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Merging task-centered social work and motivational interviewing in outpatient  
medication assisted substance abuse treatment:  
Model development for social work practice

Dissertation submitted

by

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I dedicate this work  
to my mother, Anna Fassler, and  
to my father, Leopold Fassler,  
who taught me to cherish the values of  
intellectual curiosity,  
craftsmanship,  
and social responsibility.

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## List of Acronyms

AIDS	Acquired Immuno Deficiency Syndrome
ASI	Addiction Severity Index
CBT	Cognitive-Behavioral Treatment
CM	Combined Model
CSAT	Center for Substance Abuse Treatment
DASIS	Drug and Alcohol Services Information System
D&D	Design and Development
ED	Emergency Department
IRB	Institutional Review Board
HCV	Hepatitis-C Virus
HIV	Human Immuno Deficiency Virus
MAT	Medication Assisted Treatment Program
MET	Motivational Enhancement Therapy
MI	Motivational Interviewing
MISC	Motivational Interviewing Skills Code
MITI	Motivational Interviewing Treatment Integrity
MMT	Methadone Maintenance Treatment
NE-ATTC	North Eastern States Addiction Technology Transfer Center
NIDA	National Institute on Drug Abuse
NSDUH	National Survey on Drug Use and Health
ONDCP	Office of National Drug Control Policy
RBHA	Richmond Behavioral Health Authority
SAMHSA	Substance Abuse and Mental Health Services Administration
SSD	Single System Design
TAU	Treatment as usual
TCM	Task-Centered Model
TEDS	Treatment Episode Data Set
TLFB	Timeline Follow Back Interview
TPIS	Task Planning and Implementation Sequence
VCU	Virginia Commonwealth University
UDS	Urine Drug Screen
UN	United Nations

Abstract

MERGING TASK-CENTERED SOCIAL WORK AND MOTIVATIONAL  
INTERVIEWING IN OUTPATIENT MEDICATION ASSISTED SUBSTANCE  
ABUSE TREATMENT: MODEL DEVELOPMENT FOR SOCIAL WORK PRACTICE

By Andreas Fassler, Ph.D.

A dissertation submitted in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy at Virginia Commonwealth University.

Virginia Commonwealth University, 2007

Major Director: Matthias J. Naleppa (Ph.D.), Associate Professor, School of Social Work

To advance social work practice and decrease the research practice gap, this dissertation followed a model development paradigm consisting of several phases. Based on the task-centered model of social work practice and motivational interviewing, a new combined model was construed. The two underlying models were analyzed and synthesized, using technical eclecticism as the integrative approach. The resulting combined model was described by guidelines and manualized.

To test the combined model in an applied setting, a study was designed in collaboration with social workers at a substance abuse counseling center. There, the combined model intervention was implemented in an outpatient medication assisted treatment program dispensing methadone and buprenorphine to a mainly African-

American population. The agency program aimed at detoxification, but also provided methadone maintenance. It offered additional groups and acupuncture.

Ten clients and four social work practitioners participated in the intervention study. The study used a mixed-method approach in data collection and analysis. Client practitioner verbal interaction was recorded using digital audio recording. The digital audio files were loaded directly into Atlas.ti software to be used for analysis. Qualitative data analysis with Atlas.ti was performed for two research tasks, a) assessing implementation fidelity of the manual based intervention and b) exploring model development aspects to improve model guidelines.

Treatment fidelity was analyzed through deductive coding and frequency counts. Model development analysis was performed similar to a grounded theory model and used content analysis and constant comparison methodologies. Addiction Severity Index and Readiness Ruler, urine drug screens, problem change, and task accomplishment ratings were used as quantitative outcome measures to produce time series data in order to chart individual case progress in a single system design. After testing the intervention, a focus group with participating practitioners was conducted.

Overall beneficence with clients improving and progressing successfully in the program was found. The integration of the underlying models was deemed successful. Their elements were found to be complementary and intricately linked. Crucial for successful implementation is that the program environment supports and accepts client choices. Model guidelines were reviewed and improved for further field testing.



## Chapter 1 Introduction

### *1.1 Purpose of the Study*

This study is an attempt to design a new model for social work practice for substance abusing clients in a medication assisted treatment program (MAT), which is delivered in an outpatient setting. The new model builds on the task-centered model (TCM) of social work practice (Reid, 1996) and motivational interviewing (MI) (Miller & Rollnick, 2002), and combines their compatible elements. Therefore, it is called the combined model (CM). The new combined model is also an adaptation of these models to a new setting, a MAT.

Through my dissertation, I want to contribute to practice knowledge in social work. Therefore, the chosen research design is model development, which is also called developmental research (Rothman & Thomas, 1994). The outline of this study follows Reid's description of how model development can be framed for dissertation research (Reid, 1979). Accordingly, the study included three major phases. The first phase was developing an initial model, which then was pilot tested in a second phase. Finally, a revised model was built and presented by evaluating what was learned from the analysis of the pilot testing.

The study was situated at a counseling center, a private for profit agency in Richmond, Virginia. Approval for the study was granted by the director of this site and from the Institutional Review Board (IRB) at VCU.

### *1.2 Rationale for Topic Selection*

Personal and professional preferences stemming from being a social worker guided the selection of the topic for this dissertation. The guidelines I applied for the choice of this topic were the following:

- Produce knowledge of practical utility for social work practice, social work education, an agency, its practitioners, and clients.
- Contribute towards a well-described intervention that can be disseminated further.
- Select a social work model, which is not too narrowly focused and has potential for application in a variety of settings in social work practice.
- Build on my previous practice experience in the field of substance abuse treatment with methadone receiving clients.
- Focus on the practice method and not on a specific client sub population within substance abuse or methadone treatment valuing a generalist social work practice approach over therapeutic specialization.

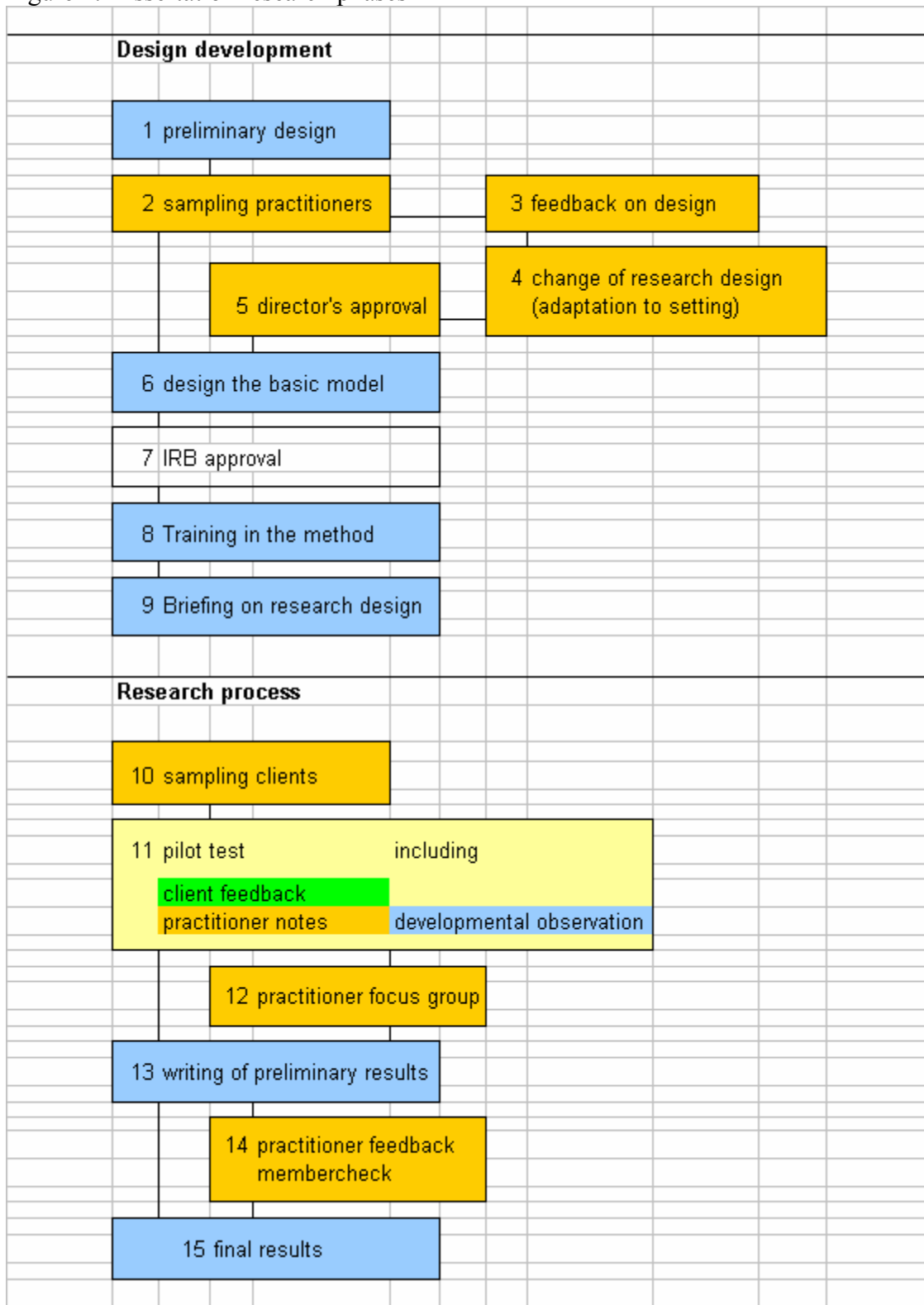
### *1.3 Outline of the Dissertation*

The following section delineates and defines the problem. Next, the scope, severity, and current situation regarding the problem is explored and described. In the remainder of this chapter, a rationale for the study is given and justified from different points of view. Chapter 2 details the problem situation of clients and treatments in use in the substance abuse field by reviewing the literature. It contains a review of the original models selected for model development, the TCM and MI, including the current state of the research on these models. In chapter 3, I describe the research design and

methodology.

Because the dissertation was situated in the larger research context of model development, I first described this approach as a unique category of research. The particular phases of the model development process, which were applied in this dissertation, are then described in more detail. After the chronological presentation of the phases, the different measurement processes are presented method wise and systematically. Finally, chapter 3 explains the exact steps of data analysis needed to arrive at a revised and combined model. Limitations of this type of research in an applied setting are noted. Chapter 4 provides an in-depth description of the initial combined model, which was used to train the participating practitioners. It also includes how the model was constructed and the merging of the two basic models was accomplished. A few notes on the implementation process in the introductory section to chapter 5 builds the transition to the presentation of the findings in the form of case reports. Chapter 6 presents the analysis of qualitative data on the model features. The application of these findings to a revision of the model guidelines results in a new version of the combined model, which is presented in the final chapter 7. Conclusions about knowledge building and future research are drawn in the remainder of chapter 7. A model of the dissertation process is provided in the following figure.

Figure 1. Dissertation research phases



### *1.4 Problem Statement*

Five currently persisting problem areas provide justification for this study:

(1) Substance abuse has been and still is one of the most serious problems in society. From the following description of the magnitude, severity, complexity, and urgency of the problem, it will become clear how crucial it is for society to find an adequate response and improve existing treatments.

(2) A strong movement within social work that strives for evidence-based practice. In order to produce such research-based knowledge, practice interventions need to be described in detail so that they can be researched, reproduced, and taught. Because social work is an applied profession, a social work researcher needs to become a developer of practice innovations. Research must attend more to particular interventions with particular clients (Reid & Hanrahan, 1982; Rubin, 1985). Still, research is neither focusing on the independent variable enough nor describing it well (Cagle & Naleppa, 2006). Therefore, there is an ongoing need for model development and research on models that are suitable for practical use.

This need is particularly apparent in social work practice with clients in MATs, where the research base is mainly medically oriented. In order to back up this point I conducted a brief bibliographic analysis of a seminal publication, the “Treatment Improvement Protocol for MAT” (Center for Substance Abuse Treatment [CSAT], 2005a). This publication was put together and approved by a panel. Domination by the medical profession was apparent in the panel composition. Only 6 out of 50 panel members have a social work background. A medical bias in the selection of the

references used is shown in the following analysis. The 625 references cited there can be categorized as follows in the next table.

Table 1. Bibliographic analysis of “Treatment Improvement Protocol for MAT”

Publications	Percentage	Publications stemming from what type of journal
N=625		
283	45.3	journal from addiction field (e.g. Journal of Substance Abuse Treatment) which may be to a large extent medically oriented
265	42.4	clearly identifiable medical journals (e.g. JAMA)
56	9.0	journals from other fields (law, history, news, statistics)
17	2.7	psychological journals
3	0.5	journals somewhat closely related to social work
1	0.2	social work journal: Social Service Review

Social work research needs to address this lack of social work presence because social work practitioners are a considerable work force providing treatments in MATs. Social workers are needed in MATs and social work needs well-developed and researched models. However, not enough research in this area comes from social work and brings the strength of social work to the fore.

(3) The particular situation of clients arriving in MATs call for a social work model that is broad and flexible enough and, therefore, capable of addressing basic needs in daily living and thus building toward a stabilization of the client’s life which then can become the basis for better retention and more effective treatment. During their treatment process, clients have to make decisions and experience ambivalence, especially at crucial transitions. These transitions are the beginning of treatment and before the decision-making point to detoxify. For these situations, the TCM and MI, provided as

psychosocial services, can provide a valuable addition to an otherwise medically dominated treatment.

(4) Further reason for this study resulted from the perspective of model development of two promising models, the TCM and MI. Analysis of the particular strengths and weaknesses of these two models will show how the TCM can benefit from the detailed techniques of MI and how MI can benefit from the structure of the TCM. Both models are open to development and are worthy of advancement. MI developers encourage adaptations. The TCM is integrative by principle. Therefore, the structure of the TCM will be taken as the starting point for integrating MI spirit and style.

(5) A final reason for this study came from the situation of research in substance abuse treatment. It was criticized that research has left practice behind creating the so-called research-practice gap. From the viewpoint of practice, often times, research is seen as not relevant and not suitable for implementation because it was produced under laboratory conditions removed from the constraints present in practice. Therefore, research needs to return closer to where it is needed: at the agency level. Concerns for this situation led me to conceptualize my research at the agency level and to adapt to the constraints of every day practice there. In the following chapters, I will provide more details and justification for each of the reasons that I have mentioned here.

### *1.5 Scope of the Substance Abuse Problem Worldwide*

Modern societies have to deal with an epidemic, substance abuse, and have not found a satisfying way of addressing it as of yet. Scope, severity, and costs to society provide rationales for social work research to attend continuously to this large societal

issue in order to find an effective and humane response. For this dissertation project, I mainly focused on illicit drugs and more precisely on the opiate abusing population.

In order to demonstrate the scope of the problem I start out with worldwide figures, move to nationwide figures, and finally present figures for the state of Virginia. The United Nations provided a figure of 180 million drug users globally for 2002 (Cherry, Dillon, & Rugh, 2002). In 2005, the UN World Drug Report estimates an annual prevalence of 200 million people (United Nations Office on Drugs and Crime, 2005). That means that 5% of the global population between 15 and 64 years old were consumers of illicit drugs at least once in the 12 months preceding the assessment. The following table reproduced from executive summary shows the distribution according to type of drug using estimates for 2003/04 or the latest year available (United Nations Office on Drugs and Crime, 2007, p. 9).

Table 2. Extent of drug use worldwide (annual prevalence)

	All illicit drug users	Cannabis	Amphetamine-type stimulants		Cocaine	Opiates	of which heroin
			Amphetamines	Ecstasy			
in million people	200	158.8	24.9	8.6	14.3	15.6	11.1
in % of global population age 15-64	4.8%	4.0%	0.6%	0.2%	0.3%	0.4%	0.3%

Note. Numbers do not add up, because individuals may use more than one drug.

### *1.6 Prevalence of Illicit Drug Use in the U.S.*

In the U.S., the prevalence of substance use disorders (i.e., dependence on or abuse of a substance) is assessed by the National Survey on Drug Use and Health (NSDUH). This survey is the primary source of statistical information on substance abuse



by the population of the U.S. An estimated 22.5 million persons aged 12 or older in 2004 were classified with dependence on or abuse of illicit drugs or alcohol in the past 12 months according to this report (Substance Abuse and Mental Health Services Administration [SAMHSA], 2005c). This equals 9.4 % of the total population. The classification of abuse does not mean they are chronic users, yet; still, the rate is quite impressive.

Because of the common poly drug use in the illicit drug user population, the subpopulation of interest for this research cannot be found in the illicit-drugs-only user group. Alcohol abuse is very much part of the problem found in this opiate abusing population. Of the 22.5 million considered dependent users in the U.S., 3.4 million were dependent on or abused both alcohol and illicit drugs, 3.9 million were classified with dependence on illicit drugs but not alcohol, and 15.2 million as dependent on or abusing alcohol but not illicit drugs (SAMHSA, 2005c).

Table 3. Dependent users by type of substance

Type of substance abuse	Million dependent users
illicit drugs only	3.9
alcohol and illicit drugs	3.4
alcohol only	15.2

NSDUH classified 300,000 past year heroin users with dependence on or abuse of heroin (SAMHSA, 2005c). According to a UN report, the number of addicted heroin users in the U.S. is around 600,000 (Cherry et al., 2002). The Office of National Drug Control Policy (ONDCP) is estimating the number around 898,000 (Kreek & Vocci, 2002). These numbers are quite different because they stem from different years and used

different research methods for estimation and data collection. Opiate use continues to grow slowly (United Nations Office on Drugs and Crime, 2005). During the 1990s, heroin incidence rates began to rise to a level not reached since the 1970s. In 1994 there were 110,000 new heroin users and this number increased to 146,000 in 2000, and fell again to 118,000 in 2004 (SAMHSA, 2002c, 2005c).

The misuse of prescription opiates is a related issue. Indicators of the illicit use of prescription narcotics increased in all 14 of the cities and states that report on these drugs (National Institute on Drug Abuse [NIDA], 2002). The nonmedical use of pain relievers represents the fastest growing group of new users, 2.4 million in 2004, and 1.4 million of past year's users are considered dependent (SAMHSA, 2005c). Cocaine users can be added to this group of opiate dependent users because they are often treated with methadone as well. In 2004, an estimated 1.6 million were dependent on cocaine (SAMHSA, 2005c).

Because I am interested in practice and disseminating my research in Germany as well, I interject some comparisons with the situation in Germany. This comparison may also illustrate that although both are modern societies and similar laws govern illicit drug use, there can be considerable difference in certain aspects namely prevalence, mortality, and treatment admission rates. The number of persons with problematic heroin consumption in Germany was estimated between 70,000 and 172,000 for 2004 depending on the method of estimation (Simon, David-Spickermann, & Farke, 2005). If these numbers are converted to persons per 1000 in the population, they may become somewhat comparable. Even though comparisons between states are generally

complicated because of differing definitions and categorizations, the following comparison at least shows the picture of the population at risk. The above-mentioned estimates of NSDUH and ONDCP are used for the following table.

Table 4. Comparison of heroin dependence estimates Germany-U.S.

	Estimates		Population 2004	Age Group	per 1000 of population	
	Lowest	Highest			Lowest	Highest
U.S.	300,000	898,000	238,000,000	12+	1.26	3.77
Germany	70,000	172,000	50,000,000	15-64	1.40	3.44

The comparison of the German to the global estimates show that continuous and increased effort to provide more treatment opportunities and improve existing treatments in the U.S. are needed. Research in better methods is justified by the present scope of this problem, the continuous growth of the epidemic, as well as the persistent unmet needs for treatment.

### *1.7 Severity of Substance Abuse*

Even though the numbers of substance abusers are high enough for a society to be concerned, and opiate use being only a portion of this, it is not only the scope of substance abuse that justifies effort aimed at improving treatment, but rather the dramatic and deadly severity. Substance abuse is a chronic condition with high recidivism rates after treatment episodes. People spend many years suffering from the condition, in treatment and in prison. A median time of 27 years was found from first to last use in a study (Dennis, Scott, Funk, & Foss, 2005). On average, a person has 12 years of injection drug use before accessing treatment for the first time (SAMHSA, 2005a). A person going

through the process of addiction in Germany, which, like the U.S., favors a restrictive policy on drugs, spends on average 2.6 years in prison. That is more time in prison than in treatment (Vogt & Schmid, 1998).

The severity of drug abuse as a medical condition can be shown through the number of emergency department (ED) visits. Heroin was involved in 164,572 ED visits (confidence interval: 123,613 to 205,531) drug-related ED visits which amounts to 20% of all the 816,696 drug-related ED visits nationwide in 2005 (SAMHSA, 2007). As ED visits imply, opioid addiction is a deadly medical condition. Its ultimate severity is shown by mortality rates. The death rates in the illicit opiate using population not in treatment range from 1.65 to 8.3% per year; the median annual death rate is 3.5% (Kreek & Vocci, 2002). The same authors report on a study, which demonstrated that the death rate could be reduced from 7.2% to 1.4% through methadone maintenance treatment (MMT) (Kreek & Vocci, 2002).

When considering drug related deaths the most deadly condition is poly drug use. The most frequent multiple-drug deaths involved various combinations of opiates/opioids, cocaine, and alcohol. Across 32 metropolitan areas, the most common unique combinations were cocaine with opiates/opioids, alcohol with opiates/opioids, alcohol with cocaine and opiates/opioids, and alcohol with cocaine (SAMHSA, 2005). Drug misuse deaths for selected areas close to Virginia are shown in the following table (SAMHSA, 2005):

Table 5. Drug misuse deaths

Geographical area	Drug misuse deaths per 1,000,000 population	Drug-related suicide deaths per 1,000,000 population	Population covered by DAWN	Percent of population covered by DAWN	Total area population 2003
Baltimore-Towson, MD	205.6	4.6	2,616,229	100%	2,616,229
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	103.8	28.1	2,811,906	49%	5,772,947
Washington-Arlington-Alexandria, DC-VA-MD-WV Virginia is not reporting to the DAWN network.	63.5	7.5	4,774,745	94%	5,057,414

Here, I attempted to present the death rate as an outcome measure of the U.S. treatment system, which I view in need of improvement. With this research study, I attempted to build a more effective treatment model aimed at only one segment of the treatment system, the opiate using population. Again, death rates of a nationwide treatment system can be better understood if they are compared to other countries treatment systems. Drug addiction related deaths in the Netherlands, which is often criticized for its lax policies against drug consumption, are at 2.4 per million. These are the lowest in Europe (Derks, Hoekstra, & Kaplan, 1998). Germany reported 20 drug related deaths per million for 1995 (Cherry et al., 2002) and 25 per million as of 2000 which represents an absolute number of 2030 (Deutsche Hauptstelle gegen die Suchtgefahren, 2001a). In 2001, after an increase for three years for the first time, a decrease to 1835 deaths could be observed (Simon, Spiegel, Hüllinghorst, Nöcker, & David-Spickermann, 2002). In 2005 1385 drug mortalities were recorded equaling 28 per million (Simon et al., 2005). In contrast, drug induced mortalities in the U.S. are 19,698

in 2000 which is about 90 deaths per million (ONDCP, 2003). In addition, opioid-related deaths are increasing according to reports from U.S. poison control centers (CSAT, 2004b).

Even though the differences shown by these numbers may be explained by the more obvious distinguishing structures of prohibitive vs. decriminalization policies and public health care systems, these reports on mortality cannot easily be compared because they depend on the definition of drug-related deaths. In Germany a broader definition is used; direct (i.e. acute intoxications) and indirect deaths are equally registered (Simon et al., 2002). In addition, statistics are not collected for the whole nation (Simon et al., 2005). Nevertheless, from these numbers it becomes clear that a) opioid dependency is a deadly condition, b) it should be treated, and c) there are differences in mortality between countries, which suggest that the U.S. could do better in caring for a highly vulnerable population.

### *1.8 Secondary Problems through Substance Abuse*

The severity of substance abuse problems is further exacerbated by concomitant problems in other areas. Substance abuse rarely presents in isolation; it is usually a complex array of interrelated problems and needs. This condition provides another justification for the need of appropriate assessment and treatment, and it has consequences for the approach to treatment as will be shown below. The problem areas are only briefly visited here to provide a rationale for the need of psychosocial services and a sound social work practice model in working with the complex needs of this population. More details are provided in the next chapter where a literature review is

provided on the different problem areas.

The problems and corresponding needs of someone abusing substances fall in the areas that can be roughly categorized by the following terms: physical/medical, emotional/psychological or psychiatric, relationship/social or family, legal, educational/employment/financial (CSAT, 2005a; NIDA, 1999). Substance abuse in general is accompanied by this broad variety of “other” but related problems in health and social functioning. The time order of causality for this condition is not entirely clear. It may well be that substance abuse is prior to and fostering these problems. It may also be possible that the onset of substance abuse is a consequence of problematic conditions. However, the frequently seen concomitant appearance exacerbates problems and poses greater challenges to treatment and recovery.

The substance abusing population is largely affected with a wider variety of problems than the general population. These problems go beyond the immediate effects on health and include amongst others mental illness, family problems, car accidents, loss of driver’s license, transportation problems, unemployment, debts, being uninsured, poverty, criminalization, homelessness, domestic violence, and higher infection rates with HIV and Hepatitis-C. Thirty-six percent of the HIV/AIDS cases in the U.S. are due to injection drug use or sexual activity with an injection drug user (Kreek & Vocci, 2002). Substance abuse of a parent severely affects children in a variety of ways, prenatal and continuously.

Multiple needs beyond substance abuse require a service delivery approach, or what is also called multimodal service delivery, comprehensive models of care, or

integrated services (CSAT, 2005a; Lamb, Greenlick, & McCarty, 1998). However, instead of providing a large number of ancillary services, treatment providers often use case-management to access outside resources. Another approach, which is suggested in this study, is to integrate a broad problem solving approach, the TCM, into MAT, so that a wide range of problems in living can be addressed during MAT. The task-centered component in the new model with its versatility appears to be flexible enough and therefore suitable to address these multiple needs.

### *1.9 Damage and Cost of Substance Abuse to Society*

Substance use represents an enormous burden on society and a significant challenge to the healthcare system. ONDCP provides summary information on the scope of the problem. A total economic cost of \$143.4 billion due to drug use was estimated for the year 1998, which rose to \$160.7 billion in 2000 (ONDCP, 2001, 2003). These societal costs are represented by different categories: Productivity losses, and costs related to health care, the criminal justice system, reducing the supply of drugs, and social welfare. This figure does not include costs related to abuse of or dependence on legal substances such as alcohol or tobacco, or prescription medications. Estimates of direct and indirect costs due to legal, plus illegal, substance abuse exceed \$300 billion annually (Frances & Miller, 1998).

A type of cost different from these monetary estimates is the boundless personal as well as that of parents, children, friends and family; a suffering to which no number can be assigned. Disrupted families, child abuse and neglect, homicide and suicide are only words, which cannot measure the misery and suffering brought about by substance



abuse.

A range of studies found the benefits of providing treatment outweigh societal costs of treatment by fourfold to twelve fold (Frances & Miller, 1998). Therefore restricting treatment access seems to be no rational policy. However, the budget for 1996 shows that a majority of funds was allocated for law enforcement (63%). Considerably less (13.6% and 19.4%) was spent for prevention and treatment. This distribution of funds and the number of incarcerations suggests categorizing the U.S. response to substance abuse and its drug policy as prohibitive (Klingemann & Hunt, 1998). Especially in light of limited resources, every effort needs to be made to improve the existing services, to alleviate individual suffering, and to enhance societal responsiveness.

#### *1.10 Need for Substance Abuse Treatment and Treatment Admissions*

Due to capped budgets and limited resources, often limited accessibility and a prohibitive drug policy, there are many fewer treatment admissions than are needed. The overall condition of far more people in need and waiting for treatment which should be provided with treatment according to prevalence estimates versus the number of actual treatment admissions is known as the “treatment gap” (Kreek & Vocci, 2002). The treatment gap provides another rationale for improving treatments if society wants to make the most effective use of limited treatment spaces with regard to outcome and treatment retention. In the following, I present treatment admissions against estimates on treatment needs to document this situation.

In NSDUH, the definition for needing treatment for a drug use problem was

whether the individual met the diagnostic criteria for dependence on or abuse of illegal drugs in the past 12 months or received treatment for that drug use in the past 12 months (SAMHSA, 2005c). According to this definition, 3.9 million purely illicit drug users and 3.4 million drug and alcohol users are in need of treatment. Only 10% (709,000) received treatment at a specialty facility for illicit drugs use (SAMHSA, 2005c).

Another way of estimating the group in treatment is to look at the admissions. Naturally, these numbers will be somewhat lower. Based on SAMHSA's 2000 Treatment Episode Data Set (TEDS), a source for estimates on treatment admissions, there were 269,400 admissions with opiates as a primary substance of abuse. Heroin accounted for 90 % of these opiate admissions. In 2003, there were 237,000 substance abuse treatment admissions for the high-risk group of injection drug users, 13% of all admissions reported to SAMHSA's TEDS. Opiates accounted for 77% of admissions for injection drug use, followed by stimulants (16%) and cocaine (6%) (SAMHSA, 2005a).

The ratio male-female for treatment admissions is about 2:1 with a tendency toward more women amongst youths (SAMHSA, 2005c). African-Americans, Hispanics, and Native Americans are overrepresented as proportions of the general population in the substance abuse treatment system (Klingemann & Hunt, 1998). People who do not enter treatment tend to be younger. The treatment gap is widest for the age group 12-25 years. Nationally 62% of persons in the treatment gap come from this group (SAMHSA, 2002b).

The treatment gap presents even worse if we look at persons who are incarcerated. Great need is coupled with very limited access to treatment. Approximately 2 million

persons are imprisoned related to drug offenses (Brocato & Wagner, 2003). In 2001, 55.5% of all prisoners in federal prisons were drug offenders; in 1999, 83.9 % of state prisoners were involved with drugs at the time of their offense (ONDCP, 2003). The increase and amount of drug related incarceration is staggering. Estimates on the percentage of inmates treated for drug addiction are around 4 % for 1994 and the number of treatment facilities per state counted in 1991 range from 28 in Ohio to zero or one in 26 other states (Klingemann & Hunt, 1998).

Treatment capacity is growing. According to the Drug and Alcohol Services Information System (DASIS), the heroin treatment admission rates between 1993 and 1999 increased by 200 % or more in 6 states and by 100-199 % in another 11 states (SAMHSA, 2002a). Still, a considerable number is not receiving needed treatment. A SAMHSA report looked at the treatment gap and explained what the individuals' situations were when they did not enter treatment. Only 5.8 % of all who needed but did not receive treatment in 2004 reported that they felt they needed treatment for their alcohol or drug use problem. Of these, 35.8 % stated that they made an effort but were unable to get treatment. The remaining 64.2 % conceded having made no effort to get treatment (SAMHSA, 2005c). The most common explanations for not receiving drug or alcohol use treatment among persons who felt they needed treatment were being not ready to stop using (40.0 %), claiming cost or insurance barriers (34.5 %), blaming stigma (21.6 %), and not feeling the need for treatment (at the time) or being able to handle the problem without treatment (13.9 %) (SAMHSA, 2005c).

MMTs and other MATs provide low threshold access to treatment. Therefore,

MATs are capable of reaching those in the treatment gap. The target group for MATs is comprised by the 40% tier, who is not ready to stop using. This group could be helped reaching readiness for treatment through motivational interventions. Clients who cannot be attracted by abstinence only treatment options can potentially be reached by MATs. For only 40 % of all heroin admissions methadone was planned as treatment (SAMHSA, 2003). In addition, only 20% of those addicted to heroin received treatment, pointing to a considerable treatment gap and neglect of using evidence based treatments (CSAT, 2005a). According to unpublished data from SAMHSA, on any given day in 2003 more than 200,000 persons were treated in a MMT in the U.S. (CSAT, 2004a). Another nationwide survey estimated 240,961 clients in methadone treatment for 2004 (SAMHSA, 2005b). MATs could be offered far more often.

When these numbers are compared to Germany where 50,000 persons were treated in MATs in 2001, which rose to 57,700 in 2004 (Simon et al., 2005; Simon et al., 2002), then it is easy to see that there could be far more persons provided with MAT. Idaho, Mississippi, Montana, North and South Dakota, and Wyoming even do not allow methadone treatment at all (Rettig & Yarmolinsky, 1995; Yoast, Williams, Deitchman, & Champion, 2001).

Virginia is a state where the benefits provided by MATs are available. Data on treatment admissions in Virginia comes from two different sources, the National Survey of Substance Abuse Treatment Services (N-SSATS) and the TEDS. In Virginia 195 substance abuse treatment facilities responded to the 2004 N-SSATS reporting that there were 22,298 clients in substance abuse treatment on March 31, 2004 (SAMHSA, 2004).

SAMHSA also provides a treatment gap estimate for each state in a single measure. The state of Virginia had 88,000 persons falling into the treatment gap (SAMHSA, 2002b).

The TEDS provides information on demographic characteristics of the 1.9 million annual treatment admissions for abuse of alcohol and drugs in facilities that report to state administrative data systems. Based on TEDS data, in 2004 there were 57,435 individuals in treatment in Virginia; and methadone was dispensed in 15 facilities to 2,862 clients (SAMHSA, 2004). Amongst all the persons in treatment, there were 4,765 with heroin as the primary drug of choice, which could be treated through a MAT (SAMHSA, 2006).

In summary, when comparing treatment admissions with persons in need of treatment, for every person undergoing drug treatment there are an estimated three to four people who need treatment (Cherry et al., 2002). Many clients in need get discouraged by waiting periods more than a month and go untreated. The viable treatment option through MAT is underutilized. All of this illustrates what is meant by the treatment gap. The conclusion therefore is that if a majority is not receiving needed treatment then availability needs to be increased. Although social work intervention research, as this study is pursuing, is not targeting and influencing policy decisions directly, it can still contribute to improvement of this situation by attempting to decrease attrition and to increase treatment duration and retention of treatment gains through an improved treatment model.

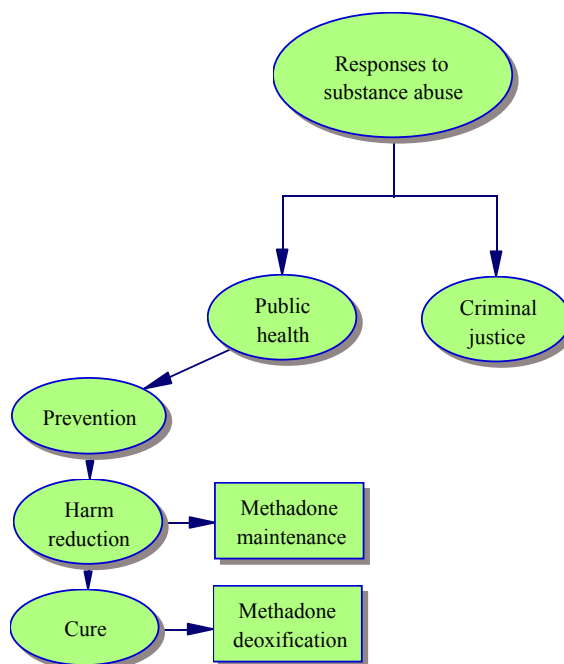
### *1.11 Current Practice Situation*

There are many ways of viewing and conceptualizing the problem of substance abuse treatment and accordingly for crafting a solution. The treatment gap points to a

shortage of funding and the need for public recognition of shortcomings in the availability of treatments. MATs are not reimbursed by Medicaid in some states (CSAT, 2005a). This indicates that funding, rather than better methods, may represent the bottleneck for the improvement of the current situation.

An emphasis on criminal justice at the expense of harm reduction limits availability of MATs. One can distinguish between two broad policy and programming approaches in dealing with substance abuse, the criminal justice model and the public health model (Cherry et al., 2002). Public health applies preventive, harm reduction, and curative approaches. Methadone programs can be viewed as harm reduction or curative approaches depending whether the program is laid out as maintenance or detoxification program. The different responses to substance abuse are illustrated by the following figure:

Figure 2. Societal responses to substance abuse



Methadone clinics do not enjoy much public support and tend to provoke controversy whenever a new clinic is supposed to open. A conservative stance in the general population and among policy makers limits availability of MATs. Other countries are much more willing to experiment to find new solutions. Heroin prescription is in the experimental phase in Canada; in 2004 a heroin prescription project has begun there with public safety rooms where drug users can inject safely (Hainsworth, 2004). In 13 states and the District of Columbia of the U.S., needle exchange is still prohibited (Villarreal & Fogg, 2006). Therefore, the U.S. along with Germany can be classified as a conservative country as distinct from experimental countries (Canada, England, Netherlands, and Switzerland) (Klingemann & Hunt, 1998).

Conservative countries following the criminal justice model see drug addiction more like a crime than a disease. This is evident by the number of persons with an addiction diagnosis in prison in the U.S. as well as in Germany. Prevalence of an addiction diagnosis in this population is many times higher than in the general population (Fazel, Bains, & Doll, 2006). A person going through the process of addiction spends more time in prison than in treatment (Vogt & Schmid, 1998). Driven by a value position which favors the criminal justice model, methadone is restricted and not as available as needed from a harm reduction perspective.

Further indication of a conservative and rather punitive approach to substance abuse can be found in the widespread use of confrontational approaches. The reliance on self-help parallels constricted reimbursement for professional treatment. Neither approach is supported by research (Burke, Dunn, Atkins, & Phelps, 2004; Miller, Brown

et al., 1995). No support was found about the confrontational style in counseling. Nevertheless, this approach enjoys particular popularity in the U.S.; and the treatment community is relying on self-help groups, mainly AA, in large parts. Similarly, efficacy of the AA approach has rarely been studied. The two studies found could not report beneficial effects although AA is still used predominately by U.S. treatment programs (Miller et al., 1995). This amounts to a situation where someone in need of substance abuse treatment currently is not likely to be offered treatment with the best evidence base (McGovern & Carroll, 2003). One conclusion drawn from this brief discussion of approaches to substance abuse is that the practice world currently does not reflect results from research on best practices. Some researchers even see a negative correlation between scientific evidence and application and criticize the use of methods with the least evidence of effectiveness (Brocato & Wagner, 2003; Miller et al., 1995).

How to change this societal response to more substance abuse prevention and better treatment can be the focus of future efforts. Alternatively, much can be done in improving existing practices. This dissertation focuses on what social work clinical practice can contribute to the improvement of available treatment. Treatment with a different value orientation toward client-centeredness like the TCM and MI can contribute to changing a climate of punishment and exclusion (Miller & Rollnick, 2002). These psychosocial treatments can make a valuable contribution to the success of harm reduction approaches.

### *1.12 Treatment Settings and Approaches in Use*

Rationale for the choice of setting for this dissertation research and placing it in



the outpatient modality of treatment comes from the predominant use of this modality. According to the National Survey of Substance Abuse Treatment Services (N-SSATS), which provides data on Substance Abuse Treatment Facilities from 2004, the available modalities are:

- Outpatient treatment services (regular outpatient treatment, intensive outpatient treatment, day treatment or partial hospitalization, detoxification, MMT)
- Non-hospital residential treatment (short-term, i.e., 30 days or less; long-term, i.e., more than 30 days; detoxification)
- Hospital inpatient treatment (treatment, detoxification) (SAMHSA, 2005b).

MAT can be used in all of these settings. However, the majority of treatment is delivered in outpatient settings.

In Germany, 52% receive outpatient treatment for drug or alcohol abuse (Simon et al., 2002). In the U.S. in 2004, the majority (98%) was treated on an outpatient basis (SAMHSA, 2005b). That is why this study project was designed to be applicable to and situated in an applied outpatient setting.

Further justification for a focus of this dissertation research project on problems in living was found in the currently limited breadths of services. For MATs to be effective additional psychosocial services are needed and required by federal law (Rettig & Yarmolinsky, 1995). However, because of the restriction discussed above and managed care impositions, which focus on the diagnosis of a substance abuse disorder and not on secondary problems of living, psychosocial services tend to be marginal. The services that are provided tend to be therapeutically or medically oriented and thus narrow. All of

these strategies are rather focused on managing the patient, target substance use directly or focus on medication adherence. Only case management as another frequently used approach might be able to address problems in living. Pure medical maintenance programs are prevalent with the medical point of view on treatment being dominant. In the following literature review, I provided information on the need for broad psychosocial services. I wanted to strengthen the contribution that social work can make to MAT. Social work can address some important needs of clients.

I consider the current situation exposing a gap between client needs and available treatments. The traditional focus in addiction research gravitates towards the medical point of view, which is limited and does not provide answers to the complete spectrum of needs. Therefore, from a social work point of view, I see the need for more and better psychosocial services focused on problems in living. These services need to be described in detail for research purposes and dissemination. From this perspective, I came to see the utility of the TCM in assisting clients with their multiple and concrete needs and in providing them with problem solving capabilities.

### *1.13 Need for Intervention Research in Social Work*

Not only is there a greater need for psychosocial services, their scientific treatment is somewhat marginal, scattered, inconsistent, superficial, unfocused, and unspecific. Practitioners need better descriptions of psychosocial services central to MATs. The best-practice guidelines of the CSAT consensus panel among several medical core services only list “counseling to stop drug abuse” and “interventions to address family problems” (CSAT, 2005a, p. 121). Furthermore, in these guidelines group

counseling, case management, cognitive-behavioral treatment (CBT), community reinforcement, contingency management, and psychotherapy are mentioned but not specified further. This marginal treatment of the substance abusing population should become a broad concern for comprehensive rehabilitation. Social work can provide the rationale for additional efforts towards describing models that focus on and can achieve comprehensive rehabilitation.

Not only from the clients' point of view, there is a need for more elaboration and specification of social work models in general. From the viewpoint of the social work profession, there is an apparent need to focus on developing models. The argument here in support of the choice of my topic in this dissertation is twofold. (1) There is a call, which I wish to follow, for more practice research that comes from within social work. (2) I see social work in need of practice research for substance abuse treatments because the field is so dominated by the medical profession.

The most general reason is the requirement for social workers to deliver best practice posed by social work's code of ethics (National Association of Social Workers, 1999). Social workers are called to advance their methods on a regular basis. Social work is an applied profession. Thus, its research needs to be close to practice. The importance and the dearth of practice research were expressed multiple times. The Task Force on Social Work Research voiced concerns for the lag of practice-relevant research behind the growth of the profession and concomitant challenges, the lack of agency collaboration in research on practice, and the small amount of publications that inform practice (Austin & et al, 1991). As one of the consequences to this call at this time, the Journal of

Research on Social Work Practice programmatically required a section on implications for practice in each article (Thyer, 1991b). Many authors called for more intervention research (Harrison & Thyer, 1988). Intervention research seems to be the most encouraged but the least conducted type of research (Fortune & Proctor, 2001).

Another source of practice knowledge, the tacit knowledge held by experienced practitioners, is not appreciated as much as it could be. There is considerable expertise among social work practitioners; however, it is not collected systematically, not documented, and not disseminated. In my dissertation research project practitioners were at the heart of the research process. Their practice experience substantially influenced the course and outcome of the research.

Research studies in the field of substance abuse often refer to “psychosocial or counseling” only. Many authors decry that interventions are described inadequately in the literature (Reid & Fortune, 2000; Rosen, Proctor, & Staudt, 1999). This calls for intervention research in social work that takes care of a detailed description of the intervention. Social work practice needs more manualized treatments originating from social work research. Social work doctoral dissertations have been suggested as an important avenue to pursue intervention research (Thyer, 1991a, 2001).

Social work produced many generalist models (Turner, 1996) but they need to be adapted to MAT’s specific challenges and then disseminated to agencies in order to be recognized in the field. Due to the strong influence of medical research, social work research is lacking presence in the field of substance abuse treatments. Reid and Fortune (2000) reviewed the evidence-based literature on social work effectiveness since 1990

and found 14 out of 99 intervention programs related to substance abuse, however, not one on social work interventions in a MAT. Therefore, I conclude that the topic for my dissertation filled a needed gap in social work research in its quest to develop, to research, and to further disseminate its own models.

#### *1.14 Research Practice Gap*

Another reason for the focus and design of this dissertation stems from the issue of the research-practice gap in the substance abuse field. Practitioners and researcher often have very different perspectives on the subject and differ widely in their agency or community culture and experiences (Lamb et al., 1998). The practice world (agency directors and practitioners) complains that research is not delivering what they need. Consequently, this study is attempting to engage in close communication with staff throughout the research process.

In a complementary fashion, researchers are noticing that the practice world is not applying what has been found beneficial through research. This concern is documented by NIDA's effort with a new initiative, the National Drug Abuse Treatment Clinical Trials Network, aimed at bringing scientifically based treatment findings closer to the community (Zickler, 1999). Therefore, this dissertation was designed to deliver training to the agency and produce knowledge where it was needed and potentially may be applied.

Amongst the several examples and conditions to document the research practice gap given by Lamb (1998) the following issues are relevant here:

- A research focus on one service centered on substance abuse that is too narrow vs.

- on the comprehensive services that are needed,
- Too much research in laboratory settings (investigating efficacy) vs. the shortage of effectiveness studies under agency conditions,
  - A too narrow selection of clients in order to control laboratory like conditions,
  - A dissemination time that is too long vs. exploratory or quasi-experimental research, which could be conducted more easily.

Agencies often are not able to allow their staff to participate in research that requires additional training e.g. the administration of a complex research tool like the Addiction Severity Index (McLellan, Kuskner, & Metzger, 1992). Among researchers, there is unequal attention to relevant elements of substance abuse treatment. Some treatments are studied more than others; and this is also true for modalities, settings or populations (Lamb et al., 1998). There is much focus on medical research and on large-scale quantitative research, e.g. Project MATCH (Project MATCH Research Group, 1993). Intervention research and research on psychosocial services in MATs in comparison seems to be underrepresented. Often not enough funds and professional time can be allocated for research by community based treatment providers. All of this invites research that is based, conducted, and disseminated at agencies in the community (Lamb et al., 1998). Therefore, this study, which aimed at utilization and reducing barriers through situating research in an applied setting, tried to ameliorate this condition and contributed to technology development and knowledge transfer.

### *1.15 Research Questions*

The following questions were used to guide the literature review and the design of

the dissertation. They summarize the research intent.

1. How can social work's contribution to MAT be improved? Tentative answer: By designing a model that fits this application. The overall research design, therefore, was model development.
2. What is needed in MAT? Consequently, what does the new model need to provide? This was explored in the literature review on treatment needs of this client population in chapter 2.
3. What do the existing models already provide? How can they be combined in order to get synergy effects? Therefore, the state of current research on TCM and MI was reviewed.
4. How can these models be adapted for application in MATs? The model design process in collaboration with the agency allowed answering this question.
5. What methods do we need for this research task? How is model development research conducted? This question was answered by proposing a research methodology in chapter 3. The tentative answer is that a model development framework for research requires going through the process of creating, testing and revising a model.
6. What practice guidelines can be developed describing a model for combined task-centered and motivational interviewing for MAT? What are the characteristics, the processes, and structures of the model? What are typical and successful elements of the model? This question is answered by designing a basic model that was the foundation for the pilot testing described in chapter 4.

7. The final and summarizing question, which is at the heart of this dissertation, was: How can this new combined model be improved based on the pilot testing in this study? Empirical testing and analysis of the findings were the foundation of the revised guidelines, which are presented and discussed in the results section of this dissertation.

#### *1.16 Significance of the Study to Social Work*

The study yields a potential contribution to social work practice knowledge in general, to the advancement of each model in a conceptual way, and to the enlargement of the model's scope of application. The model development process, described in this study attempted to combine best practices by selecting well-established and broadly researched practice models. This constituted a contribution to treatment integration, which was proposed to be the latest step in the evolution of treatment practices (Norcross & Goldfried, 2005). The findings should be relevant to practice because the design strived to include the much valued perspective of the clients and practitioners. Consumer driven research, emphasized in Great Britain, should become integrated in the methodology of this study (Beresford, 2000). The project attempted to utilize dissertation research efforts directly in order to change a situation where dissertation research still is the most underutilized category of research for knowledge building.

There are limitations to transferability due to the small number of participants. However, this dissertation research only represents a few steps out of the larger model development process. Even though the findings are not be generalizable by the power of random sampling, there might still be some other possibilities for transfers. The research



population in the study was fairly typical, thus possibly allowing transfer of findings along gradients of similarity (Cook & Campbell, 1979). The research was expected to contribute to cumulative knowledge building. After sufficient efforts have been made to disseminate the results, the ultimate test will be the acceptance of practitioners.

The study also potentially contributes to the development of each of the basic models. It attempted to add to the gaps in each model and therefore to strengthen each of them. This can be considered a further step in model development for TC and MI. The combined model includes the most valued and functional parts of the original models and therefore represent a developmental step forward for both models. Both models are widely tested with different client populations. However, neither one has been reported having been applied to clients in a MAT. Therefore, the adaptation to the use in substance abuse treatment in a MAT setting will enlarge the scope of applicability of both models.

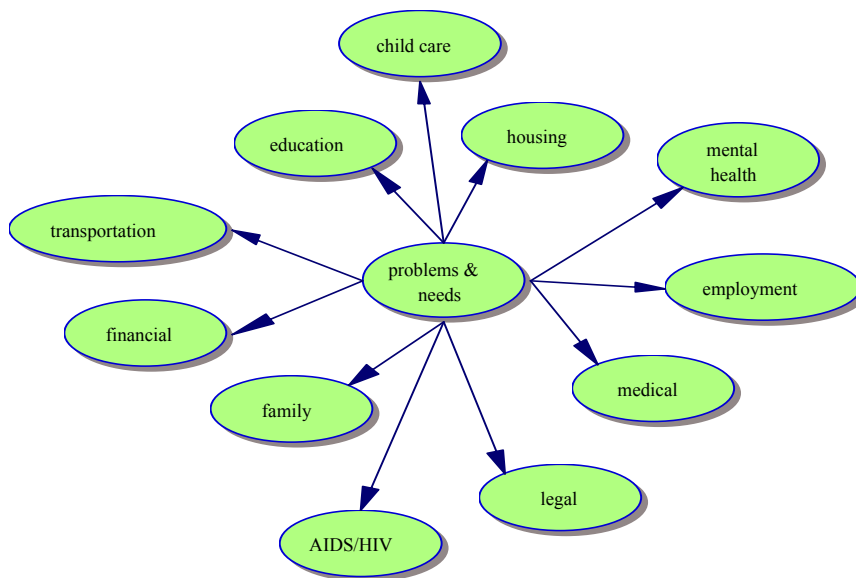
## Chapter 2 Literature Review

The purpose of the first part of this chapter is to identify needed characteristics of a model that are required in the treatment of substance abusing clients in MATs and, therefore, became part of the proposed model. This is accomplished by reviewing the literature on client needs and successful (evidence-based) features of selected treatments. In the later part of this chapter, the literature on the basic models from which the new practice guidelines for the new combined model will be drawn is reviewed.

### *2.1 Client Situation and Needs*

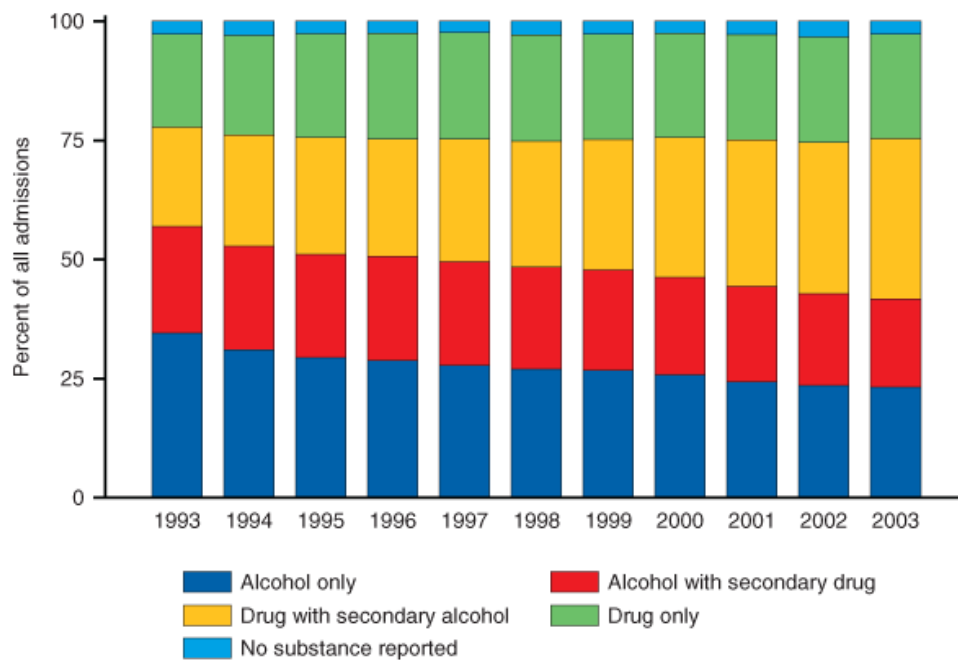
The first section reviews the literature on clients' needs showing what kind of problems the clients who abuse opiates and other drugs face when they enter the treatment system. From this profile of needs one can infer that a broad based generalist problem solving approach is required. It is commonly known that clients' needs are multifaceted and stretch into all areas of living as shown in the following figure (NIDA, 1999).

Figure 3. Needs profiles



In the following sections, I will briefly discuss the main problem areas that are typical for MATs and provide supporting statistical data. Secondary drug use is of major concern in MATs. Besides the main problem of opioid dependency (primary drug use) in clients targeted by MATs, which is severe due to its chronic and life threatening nature, clients' problems are often exacerbated by abuse of multiple other drugs. Multiple or poly drug abuse is more common than using a single substance (SAMHSA, 2005d). More than 55 % of clients admitted to outpatient treatment programs used another substance in addition to their primary substance (CSAT, 2005a). There is a strong association between illicit drug and alcohol use, which is the most common secondary substance (SAMHSA, 2005c). The following figure reproduced from the TEDS 1993-2003 shows how drug use in combination with alcohol has increased among treatment admissions between 1993 and 2003 (SAMHSA, 2005d).

Figure 4. Co-abuse of alcohol and drugs at treatment admission



Concomitant cocaine abuse can be as high as 47 % (Haug et al., 2005). Cocaine abuse is very detrimental to outcome (CSAT, 2005a). However, it can be reduced in well-managed programs (Borg, Broe, Ho, & Kreek, 1999). The pattern of multiple substance use increases the death risk. Close to 90 % of opioid related deaths may be linked to secondary drug abuse (CSAT, 2005a). In addition to the substance use problem, the main concerns are (as listed in Chapter 1) physical/medical, including special needs during pregnancy, emotional, mental health, co-occurring psychiatric conditions, relationship/social or family, legal, educational/employment/financial (CSAT, 2005a; NIDA, 1999).

Medical problems and, therefore, medical concerns are central to the treatment of opiate addiction, which has a substantial impact on the body. Medical needs stem from the high risk of tuberculosis, sexually transmitted diseases, hepatitis (HCV), or HIV

infection (CSAT, 2005a). The route of drug administration, especially intravenous drug use, is prone to catching and spreading these infections and causes further health problems like damage to the veins. Further harm stems from the toxic and harmful nature of the substances consumed. Life circumstances like homelessness, poverty, the neglect of healthy nutrition, and general health needs create and exacerbate medical problems. These conditions require primary medical care to be integrated in MATs, and to be addressed and managed through psychosocial services or case management.

Psychiatric problems can be either at the root of substance abuse conditions or the consequent effect of exposure to substances and the accompanying life circumstances. Fifty to 75 % of clients in substance abuse treatment programs are reported to have co-occurring mental disorders. This is considerably higher than in the general population and has substantial impact on treatment outcomes (CSAT, 2005b). Substance use clients and even more so clients with co-occurring mental disease are seven and eight times as likely to be HCV infected than clients with mental-disorders only (Huckans, Blackwell, Harms, & Hauser, 2006). Clients with co-occurring mental disorders are likely to spend more days in hospitals, have higher rates of HIV infection, relapse, depression, and suicide risk (CSAT, 2005b).

Legal difficulties and substance abuse are correlated due to drug control laws covering these substances. About two thirds of individuals in the criminal justice system are involved with substance abuse (Weber, Grunberger, O'Grady, & Arria, 2005). Adults on probation are roughly four times more likely to report current illicit drug use (SAMHSA, 2005c). In an exploratory study with 200 participants, it was found that

almost 50% identified legal needs in five problem areas: health care, work, family, civil liberties, neighborhood, and community (Weber et al., 2005). An ever-increasing number of clients are court mandated to undergo substance abuse treatment (Polcin, 2001) and referred by drug courts (ONDCP, 2003). In order to reintegrate a person who has abused illicit substances, legal problems need to be addressed through a psychosocial service component (NIDA, 1999).

Living conditions for substance abusing clients tend to be harsh in general. Financial, housing, educational and employment needs are common with this population as well. Unemployed adults are more likely to abuse drugs, however, 77.6% of adults classified with dependence or abuse are employed (SAMHSA, 2005c). Still, unemployment, especially in an outpatient treatment condition, has been linked to more secondary drug use, poor treatment outcome, and higher criminal activity (Platt, 1995). For that reason, a focus on vocational aspects might enhance treatment through increasing employment (Dennis, Karuntzos, McDougal, French, & Hubbard, 1993; Silverman, Chutuape, Bigelow, & Stitzer, 1996). MAT programs, consequently, have to accommodate the working client and enable unemployed clients to increase their chances for employment and legal income.

Homelessness is a major issue preventing people from even entering the treatment system. Rates of co-occurring mental and substance abuse disorders in the homeless population are increasing (CSAT, 2005b). According to established placement criteria, homelessness would require a higher level of care than outpatient treatment (American Society of Addiction Medicine, 2001). Supportive or ancillary services are clearly

needed, thus calling for service integration or a case-management component within a MAT.

From a harm reduction approach (Brocato & Wagner, 2003) needs can be positioned in a hierarchical order depending on their relevancy for survival or treatment progress. Social work guided by a hierarchy of needs perspective according to a harm reduction approach begins with crisis intervention and securing bare survival, reducing irreversible harm to the body, providing basic living conditions including housing, legal income and work, and only then addresses the reduction of substance abuse or even abstinence (Deutsche Hauptstelle gegen die Suchtgefahren, 2001b; Kellogg, 2003). This needs to be kept in mind when selecting and deciding upon treatment goals with clients.

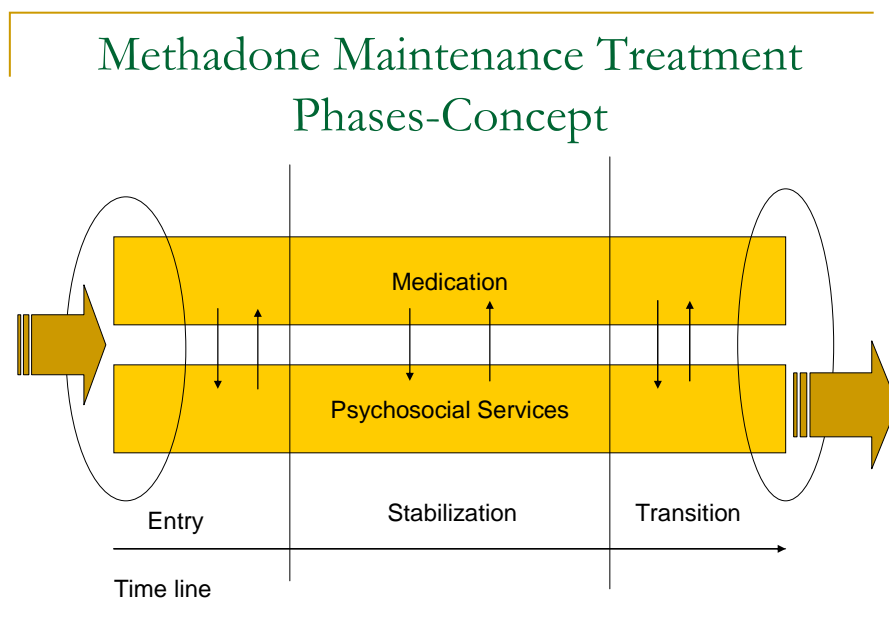
Client needs can be conceptualized related to progress in treatment. Treatment for substance use disorders usually involves an assessment, treatment planning and implementation, the treatment of intoxication or withdrawal when necessary, the treatment of the unwanted behavior, and a phase of aftercare (Mirin et al., 2000). According to a phases concept, different needs arise at different stages of treatment. In different treatment phases different goals and tasks are relevant and different interventions are needed (Bohnert, Fassler, & Niederhuber, 2002; Simpson, 2004). Different goals are relevant, separate techniques may be prescribed to practitioners, and often, different professions with different skills are involved in each phase.

Needs are most severe at the beginning of treatment (Avants, Ohlin, & Margolin, 1997); then, needs change. A cluster analysis corroborated the change of needs profiles as a function of time in treatment (Polinsky, Hanken, Purcell, & Hser, 1998). According to

this analysis, drug use was not the highest concern of clients when entering treatment. In addition, employment only became of greater concern later in treatment. The authors argue for the necessity of comprehensive treatments to match needs and impact clients' situations effectively.

The phases have been called early engagement, early recovery, retention and transition (Simpson, 2004) or conceptualized into a) crisis or acute phase, b) supportive-care phase and c) continuing care or after-care (CSAT, 2005a). When conceptualized by the classic three phases, beginning, middle, and end (Avants et al., 1997; Hepworth, Rooney, & Larsen, 2002), MAT can be portrayed as shown in the following figure.

Figure 5. Phases model



Special situations arise particularly at transitions when entering the MAT program and when terminating a MAT program. The first phase can be called orientation or



induction phase with the goal of retention in the program. There the needs of new clients are often present as immediate needs with life problems. The task-centered model seems suitable there due to its action oriented, time-limited, and brief therapy approach (Reid, 1996) and has been integrated with a crisis intervention model to work with crisis events (Behrman & Reid, 2002). MI has been used mainly as a time-limited, brief intervention, and has been applied to crisis situations, as well (Rullo-Cooney, 1995).

The middle phase can also be called stabilization phase. There the task is general problem solving with problems in living and the goal is maintaining a stable condition. The TCM seems to be best suited here with its focus on resolving problems in living, which can jeopardize stability. This phase can stretch indefinitely particularly when medication take-home privileges are received. Often long-standing clients are deadlocked and progress has stalled. Here MI interventions seem promising to assist clients in resolving ambivalence and helping them moving through the sequence of stages of one more change leading into the last phase in treatment, termination, with the goal of detoxification. This marks the transition to another phase in the same program or to another program. Furthermore, many programs offer aftercare in the form of intensive outpatient treatment within the same agency to stabilize abstinence.

Appropriate treatment goals and session objectives need to be chosen based on the hierarchy of needs and according to the treatment phase, in which a client is, in treatment conceptualized as a problem solving process. Both models, TCM and MI, have strength related to different phases. The TCM provides a flexible approach to the multifaceted

problems and MI fits with the different beginnings and transitions between the phases of treatment.

## *2.2 Medication Assisted Treatment*

### *2.2.1 History of Medication Assisted Treatment*

In 1947 methadone was approved by the FDA as an analgesic and by 1950 used to treat the pains from opioid withdrawal (CSAT, 2005a). It is a synthetic opioid which is capable of replacing other opioids such as heroin and thus capable of either ameliorating or even preventing withdrawal pains (Dole, Nyswander, & Kreek, 1966). In the mid-1960s, methadone was developed as a treatment for opiate addiction. It was found that by maintaining a certain level of methadone through daily application enabled opioid addicted persons to avoid the up and down of craving and intoxication and, thus, regain better social functioning (CSAT, 2005a; Dole & Nyswander, 1965). Since then, methadone treatment has been studied extensively. Some consider it one of the best-researched medications in modern medicine (CSAT, 2004b).

MAT is also one of the most regulated forms of treatment. MATs are a highly regulated form of medical care, which consists of the use of the medication that is prescribed by medical practitioners and dispensed by licensed nursing personnel. In order to be admitted to methadone treatment, U.S. Food and Drug Administration standards require a minimum of one year of chronic opiate addiction (Mirin et al., 2000). According to federal practice guidelines there should be a diagnosis of physical opiate dependency and of chronic addiction. Further rules dictate a minimum of counseling and regulate take home privileges (FDA 21 CFR Part 291) (Rettig & Yarmolinsky, 1995).

Today physicians can select between different pharmaceuticals for use in a MAT. Methadone requires daily application; buprenorphine, which has a longer half-life and therefore does not require daily dosing, allows for more flexibility in treatment and employment (CSAT, 2004a). Another pharmaceutical that has been developed recently, Levomethadyl-acetate (LAAM), is considered unsafe (Vocci & Ling, 2005).

CSAT computed that more than 205,000 individuals were admitted to methadone treatment programs in 2001 (Parrino, 2002). According to a thorough review by the American Methadone Treatment Association, there were 179,000 patients receiving MMT at the end of 1998 and 100,000 receiving other forms of treatment (American Methadone Treatment Association, 1999; Kreek & Vocci, 2002). The European Monitoring Center reported estimates of world wide 500,000, distributed to 300,000 in Europe, 110,000 in the U.S. and 50,000 in Germany, receiving some kind of substitution therapy. The rate of use of MATs in different European countries varied from 10 – 50% (Europäische Beobachtungsstelle für Drogen und Drogensucht, 2002; Simon et al., 2002).

In the following sections, I focus on the use of methadone as the medication of choice for two reasons. Most of the clients at the chosen site for the dissertation study were substituted with methadone. Only a small number received the newer alternative, buprenorphine. Furthermore, the effectiveness of buprenorphine was still researched (West et al., 2004), and no distinct psychosocial treatments have been developed for the different medications. It seems likely that client and agency conditions, not the type of medication, determine a differential indication for the psychosocial component of treatment. Therefore, I concentrated on MMTs as a generic type of program and more

specifically on the development of a psychosocial treatment for a MMT setting that may be used within other MATs, as well.

### *2.2.2 General Effectiveness*

The field of research on substance abuse treatments is vast. Over 2,000 controlled trials have been published which mention the term “substance abuse” (Davoli & Ferri, 2000). A bibliography about effective medical treatment of heroin addiction (which also includes non-medical psychosocial treatments), put together by the National Library of Medicine and NIDA, lists 941 entries (Conway & Cooper, 1997).

Among the treatments for opiate addition methadone treatment is currently considered the most effective (Kreek & Vocci, 2002; Parrino, 2002; Rettig & Yarmolinsky, 1995). MMT has been investigated in more than 300 reports (Rettig & Yarmolinsky, 1995). The general benefits of MMT are well established and include lowered death rates, decreased use of opiates, reduced use of other drugs, health benefits, and reduced crime rates (Ball & Ross, 1991; Farrell et al., 1994; National Institutes of Health, 1998; Rettig & Yarmolinsky, 1995). MMT is also cost-effective (Barnett, 1999; Schilling, Dornig, & Lungren, 2006) and considered beneficial from a public health and harm reduction perspective (Brands, Blake, & Marsh, 2002). Leaving substance abuse untreated costs \$3600 per person and month, incarceration about \$3300, and MMT \$290 (NIDA, 2004).

### *2.2.3 Program Modality: Maintenance versus Detoxification*

There are two basic types of methadone treatments: Methadone detoxification and MMT. MMT is indicated for chronically relapsing patients who do not benefit from time-

limited detoxification programs. Two large studies looked at treatment outcome as related to program modality.

A stratified random sample of 2,966 clients out of 10,010 clients of the national Drug Abuse Treatment Outcome Study (DATOS) has been evaluated in a longitudinal study in the U.S. (Hser, Anglin, & Fletcher, 1998). The same sampling procedure was applied for 549 clients from a purposive sample of agencies in the UK (Gossop, Marsden, Stewart, & Treacy, 2002). The program modalities that have been investigated in the studies included inpatient short term and long-term abstinence oriented programs, MMT programs, and methadone detoxification programs. A third, smaller study of 179 screened participants out of 858 volunteers compared MMT programs and methadone detoxification programs only (Sees et al., 2000).

Each of these studies had a follow-up after one year. The results in these studies were similar: Reductions in drug use have been observed across modalities and general benefits like reduction in crime could be seen. There was a significant effect on outcome found due to modality controlling for use level at intake (Hser et al., 1998). MMT was found to be more effective than detoxification or time-limited MMT (Sees et al., 2000). Outpatient methadone treatment was found to be less effective for less-than-daily users and in reducing cocaine use. However, the reduction of problems could not be attributed as having a causal relationship with the factor of program modality because it was found that different modalities attract clients with certain drug use patterns and there was no random assignment to the program modalities (Gossop et al., 2002; Hser et al., 1998). The results, therefore, cannot simply support a shift of resources to the less costly

detoxification programs (Sees et al., 2000). Rather it is suggested that service needs of clients may be substantially different and not met the same way by different treatment modalities (Hser et al., 1998).

#### 2.2.4 Program Modality: Maintenance only versus Enhanced Services

MMT can again be split in two basic types: medication only and medication with enhanced services also called adjunctive or ancillary services or psychosocial services. Of these two, methadone alone may be the least expensive, but has also shown to provide only little improvement (Rettig & Yarmolinsky, 1995). The seminal study pointing to the necessity of psychosocial services showed that patients receiving methadone alone had to be transferred out of the program due to continued drug abuse (McLellan, Arndt, Metzger, Woody, & O'Brien, 1993). Therefore, dispensing methadone only without any psychosocial services or counseling is considered substandard practice. Effective MMT in general involves the administration of medication and additional psychosocial services. Programs with higher success rates had the following characteristics: A focus on rehabilitation, an orientation toward long-term maintenance, high quality of counseling services provided to patients, and a high level of organizational functioning (CSAT, 1992). While it is well agreed upon that methadone needs ancillary services, there is great variability in available treatments (Rettig & Yarmolinsky, 1995). The challenge for practice and research is to consider the multiple needs of the population and the variability in the quality of treatment.

Researchers have debated which ingredient of treatment, the provision of methadone, the counseling, or the program structure is mostly responsible for inducing

change, and they have called for further studies to determine the most effective method of delivery for MMT (Farrell et al., 1994). Different clients with different needs may also differ in their benefit from different add-on psychosocial treatments (Stine & Kosten, 1997). Admission to the treatment in general and treatment planning, thus, should always be based on a comprehensive evaluation of the client's psychosocial needs.

#### *2.2.5 Treatment Practices*

There are many different ways to compare methadone treatments. Studies focused on the influence of key methods and practices within MMT, on the quality of psychosocial services, on client characteristics, and how these factors impact treatment outcome, instead of program modalities. A large study focused on treatment practices and looked at secondary data from a panel study in 1988, 1990, and 1995 (D'Aunno, Folz-Murphy, & Lin, 1999). The sampling frame was a list of 587 MMT units. A stratified random sample of 172 was chosen and evaluated for changes from 1988-1995. The key practices that have been identified were client influence on dosage, dose-limit, and length of time in treatment. A level of 60 mg/day is the recommended minimum and it was hypothesized that giving the client influence on dosage decisions is linked positively to treatment retention. A significant association was found between client influence on dosage as the independent variable and increase in length of stay, which is positively related to treatment success (D'Aunno et al., 1999).

#### *2.2.6 Differential Effectiveness of Additional Psychosocial Services*

Psychosocial interventions are essential components of a comprehensive treatment (Mirin et al., 2000). A treatment program usually combines a number of

different treatment elements. When used in isolation a treatment is commonly not effective (Mirin et al., 2000). The psychosocial services and the counseling that is offered vary greatly in MMTs. The search for the right components reflects the idea of matching treatment and client needs. In a seminal study (McLellan et al., 1993), it was examined whether the addition of counseling, medical, and psychosocial services would contribute to more effective MMT with 92 male participants who were randomly assigned to three different levels of counseling intensity. Methadone alone had so little beneficial effects that 69% of this treatment group had to be referred elsewhere. The group with access to the enhanced services had the most improvements measured by the Addiction Severity Index (McLellan et al., 1993; McLellan, Cacciola, & Fureman, 1996). In another study a higher level of intensity, a 25 hours per week treatment program, led to no better outcomes than once weekly counseling, supporting the effectiveness and the greater cost efficacy of weekly counseling (Avants et al., 1999). The inclusion of other types of societal costs than costs for counseling may change the cost-ratio of this comparison. However, both studies confirm the clinical efficacy of a minimum of enhanced services. Ball and Ross also specifically mention the need for more and better services for most programs they investigated (Ball & Ross, 1991) in their effort to open the black box of MMTs by taking a closer look at the service components.

Recommended services are practical support especially at beginning phase (CSAT, 2005a) and focused coping skills training (cognitive-behavioral treatment [CBT]) which enables better maintenance of abstinence of secondary drug use while on methadone (Avants, Warburton, & Margolin, 2000).



### *2.2.7 Cognitive-Behavioral Treatments and Task-Reinforcement*

Of particular interest to this research project is another integration of treatments. In a series of studies, CBT and a task-centered treatment component were combined with behavioral contingencies (Iguchi, Belding, Morral, Lamb, & Husband, 1997; Magura, Rosenblum, Fong, Villano, & Richman, 2002; Villano, Rosenblum, Magura, & Fong, 2002). The task-centered treatment component that Iguchi and colleagues devised uses an intervention that is strikingly similar to the TCM without referring to it (1997). Instead of reinforcing abstinence or targeting single behaviors, the investigators suggested reinforcing the accomplishment of tasks that were individualized for each client (Iguchi et al., 1997). This treatment condition resulted in declining use of secondary drugs, and more sessions attended. Gains were retained at follow-up (Iguchi et al., 1997). Magura and colleagues combined this task-related component with CBT and compared it to standard treatment (2002). Time effects for both treatment conditions were rather strong. The task-related component may have contributed that the clients were successful in obtaining more services as compared to the standard treatment group. However, the efficacy of the study condition (the task-related component and CBT) which was also the more intense treatment condition (against CBT only) was rather weak (Magura et al., 2002).

In a similar study Villano and colleagues compared the addition of a behavioral contingency intervention (similar to the task-centered model proposed here) to an intensive CBT. The enhanced treatment with its focus on behavioral tasks that contributed to attendance and to solve problems in living succeeded in early retention and

yielded better outcomes measured by less secondary drug use and longer retention (Villano et al., 2002). These studies, even though they did not acknowledge the contribution of the task-centered model, still encourage further study of task-centered components for MATs. More detail on how these approaches are similar to the TCM is provided below.

#### *2.2.8 Summary of Findings for Medication Assisted Treatments*

Wide diversity exists in research approaches investigating MATs because of the complex nature and the multiple factors influencing treatment outcome in MAT. While some relationships between treatments and positive outcomes have been identified, there is no clear understanding of what elements are responsible for specific changes (Ball & Ross, 1991). Future research needs to consider the elements of the treatment process to determine the minimum condition for effective intervention (Farrell et al., 1994; Hser et al., 1998). It has not been determined yet which types of services have to be included to make a program most effective for which clients. There is a trend indicating that program and treatment factors override client characteristics in their influence on outcome (Heinrich & Lynn, 2002). Only limited research has examined the effectiveness of programs applied in real-world circumstances (Hser et al., 1998). In summary, the following conditions seem relevant: Successful programs prescribe higher doses, accept successful maintenance as a goal rather than abstinence, offer higher quality of counseling, provide good agency functioning, and their clinicians maintain a better therapeutic alliance (D'Aunno et al., 1999; Farrell et al., 1994).

The practice world has not yet adopted all the findings relevant to best practice in

MAT. Federal regulation only requires a minimum of counseling (Rettig & Yarmolinsky, 1995). Consequently, there is a great variability in available treatments and many programs only apply the minimum, which according to research findings cited above constitutes substandard practice (D'Aunno, Folz-Murphy, & Lin, 1999). Important restrictions made to MMT are the availability of concomitant psychosocial services, limiting dosage (Brady et al., 2005) and the length of treatment. It is fairly well agreed upon that the dispensation of methadone without psychosocial services is not the most effective treatment and that if psychosocial services are offered the outcome is superior (Ball & Ross, 1991; McLellan, Arndt, Metzger, Woody, & O'Brien, 1993).

Most of the restrictions applied to offering additional ancillary services might be due to lack of funding and rules of managed care. The restriction might also be related to the reliance on the medical disease model, and the dominance of the medical profession in treating opiate addiction with substitution therapies preferring medication to behavioral interventions. There continues to be a broad group of agencies using substandard treatment practices due to obstacles to effective treatment, which seem to lie mainly in the realms of social misconceptions and government policy (D'Aunno et al., 1999; U.S. National Institutes of Health, 1998). The prevailing public moral still fosters the attitude of denying the drug to the addict, a viewpoint that is sometimes shared by counselors and professionals.

Research findings support the general conclusion that it is not enough to provide simply more psychosocial services for initiating and maintaining a drug free life, but that tailored services that match patients' needs are warranted (Avants et al., 2000). If services

are matched to client needs, clients tend to stay longer in treatment and are more likely to complete it (McLellan et al., 1997). The different needs of clients and the different effectiveness of treatments call for improved treatment-client matching. Guidelines are needed on how to match successfully client and treatment components (Avants et al., 1997; Buehringer, 2006). The following section addresses the specific challenges that remain for MATs and the areas where social work practice models need to be adapted.

### *2.3 Issues in Medication Assisted Treatment*

Three different dimensions influence any treatment: client characteristics, the treatment (procedures), and agency conditions. In brief, these dimensions are reviewed in terms of how they influence outcomes and how research results influence model characteristics for development.

#### *2.3.1 Treatment Related Issues*

A high rate of dropouts is a major concern in MATs. Retention, hence, is an important goal especially early in treatment. Related to retention is the amount and quality of care an agency can provide. Quality and amount is related to caseloads. High caseloads do not allow social workers to follow individual clinical processes and go beyond elementary case management. Caseworkers in many methadone programs have caseloads of 40-50 clients (Rettig & Yarmolinsky, 1995). It is also likely that a lack of correspondence of a client's stage of motivation with the treatment interventions might be associated with attrition. This lack of correspondence is a factor especially in the case when programs are pushing too early towards detoxification. Factors like limited client participation in decision-making and conflicts with the many rules in MATs seem to be

linked to attrition as well (Caplehorn, McNeil, & Kleinbaum, 1993). Consequently, administrative discharges are common which in turn increase mortality (Scherbaum, Specka, Hauptmann, & Gastpar, 2002; Zanis & Woody, 1998). Clients whose treatment is discontinued and are put on an administrative taper have three to four times higher mortality rates than clients remaining in treatment (CSAT, 2004b). Often times, service limitations are set for treatment programs, which do not correspond to the needs during the course of the rehabilitation process due to restrictions by insurance providers and the lack of insurance coverage among clients (Frances & Miller, 1998). Especially the early phase of treatment is often characterized by many crisis needs, and drop out is most likely then. In response to these needs, both the TCM and MI seem to be capable of keeping clients in treatment due to their principles of client-centeredness and respect of client autonomy.

### *2.3.2 Client Needs Related Issues*

Specific client needs can be framed as a separate category of issues in MATs. Multiple needs for example in daily living, housing, transportation, and child care, as well as financial and employment needs require treatment programs to provide a practical, hands-on approach. On the other hand, comorbidity and multiple substance abuse require a specialized therapeutic component.

Among secondary drug abuse the most common are problematic alcohol consumption which was found in 28 % of patients in a sample of 1685 (Backmund, Schütz, Meyer, Eichenlaub, & Soyka, 2003), cocaine, methamphetamine, marijuana, and benzodiazepine abuse. Benzodiazepine, which was found in 44 % of this sample, is

considered by European researchers as seriously influencing comorbidity, the clinical course of treatment, and mortality (Backmund et al., 2005; Weizman, Gelkopf, Melamed, Adelson, & Bleich, 2003). In the U.S. professionals seem to be less concerned although fatal overdoses and negative effects on treatment have been reported ("Use and abuse of benzodiazepines," 2004). The models selected for this development project have relevant contributions to make. MI has developed techniques to deal with relapse. The TCM can either address one problem at a time (e.g. the secondary drug use), and in a flexible way shift focus to related issues (e.g. family stressors, work problems), or incorporate specifically needed components for example contingency plans, skills training, or a family session.

Multiple needs require structure and focus. The TCM addresses this requirement. Multiple needs arise in a crisis fashion often at the beginning of treatment and require attention throughout the treatment process. The situation of multiple needs also requires frequent decision making for which MI provides the techniques. The two transition points, entry in MAT and detoxification toward the end of MAT, require dealing with ambivalence. Models often are designed for clients who are already motivated and ready for treatment, whereas in MAT clients often need to first stabilize and become ready for more advanced treatment. The new model needs to be capable of assisting with this needs profile.

The organization of MAT requires the cooperation of at least two different professions, the medical and the social work profession. The communication, the rules and procedures within an agency need to be clarified and specified in order to facilitate

beneficial outcomes and treatment progress. The new model can only be one part of this interrelated system of cooperation and services that comprises the operation of a treatment program. If agency policies are not in place and vital inter-institutional relations are not worked out and clarified, a better model for one part alone will not significantly improve services in general.

## *2.4 Task-Centered Model*

### *2.4.1 History and Theory Development*

The TCM originated from within social work. It grew out of social work generalist practice and casework (Payne, 1997). Theory development was sparked by the results of the comparison of the effectiveness of short-term vs. long-continued services consisting of casework with families (Reid & Shyne, 1969). Basic empirical data were gathered beginning in 1965. Results showed that families which received planned services limited to eight interviews, made more progress than those who had far more services (Reid & Shyne, 1969).

Encouraged by these outcomes, William Reid and Laura Epstein, the original founders and developers, laid the foundations for the TCM in the 1970s by synthesizing the findings on short-term models and constructing the TCM in the form of a practice model (Reid & Epstein, 1972). The TCM is drawing on previous knowledge from psychosocial casework (Hollis, 1972) and problem solving (Perlman, 1957) making use of a broad range of theories of its time (Fortune, 1985). According to a later account, the model also draws from learning, behavioral, and cognition theories as well as cognitive-behavioral and structural family therapy approaches (Reid, 1996). The developers were

open to any useful technique for carrying out specific steps prescribed by the model which attests to their pragmatic stance and the integrative character of the model (Fortune, 1985) without being attached to any particular behavioral theory (Gambrell, 1994) or any other psychological or sociological theory (Reid, 1992). The model provides a basic structure that can incorporate interventions from different theoretical orientations.

#### *2.4.2 Research on the Task-Centered Model*

Over the years, research on the TCM moved along the phases of the paradigm of model development research from the early stages to more rigorous research on effectiveness (Rothman & Thomas, 1994). Effectiveness of the TCM has been established in many areas of practice. Judged by its empirical status, a criterion suggested by Fischer (Fischer, 1978), it is one of the most thoroughly researched models in social work (Reid & Fortune, 2000; Reid & Fortune, 2004).

The first controlled experiment investigated the effectiveness of different in-session activities for task-planning and guided practice (Reid, 1975). The next developmental step was to test applications of the TCM to a variety of settings and problems for effectiveness (Reid & Epstein, 1977). These trials also yielded information on developmental aspects and about which part of the model needed more work.

Further improvements made to the TCM required a reformulation. New guidelines were presented with the results of a further controlled experiment, which provided evidence of the effectiveness of the model (Reid, 1978). In this study, TCM was compared to supportive attention indicating an overall beneficial effect on problem change. Imre criticized this control condition because it discredits supportive attention as



being non-effective (Imre, 1982). The results of seven later experimental studies, which used control groups demonstrated effectiveness through the most rigorous tests for clients with psychiatric diagnoses and problems in living and for school related problems of children (Reid, 1997b). Other findings on model characteristics of the TCM presented in this summary article and the broad body of research on brief-treatment supports the flexible use of time limits. Correlations of positive outcomes with task preparation and degree of problem focus in the TCM could be established. The correlation of client commitment to carry out the task with task accomplishment parallels findings of research on MI. Besides these main findings, a large body of research has accumulated on TC applications to different problems and situations.

#### *2.4.3 Scope of Researched Applications*

Interventions guided by the TCM can target all systems level, micro, mezzo, and macro (Lehmann & Coady, 2001). The TCM is generic, and can be applied in almost any setting. TCM was explicitly applied to group work (Garvin, 1974; Lo, 2005; Woodcock, 1995) and family work (Fortune, 1985), and mostly to individuals (Reid & Epstein, 1977).

The model is geared toward the broad range of general problems of living (Reid, 1992). The application of the TCM has been described for work with the elderly (Kaufman, Scogin, Malone-Beach, Baumhover, & McKendree-Smith, 2000; Naleppa & Reid, 1998, 2003), families (Bielenberg, 1991; Fortune, 1985; Wodarski, Saffir, & Frazer, 1982), single mothers (Raushi, 1994), children, adolescents, medical patients (Pomeroy, Rubin, & Walker, 1995), people who are homeless (Epstein & Brown, 2002),

within areas of practice like the school system (Epstein & Reid, 1977), foster care, corrections, mental health (Garvin, 1992), health (Alley & Brown, 2002), and HIV/AIDS (Pomeroy et al., 1995). Modifications have been made to make the model fit for mediation (Donohue, 1996), higher education (Fortune & Rathbone-McCuan, 1981), and field instruction (Caspi & Reid, 1998, 2002). Furthermore, research on the TCM has covered issues in agency management, minority and ethnic groups, disabilities, international and cross-cultural issues (Epstein & Brown, 2002; Naleppa & Reid, 2003; Reid, 1996).

The TCM has also made its way into other countries; among those are Canada (Reid & Epstein, 1985), China (Lo, 2005), Germany (Reid & Epstein, 1979), Israel (Reid & Epstein, 1977), Japan (Doel, Marsh, Komatsu, & Ito, 1995), the United Kingdom (Doel & Marsh, 1992; Marsh & Doel, 2005; Payne, 1997), South Korea, Switzerland, and The Netherlands (Naleppa, 2001). One of the greatest achievements of the model I see in terms of influencing the profession of social work is the incorporation of its use into generalist practice (Hepworth et al., 2002; Lehmann & Coady, 2001; Tolson, Reid, & Garvin, 2003). The TCM has found acceptance in the discipline of social work and it was included in the canon of theories (Turner, 1996). Another valuable contribution to establishing standards and guidelines for social work practice was the compilation of best-practice procedures into a collection of task planners (Reid, 2000).

The latest works attempting to further develop the model addressed specific and narrow applications (Alley & Brown, 2002; Kaufman et al., 2000), introduced it to a new country (Lo, 2005), or merged it with other approaches, for example case-management

(Naleppa & Reid, 2000, 2003). Reid had suggested that future research might focus on new problems (Reid, 1997b). The application and introduction to the substance abuse treatment field is such an endeavor.

#### *2.4.4 The Task-Centered Model and Substance Abuse Treatment*

Although the TCM was still in the early developmental stage, the main authors were initially critical of the application to chronic conditions (Reid, 1978). Substance abuse is such a condition. Within this area, the TCM has been applied to alcoholism (Wasko & Reid, 1992) and to a population of Native Americans (Nofz, 1988). However, it has not been tested extensively.

The advantages of brief treatment have been recognized in the substance abuse treatment community, but no cross reference to the findings through the TCM development process has been made (CSAT, 1999). Still, useful knowledge for substance abuse treatment has been collected within the TCM development process. The “task-planner”, a compilation of evidence-based knowledge framed for use in the TCM, includes a set of typical tasks relevant for use in addiction treatment (Reid, 2000). The following modules are described there: alcoholism, craving, discharge planning in addictions, HIV prevention, homelessness and need for shelter and employment, and non-adherence to medical treatment (Reid, 2000). The applicability of TCM has not been researched for the use in MATs. The practice used by a group of researchers mentioned above in the section on MATs appears to be quite similar to the TCM, although the authors did not refer to it in any way (Iguchi et al., 1997; Magura et al., 2002; Villano et al., 2002). Their intervention prescribes working on client-acknowledged and individual

treatment plan related problems in living. Caseworkers are instructed to devise tasks that are individually tailored, have utility for the client, match client ability, and have a high probability of being solved. Task accomplishment is reviewed weekly, has to be objectively verified, and is reinforced by a voucher. Counting the number of earned vouchers is equivalent to measuring task accomplishment in the TCM. All of these features are part of the TCM. There is resemblance even in details for example the incremental task plans and the possible use of external reinforcements which was described in the literature on the TCM before (Fortune, 1985; Reid, 1978).

#### *2.4.5 Categorization and Description of the Task-Centered Model*

In a brief theory analysis, task-centered work can be represented as a present-oriented, time-limited problem-solving approach (Reid, 1996), a prescription of steps to follow, a scaffold, or a structure of intervention. It is not a paradigm by itself, it is rather building on the problem-solving paradigm and others models of casework (Hollis, 1972; Perlman, 1957). Problem solving is a very basic activity for humans. The philosopher Leszek Kolakowski (1973) describes human existence as facing two basic needs, gaining mastery over one's environment and the need for orientation or meaning. Problem solving can be seen as the basic human activity answering the basic human need of shaping one's environment. Framed this way problem solving becomes a generic and universally agreed upon paradigm indispensable for an activity like social work (Epstein & Brown, 2002). The TCM focuses on this basic activity. Major textbooks in social work education build on problem solving and, therefore, include the TCM (Hepworth et al., 2002; Tolson et al., 2003).

Some view the TCM as a mid level theory because it includes both, abstract principles and concrete guidelines for practice (Lehmann & Coady, 2001). However, considering its clear focus and prescriptions of practitioner behavior, it is rather a practice theory (Reid, 1996). According to the criteria established by Payne, it falls under the individualist-reformist type of practice theories (Payne, 1997).

#### *2.4.6 Principles and Key Concepts of the Task-centered Model*

The main principles and key concepts, which represent the core of the TCM, are:

- Focus on client acknowledged problems,
- Collaborative relationship,
- Empirical orientation,
- Integrative stance,
- Systems and contexts,
- Planned brevity,
- Structure, and
- Tasks (Fortune, 1985; Reid, 1996).

Behind the first two principles, focus on client acknowledged problems and collaborative relationship, an overarching principle can be recognized, the respect of client autonomy, which is a central social work value (National Association of Social Workers, 1999). Client agreement on whether and how to work on what is one of the central principles in TCM. Client and practitioner are supposed to work out a conjoint problem definition and to contract. This principle also means that clients are actively involved and not merely “treated”. Proponents of the TCM hold that humans need

assistance only if they are unsuccessful in achieving what they want or lack resources (Reid, 1978).

The assumptions about human nature, underlying the conceptualization of humans as active problems solvers in the TCM, entail that humans are endowed with free will and dignity. Phrased from an anthropological standpoint it means, humans are not bound by instincts (Gehlen, 1988). They are therefore free and capable of making rational choices and acting goal-directed. Humans are not directed by unconscious drives and confined by environmental contingencies, however, they react to them (Reid, 1996). Such a view of the person in turn affects the role of the practitioner and the practitioner-client relationship. The TCM requires an attitude that expresses a “collaborative spirit” and shifts away from a style of helping, where “the practitioner acts” and “the client reacts” confined to fixed roles (Reid, 1978 p. 177). The practitioner in the TCM, therefore, avoids a hidden agenda (Reid, 1987). This is also called a partnership approach (Payne, 1997).

Even though following an outlined structure might have a technical feel to it, critique by Imre (1982) that the TCM is neglecting the relationship dimension, seems not justified. Adherents to the TCM accept the client as an expert, and practice as collaterals. That the client is viewed as resourceful, in principle capable, and with unconditional positive regard, as proposed by Rogers (1951) and reclaimed by Imre (1984), is congruent with the principles of the TCM.

However, diagnoses, which some more radical constructivists oppose and at times can be detrimental to the self-concept of a client, are used in the TCM to determine

appropriate interventions. The supportive dimension of the client-practitioner relationship is balanced with an element of expectancy, holding the client accountable to agreed upon goals (Perlman, 1957; Reid, 1996). The point of view a model takes toward human nature and whether humans are seen as active agents is a major criterion in judging models as appropriate for social work (Witkin & Gottschalk, 1988). According to this criterion, the TCM can be considered truly a social work model.

An important principle in the TCM is the idea to make the best use of scientific research and maintain an empirical stance. The empirical principle relates to two aspects, to model building and to practice. The TCM not only was developed using the paradigm of model development research, its expansion was also accompanied by rigorous research, and furthermore it incorporates self-evaluation within its procedures. The empirical principle of the TCM encompasses the modernist scientific method as the way of approaching practice, requiring the practitioner to act as a scientific-practitioner who systematically evaluates her practice (Reid, 1996). Accordingly the process of task-centered work incorporates the use of instruments that have dual utility for clinical and research purposes like the task review and the problem change evaluations (Reid, 1985). In her practice, the practitioner only draws on knowledge derived from case data and avoids speculation. The practitioner using the TCM is required to measure the client's view on problem severity, before and after tasks are carried out. Task accomplishments are also routinely rated and documented. However, despite empirical stance and structure, the TCM as a model is not as rigorous as the behavioral model (Reid, 1992). Flexibility makes the TCM attractive to social work.

In my view, the empirical principle can be interpreted more broadly as the paradigmatic view of post-positivist functionalism (Burrell & Morgan, 2000). Practice knowledge in the TCM is firmly rooted in post-positivist science. Such an orientation includes epistemological objectivism and ontological realism. The accumulation of generalizable knowledge is pursued and valued as evident through systematic model development (Reid, 1983). There is strong emphasis on evidence-based practice in the TCM, which is shown in the attempt to create a collection of best-practice interventions, the so-called task planners (Reid, 2000; Reid & Fortune, 2004). The empirical stance also opens up the door for model adaptations when new knowledge emerges within the profession. However, empirical validation is paramount. This pragmatic orientation of being open and integrative only goes so far as new knowledge for practice is based on empirical testing and new practices have demonstrated efficacy. This is in line with the basic tenet of science, skepticism before empirical validation.

This way empiricism leads to the next principle, the integrative stance. The TCM is in principle open for incorporating techniques from other orientations as long as they help advance client goals in an effective way. The TCM provides the structure for problem solving, however, which technique in particular is chosen on the micro level to carry out a certain task, for example role play, cognitive restructuring or behavioral incentives, depends on the known effectiveness and utility of the technique for the task at hand. Techniques or interventions stemming from different approaches can be used within the frame of the TCM as long as they are compatible with its basic principles. This orientation fits under the umbrella of pragmatism or technical eclecticism (Norcross &



Goldfried, 2005).

“System and context” as a principal orientation in the TCM refers to the notion, which is germane to almost all social work, that every human problem is embedded in a social context. Systems theory, the corresponding framework, views the client as a system within subsystems within the larger societal system (Hepworth et al., 2002). The life model of social work practice conceptualizes social work problems at the transition points of individual and context (Germain & Gitterman, 1996). The social work professions’ code of ethics calls for constant attention to the social context with a mandate for social change against social injustice (National Association of Social Workers, 1999). The practitioner using the TCM is aware that changes in context may be needed to solve a problem or prevent its recurrence (Reid, 1996). The ethical principle of attending to social justice, the focus on the societal context, reinforces what Mills required from a social scientist with his famous proposition that private troubles need to be turned into public issues (Horowitz, 1963).

The central concept of the TCM is the “task”. Tasks are “efforts to resolve any problem of living” (Reid & Epstein, 1972, p.95), or “planned problem solving actions” (Naleppa & Reid, 2003, p. 126). The TCM is built on the notion of the task carried out by the client as the focus of treatment (Studt, 1968) and the central means for change; the action of carrying out a task is the most direct way of achieving desired goals (Reid, 1996). Tasks can be cognitive or behavioral. They can be carried out by the practitioner or the client or conjointly in the session, but are carried out mostly outside in-between sessions. In any case, the client has to agree on the task (Reid, 1992).

### 2.4.7 Structure of the Task-Centered Model

Based on empirical orientation, the first structural characteristic of planned brevity was derived from earlier research on the TCM (Reid, 1996; Reid & Shyne, 1969). This therapeutic principle has been picked up by managed behavioral health organizations. That treatment has to be brief has become an economic requirement for most treatment efforts (CSAT, 1999; Frances & Miller, 1998; Norcross & Goldfried, 2005). The TCM suggests planned brevity of 6-12 sessions. Re-contracting is always possible and efforts have been made to integrate re-contracting in long-term client practitioner relationships (Reid, 1997b).

Structure in the TCM means a clinical strategy, a step-wise progression or a “set of procedures” (Epstein & Brown, 2002, p. 92), following an ordered array of steps (Epstein & Brown, 2002; Naleppa & Reid, 2003; Reid, 1978; Reid, 1996). The presentation of the steps is taken from (Reid, 1992):

#### Initial Phase - Assessment, Exploration and Setting Goals

- Explanation of Role, Purpose, and Treatment Procedures
- Time Limits
- Identifying Problems and Assessment
- Selecting Target Problems
- Prioritizing Target Problems
- Exploring Target Problems and Developing Problem Specification
- Setting Goals
- Using Contracts

### Middle Phase - Task Planning and Implementation Sequence

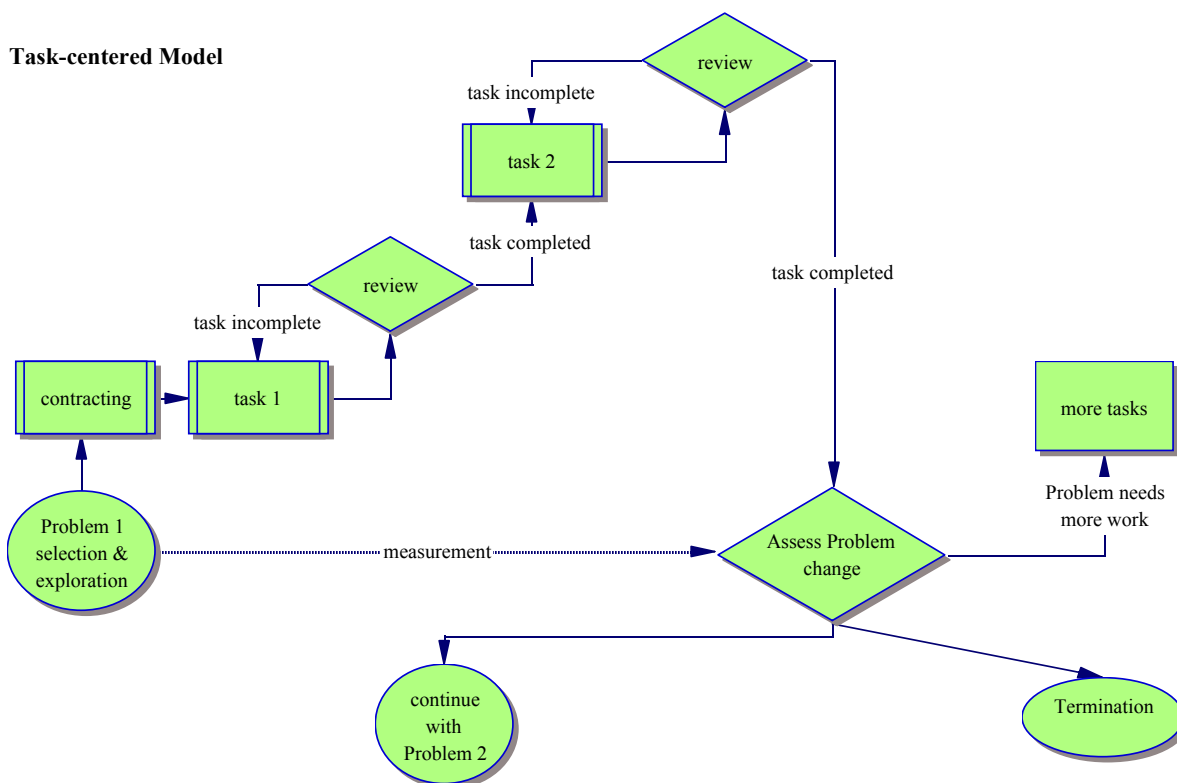
- Tasks
- Generating Task Alternatives
- Selecting Tasks
- Establishing Incentives and Rationale
- Planning Details of Implementation
- Simulating Task by Using Session Tasks
- Anticipating Potential Obstacles
- Summarizing and Task Agreement
- Implementation of Tasks Between Sessions
- Task Review at Beginning of Next Session
- Review of Target Problems
- If Needed, Making Revisions or Developing New Tasks

### Termination Phase

- Termination Session
- Final Problem Review
- Review of Accomplishments and Problem-Solving Skills
- Future Plans

The process of maneuvering through the structure of these steps is mainly linear; however, beginning with the task review, which closes a feedback loop, it becomes self-regulative, circular and iterative. The practitioner and the client enter in a self-evaluation process. At the task-review a collaborative decision is made whether the task has been accomplished and to what degree, if a repeated effort is required, further obstacles have to be removed first, or whether the task has to be changed altogether (Reid, 1992). A flow diagram of the basic model is presented in the following figure:

Figure 6. Schematic view of the Task-Centered Model



#### 2.4.8 Theory of Change in the Task-Centered Model

In order to appreciate fully the functioning of a practice model one needs to find out the assumptions about change. What does the model tell us about how change is brought about? According to a logic-model approach, any assumptions about change build on the prior conception of the problem. Therefore, we need to specify the assumptions about the nature of the problem within the model as well.

The TCM deals with a broader class of problems than behavioral work (Payne, 1997). It takes problems as given, to be resolved pragmatically (Payne, 1997) and no insight or underlying cause is sought. No theories are used to determine and formulate

target problems (Lehmann & Coady, 2001). The client is supposed to name and define the problem. The empirical stance requires that hypotheses (like diagnoses) about client problems need to be grounded in case data (Naleppa & Reid, 2003). In general, problems are seen as unsatisfied wants, which are shaped by belief systems (Reid, 1992). The unsatisfied status of wants is traced back either to a lack of resources or to deficiencies in functioning. Problems are classified as interpersonal conflict, dissatisfaction in social relations, problems with formal organizations, difficulties in role performance, decision problems, reactive emotional distress, inadequate resources, or the residual category of other (Epstein & Brown, 2002; Reid, 1978).

In the TCM, “change is affected primarily through problem-solving actions or tasks the client and practitioner undertake outside the interview” (Reid, 1978, p. 83), through specific, structured intervention activities (Lehmann & Coady, 2001). Practitioner behavior in the session serves as a model for the client. Planned and envisioned solutions are role played and rehearsed in sessions, as well. The strong focus on the task makes the model also present oriented (Naleppa & Reid, 2003) which can be viewed as another principle in its own right.

The approach of rather straightforward problem solving resembles rather linear causality, leading efforts for change straightforward from the problem across the obstacle to strengths and resources to solutions. However, grounded in a systems view, multicausality is acknowledged and recognized. Obstacles due to multicausality are anticipated when tasks are planned and can be approached as sub-tasks with a separate strategy. Direct intervening towards change through a practitioner may be performed,

coined “practitioner-tasks” (Reid, 1992, p.53), but always under the preconditions of informed consent and avoiding a hidden agenda (for example when the practitioner is trying to coax a client towards detoxification without securing agreement before).

#### *2.4.9 Interventions and Techniques in the Task-Centered Model*

The steps listed under the outlining of the structure resemble interventions carried out by the practitioner. The literature on the TCM provides ample detail how each of these steps is carried out. The following list provides examples of interventions, which have been specified in the TCM to the level of detail that sample questions are provided (Reid, 2000):

- Developing a task,
- Task selection,
- Task agreement,
- Planning specifics of implementation,
- Establishing incentives and rationale,
- Anticipating obstacles,
- Simulation and guided practice, and
- Task review.

These steps, when combined and ordered, are called the “Task Planning and Implementation Sequence” (TPIS) (Doel & Marsh, 1992; Epstein & Brown, 2002; Reid, 1975). Other accounts of the model list instructions for the practitioner and call them practitioner tasks, roles, or functions, and describe how to facilitate the different steps in detail for example:

- generating task possibilities,
- establishing motivation,

- summarizing (Reid, 1992).

Interventions from other approaches are incorporated, depending on utility for the particular problem or task to be achieved, such as a relaxation technique. They can be taken from behavioral, cognitive-behavioral, family systems, narrative, crisis intervention or any other model. More specifics on how to perform the TCM, for example on what interviewing techniques to use during contracting, are detailed in many volumes (Epstein & Brown, 2002; Hepworth et al., 2002).

The techniques of interviewing in the TCM are shared with almost all forms of interviewing amongst which one finds reassurance, direct influence, exploration, person-in-situation reflection, clarifying antecedents, and treatment structuring (Epstein & Brown, 2002). Common and essential to all forms of treatment, and therefore for the TCM, as well is the development of a positive treatment alliance. More detail on how to apply the model in the research project is provided in chapter 4.

## *2.5 Motivational Interviewing*

### *2.5.1 History and Theory Development*

Motivational interviewing (MI) is defined as a “client-centered directive method for enhancing intrinsic motivation for change by exploring and resolving ambivalence” (Miller & Rollnick, 2002, p. 25). MI was mainly developed by William R. Miller and Stephen Rollnick (Miller & Rollnick, 1991; Moyers, 2004). However, they concede in their acknowledgement “there is little that is truly original in MI” (Miller & Rollnick, 2002, p. xvi). MI builds mainly on the teachings of client-centered therapy (Rogers, 1951) and the transtheoretical model of change (Prochaska, DiClemente, & Norcross,

1992). Principles of the model have been published as early as 1983 and been refined since then (Miller, 1983).

The developers describe MI as “a way of being with people” (Miller & Rollnick, 2002, p.34). In that sense, it is rather “a style of counseling”, a therapeutic language, or an attitude than a method in the sense of a prescribed procedure of steps like the TCM or “a set of techniques” (p.35). This style marks a departure from the traditional confronting style in drug counseling, which was prevalent in the 1970s and 1980s and still is popular today.

MI is a form of brief treatment and can be conducted in as few as two sessions (Weiss, Najavits, & Mirin, 1998). Originally intended only as a prelude to treatment, it was discovered that it was associated with behavior change even when used as stand-alone intervention (Yahne & Miller, 1999). Starting with the first edition (Miller & Rollnick, 1991), MI literature was disseminated widely and has been translated into Chinese, German, Italian, Portuguese, Spanish and other languages.

### *2.5.2 Principles and Key Concepts of Motivational Interviewing*

Because it is a style rather than a fixed procedure, the principles, which delineate the spirit of the model, are of great importance. In presenting the principles and key concepts, I follow the latest edition of the major handbook on MI (Miller & Rollnick, 2002). Everything in the model hinges on the concept of motivation to change. The counterforce to motivation to change is ambivalence about change. Ambivalence is represented by the shifting between or counterbalancing of a) “resistance to change” and the other side of the coin b) “change talk”.



The central concept in MI is motivation. In MI motivation is viewed as a modifiable process depending on client-therapist interaction and changing across situations and environments (Yahne & Miller, 1999). Applying this concept is not so much a question of techniques as it is one of therapeutic style (Yahne & Miller, 1999).

The most abstract notion in MI is the spirit of this style. It can be described by basic principles of a practitioner's way of relating to clients. A major element of the spirit of MI is the idea of collaboration. Therefore, the practitioner is not the sole authority and the client is not coerced. Rather the client's expert status in his or her own affairs is acknowledged. This idea corresponds to and requires the second principle, autonomy. Autonomy refers to the notion that the responsibility for progress and the power of decision-making lies with the client. Practitioners owe respect to the client and his or her decisions about his or her life. Therefore, practitioners need to provide the opportunity for informed choice in treatment and ask permission before giving direct advice.

The third principle is called evocation. It is set in opposition to education, meaning the eliciting of the client's position and not the imposing of knowledge from a patriarchal position of all knowing. This principle is congruent with respecting client autonomy. It also shows how MI is rooted in client-centered therapy. The client is not forced to accept an addict identity and, therefore, less likely to produce behavior that may be labeled as resistant (Karan, Haller, & Schnoll, 1998). A MI practitioner does not attempt to guide or train the client (Miller, Zweben, DiClemente, & Rychtarik, 1992).

Other principles that are prevalent within the model are better called guidelines. These are one level less abstract and therefore more specific. They orient the practitioner

to the general course of practitioner behavior and to the general strategy for the course of the collaboration. They are as follows:

- Express empathy,
- Develop discrepancy,
- Roll with resistance,
- Support self-efficacy (Prochaska et al., 1992)

Expressing empathy reflects that client-centered therapy is the foundation on which MI is constructed. Underlying such empathy is acceptance and respect for the client and his or her positions and values. This acceptance includes understanding ambivalence in which a client might be stuck as a legitimate human experience.

Many clients seemingly seek treatment in order to achieve change, however, appear to be stuck in ambivalence. Developing discrepancy as a strategy relates to the mismatch between clients' current behavior and their larger goals in life or values held. Developing and amplifying this discrepancy relies on the assumption that clients will experience a source of motivation for change from discovering this discrepancy. Discrepancy of deeply held goals and the addictive behavior brought to the client's awareness (i.e., becoming able to distinguish between what one is doing and what one deeply wants to be doing) encourages a reassessment by the client and generates motivation. This needs to be linked to the reinforcement of a realistically optimistic belief in success, providing a perspective and a focus on the future as an additional motivation for change (Miller, Zweben et al., 1992). Regarding this aspect, MI is not neutral nor simply client-centered, it is "intentionally directive" (Miller & Rollnick, 2002, p.38).

Rolling with resistance means to avoid argumentation and meet resistance with acceptance (Yahne & Miller, 1999). It also rests on the spirit of respecting the client. It acknowledges that arguing does not promote change. Rather than taking the logic place of pro-change and thus leaving the corresponding logic place of contra-change to the client, rolling with resistance refuses to take this place and elicits arguments for why to change from the client (Miller & Rollnick, 2002).

All of these principles are congruent with supporting self-efficacy. Developed in the 1970s and researched extensively, self-efficacy refers to client's belief in his or her own ability to succeed with a specific task (Bandura, 1977). Self-efficacy was found to be a good predictor of positive treatment outcome in MI research (Wells-Parker, Williams, Dill, & Kenne, 1998). The practitioner's view of the client's efficacy also has an impact on the client's confidence. Practitioner expectation and client self-efficacy are common factors, which account for positive outcome across different psychotherapies (Drisko, 2004). Enhancing self-efficacy is a general goal in MI (Miller & Rollnick, 2002). It means to bring about change through the mobilization of the client's own resources (Alterman, McLellan, O'Brien, & McKay, 1998; Miller, Zweben et al., 1992).

### *2.5.3 Theory of Change in Motivational Interviewing*

Prochaska and DiClemente developed the model of stages of change (Prochaska et al., 1992). It is also called the transtheoretical model. In the model, behavioral change is conceptualized as proceeding through a sequence of predictable stages. These stages of change are

- precontemplation (not considering change),
- contemplation (ambivalence),
- preparation (considering what to do),
- action, and
- maintenance (Prochaska et al., 1992).

The transtheoretical model was found to apply to a wide range of health related behaviors (Miller & Rollnick, 2002). MI uses the stages-of-change model as its basic framework of conceptualizing the process of change. MI techniques are applied according to an assessment following this underlying model. For each stage, there are certain interventions that are considered more suitable than others. Different therapeutic strategies should be matched according to the client's designated stage in terms of readiness for change (Karan et al., 1998; Yahne & Miller, 1999). This is compatible with the old social work notion of starting where the client is (Goldstein, 1983). MI attempts to assist clients through matched interventions to progress through the stages (Miller & Rollnick, 2002). The stages of change thus provide another type of structure for MI.

Being at a certain stage of change is never static and can shift. In the transtheoretical model, it is seen as a typical part of the change process, that change is not maintained on the first try, that people go back and forth on these phases, and repeatedly cycle through them several times before reaching stable maintenance of a desired new behavior (Yahne & Miller, 1999). In addition, the stage of change might not be the same for each of the multiple problems clients face at the same time. Therefore, readiness to change needs to be assessed continuously and carefully.

#### *2.5.4 Research on Motivational Interviewing*

MI was applied to a wide range of behavioral health problems, including smoking, diabetes, alcoholism, and dual disorders (Miller & Rollnick, 2002). However, the research base on many is still small and therefore insufficient. Empirical studies have been conducted entirely on adaptations of MI as reported in a recent review (Burke, Arkowitz, & Dunn, 2002). This meta-analysis reported on earlier reviews, where adaptations of MI were tested in the domains of substance abuse, smoking, HIV risk reduction, diet and exercise, that 60% of the studies showed significant effect sizes. MI was found especially successful in improving the rate of treatment entry and retention in intensive substance abuse treatment where it showed the strongest evidence of efficacy. In a new review, 26 randomized controlled trials were quantitatively rated using outcome logic scores. The results were more diverse then, reflecting evidence for MI being superior to alternate treatments, mixed or insignificant evidence, and negative evidence (Burke et al., 2002). The authors reported strong support for the efficacy of MI adaptations applied to alcohol problems. Evidence for substance abuse trials was inconsistent with two showing logic scores indicating superiority and two showing insignificant results. These studies employed a MI adaptation as a prelude to further treatment and measured treatment entry of intention to seek treatment. In their conclusions, Burke and colleagues (2002) stated that the question of a dose effect of lengthier interventions (more than four sessions) is still undetermined. However, the tested adaptations of MI are more efficacious than no treatment and as viable as their credible control conditions. MI adaptations function as preludes as well as stand-alone

treatments, which seems to provide a good basis for combining it with the TCM. One of the reviewed studies was done with clients attending a methadone program (Saunders, Wilkinson, & Phillips, 1995). It was found that clients receiving the MI adaptation experienced a decrease in problem severity and complied better with treatment. Therefore, the authors concluded it might be a useful adjunct to MATs.

Four more studies were included in an extension of the previous meta-analysis of motivational interviewing outcome studies (Burke, Arkowitz, & Menchola, 2003). There a significant dose-response effect was found with longer treatment resulting in better outcomes. The initial push through MI was sustained and advanced with either continued MI or another follow-up treatment. The authors, explaining the lower effect size for addiction related studies, stated that compared to other behaviorally based conditions chronic substance abuse might not be as amenable to change due to its strong physiological component. A major concern reviewing all studies was that the independent variable and training procedures were not specified clearly enough and integrity checks were absent which decreased internal validity (Burke et al., 2003). Future research needs to include more of these features. In addition, the projected active components “problem feedback” and “MI style” need to be researched on their differential effectiveness (Burke et al., 2003). In a follow-up meta-analysis, which included eight more studies, fidelity and the search for the active ingredients was of most concern to the authors, who concluded that still too little is known about how MI works (Burke et al., 2004).

### *2.5.5 Motivational Interviewing and Substance Abuse Treatment*

MI development was begun when the main authors were working in the area of substance abuse treatment; it grew out of this field and was applied to addictive behavior first (Miller & Rollnick, 2002). An adaptation of MI came to great prominence when it was used in the nationwide Project MATCH for which it was modified (Project MATCH Research Group, 1997). There it was called motivational enhancement therapy (MET). It was brought into a manualized form and administered in four sessions over the course of 12 weeks (Miller, Zweben et al., 1992). MET is a hybrid approach, an adaptation of MI, which builds on several theoretical models including, behavior change principles, client-centered, systems theory, motivational and social psychology approaches (Alterman et al., 1998; Miller, Zweben et al., 1992; Weiss et al., 1998). However, it needs to be distinguished from MI, the original therapeutic style. MET appears to be by far the most prominent and accepted approach in the treatment community (Alterman et al., 1998). For this type of adapted MI the above mentioned meta-analysis did not find significant effects over other treatments for drug abuse; motivation and readiness increased through adapted MI interventions, but not more when compared to other active treatments like CBT (Burke et al., 2004). It was suggested to combine MI, which is targeting the question why to change, and CBT targeting the how (Burke et al., 2004). This recommendation supports the basic idea of this dissertation project. For the study design, it implies that the intervention needs to be described well and its components have to be observed regarding their delivery to clients and their perceived impact.

### 2.5.6 Techniques of Motivational Interviewing

Techniques represent the most concrete level of describing practitioner behavior. In the MI literature the term skills is used for this level (Corbett, 2004). A list of the essential techniques in MI is presented in the following, which, however, might not be exhaustive or definitive, yet, as MI is still developing (Miller & Rollnick, 2002):

- Ask open-ended questions
- Use affirmations (supporting the client's self-efficacy)
- Summarize
- Ask permission
- Encourage recipient choice and responsibility in decision making
- Apply reflective listening (express empathy)
- Use of reflective listening in a directive way
- Vary depth of reflections
- Elicit change talk (self-motivational statements and commitment language)
- Roll with resistance (avoid conflict and arguments)
- Help client articulate deeply held values
- Give structured and constructive feedback including the clear advice on the need for change in a supportive manner
- Probe for and assess the stage of change (Miller & Rollnick, 2002; Miller, Zweben et al., 1992; Weiss et al., 1998; Yahne & Miller, 1999).

These techniques require considerable skill for application. The needed level of skill might be found in an experienced social work clinician, as most of the techniques



are not unique to MI but rather basic to generalist social work practice. Therefore, one should expect a master level social worker to be able to learn and apply these basic counseling skills easily. However, the style and attitude found especially in substance abuse counseling is often rather confronting. Therefore, supervised training is necessary to develop the level of skill necessary for mastery in MI (Miller & Mount, 2001). Often practitioners overrate their self-perceived level of skill (Burke et al., 2004). How these MI techniques and principles can be combined with the TCM in this research project is described in chapter 4.

### *2.6 Summary*

From the multiple needs and the vast diversity, which substance abuse clients present for treatment, it is apparent that MATs will have to add a psychosocial treatment component, which is capable of addressing this broad spectrum of problems, to the pharmaceutical component. MATs, although tested with multiple add-on treatments, are still in need of an intervention model that combines the strengths of the effective models presented in this chapter. The psychosocial component for a MAT also needs to suit an agency in order to be adopted. The TCM and MI have been presented as effective treatments that are capable of addressing complementary but central needs in treatment. Both models fit with social work's value base and style, are evidence-based, and show sufficient congruence to be combined. In the following chapter, a research strategy is devised that attempts to integrate both models and adapt the resulting version to the use in a MAT.

## Chapter 3 Methodology

### *3.1 Research Design: Model Development*

This dissertation is based on the approach to intervention design and development (D&D) which was compiled by Rothman and Thomas (1994, p. xxv) as one integrated, systematic approach and methodology for “designing, testing, evaluating, and refining” social interventions. The term and concept is based on earlier works by Thomas (1978). Developing new interventions as well as adapting already established interventions to new fields of practice is the purpose of D&D (Rothman & Thomas, 1994). By integrating its characteristics, the following definition of D&D for the purpose of this study can be construed: D&D is a systematic problem-solving process that employs research procedures to develop interventions that can be applied in practical fields like social work. It is different from other research, not focused on finding relationships between variables, but on evolving interventive social technology (Thomas & Rothman, 1994). The outcome is an innovative intervention as distinct from knowledge about human behavior, which is the goal of conventional research (Bailey-Dempsey & Reid, 1996).

Rothman and Thomas (1994) outlined a systematic sequence of steps necessary to develop new human service technology. In their seminal publication, the authors distinguish between different phases within D&D. Each phase has unique objectives, which require specific activities to be carried out. This dissertation is modeled after the D&D approach. In the following the phases and activities are described in detail.

### 3.1.1 D&D Phases in General

The practical steps or activities for conducting a systematic process of D&D are grouped into a wider general scheme of phases. The phases and activities for D&D or intervention development are presented in the following table constructed according to Thomas and Rothman (1994, p. 10-11).

Table 6. Phases in design and development research

D & D phase	Activity
<b>1</b> problem analysis and project planning	<b>1</b> Identify and analyze key problems
	<b>2</b> find, select and access a site
	<b>3</b> determine boundaries and feasibility
	<b>4</b> literature review
<b>2</b> information gathering and synthesis	
<b>3</b> designing	<b>5</b> determine design team participants
	<b>6</b> use of problem solving skills and creativity to generate solutions
	<b>7</b> formulate an initial intervention model
<b>4</b> early development and pilot testing	<b>8</b> design and conduct a pilot test
	<b>9</b> revise intervention after pilot test
	<b>10</b> planning for field test
<b>5</b> evaluation and advanced development	<b>11</b> conduct field test
	<b>12</b> evaluate field test
	<b>13</b> revise intervention as necessary
	<b>14</b> diverse dissemination activities
<b>6</b> dissemination	

In the following, the phases are described in more detail according to the D&D framework (Thomas & Rothman, 1994). In phase 1 key problems of the area of interest are identified and analyzed. Then a review of the current situation regarding practice and research is begun to provide general orientation to the problems selected. This should allow a preliminary decision-making on the boundaries of the problem and feasibility of

the project. This is similar to the formulation of the research question in conventional research, which guides the whole research process (Rubin & Babbie, 2001). This step should result in a well-rounded understanding of the problem, establish its scope and seriousness, and point to the shortcomings of current efforts to deal with the problem (Bailey-Dempsey & Reid, 1996).

In the second phase, “information gathering and synthesis”, a formal literature review is conducted to expand on the previously retrieved information. Relevant sources of information are determined and pertinent information is collected. The information is structured and synthesized and centers around causal factors and intervention strategies that have potential to contribute to the solution of the problem (Bailey-Dempsey & Reid, 1996; Thomas & Rothman, 1994).

The third phase is the design phase. Depending on the degree of envisioned collaboration, access to a site is pursued early in this phase and partners for cooperation are sought. In consultation with these design participants, the potential users, practitioners of the project site, a preliminary intervention model is construed building on the knowledge accumulated from the previous phases. Creativity and problem solving capabilities are employed to develop a suitable intervention model. Requirements for the model are specified derived from practice experience and conditions in the field and at the site. The result of this phase is that the model is formulated in writing and its components, procedures, and guidelines are delineated. The guidelines might not yet be specific and complete; however, they need to be sufficiently developed in order to be useful in the pilot testing for the next phase (Thomas, Bastien, Stuebe, Bronson, & Yaffe, 1987).

The fourth phase, termed “early development”, consists of a pilot test. The purpose of which is to refine the initial model from what can be learned through its first implementation. This pilot test typically consists of a small number of practitioners and a small number of clients (Reid, 1979). A suitable setting needs to be selected and participants have to be sampled. Pilot testing helps to avoid conducting rather costly large-scale experiments prematurely (Bailey-Dempsey & Reid, 1996). It reveals the potential of the intervention and the limitations and most importantly suggests improvements to the model (Comer, Meier, & Galinsky, 2004).

The fifth phase, “evaluation and advanced development”, again builds on the results of the previous phases. If the previous findings warrant further efforts and investment, and if the model has matured enough, then the next step is a more rigorous testing under applied conditions, the field test. For field testing experimental designs are desired in order to carry out a systematic and rigorous evaluation.

The final sixth phase, “dissemination” encompasses everything from planning of the dissemination activities to designing implementation procedures, preparing means and media for reaching potential consumers, and carrying out large scale dissemination activities. Based on this developmental model the format of the dissertation is outlined for the first four phases in the following.

### *3.1.2 The Model Development Dissertation*

In 1978, Reid proposed the “model development dissertation” as a new format for social work dissertations (Reid, 1979). It combines an exploratory research strategy with the effort to utilize research findings to build and refine practice guidelines. According to

Reid, the task of the candidate is to develop a tentative model, to test the model, to analyze the performance, and apply the findings to build a better model. The tentative model consists of rough guidelines for practitioners to follow. The field test may be small-scale. Reid notes that “although design controls, such as control groups are not employed, systematic data are collected on the model’s operations and apparent outcomes” (Reid, 1979, p. 218). This caution with the use of experimental control is justified by the still emergent nature of the independent variable. It is not yet completely clear what the intervention entails at this beginning stage of model development and what outcome variables it can reliably be hypothesized to change.

The application of this approach seems to be justified, because this type of intervention constructing research still is strongly needed in a practice profession such as social work (Fortune & Proctor, 2001). The model development approach improves trial and error approaches employed by practitioners by guiding development more systematically and rigorously (Reid, 1979). This type of approach to dissertation research has been applied in a number of dissertations since (Caspi, 1997; Chou, 1992; Donohue, 1996; Naleppa, 1995; Rooney, 1978).

The four phases of the model development dissertation resemble the first four phases in the D&D approach (Rothman & Thomas, 1994). Therefore, this dissertation encompassed activities 1 to 9, which are highlighted in the table above. In practice, the phases overlap considerably. For example, the identification of key problems can continue until activity seven, the formulation of the initial intervention model, is accomplished. According to the delineation of the early model development phase further

testing through a larger experimental design is part of the next phase of evaluation called “advanced development”, which is not part of this dissertation. It may be part of future consecutive research activities.

### *3.1.3 D&D Phases Specific to the Dissertation Research*

In the following, I applied these phases to this dissertation project of which the developmental goal was to improve and to adapt a successful practice model, the TCM, by merging it with another promising model, MI.

*Phase 1 – Problem analysis and project planning.* In order to plan and design for this dissertation research project I worked on gaining access to an agency and then collaborated with staff and administration to identify the needs, feasibility and fit with my initial idea of applying a CM to a MAT program. This activity originated in anthropology and is called “prior ethnography” (Rodwell, 1998) meaning the exploration of the setting before research begins to acquire insider knowledge of what is going on, and to enable better ability to design applied research. Prior ethnography contributed to D&D activities 1 to 3, which are identifying the key problems, analyzing them, finding and selecting a site, gaining access, and determining boundaries and feasibility (Fawcett et al., 1994; Thomas, 1994). A more detailed description of the setting and the agency is given after this review of the phases.

In addition to the activities of finding, accessing and beginning to collaborate with the agency a review of the literature as presented in the previous chapter enabled a broad perspective and overview of general needs of the selected population, clients in MATs. From these sources, the literature as well as from the collaboration with the practitioners

at the dissertation site, it was apparent that clients have multiple needs beyond the primary substance abuse problem, which is treated with the medication. There was also a need for specific practice guidelines because the agency in its early organizational development in 2005 has not yet specified all the policies and procedures for this program. Thus, it was concluded that model guidelines would contribute to strengthening the agency's MAT program.

A project plan was negotiated with the agency director. The plan included an administrative decision regarding the participation of the practitioners based on feasibility. Only the clients in one treatment arm, the "methadone program", serving clients referred by Richmond Behavioral Health Authority (RBHA) were eligible for individual treatment sessions that could be conducted in the pilot test. The other treatment arms servicing self-pay and insured clients were restricted by tighter reimbursement rules and session scheduling. Therefore, only practitioners working in the RBHA client treatment arm participated in this study. This delineated the scope and conditions for the project. With these practitioners, I worked more closely in the following phases of designing and pilot testing the model. This step represented activity 5, the selection of the design team participants. The sampling of clients as part of the pilot test is discussed below.

As the goal of the project it was envisioned by the agency and practitioners that a model could be developed that enhances client motivation for detoxification and assists in alleviating crises and problems in living which in turn should result in more stabilization in the clients' lives, more retention, and rising motivation.



*Phase 2 – Information gathering and synthesis.* The writing of an extensive literature review represents the first activity within the information gathering and synthesis phase. The empirically most successful models are selected from the conceptual and empirical literature, and their functional elements are identified (Fawcett et al., 1994). For this project the basic models that have been selected, the TCM and MI, have to be described in a way that allows the defining features to be clearly recognized and presented so that they can be compared and combined. The three main dimensions of the features that are relevant for this type of model building are 1) most abstract: the values, principles, attitudes, or spirit; 2) the structures, phases, strategies, and steps; and 3) most concrete: the interventions and techniques. These descriptions provided the raw material from which in the next phase the CM was built.

As a second activity, information gathering also drew from natural examples, which I studied as a participant observer at team meetings, and from the consultations with the practitioners. Until the initial formulation of the model was completed, this information gathering continued and I stayed in weekly contact with the agency to refine and specify the needs and feasibility of the initial project idea.

*Phase 3 – Designing the initial model.* The next phase was part research activity and part creative and collaborative problem solving. The goal was to formulate the initial model. The practitioners were included in this phase by means of close collaboration and consultation (Loneck & Way, 1997). According to its purpose, practitioner and researcher will form a “design-team” at the agency and convene on a regular basis.

Designing the initial model means the creation of a basic theoretical model, which

consists of guidelines for practice (Payne, 1997). For the model development dissertation format Reid specified that the content of a model may include sequences of interventions to be followed, “statements of practitioner behaviors that are supposed to occur under particular circumstances” (p.216) but not necessarily contain discussions of underlying theories and philosophical issues or research evidence on the model under development (Reid, 1979). These practice guidelines are by nature rough and skeletal at first (Kirk & Reid, 2002). They resemble a limited but operational model (Thomas & Rothman, 1994), which mainly contains the basic structures necessary for preliminary testing of the model in an early pilot study (Carroll & Nuro, 2002).

For this dissertation research, the act of designing consisted of the merging of TCM and MI into a combined model. This process of designing a model can be viewed analogous to the process of synthesis in theory construction. Synthesis combines isolated pieces of information that are not yet connected to a unifying theory (Bloom, 1956). In the field of nursing, Walker and Avant detailed this process, and provided a tentative strategy to follow (2005). They broke down the steps, which needed to be accomplished. According to Walker and Avant (2005), synthesis involves 1) specifying focal concepts to serve as anchors for the synthesized theory (here: the TCM brought into the form of model guidelines), 2) finding related factors and concepts (here MI as the second model to be integrated), and 3) organizing concepts and statements into an integrated representation of the envisioned product (the combined model). On the structure of the TCM as a basis, MI style, techniques, and considerations were added. The initial model was built on knowledge from

- the literature review on client needs,
- the research and features of the TCM,
- the research and features of MI,
- the needs and realities of practitioners and agency;

Based on the summary outline on the models provided in chapter two and on further literature review for clarification of the meaning of relevant concepts and also on the additional contextual information that has come up during the process I was matching the essential elements as defined in the seminal literature by the developers of the models. The merging was structured along the dimensions of principles, phases and steps, and techniques; the resulting prescriptions for practice are called “guidelines”, as they provide the practitioner with directions on what to do and how to do it.

In order to justify the project a view of the features that suggested a promising synthesis are mentioned. Intersections and a fit between the original models can be found in the following: TCM provides an elaborated structure; MI provides detailed clinical techniques (e.g. what and how to ask at a certain point in treatment). The TCM requires readiness for action and MI helps achieving it. Basic principles regarding the attitude towards the client and the problem seem congruent in both models.

Practitioners’ knowledge was seen as essential and included and merged into this process for building and adapting the model to the demands of practice in general and more specifically this agency and its clients in particular. It was expected that practitioners would also bring the clients’ needs to the table mediated through their experience. The clients’ direct views and their experience of the model were elicited and

included during the next phase of pilot testing.

Some prospective questions that were planned to ask while working with the practitioners building the model were: Can you imagine carrying this out (implementability)? Does this make sense for you as a practitioner? How simple and clear is this to use? How practical is this? How would this fit with other agency policies and procedures? How can this be adapted to your contextual needs? How compatible is this with local (agency or client) values and customs? Would this work for your clients? (Fawcett et al., 1994; Naleppa, 1995). Questions were also be derived from my previous notes on field visits at the agency. Further needs of practitioners will be derived from the collaboration. Prospective areas for questions and adaptation were the integration with the agency's intake process, workload considerations, the fit with the agency's program description and educational goals, eclectic treatment philosophies of practitioners, the treatment planning and contracting process, agency policies regarding involuntary participation and mandated goals, common client problems, and the client management software.

The resulting guidelines from this process were put in the form of a manual as was suggested by Carroll and Nuro (2002). It was then used for training purposes and as a stepping stone to adapting and extending the existing instruments for controlling fidelity. A description of the initial combined model appears in chapter 4.

*Phase 4 - Early development.* The D&D phase of early development for this project includes

- Training practitioners
- Obtaining IRB approval
- Sampling clients
- Conducting the pilot test
- Analyzing the data
- Revising the intervention after the pilot test (Thomas & Rothman, 1994).

The training of practitioners involved 12 hours and was conducted at the agency by the researcher and professors of the School of Social Work, VCU. In a recent meta-analysis on MI, it was found that for previous research on MI adaptations an average of 10 hours of training time (SD=7.35) was used (Hetteema, Steele, & Miller, 2005).

However, a certain skill level was already there. One practitioner at the agency for this project had gone through MI training previously. Another practitioner studied already for her LCSW. A recent graduate student intern was hired as a MSW by the agency prior to the beginning of the study in fall 2006, and a new MSW intern was joining the agency then. The skill level of graduate students in their field placement was considered appropriate for the purposes of model development research (Reid, 1979). Additional basic training in MI was provided to help reach a common level in MI basic skills. In summary the major parts of the training were:

- Basic skills in MI,
- Basic skills in the TCM,

- Introduction to the treatment manual of the combined model,
- Case examples and role plays,
- Instructions and practice in using the forms designed to facilitate and document the process,
- Research design requirements (recruitment, informed consent, the importance of fidelity, and how to conduct the necessary measurements);

The training also included lessons learned from previous trainings conducted during my directed research project and from the workshop at the IFSW conference in Munich, 2006.

*Conducting the pilot test.* The pilot test, as an empirical research activity, was at the core of this dissertation. Included in this phase were the recruiting and sampling of clients, procedures to assure quality (fidelity) and data collection procedures. Training needed to be completed before clients could be sampled. Sampling is described below as part of the pilot test research design. After informed consent was obtained, the practitioners administered the treatment following the outlined guidelines prescribed in the treatment manual. Practitioners recorded their sessions and wrote developmental notes about their experiences. Supervision on this process was provided by the researcher on a weekly basis. A focus group with all practitioners was conducted after all sessions were finished in April 2007. Clients were asked for feedback on informative events at the end of each session. Further details on the data collection procedures and measurement devices are given below.

After all the data-collection activities were completed, the findings from the pilot test were analyzed. Analysis as part of the research activity in model developmental research according to Reid has two purposes: 1) The exploratory identification of relevant variables and hypotheses for further research, and 2) to generate information for model revision regarding fit and usefulness. This process is exploratory in nature (Reid, 1979). Additional data was collected on the degree of treatment fidelity with the goal of establishing how well the intended model has been delivered (Kirk & Reid, 2002). Details on the measurement of fidelity are described below.

Furthermore, the analysis of outcome measures enabled a general estimate on client progress. Data collected on outcome measures were analyzed for information on the general progress made by clients, the overall beneficence of the model. The intervention should show at least potential for achieving planned outcomes so that further development is warranted (Kirk & Reid, 2002). However, this analysis could not establish efficacy, because this neither is intended nor is the design capable of achieving that. This kind of knowledge will only be provided in the later phases of D&D through a field test using an experimental design and larger sample size.

*Revising the intervention after the pilot test.* The main purpose of model development research was to learn how to improve the initial model. Revising the model meant putting all the collected data and the analysis to use. For once, this was a systematic process of reviewing the model guidelines step by step in the light of the findings pertinent to the model features. On the other hand, it was a creative process of coming up with new solutions to problems which were encountered embedded in a

hermeneutic process of communication and consultation from developmental notes to the review with clients, including the final membercheck, which was conducted with the practitioners (Kirk & Reid, 2002). New ideas were incorporated and critique was taken into account in revising the initial model. The revised model was the end product of this phase. The initial guidelines representing the model were rewritten in chapter 7 adding a further layer of detail, which is also referred to as proceduralization (Thomas & Rothman, 1994).

### *3.2 The Setting*

The setting for this research project was a counseling center in Richmond, VA. The agency was a private-for profit agency. Its revenues came from self-paying clients, insurance reimbursements and contracts with Henrico County and the City of Richmond. The agency offered its services through different treatment programs. It is serving adolescents and their families, but mainly adult clients with a substance abuse diagnosis. Their largest program is a medication-assisted detoxification program. RBHA contracted this program with the agency. In a working agreement with the agency director, I committed to tailoring the dissertation research study to this program, and in turn was allowed access to practitioners and clients. This program served specifically adult clients with an opiate addiction diagnosis. Treatment consisted of medication with either methadone or buprenorphine and psychosocial treatment components. The psychosocial treatment services were more expanded than those other MMTs provided in the region. Regarding this aspect, the agency's services were unique and filled an existing treatment gap in the region. The psychosocial treatment as specified in the contract with RBHA



consisted of three weekly group sessions and individual sessions as needed. The goal of this program was detoxification. The time frame varied depending on individual circumstances and ranged from eight weeks to more than one year. The following table shows demographic information, the average length of stay, and other summary information on the program's current participants at the time of site selection and design development in October 2005.

Table 7. Client profiles for the agency's methadone program October 2005

Variable	Categories	n	Percent	M	SD
Clients (N=52)					
Age	Years			36.9	10.2
	19-29	18	34.6		
	30-38	16	30.8		
	>39	18	34.6		
Gender	f	23	44.2		
	m	29	55.8		
Length of stay	Days			234	278
	15-89	23	44.2		
	90-200	8	15.4		
	>200	21	40.4		
Urine drug screens	Results				
	positive	12	23.1		
	negative	12	23.1		
	no entry	28	53.8		
Payment type	Insurance	5	9.6		
	Self-pay	23	44.2		
	RBHA	24	46.2		
Case load	Practitioner				
	B	16	30.8	17.3	3.2
	C	21	40.4		
	other part-time staff)	15	28.8		

It needs to be considered that this table only provided a snapshot in time produced in preparation for planning and sample selection. The agency environment was highly dynamic and the agency was expanding rapidly at that time.

The practitioners who agreed to participate as mentioned before were all social

workers and had different degree of exposure to the two models. The next table gives an overview of their professional backgrounds.

Table 8. Profile of practitioners

Practitioner ID	Gender	Degree	Length of employment at agency	Prior work in substance abuse field	Prior training in MI
AW	f	MSW	1 y	some	no
BW	f	MSW	4 y		no
CW	m	MSW	4 y	some	yes
DW	f	Social work graduate student	6 months		no

One worker (CW) received prior training in MI. All practitioners learned about the TCM in classes during their social work program. The agency was medium size reaching more than 100 clients concurrently, if it is considered that there are other treatment programs offered besides the section where this dissertation research was situated. The median number of clients for methadone facilities in Virginia was 126 at that time (SAMHSA, 2004).

Almost all of the typical services for methadone facilities were offered at the agency. These were:

- Assessment Services: comprehensive substance abuse and mental health assessment/diagnosis
- Substance Abuse Therapy and Counseling
- Group therapy
- Individual therapy
- Relapse prevention groups
- Aftercare counseling
- Pharmacotherapies

- Buprenorphine
- Methadone
- Testing
  - Breathalyzer or other blood alcohol testing
  - Drug/alcohol urine screening
- Transitional Services
- Assistance with obtaining social services
- Discharge planning
- Employment counseling/training
- Housing assistance
- Case management services
- HIV/AIDS education/counseling/support
- Acupuncture
- Providing referrals to/for
  - Child care
  - Transportation assistance to treatment
  - Domestic violence or family/partner violence services
  - HIV testing
  - STD testing
  - TB screening
  - Screening for Hepatitis B
  - Screening for Hepatitis C (SAMHSA, 2004)

### *3.3 The Treatment*

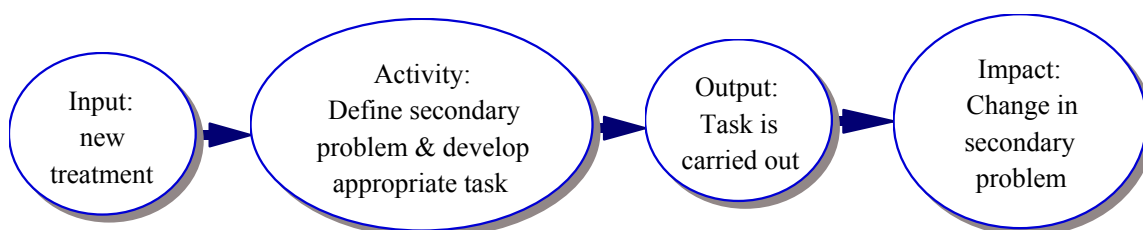
This section describes the treatment regarding its role in the research design. The new combined model is described in the form of guidelines in chapter 4. A manual was developed and used for training practitioners. The duration of the intervention was time-limited in accordance with principles of brief-therapy. Based on the TCM structure the treatment will extend for six to ten sessions.

Viewed from a broader perspective the new combined model was an adjunct to the existing program at the agency. The regular program consists of three required groups per week and one individual session every other week. Weekly individual sessions would represent an additional amount of treatment for a participant. However, any client can request and receive additional individual sessions. The protocol for the pilot test was set to include at least one session every other week with the option of weekly sessions in order to be congruent with agency and reimbursement policies as well as caseload limitations.

Considering this situation, that individual sessions are only provided biweekly while clients may attend several other groups during a week, it seemed rather unlikely being able to identify and attribute any effects to the model in the pilot test. However, the following thoughts may add weight to the hypothesized beneficial connection between intervention and outcome from the pilot testing. The situation during the pilot test can be described by using the framework of a logic model. A logic model helps to specify the intervention process (Chen, 1990). Applying a logic model description and comparing the logic model of the treatment as usual (TAU) to the logic model for the pilot test intervention results in the following description of the treatment situation for clients (in general) for the pilot test period: Parallel to receiving the new combined model, clients attended groups, which they chose themselves. The targets of this TAU were not specified and activities within the TAU varied as clients cycled through them. The combined model study targeted specifically secondary drug abuse, readiness for detoxification, and secondary problems (in summary termed “secondary problem” for the

following figure). The logic model for these outcomes is therefore much clearer and specific than for the TAU as can be shown by the following figure (W.K. Kellogg Foundation, 2004):

Figure 7. Example of a logic model for the combined model



This logic model increases the confidence that the new treatment can support change towards the specified goals. The logic model can be extended to goals that are more distal. The combined model contributes to resolving problems in living (including secondary substance abuse), therefore contributes to stabilization (as a distal goal). Stabilization can only be achieved when secondary problems and secondary substance abuse is addressed.

The requirement for thorough process research is to include all of the relevant components. The patient variable (diagnosis and demographics), the technique variable (what the client has to perform to change the problem), the therapist variable (expertise and style), and the generalized treatment effect indices (outcome variables) (McCullough, 2002). All of these areas were touched by the measurement processes used for this study.

The pilot testing of the CM can be viewed as the beginning of a new treatment phase with a new problem focus for the clients in the sample. Therefore, it is justified with some validity to assume that the outcome measurements are impacted by the interventions. The combined model is described in chapter 4 in detail. The research

design and the measurement processes including the measurement of fidelity of treatment implementation is described in detail below.

### *3.4 Ethical Considerations*

The population for which this treatment was developed is vulnerable. Usually, a larger portion of clients is from a minority background. Many clients live in poverty and substandard living conditions. Many clients have limited education, are threatened by multiple risks, homelessness, financial breakdown, unemployment, and imprisonment. Therefore, the research was designed with the central values of ethical research, respect of persons, justice, and beneficence in mind (The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). In order to assure that the rights of the research participants were protected approval from the university's IRB was sought and received. The recruitment script is provided in Appendix A.

Special focus was on informing the research participants of the research procedures involved. According to the NASW code of ethics, social workers protect their clients and their clients' information (National Association of Social Workers, 1999). This includes their right to voluntary consent to participation or to refuse at any time without any consequences to their treatment as usual. Because both underlying treatment models, TCM and MI, on which the combined model is based, hold respect and client autonomy in highest regard, the research consent procedure resembles in principle nothing more than the usual standard practice prescribed anyway for treatment contracting by both of the original models. The consent form is provided in Appendix B.

Of special concern for this research project was the participants' right to

confidentiality regarding the planned audio recording of treatment sessions. Special provisions were made to keep audio data safe. Among the security features were 1) the reminder by practitioners in the beginning of the recording not to use family names and 2) immediate transfer of the audiofile to protected storage on a password protected computer.

The potential benefits of this new treatment could be accessed by clients outside the rather small sample. If more clients wished to receive treatment according to the combined model, staff was free to work with these clients using the combined model. However, these clients were not planned to be included in the research. This way there were no disadvantages for interested clients. It was hoped that, in the long run, the agency would adopt the new model, and that its practitioners would become comfortable using it, so that all clients could benefit on a regular basis, if indeed benefit was shown.

### *3.5 Sampling*

Pilot testing in intervention research following the Rothman and Thomas (1994) D&D model only requires a small sample size. Other researchers attempting similar studies confirm this methodological position (Comer et al., 2004). Dole and Nyswander, the pioneers of research on MMTs, used six patients for their first year pilot study in 1963 (Dole & Nyswander, 1980). In addition, process research is usually labor intensive. Therefore cost and feasibility considerations limit sample size (Loneck, Banks, Way, & Bonaparte, 2002). A small sample is also less disruptive to agency functioning (Comer et al., 2004). The upper limits of the sample size was delimited by feasibility considerations and set to be 10 clients. This sample size could have potentially yielded a maximum of



100 audio-recordings.

The day of IRB approval was the starting point for sampling and all cases routinely referred to the participating practitioners after that date were designated as potential project cases (Reid, 1975). To avoid handpicking only clients who may seem to be easy to treat further criteria were devised. The criteria should serve the overall purpose of the research. This makes the sampling for the pilot test purposive and a non-probability sample (Rubin & Babbie, 2001). The purpose was to learn as much as possible from different points of view based on client diversity. Therefore, the sample should be as diverse as possible. Criteria were derived from what already was known about the population and what were relevant factors for treatment. Because there were several factors to be considered, it was possible that sampling stretched over a long time and adjustments needed to be made regarding which criterion to favor over another which had already been included in the sample, thus raising the question, which client profile is the next to sample. Because of this use of criteria for selection, this type of sampling has also been called theoretical sampling (Glaser & Strauss, 1967).

In the following, the sampling criteria are discussed briefly. Length of treatment at the agency is one criterion. The client population in the treatment arm of the agency where the pilot test was conducted varied around 50-60 clients. There was considerable turnover with sometimes more than five clients entering or leaving treatment within a week. There was also a stable client population with individuals remaining in treatment for more than one year (see Table 7. Client profiles for the agency's methadone program October 2005). Both conditions, early drop out and remaining in treatment too long, were

considered problematic. Therefore, one selection criterion was the phase of treatment, in which a client was, i.e. beginning or stabilization. New clients facing issues of retention and live crises and clients at the threshold of discharge or detoxification represented two different challenges, which needed to be included as a characteristic in the sample population. The new treatment needed to be able to address these challenges. This meant for the purposes of sampling for pilot testing that the cases were selected by their “developmental relevance” (Thomas, 1994, p. 288).

Another problem that needed to be studied was clients with secondary substance abuse. Approximately more than 50% of clients at any given time deal with this condition. Therefore, it was likely that this condition was included in the pilot testing sample anyway. However, for new incoming clients this condition could not be determined immediately and the results of urine toxicology screens would have had to be awaited. Therefore, this condition could not be used to determine inclusion in the sample for all clients consistently at beginning of treatment. Therefore, this condition was monitored through supervisory sessions with staff during the pilot test phase and staff members were consistently encouraged to include and work with clients that face this problem.

Another big concern of staff was that clients might not continuously attend the sequence of sessions. Therefore, another criterion to determine eligibility for participation was whether clients’ work schedule would allow attendance of these individual sessions. In addition, staff should also suggest clients for inclusion because of their perceived need for additional therapeutic attention based on their treatment plan. From a staff

perspective, this could have been clients who seemed to need more treatment to either stabilize, overcome crises, or clients who needed motivation when they seemed stuck in their progress towards recovery. These clients would not have been “easy” clients who would make each model look good, but clients who were challenging.

In general, all participants needed to be volunteers as required by standard research ethics (Rubin & Babbie, 2001). In summary, the sampling plan was as follows: Five new incoming clients were to be selected by staff based on potential ability of clients to attend bi-weekly sessions. Five long-standing clients who faced the issue of slow progress towards detoxification were selected by staff. An effort was made for the sample to be as diverse as possible to reflect the diversity of clients in this MAT. At least five clients needed to have secondary substance use problems to be addressed according to their treatment plans. Clients would be informed of the option to attend this new treatment for individual sessions at their first individual meeting with their assigned counselor. Staff meetings were used to clarify sampling questions. Practitioners used a script as required by VCU IRB to introduce clients to the opportunity of participating in this research project. A summary and aid for sampling decision making is provided in Appendix C.

### *3.6 Variables and Measurement Processes*

Throughout the project, multistage data collection strategies were used. Both quantitative and qualitative data were collected in order to get a full understanding of the operation of the new treatment model. General data collection strategies were audio-taping, participant observation through supervision, self-reports using forms, a focus

group, and structured questionnaires. All the measurements taken are listed in the following table.

Table 9. Planned measurements

Variable	Instrument	Time collected	Collected by
demographics	Research Intake Form	after first session	researcher, from record
drug use	UDS	session 1, 5, 10	nursing staff
days of drug use	TLFB interview, days of use	each session	practitioner
readiness to change drug use	Readiness Ruler	session 1, 5, 10	practitioner
problem alleviation	Problem alleviation form	each session, at least at session 1, 5, 10	practitioner
task achievement	Task review form, range 1-4	second and each following session	practitioner
practitioner individual reflection	developmental notes	after each session	practitioner
perception of process (client feedback)	end-of-session questions, audio recording	at end of each session	practitioner
interaction process	audio recording	during each session	practitioner
practitioner group reflection	focus group	after last session	researcher
context information of model implementation	participant observation, field notes	between sessions, at supervision and from individual communication	researcher

The measurements are described with their respective psychometric properties in detail below.

### 3.6.1 Demographic Variables

Assessment data as obtained at intake provided the measurement of the client variable. The intake at the agency was conducted outside of this research project.

Therefore, the information collected for client demographics were existing data retrieved

from the client's record. The demographic variables that were collected are:

- age,
- gender,
- race/ethnicity,
- formal education,
- marital status
- living arrangement
- diagnosis as obtained at intake;

Additional variables about characteristics, process, and outcome were obtained from client records:

- days in treatment at the agency,
- secondary drug use from previous drug screenings,
- course of medication dosage,
- problem profile from intake forms;

Age, gender, race/ethnicity, education, and marital status were used to describe the sample and each client individually. The process and outcome variables provided information about treatment progress. Length of treatment in days represented a measure of retention (Longshore & Teruya, 2005). Duration of treatment was a major predictor of outcome with high drop out prevalence within the first 90 days (Simpson, 2004). One year of retention was considered the minimum threshold for MATs (NIDA, 1999; Simpson, 2004). However, this finding is countered by cost-containment pressures. At the agency, one year represented an upper threshold for participation. For this study, "days in treatment" was considered a demographic variable, which distinguishes clients and allows describing the sample. This description provided contextual information for

interpreting outcome measures.

The results from urine toxicology screens obtained before the pilot test provided a baseline against later screenings could be compared to assess changes in secondary drug use. Course of medication dosage indicated stabilization and was analyzed paralleling secondary drug use data. The problem profile was used as an indication of problem severity and compared to tasks and problem alleviation over the course of treatment. All of this information was existing data at the agency, collected at intake or during the course of still on-going treatment. This kind of client data was recorded by the researcher using a form provided in Appendix D

### *3.6.2 Measuring the Independent Variable: Fidelity*

In order to learn about the intervention, it needed to be applied uniformly and consistently. The degree of treatment fidelity is of interest for model development research. Fidelity or treatment integrity has been defined as the “degree to which a treatment is delivered as intended” (Thomas, 1994, p. 281). Several strategies were followed to assure fidelity of the combined model:

1. The new treatment was manualized,
2. The application of the new treatment was facilitated by checklists and controlled by forms that are filled out during the process,
3. The implementation was supervised, by the researcher in weekly meetings with practitioners
4. The practitioner-client interviews were audio recorded, and fidelity was assessed.

*The Manual as Fidelity Enhancing Instrument.* The new model was proceduralized, standardized and manualized as much as possible to facilitate comparable replication of the treatment as it was planned. However, there was some danger in manualizing interventions, as was reported about MI, in cases where the manual was not fully representing the assumptions of the model (Hettema et al., 2005). Also in a pilot test, the practitioners needed to have enough freedom to develop improvements over the initial model and to interpret the guidelines as they saw fit in order to adapt it to the specific client and setting. Therefore, the manual in this research consisted of preliminary guidelines seen as a starting point for instructions and not as a final prescription (Reid, 1979). The goal was to test, even to falsify, the guidelines and ultimately to rewrite them in an improved form.

Accompanying to guidelines so-called task schedules were used in instructing practitioners to carry out the TCM and to control for treatment fidelity, as well (Reid, 1985, 2000). Task schedules are hybrids of a checklist combined with forms to be filled out comparable to therapist self-report session checklists (Carroll, Nich, & Rounsaville, 1998). They present steps in sequential order and provide space to fill in the information about the process to ensure that all of the steps were carried out. Task schedules also provided a template for parts of the manual. The manual combined guidelines, forms, and checklists comprised of the essential steps. The manual was derived from

- a) the “Profile of Practice Skills” (Fortune, 1985; Reid, 1978),
- b) an outline of the TCM that features all the essential steps (Reid, 1992),
- c) the task-schedule for the TCM (Reid, 2000),

- d) the primary description of MI (Miller & Rollnick, 2002),
- e) an operationalization of MI written for instructing and training health practitioners (Rollnick, Mason, & Butler, 1999), and
- f) training materials for MI (North Eastern States Addiction Technology Transfer Center, 1998).

*Facilitation of Treatment Implementation through Checklists and Forms.*

Checklists are also used to enhance treatment fidelity in treatment process research (Carroll et al., 1998). Therefore, the manual not only contained the guidelines but also short checklists for practitioners to use in the process as well as forms to be used in collaboration with the client.

The sub-processes of task and problem review in the TCM were facilitated by the use of forms. Through developmental research on the TCM a range of forms to facilitate practice were created: a problem and goals statement form (p. 116), a target problem form (p. 124), a task planning form (p. 146), and a task-review form (p. 148) (Naleppa & Reid, 2003). In the practice of MI, forms were used to explore ambivalence in the client. The decisional balance form and the readiness ruler were collaboratively used with the client (Miller & Rollnick, 2002; Rollnick et al., 1999). These forms were retained in the combined model and adapted if needed. The forms not only facilitated the process, at the same time they provided a means of documentation for the client record and of control whether this step was carried out. The following forms were used and presented: problem overview (Appendix E), problem exploration (Appendix F), task development (Appendix G), task accomplishment (Appendix H), and problem alleviation (Appendix I). Checklists



were provided for the following steps: Obstacle analysis (Appendix J), and termination (Appendix K).

*Supervision to Promote Treatment Fidelity.* While the pilot test was conducted, practitioners were supervised by the researcher. This served multiple purposes. First, practitioners could be reminded of the model features, additional training, guidance, and clarification could be provided. Second, supervision also provided an emergent design element for the pilot testing. As has been argued above, supervision in early model development, even though it serves to enhance fidelity, needs to leave space for creativity and new ideas to emerge. That is why practitioners were not forced to adhere completely and accurately to a manual only (Rothman, 1980). Based on practitioner feedback immediate adjustments were made to enhance the utility of the model while the pilot test was ongoing. Supervision was the place where an immediate feedback loop between sessions was closed. Third, supervision served as a data source for learning about the process. This information learned from supervision was later used together with the other data to improve the guidelines.

*Fidelity Rating from Audio Recordings.* The means discussed above were applied to strengthen treatment fidelity. However, the degree of fidelity of implementation also needed to be assessed. Instruments assessing fidelity focused on key elements that defined the model under scrutiny and distinguished it from other models. The criteria that define the combined model are established in chapter 4 where the two models are merged. The sources for the new fidelity measure were fidelity measures that have been applied in intervention research on the original models before.

Several instruments have been developed to measure MI treatment fidelity (Madson & Campbell, 2006). The instruments most germane to MI are the MI Skills Code (MISC) and the MI Treatment Integrity Code (MITI). The MISC tried to quantify salient elements of client and practitioner functioning during MI and was used for detailed questions in process research (Miller & Mount, 2001; Moyers, Martin, Catley, Harris, & Ahluwalia, 2003). The MITI version 2.0 is still under development, but was released for research and scholastic endeavors (Moyers, Martin, Manuel, & Miller, 2005). It is intended as a treatment integrity measure for clinical trials of MI. The MITI focuses on practitioner behavior only whereas the MISC in addition also records client behavior (Moyers, Martin, Manuel, Hendrickson, & Miller, 2005). The MITI is composed of two components, the global scores and the behavior counts, for example number of open vs. closed questions or simple and complex reflections.

Elements for fidelity assessment on TCM aspects of the combined model were taken from prior TCM research. For the TCM a list of practitioner skills, the “Profile of Practice Skills” was constructed to evaluate skill level in practitioners during training in the TCM (Fortune, 1985; Reid, 1978). Rating the skill level on a range from 1-5 allowed assessing the quality of application of the TCM. For other research endeavors behavior counts similar to the research approach for assessing fidelity in MI were employed which included frequencies and time in minutes of techniques used like exploration and giving advice (Reid, 1978). However, both groups of instruments, those for MI and for the TCM, are too specific for this dissertation research project because they assess quality. Quality assessment in general is more difficult to accomplish and would require more

training than was feasible to provide. The measures require extensively trained raters and the level of skill that these instruments are capable of measuring was not reached through the rather limited training provided for this project. The research question, the design, and the level of training needed to match in order not to waste efforts for mismatched rigor.

This aspect is discussed further under the section “Level of detail” in Chapter 4.

Another approach for guiding the practitioner, documenting the course of action, and being able to make a judgment about how complete the implementation has been, is provided by the utilization task-schedules (Reid, 1985, 2000). As mentioned above they prescribe what the practitioner has to do and provide space for recording what has been accomplished in the session. A similar approach was taken for this dissertation study, and a mix of forms and checklists was used for guiding the practitioner and assessing degree of implementation. In order to check the audio-recordings against the required sequence of steps a fidelity checklist has been developed which captures the essential elements of the combined model. Such a checklist provided a needed addition over expert judgment alone in order to strengthen the accuracy of the fidelity checking procedure (Carroll et al., 1998). The checklist was matched with the manual for the combined model and provided to the practitioners to inform them about what to focus on (Appendix L).

Because the setting neither was a clinical trial nor needed the level of competency from the rather limited training to be verified, the fidelity check for this type of research could merely assess whether the suggested steps were carried out. The focus is on whether the concrete steps have been carried out versus at what quality. If practitioners carry out these steps the treatment is considered implemented as planned.

Because the whole session was listened to, MI non-adherent behavior was spotted as well as violations of principles set for the combined model. These were noted and reflected with practitioners in the supervision and at the final focus group. Every conscious digression by practitioners was to be documented in their developmental logs. However, the degree to which the steps of the model were carried out was ultimately determined by comparing the process, as it was audio recorded, to the fidelity checklist. According to degree of digression of this sequence of steps, a general judgment was made about the degree of fidelity. In general, digressions from the prescribed form were seen as sources of valuable information not as jeopardizing internal validity of the research design and the consecutive drawing of conclusions. The relative degree of adherence could be used for interpretation of the treatment process and its outcomes.

### *3.6.3 Measuring the Dependent Variables*

*Readiness for detoxification.* In keeping with the restrictions of research designed for a naturalistic setting it was important to keep the burden to clients and practitioners with assessment instruments light and not to affect program operations. Instead instruments were favored that are short, simple and easy to use, and have additional clinical utility.

A MAT, by design, is a composite of two main interventions, the medication and the rehabilitation program (see Figure 5. Phases model). When thinking strictly along the lines of a logic model (see

Figure 7. Example of a logic model for the combined model) then the bio-medical component of addiction is addressed through the medication, which is supposed to

generate a narcotic blockade accomplished by an appropriate dose-level, which reduces the craving and in turn the drug-seeking behavior (Brady et al., 2005; Dole & Nyswander, 1965). The psychosocial component addresses the problems in living and social status. Ideally, the craving is stopped and clients can obtain work and improve their situation in living, which is the case for a considerable proportion of the population (Ball & Ross, 1991). If both program components contribute their share, then clients are supposed to get ready to make a decision about detoxification at some point. Readiness carries the meaning of the perceived need for treatment and commitment to participate (Longshore & Teruya, 2005). Therefore, readiness for detoxification can be construed as an important proximal goal of a MAT, which needs to be monitored and assessed. Only after readiness has increased does it seem likely that the official goals of treatment provider and insurance, the actual detoxification, can be reached and maintained.

When the constructs of resistance, reactance and readiness were discussed and compared, it was found through examining their predictive power that they are distinct (Longshore & Teruya, 2005). Readiness predicted retention and resistance predicted drug use. It was concluded that these constructs should be assessed separately. Because in this dissertation study an MI based type of intervention was applied, a measure developed for MI was used to assess outcome in terms of readiness.

The simplest way of measuring readiness is through the Readiness Ruler, which was used in MI early on (Center on Alcoholism Substance Abuse and Addictions, 1995; Miller & Rollnick, 2002). An adapted version was used in a research project with 87 MMT clients in the City of Copenhagen to measure change in drug use patterns (Hesse,

2006). There, the instrument showed power in predicting actual behavior change although its psychometric properties have not been researched yet (Hesse, 2006). The instrument has immediate face validity to clinicians, intuitive appeal, and has additional clinical utility, as well. Practitioners can use the ratings immediately after its application to discuss the specific state of readiness with the client. The instrument asks the client to self-rate state of readiness per type of drug on one item formatted like a Likert-type scale ranging 1-10. The ruler was adapted to the type of drugs and the language commonly used for drug names with the help of agency staff for this project. Tobacco will not be used, as it is not addressed in treatment. The Readiness Ruler will be applied in the first, a middle, and last session of the pilot testing to every client in the sample (Appendix M).

*Secondary substance abuse.* The most common problem for clients and MAT programs alike is secondary drug abuse. According to program policies at the agency, this problem needs to be viewed as a mandatory problem. If it is present, it needs to be addressed. Consequently, it needs to be monitored and detected. The most objective way of measuring drug use is through biomarkers like urine drug screens (UDS). The number of UDS is determined by reimbursement rules. The standard course of the MAT at the agency is conceptualized to stretch over about one year. For this period, 10-12 UDS are reimbursable and administered randomly. Using these screens the agency makes decisions about referring clients to lower demand maintenance clinics or to detoxification for successful clients.

In this dissertation research project random testing would have not been feasible considering the limited period of this intervention study; and it would have not yielded

meaningful data due to the low frequency of testing. Weekly testing would have not been reimbursable, which is a common situation, and therefore not widely employed (Iguchi et al., 1997). Even, given that funding for weekly testing could be provided, a procedure like that would not contribute to learning about the impact of the model, but rather reflect the impact of more frequent testing. Weekly testing would probably create a noticeable difference for the client to the testing schedule that the agency usually employs. The reactive effects of testing would confound internal validity and distract from the psychosocial elements in the pilot testing. Therefore, a different procedure is suggested for this study.

In accordance with the agency schedule of testing, three screenings could be conducted during an intervention time of 8-12 weeks. Therefore, it was suggested to apply uniformly three UDS to the research participants. This frequency was within the frame of the agency's testing policy. It still allowed estimating a trend past a baseline.

Because it is more interesting for intervention research to integrate the testing in the procedures germane to the new model, which is measuring problem alleviation in each session, a further procedure was used. Secondary substance abuse as a mandated focus of attention was subject to a periodic review of problem alleviation according to model guidelines. For this purpose, a measurement of daily consumption was of interest, so that the practitioner could follow up on behavioral changes. Therefore, a measure was selected to conduct weekly reviews on drug consumption specific to drug type. The method of measuring is called the Timeline Followback interview (TLFB) (Sobell et al., 1996). Originally developed for reviewing alcohol use, this procedure was used for

polydrug use and marijuana in several studies, as well (Belding, Iguchi, & Lamb, 1996; Longshore & Teruya, 2005; Martin et al., 1996). Reliability was tested for different time intervals and drug types; test-retest correlations were comparable to those measured for alcohol consumption ranging from .75 to .97 (Carey, 1997; Sacks, Drake, Williams, Banks, & Herrell, 2003; Sobell et al., 1996). Concurrent validity was generally significant (Fals-Stewart, O'Farrell, Freitas, McFarlin, & Rutigliano, 2000; O'Farrell, Fals-Stewart, & Murphy, 2003). Abusers could be correctly identified and when compared to another measure Kappa was greater than .6 suggesting good consistency (Sacks et al., 2003).

In a Timeline Followback interview, the practitioner conducts a review of consumption for the past days since last session in the session with the client. This procedure tied in neatly with task review and the measurement of problem alleviation for the combined model. This way of measuring secondary drug use had the additional clinical utility that the results could be addressed in session right away.

Scores represent the sum of days of consumption, which were counted per each type of drug. Therefore, the scores can vary between 0 and 7 for one type of drug per week and a percent value for days abstinent can be computed. The summary score increases with the number of drug types the person is using. The instrument was adapted by shortening the review time to two weeks maximum for the use in this project. The instrument is provided in Appendix N.

*Reduction of other secondary problems.* The reduction of secondary problems is another vital purpose and goal of the psychosocial part of MAT. Since the construction of



the Addiction Severity Index (ASI), which takes into account multiple dimensions of living, it is acknowledged that measuring only substance abuse is too limited to capture client progress (McLellan et al., 1996). The variables for reduction of secondary problems may be different for each client, depending on what specifically is seen as the major problem.

As described in chapter 2, the most common areas of concern are medical problems, psychiatric problems, financial problems, family and relationship problems, legal problems, employment problems, housing problems, and childcare problems. Because the target problems of each client were individually different, no common measurement instrument was selected. Instead, each practitioner was encouraged to develop a way of empirically measuring the selected target problem with the client. Rating of problem alleviation was part of the TCM and constituted a part of the new model (Reid, 1992). In case it was difficult for practitioners to observe accurately the frequency or intensity of the target problem, a generic scale provided for estimating any problem severity was used. An item formatted like a Likert-type scale ranging from 1-10 indicated a problem severity between “no longer a problem” to “considerably worse” (Reid, 1978). An example is provided as a form in Appendix I.

In a reliability study of ratings by clients, practitioners, and outside judges it was found that clients and practitioners correlate high ( $r=.84$ ) but practitioners tended to overrate as compared to the judges, therefore revealing optimistic practitioner bias (Reid, 1978). Therefore, observable indicators of problem alleviation were preferred. In order to avoid a problem of credibility if a practitioner were to rate his or her own impact on a

client's problem, the client rates perceived problem alleviation (Reid, 1978). In order to influence the client's view as little as possible the ratings are elicited but not challenged. Client ratings of psychotherapy process variables tend to be better predictors of outcome variables than practitioner ratings (Kinnaman, Farrell, & Bisconer, 2006; Ogrodniczuk, Piper, Joyce, & McCallum, 2000; Taylor, 2003). The problem alleviation ratings served a clinical purpose, as well. If carefully graphed, they provided the client with orientation to the relative position in the process and from this feedback effected impulses for either further efforts or boosts to self-efficacy could be derived.

*Addiction Severity.* The ASI covers a broad range of potential areas that could be affected by substance abuse treatment (Treatment Research Institute, 2002c) and is a standardized measure (McLellan, Kuskner, & Metzger, 1992). The ASI is suited to collect data on demographics, pre-treatment conditions, current status, and change of outcome in terms of addiction severity. The ASI provides seven composite measures on medical, psychiatric, legal and employment status, drug and alcohol use, and family/social status (Treatment Research Institute, 2002a). The composite scores have been developed from specific combinations of items in each problem area that are capable of showing change. The calculation of these composites insures equal weighting of all items in the composite. They are sound measures of change (Treatment Research Institute, 2002c).

In addition to the seven problem dimensions the ASI can measure, a summary score can be computed to represent addiction severity as a multi-dimensional construct. The ASI also includes socio-demographic background information on age, gender, and race. It is a reliable and valid instrument which measures the lifetime and recent status of

clients (McLellan et al., 1992). The average Cronbach's Alpha Coefficient of 0.75 in the reliability analysis confirms an acceptable internal consistency (Abrolat, 2002). An important reason for selecting this instrument was that it is an accepted and widely used tool in the field which will facilitate comparability of the results with other studies and that it is recommended for measuring outcome in treatment comparison studies (McLellan, Cacciola, & Fureman, 1996).

*Task-accomplishment.* The rating of task-accomplishment was used early on in research on the TCM (Reid & Epstein, 1972). Tasks are at the heart of the new treatment model. The logic model for this outcome measure assumes that the attempt of performing a task that is conceptualized to alleviate a problem resembles a step towards attaining one's goals. Accordingly any accomplished task, even only attempted and not completed tasks are recognized as representing a certain degree of accomplishment, showing clients' efforts and the usefulness of the model. Therefore, task-accomplishment represents another outcome variable. Task accomplishment in this view is a proximal outcome. Congruent with the principle of empiricism in ongoing model development, the monitoring of task-accomplishments is an integral part of the new treatment model. The rating resembles not only measurement for research purposes but also essential feedback to the client. The task-review is connected to an analysis of the obstacles (see the checklist as part of the manual in Appendix J). A number of different forms have been suggested to guide and assist with this monitoring function of task-review (Epstein & Brown, 2002; Naleppa, 1995; Reid, 2000). The degree of task-accomplishment was rated along a four-point scale from "complete success"=1 to "no success"=4, which was

developed for research on the TCM (Reid & Epstein, 1977). The form to be used for this procedure is provided in Appendix H.

#### *3.6.4 Qualitative Data Collection on the Model Development Process*

Whereas the quantitative measures above are useful for assessing outcomes and the overall beneficial impact of the model the following qualitative data collection procedures served the main purpose of the dissertation, to improve the model guidelines.

*Field notes.* The notion of field notes comes from ethnology and denotes the recording of observations while the observer is present in the field amongst the people he or she is researching. For a participant observer, the goal is to be least intrusive and to become accepted as a member of the group of interest. This status allows access to make insider observations. For this project, field notes on different aspects were collected: on observations of the agency context during every day operations and on the model development and implementation process including supervision of participating practitioners. Observations were mainly taken from staffings and personal consultations. They focused on the following questions and subjects:

- First getting to know the agency, the practitioner, and the clients, then addressing further questions like:
- How does the research project fit in with agency functioning?
- How can the research project be integrated?
- What are the client problems that the model has to address?
- How is the model to be shaped?

The methodological log kept by the researcher contained all decisions regarding

the design of the research project. Due to the emergent nature, not all details (e.g. questions for focus group, or supervision) were completely worked out nor can they at the outset. The reflexive log, also kept by the researcher, captured all thoughts of the researcher that constituted hints on possible interpretation of data or personal reactions to events that may later be helpful for data analysis, interpretation of findings, and drawing of conclusions.

*Practitioner focus groups.* After the pilot testing was accomplished and all client sessions were concluded, a review of the process was conducted with all participating practitioners. The format for this research activity was a focus group (Krueger, 1994). The purpose was to elicit a summary evaluation from the practitioners on the usefulness and fit of the model. It was also another chance to make suggestions for improvements. The group format enhanced reflection and helped the participants to spark ideas off each other. For this focus group, a preliminary set of findings in the form of questions was prepared. The focus group was conducted by the researcher and took place at the agency following the completion of the pilot testing sessions. This discussion of preliminary findings represented the member check as a step in the research methodology (Rodwell, 1998). It gave participants some power over the conclusions drawn from the data to which they contributed. A first and tentative list of questions is provided in Appendix O. Ideas for focus group questions were taken from the session audio recordings and supervision notes and added to the data pool. The focus group was audio recorded and transcribed.

*Developmental notes.* Developmental notes or logs were used for systematic data collection on the process and outcome of D&D activities (Thomas, 1994). A developmental log is an unstructured form of recording reflections on the process of applying the model during the pilot test. The developmental log was kept by the practitioners. They wrote down thoughts, reactions, and observations in an open-ended format after each session. Unstructured reporting permits inclusion all kinds of experiences about implementation or the process (Rothman, 1980). The logs were kept throughout pilot testing. Of special interest were critical or otherwise informative events. Informative or critical incidents are events that are related to the working of the model (Kirk & Reid, 2002). The developmental logs also served as a means of carrying the voices of practitioners and therefore enhancing participation (Naleppa, 1995). Through input from the developmental logs practitioners could shape the improvement of the model. A form was provided for this purpose, which included prompts to guide the practitioners on what to reflect and where to direct their attention (Appendix P).

*Session audio recording.* Each session with the clients in the sample was audio recorded. Each practitioner received a portable digital recorder. The practitioners recorded all of their sessions with their clients from the pilot testing sample. The detail of visual information was not needed for this early stage of model testing. Hence, the less intrusive audio recording was chosen to capture all the interaction during the pilot testing. In research on in-home observation of families, it was found that audio recording did not have any relevant distorting reactivity effect (Jacob, Tennenbaum, Seilhamer, Bargiel, & Sharon, 1994).

Two options of data transformation were available:

1) Low tech: While the audio recordings are listened to, notes can be taken on a form that resembles the fidelity checklist but contains more space, so that observations pertaining to each step can be recorded. The researcher functions in this process as the human instrument of recording and interpreting what is perceived as relevant (Rodwell, 1998). The notes are then treated as any other field notes collected in this project and added to the data pool with other information.

2) High tech: The audio recordings are immediately transferred to a digital format and processed on a computer. Either the audio file can be split into the unit size for analysis or tags are assigned to places in the file that contain informative events (Stockdale, 2002). Note taking can be done on a computer using software for qualitative analysis. It can even be possible to use the audio file or clippings for analysis directly with the capabilities of Atlas.ti software. The recordings could be accessed and processed this way, and the data is ready for analysis, without transcription. Through this procedure access to the original voice was available, thus keeping the original data undistorted (Crichton & Childs, 2005). A logistical advantage is gained through reduced space needed to store recordings, and when audiotapes were used they could be re-used after transfer into digital format. The details of how data collection took place are reported in the introductory sections of the related analysis procedure in chapter 5 and chapter 6.

The data collected through recording was used in several ways. The main purpose was to contribute to model development and it was evaluated for content regarding the utility of the model. Second, it assisted in supervising the practitioners while the pilot

testing was ongoing. Third, it was screened for the purpose of fidelity ratings. Fourth, the recording also contained the immediate feedback that clients gave at the end of each session prompted by the practitioners.

*Client feed back.* At the end of each session, the practitioner interviewed the client to share his or her perspective on the helping process. A semi-structured interview format was used for reflecting with the client. Clients were asked about their overall impression on the usefulness of this approach, how satisfied they were with their progress and what if anything about the model was perceived as helpful or not helpful. A more structured questionnaire was used to elicit clients' perception on the treatment process in treatment research on an outpatient methadone treatment (Institute of Behavioral Research, Texas Christian University, 2005a). A few selected questions from this form, the Client Evaluation of Self and Treatment Questionnaire, were used for the prompting of client feed back. The questions are supplied in Appendix Q. The clients' responses to this review constituted further data for model improvement.

### *3.7 Data Analysis*

The model development dissertation has to achieve two main purposes (Reid, 1979), to identify relevant variables and hypotheses for further research and to evaluate and improve the model guidelines. In addition, any research on a practice model aims to find out to what degree envisioned outcomes have been achieved. This question was be answered by quantitative analysis of data from outcome measures. However, these data on possible gains in outcome were only secondary. The main purpose was to develop the model guidelines by way of qualitative data analysis.



### 3.7.1 Outcome Measures Analysis

All of the six quantitative outcome measures were used to determine change in outcome. The following table describes the value range of these client level variables and their level of measurement.

Table 10. Dependent variables and instruments

Dependent Variable	Instrument	Range	Level of Measurement
Addiction severity	ASI	0 to 1	interval
Drug use	UDS	0, 1	categorical
Days of use	TLFB	0 to 7	interval
Readiness to change drug use	Readiness Ruler	1 to 10	ordinal
Problem alleviation	Problem alleviation form	1 to 10	ordinal
Task achievement	Task review form	1 to 4	ordinal

Data on all of the outcome measures were only observed on the small N of 10 participants but on three or more occasions. Measurements were taken for:

- Addiction severity at beginning and end of sessions,
- Secondary drug use through UDS at baseline, beginning, middle, and end of sessions,
- Secondary drug use through weekly review resulting in at least >6 measurements,
- Readiness at beginning, middle, and end of sessions,
- Problem alleviation scores, at least at beginning, middle, and end of sessions, and
- Task accomplishment for each task at each session, resulting in at least >6 measurements (compare to Table 13. Measurement and timing).

The frequent measurements generated suitable data for a time-series design. The

single system design (SSD) is recommended for the use with small samples in the earlier stages of D&D (Thomas, 1994). However, because the focus of this research was on the developmental aspects there were no extra efforts spent on collecting further baseline data. Despite this limitation, data are displayed in a SSD fashion and interpreted by visual inspection of the graphed values. All quantitative data, due to their level of measurement, could be ordered by the generic dimension of getting better vs. getting worse, even the categorical data from the drug screening. All measurements were plotted along a timeline and then visually analyzed for patterns in the observed changes.

The quantitative data presented this way were enriched and commented by qualitative data derived from the audio recordings. Demographic data were used to describe each participant. A narrative accompanies each case and aids in interpreting the outcome data. The contextual information helps in understanding case dynamics. Through the rich data from these two sources, it is possible to get a good understanding of the clinical process and the therapeutic gains made during the pilot testing. Measuring changes on these variables demonstrates the general progress of treatment, and, at the same time, it provided viable feedback to the clinician for process monitoring.

### *3.7.2 Model Development Data Analysis*

*Sampling of session recordings.* All recordings were listened to by the researcher for supervising the practitioners and to rate and monitor treatment fidelity. It was expected to collect at least 50 session recordings. This number was sufficient to get enough information for model building. This number on the other hand was also manageable for the intense and time-consuming type of analysis conducted.

*Unit of analysis.* Greenberg (as cited in Loneck et al., 2002) defined three major levels for research about the therapeutic process: speech act, episode, and relationship. Focus of the analysis here was on the level of episode. Some MI research focused on the speech act, the utterances of the clients (Amrhein, Miller, Yahne, Palmer, & Fulcher, 2003). The basic models from which the combined model is originating both emphasize relationship, a good working alliance. Working alliance is conceptualized as clinician-client agreement on goals and tasks, and bond (Connors, Carroll, DiClemente, Longabaugh, & Donovan, 1997; Petry & Bickel, 1999). These components were part of the combined model. Whether and to what degree a working alliance was achieved relates to a different research question, would require different measurements and therefore it was not used as a variable in this study. It is assumed that with satisfactory fidelity, a working alliance was achieved.

What is of interest in model development research is “what practitioners do and what follows their actions” (Reid, 1979, p. 220). The relevant question therefore is ‘what is the client reaction or response to the occurrence of one of the features of the model?’ Therefore, a meaningful unit of analysis appears to be “practitioner-client activities” units, which also have been chosen in research on the TCM before (Reid, 1978). This notion of structuring an interaction is similar to the observation of how humans always subdivide interaction sequences for interpretation (Watzlawick, Beavin, & Jackson, 1967). The unit of analysis should allow the reconnection to a model feature if possible. It should allow an evaluation of its functioning related to the two questions of “What is the interaction sequence we are dealing with?” and “How does it work?”

*Content analysis.* Three approaches to the analysis of qualitative data can be distinguished: interpretivism, social anthropology, and collaborative social research (Miles & Huberman, 1994). The overall design has many features of collaborative social research, and data analysis is not concerned with interpretation but rather the obvious interaction and the factual events during the process.

The first main analytical activity is content analysis. Content analysis refers to a broad group of techniques of making sense of textual data by identifying and grouping parts of a message (units of analysis) in a systematic way (Berg, 2004). A general set of activities in analysis adapted from Berg (2004) includes the following elements:

- Data collection and transformation into text (notes, transcripts),
- Development of codes analytically or inductively,
- Affixing of codes to data units,
- Transforming codes into broader categories or themes,
- Identification of patterns, connections or processes, and
- Drawing of conclusions in light of previous knowledge and questions.

*Coding with pre-determined categories.* A systematic analysis is achieved by clear rules or criteria for selection of codes, which need to cover the range of variety exhaustively and be relevant to the questions asked of the data (Berg, 2004). The question asked of the data is twofold: 1) How does the model - as it was planned - appear to be working? 2) Can we discover new ideas or suggestions, of which we did not think before? These two questions can be seen analogous to the distinction between testing theory and generating theory, one a deductive process, the other an inductive process

(Berg, 2004).

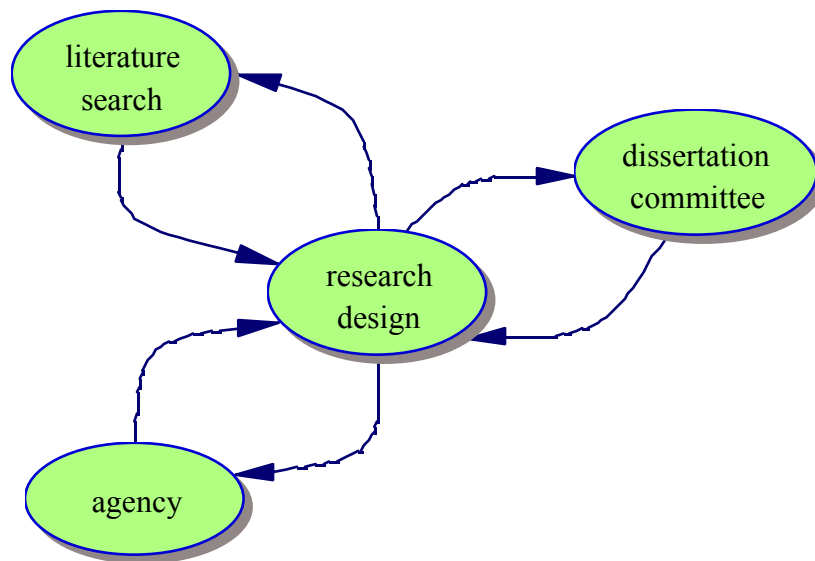
In order to determine the precise how and what focus of analysis, it was necessary first to establish a framework for this endeavor. The analysis of data in pursuit of the question of how elements of the model are working required the analytical categories be predetermined. The categories for coding came from the features of the model. If the main elements were “structures” and “readiness”, then this is what the analysis will focus on, and assign codes accordingly. The categories of the coding system naturally followed the task-centered structure and principles of MI as the underlying features of the combined model. The data from audio recordings and developmental notes after being coded then helped identify program parts that needed refinements as well as parts that were working well (Kirk & Reid, 2002).

*Open coding.* The second way of looking at the data was through open-coding. While keeping the study questions in mind, it was important to stay open for unexpected themes in the data (Berg, 2004). Informative events point to successes or failures (Kirk & Reid, 2002). They can consist on the client side of unexpected reactions and on the practitioner side of a new interpretation of guidelines or a new solution to a specific situation. Relevant incidents will somehow stand out and represent moments of insight or change for the client. Open coding followed the constant comparison method, which required comparing each incident with the previous incidents in the same and different categories (Glaser & Strauss, 1967). The results of the analysis were used to stepwise review the features of the combined model.

### 3.7.3 Feedback Loops and Hermeneutic Circles

The circles of communication that occurred were a special feature of the research design for this dissertation. The most encompassing loop was the circling back between the phases of the model development design (Thomas & Rothman, 1994). This activity of “re-reflecting” employed the “self-corrective powers” of research (Bailey-Dempsey & Reid, 1996, p.209). The designing of the initial model was reflected with practitioners, the agency director, and the dissertation committee, as portrayed in the following figure.

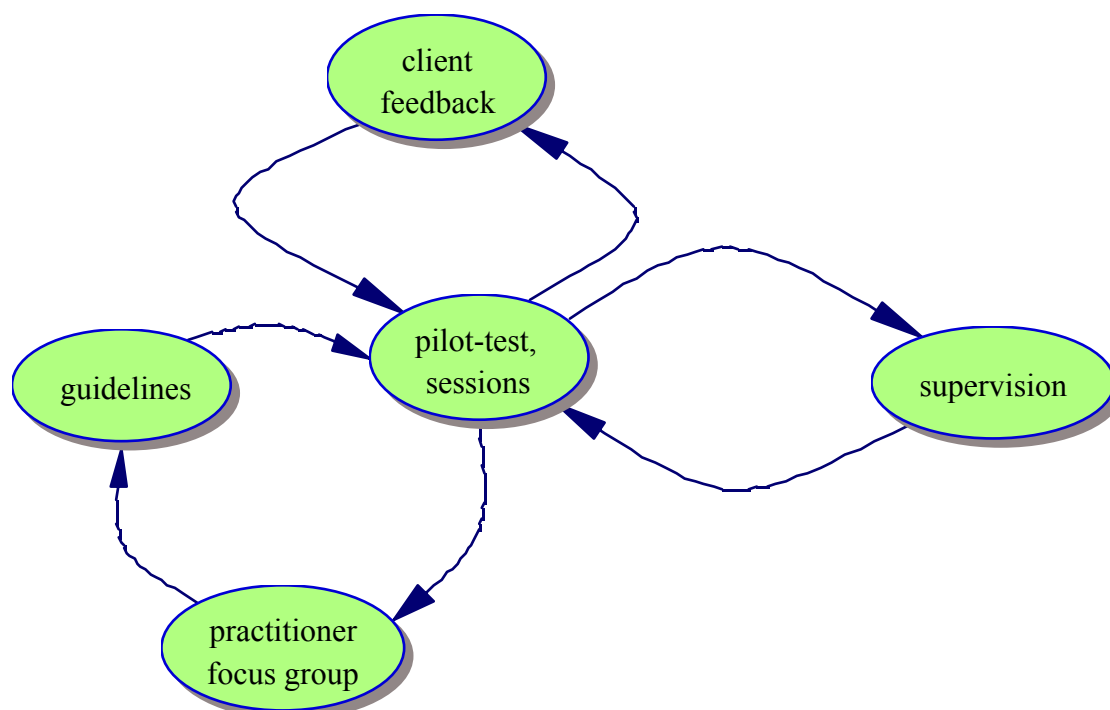
Figure 8. Hermeneutic circles - design processes



After the design question had been answered and a fusion of horizons had been accomplished, the next layer of feedback loops influenced the researched actions (and thus practitioner performance), and the emerging reflective questions (Gadamer, 1975).

A second set of feed back loops was created during the pilot testing. These hermeneutic circles are portrayed in the following figure:

Figure 9. Hermeneutic circles - pilot testing



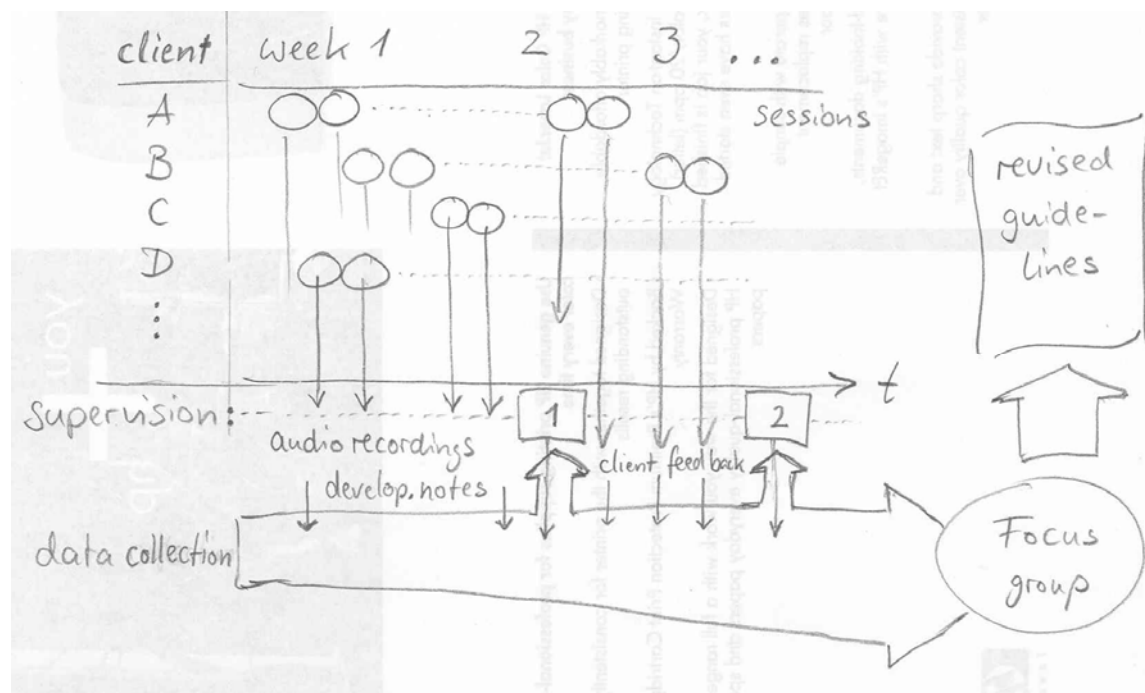
Session recordings including the client feedback were used for the review of practitioner performance in supervision. By practitioner generated developmental notes shaped focus group questions. All data sources were connected and fed off each other and thus ultimately contributed to the revision of the guidelines. The creation of several hermeneutic circles fostered a growing understanding and agreement on how to interpret and change the initial model guidelines to improve the new model (Gadamer, 1975). In order to trace the converging circles of understanding and reconsidering, the methodological journal and the reflexive journal were kept (Rodwell, 1998). These field logs were essential tools for model development (Rothman, 1980).

### 3.8 Review of Guidelines

The information related to features of the model gleaned from data analysis was

used for reviewing the initial model. Before this could be accomplished, all the information learned about the working of the model needed to be categorized according to their relevance for the model steps. The sources for this information were the process documentation through the forms, the session reviews by clients, the developmental notes, the audio-recordings, the focus group, and the field notes taken from conversations and at supervising the pilot test. The following figure shows how data accumulated, how the emerging knowledge informed later steps, namely supervision and focus group, and how finally the information was used to update the guidelines.

Figure 10. Data flow and accumulation



When the preparatory step of analysis was finished, the information could be put to work for the review of the guidelines. The review was to be conducted in steps. Each step entailed an essential sequence of the combined model. The existing guidelines for

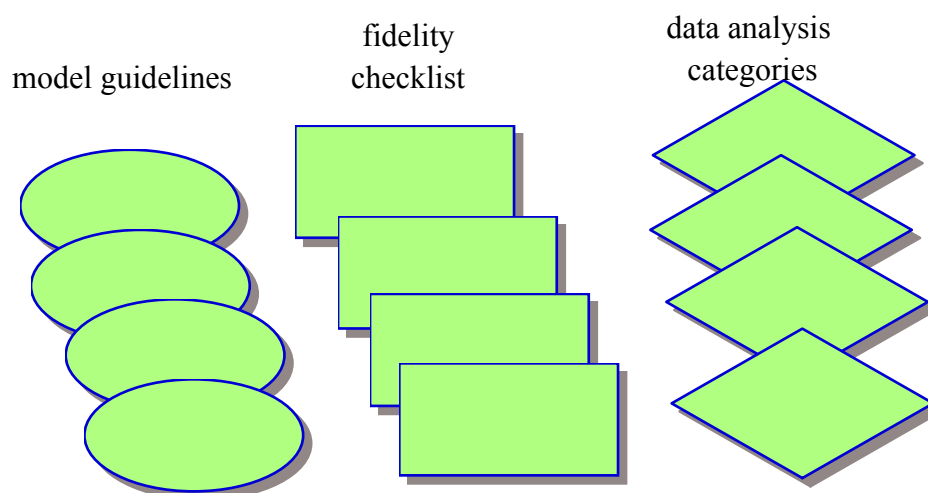


each step were compared and contrasted with the information from the data analysis, which was structured in a parallel fashion. A decision was made based on the results from the analysis whether to keep a step unmodified or whether and how to change it.

The results of the data analysis were viewed as experiences made by carrying out the model. Hence, in some cases it was possible to reconnect this knowledge to the pertinent steps. This way the results of the data analysis functioned as comments, interpretations or refinements of the initial guidelines. Special attention was given to adverse events, courses of action that seemed not to have worked as planned. Unplanned and innovative actions also yielded important information.

The unifying structure that allowed the transfer is most closely described by the fidelity checklist. This group of items described the model and provided the categories along which the qualitative data was sorted. As the data was rich enough the category list could be enhanced by some principles. These items also resembled the items that had to be reviewed. Because data could be collected that made statements about each item or model feature, each item could be reviewed, commented on, and potentially changed. The following figure illustrates this concept.

Figure 11. Model review category system



The items on the fidelity checklist were a more abstract form of the model guidelines. The fidelity checklist represented the model in a stepwise form. If data was analyzed using the fidelity list as a category system, then they could be matched to the model guidelines. The model guidelines, then, could be reviewed one by one. Other analytical categories for example “skilled/unskilled application”, “innovation”, or ‘non-adherent” were qualifiers to the first list of categories (Davis & Reid, 1988; Naleppa, 1995). They can suggest the direction of change in the guidelines, depending on further contextual information, e.g. about successful progress when it was applied, or whether the client liked it.

### *3.9 Strengths and Limitations*

The complete development of a practice model usually stretches over many years. In the D&D research paradigm, this is acknowledged by conceptualizing the process in distinct phases, which have different developmental goals. D&D applies different

methodology appropriate to the respective goals and is therefore comprised of more than one distinct research project. For this dissertation research project, it was crucial to distinguish between the phases of early development and field testing. Early development includes a small-scale pilot test whose goal is to learn about the fit and feasibility of the model's features in order to improve them and thus create a solid model worthy of further testing. Appropriate for this limited and exploratory goal, the early pilot testing puts more emphasis on the qualitative part of the research with its own criteria for rigor. Field testing, which is the next logical step in model development, on the other hand, will rather need to consider the rigor requirements of quantitative research. Larger sample size, standardized measures and experimental design would be the appropriate design features for this phase. However, the expanded field testing was beyond the scope of this dissertation.

The scientific quality of the research activity conducted in this phase of early model development depended on the rigor of adhering to the following standards for trustworthiness (Schwandt & Halpern, 1988):

1. All data were derived from empirical observation.
2. Conclusions drawn were grounded in data and can be traced back through a documented audit trail (confirmability).
3. Research activities were systematic, purposeful, described and documented in detail through a methodological log (dependability).
4. The research had considered and allowed for participation. Therefore, it reflected the needs of its stakeholders and envisioned users, the clients, the

practitioners, and the agency. The research project was adapted to and embedded in an applied setting and therefore relevant to its potential users (credibility). As a result, ecological validity was increased.

Other limitations have been mentioned above and include the lack of funding and the conditions in a naturalistic setting, which restricted the number, scope, and sophistication of the research instruments, fidelity testing procedures, and practitioner training. From a research standpoint, it could also have been advantageous if a research team had assisted with data collection and practitioners would have been relieved of research tasks. Additional coders and raters would have enhanced reliability for analysis. Nevertheless, considering the efforts that went into the collaborative designing of the research, the design described in this chapter was considered appropriate for the purposes it aimed to achieve.

## Chapter 4 Development of the Initial Combined Model

This chapter describes a) the combined model and b) how it is developed from the underlying original models. It represents the “early model” within the model development process (Rothman & Thomas, 1994). This preliminary version includes practice guidelines, checklists, and forms, accompanied by flow diagrams to illustrate the sequence and interrelatedness of steps in the model design. The combined model is a new and creative development, the first product of this dissertation research. This chapter is structured by the following sequence of tasks:

- Select the approach for merging the underlying models,
- Define what constitutes a model and its parts,
- Clarify the requirements for guideline writing,
- Integrate the principles,
- Combine the theories of change,
- Merge the structures, and
- Create a description.

### *4.1 Method for Model Integration and Guideline Development*

This section outlines in more detail the process of merging the two underlying original models, the TCM and MI. Eclecticism might be the broadest frameworks guiding the integration of models and can take different forms. Systematic integration is set apart from casual, individual, and convenience approaches of putting models together (Payne,

1997), and theoretical integration is distinguished from technical eclecticism (Norcross & Goldfried, 2005). Theory synthesis is among the systematic approaches to integrate models for which a set of consecutive steps is provided (Walker & Avant, 2005). This approach is selected for combining the two models. The steps are:

1. Determine the constitutive elements first,
2. Determine congruence or discrepancy,
3. Merge or if not possible discuss a different solution,
4. Create a representation (graphic or linguistic) (Walker & Avant, 2005).

The constitutive elements of the social work practice models selected for treatment integration are concepts, principles, structure, and unique techniques. They can be found in the writings of the developers and in fidelity instruments and other research instruments on these treatments. These elements are of different kind and need to be subdivided into more homogenous groups. The three main groups that are relevant to model building are subdivided along the dimension of abstractness:

1. most abstract: the values, principles, attitudes, or spirit;
2. the structures, phases, strategies, and steps in their sequential order; and
3. most concrete: the interventions and techniques within the phases and their sequential order.

Ordering elements of models requires analysis before synthesis. It requires careful relabeling and categorizing of the terms, which the developers used according to an overarching framework or taxonomy. For example depending on the phrasing, an element maybe named after a) goal or phase, b) behavior or strategy, or c) principle or key

concept. It can be represented as a variable in the assumptions about change or designated as a skill. There is no sharp and clear cut distinction about these terms and they are often used interchangeably (Epstein & Brown, 2002; Payne, 1997). An example is “reflective listening”. It can refer to an intervention (response), a strategy (striving to listen more than talk), or a practitioner skill. It is all of these depending on what part of the description of the model we are considering. The grouping of these elements is conducted according to a purpose or from a certain point of view. The different possibilities are illustrated by the following ways of grouping elements of a model:

- Related to the practitioner: Phrased/labeled as skill, knowledge, attitude,
- Related to the treatment process: Phrased/labeled as phases and steps or corresponding goals and sub-goals (objectives);
- Related to level of abstractness of practitioner action: overarching strategies and precise and specific interventions (techniques);
- Related to target, subjects, or key concepts: The concept “problem” (as a focus and emphasis) and related practitioner and client behavior, which can be expressed as variables and put into a theory of change conceptual framework. The parallel example is the concept of “readiness” in the MI, in which related client behavior (resistance) is matched with practitioner behavior (rolling with resistance).

All of the above are ways of telling the story, i.e. describing the model. In order to accomplish step one, the compilation of essential elements, relevant and representative quotes from the major works by the original developers were collected and then fitted

into an ordered and hierarchical framework according to the aforementioned three levels. This procedure resembled the qualitative research steps of data collection and content analysis of text into categories of statements.

Many sources were reviewed for this purpose. Inconsistencies in terminology were found, breaks in logic, variable use of multiple terms, and doubling (Epstein & Brown, 2002, pp. 94, 95 “summarize tasks”), or scattered and undefined terms (Corbett, 2004). This is also true for other disciplines and great efforts are needed to improve this situation for any discipline (Eichler & Burke, 2006; Estabrooks, Thompson, Lovely, & Hofmeyer, 2006; Graham et al., 2006; Hardiker & Rector, 1998; Sahli, 1981; Salvatore et al., 2006; Smith, 2006; Valsiner, 1994).

However, the difficulty with terminology is frequently due to the contextual nature of social work practice, which can lead to confusion between assessment, intervention, and evaluation actions. At other times, issues with terminology are due to a lack of conceptualization (Walker & Avant, 2005). These inconsistencies pose limitations for integrating the two models. Synthesis of two models requires analysis, which quickly reveals any lack of clarity in an original model and presents the opportunity to define and order elements with greater consistency. After the elements are defined and ordered, the next step in synthesis can follow logically: determine congruence or discrepancy, merge or discuss a different solution, and create a graphic and linguistic representation.

#### *4.2 Working Definitions*

Different theories are used in social work: a) theories about what is social work, b) theories about clients and human functioning, and c) theories about how to do social



work (Payne, 1997). The type of theories that deal with the question of how to do social work are often called practice theories or models. Models describe or prescribe in a structured form what social work practice looks like (Payne, 1997). Therefore, one can define that model are constituted as “organized sets of related interventions that are stated and described with a high degree of specificity” (Epstein & Brown, 2002, p. 35).

The use of “intervention” in the model definition is broadened and more neutrally termed “element” for creating a taxonomy that is applicable to both models. Following this re-labeling more working definitions were needed. An element of theory building is either a concrete step (like “intervention” in the model definition above) or a principle. A step is a prescribed counselor action, which is unique and plays a role in advancing the client through the model, which has a precursor/trigger, and for which a goal exists or can be construed. Two or more steps can form a group, a phase, or belong to a strategy. A principle as it is used in the literature on the original models represents a diverse group of elements. It is used for a certain quality of an action (“collaborative”) or a strategy (“develop discrepancy”, “roll with resistance”), or a counselor attitude that carries through the application of the model (“empathy”), or an assumption (a preference or emphasis preferably based on an empirical fact) about a central concept (like “brevity of treatment”, “change through tasks”, “motivation”, “self-efficacy”). With these working definitions, the merging and model building could proceed with the goal of producing new guidelines. Guidelines are the prescriptive form of how each element is described for the instruction of a practitioner in a manual kind of fashion.

### *4.3 Presentation and Level of Detail: Requirements for Guideline Writing*

The resulting description of the model can be accomplished at different levels of detail, depending on what is needed. A model description for the purpose of model development only needs to consist of practice guidelines (Reid, 1979). However, to train the workers some more details are needed such as graphic representations to depict the phases; sequences of interventions; options that require assessment and decision-making; and details on more complex steps (like obstacle analysis) which can be delivered in a checklist format. The next level of description is a detailed manual, which provides background information and contains case examples. This can be a follow-up product of the guidelines produced here.

Questions before design activities were begun related to the level of detail were:

- How much detail is needed to design the model?
- How much detail is needed to teach it?
- How much detail is needed to learn it?
- How much detailed learning is needed to do it?
- How much detail needs to be observed to monitor fidelity?
- How much applied detail is needed so that clients experience beneficial effects?
- How much detail is needed to reflect on in order to learn about it and to improve it?

None of these questions can be answered fully. Therefore, a note of caution is appropriate. Not enough precision might result in vagueness. Too much precision could be wasteful or detrimental at this stage of development. A model that is too detailed

might not be carried out at the planned level of specification. Practitioners need time to arrive at a higher level of specification or skill. It was found that skill level is highest immediately after training, therefore, the pilot test is planned to begin immediately after the training. Training effects diminish over time requiring continuous supervision for retention (Miller & Mount, 2001). As argued before, a model that is too detailed might confine practitioners too much not leaving room for development and creativity.

Therefore, a level of detail was selected which preserves the essential tenets of the original models, and can be taught and monitored within the confines of a naturalistic setting. Central is the notion of correspondence between effort and expected results, between design activity, training, practicing (pilot testing), fidelity testing, and reflecting/evaluating. All of these activities need to have similar levels of specification to increase precision.

#### *4.4 Integrating Principles*

As mentioned before, the synthesis of principles suffers from the incongruence of what the model builder defines and names as “principles”. Instead of redefining the meaning of “principle” and thus creating a new “unifying theory” (Bloom, 1956), the principles are taken from the main accounts of the respective developers as compiled in the literature review in chapter two and are used as building blocks (Miller & Rollnick, 2002; Reid, 1996).

In order to compare or match two things one needs a third called “tertium comparationis” (Latin for the “third in a comparison”), the dimension on which they are matched, the basis of comparison or reference point. This dimension needs to be at a

higher level of abstraction. The following concordance table shows how the principles of the original models are matched according to relevant dimensions.

Table 11. Concordance of principles

Dimension	TCM	MI
1 knowledge base	empirical orientation	builds on empirical research
2 model building	integrative stance	abundance of adaptations built on work of others
3 form	planned brevity	brief treatment
4 model emphasis	structure	Style
5 central concept	task	motivation
6 perspective	systems and contexts	Intrinsic
7 intervention focus	client acknowledged problems	target behavior while respecting client autonomy
8 relationship	collaboration	collaboration roll with resistance
9 strategies	problem solving	Evocation
10 addressing motivation	develop rationale, explicit commitment	assess readiness, develop discrepancy
11 orientation	action (task accomplishment)	linguistic (change talk)
12 general goals theory of change	enhance self-efficacy task accomplishment alleviates problem	support self-efficacy resolve ambivalence (get ready for action)
13 therapist stance	empathy	Empathy

The pair of terms in the table is referenced by its number in brackets in the following discussion:

Congruence is apparent in both models' orientation to model building in (1) that they value and build on empirical research and (2) the fact that both models integrated elements of other models when they were developed. The developers of MI and the TCM frequently refer to other sources (Lemon, 1983; Miller & Rollnick, 2002). One of the principles of the TCM is that it is inclusive, a category used by Payne, (1997) and

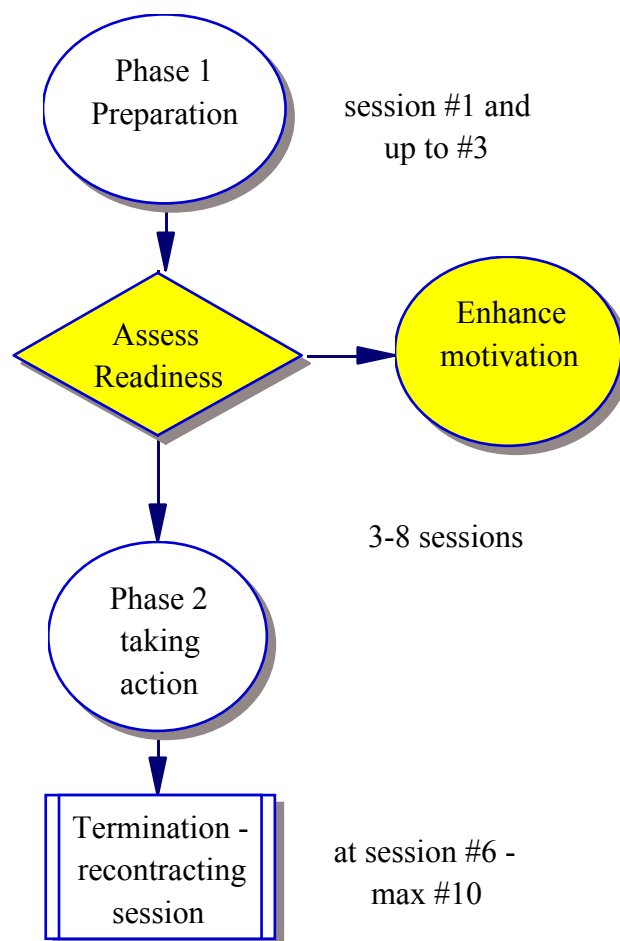
evidence oriented. Therefore, new knowledge about social work practice, which has shown evidence, can be incorporated. MI represents such knowledge about successful interventions. MI has been described in a variety of adapted versions (Burke et al., 2002; Miller, Rollnick, & Conforti, 2002). MI is open for adaptations as evident in that more studies have been conducted using adaptations of MI than on the original model. This fact concerned MI developers who repeatedly questioned fidelity of adaptations and strive to protect the core, the “spirit of MI” (Miller & Rollnick, 2002; Rollnick, Miller, Longabaugh, & Heather, 2001). However, in a discussion of action-oriented couple therapies, it is explicitly acknowledged that it is “possible to combine MI with more action-oriented approaches (as is the TCM) for which it may be a potentially valuable addition” (Miller & Rollnick, 2002, p. 353).

(3) Both models are conceptualized as brief treatments (Lemon, 1983; Miller, Zweben, DiClemente, & Rychtarik, 1992; Reid & Shyne, 1969). In considering model emphasis, or the characteristics of each model that are thought to be most central to the specific model (4) differences become apparent and structure can be pitted against style. MI is only roughly structured in two phases, one and two, or “preparation” and “action” (my labels). This is not much different from the three phases in the TCM. In addition to beginning and middle, the TCM recognizes termination as a third and independent phase consisting of one session (Naleppa & Reid, 2003). MI does not have much prescribed structure within the phases, whereas the TCM describes many steps in detail (Reid, 1978, 1992). It is possible to view MI as structured by the five stages of the change (Miller & Rollnick, 2004; Prochaska et al., 1992). Furthermore, within each of these stages a set of

steps is prescribed, e.g. steps within MI phase one are to explore, to find ambivalence, to enhance ambivalence, then to develop discrepancy (North Eastern States Addiction Technology Transfer Center, 1998). However, it seems that MI is more often described like a dance than a linear progression (Miller & Rollnick, 2002; Scales, Miller, & Burden, 2003).

Discrepancies between the models can be found in (5) task vs. motivation, (6) context vs. self, (9) and (11) action vs. talk. These discrepancies can be solved by sequencing or addition. First motivation needs to be clarified before a task can be attempted. Commitment through explicit agreement needs to be established before a task is attempted to increase likelihood of successful completion. Therefore, the phase plan for the new model will sequence these activities. Assessing and enhancing motivation becomes a clear and distinct step before the TPIS is applied as is shown in the following figure with the colored/shaded areas signifying MI domains.

Figure 12. Phases model



(9) MI focuses on client speech (Miller & Rollnick, 2004) and traces its effectiveness back to certain speech acts (Amrhein, 2004; Amrhein et al., 2003). However, problem solving does not need to be put up against evocation. It is held in the TCM that explicit client agreement is contributing to commitment, and that summarizing should be carried out by the client. On the other hand, the focus of session activity in MI shifts also from change talk to action planning (11), when the client moves into the action phase. Therefore, I see no barrier to integration here. Both models complement each other.

It was recognized that a possible shortcoming of traditional MI is that it does not fully assess and use client context (6) (Miller & Rollnick, 2002). This can be improved through the merging of the two models where the TCM adds social work's ecological-systems view to the combined model. Congruence is apparent furthermore in, 7, 8, 10, 12, 13. Both models need a defined target behavior to address possibilities of change (7). Both models also highly emphasize client autonomy and respect of client choices (7). Asking permission before giving advice in MI (North Eastern States Addiction Technology Transfer Center, 1998) parallels "securing agreement", a step in the TCM (Reid, 1992, p. 60).

In principle, both models describe the client-practitioner relationship as collaborative (8) as opposed to prescriptive or directive (Miller & Rollnick, 2002; Reid, 1978). However, MI distinguishes itself from Rogerian client-centered therapy by the use of direction. In the TCM direct advice giving is seen as a strong component by some, however, the evidence is not clear (Lemon, 1983). The practitioner using the TCM is advised to avoid persuading the client (Reid, 1992). Giving direct advice is a MI non-adherent category, but only if permission is not asked (Moyers, Martin, Manuel, Hendrickson et al., 2005). MI provides valuable rules for practitioner behavior for this situation. Before information or advice is given, the client is asked permission. Emphasis on directiveness can also be seen in the TCM's focus on the target-problem. Due to the constraints of the brief therapy framework maintaining focus is encouraged (Reid & Epstein, 1972). Both models avoid client reactance (8) and cite the same references (Brehm & Brehm, 1981; Rooney, 1992). The TCM strategy to avoid adverse reactance is



careful contracting and MI's is careful adjustment of practitioner behavior. In MI, client responses trigger therapist behavior. Resistance is taken as a signal to respond differently (Miller & Rollnick, 2002). This fine-tuning of practitioner behavior is one of the strengths of MI that will be a valuable addition to the TCM.

Even though MI's hallmark is focusing on motivation, the TCM considered the relevance of motivation (10) early on by discussing ambivalence as conflicting wants, and by including techniques that enhance motivation and motivational congruence in the TPIS like providing incentives, developing a rationale, securing agreement on problem and task, summarizing, and rehearsing (Reid, 1978, 1992; Reid & Hanrahan, 1982). Even the use of an evaluation of pros and cons very much alike the MI version of a decisional balance sheet (Rollnick et al., 1999) is used in the TCM (Reid, 1992). Motivational congruence between practitioner and client is stressed for work with involuntary clients using the TCM; choice and the sense of self-control is emphasized (Rooney, 1992). Rooney, a developer in the task-centered tradition, cites Miller on this topic, a main contributor to MI (Miller, 1995).

Another commonality is the shared general goal of self-efficacy (12). Both models acknowledge the underlying importance of self-efficacy perceptions for all human mastery of life. MI addresses this dimension by an extremely supportive style; the TCM utilizes the task and problem review in addition to a supportive practitioner style to address it. A task, which could not be carried out, in the TCM should be scaled back until it is attainable, thus improving the client's chances to succeed (Reid, 1992; Rooney, 1992). Both models shift responsibility for change away from the practitioner to the client

(Miller & Rollnick, 2002).

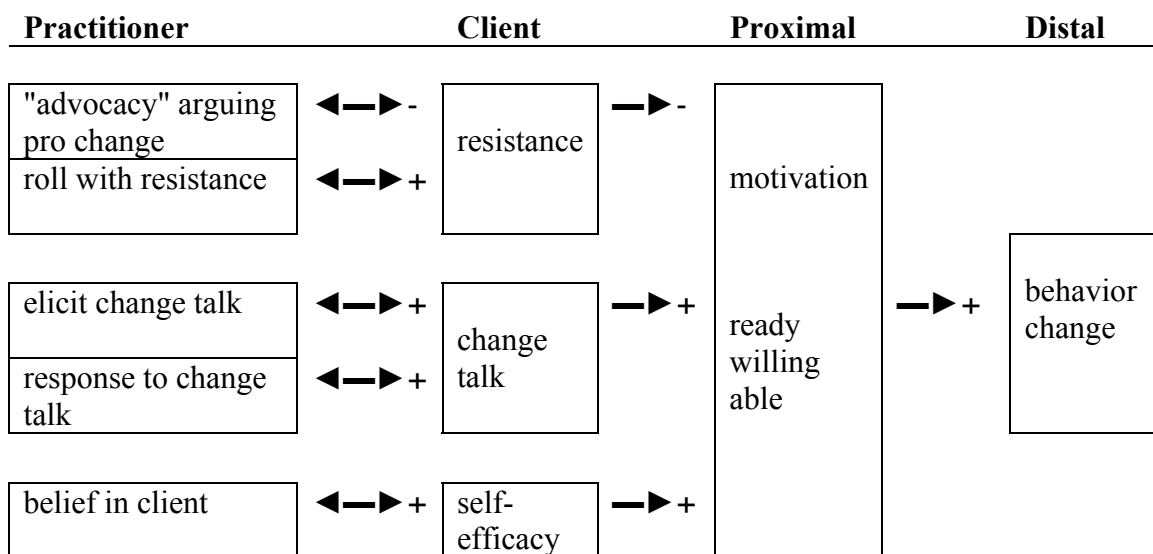
In support of self-efficacy, both models also converge on the value of empathy (13) as the major practitioner stance, which is also seen as a common characteristic of brief treatment models in general (Epstein & Brown, 2002). A summary of the principles used to describe the combined model and to instruct and guide the practitioners in the pilot test is provided in Appendix R.

Most of the principles for treatment discussed above find additional corroboration outside the writings about the two models in the treatment and social work literature under the themes of accepting the client's point of view, the client as expert, practitioner neutrality, the "not knowing stance" (Boscolo, Cecchin, Hoffman, & Penn, 1987), and abandoning the concept of resistance (De Shazer, 1984). These writings and research on common factors provide ample support for building models using an eclectic approach to the integration of knowledge (Drisko, 2004). A similar approach to model integration building on common factors can be found in another general problem-solving approach to treatment (Norcross & Goldfried, 2005).

#### *4.5 Merging Theories of Change*

Theory of change in MI conceptualizes the process of change in stages (Prochaska et al., 1992). Practitioner behavior, sensitive and matched to the client situation, aims at the proximal of goals of readiness and motivation first and behavior change following. The relevant variables and their associations are depicted in the following conceptual framework.

Figure 13. Conceptual framework of change



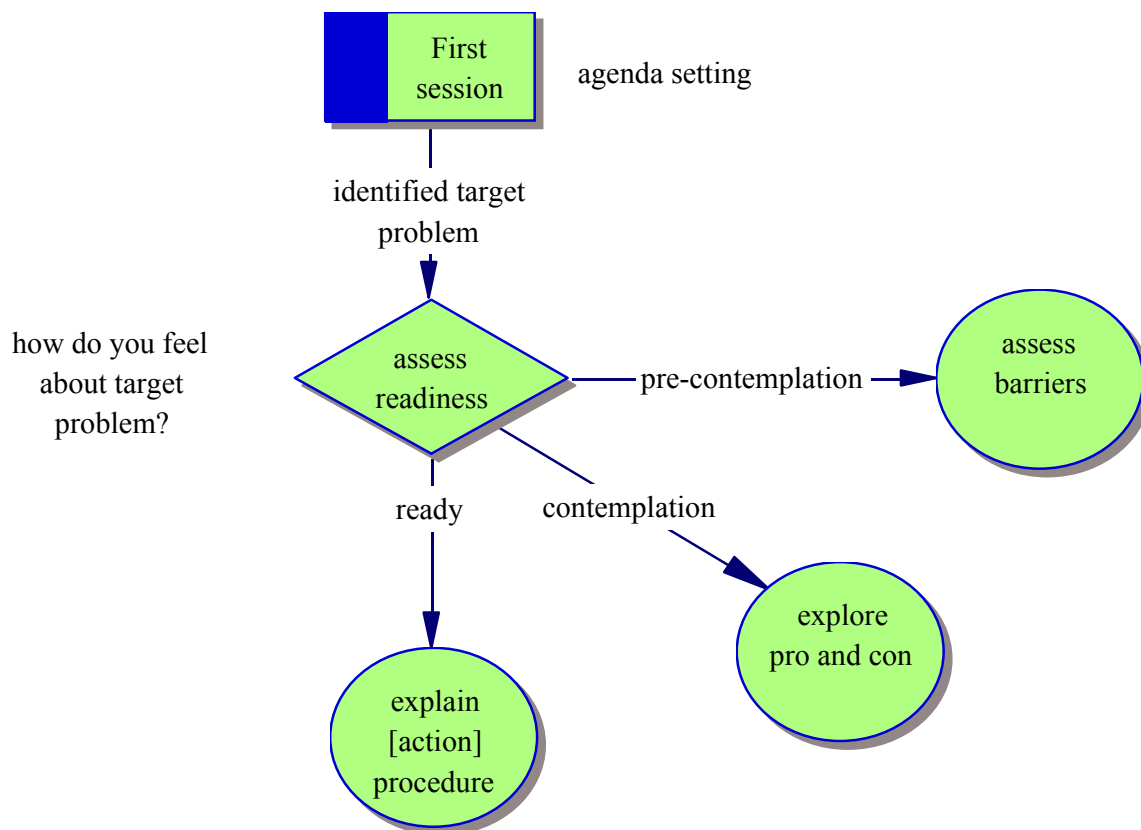
Theory of change in the TCM is not contradicting this framework in any way. Rather, the concept of change in the TCM adds another step to the last phase of behavior change. If behavior change is construed as successfully carrying out tasks that have either not been attempted before or have not been completed successfully before, then a further step can be added to the conceptual framework above, the change in the problem situation. The TCM holds that a problem situation is changed by action taken by the client (Reid, 1996).

#### 4.6 Merging Structure

Through the discussion of principles and through the propositions of the transtheoretical model of the stages of change it is apparent that assessing and enhancing motivation precedes work on action steps. In MI, change is conceptualized as a process, therefore, the structure of the theory of change as depicted above shows up in the structure of the steps within the model. In MI, the process is guided by client responses,

which is a cybernetic model. The process is governed by the feedback through the client i.e. practitioner assessment of the stage of change determines further practitioner action. Client resistance, perceived at any point, triggers certain practitioner action, indicating a lower stage of readiness than the practitioner was assuming. Conceptualized this way, the structure is shaped by a large number of if-then junctions, beginning with the first set of choices dependent on the client's stage of readiness as is illustrated by the next figure.

Figure 14. Assessing readiness



After defining the target problem (only in the sense of raising a topic: “what are we talking about”, not yet as subject for drafting a change plan – as it might seem in the TCM), the practitioner assesses the stage of readiness by an open-ended question. The

stage of preparation (determination) is congruent with the preparation for a task in the TCM, which equals readiness for “planning” of action. Therefore, when a client is assessed as being in the preparation (determination) phase of change, then a practitioner can proceed with the TPIS, which is concrete action planning. The TPIS includes what MI prescribes as responses for this phase: maintain and strengthen commitment and plan strategies for implementing the change (North Eastern States Addiction Technology Transfer Center, 1998). Therefore, the assessment at the decision-making points is about precontemplation, contemplation or preparation. Consequently, a practitioner has only to distinguish three different courses of action from there.

The strength of the TCM lies in the TPIS, which was empirically developed and has demonstrated its effectiveness through several studies (Reid, 1975, 1985, 1997a). If this sequence is followed, it is associated with better rates of task completion. Therefore, this sequence is kept to enhance the less detailed instructions for the action phase in MI. However, the strength of MI lies in its careful assessment of readiness and the elaborate techniques for enhancing motivation. The most prominent amongst these is developing discrepancy between values held in high esteem and current behavior, which then may lead to contemplation of the possibility of change (Miller & Rollnick, 2002). Hence, these MI techniques are infused in the TPIS.

As a general principle of integrating the two models, it was found that MI techniques are invoked at every decision making point. These are the points when the target problem is negotiated, before task planning is begun, and when the task is reviewed and a decision has to be made whether to retry or move on. Adding MI sequences into the

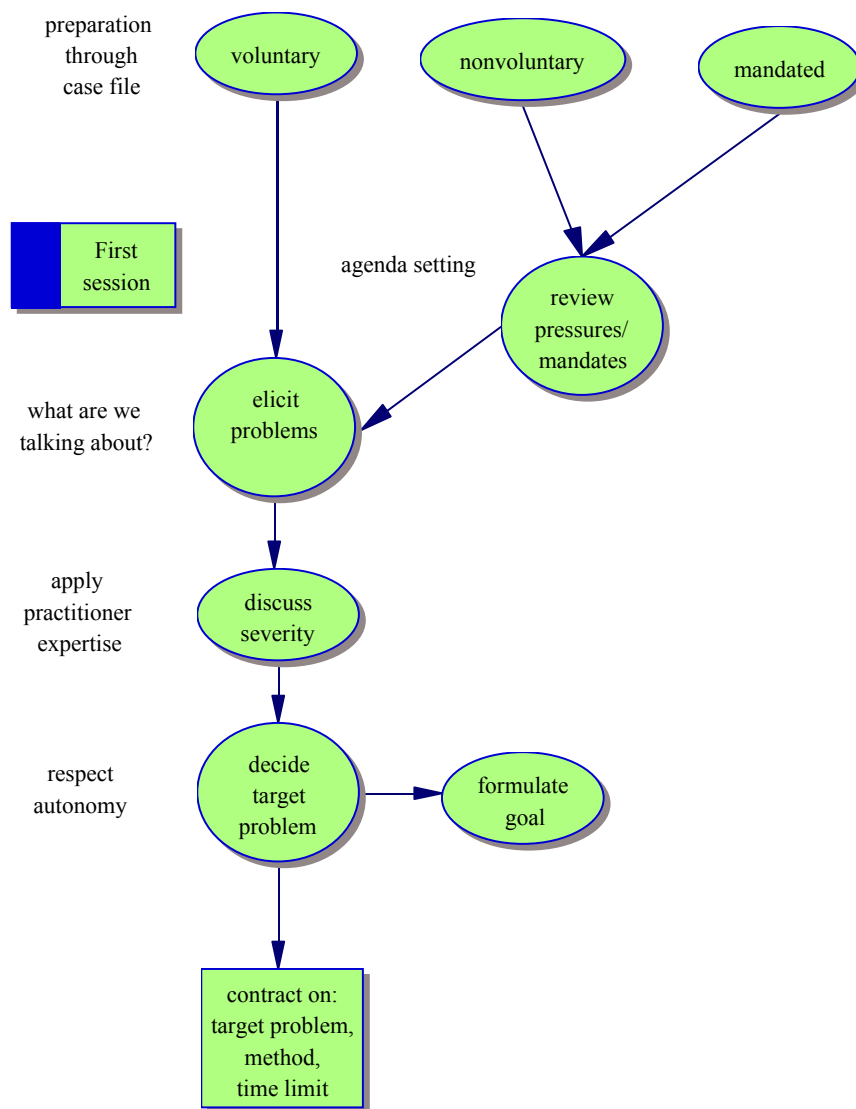
TCM this way results in a model structure, which constitutes the core of the combined model presented in the following figure.



Further instructional material is prepared for the practitioners to guide them through the new model in the appendix. The “Sequence of steps” (Appendix S) provides an overview and more detail than Figure 15. Combined model. Considering the common situation in MATs with involuntary clients, a sequence needs to be inserted at the beginning. Following these steps allows the accommodation of mandated clients. Rooney describes this sequence, which can also be called role induction or socialization phase (1992). It entails a careful negotiation process detailing the choices left to the client and assessing client reactance and readiness for collaborative work. All of these procedures contribute to retention and readiness (Rooney, 1992). The main steps are illustrated by the following figure:



Figure 16. Intake and problem specification



The detailed guidelines for this initial phase that cover the intake procedure up to contracting on the target problem are described in Appendix T. About the sequence of decision-making and assessing readiness described above and illustrated by Figure 14, detailed guidelines are prepared in Appendix U. The guidelines instruct how to assess readiness and include two assessment devices, the decisional balance sheet and the

simple ruler. In keeping with the suggestion by the transtheoretical model of change, that at each stage of change a different set of interventions is appropriate, the interventions at each stage relevant to the combined model are depicted in conceptual schemes:

interventions at the stage of precontemplation in Appendix V and interventions at the contemplation stage in Appendix W.

Only if the stage of preparation is reached, the next sequence, the TPIS, is applied. The TPIS represents the core of the TCM. It was developed early on and slightly modified and carried on by many authors (Epstein & Brown, 2002; Marsh & Doel, 2005; Reid, 1992). The modification for the combined model includes the adaptation of MI strategies for enhancing motivation and the ongoing monitoring of readiness as well as the careful assessment of readiness at decision-making points accompanied by the eliciting of change talk. The TPIS is applied after the assessment of readiness indicates that the client is in the preparation or action phase. Guidelines for the application are provided in Appendix X. The training of the practitioners in the combined model is conducted using these materials.

## Chapter 5 Case Descriptions and Single System Designs

This chapter describes the data collection process in the “real life” conditions of an operating agency in a highly dynamic environment. The second purpose is to demonstrate a beneficial effect of the intervention from the research study by looking at the quantitative outcome measures which are supported by a qualitative process description. The amount and type of data collected is presented first in a summary fashion. The subsequent sections feature detailed case reports in the style of a case study. In these, here called case reports, demographic information about each individual client who participated in the pilot test is presented. A narrative about the course of treatment during the pilot test phase follows, discussing confounding influences and critical moments in the process. The individual case reports are concluded by the presentation of a SSD spanning a baseline period before and in some cases up to several weeks post the pilot test phase. The narrative about the process is designed to aid understanding of the outcome and supported by the graphical display of data in the SSD chart.

### *5.1 Data Collection Overview*

#### *5.1.1 Implementation Process*

The pilot test phase began November 15, 2006 and stretched over 6 months (187 days) until May 21, 2007. However, data collection started earlier with collecting field notes about the program environment and pre-testing the client population with the Readiness Ruler in October 2006 to aid decision making for sampling. Even after May

21, 2007, my presence at the agency was still required to collect some demographic information from client files needed to fill in missing information and to complete demographic and treatment process data. Overall, my involvement beginning with gaining access in May 2005, negotiating the research project, and the planning and designing phase in collaboration with agency staff during 2006, extended over more than two years. During this time, I attended staff meetings every week and became a colleague to agency staff. This close engagement allowed trust to build. As a researcher, having been an outsider, I became a team member. The acceptance as an insider was apparent at moments of celebration and when confidential information was exchanged even when I was present. In my time with the agency, I got to know three generations of MSW interns, and saw new social workers coming in, passing their LCSW exam, and moving on.

This period of research at the agency was marked by several events that put strain on the agency, the clients, and the workers. This also impacted the pilot project. The agency was in fundamental transition and underwent considerable developmental change. When I became involved, the agency was in the middle of a transition into private ownership from a past where it was part of the Virginia Commonwealth University Medical Center. Part of this developmental phase was construction work, preparing and undergoing accreditation by the Joint Commission, and implementing a networked treatment management system (Methasoft). On top of changes in the agency environment, there were also changes in the personal lives of participating staff, which were impacting the project. Student interns and one staff member left the agency between

planning and implementation. On top of these natural career dynamics, illness created periods of stress for everybody involved. At times, of four participating staff members, only one was holding the program together while everybody else was sick. One staff member even had to begin facing a life-threatening illness, which required several hospitalizations. Eventually, with MSW students graduating and staff, who were instrumental in the study, passing LCSW exams, there was a natural end to data collection in May 2007. The four social workers who participated in the study worked with ten clients and produced 44 sessions in the pilot test. A summary of sessions per social worker is displayed in the following table.

Table 12. Sessions per social worker

ID	Sessions
	N=44
AW	19
BW	14
CW	7
DW	4

### 5.1.2 Measurements

The instruments that were to be administered and the points in time are displayed in the following table, which also was distributed during a supervision meeting to the practitioners as an aid and reminder.

Table 13. Measurement and timing

Overview	Session #						
		1	2	x	x	x	Last
Forms	Pre			Middle			End
<b>Readiness Ruler</b>	X			X			X
<b>ASI</b>		X					X
<b>(Any) Problem Change</b>		X	X	X	X	X	X
<b>Weekly Drug Use Review (Timeline Followback)</b>			X	X	X	X	X
<b>Task review</b>				X	X	X	X

The completeness and accuracy of measurements taken and the correct use of forms was supervised continuously and discussed with the participating social workers. Adhering to the complete schedule of forms to be administered must be considered an ideal. Due to time constraints and focus on the needs of clients – which I found very appropriate – not all of the planned measurements could be administered and some of the forms were not used in all instances as previously contemplated.

In the following paragraph, the changes about the data collection process that happened during the pilot phase are addressed. Ultimately, the TLFb could not be included in the following analysis. The plan was to administer this instrument in each session with the idea it could serve as a clinical aid in talking about secondary drug use. However, the social workers did not apply it frequently enough for it to yield meaningful and connected data. From the social worker's view, it was not appropriate to address secondary substance use in each session. The usual procedure was to follow up on a positive UDS in the next session. These sessions sometimes took place outside the pilot

test sessions. At times, these sessions were disciplinary interventions, where the therapeutic team including the director met with the client and presented a contract stating the conditions for further services and the consequences of non-compliance. In addition, clients in the sample - for the most part - were not in a situation where frequent use needed to be addressed. Reducing the use of drugs was never chosen as a goal to work on in the CM sessions. Another reason for not using the TLFB may have been that the overall atmosphere at a methadone program is rather punitive largely due to laws and regulations. Nevertheless, staff and director worked very hard to create a non-punitive atmosphere. However, if any secondary drug use is detected, this needs to be followed up by some kind of intervention, eventually culminating in a discharge and referral. Therefore, it requires tremendous effort building enough trust to have an open discussion about drug use, which goes beyond an exchange like “you cannot have another positive urine”, and from the client side “I know, I need to cut down on my use”, or simply blatant denial. A related issue that was recently addressed by the medical staff at the agency, is the surprising amount of false positives among UDS, which created further reason for some tension and distrust between staff and clients.

### *5.1.3 Demographics of the Sample*

Demographic information was collected by the researcher from client files at the agency and from the ASI, which was administered by the practitioners at the beginning and the end of pilot testing. An overview of the general client demographic information is presented in the following table. There and in the following, clients are labeled AC-JC for better protection of their data.

Table 14. Demographics of sample

Client ID	Worker ID	Age	Race	Gender	Marital status	Living with	Education
AC	AW	36	AA	m	n. married	mother	12
BC	AW	55	AA	f	partner	family	12
CC	BW	42	AA	m	partner	family	18
DC	DW	40	AA	f	n. married	family	10
EC	CW	46	AA	f	n. married	children	15
GC	BW	43	AA	f	n. married	family	12
FC	CW	27	W	m	partner	family	12
HC	CW	40	W	m	n. married	parents	14
IC	BW	34	AA	f	single		11
JC	AW	31	AA	m	separated	family	10

Note. n. married = never married

The agency practitioners invited ten clients to participate in the research study. Their age ranged from 27 to 55 with an average of 39.4 years (SD 8.0). The sample included only two (20%) White Caucasian participants. From what is known about the general population at the agency, this group is a minority there, with White women being the smallest group. There was no White Caucasian female in the pilot study. There were five males and five females in the sample. However, among the African-American population in the sample, the females represented 63% (five out of eight), which appears to be an overrepresentation of the population of drug users in general. The reason for this might be explained by the higher ratio of women participating in the therapeutic services the agency is offering. Males there tend not to attend groups and individual treatment services as much. Almost all (missing information on one) participants live with some family members, either children, parents, or both. The educational level of the research population was evenly distributed with three participants below, three above, and four at a 12-grade level.



#### 5.1.4 Problem Profiles

In the literature review in chapter two it was discussed that it is typical for clients in MAT to have multiple problems. Every client presents with an individual mix of problems. A complete assessment of a client's situation results in what can be termed a "problem profile". The problem profile was considered a useful descriptor for the research sample. Clients had one problem in common. Everybody in this particular program, from which the sample was selected, has received the same DSM diagnosis of opioid dependence, which is the usual diagnosis at intake for clients to be eligible for the agency's services, including the prescription of methadone (American Psychiatric Association, 2000).

The information about the more differentiated problem profile regarding secondary problems came from a custom-made self-report in use at the agency, which is routinely administered at intake. Only 24 of the 39 categories of this self-report have been used by the clients in the sample. A summary view of the original problem reports is depicted in the following frequency table. One client (BC) did not have a report in her chart, probably because the intake procedures have been changed from when she became a client. Two problem areas have been combined because they seemed so similar (lack of motivation and/or lack of energy and work and/or career problems). The table is ordered by frequencies.

Table 15. Problem self-reports

Problem categories per client	FC	AC	EC	GC	HC	IC	JC	DC	CC	BC	n
drug use	1	1	1		1	1	1	1	1		8
sleep	1	1		1	1	1	1	1			7
lack of motivation and/or lack of energy	1	1	1		1				1		5
depression		1	1	1	1						4
loss of family member	1		1	1				1			4
headache	1		1			1	1				4
finances		1			1	1			1		4
unhappiness	1	1				1	1				4
anxiety attacks	1			1	1			1			4
health problems	1	1		1							3
problem with children			1			1					2
work and/or career problems	1	1		1							3
dental			1								1
eating		1									1
undue stress				1							1
separation							1				1
legal							1				1
shyness								1			1
sexual problems									1		1
nervousness	1										1
angry outbursts	1										1
self-control					1						1
n	11	9	7	7	7	6	6	5	4	0	62

Each “1” in the table indicates a “yes” about whether the clients (AC-JC) have reported the problem in their initial self-report at intake. The rows and columns are ordered by frequency. A slightly different problem profile for the clients was established by the ASI, which explores seven problem areas, and which was administered solely for the pilot test. The problem scores produced by the ASI are discussed with the individual case reports.

### 5.1.5 Treatment Situation

Other important characteristics of the processes to be described that can have great influence on the outcome other than client characteristics and problem profiles are

length of time in treatment at the agency, number of additional individual and group sessions, NA involvement, and UDS. The situation at termination of the pilot test represents an outcome in the following table that may suggest an association with some of the factors listed here.

Table 16. Treatment data

ID	Days in tx	Sess. CM	NA	Add. Individ.	Add. Groups	Pos. UDS	Situation at termination
AC	1387	8	0	7	69	2	continues
BC	1209	10	1	4	27	1	continues
CC	67	10	1	2	1	3	successful detox
DC	32	4	1	3	10	4	discharged: missed medication
EC	345	3	1	2	32	1	stopped CM, continues program
FC	26	2	1	2	1	4	discharged: missed medication
GC	272	3	0	2	0	0	continues
HC	369	2	0	0	14	2	continues
IC	49	1	1	1	7	2	discharged: missed medication
JC	27	1	1	4	11	4	discharged: missed medication

The values in the table can be interpreted differently. The number of CM sessions can be seen as an output (retention) or as an input of treatment dosage. Days in treatment at the agency seems to be associated with higher number of sessions in the pilot test and continuation in the program. This relationship may be mediated by rapport building. Estimating the connection between attendance of additional treatment services and

retention would need to take into consideration employment or having to take care of children before being evaluated.

Number of positive UDS may be seen as owed to client characteristics (blaming the patient for being sick), but may also be viewed as a reflection and outcome of the program. The better the program the less positive UDS one expects to see. The more severe the addiction, the more positive UDS, the more likely to be discharged early seems to be the pattern here.

The last column in this table presents outcome as the status of the client at the end of the pilot test. Discharges may be seen as corroboration of a difficult situation to begin with. Discharges can also be seen as a failed process. Finally, discharges can be seen as a transitory disturbance while hoping that clients will show up again at the doorsteps of the agency. However, this cannot be taken lightly, as a discharge from a methadone program has been shown to increase the risk of death (Kreek & Vocci, 2002; Scherbaum, Specka, Hauptmann, & Gastpar, 2002). At this point it becomes apparent that in a situation, where the intervention research is embedded in a more complex treatment program, it is virtually impossible attempting to ascribe effects to any specific component of the package.

#### *5.1.6 Sample Selection*

The sampling process was closely watched by the researcher in order to prevent any apparent selection bias. However, there was not much influence I could exert over the sampling, as the agency practice was to assign clients to social workers during staffing, and social workers subsequently evaluated the suitability of their clients for

inclusion in the study. The criteria they employed were not fully known. However, one known criterion in use was the estimated likelihood that a client is able to follow through with consecutive sessions. As shown by the last table, practitioners did not cream and worked with clients at risk who dropped out of the program prematurely. That the sample which was eventually selected represented a good mix of the client population is shown in the following table.

Table 17. Sampling overview: clients by sampling criteria

Client ID	Gender	+UDS x all UDS	UDS ratio	Drug types on RR	Length in treatment
AC	m	0x5	0	1	long
BC	f	0x6	0	1	long
CC	m	1x3	0.3	1	short
DC	f	1x2	0.5		short
EC	f	0x3	0	1	medium
FC	m	0x4	0		medium
GC	f	1x1	1	2	short
HC	m	2x5	0.4	3	medium
IC	f	2x3	0.67	2	short
JC	m	1x1	1		short

In order to describe secondary substance abuse as a condition before participating in the pilot test (baseline), the ratio of positive UDSs to all UDSs was posted (+UDS x all UDS) and computed (UDS ratio). The value for “drug types on RR” represents the number of different drugs a participant admitted trying to change (from the Readiness Ruler administered at pre-test). Length in treatment values were grouped in <90 days = short, 270-370 days = middle, and above 370 = long. Even though it was not possible to direct the sampling process as much as was planned, it can be seen from the table that a natural mix of clients was included in the sample. The goal of sampling, getting

maximum variation, was satisfactorily achieved.

Another way to demonstrate that there is no sampling bias is the comparison of the group in the sample with the rest of the population at the agency. Before sampling began in October 2006, the Readiness Ruler was administered to the whole population of clients in this particular methadone program. A sample of 17 clients could be reached to fill out the screening instrument. This number resembled two thirds of the whole client population at that time. Even though this is a rather small number, several sources suggest that a t-test can be used with small samples (Weinbach & Grinnell, 2000). When an independent sample t-test was performed to test for differences between the groups (the sample for the pilot test and the other clients in the program), the most unlikely difference which was found amongst the answers was about the drug type sedatives and even that was non-significant ( $p = .082$ , equal variances not assumed).

When looking at the Readiness Ruler data, which mainly showed extremely high readiness ratings (10 on a scale of 1 to 10) or “no use” (0), it was suspected that clients tended to fill out this instrument without much differentiation. Therefore, the validity of the different categories used on the Readiness Ruler could be doubted. One must consider, that the explanation of the different answer categories, often times given under time constraints in the beginning of group, might not have been very precise. When the Readiness Ruler data were recoded to resemble the categories 0 and 1 only, however, the same results were obtained. The two groups were not significantly different regarding the more commonly discussed drugs in the program, opiates, cocaine, marijuana, and benzodiazepines. The variations between those groups as portrayed by the Readiness

Ruler can only be attributed to chance not to any biased selection.

In the following, data from the Readiness Ruler are only used as single items and for comparisons between pre and post tests of the same client. Because of the questionable validity, data were used with caution and not accumulated.

#### *5.1.7 Single System Design and Case Report Presentation*

Data sources for all of the following case reports came from the agency's data management system, the forms designed for the CM, the instruments, and in cases of missing data also from audio recordings of the pilot test. Different from case studies in other qualitative research, I did not attempt to create a description as detailed as possible to make the person come alive for the reader. This is for two reasons. First, the focus is on model development and not so much on the person. Therefore, it is suggested to report about the circumstances, background characteristics or idiosyncrasies of the case in a more abstract form. Second, because the research participants still live in the town where this report will be placed at a public library, and the agency might be identifiable, the identity of the participants requires more protection than usual.

All quantitative data, due to their level of measurement, were ordered by the generic dimension of getting better vs. getting worse, even the categorical data from the drug screening. The measurements were plotted along a time-line and then analyzed and interpreted for patterns in the observed changes by visual inspection of the graphed values. For these SSD charts, the following measurements are used: UDS, dosage of the medication, number of sessions, problem change ratings, task accomplishment ratings, and in some cases the additional treatment services received.

### 5.2 Case Report AC

AC is a 36-year-old African-American male who was a client with the agency for almost four years when he began participating in the pilot test. He has 12 years of education and is unemployed for the last 3 years. He never married and currently lives with his mother. He is on medication for depression. In the pilot test, he worked with social worker AW.

His treatment plan addresses opioid dependency, unemployment, and psychiatric problems. In the ASI initial assessment, he indicated needs for counseling for medical problems (extremely), employment problems (extremely), drug problems (extremely), family problems (extremely), psychological or emotional problems (extremely), but not for legal problems. The areas he selected to work on in the research study were building skills for employment and learning to trust others.

AC had eight sessions with AW working on his goals. He also attended 52 groups at the agency during the pilot testing phase, although, it was not clear whether one could count some group attendances, when the participant seemed to sleep. This may seem like an unusually high number of groups, however, it can be explained by his unemployment status and his strong ties to the agency. The agency seems to provide a needed structure for him during the week and provides social contacts. After the sixth session, there were several conflicts with staff arose. At that time, he withdrew from the research sessions for six weeks. It is possible to link these issues to the self-selected target of “trusting my environment”. The content of the issues at stake were related to trust. The resolution can be attributed to the progress he made in the individual sessions and the trusting



relationship with his social worker. When these issues were eventually resolved, AC resumed participation for two more sessions. After the pilot test phase had ended AC and his social worker continued having individual sessions.

The ASI client ratings for treatment needs did not change between pre- and post-test, except for the medical issue, which was reduced to “not at all”, which according to the audio recording can be explained by a different understanding of this question. The rating for needs for counseling for legal issues was upgraded to “extremely.” On the Readiness Ruler, AC marked the highest score (10) at pre-test and changed to a (5) at post-test for prescribed opiates (methadone). Ten is designated to mean readiness demonstrated by action and the five designates “unsure” bordering readiness to contemplating change, which seems much more realistic given his situation in the program. This score change in light of the audio recording can be interpreted as a move from either lip service or a legitimate understanding of taking methadone as action taken away from heroin towards a self-reflective awareness of existing ambivalence toward detoxification from methadone.

Three months before the pilot test began AC showed no positive UDS for opiates anymore. He maintained a stable dose of 60mg methadone throughout the data collection period. For work in the research study, the following list of problems was established and prioritized.

Table 18. Case AC: problem list

Rank	Target problem
1	Employment/building skills
2	Increasing direct communication with mother
3	Trusting people and my environment more
4	Reliability/consistency
5	Managing finances

Towards the goal of employment, only one task was accomplished before the focus shifted towards the third goal of “trusting my environment”. Beginning in session three, considerably more time in sessions was devoted to this goal. Nine tasks were created altogether, five reviewed, and four accomplished. The tasks are listed in the following table, when they were created, reviewed and how to what extent they were accomplished.

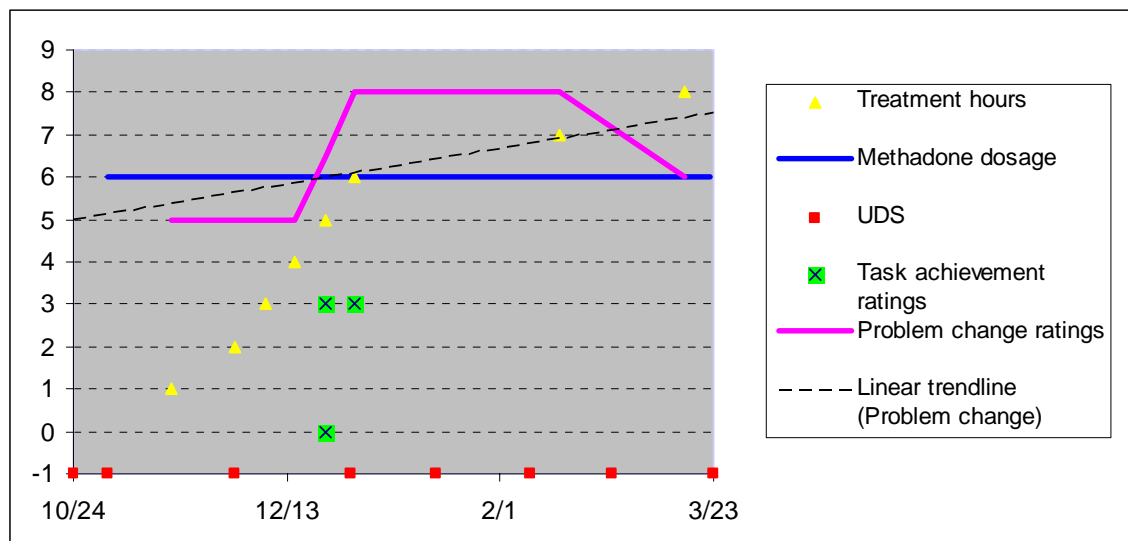
Table 19. Case AC: task list

Session	Task Description	Review Session	Review Result	Review Score
3	talk to former employer	4	done	3
4	write down positives in a journal	5	not attempted	0
4	practitioner task: remind client to task	5	done	3
5	talk in group	5	done	3
5	share something about himself in group	6	did it twice	3
6	pay attention to when you have this feeling	7	not reviewed	
6	let go of negative relationship, say no to this person	7	not reviewed	
7	identify one individual outside the clinic environment who is a safe place to discuss managing life issues without drugs	8	not reviewed	
7	identify positive traits and negative traits in relationships and actively seek out relationships where his recovery is supported	8	not reviewed	

The problem-change scores and the task-achievement ratings, and other

background data are displayed along a timeline in the following SSD chart.

Figure 17. SSD chart AC



The practitioner task of reminding the client was not included in the chart. The task carried out for problem #2 “finding employment” was not put in chart either, because there was no more work done on this problem area and the problem ratings stayed at “no change.” The session numbers are shown as an increase in treatment exposure (treatment dosage) by a climbing line distributed over a time line. This depicts denser periods and gaps in scale with the time passed. The line of methadone dosage and the dots of UDS given which were all negative (-1) provide the background against which the other process information needs to be viewed. Marks for task achievement need to be associated with problem change scores according to the logic model of the intervention.

Problem change ratings on “trusting my environment” did not reflect the conflict happening outside the pilot test. This stability in gains, which is a remarkable holding effect, may be mostly due to the strong rapport between client and counselor. However,

the time gap between sessions six and seven is due to the disturbance at the agency, which was described above.

It probably is not enough to attribute progress to the tasks that have been accomplished. The progress is also due to intensive in-session work. There was considerable practicing and negotiating going on in AC's CM sessions, which may account for much of the learning. Overall treatment accomplishments are great considering the personal changes apparent on the audio recording. These accomplishments are "trusting the counselor" as a step towards trusting others, increased communication about self, which became apparent in groups, and the increased ability to communicate and reflect on self. In chapter six about qualitative data analysis and findings, more detailed descriptions are presented about what these improvements were. Communication with the social worker revealed that in the following sessions, work on this area has continued and even the job search has progressed and a new attempt was made. That intensive in-session work and rapport building can trigger positive personal development can be learned from this case. Personal development means progress for the overall treatment even without tangible outside accomplishments.

### *5.3 Case Report BC*

BC is a 55-year-old African American woman who lives with her partner, her adult son, and her granddaughter. She is living with one person in the household, her partner, who is actively using drugs. However, she takes care of her partner, who also has a medical condition, and her adult son. She has completed 12 years of education. When she began with the pilot test, she was unemployed. She has been a client with the agency

for more than three years and worked with social worker AW for the research. At the time of the study, she was receiving medication for anxiety.

The agency's treatment plan for BC focused on opioid dependency, anxiety, and the problem of relapse. In her ASI assessment in the beginning of the pilot test she indicated needs for counseling for medical problems (extremely), drug problems (extremely), family problems (extremely), psychological or emotional problems (extremely), but neither for employment problems (not at all) nor legal problems (not at all). For the pilot test she prioritized a list of five problems presented in the following table.

Table 20. Case BC: problem list

Rank	Target problem
1	Communicating with family better
2	Creating more personal space
3	Feeling taken advantage of in relationship with boyfriend
4	Getting more help around house Isolation, impulse to withdraw, getting out more Live-in boyfriend using in the house

In this case it seems that problems, goals and tasks were mixed, (which in fact was an issue); however, this table represents the problem list as it was used to work with the client. BC worked with AW in ten consecutive sessions. She also attended 27 groups at the agency, received acupuncture, and went to NA meetings. In-between the pilot test she also received four brief individual sessions according to agency records. This indicates she is using what the agency has to offer. As a motivation for participating in the research, her counselor stated that BC wants to “move ahead after a period of stable

maintenance”.<sup>1</sup> In the beginning of the pilot test sessions she decided to work on “communicating more clearly with her family” first. This turned out to be an overarching topic that touched all other areas she identified as needing work. All tasks that were created from this problem list and reviewed during the sessions, even though they addressed several of the problem areas listed above, can also be seen in a way at the same time contributing to the major problem area #1 “communicating with family better”. Therefore, they are all presented in one chart together with the problem ratings for “communicating with family”, in the SSD chart below. The tasks that have been worked on are presented in conjunction with the sessions in which they were reviewed in the next table.

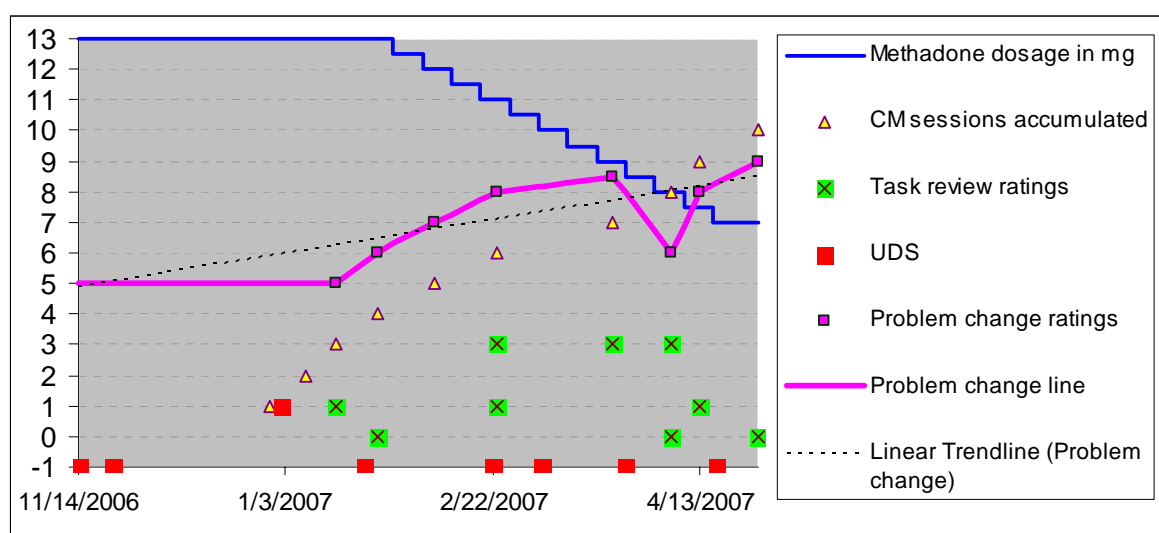
Table 21. Case BC: task list

Task description	Review session	Review result	Review score
write down what you want to communicate	3 + 4	attempted then dropped	1+0
sit down with granddaughter and talk asking for help in the house and waiting for boyfriend to do it	6 + 7	done attempted then done	3 1+3
practicing every time he uses in front of me, I let him know that it is unacceptable	8	done	3
sit down with boyfriend and talk	8	not tried	0
create a pros and cons list about son leaving	9	attempted	1
prioritize the items on the pros and cons list	10	not tried	0

As can be seen in the task list, with these tasks BC addressed communication with each family member. Accordingly the focus of the sessions went from first getting into the topic and providing an overview, to working with the granddaughter which probably was a bit easier, then addressing next help from the partner, and finally facing up to the

issue with her grown up son. The session where her ambivalence about her son leaving was addressed turned into a great example of working with the pros and cons scheme developed in MI. The course of the session including the background information about methadone dosage and UDS are presented in the following chart in the style of a SSD along a timeline.

Figure 18. SSD chart BC



The tasks that have not been carried out are all related to paper work, writing down things, making a list, working with a list. There are several areas, in which improvements can be seen. BC maintained abstinence and held her taper at a low dose. Her social worker reported that she improved her communication skills by asking for what she needs and started to set boundaries. Her ability to identify sources of anxiety has increased remarkably as documented in the session recordings. BC began to identify feelings inside of her, which points to greater awareness and ability to self-reflect. That she was involved in the 12-step process and active in groups at the agency attested to her

stable motivation and commitment to her change process. It was noted by her social worker that in several sessions she presented with “bright affect and energy.”<sup>2</sup> Outside the sessions, she was working on building a relationship with a relative who supported her recovery efforts. Especially in the session (#9), where the pros and cons of telling her son to leave were worked through, she showed that she was open to learn decision-making skills. She stated feeling physically all right about the tapering process and reported no cravings.<sup>3</sup> This application of the CM demonstrated that personal relationships and personal growth could be targeted successfully, even though they were complex and required a rather skilled use of CM.

#### *5.4 Case Report CC*

CC is a 42-year-old African-American man who only recently, in October 2006, became a client with the agency. His goal was getting a rather quick detoxification. In December, he joined the research study and by the planned end of his involvement after ten sessions, he had achieved his detoxification successfully. He has completed more than 12 years of education and received a technical training. Over the last three years, he has worked on and off in unstable and part time occupations. CC lives with a partner and children. In October 2006, when he filled out the Readiness Ruler as a pretest, alcohol still was in the picture. In the beginning of the pilot test the alcohol problem score from the ASI was at zero. His first goals were to manage the detoxification process and find a job to, as he said, “feed my family”.<sup>4</sup> When working with the CM and establishing a weighted problem list, the priorities changed somewhat and are depicted in the following table.



Table 22. Case CC: problem list

Rank	Target problem
1	get employment
2	find right type of employment
3	get driver's license
4	set up payment plan to DMV
5	get off methadone

From this table it also becomes apparent that it was not always easy for the practitioners to distinguish clearly between goals and tasks. Item #4 clearly is a task and later in the process, it was treated as such. This problem list showed his immediate concerns. The ASI reflected some of these needs. The ASI showed needs for counseling for medical problems (extremely), employment problems (extremely), drug problems (extremely), but neither for family problems (not at all) nor for psychological or emotional problems (not at all). His view on not needing to address family problems is contradicted by a case manager note<sup>5</sup> that his family is upset with him. The need for counseling about legal problems (extremely) could not be addressed during the time in the study, however, proved imminent, after he had to serve a brief time incarcerated while he was still in the program.

CC related an experience he had with another agency he has to work with, where he was “looked down on by those white guys”.<sup>6</sup> Such demeaning responses by staff are not only detrimental to treatment success but also are insulting to the person. With the report of this incident, it became apparent that the CM introduces a different culture to the system. The CM is requesting the opposite attitude, which is counter the dominant culture of many drug courts and public social and mental health service agencies.

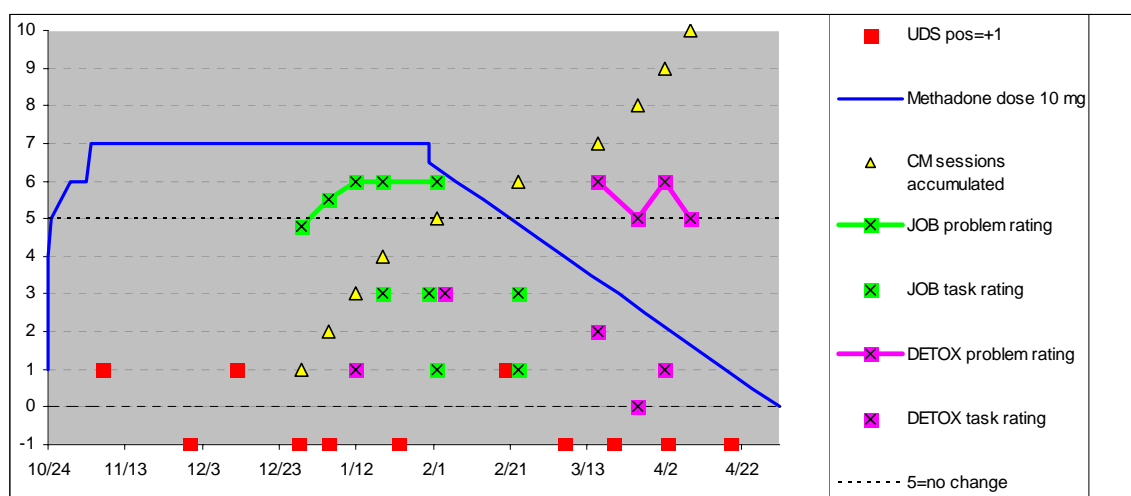
CC worked with social worker BW for ten consecutive sessions. The tasks that have been worked out, agreed upon, and reviewed are listed in the following table.

Table 23. Case CC: task list

Task Description	Review session	Task Review	Task Score
attend groups	3	partial: will continue attending groups	1
inquire about jobs	4	completed: was promised a job	3
getting a job: waiting to hear back from potential employer	5	partial: not been contacted	1
inquire about criminal record	5	completed: reported result	3
begin detox	5	completed: detox started	3
set up payment plan to DMV	6	completed	3
get license	6	completed	3
go to training for alarm systems	6	partially completed	1
go to new NA meetings	6+7	almost complete	0+2

During the first half of the session series, the job search was at the center. Later, when the detoxification process began, tasks supporting this process became more central. The overall process including background information on stability with secondary drug use represented by the UDS results and the course of methadone dosage are depicted in the following SSD chart. Because the tasks belonged to two different goals, the problem rating line was split between the different projects.

Figure 19. SSD chart CC



The ratings for the problem area “job search” went up slightly. A trend line was not included in this chart, because of the two different problem lines. Even though a suitable job was not found during the pilot study, CC’s position had shifted to the positive when he got his driver’s license back. When looking at the ASI composite score for the employment area, the change in availability of a driver’s license impacted this problem score to drop to 25%.

When interpreting the detox problem rating, it is appropriate to see the “no change” ratings as positive meaning “no problem” during the usually uncomfortable and often painful time of detoxification, which finally led to a successful completion of detoxification. Therefore, a trend line for these scores was not included. It would have resulted in a falling trend leading to a misrepresentation of the successful treatment episode. This case shows that personal determination and effort of a client can override difficult starting conditions. The contribution the CM has made can be seen in supporting

self-efficacy of an already efficacious client through creating a success story every session and through providing a persistent focus on the goal.

### *5.5 Case Report DC*

DC is a 40-year-old African American woman. She has never married, and lives with her family. Having only finished 10 years of education, she still held a job. DC belongs to the client group which is comprised by rather new clients at the agency. DC started to participate in the research only 30 days after she became a client to the agency. Social worker DW, who is a MSW graduate student intern with the agency, worked with her for four consecutive sessions. DC never finished initial stabilization in the program. However, a detoxification process was initiated as required by insurance rules. When the dosage was down to one third of the initial amount, she was discharged after missing three days of medication according to agency rules. Her UDS were frequently positive for cocaine and opiates.

A remarkable circumstance of her situation was that she was mandated to keep many appointments with the probation officer, and other agencies on top of attendance at the agency.<sup>7</sup> The usual treatment regimen required that she attended three groups and NA, as well. The records stated that she attended one group a week, altogether ten groups, and three individual sessions outside the pilot test. This limited time to take care of other vital tasks. She had transportation problems and did not have a car or driver's license. At that time, she had to take care of four other persons in the household and worked 30 days per month. Her ASI composite problem score on employment was at 56%, a score that would be even higher if she had considered her employment situation a

problem and had given it a higher problem rating. She was a waitress and earned \$ 800 per month, not considered a living wage. Recovery is severely hampered by an economic situation like this.

DC's ASI composite problem score in the medical area (92%) and the psychological area (55%) were the highest in the sample. Running out of medication had likely contributed to her last relapse. Her treatment plan at the agency did not yet include her medical and psychiatric needs, but reflected only opioid dependence and relapse. In her agency chart, the diagnosis depression was not established and still needed to be verified or ruled out.

The goal she chose to work on was getting psychiatric treatment for her depression. Rank two on her list of problems was the chronic pain, and rank three was the mandated parenting class. The tasks were to call a Medicaid telephone number and get the addresses of three psychiatrists. It could not be carried out at first, because she could not find the Medicaid card. By the next session, she had managed to call for a new card. However, the card did not arrive in time, so that by the fourth session she still had not found a psychiatrist to treat her. At this session, she could report that she was well on her way to take care of a mandate to attend parenting classes and had collected the information on when these take place. The tasks and their rating according to the convention in task-centered research (n= no opportunity to carry out task) are as follows:

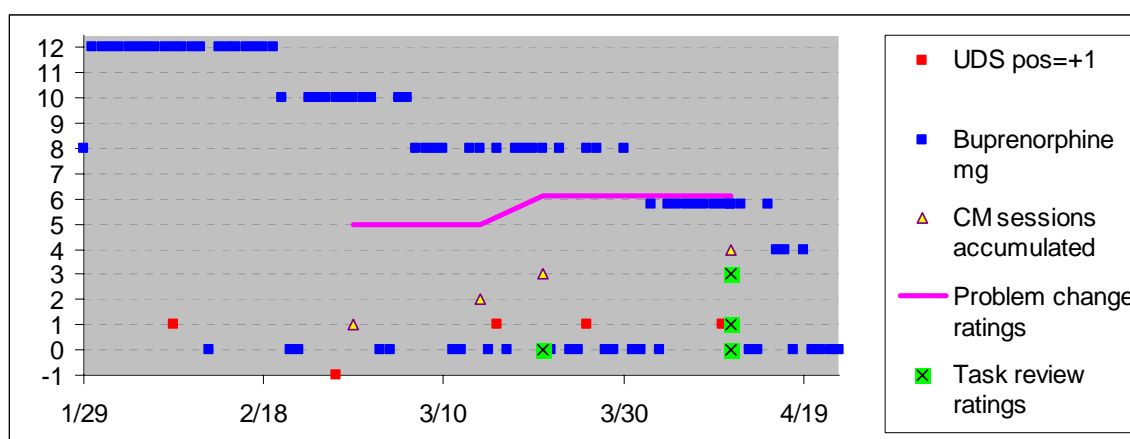
Table 24. Case DC: task list

Task description	Review-session	Task review	Task-score
get three phone numbers of doctors	3	couldn't do it (no card)	n
make a call to get Medicaid card	4	called two weeks ago	3
get three phone numbers of doctors	4	card has not come yet	n
participate in parenting class	4	"already working on it"	1

After the fourth session, she did not return for CM sessions. The helping process would have needed a few more weeks to become more stable. The tasks would have needed a little more work. The goal for her was to get psychiatric care. She was approaching this goal, but she did not reach it. The MSW intern, who was working with her, could not continue to work with her, because of graduation. Although, this was inevitable, and one of the full-time social workers at the agency was to take over, DC clearly showed an abandonment reaction and stated, “one gets used to you guys and then you just bounce off.”<sup>8</sup>

There were only two problem ratings conducted with DC. They were done in the third and fourth session, where DC felt that things were a notch better. Therefore, these were the only data points on outcome for the SSD chart. However, just the course of dosage, especially the missed days of medication, and the task ratings, which show that she tried to make this treatment episode work, give a good impression on the process. The SSD chart in the following table includes all the data that could be applied to her treatment episode.

Figure 20. SSD chart DC



As can be seen in this table, task work had just begun, but couldn't really take off. Only two problem ratings were conducted, therefore a separate table was omitted. The most remarkable feature in this chart is the course of medication. The medication was frequently interrupted by missed doses, which are indicated on the zero line. Many of these are two days of missed medication. Because of the many missed doses, a different style of plotting the line for dosage was chosen. Instead of a continuous line, a dot per day indicates the dosing of the medication. This way it is portrayed how unstable the medication was as compared to the other clients.

Despite many missed doses and a continued series of positive UDS, the taper was continued and, eventually, a third day of missed medication led to the discharge. From this case study, it can be learned that treatment program characteristics need to support the clinical approaches. Here, the program did not provide the basis for the client to succeed.

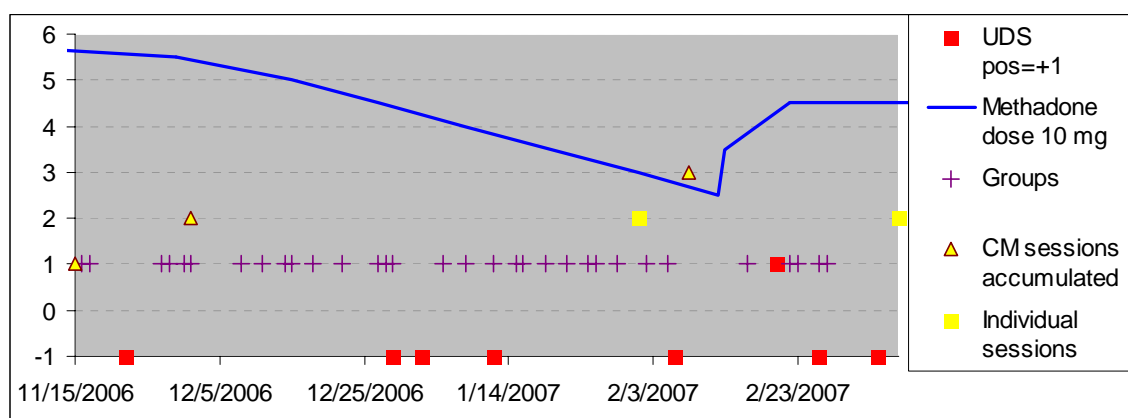
### 5.6 Case Report EC

EC, a 46-year-old African-American woman, is a mother and lives alone with her children. Her usual employment pattern is part-time. However, she is currently unemployed, but has an education of 15 years and typing skills. On the ASI her employment needs were at the highest possible rating of 100%, owing much to not having a driver's license and no available car.

She has been a client with the agency for almost one year. This length of stay puts her into the middle group on this characteristic amongst the participants. She attended groups frequently (32 during the pilot phase) and had two individual sessions with her caseworker outside the three sessions with the CM. She also participates in the acupuncture sessions and goes to NA meetings. At intake at the agency one year ago, she declared dental problems as a major concern. These were problematic still in the beginning of the pilot test and showed up on the ASI with a rather high score of 61% on the medical problem dimension. Currently, her agency treatment plan did not address any additional needs beyond opioid dependence. Consequently, her dental, financial, and job needs showed up in the initial sessions with the CM and were prioritized high. Due to a rather short duration of working with the CM, tasks could not be developed. Problem- and task-ratings were not conducted. Therefore, no tables about problems and tasks are presented for this case. The course of events during the pilot test is charted in the following graph.



Figure 21. SSD chart EC



After the second session, she began to miss appointments and to evade her practitioner CW. It took considerable time and an individual session with her previous caseworker BW after the second session until she continued with another CM session. The researcher and the social workers discussed whether the somewhat delayed start with the administration of the ASI distributed over almost two sessions might have deterred her from continuing and exhausted her motivation. However, EC indicated to her previous social worker BW that she wanted to change the person working with her in the pilot test. Later in supervision, the social workers explained that EC was more comfortable with her female counselor BW than with the male counselor W, who she started out with. In the following session (#3), however, she finally told her female social worker, that she has “other priorities” and didn’t want to continue. The course of her participation process, therefore, was somewhat disjointed.

As she had stabilized during the time in the program, it was appropriate that she attempted a detoxification during the pilot test. She stopped it when she felt

uncomfortable, which in any scenario is better than relapsing. This way she successfully maintained her stability. Her Readiness Ruler screening in October indicated that she was active in changing any secondary use of opiates. The one negative UDS in February seemed to be a single exception. Her Readiness Ruler screening in April (post-test) indicated a realistic and high level of readiness to change, which has also been shown through her most recent attempt at tapering.

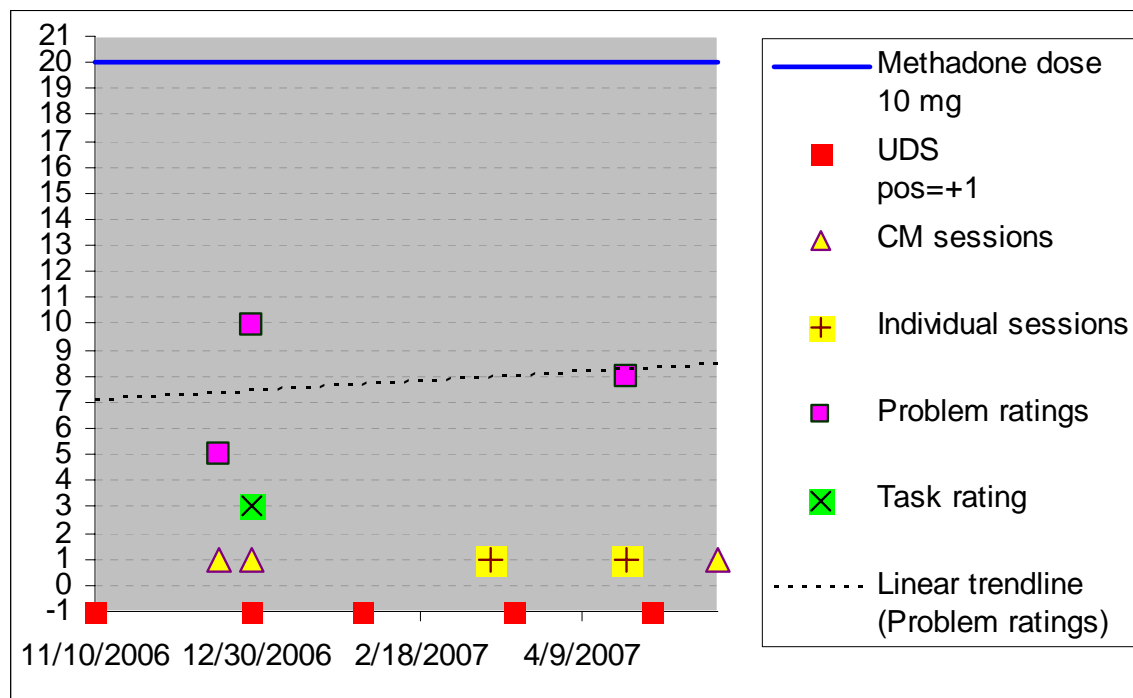
Even though the opportunity for participation in additional CM sessions persisted, EC did not choose to use it any further. Only hypotheses about this situation can be generated. Maybe a more skilled and client-oriented interpretation of the CM could have produced a stronger holding power.

### *5.7 Case Report FC*

None of the following case reports include problem and task lists, because due to the limited number of sessions they could not be developed. FC is a 27-year-old white male, the youngest in the sample. He is married with children and lives with his family. He holds a steady job and has 12 years of education. Besides the opioid dependence, his treatment plan also included a psychiatric need related to anxiety. This need did not show up anymore on the ASI and in a treatment plan review. When he entered the program nine months ago, he gradually increased his dose of methadone. He remained stable throughout the pilot test phase on a rather high dose of 200 mg. It seems that the methadone has some impact on his anxiety. He indicated needs for treatment regarding family issues on the ASI (extremely) and for medical issues (moderately, 50%). When beginning with deciding on the problem focus in the CM, accordingly he chose “physical

health” (ranked 8-9 in importance) and his own “critical nature” (ranked 9-10). The family problem indicated in the ASI and his “critical nature” seemed to be the same issue. FC was given the task to read a book to help him with his critical thoughts. By the second session he had read the book and was enthusiastic about the difference in perspective he had achieved. The problem change in that area was evaluated under the new heading of “critical interactions with wife”. A direct connection between the task and the problem change was apparent in this incident. As this example also suggests, when problem definitions change, it can become harder to follow up on progress and with measuring change. The available data for this case are presented in the following table.

Figure 22. SSD chart FC



Due to his social worker’s severe illness, FC could not receive a continuous series

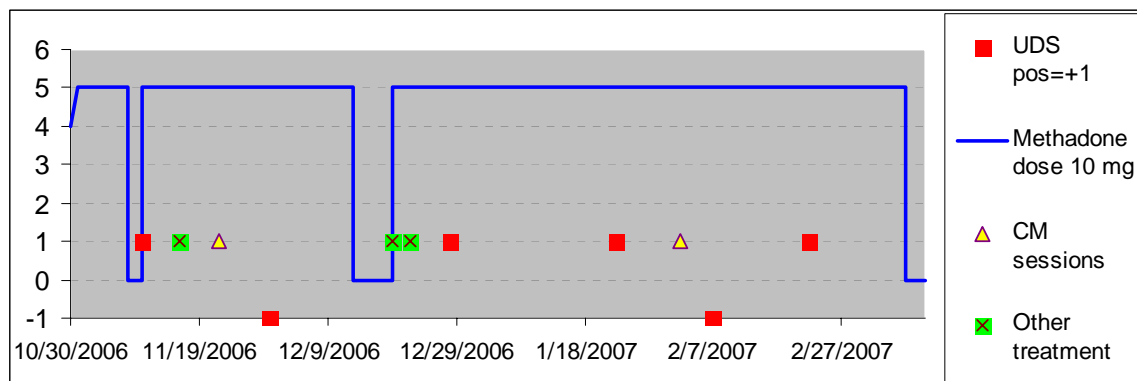
of CM sessions. It was not entirely clear whether some of the individual sessions, which were performed, would have qualified as CM sessions. It could not be verified because there were no audio recordings made and the paper records did not allow a fidelity estimate on those sessions. Therefore, they have been included in the SSD chart allowing their consideration in the evaluation of the process. There was no further record on task development or performance evaluation other than what is depicted in the SSD chart. Due to reaching the projected sample size, data collection was concluded in May 2007, when FC was still stably continuing in the program. With highly functioning clients like FC, it should be easy to take advantage of the strengths of the model in achieving goal by goal in little steps. In this case, regular participation was not possible; therefore, the full potential could not be realized.

### *5.8 Case Report GC*

GC was at the agency the shortest time when she joined the research study at day 27. She is an African-American woman, 43 years old, and she lives with her family. A characteristic of her situation that distinguished her from the others in the sample was that she was a mandated client under parole. In the ASI she indicated a strong need for legal counseling (extremely, score 30%). Furthermore, no medical treatment needs (not at all) but employment needs (extremely, score 98%) became apparent at the first session in the pilot study through the ASI. Her agency treatment plan reflected the employment issue. Her 10-year-old son depends on her. However, what she stated being her income would not even support her. Twelve years of education without specific job skills and no means of transportation explained the high problem score of employment needs. She also had a

supportive family on which she could depend in the past.

Figure 23. SSD chart GC



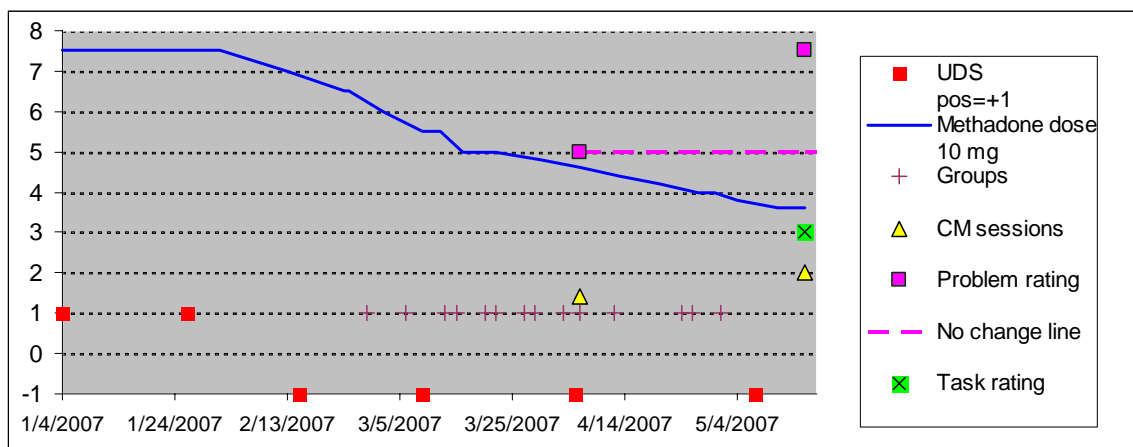
The most remarkable features in this chart are the drops in methadone dosage due to days of missed medication. On her 44<sup>th</sup> days in the program she was discharged due to missing three days of medication without ever reaching a point of psycho-social stability. After five days, she was readmitted to the agency. Another attempt was made at working with her using CM session format. On the Readiness Ruler, in the second session, she rated herself at “just getting ready to change” regarding her cocaine use, and not ready at all to change methadone use. Her UDS showed that she still is right in the middle of ambivalence with four positives out of six screenings. The goals listed in the two CM sessions were taken from the 12-step approach rather than developed from the client’s point of view, which may suggest a deviation from model guidelines. The goals were “getting a sponsor”, “start with step-work”, and “stop using other illicit substances (cocaine)”. The second session also yielded positive news about employment to begin in a few days. However, she did not return to CM sessions after the second session and thus was discharged again. This happened after five weeks in the program and one more

positive UDS. When reviewing this case report, it seems to reflect also on agency functioning and how new clients are inducted into the program. Especially in the beginning of treatment, clients need all the possible resources. The CM can be such a resource if it can get delivered to the client.

### 5.9 Case Report HC

HC is a 40-year-old white male who came to the program a year before he joined the research study. He has never been married and lives with his parents. On the Readiness Ruler assessment, he admitted using and trying to change the highest number of substances, marijuana, benzodiazepines, cocaine, and opiates. However, he stopped using before early in 2007, started to taper by the end of March and joined the study a week later. Consequently, his major goal was to get through detoxification and he tasked himself not to use. The course of his treatment before and during the pilot test is portrayed in the following table (a trendline is not included, as there were only two data points).

Figure 24. SSD chart HC



His CM sessions could only start this late into the study due to his social worker being away on sick leave. Only a first and a last session six weeks apart could be conducted. In-between, four group attendances were recorded in the agency's data management system. He is not attending NA meetings, though. After the last session in the pilot study on May 16, 2007, data recording was stopped with this phase of the research project ending. This task of not using since the last session was rated "completely achieved", as all his UDS stayed negative. HC concluded the research participation with rating problem change as "considerably better".

He successfully maintained stability at this point in the taper and continues with the program. The trend-line of problem change points upward. With more sessions, results would have been expected to be even better. Even though the client attended numerous groups, this could not provide the focus needed to ameliorate her problems. The individual sessions complement group work. Group work cannot replace the focus individual sessions bring to treatment.

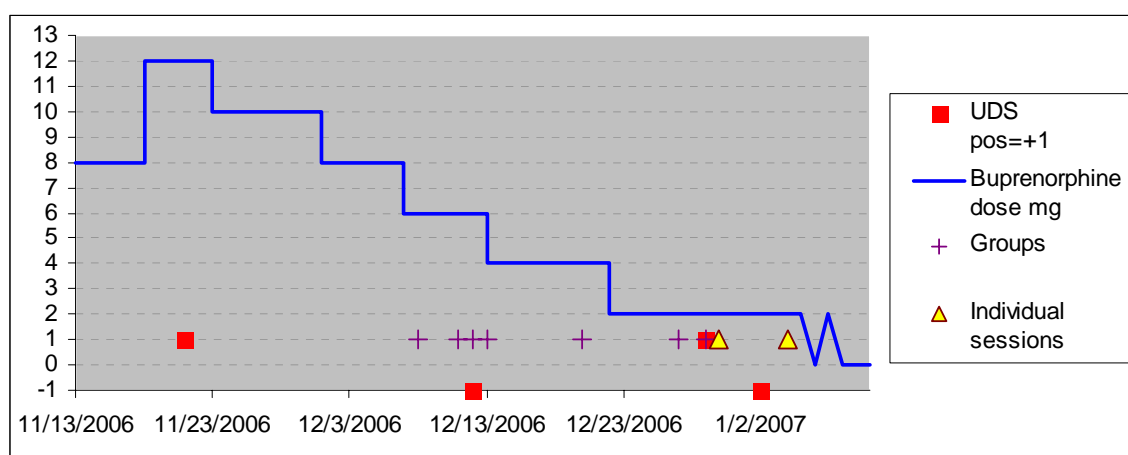
#### *5.10 Case Report IC*

IC is an African-American woman, who joined the research study seven weeks after being admitted into the methadone program. Therefore, she also belongs to the group of rather new clients in the sample. She is single and has four children and her partner depending on her. The partnership appeared to be tumultuous, involving violence at the time, and added to the instability of the situation.

The ASI assessment yielded medical (extremely), employment (extremely), and legal (extremely) counseling needs; the other problem areas could not be evaluated. The

ASI was not completed any further. The agency acknowledged her employment needs besides the opioid dependence in the treatment plan. She had 11 years of education and worked mainly part-time. She was one of the few people in the sample, trusting enough to admit to illegal sources of income. The course of her treatment process according to the limited amount of data, which could be collected, is illustrated in the following table.

Figure 25. SSD chart IC



IC was admitted under a time limited taper regimen, which started on day ten of her treatment. Not much later, half way into the taper, she indicated, “that the medication is not holding me”.<sup>9</sup> Missing medication and positive UDS indicated that she was not stable yet. A similar pattern as in the situation of DC unfolded governed by insurance rules. The tight scheme for detoxification using buprenorphine requires a straightforward motion towards detoxification. No time is allocated to stabilize before. Twelve days into the pilot study, she was discharged on her 58<sup>th</sup> day in the program for missing three days of medication. The first individual session was a CM session, mainly consisting of ASI assessment. The next and last individual session was devoted to crisis needs and

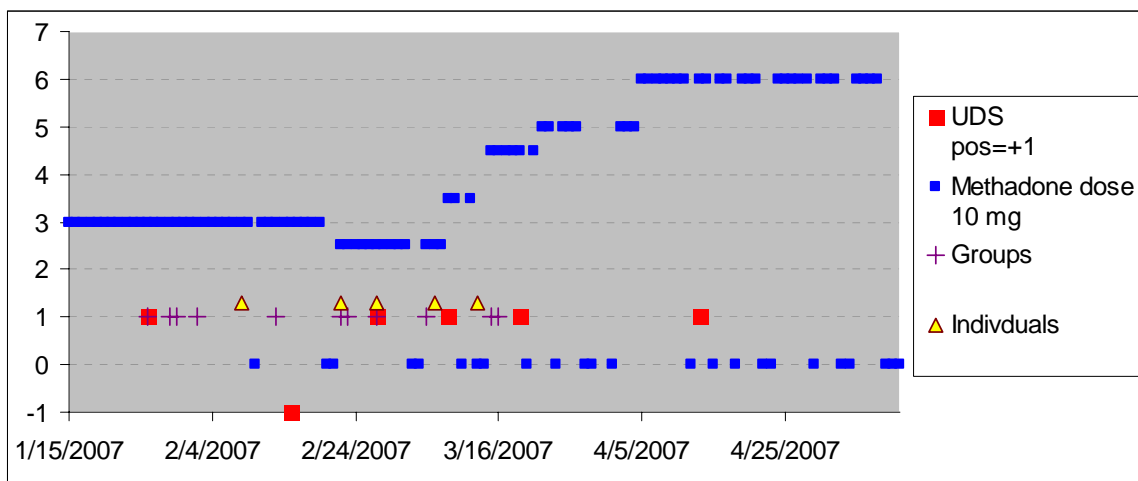


discussing the last positive UDS. Crisis work can be framed in the CM, too. Only with closer individual attention can outcomes in situations like this be improved. However, the limits are set by the reimbursement rules of insurances. They need to be changed to not hurt clients by just providing enough treatment to let them miss success by a notch.

### *5.11 Case Report JC*

JC, a 31-year-old African-American male man is the father of three children. Separated now for a few months from his wife and children, he currently lives with his grandmother. He has 11 years of education, and makes most of his income from illegal activity. When he started participating in the pilot test, he was a client to the agency for about one month. Already in the beginning of the interviewing for the ASI, it became apparent, that early trauma that he had experienced needed serious attention. Therefore, the ASI could not be finished. While in the methadone program, he continued to use multiple types of drugs. Relapse prevention was a major goal in his treatment plan. As like the cases before, task and problem ratings were not conducted. A trend line could not be computed. A SSD with all available data is presented in the following table:

Figure 26. SSD chart JC



At the agency, he attended groups. However, work using the CM could not begin fully. It was hard for him to trust and after the first session, he chose not to have his sessions audio recorded. There was no second session with him, although his caseworker continued to see him for several further individual sessions outside the pilot test setting. These other individual sessions are also included in the chart. The dosage line is interrupted due to missing doses. Continuing with the CM would have required first building enough rapport for him to feel secure. This climate could not be achieved during the time in the program. In May 2007 after a series of positive UDS and frequently missing medication for two days – indicated in the chart -, he was discharged for eventually missing three consecutive days of medication. In this process, it became clear that research related data collection could impact therapeutic processes and building of trust. However, the client-centered principle of the CM seems still be a valuable approach for reaching clients in challenging situations like his.

### 5.12 Summary

The purpose of the SSD charts and the case reports was to speak to the effectiveness of the CM. Instead of effectiveness, it might be more appropriate to speak of beneficence. In a very general way, it can be claimed that any single task that was accomplished is a positive result. The connection is apparent when looking at some of the SSD charts, where both events are visually connected. However, the charts show that there is a general trend toward favorable problem change ratings, if the process is begun at all. The following table shows a summary of the trends in all SSD charts.

Table 25. Overview SSD results

ID	Problem ratings	Task ratings	Session n
			N=44
AC	positive	positive	8
BC	positive	positive	10
CC	positive	positive	10
DC	positive	positive	4
EC	not conducted	not conducted	3
FC	positive	positive	3
GC	not conducted	not conducted	2
HC	positive	positive	2
IC	not conducted	not conducted	1
JC	not conducted	not conducted	1

The outcome seems to be clearer the longer the sessions continue. Some of the problem change ratings might be of temporary nature; however, others, for example in the case of AC, extend positive effects into post pilot study times. More task work and more successfully accomplished tasks tend to show up in a clearer trend for the problem rating. The cases in which too few sessions took place to unfold the CM completely, could not be evaluated for beneficence.

It is also possible that all parties involved, social workers and clients alike, are prone to favorable outcome ratings of their efforts. However, it has been shown, that practitioners tend to rate outcomes rather conservatively (Reid & Smith, 1989). Nevertheless, even subjective improvements are improvements seen and experienced by the participants. Some of the gains might have happened in domains which have not been measured in this research and thus were not noticed. These gains are not only the very concrete impact of a completed task on the problem change, but also the psychological and motivational impact. Clients gain self-efficacy, when they realize something was accomplished and they can tell themselves “I did it”.

It can be learned from the case reports that the CM can be applied in a MAT and produce beneficial results in general. However, it is obvious, that in order to produce the benefits a supportive program environment is needed. The research requirement of using an additional lengthy intake process may have taken away from the treatment hours clients could have received. This procedure might even have impacted the retention in the study. A certain amount of sessions seems to be necessary to work through ambivalence and untangle interconnected problems to arrive at task work and then to see the impact on problems. This threshold is probably reached only after the fifth session as the case of DC suggests.

An important distinction seems to be in which phase a client is in his or her recovery. Beneficial results are not only positive problem ratings, successful tasks, or negative UDS. Beneficial results are also staying in the pilot test for consecutive sessions and continuation in the program after participating in the pilot study. Clients who are

already in the stabilization phase seem to fare better in this respect. This seems like a natural consequence. If one is discharged early, not much progress can be made. The more stable a client is, the more benefit from the CM is likely. This, posed as a hypothesis, is one outcome from this model development research which needs to be tested next in a more narrowly focused and rigorous study.

Finally, the results in the case reports only speak to the population found at this particular site. The problem profiles and other life situations may be different in other locations. The model has to be adapted to different needs in a client population. It can be envisioned that a stronger role induction and more attention to crisis needs in the beginning would improve the usefulness of the CM especially for the newer clients that have not stabilized yet.

The next chapter turns to the qualitative nature of the process of delivering this new intervention. The focus for this next analysis shifts from the more tangible outcomes of task accomplishment and problem change to how well the micro parts of the CM are received by the participants of the study.

## Chapter 6 Process Analysis for Model Development

### *6.1 Data Collection Overview*

In this section, the sources and the amount of data collected for analyzing model development are described in a summary fashion. In later sections, different analyses are presented. Data for evaluating fidelity were collected from two different sources, session audio recordings and CM forms used by practitioners while working with their clients in the pilot test. Data for model development analysis came from several different sources,

- the client feedback, which was either audio recorded during sessions or on notes by practitioners,
- the practitioners' developmental notes on either the form provided or audio recorded,
- my field notes, and notes of supervisions which I conducted with practitioners, and the most important source,
- the practitioner focus group, which was conducted right after the pilot test.

The practitioners were responsible for the audio recording of their sessions. I provided them with three digital audio recording devices, a Marantz PD660, an Olympus WS-320M, and a Panasonic recorder. The four practitioners conducted 44 sessions with ten clients. An overview of the sequence of sessions is provided in the following chart.

Table 26. Overview case progress in pilot test

ID	1	2	3	4	5	6	7	8	9	term.	Sessions
											<b>N = 44</b>
AC	1	1	1	1	1	1	1		1	1	8
BC	1	1	1	1	1	1	1	1	1	1	10
CC	1	1	1	1	1	1	1	1	1	1	10
DC	1	1	1	1							4
EC	1	1	1								3
FC	1	1								1	3
GC	1	1									2
HC	1									1	2
IC	1										1
JC	1										1

The broad border in the table between cells indicates a break in the sequence of sessions. The processes with only one session were not included in the fidelity estimate. Thirty-one of these sessions were audio recorded. Some sessions were not recorded for technical reasons; for example when handling the equipment improperly; because of time pressure, so that the equipment was not ready to record; or for personal reasons, when clients chose not to record; or practitioners suggested not to record when they realized that clients “clammed up”. For these situations, a paper form was developed to help practitioners replace the recording with a written account. The form includes the fidelity checklist to help with documenting the model elements and questions about model performance. The form is called Missed Recording Documentation Form and is printed in Appendix AA. The developmental notes form was also redesigned to facilitate feedback (Appendix Z). The 31 audio recordings amounted to 13 hours, 6 minutes and 38 seconds of documented interaction for the pilot study.

All the data collected needed to be prepared for analysis. Atlas.ti, a software product for qualitative analysis, was used to accomplish this. Recordings of the entire

length of a session were too long to be workable in Atlas.ti. Therefore, all audio recording were cut into five-minute pieces. The file format chosen for this project was mp3. All but the Marantz recorder created a different file format, which required that these recordings had to be transformed into mp3 format from which they could be cut into the right size. The software used to cut files was Audacity.

CM forms, which documented unrecorded sessions, were scanned and transformed into an image file format (jpg) so that they could be loaded into Atlas.ti, as well, in order to create an audit trail. Every piece of information that is used for this study and in this qualitative software package can be located there, traced back to its origin, and even be viewed or listened to anytime. This preparation resulted in 212 primary documents, 37 from written reports, 175 from audio recordings. All documents were loaded into Atlas.ti.

The recordings were parsed into interaction sequences that included a practitioner input and a client response. These elements are called “quotations” in Atlas.ti or “units” in constructivist research (Rodwell, 1998). Parsing resulted in 1630 quotations, which needed to be coded for a) fidelity and b) model development aspects and then to be analyzed to answer the research questions. Amongst these quotations were 207, which were generated from the written data on forms. The quotes from audio recordings had the following characteristics:



Table 27. Quotations - descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Length of quotes in seconds	1423	1 sec.	261 sec.	33.17 sec.	24.848 sec.

Quotes as short as one second might contain a simple exchange of the quality of “Did you? No”, whereas the longer quotes contain a sequence, in which the practitioner lectures or the client goes on talking uninterrupted.

### 6.2 Fidelity

During implementation of the pilot test, several avenues were pursued to enhance fidelity. Weekly meetings of different duration depending on practitioners’ availability ranging from a brief hallway conversation to scheduled Friday afternoon meetings were conducted. The practitioners were provided forms and folders to keep the paper work together. When it was learned in supervision that some of the forms were not used and some of the activities were not performed as frequently as planned, an additional training, particularly to refresh MI skills, was offered in March 2007. In addition, a new form was developed to reduce paperwork and give concise direction for conducting a generic session (Appendix Y. Brief Documentation Form).

In order to monitor and measure fidelity, each quote from the audio recordings of the sessions in the pilot test was categorized as either a model element or not. The list of possible model elements was constituted by the fidelity checklist containing 30 items. During the coding process it became apparent that some practitioner interventions could not be categorized with the existing codes from the fidelity list. Nevertheless, they

seemed to be in keeping with the model. New categories for these behaviors were added to the fidelity list of guidelines depicted in Appendix BB Fidelity Codes (extended list). Because this discovery emerged during analysis, the original order and numbers in the fidelity list needed to be kept. Therefore, the added categories were placed next to the most similar or in time of application most closely related category and given the same number.

The most instances of the new categories were counted for the MI-type behavior coded “active listening”. Positive reinforcement or pointing out strengths was also an activity, which emerged as vital to the process, and was frequently used. It was added to the fidelity list and coded as “encouragement”. Another activity was coded “redirecting”, an activity used for getting back on track, when clients became unfocused. Using this data material coded by 33 categories, three types of fidelity estimates could be performed:

- summary model vs. non model element frequency, termed overall fidelity,
- individual model element frequencies, and
- model element per case fidelity (using frequency matrices).

Another, fourth, way of looking at fidelity is evaluating the use of the fidelity enhancing tools of forms and checklists. Each of these fidelity estimates is presented in a section in the following.

### *6.2.1 Overall Fidelity*

Called overall fidelity all model behavior is contrasted with all non-model behavior in the sample. Because the entire interaction time was parsed and coded, the

categorizing of units allows a precise estimate of overall fidelity. The number of quotes coded as in keeping with the model (fidelity quotes) can be compared to the number of quotes coded as something else (non-fidelity codes). In every session, there are also interaction sequences that do not have to resemble the model and do not constitute a digression of the model. These interactions are for example the opening small talk, the ending phrases and planning the time for new meetings. These were labeled “neutral”. In the following table, a summary estimate for fidelity is expressed by the relationship of these two numbers of quotes per code group of all documents in the analysis.

Table 28. Summary estimate of fidelity

Type of quotes/code group	Frequency	Percent
N=1528		
fidelity quotes	1194	78.1%
neutral quotes	32	2.1%
non-fidelity quotes	302	19.8%

With 78 % of interaction sequences considered constituting instances of application of the CM, the practitioners in the pilot test have reached a satisfactory level of fidelity. However, these numbers do not give information about the quality of these interventions, and whether they were delivered skillfully.

### 6.2.2 Model Element Frequencies

Furthermore, for model development reasons it is interesting to know about the use of the individual elements. Some elements of the CM have been used more extensively than others. The reasons for the differences in frequency may be found in the following group of conditions,

- higher level skills are required,
- training was inadequate,
- the new style is too different from the usual work habits, which makes it harder for the social workers to follow the guidelines, or
- there was a lack of opportunity.

These conditions are hypothetical explanatory categories. They may not provide a sufficient explanation, however, they can guide future attempts at training or researching these connections. The frequency of use by all social workers across all sessions per each element of the CM is displayed in the following table. The table is sorted by frequency of occurrence. The hypothesized type of associated condition is added and discussed in the following for the model elements that seemed to have been underperformed.

Table 29. Application frequency of all model elements

Model element/activity	Frequency	Type of hypothesized related condition
27 encourages	108	
05 problem explored	96	
19 generates tasks	86	
11 active listening MI skill	85	
23 obstacles explored	69	
04 identifies target problem	68	
27 task review	67	
18 measures change	58	
21 plans details	54	
01 gives orientation	47	
17 educates	45	
09 summarizes	38	
20 elicits task agreement	37	
14 explores previous attempts	33	
15 examines pros and cons	33	
22 develops rationale	32	
06 develops goal	31	
24 practices with client	31	
10 contracts	21	habit
11 assesses importance	18	skill
16 explores values	18	skill
29 Termination: reviews process	17	opportunity
26 client summarizes	14	habit
28 Termination: reviews problem status	13	opportunity
12 assesses confidence	12	skill
25 practitioner task	12	habit or opportunity
30 Termination: recontracting	10	opportunity
01 uses time limits	9	habit
19 redirects	9	training
02 explores outside mandates	8	training
07 initial problem measuring	6	habit
13 assesses readiness	6	skill
03 agency mandates explored	3	training

The elements of the CM, which belong to the first group, mainly are the MI skills of “active listening”, the “exploration of ambivalence”, and “deeply held values”. In order to perform these routinely and easily, a high level of skill is required, which was

not easy to achieve by the rather short training events for the pilot test. It also turned out, that the TCM activity of “developing a goal”, is not trivial. The skill with which this activity is carried out determines the utility of the product for the rest of the treatment process. Developing a goal is based on a clear conceptual understanding about the level of abstractness and the difference to a task. Building skill for this model step needs reflection and practice. Merely negating the problem is not what is aimed for with this activity.

The second group of model elements that were not performed as frequently as hoped, were the techniques around “elaborating the mandates” which include “uncovering the degree of involuntariness”, and negotiating. These elements stem from the writings of R. Rooney (1992) and constitute a preparatory phase in the CM. It may be that these processes of exploring and negotiating mandates were not presented distinctly enough in the training for the pilot test in order to enable the practitioners to perform them well. Another reason might be that all clients had been at the agency for almost a month and some much longer, when they entered the research study. At this point in their treatment, mandates probably had already been discussed and negotiated.

The underperformance of the third group of activities share the characteristic of being counter to the dominant culture in substance abuse treatment, therefore, rather unfamiliar to the practitioners. In this group belong “getting the client to summarize”, “using time limits”, “measuring the problem initially”, and “contracting”. These are not difficult to carry out; however, they require awareness, and maybe a change in personal style of working. Similarly, the intervention of “redirecting” requires a high level of

oversight and focus on part of the practitioner and it conflicts at times with the need of clients to vent feelings, with rapport building and slow-paced exploration.

Finally, some elements could not be performed because there was not enough opportunity. This was the case for termination activities, and maybe the case for practitioner tasks.

### *6.2.3 Practitioner and per Case Fidelity Estimate*

This section attempts to estimate fidelity by presenting all coded quotations per case in chronological order in one display. Through a display, data reduction is achieved and a summary view on fidelity of a complete case presentation is provided. Each case is displayed in a time ordered and colored matrix and thus “reduces complex information into selective and simplified gestalts” (Miles & Huberman, 1994, p.11). Displaying involves analytic steps. The kind of display was developed to capture fidelity and allows both,

- a) a rather rough impression about phases facilitated by colored areas and
- b) a very detailed view on a small unit of interaction provided by a single cell.

Each case is displayed by a separate matrix. The two cases with only one session are not used for this analysis. Each row in the displayed matrices represents a five-minute piece of audio recording of a session (or one document describing in-session activity to replace the audio recording). The rows are ordered chronologically. Session time runs from top to bottom. All sessions follow consecutively.

All quotations were coded whether they represent actions that were part of the model or whether they were something else. Again, the codes for this type of coding were

derived from the CM fidelity checklist. Originally, 30 codes were used for analysis of fidelity. During the coding process a few more codes emerged, as mentioned above, which denote elements of the model. These were added to the list of codes, so that a total of 33 codes could be used. The list of codes is displayed in Appendix BB in the chronological order in which it was conceptualized being applied in practice. The same order was used in the coding process and in the displayed matrices.

Each column represents one of the 33 fidelity codes. Each cell includes the frequency count of the occurrences of a certain activity. The shading of the cell is intensified with the frequency. One is of lighter color; two is darker. The extra columns at the right border indicate the neutral activities (intros and endings) and the distinct non-model activities. Even though a counseling process does not always follow a predetermined order, the codes are arranged into a sequence from left to right, which approximates the order in which they were conceptualized for the CM.

Through colors, groups of activities are marked and the glance of the reader is directed. Focusing on the numbers other than zero in the colored areas allows an estimate to what degree the designated activity was performed or not performed.

- Green denotes activities around problem exploration, prioritizing, and contracting,
- Blue denotes the MI-type activities, like active listening or assessing readiness, etc.
- Yellow signals the Task-Planning and Implementation Sequence, and
- Pink points out the termination activities.



The colors in the display are not meant to make a definite statement, or be exhaustive; they rather are a suggestion of where to find what and how to look at these displays by marking them with a broad brush.

The information in the top area of the tables references the sources from which they were constructed and this way provides an element in the audit trail. The number of all quotations in the documents on which a matrix is based on can be found in the header after “Quotation-Filter”. The number of all quotes displayed in the matrix can be found at the bottom. The number of all quotations in the documents can be different from the number of quotes in the matrix. This can be because of codes used for ASI assessment, client feed back and other miscellaneous purposes. It can also be different because of coding one quote with two codes. The ratio of fidelity codes versus non-fidelity codes can be retrieved through the percentages given for each group codes. These codes are displayed in the right margin. A discussion of the individual fidelity matrices follows.



Figure 27. Matrix BC represents the most complete, and complex example. Problem defining activities (green) were most intense in the beginning as was appropriate. The blue MI codes are not very dense, indicating that MI-activities were not used exhaustively, but consistently. The first session has almost no fidelity codes, because the ASI was conducted. This situation is true for almost all cases. The ASI usually took one to one and a half sessions away from work with the CM. Task work (yellow) for this case was conducted. Termination activities including recontracting were not performed. However, the social worker is continuing to work with the client.



Figure 28. Matrix AC

CODES-PRIMARY-DOCUMENTS-TABLE		Code-Filter: Code Family "fidelityTable" [42]																																			
Report created by af - 06/28/07 01:45:32 AM		PD-Filter: Primary Doc Family "client: AC" [50]																																			
HU: [C:\dataCollected\vdiss3.hpr5]		Quotation-Filter: All [430]																																			
	01	01	02	03	04	05	06	07	09	10	11	12	13	14	15	16	17	18	19	19	20	21	22	23	24	25	26	27	27	28	29	30	Totals	neutral	non-fid		
P1:	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2		
P2:	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1		
P3:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
P4:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
P5:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
P6:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
P7:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
P8:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
P9:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P10:	0	0	0	2	1	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	
P11:	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	1	4		
P12:	0	0	0	4	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0		
P13:	0	0	0	2	1	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0		
P14:	0	0	0	1	3	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0			
P15:	0	0	0	0	1	0	0	0	0	1	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0			
P16:	0	0	0	0	0	3	0	1	0	0	0	0	2	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	9	0	1			
P17:	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1			
P18:	0	0	0	0	0	0	0	1	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	7	0	2			
P19:	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	3	0	0	0	1	0	0	8	0	0				
P20:	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	6	0	3				
P21:	0	0	0	0	0	1	0	0	0	3	0	3	0	0	1	0	0	0	2	1	0	0	1	1	0	0	0	0	0	0	13	0	1				
P22:	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	1	3	0	0	1	0	0	8	0	2					
P23:	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	0	0	4	0	5	0	0	18	0	0					
P24:	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3	0	0	0	0	7	0	6					
P25:	0	0	0	0	1	0	0	0	0	1	2	0	0	1	2	0	0	0	1	0	0	0	0	0	0	1	0	0	0	9	0	1					
P26:	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	2	0	0	0	7	0	1					
P27:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	3	0	1	0	0	7	0	0	15	0	0					
P28:	0	0	0	0	1	0	1	0	0	2	0	0	0	0	2	0	0	0	2	0	0	5	1	0	0	0	0	0	0	14	0	0					
P29:	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	1	3	0	1	0	0	9	0	0						
P30:	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	9	0	5				
P31:	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0			
P32:	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	6	0	2					
P33:	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0	0	9	0	0					
P34:	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1	1	1	0	0	0	2	0	0	0	9	0	0						
P35:	2	0	0	0	2	0	0	1	1	1	1	0	0	0	0	1	0	0	0	0	0	1	1	0	0	1	0	0	12	0	0						
P36:	0	0	0	0	2	2	0	0	1	1	0	0	0	0	1	0	0	2	0	1	2	0	0	0	0	0	0	0	12	0	0						
P37:	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	2	0	0	1	0	0	0	7	0	0						
P38:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	1	1	0	0	1	0	0	3	0	0	10	1	0						
P39:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	3	0	0	5	1	0	0	0				
P40:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	0	0				
P41:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0				
P42:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	0	0				
P43:	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	0	0	0	0	2	0	0	0	6	0	4	0	0				
P44:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	2	0	0				
P45:	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2	0	0	1	1	1	0	0	1	0	3	0	0	11	0	4	0	0				
P46:	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	2	0	1	1	0	0	0	0	1	1	0	0	10	1	0	0	0				
P47:	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	3	0	0	0	0	0	0	0	2	0	0	4	2	0	14	0	0				
P48:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	1	2	10	1	17	0	0	0				
P49:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	1	0	0			
P50:	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0			
TOTAL	10	0	0	2	15	17	7	0	7	8	25	3	4	2	7	5	9	12	19	2	15	8	13	9	16	12	7	2	35	19	7	12	2	311	9	70	
																																			79.7%	2.3%	17.9%
																																					390

This case has two fields of activity around problem defining (green), indicating that there might have been some renegotiating or switching in problems. There is some MI-activity (blue), but limited to middle sessions. Task activity (yellow) started only in third session, and subsided later. Termination activities seem appropriate.



Figure 29. Matrix CC

CODES-PRIMARY-DOCUMENTS-TABLE		Code-Filter: Code Family "fidelityTable" [42]																																				
Report created by af - 06/28/07 08:32:14 AM		PD-Filter: Primary Doc Family "client: CC" [25]																																				
HU: [C:\data\collected\vdiss3.hpr5]		Quotation-Filter: All [122]																																				
		01	01	02	03	04	05	06	07	09	10	11	11	12	13	14	15	16	17	18	19	19	20	21	22	23	24	25	26	27	27	28	29	30	Totals	neutral	non-fid	
P124	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	
P125	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	2	0	0	0	0	0	0	0	9	0	0	
P126	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	
P127	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	5	0	0	
P128	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0		
P129	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	1	0
P130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	
P131	0	0	0	0	4	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	10	0	0	
P132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P133	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	4	0	0	
P134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	
P136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	
P137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
P139	0	0	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	8	0	0	
P140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	
P141	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	
P142	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	
P143	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	4	0	0	
P144	0	0	1	0	0	1	0	0	1	0	0	1	1	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	
P145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	1	0	0	0	1	2	0	0	7	0	1	
P146	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
P147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	1	1	0	0	0	3	0	0	0	8	0	0
P148	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	1	0	0	0	0	0	0	1	6	0	0	
TOTAL	1	2	1	0	10	7	1	2	1	0	0	5	2	2	1	3	1	0	15	0	17	1	5	1	9	0	0	0	1	14	0	0	1	103	1	2		
																																			97.2%	0.9%	1.9%	
																																					106	

The documents on which this matrix is based are mainly forms. This explains the high level of 97% fidelity codes. Non-fidelity codes were simply not recorded. CM activity was dominant in almost every session, except for the fourth. However, the lack of documentation in this session does not prove that there was no CM activity taking place. MI-behavior (blue) naturally was harder to capture through paper records, but was interspersed as suggested. Task planning, implementation and review were ongoing. Termination activity was not elaborate and brief.

Figure 30. Matrix DC

CODES-PRIMARY-DOCUMENTS-TABLE		Code-Filter: Code Family "fidelityTable" [42]																																			
Report created by af - 06/28/07 01:47:03 AM		PD-Filter: Primary Doc Family "client: DC" [10]																																			
HU: [C:\dataCollected\dis3.hpr5]		Quotation-Filter: All [149]																																			
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Totals	neutral	non-fid				
P163:	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0				
P164:	2	0	0	0	7	4	0	0	2	0	3	1	0	0	0	0	0	3	0	0	1	2	3	1	1	0	1	1	2	0	0	0	34	0	0		
P165:	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	2	1	2	1	0	0	1	0	1	0	0	12	0	0		
P166:	0	0	2	1	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	3	0	0	0	10	0	0			
P167:	0	0	0	0	0	1	1	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	6			
P168:	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2	0	1	1	3	1	0	0	0	1	5	0	0	16	1	2			
P169:	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	1	9				
P170:	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3	1	0	0	8	0	6			
P171:	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	1	0	2	0	0	0	0	0	0	0	10	0	5				
P172:	1	0	0	0	2	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2	0	1	0	0	1	0	0	2	13	1	0			
TOTAL:	5	1	4	1	10	5	2	0	3	1	8	1	0	0	1	0	0	10	5	2	6	6	11	5	3	0	1	4	14	2	0	2	113	3	28		
																																		78.5%	2.1%	19.4%	
																																			144		

This case seemed to have a balanced and appropriate distribution of CM activities throughout the process. Again, MI-activity (blue) was somewhat underrepresented. Task activities were solid and prevalent (yellow). Termination was not planned at this time; only a transition to another worker was discussed.

Figure 31. Matrix EC

CODES-PRIMARY-DOCUMENTS-TABLE		Code-Filter: Code Family "fidelityTable" [42]																																			
Report created by af - 06/28/07 01:51:00 AM		PD-Filter: Primary Doc Family "client: EC" [12]																																			
HU: [C:\dataCollected\dis3.hpr5]		Quotation-Filter: All [94]																																			
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Totals	neutral	non-fid				
P191:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0			
P192:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
P193:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
P194:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
P195:	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	1	4			
P196:	1	0	0	0	4	6	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0			
P197:	0	0	0	0	1	1	0	0	1	0	1	3	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	13	0	0			
P198:	0	0	0	0	0	2	2	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	9	0	0				
P199:	1	0	0	0	0	1	2	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	4	0	0	1	0	0	0	11	0	0				
P200:	1	0	0	0	1	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	7	1	0				
P201:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	3				
P202:	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	5	0	0				
TOTAL:	4	0	0	0	7	11	4	0	4	3	2	3	5	0	4	1	0	0	0	4	0	1	0	4	0	0	2	2	0	0	1	62	5	7			
																																		83.8%	6.8%	9.5%	
																																			74		

Of the three sessions, only the middle one is a true CM session with the full spectrum of activities. The degree of fidelity behavior is relatively high (83.8%). This rather tight structuring might have contributed to the client not wanting to continue (compare the case report).





Figure 32. Matrix FC

CODES-PRIMARY-DOCUMENTS-TABLE																																Code-Filter: Code Family "fidelityTable" [42]				
Report created by af - 06/28/07 01:51:34 AM																																PD-Filter: Primary Doc Family "client: FC" [18]				
HU: [C:\dataCollected\dis3.hpr5]																																Quotation-Filter: All [105]				
	01	01	02	03	04	05	06	07	09	10	11	11	12	13	14	15	16	17	18	19	19	20	21	22	23	24	25	26	27	27	28	29	30	Totals	neutral	non-fid
P173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
P174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P175	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
P176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P178	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	4	0	1
P179	3	0	0	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	9	1	1	
P180	0	0	0	0	1	5	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0
P181	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
P182	0	0	0	0	0	2	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0
P183	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	
P184	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	1	0	6	1	0	
P185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	0	0	5	0	3		
P186	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0	4		
P187	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0	4	0	3		
P188	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	5	0	1		
P189	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	5		
P190	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3	0	3	0	0	
TOTAL	5	0	0	0	5	9	2	1	1	3	4	0	0	0	1	0	0	4	1	4	0	0	0	0	0	0	1	2	6	6	5	3	63	5	21	
																																		70.8%	5.6%	23.6%
																																				89

CM activity is lower than in the case before. Again, this may be due to missing data, however, density of task and MI activity is very low. Termination activities are considerable, as the last session was a planned termination from the pilot test.

Figure 33. Matrix GC

CODES-PRIMARY-DOCUMENTS-TABLE																																Code-Filter: Code Family "fidelityTable" [42]				
Report created by af - 06/28/07 01:52:15 AM																																PD-Filter: Primary Doc Family "client: GC" [14]				
HU: [C:\dataCollected\dis3.hpr5]																																Quotation-Filter: All [79]				
	01	01	02	03	04	05	06	07	09	10	11	11	12	13	14	15	16	17	18	19	19	20	21	22	23	24	25	26	27	27	28	29	30	Totals	neutral	non-fid
P149	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	
P150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P152	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P153	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	
P154	0	0	0	0	2	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	9	0	1		
P155	0	0	1	0	1	6	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	13	0	1			
P156	0	0	0	0	5	2	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0	0	0	2	0	0	0	13	0	2			
P157	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	6	1	1			
P158	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0			
P159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0		
P160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0		
P161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	1	0	1	1	0	0	0	0	7	0	0	0	0		
P162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	3	1	1	0	7	14	3	1	1	1	1	0	0	4	0	0	2	1	0	6	1	1	0	1	2	0	0	5	3	0	0	59	1	5		
																																		90.8%	1.5%	7.7%
																																				65

This case has a balanced but rather low level of activity. The high degree of fidelity (90.8%) points to a very structured way of working. However, the case was terminated prematurely.







Table 30. Use of forms

Title of form	Frequency of use
N=34	
Brief Documentation	9
Problem Overview	7
Problem Exploration	7
Problem Change	5
Task Accomplishment	3
Task Development	2
Simple Ruler	1

From this table it can be seen that some forms were obviously not used as much as others. The Brief Documentation Form (Appendix Y) developed during the pilot test was used most frequently. It seemed to fit best the needs of practitioners and received good feedback. This was a small success in further developing the forms as one model aspect.

The Problem Change Form (Appendix I) could have been used more often. Its limited use might be related to the still new behavior of measuring the problem status before beginning to work with a client and each time thereafter. It seems that practitioners are not yet there where evidence based practice, accountability, and the practitioner-researcher model would like them to be.

The Task Accomplishment Form (Appendix H) might have been too detailed for flexible and speedy use in session. However, this also seems to correlate with a less formal and less structured approach of practitioners in conducting the task review. The down side to the non-use was, that tasks were forgotten, accomplishments might have been overlooked. In addition, holding the client accountable and staying focused is harder

to achieve.

The forms for problem exploration (Appendix F) and task development (Appendix G) were not used much either. Maybe this is because the forms cover very basic procedures with which every social worker is familiar. A novice practitioner or a graduate student may take more advantage of these forms. On the other hand, a more skilled application could have resulted by staying closer to the protocol suggested by the forms.

The Simple Ruler Form (Appendix U) was only used once, although the technique was used more often. The relatively low degree of utilization is congruent with the limited use of the more advanced MI skills. This may be attributed to a) the state of training in which the practitioners were, b) their knowledge of the utility of scaling questions, and c) their awareness of when to apply them. Scaling questions seemed to be not in the repertoire of most of the practitioners yet. Related is the impression that the atmosphere in substance abuse treatment often is not conducive of client decision making and respecting ambivalence. The clients, as well, have learned these expectations and either resist passively, contribute lip service, or repeat the twelve-step mantra. MI as a culture has not arrived yet in the hearts and minds of everybody in the substance abuse treatment field.

Form use may also be attributable to such trivial things as easy access. In this study, access played a role, as the manual was called too voluminous and the forms hard to find by a practitioner.

### 6.2.5 Summary

The different approaches to estimating fidelity yielded slightly different results. The overall estimate based on the ratio true model behavior counts vs. non-model behavior counts of 4:1 implies a satisfactory outcome. The detailed look at the individual model elements revealed weaknesses and qualities (for example the high yield of encouraging behavior). Finally, the view on casewise session sequences displayed differences in model interpretation between practitioners, their different skill level regarding MI-behavior, and their different style in how closely they followed the manual. The casewise view also corroborated the basic pattern and sequence of groups of model activities (phases and sequences like TPIS) as it was displayed in the conceptual description (see the figures in chapter 4).

The model behavior based on TC model elements was visible more than the MI elements. This difference needs to be attributed to the steeper learning curve for MI skills, which require more time and practice to acquire. The same is true for the more skilled application of TC steps, which only on the surface seem straightforward, but involve dexterity and discipline in its application on a higher skill level. Considering the practical challenges in implementing the study, the result in degree of fidelity is more than satisfactory. A general lesson to be learned is that supervision and forms cannot make up for training and learning time.

### 6.3 Model Guideline Review Introduction

This section presents findings relevant for model development. The questions to be answered by the data are as follows: how did the CM work, what about the CM needs

improvement, and how can the CM be improved. The nature of this study is essentially exploratory. When looking at the following section, the reader needs to consider that the answers to the above questions are suggestions, ideas, and hypotheses inspired by the data, but also grounded in the data. The empirical evidence for these suggestions and qualitative evaluations is based on a small sample of clients, an even smaller sample of practitioners, and on one location. Therefore, results need to be considered idiographic knowledge. Nevertheless, the purpose of the study can be satisfied with this type of knowledge. The task was to conduct a practice test, to implement a set of practice guidelines in a natural setting, to observe the application, to retrieve the experiences of participants, and to reflect on this data material. These reflections are presented in the following chapter.

In the following section, the initial CM as described in chapter four and represented by guidelines in the manual (appendices) is reviewed. This stepwise review follows the outline provided by the fidelity checklist, which was used to establish implementation fidelity. The fidelity checklist in Appendix L compiles all the essential steps in carrying out the model as defined for this study.

The data for this analysis were comprised of all items in the data collection that were able to “make a statement about the combined model.” Characterized by this quality, these items were identified by first coding the data material for relevancy for model development. Data items relevant for model development came from a wide variety of sources, which are displayed in the following table.

Table 31. Data sources for model development

Data Type	Source	Format	Quotes/Units
			N=656
Developmental notes	Practitioner	audio	25
Field notes	Researcher	notes	45
Supervision	Researcher	notes	52
Session feedback	Client	audio	72
Focus group	Practitioner	audio	129
Memos	Researcher	notes	138
Session performance	Client and practitioner	audio	195

The data source, through which the research task of model evaluation and development was most directly addressed, was the focus group, asking for the practitioner's evaluation of functioning, usability, practicality, and input on model improvements. Field notes were comprised of the ongoing notes I took on observations for feedback to practitioners for supervision, on practitioner remarks on and discussions about the working of the model. My own ideas and reflections on developmental aspects of the model and the supervision were also recorded in the field notes.

All of these data were parsed into units, which carry meaning for the analytic question. They were mostly sentences or paragraphs, and complete answers to direct questions for example in the focus group or from client feedback after the sessions.

These quotations then were analyzed with the aim of evaluating the performance and exploring the potential for improvement of model guidelines (model elements). This analysis was done after a second round of coding in Atlas.ti marking performance quality in a positive or negative way, critical incidents, and interaction sequences, which seemed to carry some innovative idea or information (informative event) for model development.

Critical incidents are interaction sequences, which appear to have potential to illustrate the functioning, teach a lesson, or yield information for improvement (Reid & Smith, 1989).

While engaging in this coding activity, a second layer of statements was created and built on the coded sequences. This layer is constituted by annotations, called “memos” in Atlas.ti. They document analytical activity and represent a first step in evaluating and analyzing the functioning of the coded elements. The memos and the other primary data were then prepared for the stepwise review and accordingly grouped along the fidelity codes, which represent the guidelines of the CM, the essential model features.

From this data material additional themes emerged which pertain to either more general aspects of the model, or other themes more specific to and relevant for adaptation in the field of substance abuse treatment. An additional use of memos was to document methodological decisions while conducting the analysis. These memos represent the methodological log, and were not included in the analysis, as they are not considered data. The findings from this analysis are presented in the next section. In order to ground the statements, conclusions, ideas, and revisions in the data, the connection is made through endnotes. The endnotes can be found in Appendix CC.

#### *Review of Guideline 1 Orientation*

The purpose of orientation is to let the client know what the steps are that the practitioner intends to follow. This was carried out in 48 instances in different length and depth. Like every beginning, this model step is crucial for helping clients get a good start in working with the CM. Client reactions ranged from nervousness<sup>10</sup>, hesitancy<sup>11</sup>, to

displaying readiness<sup>12</sup>. The first step of orientation into the proceedings is especially crucial with clients in our sample who were new (around 30 days in treatment) to the agency. The challenge for the practitioners using the CM with them was to help the client even stay in the program. Usually they were unstable and in crisis mode.<sup>13</sup>

A conceptual idea about clarifying and improving the quality of this step is to include the following elements when conducting orientation:

- Address choice and ownership,
- Indicate potential utility of client and practitioner tasks,
- Repeat orientation as an introduction to other crucial model steps.

The model step of orienting the client is demonstrated well in the following example, in which the practitioner is stepping back, emphasizing that the client has a choice, and double-checking:

Practitioner: And it really isn't my decision to make...

Practitioner: what I wanna [sic] let you know, whatever you really wanna [sic] work on is really what we work on...

Client: yes, that's what I want to work on.

Practitioner: Am I talking you into it?<sup>14</sup>

Practitioners drawing on their experience also warned that clients pretend to agree when they feel they do not have a true choice.<sup>15</sup> Therefore untangling the knot of coercion and involuntariness that is permeating the whole setting in order to free up the way for a trusting relationship and rapport building is crucial. At this point, orientation is intertwined with clarifying constraints. Establishing ownership is facilitated by asking what clients want to use the sessions for.<sup>16</sup> If it does not become clear for the client what the sessions can be used for, then he or she might not be motivated to engage.<sup>17</sup> This is

especially true when there are a multiple problems connected to each other that tend to overwhelm the client.<sup>18</sup> Practitioners can give examples of what can be expected from sessions. Orientation not only needs to be carried out in the beginning, but at every step in the model, especially at such crucial points like goal development.<sup>19</sup> It may be necessary and also helpful to indicate to the clients why and how to create a problem list.

Methodological knowledge for future development of this step in future research may be derived from the concept of role induction. Orientation is closely linked to the next model step of clarifying the mandates operating in the given situation, which is discussed in the next section.

#### *Guideline 1 Revisions*

The following revisions are to be added to the guideline about “orientation”.

Orientation includes the following aspects:

- The decision-making about the problem choice and tasks is made by the client.
- A consequence is that openness about motivations is required from both parties.
- It should be described to the client at the beginning that tasks are carried out by client and practitioner.
- Emphasize the practical utility.
- Orientation is to be carried out as an introduction to other model steps, as well.



*Review of Guidelines 2 and 3 Assessing Outside and Agency Mandates*

Agency mandated treatment goals were documented in each client's treatment plan. In addition, a standardized assessment tool, the ASI, was conducted in the beginning, which also inquired about legal mandates. Because participation in the pilot testing was entirely voluntary, practitioners and clients were free to work on goals of their choosing. This consideration leads to a different hypothesis than lack of emphasis in training as was discussed in chapter five (see Table 29. Application frequency of all model elements). Maybe the reason for not exploring mandates much and not negotiating treatment plans was the freedom to explore other areas provided by the pilot test.<sup>20</sup>

Observations from the study suggest the question at what point in the course of entering treatment is best to conduct the assessment. Carrying out this model step appeared to be a structural question. A natural place for assessing and negotiating mandates is at intake. However, at intake true negotiation cannot take place because clients often are in the middle of withdrawal so that they would agree to anything just to get access to medication.<sup>21</sup> The negotiations about the treatment plan were done in other sessions, outside the pilot sessions. This way there was not much impetus to do a review during the pilot test. The situation might be different if the CM becomes a regular part of a treatment program. Then this model step can be placed more favorably.

However, mandates and constraints are plentiful in this treatment context. Influences on the course of action also appeared during the study. Occasionally practitioners felt the obligation to intersperse pilot test sessions with uninvited education about other services at the agency.<sup>22</sup> This is perfectly legitimate and only illustrates that

there are always different views on what needs to be done. Open negotiation also might prevent practitioners from following hidden agendas.<sup>23</sup>

Secondary drug use is another example for a constraint put on this type of treatment. If there is no space to negotiate drug use without sanctions, then clients may lie or become restricted.<sup>24</sup> If the expectations by staff or agency are to get clean, live abstinent, and play by the rules, and there is no space to negotiate, then clients may pretend.<sup>25</sup> Treatment goals established for the agency's treatment plan are also somewhat constrained. Only certain topics qualify as treatment goals specified by third party payers. All of these circumstances put constraints on the treatment situation and, therefore, corroborate the relevance of this guideline to carefully uncover and negotiate these constraints. As a practitioner put it: "when they come here, we tell them what their problem is. You are here for the opioid dependence. So they don't get a voice."<sup>26</sup>

In the study, it became apparent that treatment plans may cover the long-term goals, whereas what is on the client's mind has more imminent priority.<sup>27</sup> Between these two directions, the target problem needs to be negotiated. The intention of the CM is that clients can work on their priorities. The CM wants to prevent a situation where a practitioner stated, "She couldn't talk about what was important to her."<sup>28</sup> When a negotiation is carried out and a choice is made in a fair way, practitioner and client both seemed to be reassured to work on a worthwhile goal as was expressed here: "that process allowed us to get a sense of where he was really willing to work, instead of where he felt like he was supposed to work".<sup>29</sup>

### *Guideline 2 Revisions*

The following guidelines and qualifying remarks about the nature of this step are to be added:

- Harmonize negotiating mandates with intake and agency rules.
- Assessing and negotiating mandates is not only a practitioner skill to be learned, it is also part of the larger agency structure. It depends on the agency's intake process at what point in the sequence (and how) mandates are negotiated in the CM.
- The positioning of assessing and negotiating mandates hinges on the integration with existing treatment structures and agency policies, rules and regulations.
- The CM can only unfold its strengths (i.e. being motivating for clients) if a coercive environment is structured to provide room for negotiation.

### *Review of Guidelines 4 and 14 Explore Target Problem*

The activity of exploring the problem includes model step 14 “exploring previous attempts” at solving the problem. Therefore, the guideline review for both model steps is combined. Resolving ambivalence is a second purpose for which “exploring previous attempts” is used.

The data pointed to the first issue about this model step, which is how formal assessments tie into exploring. At the agency, multiple assessments were conducted and the information gathered from these assessments was not easily usable for working with the CM<sup>30</sup> as was discussed in chapter five in the section about problem profiles. The

formal assessment conducted for the pilot study, the ASI, was received with ambivalence. For some, it was a too long and formal assessment tool; for others, it was not providing essential details.<sup>31</sup>

The ASI seemed not to fit very well with the application in a MAT program because it did not discriminate enough regarding additional drug use within the program. The practitioners also raised some doubts about the reliability of self-report on past drug consumption.<sup>32</sup> When the ASI was applied too mechanically<sup>33</sup>, it was hampering the flow of interaction<sup>34</sup> and there was the tendency not to provide useful knowledge for the current problem situation. On the other hand, when the ASI was accepted as a guide in exploring the client's situation, it alerted a clinician, for example, to address depression more closely. A subsequent discussion of the issue brought about insight for a client regarding how depression and a sleep disturbance might have been related to a lapse in her medication.<sup>35</sup>

Finally, the use of an assessment instrument like the ASI is also contingent on clinical skills in assessment and usually requires extra training, which was not provided by the agency. Although the social workers received training for the pilot study, to conduct the ASI like a dialogue, in order to avoid the question and answer pattern, would have still required advanced practice.

Another finding regarding model development suggests that too much dwelling on exploring the problem may aggravate what the client feels about the problem.<sup>36</sup> Similarly, getting too therapeutic and exploring too deeply, one practitioner warned, can make the process “scary” for clients and clinicians alike.<sup>37</sup> The CM is not designed for

exploring childhood issues.<sup>38</sup> One guideline for gauging the right amount of exploration comes from the outline of the model. It is designed to progress from problem identification to problem solution. Practitioners stated that this central idea helped them to remain aware of limits.<sup>39</sup> In search of a guideline for the right depth of exploring, the following proposition was developed. Limits for problem exploration are given by what is needed to know about the problem in order to move on. It needs to be a) enough to resolve ambivalence, b) enough to develop a task.<sup>40</sup> Formal and the use of standardized instruments is the preferred way of assessment in order; however, the instruments need to be suited to the field and program. Instruments developed for use in a MAT may be more promising (Institute of Behavioral Research, Texas Christian University, 2005b). Finally, assessments need to be carefully integrated into intake and treatment planning procedures.

A challenge specific to work in MATs is the chronic nature of problems.

Examples for situations in which clients are living include:

- having used heroin for 15 years,
- needing to sleep in the hallway, “because left and right they were doing drugs”<sup>41</sup>,
- having a house full of children,
- having little education and limited job skills,
- living with a partner is who is actively using,
- being taken out by dad to use, and
- being a third generation substance user.

The special challenge there is to untangle the knot of multiple interrelated problems. It is natural that the problem for the social workers was to break a given situation down into smaller problems, goals, and tasks. This needed to be done in intervals when reviewing tasks, talking about obstacles, and developing and planning new tasks. Each task review implied circling back to another problem exploration. From this observation in the data comes the notion that problem exploration is a recurring function that includes what is in MI called the “dance” around ambivalences.

Knowledge to develop this model guideline further might come from the concept of “not knowing” developed by the Milan school of systemic therapists (Boscolo, Cecchin, Hoffman, & Penn, 1987). Untangling complex problems might benefit from methods like node link mapping (Dees, Dansereau, & Simpson, 1997; Pitre, Dansereau, Newbern, & Simpson, 1998).

#### *Guideline 4 and 14 Revisions*

The following revisions are to be added:

- View problem exploration as an ongoing task to be accomplished in intervals and to be continued at task development, task review, and obstacle analysis.
- Use appropriate standardized assessment instruments.
- Integrate CM assessment into agency environment and structure.

#### *Review of Guideline 5 Identify the Target Problem*

The detailed elements of this guideline are the gathering of problems in a problem list, the ranking of the problems, and the decision-making. Practitioners liked the

Problem Overview Form.<sup>42</sup> Determining the target problem was evaluated throughout as a useful step.<sup>43</sup> They saw the usefulness in identifying the problem as a central step of moving toward a solution.<sup>44</sup> The ranking procedure helped the practitioners corroborate on what the clients wanted to work.<sup>45</sup> Clients liked that practitioners took care to find out on what they felt they needed to work.<sup>46</sup> If this step is given completely into the control of the client, it is likely to enhance their commitment.<sup>47</sup> Conceptual considerations lead to the linking of this ranking procedure with the assessment of readiness. A more detailed discussion about this suggested innovation can be found in the section on assessing readiness below.

The determination of the target problem provides focus for the following work. Incorporating the client's own words into a problem formulation requires going slowly and sticking to concrete terms.<sup>48</sup> However, oftentimes clients brought the need to vent or talk about other issues that were bothering them into session.<sup>49</sup> These psycho-social needs called for attention and appreciation. Adhering to these client needs contributed to rapport building and helped the client feel acknowledged as a partner in the interaction, helped them feel like a person.<sup>50</sup> Changes in the course of treatment, like the beginning of a tapering phase, also bring in dynamics and may demand refocusing.<sup>51</sup>

That clients bring in new problems was a frequent situation encountered by practitioners. Often this was followed up by the practitioner, thus leading to a loss of focus, and slowing down progress in task work. Practitioner behavior related to these situations was labeled "letting go" and counted in 51 instances. Bringing in new problems is a similar challenge to focused work as is for example reminiscing in the field of aging

(Naleppa, 1995); 31 instances of this type were counted. The balancing between acknowledging current needs and focusing on contracted target problems is a clinical skill and requires experience and intimate knowledge of the client population.

As a technical attempt at a solution to this issue, another new practitioner function was created termed “redirecting”. Several instances could be identified and coded where practitioners carried out this function. There are different ways for accomplishing this task. Redirecting can be accomplished by a directive intervention, by a MI-type summary, or by resorting to meta-communication and orientation to the method and style of the CM.

#### *Guideline 5 Revisions*

The following revisions are to be added:

Reverse the order of steps 4 and 5:

- Begin with populating the problem list.
- Assess importance and readiness to address the problems next.
- Based on this assessment a decision about the target problem is made.
- Explore the target problem in detail.
- Note caveats: Balance depth and breadth of exploration<sup>52</sup> against current needs, needs to vent feelings, rapport building exchanges, and exploring due to lack of direction.
- Include ‘redirecting’ as an important function to balance focus, being directive, and client-centeredness.



*Review of Guideline 6 Develop a Treatment Goal*

This activity was liked for the same reasons as were given above for deciding on a target problem: It provides focus for the collaborative work.<sup>53</sup> The skill that seems most important for this step is conceptual clarity. The listings on the problem forms showed that practitioners often struggled to maintain clarity between task and goal.<sup>54</sup> The second skill needed is related to experience and creativity. What is the right size of a goal was a debated issue amongst practitioners.<sup>55</sup> Clients tend to create huge goals for themselves.<sup>56</sup> The following sequence from the focus group with the practitioners illustrates the issues.

CW: We'd love to see him get a job.

DW: That wasn't his goal that was our goal.

AW: Kind of and at the end of the day, it is his goal, but I think he was able to tell us, what was really the obstacle, which is I don't trust my environment enough to go out in the world and look for a job. And he didn't say it that way, but was able to kind of steer - given the opportunity to steer it away from the goal getting a job. He took it right where he needed to go. I thought that that was nice about that.<sup>57</sup>

The task of the practitioner is to make the goal workable, concrete, and achievable in a collaborative effort;<sup>58</sup> most of the time this means to scale down a goal.<sup>59</sup> As a guideline, the goal should be achievable within 10 sessions; a task should be doable within a week and have an impact on the goal.<sup>60</sup> Concrete goals seem to help clients getting started, while secondary gains regarding problem-solving skill, self-efficacy or communication skills may happen along the way.<sup>61</sup> A summarizing impression about this model guideline is that nebulous goals tend to have a ripple effect on the following treatment steps. These aspects about this model guideline are not new; however, provide additional clarity about the issues. This knowledge can guide future training and research.

MAT specific: Similarly, the treatment plans in this MAT tended to aim for large

goals. This reflects the fact that problems of clients in a MAT tend to be chronic and require large-scale changes.<sup>62</sup> Orientation for sub-goals can be drawn from structuring MAT in phases. Knowledge for further developing this model guideline may come from solution-focused work.

#### *Guideline 6 Revision*

The following revisions need to be added:

- As a guideline for sizing the goal: The goal should be achievable within 10 sessions.
- A goal formulation should be as concrete as possible.

#### *Review of Guidelines 7 and 18 Measuring Outcome*

The purpose of this model guideline is to recognize the smallest success and make it visible to the client. Practitioners in the study showed a different understanding of this step. For some clinicians it had the connotation of paper work, which is apparent in the following statement when introducing the measurement procedure: “I want to go on with some administrative stuff”.<sup>63</sup> Other practitioners used measuring problem change to build rapport<sup>64</sup> and to encourage clients<sup>65</sup>, for example, by saying, “You got a little done on both fronts”.<sup>66</sup> This model step appeared to be a natural place to give encouragement and show appreciation. It also provided the opportunity for practitioners to reflect with clients on the connection that these changes in problem severity have with task completion and the work in session.<sup>67</sup>

Practitioners valued carrying out this guideline.<sup>68</sup> They found it was “helpful because it was a great way to remind the client early in the session of what the focus

was”.<sup>69</sup> Whenever clients spoke to it, they seemed to appreciate this model step as well. One client said, that he found taking these measurements helpful because they showed him “how good I get”.<sup>70</sup>

#### *Guidelines 7 and 18 Revisions*

The following revisions are to be added. A technical note on this model step is also needed.

- The question for measuring problem change needs to be the same every session in order to make measurement series valid.
- Therefore, a precise and written statement at the outset is necessary.
- Problem change rating and the adjacent task review should be presented in a standardized form.

Additional qualifying remarks and suggestions: The standardized form facilitates a shift into working mode. As an additional marker of this transition, the tone of voice can be shifted from casual introductory small talk to a more business like working session. An additional benefit of this presentation is to distinguish working with the CM from other individual sessions provided at the agency.

#### *Review of Guideline 8 Set Time-limit*

Setting time limits can work in two different ways. It can motivate a client to get something accomplished by a certain deadline, and it promises relief after the deadline. From the application in the study, it could be learned that their use in a MAT setting has different implications depending on the program philosophy. The study site proved to be a mix of program philosophies. In some program parts, treatment is governed by a time-

limits philosophy, which prescribes detoxification in a certain amount of time. In other program parts, clients are allowed to stabilize and approach detoxification without a predefined timeline. Clients with both types of courses of treatment were in the sample of the pilot test.

What can be learned about the application of a time limit in the CM is that it has to be presented consistently and clearly. This can only be accomplished if the practitioner is clear about these somewhat artificial border markers. In one case, a practitioner had already precontemplated that the sessions would continue<sup>71</sup>. Even in a case like that, formal recontracting allows the chance of clarifying the goals and evaluating the process. An MAT is the type of setting, in which the challenge is not to overlook the end of a series of sessions with long-term clients. In some cases, the practitioner was not aware of the number of the session.<sup>72</sup> This way a time limit cannot be used. With one long-term client (AC), it could be seen in his SSD chart and heard in his session recordings that the intensity of the pilot test had a booster effect on his treatment. Taking a look ahead and keeping a session count is also important for vacation times and planned transitions to other workers<sup>73</sup> so that clients do not feel abandoned but informed and empowered as service users<sup>74</sup>. Another aspect about treatment in a MAT setting was that weekly sessions seemed to be too intense and clients were rather likely to have not worked on a task within that interval. Therefore, a biweekly rhythm was preferred by practitioners.<sup>75</sup> In general, it seemed that the process of recovery and passing through the stages in a MAT is rather a long-term developmental process<sup>76</sup> and that some tasks like building a support network can take a long time.<sup>77</sup>

The challenge for new clients in a MAT is that the likelihood of drop out early in the program is rather high. In an internal evaluation which I helped to conduct at the agency, it was found that 40% of the clients receiving methadone (N=290) and 50% of the clients receiving Buprenorphine (N=34) were discharged prematurely due to missing three days of medication. Therefore, in this setting, every new client should be treated like in a brief-treatment setting with a keen awareness of the likelihood of early drop out.

### *Guideline 8 Revisions*

The following revisions are to be added:

- This guideline is part of orientation.
- Setting time limits must be introduced together with orientation at the beginning of the treatment.
- Like orientation, this model step needs to be used at several places in the model.
- Accordingly, a complete contract includes information about who is working with the client for how long on what.
- The most important places where to address time limits are initial orientation, contracting for a target problem, each session at goal change measuring, session beginning and session ending.
- The number of sessions needs to be monitored.
- Monitoring the session count is facilitated through the problem change evaluation, which is to be conducted in every session.

Implications specific to a MAT setting:

- Treat new clients with a brief-treatment framework.
- Conceptualize intervention as a time-limited booster with long-term clients.

*Review of Guidelines 9 and 10 Summarizing and Contracting*

When coding all “summarizing behaviors”, it was found that the step of summarizing consists of two different applications: a) the step of summarizing before a contract or as part of expressing the contract, and b) the skill of summarizing while guiding and directing the interaction process. In that latter sense, summarizing promotes directedness. It is described elaborately as an MI technique, where it is a form of advanced active listening, and making MI more directive as pure client-centered work. Simple active listening was encountered quite frequently in the data (N=85, ranking fourth). The more advanced form of summarizing as an MI technique was not found as frequently. Summarizing before contracts was counted 38 times.

Several caveats could be observed. When summarizing, the practitioner may move into educating the client.<sup>78</sup> This practitioner behavior then may progress to becoming directive, telling the client what to do, which is not in keeping with the CM principles. Another more therapeutic digression developing from summarizing is to move into meta-communication.<sup>79</sup> If done skillfully, it can increase rapport and mutual understanding.<sup>80</sup>

Contracting as a formal act was somewhat underutilized in the study (N=21), sometimes skipped or forgotten<sup>81</sup>. However, the smallest form of contracting can also be

very informal, and consist of a clarification of the ranking, and a clear “yes” by the client.<sup>82</sup> Forms that are more elaborate involve meta-communication as mentioned above, or a signature.

There was a debate amongst clinicians, whether the content of a contract is better kept at a higher abstract level, providing more flexibility in session.<sup>83</sup> This position fosters the likelihood of a hidden agenda. However, oftentimes clients seemed not to be ready for clear-cut, narrowed down contract, and the development of a more precise focus turned out to become a longer process.<sup>84</sup>

MAT specific: Because clients are asked to sign so many papers at intake, releases of information, etc., rushed in at the end of a session<sup>85</sup>, often even when they are in a constrained situation<sup>86</sup>, therefore, a signature seems not to be the best means to get commitment for a treatment goal. A focus on building trust, encouraging openness, and providing a menu of options for negotiations seems to be more promising alternatives for this field of practice. The key is to get the client to develop some sense of ownership and control of the process.<sup>87</sup>

#### *Guideline 9 and 10 Revisions*

The following revisions need to be added:

- In the interest of tracking progress, the written form needs to be observed.

MAT specific:

- Don't use a signature for contracting.
- Make sure a menu of options for negotiations was presented instead.

*Review of Guidelines 11, 12 and 13 Assess Importance, Confidence, and Readiness*

The activity in conducting these three model guidelines is the same. The content of the assessment is about aspects of readiness. Therefore, this type of assessment needs to be considered one unit. The discovery of the utilization of an MI-type assessment of importance and readiness for the model step of prioritizing problems<sup>88</sup> turned out to be a small conceptual innovation. The conceptualization of readiness with the aspects of importance and confidence proved to be a good fit for assessing the problems in the initial problem list and an aid for ranking their priority. The provision of forms helped assure that this guideline was carried out.<sup>89</sup> However, if the assessment is conducted too mechanically, then the interaction ends up in the question answer pattern, which is not conducive from a client-centered perspective<sup>90</sup>.

Practitioners found that the two underlying models provide balancing elements. One practitioner found it easy to get stuck in working with ambivalence from a MI perspective, and helpful, that the TCM elements encourage the thinking and working in sequential steps.<sup>91</sup> Getting stuck in assessment is a crucial caveat with this type of work. Clients in MATs, particularly when they are in the detoxification phase, can be just ready to go. If a practitioner does not pick up the pace, which this readiness suggests, than clients can be frustrated<sup>92</sup>, or even take the lead in moving the session forward.<sup>93</sup>

On the other hand, if ambivalence is overlooked, then progress is hampered at every step, tasks are harder to develop, decisions, and commitments are not made.<sup>94</sup> At several moments during the study, ambivalences were not addressed adequately.<sup>95</sup> This leads to the suggestion that an assessment of readiness needs to be conducted at every



crossroads, where decisions are made.<sup>96</sup> Assessing confidence seems to work well at the task review, and when measuring change. One client stated at that point: “I did not believe that I could get that far.”<sup>97</sup>

#### *Guidelines 11, 12, and 13 Revision*

The following revisions need to be added:

- Use an assessment of readiness to prioritize problems before making a decision on the target problem.
- Use assessment of readiness at all other points where assessments or decisions are made;
- Points to assess readiness are task development, obstacle analysis, and task review;
- The trigger for assessing readiness is any sign of resistance.

#### *Review of Guidelines 15, 16, and 22 Examine Pros and Cons, Long-term Goals, Values, and Rationale*

Discussions about rationales could be found at different places in the sessions. In the beginning when talking about why to participate and use the CM<sup>98</sup>, when selecting and deciding on problems and goals<sup>99</sup>, when reinforcing the usefulness of a task<sup>100</sup>, and when resolving ambivalence about any of the above. This became apparent after coding, that the same practitioner activity has to be identified at different places in the sequence of sessions. The technique is essentially the same, exploring the underlying values and applying them to decision making about whatever the issue is, taking action, deciding the focus, or the specific task. Therefore, these three guidelines have been combined for

discussion here.

As was described before, assessing readiness should be considered a step in the model. Exploring values is a technique to resolve ambivalence about change. Implementing a task as another model step includes smaller activities, amongst those, the exploration or simply the reminder of previously expressed values contributes to establishing a rationale for task accomplishment.

When an exploration of values was conducted, it was found very rewarding. Clients tend to express these goals and aspirations frequently: “I want custody of my daughter” (EC), “I want my granddaughter to grow up differently” (BC), “I just want to work like everybody else” (AC), “I put my recovery first” (DC). However, many opportunities passed by and were not picked up by practitioners. The awareness of these instances is likely to increase with practice.

*Guidelines 15, 16, and 22 Revisions*

The following revisions are to be added:

- In the interest of conceptual clarity, it is recommended that the technique denoted by this model step be called an exploration of values.
- This technique is to be used for resolving ambivalence, deciding about goals, and establishing rationale for task execution.
- The locations where these techniques are to be used need to be marked in the revised guidelines.

- In a graphic representation of the CM, it needs to be made clear that the previous guidelines for examining pros and cons, long-term goals and values, and establishing task rationales are similar in technique.
- Exploring values is conceptually subordinate to the related larger model steps.

*Review of Guideline 17 Give Information after Asking Permission*

It was found that this guideline relates to a broader group of practitioner-client interactions; therefore, it was somewhat hard to define and to code. As an activity, it is closely related to giving orientation about treatment<sup>101</sup>, which is another model guideline. Giving information includes educating clients about other services at the agency<sup>102</sup> and about aspects of their treatment, what a “slip” means, and what happens at a low dose of methadone.<sup>103</sup> Related is the information sometimes given about 12-step-work and the disease concept.<sup>104</sup> The danger with this kind of information is that it can easily get directive, which would not be in line with the client-centered principle of the CM. The habit of asking permission to give information as a safeguard to being too directive was not acquired as a new skill by practitioners, yet.

Other related practitioner interventions excluded from being counted as model behavior are reframing and interpreting. These can be helpful activities and tools to carry out the larger guidelines. Examples of reframing or interpreting by the practitioner begin like this: “I hear you are looking at these issues from a different place...”<sup>105</sup>, “We know when you leave you enter a different environment...”<sup>106</sup>, “...and you brought some of it in here - which is a really healthy thing to do - let me tell you how angry I am feeling

about - and I guess what I am thinking - last night is one of those moments where what you just communicated to me ... him and you were on two different paths - becomes very clear at that moment - I became that angry ... and probably made a smart decision not to talk when I am that angry...<sup>107</sup>, “there is no right way making up your mind...<sup>108</sup>, “so this is one of those places where it takes a lot of faith to believe, that I can...<sup>109</sup>, “I would like to take a minute to normalize for you that experience...<sup>110</sup>, etc. How much the practitioner behaviors of interpreting and reframing can be considered part of the CM needs to become the subject of further exploration.

#### *Guideline 17 Revision*

The following revisions are to be added:

- The guideline needs to be changed into a principle. It is not a distinct model step.
- Clarification: Relevant for the CM is mainly that permission is asked so that unwarranted information is not dumped on clients.

#### *Review of Guideline 19 Developing Tasks*

This needs to be considered an umbrella term, as the step consists of the more detailed activities of planning details, considering obstacles, and at times rehearsing, and practicing in session. The basic idea of scaling down goals, and creating tasks was found very helpful by practitioners and clients<sup>111</sup>. The issue for this task was to develop and find the right size.<sup>112</sup> In general, it seems that smaller tasks work better.<sup>113</sup> However, if a task is too small, it might not be taken seriously by the client. As one client stated “making the task smaller is punk.”<sup>114</sup> During the pilot test, several ideas were developed to describe

the right size of a task. A task should represent a fitting challenge for the client, not overwhelming, and not insignificant. When evaluating the fit estimating self-efficacy and likelihood of success should provide the guidance.<sup>115</sup> The burden for developing the right size of the task cannot be put on the client alone as was suggested by one practitioner.<sup>116</sup>

Task planners are tools that should be developed to aid the task development process.<sup>117</sup> However, the agency culture needs to encourage this type of knowledge management. If information sharing is not encouraged, then resource indexing and other knowledge building activities are not likely to take place. AA step work can be another resource for task creation in that field and it can be integrated, as was done in the pilot study.<sup>118</sup>

It was observed that sometimes precision was lost and the terms and activities related to goals and tasks were mixed up<sup>119</sup>. Task generation seems like a straightforward activity; however, it is not trivial and requires skill, which comes from practice and experience.

During task work, there are many opportunities to lose focus. Any sign of what can be termed “resistance” is conceptualized in the CM as the signal to shift from action oriented task-work to ambivalence resolving MI-techniques. This was demonstrated well in a series of sessions with BC<sup>120</sup>, when her social worker, while attempting to develop a task sensed signs of ambivalence, switched to the exploration of this ambivalence and created a task around it.<sup>121</sup> The next session was like an in-session task of practice devoted to establishing and working with a pros and cons list, until the picture of a strong ambivalence clearly emerged for the client.

Another concern about task creation emerged from the data around tasks and writing. Clients in this program did not like tasks involving writing. Writing down thoughts, writing in a journal, writing pros and cons, were not carried out at all or only with repeated attempts.<sup>122</sup> One client thought it is “juvenile” to write down thoughts.<sup>123</sup> The reason for this situation might be a cultural issue, a middle class bias of social workers to prefer creating writing tasks, or that it simply requires a learning process for clients to benefit from it.

#### *Guideline 19 Revisions*

The following revisions are to be added:

- It is the responsibility of both, client and practitioner, to develop the task.
- The collaborative responsibility starts from breaking down the goal and continues with creating a task of the right size.
- As guideline for task development, it is suggested to aim for the greatest likelihood of success.
- Practitioners are encouraged to develop task planners from their practice knowledge.
- Task planners are an aid in task development and provide a menu of options for clients.
- An idea for further refinement of language to be used in session is to rename between-session tasks into “projects.” The name change is intended to take away the notion of chore or homework.<sup>124</sup>

MAT specific suggestions:

- Writing tasks tend not to work well.
- Alternative tasks should always be considered so that a client has a choice.
- AA step-work may be integrated into the CM as a menu of options from which to choose.
- Clients should not be coerced to adhere to 12-step work.

*Review of Guidelines 20 and 26 Summarizing and Task Agreement*

This step concludes task work with an explicit agreement. Summarizing of the task by either practitioner or client either precedes the explicit agreement or is part of the act of agreeing. In a way, this step represents an assessment of readiness. If the agreement is not given<sup>125</sup> or hesitation is apparent or the answer is silence<sup>126</sup>, these signals should trigger further assessment of fit and readiness and a follow up with MI techniques. In that sense, even the clarity reached in answers expressing ambivalence is an accomplishment and one step up the stages of change. For example, it is a success for a session, when a client, after working on the issue of getting her live-in boyfriend, who is actively using drugs, to move out, expresses to herself: “Do I really want him to move or do I not?”<sup>127</sup>

The useful aspect of a task agreement was expressed positively by a practitioner stating that this step explicitly marks the transition of talking about a task “to kind of take that next step”.<sup>128</sup> This model element was not used consistently. Combined with not taking a written note, not eliciting explicit agreement seems to be related to tasks not being clear, not being remembered and not attempted.<sup>129</sup> The reason for this may be that it might be a new element and different from the usual style of working, so practitioners simply forgot about it.<sup>130</sup> Another hypothesis about the difficulty in applying it regularly

is related to timing. It seems that when practitioners develop their ideas about tasks, sometimes, they get excited and do not wait for the client to follow or answer.<sup>131</sup> In such an instance, they do not listen to the small signs of reluctance in a client's reaction, and do not wait for a client to answer.<sup>132</sup> However, there was also an example where a practitioner took the time and used the power of silence to get a clear commitment:

Practitioner: "We talked about two tasks. Do you want to do both of them, or just one of them?"

Client: mmm

Practitioner: [silent]

Client: anyway

Practitioner: [silent for a long time]

Client: two tasks.<sup>133</sup>

Because it was found that it was rare hearing clients summarize their tasks, it is needed to reemphasize that in the interest of developing ownership it is best to let the client summarize the task.

#### *Guidelines 20 and 26 Revisions*

The following revisions are to be made:

- Conceptually, the former step of summarizing needs to be combined with task agreement.
- Let client summarize the task.
- Awareness needs to be directed to any hesitancy in the response of the client. A moment like this in the CM requires an assessment of readiness.
- Task agreement is an explicit crossroads to MI techniques for resolving ambivalence.



### *Review of Guideline 21 Planning Details of Task Implementation*

This step was applied frequently (57 instances were coded). The evaluation of its usefulness was positive. A client being asked about what was helpful in today's session stated: "Yes, working on saying the right things to my son and my old man"<sup>134</sup>. The issue of arriving at the right size of a task as it was discussed above plays out at this step. The more detailed form for task development (Appendix G) was not used frequently (N=2) and when it was used contained only trivial information. It seemed that it was not suited to enhance creativity in practitioners. Therefore, it is recommended not to use this form in the core set of the manual. Experienced practitioners seem not to need this kind of guidance. The new form designed to guide and document work in session (Brief documentation form, Appendix Y) was used (N=9) for documenting the details of a task. It can be recommended as an aid in carrying out this step of planning the details of implementation.

### *Guideline 21 Revisions*

The following revisions need to be added:

- Drop the previous task development form from the manual.
- Include the new form (Appendix Y)

### *Review of Guideline 23 Analyze and Resolve Obstacles*

Obstacle analysis is an important step because most of the time tasks were not precise the first time they were construed, and not completed the first time they were assigned.<sup>135</sup> This makes it apparent that obstacle analysis is an appropriate step of moving forward in problem solution by refining the task. It was a model step that was used

frequently (N=71).

A caveat of this model step is to drift into “problem talk”. When analyzing an obstacle it is important to keep the focus on the solution. Oftentimes obstacle analysis became a continuation of exploring the problem and turned into the question of why the problem persists. At other times, it merged into analyzing ambivalence.<sup>136</sup> Conceptually, this model step was not found to be controversial.

### *Guideline 23 Revision*

No revisions are suggested.

### *Review of Guideline 24 Practices, Models or Rehearses the Task*

There was ample opportunity for the social workers to practice the new behavior clients desired to acquire. Examples of in-session practice include trusting more (AC), communicating needs (BC), what to say on the phone (DC, GC)<sup>137</sup>, and practicing written decision-making skills (BC).<sup>138</sup> At this point in the model, it is possible to apply any skill in clinical session that the social worker possesses. Some of the interventions had highly therapeutic qualities.<sup>139</sup> It was obvious that the safe environment that the session provided was a welcomed and needed opportunity for clients to practice. It was possible to observe interpersonal growth by comparing these in-session practices over time. In the case of one client, it could be observed how openness grew and rapport was built<sup>140</sup>, and how he became able to make a beautiful and very personal statement.

“I can say something that y'all probably don't know about me, that sometimes I put out this tough ... like ...in front, but I am really a sensitive guy”<sup>141</sup>

### *Guideline 24 Revision*

The following revision is to be added:

- In order to reach a higher level of fidelity with the principles of the CM it is important to include the provision of asking permission before drawing a client into the guideline for practicing or rehearsing.

### *Review of Guideline 25 Practitioner Task and Securing Resources*

In this study, practitioner tasks were used and mostly interpreted as reminding and encouraging clients in carrying out their tasks<sup>142</sup>. Having been assisted by a practitioner had a powerful encouraging effect on a client.<sup>143</sup> There are two conditions, which have potential to advance the application of this guideline in frequency and scope, a) practitioner readiness, and b) agency support. Awareness and readiness in the practitioner is a necessary precondition to become an active part in problem solving in the sessions. This may be a new task and role for social workers who put more emphasis on a linguistic approach to treatment.

Agency support for this model element is contingent on the internal distribution of function inside the agency. The current practice at the study site was that clients were only transferred for case management at the end of their taper. The functioning of case management also depends on knowledge and access to resources. Therefore, resource indexing and knowledge sharing is an important preparation for this function. As mentioned above, if resource indexing is not done collaboratively it remains at a low functioning level.

### *Guideline 25 Revisions*

The following revisions need to be added:

- This step resembles a case management function.
- In order to implement this model element fully, the agency structure needs to allow the practitioner to step into that role.
- A supporting activity is resource indexing, which is recommended to carry out collaborative work at an agency.

### *Review of Guideline 27 Task Review*

The task review is a core process of the CM. Accordingly it was used frequently (78 quotation counts). Clients “feel nice”<sup>144</sup>, enjoy bringing in a “good report”<sup>145</sup> or “getting more responsible”<sup>146</sup> through the task review. A positive task review even inspired an attempt at transferring skills from one situation to another.<sup>147</sup> This could be considered an innovative use of the task review.

The interpretation of the task review by the practitioners was somewhat informal. However, this gave away some of the clarity about progress and it also seemed to be harder to retain continuity. A task review builds on what was established before in task development and task agreement. If this front end is not set up well, the task review suffers and loses precision.<sup>148</sup> When this happened, tasks were not remembered<sup>149</sup>, or practitioners expected more than the client had agreed to do.<sup>150</sup> Although practitioners were recognizing even minimal progress<sup>151</sup>, because in most cases it took a few sessions until task work was begun.<sup>152</sup> This can only be achieved if open-ended questions are used to begin the task review, and practitioners do not rush through it too quickly.<sup>153</sup>

Additionally, it became apparent from coding quotations around the task review, that encouragement was used frequently by practitioners.<sup>154</sup> The final frequency count is 125. That makes it the most frequently encountered practitioner behavior in the study. In fact, encouragement fits so well the overall spirit of the CM that it needs to be considered part of the model.

#### *Guideline 27 Revisions*

The following revisions need to be added:

- Always add encouragement to a task review.
- Begin a task review with an open-ended question.

#### *Review of Guidelines 28, 29, 30 Termination Activities*

For termination a final review of the problem status, a process review and an assessment of the needs for re-contracting were supposed to be conducted. With a portion of clients having dropped out prematurely from the study, the occasions to observe this model step were limited. The issues around a) making time limits useful and b) how to improve the review of problem change have already been discussed above. The unique chance at termination is the process review, which resembles meta-communication about the experience of going through the sequence of sessions and the opportunity to negotiate a new service contract. Further developments may draw on research about the use of meta-communication in treatment.

With clients being discharged for administrative reasons for missing medication after three days, these steps could not be performed. One termination was related to a practitioner leaving the agency. The client clearly showed a sensitive reaction to the

situation<sup>155</sup>, which is a reminder to treat termination with care. With the more stable clients, it was clear to the practitioners and to the clients that they would continue in the program. This situation was probably leading practitioners not to use the recontracting procedure in full. In cases where practitioners conducted an assessment and recontracted, it was done in a somewhat abbreviated form.<sup>156</sup> This situation leads to the following recommendation for long-term programs. In order to make use of the guidelines for reviewing the process and renegotiating the contract, it is essential to clarify the role of the CM sessions within the larger program.

#### *Guidelines 28, 29 and 30 Revisions*

The following revisions need to be added:

- A long-term program structure needs to be harmonized with the brief-treatment model to be implemented successfully.
- Practitioners need to mark transitions clearly.

#### *6.4 Emergent Topics*

The coding procedure resulted in reoccurring conflicts about how to categorize an interaction. This decision-making process resulted in the creation of new categories to resolve the lack of a fitting category. When proceeding this way several themes emerged from the data. As more instances were categorized using these new themes, a similar conflict became apparent amongst these categories. This phenomenon suggested a conceptual link between the categories. These links finally resulted in networks of themes. The detailed nature of these relationships needs to be explored in a future study. However, the major networks of connected themes are presented only briefly in the

following attempt to link them in the form of sentences. A discussion of a small selection of these emergent topics is added in the remainder of this section. (Categories in bold)

Mutual **trust** between social worker and client and the **openness** displayed as a consequence of growing trust were closely linked through **rapport** building moments fostered by a **non-judgmental** and **client-centered** working style. **Retention** as a result seemed likely. **Client-centeredness** related to a **flexible focus** and responsiveness toward **clients' needs** was counterbalanced by being **directive** and outside **coercion**, merging into the issue of **challenge or fit** between **cultural** differences and **environmental** circumstances under the **impact** of the model.

#### *6.4.1 Openness*

Openness is an issue especially in a coercive context. If clients have to fear disadvantages related to very essential resources that they cannot control (treatment and medication), then they need to make choices about what to reveal and what not to reveal.<sup>157</sup> Several instances showed that social workers sometimes didn't believe clients and clients didn't want to reveal everything. Trust was a big issue. The topics ranged from illegal sources of income<sup>158</sup>, amount of income<sup>159</sup>, and last-30-day-drug-use<sup>160</sup>, to personal relationship issues<sup>161</sup>. Largely, the issue of secondary drug use was negotiated outside of the pilot test sessions. Therefore, it could not be observed much. Consequently, in such a context, building trust is crucial. It needs to build on role clarity, reliability, and negotiated mandates. To the extent that this is not done in good quality, what can be achieved in session is limited.

#### 6.4.2 *Forms in the CM and Paperwork*

The role of paper work and the use of forms in the CM could be reflected through some of the findings. If the solutions, agreements, tasks, and problem definitions that were discussed with clients are not remembered, treatment loses precision, focus, and accountability.<sup>162</sup> Written documentation and forms are an aid to these aims. However, paperwork may slow down the flow of dialogue and make interaction cumbersome.<sup>163</sup> A balance is needed to achieve the optimum.<sup>164</sup> This balance may be different between different practitioners.<sup>165</sup>

As a result, a suggestion of a participating social worker for improving the existing model was adopted.<sup>166</sup> It might be beneficial to distinguish two categories of forms, a main and a supplemental set. The main and mandatory set consists of the problem overview and the brief documentation. The supplemental set to be used at select times or not at all includes problem exploration, task development, task review, problem change, and MI forms. At training participants can be encouraged to create their own forms, individualize them and use them as tools and make them their own.

#### 6.4.3 *Anything Else*

As a type of intervention, the question posed by the practitioner “anything else” emerged from the data. A little thing, but a quite useful technique at giving client input another chance, is asking “anything else” at the end of each step, where things are finalized and contracted.<sup>167</sup> It was discovered through several sequences during the pilot test that this question prompted a crucial piece of input.<sup>168</sup> Moments where it can be applied is at problem listing, problem exploration, value exploration, pro and con



exploration, and task development.

#### *6.4.4 Closing Remarks*

The data collected in the pilot study was subjected to the question of what the implications were for model development. Per each guideline, a discussion about suggestions based on the material was conducted. Even though the amount of data seemed large, the review is far from comprehensive and the revisions may appear selective. Therefore, only incremental steps at developing the model could be taken. However, the many aspects of the findings provided rich content for rewriting the model guidelines, which are presented in the next chapter.

Through the review of guidelines, it became apparent that the MI portion of the CM model is permeating the whole sequenced process prescribed by the TCM. MI behaviors like summarizing, exploring values, active listening, presenting a menu of options, and assessing readiness appear to be present and useful at almost every TCM step. These two models are intertwined much more than were assumed originally in the planning phase. It may be a future research task to take a closer look at the convergence (or interface) of MI and TC. More detail is needed to understand in particular how the tacking back and forth at the interconnections of the two underlying models is working.

## Chapter 7 Guideline Revisions and Conclusion

In chapter three, the steps of model development research according to the D&D approach were described in detail (Rothman & Thomas, 1994). The task for this dissertation research was to begin a model development process and conduct the first steps of this larger process. The conceptual framework for this type of dissertation defined that the final product is the revision of the initial guidelines (Reid, 1979). The initial product was the creation of a practice model consisting of a sequence of steps, formulated as rough guidelines, and presented in a manual. At the heart of this dissertation research process was the practice test, which produced the empirical data. The analytic process resulted in suggestions for revisions of the initial guidelines in chapter six. These guidelines are again tentative, waiting for more rigorous testing in future research studies. They are suggestions for future conceptual refinement and direct attention to aspects of the model, which need more developmental work. Other dissertations following this model concluded with a revision of the initial guidelines in the form of a brief summary of the results (Caspi, 1997; Chou, 1992; Donohue, 1996; Naleppa, 1995; Rooney, 1978). Such a summary of the revisions is presented in the following section.

### *7.1 Summary of Revised Guidelines*

The initial guidelines were represented through the “Sequence of steps” which listed the essential steps to be carried out in a specific sequence (Appendix S). These

steps were the basis for the fidelity checklist (Appendix L) used in the study. In this section, the revised guidelines are compiled using the revisions proposed in chapter six based on those two initial representations of the CM. The instructions pertaining to the research aspect of the study were omitted from the summary.

*Phase 1: Intake and Agenda Setting*

1. Orientation to treatment. Orientation includes the following aspects:

- The decision-making about the target problem and tasks is made by the client.
- Consequently, openness about constraints and motivations is required from both parties.
- It should be described to the client at the beginning that tasks are carried out by client and practitioner.
- Emphasize the practical utility.
- Orientation is to be carried out as an introduction to other model steps, as well.
- Set time limits. Setting time limits is part of orientation. The overall timeline and use of task specific time limits must be introduced at the beginning of the treatment.
- Like orientation, this model step needs to be used at several places in the model.
- Accordingly, a complete contract includes information about who is working with the client for how long on what.
- The most important places to address time limits are initial orientation, contracting for a target problem, each session at goal change measuring, and session beginning and ending.

- The number of sessions needs to be monitored.
- Monitoring the session count is facilitated through the problem change evaluation, which is to be conducted in every session.

Implication specific to a MAT setting:

- Treat new clients as in a brief-treatment framework.
  - Conceptualize intervention as a time-limited booster with long-term clients.
2. Make a list of all problems on which the client would like to work.
  3. Use socialization strategies with non-voluntary or mandated problems.
    - Harmonize negotiating mandates procedure with intake and agency rules.
  4. Assess importance, confidence, and readiness to address the problems.
    - This is a preparation to prioritizing problems before making a decision on the target problem.
  5. Prioritize and select a target problem (problem selection).
    - Based on the previous assessment make a decision about the target problem.
  6. Explore the target problem in detail.
    - Use appropriate standardized assessment instruments.
    - Integrate CM assessment in agency structure and environment.
    - Problem exploration is an ongoing task to be accomplished in intervals and to be continued at task development, task review, and obstacle analysis.
    - Note caveats: Balance depth and breadth of exploration against current needs, needs to vent feelings, rapport building exchange, and exploring due to lack of direction.

- Use ‘redirecting’ as an important function to balance client-centeredness and focus.

7. Formulate a goal based on the target problem.

- As a guideline for sizing the goal: The goal should be achievable within ten sessions.
- A goal formulation should be as concrete as possible (use client’s own words).

8. Contract on target problem and procedure.

- In the interest of tracking progress, the written form needs to be observed.
- MAT specific note: Don’t use a signature for contracting.
- Make sure a menu of options for negotiations is presented instead.

9. Measure target problem.

- The question for measuring problem change needs to be the same every session in order to make measurement series valid.
- Therefore, a precise and written statement at the outset is necessary.
- Problem change rating should be presented in a standardized form.

Additional qualifying remarks and suggestions: The standardized form facilitates a shift into working mode. As an additional marker of this transition, the tone of voice can be shifted from casual introductory small talk to a more business like working session. An additional benefit of this presentation is to distinguish working with the CM from other individual sessions provided at the agency.

10. In cases of ambivalence, conduct an assessment of readiness, which consists of the following:

- Assessing importance,
- Assessing confidence,
- Developing motivation by an exploration of values.
- Use assessment of readiness at all other points where assessments or decisions are made;
- These points are task development, obstacle analysis, and task review.
- The trigger for assessing readiness is any sign of resistance.

*Phase 2: Action or Task Planning and Implementation Sequence (TPIS)*

11. Develop and select tasks.

- It is the responsibility of both client and practitioner to develop the task.
- The collaborative responsibility starts from breaking down the goal and continues with creating a task of the right size.
- As a guideline for task development, it is suggested to aim for the greatest likelihood of success.
- Practitioners are encouraged to develop task planners from their practice knowledge.
- Task planners are an aid in task development and provide a menu of options for clients.

An idea for further refinement of language to be used in session is to rename between-session tasks into “projects.” The name change intends taking away the notion of chore or homework.

MAT specific suggestions:

- Writing tasks tend not to work well.
- Alternative tasks should always be considered so that a client can make a choice.
- AA step-work may be integrated into the CM as a menu of options to choose.
- Clients should not be coerced to adhere to 12-step work.

12. Monitor readiness (details see step 10).

13. Prepare client to carry out the task:

- Strengthen motivation by an exploration of values.

14. Plan details of task implementation

- Give information or educate (after asking permission)

15. Analyze and resolve obstacles.

16. Practicing, modeling, and rehearsing.

- Ask permission before drawing a client into practicing or rehearsing.

17. Consider a practitioner task and secure resources.

- This step resembles a case management function.
- In order to implement this model element fully, the agency structure needs to allow the practitioner to step into that role.
- A supporting activity is resource indexing, which is recommended to carry out in collaboration at an agency.

18. Summarizing and contracting about the task.

- Summarizing is to be combined with the task agreement.
- Let client summarize the task.
- Awareness needs to be directed to any hesitancy in the response of the client.

- This point in the CM requires an assessment of readiness (see details at step 10).

19. At the beginning of every session, assess problem change.

- Problem change rating and the adjacent task review should be presented in a standardized form (see step 9).

20. Review of task accomplishments.

- Begin a task review with an open-ended question.
- Always add encouragement to a task review.
- Continue with analyzing obstacles and assessing readiness.

### *Phase 3: Termination*

21. Assess the problem change,

22. Review the process,

23. Assess need for recontracting, and recontract or terminate.

- A long-term program structure needs to be harmonized with the brief treatment model to be implemented.
- Practitioners need to mark transitions clearly.

Each of these revised guidelines will be accompanied by a more detailed narrative when a new manual is written for the next study on the CM.

### *7.2 Lessons learned for future training*

The research study enhanced conceptual understanding of the model. A clear conceptual understanding provides the basis for the development of useful training materials. Training for the CM has as many levels as the model. Briefly, three levels can be considered. There is the clear sequence of the steps, which needs to be taught, so that



they are carried out completely and in the right sequential order. Then there is the aspect of quality, which can only be acquired after a longer training. Active listening, summarizing, exploring values, developing measurable goals, and redirecting, are skill based model elements. It takes time, practice time, training time, and supervision time to perform these model steps well. Finally, there is the attitude, which needs to be acquired to carry out the model steps correctly. This probably takes the longest time, and requires supervision and discussion. Aiming for a high performance level requires a high amount of training time. Accordingly, the more demanding parts of the model can only be observed and researched when this level of training is provided. Any future research projects need to match the research goals with the available means for training. Future training needs to direct emphasis to these more specific and skill demanding model parts. Training would benefit from audiovisual material. Perhaps the session recordings from this study will provide material for case studies, which can be used in future trainings.

### *7.3 Lessons Learned for Future Research and Model Development*

#### *7.3.1 Beneficence*

From looking at the SSD results in chapter five the question whether the model shows general beneficence or promise can be answered positively. A determination about the worth of further development can be made and needs to be encouraged. No potential harm became apparent in any of the procedures involved. There was no indication apparent that the model parts would not work well together. Rather, the model parts were used flexibly in fluid succession. In a future research study, the model needs to be compared to a competitor to demonstrate its comparative effectiveness.

### 7.3.2 Research Design and Limitations

The study was not designed to demonstrate a high degree of rigor. The pilot test conducted under full agency functioning in a highly dynamic environment faced a wide variety of conditions that resulted in limitations to rigor of research methodology. Client characteristics could not be screened, attrition was rather high, clients had vastly different and multiple needs that have persisted as chronic conditions. Sample size was small and other treatment components influenced any outcome. Illness and career dynamics among the participating workers almost limited the extent of sample size and study duration. However, the project was conducted according to plan. The timing and completeness of sessions could not be controlled due to attrition, training hours were limited due to time demands on the social workers, and even though fidelity was satisfactory, multiple other treatment components contributed to the outcome.

There were some validity concerns regarding the application of the ASI and the Readiness Ruler. It became apparent that frequently the same questions asked in the beginning were presented with a slightly different understanding at the end. Therefore, in such a case these two items could not be compared. However, the audio recordings enabled quality control over the administration of the ASI and helped with interpretation of ambivalent data.

Quality of data was enhanced through triangulation. Triangulation of written records on forms designed for the research, audio recording, and the official documentation of treatment through the agency's data management system resulted in a complex web of information. While conducting the analysis, this triangulation became

apparent. A view on the data from different perspectives could be achieved as the following example shows: A client practitioner interaction was audio recorded in session, the practitioner was commenting on it, there was a written document produced about it using a form, and finally, another colleague remembered the same incident and discussed it in supervision or in the focus group.<sup>169</sup> This also led to the discovery of many inconsistencies and contradictions, mainly regarding treatment dates and sometimes regarding demographic information, which could be resolved in most of the cases.

Hurdles in understanding and sense making about the application of the model resulted from missing data about what was done in session, ambiguity in understanding “task” and “goal”, and changes in the wording of tasks or goals. Many of these could be clarified through direct interaction with staff. When considering the main purpose of this study, which is exploratory, then this aspect of many inconsistencies turns into a benefit. Instead of confining data into narrow and definite results, many questions and new hypotheses were generated. This study opened the view for the richness and complexities of social work in practice. Research for practice will always have to deal with inconsistencies. They are a source of creativity.

### *7.3.3 Learning about Methodology*

This study relied heavily on the data analytic capabilities of Atlas.ti. The use of this software brought unique and quite new possibilities to this type of model developmental research. The most convincing aspects are:

- that direct and unmediated access to each and every unit of data is given,

- that the original audio recording could be used, and thus a freshness in the data was preserved,
- that micro aspects of treatment interaction could be captured and analyzed in a wide variety of ways, thus making an intervention almost transparent.

Each unitized piece of data was referenced and is still accessible directly in Atlas.ti. These data units consist of 90% audio recordings. Through this set-up, each reference leads directly to an audio clip, which can be replayed with a mouse click. This advantage was used during the coding phase. During coding activity, the original recording could be reproduced in an instant, which allowed extreme closeness to the data. Closeness to the data is preserved through this still persisting functionality of the data analysis file in Atlas.ti. This system of references and automatic time stamps on coding and annotation activities in Atlas.ti also provided a complete audit trail.

When comparing the coding of audio recordings to the process of transcription (as was done for the focus group) it became apparent that the focus changed. The process of coding directly from audio recordings resulted in a focus centered on the meaning of sentences, while somewhat different in transcribing, the focus is on the understanding of words. Written material allows greater overview during coding and easier movement back and forth, than audio recordings, which confines the analyst to the linear stream of time while glued to the audio sound. When using the coded elements for a higher level of analysis, for example comparing or resolving a coding conflict, the access to audio recording is slower, because it requires replay. The access and overview of written material is better in that respect. This fact can be ameliorated if appropriate labels are

given to data units and documents consisting of audio material.

The closeness to the data is an advantage for a micro focus. Larger projects as the one conducted also need the larger view on sequences. In order to provide this overview as was learned in doing this analysis, the coding and writing process need to be organized and preplanned based on knowledge of the software. For example in this study it was learned that documents representing mid level units in this research study (5 min recordings, a 10% piece of a session) need to be labeled to remain recognizable in the larger project. Either the file names of these documents can be used or new names can be assigned for this purpose. In addition, memos, which are annotations in Atlas.ti, should be organized by assigning an informative title, in order to be able to sort them later for report writing.

#### *7.3.4 Type of Knowledge*

The type of research was exploratory and the knowledge that was produced is idiographic. The researcher, the participating social workers and clients all contributed with their subjectivity to the product. Through this collaboration the aim of the research, conducting an evaluation of the model in action by a group of social workers working with a non-selective sample of clients could be achieved. The knowledge, therefore, is a collaborative product. The research design has features of collaborative social research and allowed participation of social workers early on in the planning phase.

Data analysis was not concerned with interpretation but rather the obvious interaction and the factual events during the process. However, it was found that interpretation was nevertheless a big part of analysis. Many interpretations had to be

performed. It had to be interpreted whether a recorded sequence was an instance of what was meant by a model step. A decision had to be made about what constituted the sequence and what are its boundaries. In addition, it had to be evaluated what quality an interaction had (i.e. interpretation). Was it a misfit, did it function well, was there something innovative, was there a critical aspect to it?

The resulting knowledge is local knowledge, and it is relevant for the practitioners and the agency. Throughout the study, the participating social workers were enthusiastic, and found the study highly relevant for their work.

### *7.3.5 Recommendations for Future Research*

The next step in model development research is to subject the revised model to a more rigorous evaluation, which can be quantitative, with a larger client population and preferably with more than one agency. In order to increase the quality of the research product the following principles need to be observed, which are congruent with the experience in the current study.

Effective program implementation depends on the talent, skill and willing participation of clinic staff. Program adaptations that conserve staff time and resources and recognize their contribution can increase program effectiveness without jeopardizing its fidelity (Perrin et al., 2006).

In order to advance model development, future research can follow different strategies slowly increasing detailed knowledge about the intervention. The following table lists possible strategies.

Table 32. Model development strategies

Questions for Progress Reviews	Methodological Design for Studies
What is the impact of this treatment relative to no treatment, placebo, or some alternative treatment?	Treatment package/efficacy strategy
What components or treatments can be added to enhance therapeutic change?	Constructive/additive strategy
What components of this treatment are necessary and sufficient for therapeutic change?	Component analyses/dismantling strategy
What factors explain the mechanism through which this treatment influences outcome?	Process/mechanism strategy
What client or therapist factors influence the magnitude or direction of the relation between treatment and therapeutic outcome?	Moderator strategy
What aspects of this treatment can be altered to increase its efficacy?	Parametric strategy
Do treatment effects generalize across problem areas, settings, and other domains?	Generality strategy

(Kazdin, 2000; Nock, 2003)

#### *7.4 Lessons Learned for Applied Research*

A core issue for applied research is the integration of the research part in the day-to-day operations and in the structure of the program. This aspect appears particularly at the transition points with intake assessments and termination. For example, multiple assessments at intakes (by medical staff, by counseling staff), which are not combined and coordinated well, might result in different directions for treatment and different emphasis on issues. Goals set in the agency treatment plan often differ from priorities the

client would choose. In this study, especially the following issues seem important and frequent, but somewhat overlooked in treatment: sleep problems, issues around children (parenting and day care), trauma (especially the loss of a family member).

Another issue, which seems to be an issue in the field of MAT, is retention. What might need more consideration is the role of medication as a stabilizing factor. One could imagine that in the case of DC in this study, had she gotten immediate help with her psychiatric needs and had received the right medication early on, the course of treatment might have been different. The conditions, under which medication is given, as opiate substitutes or for psychiatric reasons, are tied to insurance regulations, and thus access is restricted.

Another issue altogether is that of insurance mandated detoxification regimens. One purpose of substitution medication is that of stabilizing a client so that other destabilizing factors in life can be taken care of. If the medication is not helping to stabilize a client's life, but creates another dynamic in itself, other helping processes cannot even start, much less bring fundamental change. One conclusion is that the most crucial steps are the first 90 days in a program. An agency would be well advised to focus on serving new clients as well as they possibly can to keep them in the program.

As an outlook and summary about what might be needed in future treatment development the following quote from another research group is presented.

A systemic change in the delivery of treatment services may be required. As discussed above more (e.g., more treatment sessions) may not be better. Since opiate dependence is just one of the problems that these patients present, future research could determine whether an array of treatment and service options (in addition to methadone) should be integrated into the treatment program (e.g., selfhelp groups, on-site psychiatric medication,



housing support). This may change the nature of methadone programs. That is they would become psychiatric facilities, polydrug use clinics, vocational rehabilitation agencies, as well as sites where methadone is dispensed. Such a program would require a different type of thinking among treatment staff since opiate dependence would be recognized as only one of the problems that patients present with (Magura, Rosenblum, Fong, Villano, & Richman, 2002).

Situating this study in an applied setting posed limitations on the design and implementation. More training time would have benefited fidelity and probably the outcome, and the innovative yield in the data of this study. Data collection activity was at times constrained by the demands of every day operations at the agency. However, considering the available means the results are very satisfying. In summary, clients received extra attention and clearly benefited in their treatment, social workers received training, the agency had side benefits from the research cooperation, and the pilot test was conducted successfully, encouraging further development and research on the combined model. The most encouraging result is that MI and the TCM seem to be compatible. The application of the combined model in practice revealed many linkages and suggested that the “marriage of TC and MI”<sup>170</sup>, as one social worker put it, might have a promising future.

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## Appendices

*Appendix A Script for Recruitment of Clients*

Referral/recruitment for pilot testing

**I) Announce in group or at brief/mini-sessions with a client or**

**II) Conduct within an individual session**

when client has been referred to individual treatment because of program requirements/treatment plan.

The social worker reads (or paraphrases) one of the following statements

a) [more general] For a research project we offer a series of additional individual sessions.

b) [more direct] May I suggest /propose to you a more intensive way of working.

What do you think about that?

[Giving a reason why this (individual) treatment may be beneficial for clients at different stages]

a) (new client) Because you are a new client for initial orientation and stabilization in the program

b) (middle phase, crisis) Because I see some things (from your knowledge of the client's situation from group work or staffing) on which we might want to work (maybe positive UDS)

c) (longstanding client) I see you at a point in the program where you could use some new impulses that may help you move forward.

That means we would work in a more intensive way

- We would meet once a week or every other week
- We would have a contract about what and how we work.
- We would set a time limit and work only for a limited time – only 6 to 10 sessions
- We would work on things that you determine as important to you.

on problems that YOU decide and which you find the most important.

[asking permission] Are you interested and want some more information?

**Then ask clients to see you individually or**

proceed immediately with research consent form.

*Appendix B Consent Form for Participating Clients*

**RESEARCH PARTICIPANT INFORMATION AND CONSENT FORM**

**Title of Research:** MODEL DEVELOPMENT FOR SOCIAL WORK PRACTICE

**VCU IRB NO.:** HM10578

Principle Investigator: Matthias Naleppa, MSW, Ph.D.

Student Investigator: Andreas Fassler, MSW, doctoral candidate,  
School of Social Work, Virginia Commonwealth University  
1001 W. Franklin St.  
Richmond, VA 23284-2027

If this consent form contains words that you do not understand, please ask your social worker to explain any words that you do not clearly understand.

**Description of the Study and Your Involvement:**

The purpose of this research study is to explore how this way of helping (the “combined model”) which your social worker is using can be improved. The study is mainly interested in what the social worker does, whether he or she applies the treatment correctly, how helpful it was to you, and how it can be improved.

You are being asked to participate in this study because you are eligible for individual sessions at FCCR. Approximately 10 clients at FCCR can participate. It is hoped that you are able to attend all sessions recommended by your counselor.

In order to conduct the research, we ask you to allow

- audio recording of the sessions with your social worker (can be waived),
- asking you a few questions at the end of each session,
- the researcher to look at the notes your social worker takes while working with you, and
- to retrieve demographic information from your agency record and to see what progress in achieving treatment goals was made, which includes information on your substance abuse, and treatment services received without using your name. The demographic information to be collected is about your age, race, marital status, education, days in treatment, and your problem profile (see details in the attached form).

**Confidentiality:**

We will not tell anyone any personal information we obtain about you. What we find from this study may be presented at meetings or published in papers, but your name will not ever be used. This consent form will be kept with your record at your agency and you will receive a copy as well. In order to protect the confidentiality of your data we will

remind you to not use last names during the audio recordings, we will password protect the audio recordings and keep them locked, and we will only use a code ID on your records from this study. This consent form will be kept by the researcher in a locked file cabinet at the research lab at the School of Social Work and will be destroyed when the dissertation defense is completed. You will receive a copy as well.

**Risks and Discomforts:**

Audio recording may cause some discomfort, which usually subsides after a while. The data collection for research requires extra time in your session with the counselor. Some personal information about you and the treatment process is collected. It also might be uncomfortable for you to talk about your substance abuse. However, there are no known risks with the research procedures other than the concern for the confidentiality of your data.

**Benefits:**

You may indirectly benefit from this study, because your counselor might be able to learn from the research. What we can learn through your contribution and from this study may help other clients in the future and help us designing better programs.

**Costs:**

There are no costs or additional time required for you other than what you spend in the program anyway.

***If an Injury Happens:*** Participation in this study poses minimal risk. However, because of the need to transfer and analyze data outside the agency there is a risk of breach of confidentiality. Such a breach may be upsetting. However, the researchers will reduce this risk through measures of data de-identification and data safety. No real names are used and audio recordings are corrected if any identifying information should unknowingly have been captured. Data security is ensured by pass word protecting the laptop used to transfer the data and erasing all remaining copies after data have been secured in the protected and locked research lab. All the time only the researchers have access to the data. In the reporting real names are never used.

**ALTERNATIVES**

[If you do not want to experience these risks and discomforts listed above, then the alternative is to not participate in the study.

***Voluntary Participation and Withdrawal:***

You do not have to participate in this study. The care or service you receive from your agency will not be affected if you do not participate. Even if you choose to participate, you may stop at any time without any penalty.

If you do not want to participate in the research, then your services will continue like before.



**Questions:**

In the future, if you have questions about the research or about your participation in this study, ask your social worker or contact

Principle Investigator:  
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If you have any questions about your rights as a participant in this study and research-related disadvantages, you may also contact:

VCU Office of Research Subjects Protection  
 800 East Leigh Street, Suite 113  
 Box 980568  
 Richmond, VA 23298  
 Telephone: 804-828-0868



### Appendix C Decision-making for Sampling

After IRB approval has been given:

1. Practitioners invite their by agency procedure assigned clients depending on their chronological order into attending regularly scheduled individual sessions and clarify eligibility there, going through the following steps:
2. Client is interested,
3. Client is eligible and required to attend individual sessions,
4. When considering the client's working hours, the client is in principle capable of appearing for individual sessions,
5. Apply other criteria to ensure diversity:
6. Client is new (less than 30 days): Fill up to 5,
7. Client is at agency longer than 30 days: Fill up to 5,
8. Client has no secondary substance abuse problem: Maximum of 5;

Research consent and intake in research project then takes place at first individual session.

The distribution of clients amongst practitioners is largely determined by their work hours and caseload balance according to agency procedures. Because two of the participating practitioners are students, they can only carry one client due to agency policy.

practitioner	n cases	Client characteristics	Time at agency
AW (full-time)	3	varied	varied
BW (full-time)	3	varied	varied
CW (full-time)	3	varied	varied
DW (student)	1	female	brief

Distribution of demographic criteria amongst clients in the sample needs to be observed while sampling is going on to insure diversity. Therefore, while sampling is going on, this table is filled out to aid with decision making insuring diversity of the sample is monitored.

client ID	gender	secondary substance abuse	length in treatment	special need	practitioner
1					
2					
3					
...					
...					
8					
9					
10					



*Appendix E Problem Overview*

Client ID: .....

**Problem Overview**

Social worker: .....

(seating: next to each other, filling out forms collaboratively)

1. step: What should be changed?

2. client evaluates strength of problem:  
(circle for strength, importance, urgency)

.....

\_\_\_\_\_

1 2 3 4 5 6 7 8 9 10

.....

\_\_\_\_\_

1 2 3 4 5 6 7 8 9 10

.....

\_\_\_\_\_

1 2 3 4 5 6 7 8 9 10

.....

\_\_\_\_\_

1 2 3 4 5 6 7 8 9 10

.....

\_\_\_\_\_

1 2 3 4 5 6 7 8 9 10

.....

\_\_\_\_\_

1 2 3 4 5 6 7 8 9 10

3. step: Discuss and let client make a decision which problem to start with

(It may help to insert in the boxes here the rank according to strength, importance, or urgency)

4. Working agreement (verbal or written):

I have contributed to compile this list and I want to work with these problems.

-----

-----

Place and date

signature

5. Continue with exploring the most important and most urgent problem first.

*Appendix F Problem Exploration*

Client ID: .....

**Problem Exploration**

Social worker: .....

Selected problem from problem overview: # \_\_\_\_ : \_\_\_\_\_

Problem is

- suggested by client
- attributed through agency policy/treatment contract?
- legally mandated or  attributed by third party, please specify .....

Describe the need/problem as it was first formulated with/by client (=problem statement)  
(What is the problem? Why is it a problem?)

How long has the problem/need existed?

When was the problem/need not present (exceptions)?

What has the client done to address the need/problem?

Goal formulation: Long-term and short-term, state as condition (like the exception), as a status reached, not as activity, and give time estimate.

(As needed:) Working agreement (verbal or written):

I have contributed to exploring this problem and I agree to work on it.

.....  
Place and date.....  
signature

How can the severity of the need/problem be measured in order to see progress?

(How often did it –goal or problem- occur in week prior to treatment?

How severe was it?)

(Use problem change form here, even if other measure has been found as well)

Appendix G Task Development

Client ID: .....

**Task Development**

Social worker: .....

Task contributes to goal: \_\_\_\_\_

Collect ideas for tasks that contribute to reaching the goal: What would help? What makes sense to do?	What are my strengths? What are the means I can employ? Where can I get help? Where can I find resources:	What potential obstacles could arise?	What can be done to avoid or deal with these obstacles? What can be done in the session?
--	--	---------------------------------------	--

Check **readiness** – then summary and agreement:

In order to reach the agreed upon goal the following task need to be carried out. The plan is as follows and was explicitly agreed upon:

Until next session

who does	what,	when,	how or how often?
----------	-------	-------	-------------------

### Appendix H Task Accomplishment

Social worker: .....

#### Task Accomplishment

Name (coded): .....

Selected goal: No. \_\_\_\_: \_\_\_\_\_

Task to be evaluated: \_\_\_\_\_

The evaluation is done by social worker and participant collaboratively.

**Evaluation scale:**

n= no opportunity to perform task.

1= complete and successful task accomplishment.

2= almost complete/relatively successful performance;  
only little or no further efforts necessary.

3= partial performance/partial success;  
task requires further efforts.

4= opportunity not used or no success at all;  
task requires considerable further efforts.

**Session #:**

**Evaluation:**

**Decision and rationale:**

Date

	Consequent decision:	Try again <input type="checkbox"/> , modify task <input type="checkbox"/> , or:
	Consequent decision:	Try again <input type="checkbox"/> , modify task <input type="checkbox"/> , or:
	Consequent decision:	Try again <input type="checkbox"/> , modify task <input type="checkbox"/> , or:
	Consequent decision:	Try again <input type="checkbox"/> , modify task <input type="checkbox"/> , or:



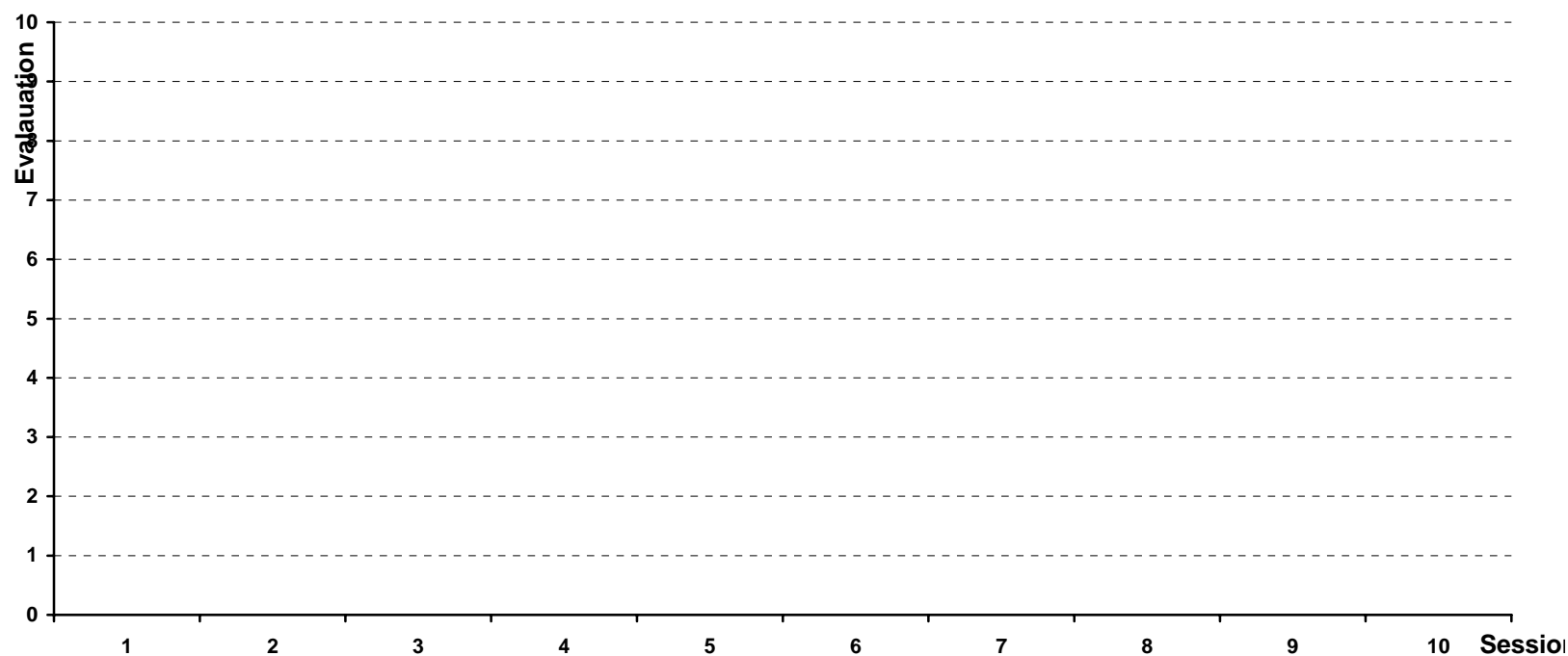
Appendix I Problem Alleviation

**Problem Alleviation – Achieving Solution**

Problem # : \_\_\_\_\_ Social worker: \_\_\_\_\_ client ID: \_\_\_\_\_

Please let the client evaluate the **change of problem** from his or her perspective. Use the scale:

1	2	3	4	5	6	7	8	9	10
Considerably worse		A little worse		No change	A little better		Considerably better		No longer a problem



*Appendix J Obstacle Analysis*

After task has been attempted, at task review, conduct an analysis of the obstacles that prevented success.

Was obstacle related to the task?

Lack of client skill?

Lack of client capacity to complete task?

Lack of practitioner skill?

Inadequate specification of task?

Occurrence of emergency or crisis?

Task lacks rationale (was not enough motivation/readiness established?)

Lack of reinforcement?

Debilitating anxiety or fear?

Adverse beliefs?

Environmental obstacles?

Lack of support?

Lack of power?

Was obstacle related to the target problem?

Problem is attributed rather than acknowledged?

Client is not aware of consequences of failure to work on mandated problem?

Client has conflicted wants (continue exploring ambivalence)

Client has little hope that problem can be reduced (target self-efficacy)

Checklist adapted from Rooney (1992).

**Continue** with tailoring the task better so client can succeed more likely.

*Appendix K Termination*

- At each interview there should be a reminder of the session number.
- The next-to-last interview is the last in which actual work on the problem is handled

At termination address:

- Review past work:
- Gather what might be helpful for future problem solving
- Develop/boost client self-efficiency
- Devise strategies to maintain gains
- Arrange for follow-up contact (=treatment plan review at 90 days)
  
- Extend work if client shows evidence of commitment
- (Reopening) Continue then with formal new contracting

Checklist adapted from Epstein and Brown (1992).

*Appendix L Fidelity Checklist*

The following list not only allows checking treatment fidelity, it also instructs the practitioners as to what is expected of them in a summary fashion.

- 1 gives orientation to treatment
- 2 asks about outside pressure
- 3 identifies agency mandated treatment goals
- 4 explores areas related to target problem
- 5 identifies the target problem the client wants changed
- 6 develops a feasible desired outcome statement (=goal)
- 7 develops a specification of target problem in quantifiable terms and measures it
- 8 sets duration and uses to enhance treatment
- 9 summarizes work
- 10 arrives at a treatment contract (duration, target problem, general tasks, goal)
- 11 assesses importance
- 12 assesses confidence
- 13 assesses readiness
- 14 explores previous attempts
- 15 examines pros and cons
- 16 explores long term goals and values
- 17 gives information (after asking permission)
- 18 reviews problem status at each interview in quantifiable terms
- 19 generates tasks and task alternatives with the client
- 20 elicits task agreement
- 21 plans details of task implementation
- 22 establishes sufficient rationale and incentives using MI techniques
- 23 analyzes and resolves obstacles
- 24 practices, models or rehearses the task
- 25 considers practitioner task and secures resources

- 26 asks the client to summarize/restate the task
- 27 reviews task progress in detail
- 28 reviews problem status at termination
- 29 reviews process
- 30 assesses need for recontracting

*Appendix M Readiness Ruler*

Date ..... Client ID: .....

Using the ruler shown below, indicate how ready you are to make a change (quit or cut down) in your use of each of the drugs shown.

If you are not at all ready to make a change, you would circle the 1.

If you are already trying hard to make a change, you would circle the 10.

If you are unsure whether you want to make a change, you would circle 3, 4, or 5.

If you don't use a type of drug, circle "don't use" in the box at the right.

Circle one answer for each type of drug

Types of Drugs	Not Ready to Change		Unsure			Ready to Change		Trying to Change		Don't use	
	1	2	3	4	5	6	7	8	9		10
Alcohol	1	2	3	4	5	6	7	8	9	10	Don't use
Inhalants	1	2	3	4	5	6	7	8	9	10	Don't use
Marijuana/ Cannabis	1	2	3	4	5	6	7	8	9	10	Don't use
Tranquilizers	1	2	3	4	5	6	7	8	9	10	Don't use
Stimulants	1	2	3	4	5	6	7	8	9	10	Don't use
Benzoos	1	2	3	4	5	6	7	8	9	10	Don't use
Crack-cocaine	1	2	3	4	5	6	7	8	9	10	Don't use
Cocaine	1	2	3	4	5	6	7	8	9	10	Don't use
Hallucinogens	1	2	3	4	5	6	7	8	9	10	Don't use
Opiates Street- Methadone	1	2	3	4	5	6	7	8	9	10	Don't use
prescribed Methadone	1	2	3	4	5	6	7	8	9	10	Don't use
Other Drugs	1	2	3	4	5	6	7	8	9	10	Don't use
	Not Ready to Change		Unsure			Ready to Change		Trying to Change			

*Appendix N Drug Use Review - TimeLine Followback Interview*

Client ID: ..... Date:.....

		type of drug reviewed		
	(date)			
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				
<b>totals:</b>				

*Appendix O Focus Group Questions*

1. What worked well with the model?
  - 1.1 Why do you think so?
  - 1.2 What reaction of clients to the use of the model did you notice?
  - 1.3 How did decision making and collaboration work in the model?
  - 1.4 Could you uphold the voluntary status of the client?
  - 1.5 How well could you engage the clients?
  - 1.6 How did you do regarding staying with the subject? Did you notice any attempts to change subjects? How well could you maintain continuity?
  - 1.7 Where did you notice progress and beneficial effects?
  - 1.8 How was the speed of progress?
  - 1.9 How did you manage the timing?
  - 1.10 How useful are the forms?
  - 1.11 How useful is the emphasis on written form?
2. What did not work well?
  - 2.1 Where do you still notice a problem?
  - 2.2 Why do you think so?
  - 2.3 How useful would it be to have more exemplar solutions?
3. Where did you depart from the model and why?
  - 3.1 How did you incorporate your style?
  - 3.2 What ideas do you have on how to improve the model?
4. Which part of the process is still unclear?
5. Was there anything special you have noticed when applying the model?



*Appendix P Developmental Notes*

Date: .....

Social worker: ..... from session with (client ID): .....

Which parts of the model worked well – why?

Which parts of the model did not work well – why?

Ideas on how to improve the model from my experience:

I noticed:

Unclear was:

I departed from the model, because ...

I discovered a problem with ...

A client reaction on ...

What I thought of also (free association)

Further **prompts** to help you reflect:

Use of forms/written form

Timing

Voluntary - involuntary

Written consent

Attempts to change the subjects

Accountability

Continuity

Need for an exemplar solution

Is there progress?

Speed of progress

How to incorporate my style

Cont.

Instructions for recording observations through developmental notes:

The main purpose is to improve the combined model guidelines.

Anything that either works well or doesn't seem to work is worth recording.

Please spend a few minutes right after the session jotting down a few notes.

Even afterthoughts are important.

You may record those anywhere or verbally report at staffings.

Special situations that warrant remarks in the log are:

Crisis type like situations or situations where it would constitute imminent risk to self or others or where required by law or regulations that require that the principle of client centeredness be overturned. Ambiguous cases should be discussed at staffings.

Whenever client autonomy issues are unclear, and whenever client conditions limit the normal flow of the model e.g. client is unable to carry out tasks, it should be recorded.

*Appendix Q End of Session Review*

At the end of each treatment session, ask the client:

How was it for you today, working with me in the way we did?

Would you please answer a few more questions, which are of interest for the research that we are doing:

1. What about today's session did you feel was particularly helpful? And why?
2. What about today's session did you feel was not so helpful? And why?
3. How helpful was it that I used ....? [insert whatever activity you consider the core of today's session, or that part, that you as a counselor think had significance for the process today]

### *Appendix R Principles of the Combined Model*

This summary of principles describes the TCM and the MI spirit and style for the pilot test. Terms in boxes refer to additional material provided in the manual.

#### **Overall guidelines' hierarchy**

1. Choose what is best for the client according to your judgment.
2. Choose what from your expertise seems to be the right thing to do.
3. Follow the model guidelines.
4. Document when and why you digressed from the model. This is the most important information for this research study. Use developmental notes form

#### **General practitioner attitude**

- Convey empathy, warmth, kindness, and respect
- Support self-efficacy (recognize strength)
- Client is the expert, client is in charge
- Allow the client to make the decisions
- Ask permission before giving information or advice or for how to proceed
- Collaborate
- Accept ambivalence
- Change occurs naturally
- Roll with resistance
- Provide the structure for the session
- Keep the client informed about the procedures
- Take your time

#### **Behavior to avoid:**

- Avoid being judgmental
- Avoid confronting and arguing
- Do not interpret, stick with the facts of assessment (empirical orientation),
- Do not argue for change,

- Do not assume the expert role
- Do not label
- Do not claim to know what is best for your client
- Do not advise or direct
- Do not criticize, shame, or blame
- Don't be in a hurry

### **General guidelines about the use of MI strategies:**

Assess motivational congruence of problem/task agenda with the client:

1. At any encounter of resistance  
Monitoring readiness should become like an “ongoing background task”
2. At any decision making point. These are
  - Problem selection
  - Task selection
  - Task review
  - Recontracting at termination

### **At each step**

1. Monitor and assess readiness
2. Work through obstacles towards readiness
3. Clarify details of action
4. Emphasize control of client and get agreement/permission
5. Affirm and support

### **MI style**

Indication for good MI style is

- More open questions than closed questions
- More reflective listening statements than open questions
- Absence of behavior to avoid (non-MI adherent behavior)

adapted from Miller & Rollnick (2002)

## *Appendix S Sequence of Steps*

### **Sequences of Steps in the Combined Model**

[Terms in boxes indicate that another form, checklist or guideline is available for more detail.]

This compilation goes beyond Figure 15 and lists the essential steps in sequence to be carried out. Details on how to carry out the steps can be found either under principles or under the descriptions for the respective sections.

Sections for which detailed descriptions are provided:

Intake, assessment of readiness, TPIS, obstacle analysis, and termination.

#### 1. Recruitment

Research contracting

#### 2. Intake/socialization/problem selection/agenda setting

Orient to treatment

Make a list of all problems (problem selection)

Use socialization strategy with non-voluntary / mandated problems

Prioritize/select/identify target problem

Explore the problem in detail (problem exploration)

Formulate goals

Contract on target problem

Measure target problem

#### 3. Assessment of readiness

Assess importance

Assess confidence

Develop/Build motivation

#### 4. Action/Task planning and implementation sequence (TPIS)

Develop tasks

Select task

Monitor readiness

Prepare client to carry out tasks

Strengthen motivation

Summarize plan to carry out task

Review of task accomplishments

Assess problem change

#### 5. Termination

Review the process

Assess problem change

Recontract or terminate

*Appendix T Phase 1 Intake and Getting Ready*

**Phase 1 “intake and getting ready”**

[Terms in boxes indicate that another form or checklist is available for more detail.]

Before first session:

**Recruiting:** use IRB recruitment script

Determine eligibility for the pilot study, apply sampling criteria

Get informed consent now or at first session, use consent form.

**Preparation** (as much as time allows) through client file before sessions begins.

Review available case information.

Identify non-negotiable legal mandates.

Identify non-negotiable agency requirements (review treatment contract/plan).

What are the problems (attributed and acknowledged)?

What are the rights? (refusing services)

What are the choices? (refusing services, change the attitude)

What can be negotiated?

Be a reflective practitioner: What is my attitude about it? Do I have a prejudgment?

**First session** “Intake for pilot testing and getting ready”

Obtain informed consent on research participation,

use consent form (=role preparation 1)

(Includes only the choice of participating in research or not)

**\*\*\*Start audio recording\*\*\***

Remind client to NOT use family names



### **Orientation to treatment**

The treatment style is explained to client, including importance of client choice, responsibility for tasks, and time-limits.

Orientation informs the client to what will be going on in treatment, and what his or her role will be. The better clients get introduced the more they benefit.

Restate reasons for meeting based on distinction of referral status (voluntary, nonvoluntary, mandated) (=role preparation 2)

Definitions: nonvoluntary (any outside pressure), mandated (legal pressure) [including court and probation]

Note that pressure from employers, family members, referral sources and outside events is included here and also pressure from goals established by the agency's team. These are attributed problems, which are different from the client's wishes, making the client non-voluntary/mandated.

If client experiences pressure in the contact, assess response to pressured contact.

Express empathy.

The client can always choose to be in the session or not.

Ask for the choice of being in the session. If client chooses so, then continue.

[fit in any by agency policy required assessment, unfinished intake procedures, etc.]

### **Problem selection**

Client and practitioner collaboratively identify the needs and/or problems.

They concentrate on what the client identifies as a problem, what she or he wants and thinks is needed.

Make a list of all problems including the mandated ones use problem overview form

Discuss priorities of listed problems. The practitioner makes available all information needed to set priorities. This includes knowledge about client conditions, available resources, alternatives, and agency policies.

Then let client select target problem and mark on the problem overview form

Hold client priorities to three

### **Problem exploration**

Explore target problem no. 1 and use problem exploration form.

Everything that is needed to understand the problem in context is assessed.

Focus on obstacles preventing a solution.

Formulate a goal for the selected target problem.

Problem severity is measured using the problem change form.

Assess problem change at the beginning of each session.

Summarize the process and let client state the decision in own words.

Elicit explicit agreement on target problem.

Sign problem exploration form.

Apply the Readiness Ruler for mandated problem of secondary drug use.

Then assess readiness for other target problem using assessment of readiness guideline.

## *Appendix U Assessment of Readiness*

### **Assessment of readiness**

This section details how to assess for readiness after the target problem has been defined and orientation to the treatment process has been given (Rollnick et al., 1999). In keeping with the spirit of MI the steps are not as structured and sequenced as in the TCM. Here the “dance” and the art in counseling are more apparent. Client feedback drives the process. However, there are certain sequences that can be carried out and orient the practitioner as to how to proceed. The treatment remains in this phase if readiness to carry out tasks cannot be reached. If readiness can be established, the **TPIS** follows.

Readiness is a larger concept encompassing at least two dimensions: Importance and confidence. Readiness is not only seen as a client characteristic but also a function of practitioner behavior. Depending on how the interaction is conducted and unfolds, clients may contemplate the pros and cons of change and this way get ready for change at their own pace. Following are instructions to guide the practitioner.

#### **I) Preparation:**

If the client seems disengaged, then do not conduct the assessment. Attempt to raise the level of engagement first.

- Express curiosity
- If rapport is good enough: challenge in a friendly way

#### **II) Assess importance:**

Definition: importance=convinced of the personal value of change

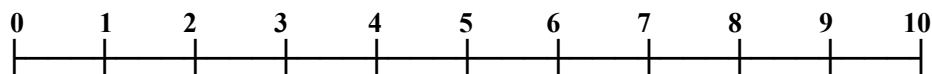
Informal: “How do you feel about ...

More formal: Use a ruler: On a scale 1 – 10 :

1. (introduce) “I am not sure exactly how you feel about (behavior or change). Can you help me by answering two simple questions, and then we can see where to go

from there?”

2. (assess) How do you feel at the moment about (change)? How important is it to you personally to (change)?
3. (use Simple Ruler) “If 0 was ‘not important’ and 10 was ‘very important’, what number would you give yourself?”  
variation: “How much do you want to change?” (not at all - to - very much)



#### 4. Explore importance: Why should I change?

Questions to be explored by open ended questions may include:

- Pros and cons
- Costs and benefits
- Fundamental values
  
- Is it worthwhile?
- Why should I?
- How will I benefit?
- What will change?
- At what cost?
- Do I really want to?
- Will it make a difference?

### III) Assess confidence:

“If you decided right now to (change) how confident do you feel about succeeding with this? If 0 was ‘not confident’ and 10 was ‘very confident’, what number would you give yourself?”

#### Explore confidence: How will I do it? What?

Definition: Confidence is seen as belief in ones ability.

Questions to be explored by open-ended questions may include:

- Can I?
- How will I do it?
- How will I cope with xyz?
- Will I succeed if...?
- What change...? (Is it the right change?)

#### IV) Assess readiness:

- 1 open questions such as  
"Tell me, how does drinking fit into your life?" or  
"How do you feel about your drinking?"  
"How do you feel about...?"  
"How ready to change are you?"
- 2 numerical scaling: If 0 was 'not ready' and 10 was 'ready', what score would you give yourself?
- 3 readiness ruler: "Where are you on this ruler?"
- 4 (explore readiness)

#### Explore readiness: When?

Questions to be explored by open ended questions may include:

- Should I do it now?
- What about other priorities?

#### V) Explore assessment results/ follow-up questions: what is next?

Decision making guidelines following assessment of importance, confidence, and readiness: Take into consideration the results of the scaling questions.

##### Above 5 (indicating readiness)

"You gave yourself x. Why are you at x and not (a lower number)?"

"What would happen for you to move up to (a higher number)?"

- Do not rush.
- If client arrives at readiness continue with task planning sequence.

##### Below 5: If assessment was: **not** important and **not** confident (precontemplation):

(Lower your expectations)

"Perhaps now is not the right time to talk about this...?"

"Is there some other issue that feels more important to you?"

"Would you like more information?"

(Then inform about risks of behavior)

Address low confidence by exploring previous attempts to change

Always summarize at the end of this sequence

##### Around 5: (high ambivalence, contemplation) then examine pro and cons

- (introduce) ask whether client would like to examine the pros and cons
- **Decisional Balance Sheet** (instruction for use follow below)

No change	Change
Costs	Costs
Benefits	Benefits

Explore pro status quo first:

- What are the good things about (the behavior)?
- What are the less good things about (the behavior)?

Summarize using the words of the client

- What are the good things about change?
- What are the less good things about change?
- Summarize both sides

Explore future, long-term goals (shows the values held)

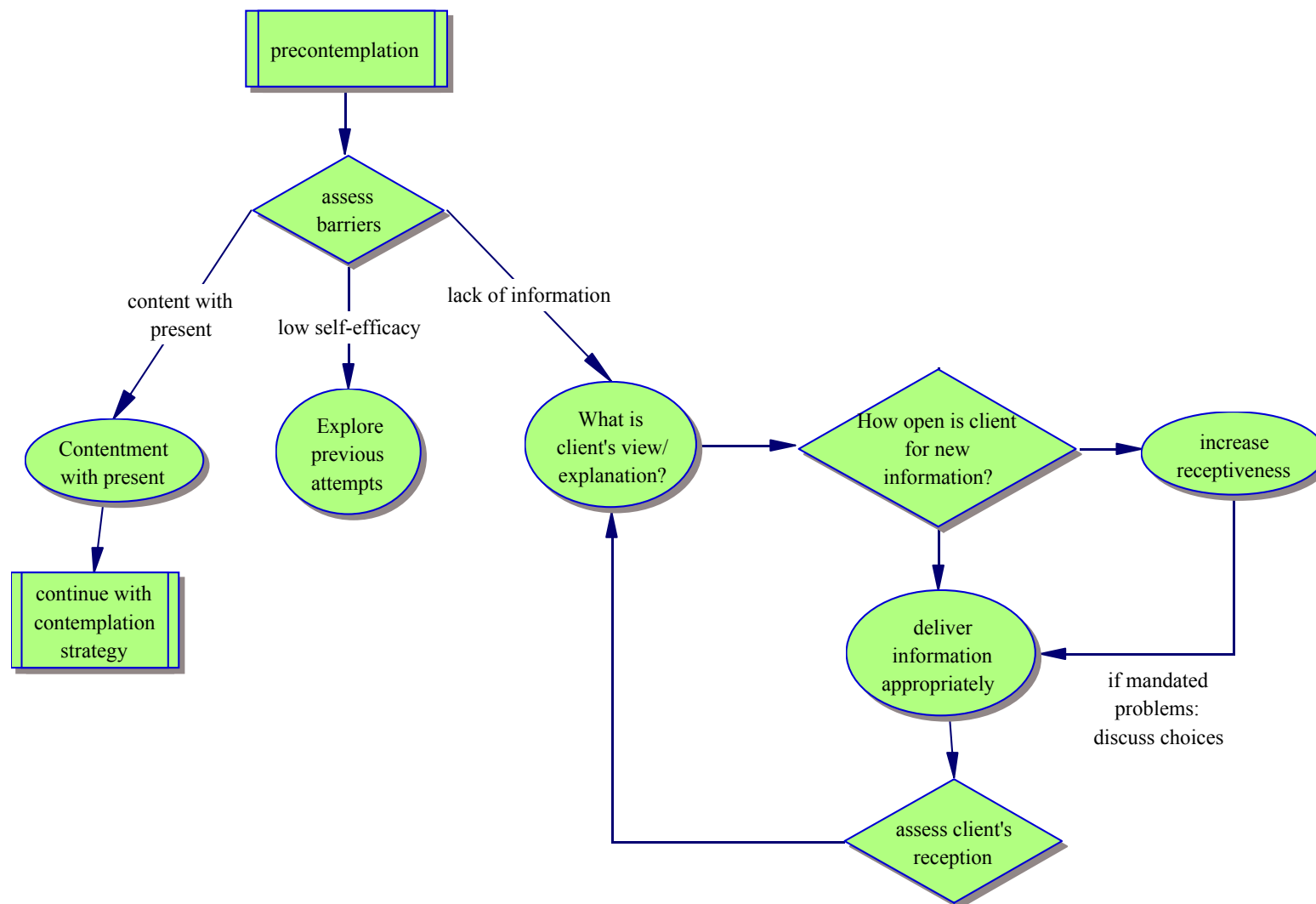
Explore alternatives: If goals were not attainable: what would be alternatives?

If discrepancy is felt...

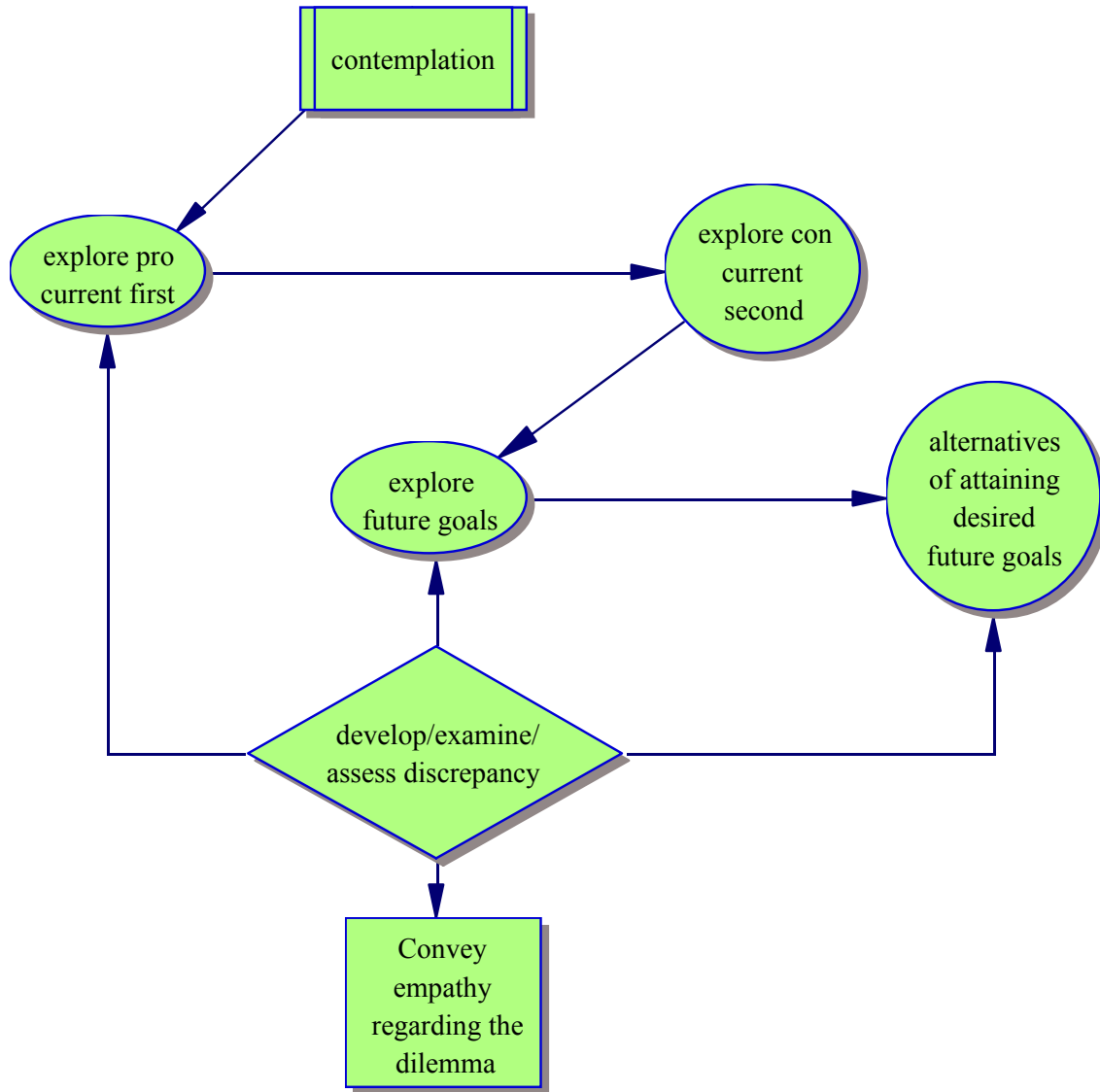
- Express accurate empathy.
- (Do not argue pro change)

Adapted from Rollnick, Mason, and Butler (1999)

Appendix V Interventions at Precontemplation



Appendix W Interventions at Contemplation





*Appendix X Task Planning and Implementation Sequence*

Task Planning and  
Implementation Sequence  
(TPIS)

**1** generating task  
options

**2** choosing  
the task

monitor  
readiness

**3** planning  
implementation  
details

**4** enhancing  
commitment

use MI strategies  
here:  
review values  
pros and cons

**5** considering  
possible  
obstacles

**6** providing  
guidance

ask permission  
first

---

next session:

**7** task  
review

## Task Planning and Implementation Sequence (TPIS)

More details can be found on the accompanying forms indicated by their boxed titles, which are designed to guide practice and serve as checklist to how to proceed as well as to document the process.

### Task generation

Generate task options with the client actively involved. Use **task development** form.

Promote patient autonomy in choosing tasks

Maintain a list of issues and barriers and helpful contacts, resources (task planner)

**Task planners** can be used to identify tasks

Examine previous strategies

Explore outside resources that may be needed including assistance from the practitioner and what can be done in session

All possible tasks are discussed

Evaluate pro and con of each strategy, “wonder aloud whether your concerns are warranted”

Practitioners need to know about pro/con of different strategies (expertise)

Do not support strategies (tasks) that have repeatedly failed

Select one task to be carried out

Express support about client’s choice of strategy (task)

Assess readiness for task (use details from **Assess Readiness** guidelines)

Client makes the decision and expressively agrees to work on the task

### Plan implementation details

Plan specific details of implementation

Enhance commitment:

Provide rationale (consider potential benefit)

Indicate belief in individual’s potential to implement change  
(encouragement)

Maintain and strengthen commitment by eliciting commitment statements

(self-motivational statements)

Use MI strategies from Assess readiness guidelines

Consider possible obstacles retrospectively or prospectively and how to deal with them or avoid them

Make a contingency plan: what if ...

Ask permission first to conduct in-session task that facilitates task accomplishment.

Examples are:

provide guidance (information or role play)

learn a new skill (skills training)

make a phone call right away

Set implementation dates, but honor any prerogative to delay implementation.

Summarize at the end of the session exactly how the task is to be carried out (A review enhances concreteness and specificity)

Commitment to do the task needs to be elicited

End on a congratulatory and encouraging note

**Task is carried out** by client (and or practitioner) between sessions  
(practitioner task e.g. phone call)

**Task review** at next session: use task accomplishment form

Task completion and problem alleviation is reviewed at the beginning of each session: use problem change form

If the meeting is more than two weeks apart, the practitioner will check task completion with client by phone or at or after group-attendance. A thorough task review will still be conducted at the next session.

For an obstacle analysis use checklist Obstacle Analysis

Every attempt and small achievements are acknowledged and used to build self-efficacy

Adapted from Reid (1992), Epstein & Brown (2002), and Marsh & Doel (2005).

*Appendix Y Brief Documentation Form*

Social worker \_\_\_\_\_ Client ID: \_\_\_\_\_ Date: \_\_\_\_\_

Agreed upon **problem** last session was: \_\_\_\_\_

How has the problem **changed** since last session:

1	2	3	4	5	6	7	8	9	10
Considerably worse		A little worse		No change	A little better		Considerably better		No longer a problem

Agreed upon **task** last session was: \_\_\_\_\_

**Rate task performance:**

no opportunity to perform task

opportunity not used or no success at all; task requires considerable further efforts

partial performance/ partial success; task requires further efforts

almost complete, relatively successful performance; only little or no further efforts necessary

complete and successful task accomplishment, no further efforts necessary

- Acknowledge every **progress** and **effort** or **attempt**.
- Check **motivation**, analyze **obstacles** or work on **problem/task** refinement

a) Agree on detailed **task** --- let client formulate it:

\_\_\_\_\_

or b) **Summarize** the result MI style

1. **What about** today's session did you feel was particularly helpful? **And why?**

2. **What about** today's session did you feel was not so helpful? **And why?**

3. **How helpful** was it that I used /did .....

*Appendix Z Developmental Notes (redesigned)*

Social worker: ..... from session with (client ID)..... Date: .....

Which parts of the model did work well – why?	
Which parts of the model did not work well – why?	
Ideas on how to improve the model from my experience:	
I noticed:	
Unclear was:	
I departed from the model, because:	
I discovered a problem with ...	
A client reaction on ..... was .....	
What I thought of also ..... (free association)	
How useful were the forms / the written form?	
How useful was written consent?	
Any thoughts on accountability?	
How was the timing and the speed of progress?	
Is there progress?	
Any thoughts on continuity?	
Any attempts to change the subject?	
How voluntary – involuntary was the interaction?	
Do you feel the need for an exemplar solution?	
How could you incorporate your style?	

*Appendix AA Missed Session Recording Replacement Documentation Form*

(short MSRRDF)

Just mark what you did: The practitioner ...	<b>X</b>
1 gives orientation to treatment	
2 asks about outside pressure	
3 identifies agency mandated treatment goals	
4 explores areas related to target problem	
5 identifies the target problem the client wants changed	
6 develops a feasible desired outcome statement (=goal)	
7 develops a specification of target problem in quantifiable terms and measures it	
8 sets duration and uses to enhance treatment	
9 summarizes work	
10 arrives at a treatment contract (duration, target problem, general tasks, goal)	
11 assesses importance	
12 assesses confidence	
13 assesses readiness	
14 explores previous attempts	
15 examines pros and cons	
16 explores long term goals and values	
17 gives information (after asking permission)	
18 reviews problem status each interview in quantifiable terms	
19 generates tasks and task alternatives with the client	
20 elicits task agreement	
21 plans details of task implementation	
22 establishes sufficient rationale and incentives	
23 analyzes and resolves obstacles	
24 practices, models or rehearses the task	
25 considers practitioner task and secures resources	
26 asks the client to summarize/restate the task	
27 reviews task progress in detail	

Please comment on:

To what degree did the model/what you did work/make sense?

What did you perceive about the client:

a) Any progress?

b) Any moment where he seemed to benefit?

c) Any moments where you and he (the model) seemed to not be fitting?

Anything the client overtly stated that speaks to the model?

*Appendix BB Fidelity Codes (extended list)*

(The changes are in bold)

Model element/activity/guideline

---

- 01 gives orientation
- 01** uses time limits
- 02 explores outside mandates
- 03 agency mandates explored
- 04 identifies target problem
- 05 problem explored
- 06 develops goal
- 07 initial problem measuring
- 09 summarizes
- 10 contracts
- 11 active listening (MI skill)**
- 11 assesses importance
- 12 assesses confidence
- 13 assesses readiness
- 14 explores previous attempts
- 15 examines pros and cons
- 16 explores values
- 17 educates
- 18 measures change
- 19 generates tasks
- 19 redirects**
- 20 elicits task agreement
- 21 plans details
- 22 develops rationale
- 23 obstacles explored
- 24 practices with client
- 25 practitioner task
- 26 client summarizes
- 27 encourages**
- 27 task review
- 28 Termination: reviews problem status
- 29 Termination: reviews process
- 30 Termination: recontracting

### *Appendix CC Endnotes*

Introduction to how to read the following endnotes:

Each endnote points to the exact location of the information in the documents loaded into Atlas.ti. The first number denotes the document, the second number the place in the document (the ordering number of the quotation). For example: 101.22 points to document 101, and quotation 22 in this document.

Documents 1-213 report on the application of the CM in the sessions;  
documents 214-232 are reflections about this process.

- 
- <sup>1</sup> 233.1
  - <sup>2</sup> 234.1
  - <sup>3</sup> 235.1
  - <sup>4</sup> 137.2, 236.1
  - <sup>5</sup> 237.1
  - <sup>6</sup> 238.1
  - <sup>7</sup> 239.1
  - <sup>8</sup> 172.5
  - <sup>9</sup> 240.1
  - <sup>10</sup> 195.10
  - <sup>11</sup> 200.2
  - <sup>12</sup> 207.14
  - <sup>13</sup> 230.4
  - <sup>14</sup> 35.9
  - <sup>15</sup> 230.10
  - <sup>16</sup> 230.12
  - <sup>17</sup> 200.2
  - <sup>18</sup> 200.2
  - <sup>19</sup> 232.69
  - <sup>20</sup> 229.105
  - <sup>21</sup> 231.21
  - <sup>22</sup> 231.38
  - <sup>23</sup> 229.57
  - <sup>24</sup> 231.35, 229.114
  - <sup>25</sup> 230.9
  - <sup>26</sup> 229.116
  - <sup>27</sup> 10.9
  - <sup>28</sup> 231.34
  - <sup>29</sup> 229.56
  - <sup>30</sup> 232.6
  - <sup>31</sup> 54.3, 203.5, 205.3
  - <sup>32</sup> 53.1, 229.57
  - <sup>33</sup> 163.1, 196.12; 196.14, 139.4, 232.53
  - <sup>34</sup> 231.9, 232.53



35 195.11  
36 20.6, 232.57  
37 229.62  
38 213.4  
39 229.90  
40 230.45  
41 231.36  
42 229.99, 229.116  
43 229.115  
44 229.49  
45 229.51, 229.99  
46 62.5  
47 14.3  
48 12.4, 232.21  
49 137.6, 230.31  
50 112.7, 112.8, 232.1  
51 230.37  
52 231.32  
53 229.132, 231.11  
54 70.1, 156.10, 230.40, 232.65, 232.70, 232.71  
55 229.57, 229.64, 229.65, 232.61, 232.68  
56 229.34  
57 229.58  
58 66.3, 232.63, 232.72  
59 64.7, 231.10, 232.68, 230.22  
60 230.22  
61 229.48, 232.74  
62 230.49, 232.11  
63 34.8  
64 45.5  
65 92.6  
66 92.4  
67 168.4  
68 229.97  
69 229.98  
70 46.15  
71 123.4  
72 230.34  
73 172.5  
74 230.15  
75 230.32  
76 231.33  
77 148.4  
78 157.2  
79 35.6  
80 35.9  
81 164.10, 229.59  
82 172.3  
83 229.64, 229.66  
84 229.67

- 
- 85 157.4  
86 231.21  
87 179.5  
88 67.4, 197.3  
89 67.4, 232.58  
90 197.5  
91 229.30, 229.31, 229.32  
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<sup>138</sup> 229.35  
<sup>139</sup> 77.8  
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<sup>142</sup> 27.7, 100.11  
<sup>143</sup> 27.11, 229.126;  
<sup>144</sup> 115.1  
<sup>145</sup> 162.1  
<sup>146</sup> 168.21  
<sup>147</sup> 96.4  
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<sup>149</sup> 46.5  
<sup>150</sup> 92.14  
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<sup>154</sup> 162.1, 93.15, 147.9;  
<sup>155</sup> 172.5  
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<sup>160</sup> 53.1  
<sup>161</sup> 122.2  
<sup>162</sup> 46.7, 48.3, 198.10  
<sup>163</sup> 198.10  
<sup>164</sup> 62.4  
<sup>165</sup> 70.12  
<sup>166</sup> 229.4, 229.127  
<sup>167</sup> 13.2  
<sup>168</sup> 13.2, 93.6, 112.7  
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## Vita

Andreas Fassler was born on April 25, 1961, in Garmisch-Partenkirchen, Germany, and is a citizen of Germany. He graduated from Hauptschule Oberau in 1976 and from Kolleg St. Matthias in Waldram in 1984. He received his Diploma in Social Work (Diplom-Sozialpädagoge) from Katholische Stiftungsfachhochschule München, Germany, in 1990. As a Fulbright scholar he graduated as Master of Social Work from the University of Georgia, Athens, Georgia in 1993. He was awarded a Graduate Studies Fellowship at Virginia Commonwealth University from 2002 to 2003 and received a Graduate Studies Dissertation Scholarship in 2007.

Mr. Fassler has over ten years of social work practice experience including social work with youth and families, child welfare, substance abuse treatment, prevention, community and program development, and supervision. From 1995 to 2002 he worked as the associate director and senior clinical social worker for Caritas Fachambulanz Outpatient Treatment Center for Addictions in Miesbach, Germany.

Mr. Fassler has served for many years on different boards for the German Professional Association for Social Workers (DBSH) and written for the association's newsletter. He has published in peer-reviewed journals and presented at national and international conferences.

During the pursuit of his doctoral degree he served as adjunct faculty for Virginia Commonwealth University's School of Social Work from 2004 to 2006 teaching among others foundation of research classes in the BSW and MSW program. Mr. Fassler presently resides in Miesbach, Germany. His web address is <http://andreas-fassler.de>