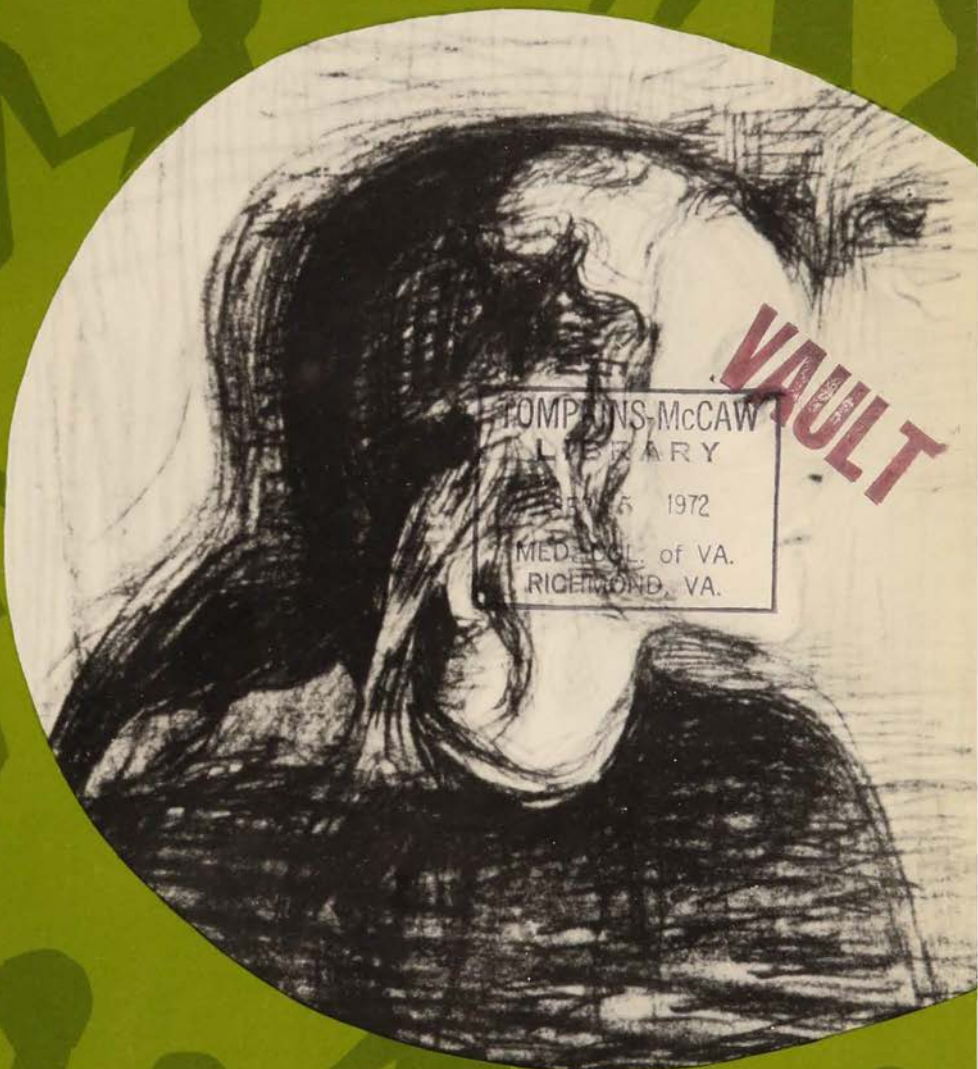


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MEDICAL COLLEGE OF VIRGINIA QUARTERLY  
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SYMPOSIUM ON CHILD PSYCHIATRY



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## Child Psychiatry

The first annual Spring Forum for Child Psychiatry was held in 1963. Although interest in the establishment of programs for children was running high in many civic groups, there was little knowledge about how these programs could be organized and what they could accomplish. The first Forums served the purpose of sharing with the public and with other mental health professionals the experience and knowledge being gathered at the Virginia Treatment Center for Children. Later Forums have provided a means whereby other groups having a vested interest in children and their welfare might express their views, proposals, or the results of their own activities.

This year's program provides us with the results of several successful, newer clinical approaches in child psychiatry and also with some serious challenges to all the mental health professions. Our attention is called not only to areas of progress and hope but also to the vast remaining areas of need and despair. This is the purpose of such a program. It must be left to the ultimate judgment of the reader whether or not this purpose has been fulfilled.

A special word of thanks must go to the Medical College of Virginia and the Department of Psychiatry for their support of this annual event, to this year's participants for sharing their knowledge, and, most especially, to every member of the Virginia Treatment Center Staff who willingly undertook the many time-consuming and often tedious tasks which underlie the visible structure of any successful program.

**WALTER DRAPER, M.D.**

*Chairman, Division of Child Psychiatry  
Medical College of Virginia*

*and*

*Director, Virginia Treatment Center for Children*

# A Brighter Future: They Can Succeed\*

ANN H. STEWART, M.D.

*Director, Tidewater Mental Health Clinic, Williamsburg, Virginia,  
and Clinical Associate Professor of Psychiatry,  
Medical College of Virginia, Richmond, Virginia*

SHELBY DODD

PATRICIA MERRIMAN

MARSHA MUSSER

WILBUR REESE

The Joint Commission (2) reports that:

*The prevention and treatment of mental retardation on both individual and societal levels rest fundamentally on a fuller understanding of its causes and pathogenesis, on concerned and skilled professional practitioners, and on the commitment of appropriate resources at all levels of government. . . . In the behavioral sciences much has been learned about the impact of environmental deprivation on mental growth and the compensating effects of early stimulation, about methods for promoting language development and reading skills, and about the untapped capacities of many retarded individuals for socially useful living. Perhaps most important of all is the growing recognition that in most forms of retardation, even where a single etiological factor can be isolated, the individual's functional performance is the product of the interaction of his biological makeup and environmental events and can be modified. The potential for behavioral change, sometimes to the point of reversibility, represents one of the most significant concepts in the field to emerge in recent years.*

It has also been said by the Joint Commission that:

*At a time when education is becoming ever more essential, when failure in school means failure in society we need to examine more closely the ways that failure or success occur. It is no longer enough to teach children a few key skills and a set of static traditions and values. Adaptation in our culture will call for a level of competence never before demanded.*

Ever since the development of the Intelligence Quotient as measured in different ways, great controversy has raged about genetic causation for low IQ's. It is frequently stated that an Intelligence Quotient is only a determinant of how the individual is operating at the time it is taken, but I find it almost impossible for this statement to be accepted

by teachers and school systems. Mental retardation is said to make up 3% of our total population, 75% of which is the so called "familial retardation" with no demonstrable organic pathology. The children so labelled and referred to Special Education Classes are commonly known as "the dummies" and carry out the self-fulfilling prophecy of what is expected of them.

In our rural areas of York and Williamsburg-James City Counties, the following are this year's figures. In Special Education at Williamsburg-James City County there are 98 educable and 7 trainable children. In York County there are 58 educable and 12 trainable children. These children have been placed in Special Education based on an IQ test of less than 70. In James City County, they are placed in Special Education, 4 from Head Start, 12 from Pre-School, 23 from Grade 1, 31 from Grade 2, and 22 from Grade 3. In York County, 50 are placed in Special Education in Grade 1, 14 in Grade 2. Thus, in our area, by Grade 3, 156 children are already labelled as failures with a record to which successive teachers and principals will refer.

In our pilot study at Norge School, 26 children, 14 boys and 12 girls, were chosen at random and matched with 26 other children as nearly as possible by race, age, sex, parents or parent, number of siblings, and approximate income. Eight were white and forty-four were black. These children were chosen from Head Start which runs for eight weeks in the summer, and they had not had any prior education. They were to enter first grade in September, 1971, and so were already six or very nearly six. They came from disadvantaged families. When tested in Head Start using 70 IQ as the cut-off below which they would ordinarily need

\* Presented at the Tenth Annual Spring Forum for Child Psychiatry, May 26, 1972, at the Medical College of Virginia, Richmond.



TABLE I  
SPECIAL EDUCATION

YORK COUNTY	.9%
TOTAL NUMBER OF CHILDREN	80
ENTERED IN GRADE 1	50
ENTERED IN GRADE 2	14
WILLIAMSBURG-JAMES CITY COUNTY	2.3%
TOTAL NUMBER OF CHILDREN	105
ATTENDING HEAD START AND PRE-SCHOOL	16
ENTERED IN GRADE 1	23
ENTERED IN GRADE 2	31
ENTERED IN GRADE 3	22

referral to Special Education, 4 boys and 4 girls of the original 26 children qualified for Special Education based on their Intelligence Quotient. The school was not aware of these Intelligence Quotients, and all of the 26 children were placed with five teachers in the regular first-grade classes. Using the testing on all 52 children, the 26 chosen at random and the 26 matched to them, 15 would have belonged in Special Education on entering first grade—already failures.

Mrs. Merriman, a diagnostic prescriptive teacher, worked with the 26 children at Norge School one, two, or three times a week for a half to three-quarters of an hour, taking them from their regular classes, and working also with their teachers. Her report of these 26 children selected at random reads as follows:

Academically, in September, these first graders were limited in proficiency to such skills as recognizing their name when it was written, and counting aloud from 1 to 10. Six students were able to print their own names, using either paper and pencil or board and chalk. Two of the 26 children could recite the entire alphabet, but only one could recognize the written letters he had recited. None of the children could read any of the words found on the Dolch Reading List.

Although as many as half the students were able to count aloud from 1 to 10 in September, only 6 of them could recognize the numbers when flashed out of sequence; and only 4 of them could reproduce the numbers with pencil and paper. Their understanding of directions was limited to one-step commands, and even these required repetition.

Socially and emotionally, in learning, working, and playing situations, all but four children functioned in a very immature self-centered manner. They were unable to

sit in a group and listen for longer than 5 minutes, they were unable to concentrate on a task assigned to them in a group, and they were unable to cooperate in group play by taking turns or sharing. Seven children exhibited aggressive group behavior, making their own rules, fighting for turns and toys, and often taking things they wanted from other children. Six students showed extreme passive group behavior, withdrawing to a corner or simply sitting and watching things happen around them and to them.

While most of the children could communicate verbally with each other, most were reticent about talking before a group or to adults. Two of the students were totally non-verbal at the start.

During the past school year, Mrs. Merriman has worked with these children, one at a time at first, later in small groups as a diagnostic prescriptive teacher. Now, in May, all except one have IQ's above 70. Of the 26 children without benefit of the diagnostic prescriptive teacher who were chosen to match this group, 5 remain in the Special Education range. Let me quote the end of the March report from Mrs. Merriman:

Academically, at this time, all 26 children can recognize and print their full names. All but one of the children can recite the alphabet, all but five can recognize, recall, and reproduce all letters. With the exception of six children, the students now have a reading vocabulary of from 8 to 30 words, most of which are found on the Dolch Reading List.

All but 2 children can count to 50 and all but 4 can recognize, recall, and write the numbers 0 to 50. Twenty of the 26 have moved into addition and subtraction skills, and all of them understand such mathematical concepts as sets, grouping, ordering, greater and less than, and so forth.

Judging by student performance, they all understand and can carry out four and five-step directional commands—most often by hearing the command once.

Socially and emotionally, the children have matured at a very accelerated pace. They are all more group-oriented than they were in September, as well as more self-assured. The seven "aggressive" children since September have developed enough self-control to rechannel their aggressiveness. No one of the 26 students behaves in a withdrawn or passive way now, and their self-concept has taken a more positive direction. The students' communication skills and social presence among peers and adults have increased and matured, and we have no non-verbal children.

Dr. Seymour Lustman (3), in an article on cultural deprivation, said in 1970:

It is my impression that the development of impulse control is one of those key developmental syntheses which signifies the presence of a host of other psychic functions necessary to permit school learning. Psychoanalytic learning theory does not concern itself directly with the development of intelligence or those aspects of human thought subsumed under cognitive development. However, its concepts of primary and secondary process are important devel-

TABLE II

## INTELLIGENCE QUOTIENTS

## NO DIAGNOSTIC PRESCRIPTIVE TEACHER

AUGUST 1971	MAY 1972
54 .....	66
61 .....	66
68 .....	76
63 .....	65
54 .....	60
55 .....	60
65 .....	76

## DIAGNOSTIC PRESCRIPTIVE TEACHER

AUGUST 1971	MAY 1972
55 .....	71
69 .....	86
60 .....	71
62 .....	79
68 .....	76
65 .....	83
62 .....	68
68 .....	100

the children moved on to verbally sequencing events, describing pictures, recalling events, and relating feelings. In four cases, home contact was called for, and visits were made in an attempt to involve the parents in their child's school life.

Mrs. Merriman does not include her own warmth, imagination, originality, and involvement that have come out in our regular conferences. For example, she tells me three boys came in "through a magic door" to her room to learn. One boy, putting on his head a hat that resembled a horse, used his hands as blinders to help him learn to direct and focus his attention on his reading. A little girl had breakfast daily with Mrs. Merriman, and one boy could only come if his control had been acceptable the previous day. Mrs. Merriman has expectations of a potential in every child, and these children knew this. In the past, because of the expectations stimulated by labelling disadvantaged children as "hopeless," one seldom saw this process reversed.

Recently, I have had a most delightful example of what a teacher's expectations can do. A young, not-yet-certified teacher, has taken the 12 trainable children in York County whose IQ's are below 55, and because she did not expect them to fail, has taught them all to read with the use of phonics. As with Mrs. Merriman, this teacher's expectations were high, though naïve, and the results are amazing.

Not all of the 26 children will be doing second-grade work next year. However, in a system which allows for individual progress, they are not failures, and one hopes a second year with help will continue the process of emotional and scholastic growth. Take Ricky who, even though he is at times distractable and has trouble with temper control, is rated as very good on social confidence and self-confidence by his teacher, with an IQ change of 60 to 71. Kathy has raised her IQ from 62 to 79. She shows average attention span, ability to follow instructions, social and self-confidence and is rated good on her ability to play with others. She still is not ready for second-grade work.

From York County comes a different approach to "familial retardation" and one that I am very eager to see extended. The York County Volunteer Association carries out a three-times-a-week Parent-Child Center for disadvantaged families aimed at educating and enriching the parents—mostly mothers and grandmothers—and placing the children, from birth to kindergarten, in age-appropriate nursery school activities.

In our research, we tested all 16 children

*opmental modes of thinking as well as feeling and behaving. Such a theory would follow a schema from direct and immediate gratification to controlled, delayed, directed, and even symbolic gratification. Sublimation is of great importance. It would developmentally relate frustration or the absence of gratification to the learning of differentiation. Mastery in repetitious play and subsequent fantasy is of crucial learning importance to this age group. This kind of learning process occurs only within the framework of incredibly intense human relationships.*

We may hypothesize that prolonged and intense object ties with one's teacher may act as inducer and organizer of psychic function.

What are Mrs. Merriman's ways of relating to each child? She states the techniques employed were:

*All 26 first graders came to the diagnostic prescriptive teacher's office, one at a time, once a week in the beginning of the school year. By November, when a rapport had been established, they began coming in groups of 2, 3, and 4 with a structured program of academic and social successes planned. The academic concentration, for the most part, was on verbal, sensory-motor, and perceptual-motor skills. Such activities as body-awareness exercises, left-right orientation games, eye-hand coordination exercises, and discriminatory listening games were planned and carried out in the office. Many of these techniques were passed on to the teachers, to pursue on their own. From the limited beginnings of verbally answering yes and no, calling colors, sizes and placement of objects in the room,*

entering first grade in York County with at least one year at the Parent-Child Center and one year of half-time kindergarten which York County has. All 16 entered regular classes, though one child with brain damage would qualify for Special Education from his IQ. One in 16 is a very different number from 15 out of 52. The York County Volunteer Parent-Child Center expects these children to develop normally despite poverty and serious emotional problems in some homes. No child who has been at the Center has ever been in the slowest kindergarten group, though recently one has been excluded from kindergarten for some aggressive behavior. The Center's expectations take the form of early stimulation three days a week at school plus a wide range of enrichment for the mothers.

From the Report of the President's Task Force on the Mentally Handicapped (1) comes the statement, "The years from birth to five, sometimes referred to as 'the lost years' because so little attention has been paid to them, are the period during which the pattern of later life is laid down. And this is the period in which preventive intervention has its highest potential."

In our overall testing, these children from very disadvantaged homes had developed confidence, ability to communicate and to delay gratification which allowed for the process of cognitive learning to take place. George Pope, York County Superintendent, has told me that teachers can identify children who have been to the Center by their appropriately mature behavior. And, as I have stated, there are no failures in this group.

In conclusion, I would like to make four recommendations:

1. The diagnosis of mental retardation and assignment to Special Education Classes should not be based on IQ measurements alone and especially not in the first four grades.
2. Early stimulation and education especially of high-risk children can be demonstrably preventive of cultural retardation, even more so if parents are also involved.
3. An intimate, consistent, frequent relationship with a diagnostic prescriptive teacher

in the earliest grades can reverse the process of non-involvement in learning, can help with impulse control, and offer confidence to children who have not had such a relationship. I, who am not a teacher, feel that teachers need more education in the varieties of ways to relate to children with a respect which sees more of the positives than of the negatives, and feels free to help the child attain successes at whatever stage he is. It is only through this that we can tap the richness and originality inherent in every individual.

4. Finally, if the fragmented services of Health, Education, and Welfare could be united and the workers dynamically oriented, prevention of large numbers of so-called retarded children would result, I am sure.

*Education cannot be carried out when it is addressed only to the rational, intellectual side of the child. Integrated learning which is lasting and usable to a child must be addressed to his emotional and social needs as well as his intellectual and rational ones. If learning is to promote creativity, flexibility, resourcefulness and individuality it must be carried out in such a way that the child has access to the rich world of his feelings and total life experience. Further, it is impossible to overlook the fact that the child brings his whole life to school with him. (4)*

*Authors' Note:* We wish to acknowledge the cooperation of the school systems for Williamsburg-James City County and York County and the Parent-Child Center of York County Volunteer Association, and lastly, the Mental Hygiene and Hospitals' Grant which made this project possible.

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# The Chronically Ill Child: A Challenge to Family Adaptation\*

AKE MATTSSON, M.D.

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and Professor of Psychiatry and Pediatrics,  
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Why should psychiatrists and other mental health professionals be concerned with physical illness in children and teen-agers? Aren't we kept busy enough with the emotionally disturbed young patients and their families? There are at least two compelling reasons why child mental health workers should devote some of their time to children suffering from chronic physical illness:

As mental health professionals we have much to learn from studying children and parents who have successfully mastered the hardships associated with a chronic illness in childhood. These are families who illustrate Robert Louis Stevenson's saying, "Life is not a matter of holding good cards, but of playing a poor hand well." Common life contingencies such as serious illness, accidents, the threat of death, and natural disasters create significant emotional stress in addition to the physical ones. In recent years, there have been many reports on the coping techniques that an individual and his family use in order to master such threats to their psychological stability so that they can continue to function effectively. Coping behavior includes the use of cognitive functions, motor activity, emotional expression, and certain psychological defenses. All these techniques are involved in the individual's attempt to master the challenge, for instance, of a chronic illness.

The second reason for our interest in chronically ill children and teen-agers reflects our desire to prevent psychological complications from long-standing physical conditions. Such physical disorders are associated with a variety of distressing emotions and interferences with normal life activities that may lead to social crippling more disastrous to an individual than the effects of his primary physical

illness. As mental health specialists, we are often asked to be on the firing line together with our medical and surgical colleagues in preventing such socio-psychological complications. This is a good investment in time as we often can promote the chronically ill child's growth toward becoming a responsible and productive citizen.

*The prevalence of long-term physical illness* in children is impressive. Recent American and British surveys show that 7% to 10% of young persons up to 21 years of age suffer from chronic physical disorders. The most common ones are asthma, epilepsy, heart conditions, cerebral palsy, orthopedic problems, bleeding disorders, diabetes mellitus, blindness, and deafness.

The last two decades have seen over 100 studies on children's adaptation to chronic physical illness. Many authors have been impressed by the relatively good psychosocial adaptation of these young patients and by the fact that early mastery of distressing emotions on the parents' part, leading to realistic child-rearing attitudes toward the child, is positively correlated with the adaptation of the child. A serious illness in any family member disturbs the family equilibrium and makes it especially difficult for the mother to meet the needs of the other family members.

When a serious long-term illness afflicts a child, the initial reaction of the parents is usually one of acute anxiety and fears related to the possible fatal outcome of the child's disease. The second phase is one of trying to minimize or deny the situation, particularly if there are few obvious signs of illness. During this stage, the parents might complain that "no one ever tells me anything" and also show a tendency to "shop around" for additional professional opinion which would disprove the initial diagnoses. Behind such negative, often uncooperative parental attitudes, we frequently see

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\* Presented at the Tenth Annual Spring Forum for Child Psychiatry, May 26, 1972, at the Medical College of Virginia, Richmond.

underlying feelings of sadness and self-blame, which the parents tend to project upon the medical profession in an accusatory way. As this stage of denial fades, the parents often will begin to verbalize their feelings of hopelessness, guilt, and self-blame. This guilt-ridden, depressed stage will hopefully subside, too; otherwise parental attitudes of self-sacrifice and overprotection of the child might develop and jeopardize the child's psychosocial adaptation.

Let us turn to *some clinical examples* of the effects of a chronically ill child on family adaptation. The recent best seller, *Nicholas and Alexandra*, by Robert K. Massie, and its subsequent movie, portray the tragic influence that hemophilia, the so-called European royal disease, had upon the family of the last Czar of Russia. The son of Nicholas and Alexandra, Alexis, born 1904, was the heir to the Russian throne. The boy was found to suffer from hemophilia in his first year of life, and the diagnosis came as a shock to his parents despite the known hemophilic trait in the family of Queen Victoria, Alexandra's grandmother. From that point on, Alexis was continually overprotected, surrounded by round-the-clock nurses, and from age 5, by two Navy sailors who followed the Czarevitch around at all times so they could reach out and catch him in case he fell and risked hemorrhaging. The two sailors also provided him with affection, distraction, and sedentary activities. He was denied playing with children his age as his mother feared he would get hurt. Alexis frequently objected to his restricted life and was overheard crying to his mother, "Why can other boys have everything and I nothing?" At times he rebelled against all restraints and was described as a rather spoiled, often insolent child. His parents attempted to make up for his frustrations by lavishing expensive, mechanically operated toys on him.

Empress Alexandra was an oversolicitous, always worrying mother like any inexperienced parent of a seriously ill child. She was repeatedly fatigued due to her 24-hour attendance to Alexis during his bleeding episodes. For a long time she refused to accept that there was no cure for hemophilia, and she consulted specialist after specialist. Deeply religious and feeling that God seemed to reject her prayers for her son, she was plagued by guilt for having transmitted the illness. When Grigori Rasputin, the Siberian peasant and faith healer, arrived in St. Petersburg, Alexandra viewed him as a God-sent agent able to stem the course of Alexis' illness. In the fall of 1912, Alexis sustained prolonged, serious bleeding and was close to death for over a

month. His moaning was heard all over the royal palace, and he spoke to his mother about his impending death, "When I am dead it will not hurt me anymore, will it?" All Russia thought he was dying, and the London Daily Mail reflected many Europeans' opinion when they suggested that Alexis had been fatally wounded by an anarchist's bomb. Feeling desperate, Alexandra called upon Rasputin who responded by cabling back, "God has seen your tears and heard your prayers. The little one will not die. Do not allow the doctors to bother him too much." As Alexis began to recover the day after this message, Empress Alexandra was convinced of Rasputin's healing and mystical powers; a conviction which led to his increasing influence on both the Empress and the Czar regarding political matters in Russia. Any requests for parliamentary reforms and a sharing of the Imperial power were consistently turned down by Alexandra, goaded by Rasputin, and Nicholas gave way to his wife's objections. At the time of Rasputin's death in 1916 it was too late for any turn toward an enlightened monarchy. The revolution was inevitable as was the eventual triumph of Lenin and the ruthless killing of the Czar and his family in 1918.

The contemporary case of 14-year-old Sam, also a severe hemophiliac, illustrates the relationship between strong maternal guilt and an inhibited, fearful teen-ager. Sam was a quiet, cooperative, and "ideal" patient on the ward. During remissions he insisted on using crutches or a wheel chair because, "I want to spare my ankles." His mother allowed him to stay indoors all winter so he wouldn't run the risk of slipping on ice and hurting himself. In the hospital, he moaned and cried at times of pain, but only when his mother was around. Sam's strong fears and self-imposed restrictions seemed related to his mother's marked anxiety and overprotective attitudes. She had never let him out of sight in his preschool years and always felt reminded of the fate of her two hemophilic brothers who died from bleeding at a young age. In addition, she had lost an older hemophilic son before Sam's birth. Sam would at times tell his mother, "I wish you could have taken this illness instead of me," which upset the mother greatly due to her guilt over being a carrier. She stated her main purpose in life, "to care for my bleeding son," in a depressed, resigned way. Sam's father tried to question the mother's over-involvement with Sam, but he had little influence on her handling of him and spent less and less time with Sam.

The guilt-infested interaction between Sam and his mother can be compared to the interaction in

Peter's family. Peter, a 10-year-old hemophiliac, had for several years known about the genetic background of his illness. At times he would tell his parents, "I wish I were dead," when acute bleeding caused him severe pain. One day, as Peter was taking a bath, his mother entered the bathroom wanting to check his body for possible fresh hematomas (an unnecessary procedure, which the mother intellectually knew). Peter looked at her seriously and said, "I wish I could have got another mother." The startled mother felt tears welling up and left the bathroom. After having collected herself she returned and told Peter, "I am very sorry, too, that you are a bleeder, and that you got it from me. I understand how you feel about me at times. It's o.k. to tell me." Obviously Peter's mother had mastered her own conflicting feelings about being the transmitter of hemophilia. Both she and the father had told Peter as well as Peter's 3-year-old hemophilic brother about the hereditary aspects of the illness, and also stressed with their sons that they had to learn to watch themselves in play and take care of minor bleeding episodes as much as possible. Peter was an outgoing 10-year-old, participating in many games and sports, often with his father's guidance. The parents stressed that they wanted their hemophilic sons to grow up as normal as possible, to attend public school, and to be rather firmly disciplined.

Many chronic disorders of an episodic character, such as diabetes, epilepsy, hemophilia, at times cause family members to become quite concerned that a medical crisis might result from the child being emotionally provoked and upset. Emotional arousal can of course precipitate a convulsion in an epileptic child or cause a diabetic patient to develop ketoacidosis. There are many instances, however, when a child or a teen-ager, suffering from a chronic illness, takes advantage of his knowledge of the importance of emotional factors, and frustrates parental attempts at discipline, telling the parents for instance, "Don't yell at me like that, you know what might happen." An example is a 12-year-old epileptic boy who commonly would start faking an epileptic attack by shaking his arm whenever the father scolded him. The father was becoming increasingly confused and angry at his son. Considerable work with both the boy and his parents was required in order to open up family communication about the boy's intentional seizure-like movements as his response to an authoritarian, rigid home environment.

Let us review *some characteristics of chronically ill children and teen-agers who show a good psychosocial adaptation* to their illness and life situ-

ations. These youngsters function effectively at home, at school, and with peers. They accept those limitations that are realistically imposed by their illness and its complications. They have little need for secondary gains offered by the illness. From age 5 to 6 such coping mechanisms (ego functions) as memory, speech, reasoning, and reality testing assist them in learning more and more about the nature of their illness and its cause and effects. These mechanisms help them to develop an ability to accept limitations and show responsibility for their own care and assist in the medical management. In other words, they early develop a sense of self-protection which serves the vital function of self-preservation. These well-adapted chronically ill children seek and find satisfaction in many compensatory physical and intellectual activities. Here the parents' encouragement and guidance are of great importance. We also note that the well-adjusted, chronically ill child can allow himself expression of negative emotions at appropriate times, that is, he will show sadness, fear, anger, and impatience at times of physical discomfort, changed plans, and interfering treatment procedures. The defense mechanism of denial is employed to some degree by all well-adapted chronically ill children. Denial helps them to cope with the common chronic discomfort, their uncertain future, and the frequently guarded prognosis. Such an adaptive use of denial assists them in maintaining hope for speedy recovery in times of medical crises, hope for more effective medical treatment, and hope for a relatively normal, productive adult life. Many of the well-adjusted older children and teen-agers display certain pride and confidence as they have successfully mastered many critical exacerbations of their illness. We often observe that serious chronic illness in children seems to spur their maturation and heighten their sensitivity and sense of compassion for other human beings.

Children with *prolonged poor adjustment to their chronic disease* seem to fall into three groups. One group is characterized by the patients' fearfulness, inactivity, lack of friends and outside interests, and their prolonged dependency on their families, especially their mothers. In other words, these youngsters impress as early passive-dependent personalities. These patients have commonly been raised by constantly fearful and overprotective mothers.

The second group of poorly adjusted children with chronic illness contains the overly independent, highly active, often daring patients. They may engage in prohibited or risk-taking activities, making strong use of denial of realistic dangers and fears. At times they are true counter-phobics and their reality sense

seems impaired. (For instance, the diabetic adolescent, refraining from taking any insulin for a series of days in order to prove to himself and to his family that "I can do it.") Many of these rebellious, risk-taking patients have since early childhood been raised by oversolicitous and guilt-ridden mothers. At puberty, they rebel against maternal interference and turn into overly active, defiant teen-agers.

The third, less common group of chronic maladjustment comprises older children and adolescents with congenital physical deformities and handicaps. They often impress as shy and lonely patients with hostile attitudes towards the environment of normal appearing persons who seem to owe them an excuse for their lifelong sufferings. These patients harbor feelings of having suffered unjustly all their lives. Such attitudes of a physically disabled person commonly are related to early parental attitudes of embarrassment and shame about having a defective child. Obviously such a child tends to identify with the family's view of him and develop a self-image of a defective outsider.

In turning to the *parents who show good adaptation* to the burden of raising a chronically ill child, we note that the crucial factors in determining their acceptance of their child's illness appear to be their ability to master self-accusatory and guilt feelings over having transmitted or in some way "caused" the child's affliction. Parents of chronically ill children display the use of some common adaptational methods to cope with their distressing emotions associated with the constant stress related to raising a seriously ill child. These methods can be presented by way of some well-known tension-relieving mechanisms of the ego, namely, the psychological defenses of isolation, denial, rationalization, intellectual processes (control through thinking), reaction formation, and identification.

The mechanism of isolation seems particularly useful for parents of chronically ill children when they deal with acute emergencies. Many parents describe how they become almost unfeeling toward their ill child during a medical crisis; the mothers in particular become efficient nurses. This provides a detachment from painful emotions and helps the mothers to function effectively. When the crisis is over, a rebound phenomenon of a few hours to a few days often occurs, and the parents may feel depressed, irritable, "of no use to anyone."

The defensive mechanism of denial is frequently employed by the parents to avoid distressing aspects of acute situations and the constant strain of having a chronically ill family member. Parents often quickly

forget crucial information about the child's illness, including realistic precautions against future problems. A sense of helplessness may also be warded off by denial. It is common among parents of handicapped children to exhibit attitudes of superiority toward physicians, particularly toward house officers. Some of the criticism is of course valid, but one also senses that the parents are trying to master some of their long-standing helpless feelings in this manner. They deny such feelings and also displace and project helpless and angry feelings onto various medical staff members.

Denial is closely associated with rationalization, that is, the defensive use of rational explanations, valid or invalid, in an attempt to hide true emotions or real motives for certain behavior. One commonly hears from parents of chronically ill children that it is a "wonderful thing" to raise a sick child. One is reminded of "myth-building" when such parents state, for instance, that their child's illness has "emotionally sharpened" the parents or made their lives "spiritually richer." While indeed there might be some truth in such statements, these attitudes also assist parents in hiding from themselves and their children sad, angry, and helpless affects related to their unique burden. We also note that many siblings of chronically ill children rationalize inconveniences and hardships that have been imposed on them due to their sick brother or sister.

All effectively coping parents, along with their children, use intellectual processes to master distressing emotions related to the illness, that is, they rely on the cognitive coping strategy of "control through thinking." In this way they prepare themselves for what might be happening next during the course of a chronic illness and thus lessen their anxiety. Most parents of chronically ill children make it a point to learn all they can about the medical, physiological, and even the psychological aspects of the disease. These are the parents who are genuinely grateful to those physicians who provide them with repeated dosages of factual information regarding the illness, its course, and future plans.

The use of reaction formation allows an individual to turn unacceptable impulses or feelings into their opposites, which become permissible to express. Reaction formation may be helpful for any parents of chronically ill children who harbor affects of anger, guilt, and sadness regarding their child. It allows them to reverse these feelings and devote their energy to the care of their child. Reaction formation may become detrimental to the parents' adaptation when it is employed to such a degree that no aware-

ness of their painful feelings is possible. This might lead to martyr-like attitudes of the parents where they direct their whole lives to caring for their suffering children. Such attitudes can also be seen in siblings of chronically ill children when the siblings have been expected always to be understanding, forgiving, and loving towards their suffering brother or sister. It is not uncommon to find that parents who show devoted, martyr-like attitudes experience periods of feeling bitter and resentful about their fate as parents of a handicapped child. Such feelings often betray to the parents their underlying desire to be completely free of parental responsibilities, that is, they are close to the prohibited and guilt-producing thought of "wanting their child unborn," which borders on wishing the child dead. In general, fathers seem better able to verbalize anger and frustration regarding their children's disease. This seems related to the fact that mothers tend to feel more responsible for a genetic transmission or—unrealistically—"having caused" their child's handicap.

Identification with other parents of chronically ill children is an important adaptational mechanism among parents. Through association with other parents, informally or through various national organizations, they learn to adopt more realistic and relaxed attitudes towards caring for their ill children. They can also share the various distressing emotions related to their burdens and pass on some of their positive experiences to other parents of chronically ill youngsters. It is also of interest to observe that parents of children with a long-term illness often gain strength by identifying with their growing child's positive and stoic attitudes in the face of repeated crises and an uncertain future. Their maturing child's effective adaptation to his illness has become a helpful source of strength. Behind this recognition is often the awareness that the parents have "done a good job" in raising their ill child and that their long-standing ordeal has paid off.

In conclusion, by studying the emotional stress and the coping behavior of children with chronic physical illness, we can learn considerably about how

these patients and their families learned to "play a poor hand well." In this regard, it is noteworthy how often adolescent patients relate their good adjustment and positive outlook on life, despite their handicap, to their parents' early and consistent attempts to raise them with realistic and minimal restrictions. As one 16-year-old boy put it, as he was lying in bed receiving plasma infusion during a hemophilic bleeding episode, "Don't worry about the kids, Doc, but help the parents with their worries, so they can treat us like normal children." There is our challenge—to help the parents to readjust to the problems posed by their child's serious illness, to achieve a new family equilibrium, and to promote continuous family growth and integration.

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# An Ounce of Prevention\*

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As a matter of definition, I would like for us to consider mental illness as the inability of an individual to adapt to the society in which he lives with a minimum of anxiety (frustration) and a maximum of happiness (satisfaction of needs). This inability to adapt may be due to a number of factors, the most common being genetic, physical, social, and educational. If we can agree that an individual learns a maladaptive response as the result of his genetic programming plus environmental influences (internal and external), then possibly he could learn adaptive responses under different environmental situations. And if we could determine epidemiologically the genetic backgrounds which increase susceptibility to the development of certain maladaptive responses, we could be more diligent in providing an optimum environment for prevention of mental illness in highly susceptible groups.

It would be inappropriate to attempt to discuss "An Ounce of Prevention" until we have considered the possibility of "A Pound of Cure." Since psychiatry is in the field of medicine, we feel obliged, and the public demands, that we cure mental illness. It is not at all unusual at the time of admission of a patient for the family to suggest that they do not want the patient released until he is cured. We have attempted to overcome this problem by developing specific behavioral objectives at or near the time of admission. We need to educate both ourselves and the public to the fact that a "cure" in the medical sense does not exist in psychiatry. The most we can hope for is the remission of very specific symptoms. Once a person is mentally crippled by the label "mental illness," in addition to life-long faulty behavior patterns, we must accept the fact that if he can manage with the crutches of medication, a structured environment, or a sheltered workshop—this is a success!

As far as treatment is concerned, we must set up realistic objectives; that is, we must attempt to relieve the symptoms that make the patient unac-

ceptable to society and teach the patient responses which will be reinforced by society. In doing this, we must be very careful not to teach the patient useless responses or responses which only provide reinforcement for the therapist. For example, a therapist may spend hours teaching an autistic child to respond to the verbal command "Pat your head with your right hand." What use can be made of this response, and will it be reinforced by society? The therapist, however, may feel highly reinforced by this accomplishment.

One of our major difficulties in developing a realistic treatment program is the fact that very little research data is available to indicate the effectiveness of various programs, and so we are stumbling along practicing whatever seems to work for us clinically. Research and evaluation should be built into every treatment program, and I would like to suggest the following approach:

1. **Genetic.** Inasmuch as certain genetic disorders may be remedied, they should be investigated and corrected, for example, cretinism, PKU.
2. **Physiological.** The symptoms of certain physical illnesses mimic mental illness, and as much as possible, these disorders must be corrected, for example, pellagra, myxoedema, deliria of various kinds.
3. **Social and Educational.** We must determine the level of social skillfulness of the patient and attempt to correct this through an educational model in the same way we approach the remediation of any other learning disability or handicap. At DeJarnette a couple of years ago, we tested several hundred patients and college students with the George Washington Test for Social Intelligence and found without exception that the college students scored above the fiftieth percentile, while the patients scored below the fifteenth percentile. Social intelligence did not appear to be a function of intelligence or educational background in that many of the patients had academic achieve-

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ment superior to the college students. We have continued to use this test on all of our patients, and have found two or three who scored above the fiftieth percentile. All of these have been people who were admitted for problems other than mental illness.

Let us now look at "An Ounce Of Prevention." There are three essential ingredients in preventing mental illness.

1. **Effectiveness.** Research and evaluation must be built into every program. Otherwise, we will never be able to determine whether or not a particular program is effective. There are many approaches which appear to have merit, and they certainly deserve to be evaluated. This can be accomplished by setting up small, scale model programs for the purpose of selecting for expansion those which appear most useful.
2. **Economics.** The time is rapidly approaching when the silent majority is going to demand accountability for the use of their tax dollars. A program for prevention of mental illness should be no more expensive than the prevention of illiteracy. Also, for those who still take pride in paying for services, the cost should be within the financial means of the average citizen. In some instances, effective programs will have to be discarded because they are economically impractical.
3. **Consumer Acceptance.** We are so obsessed with the idea of imparting our middle class values and morals to everyone that it never seems to occur to us that other people may not want what we have to offer. A glaring example of this are the various Mental Health, Mental Retardation, and Chapter 10 Boards. These are composed of civic-minded, nurturing members of our middle class society who are without consumer representation. We must find out what is important to our consumers, what *their* needs are, before we attempt to meet these needs.

Research in neurophysiology (1) has shown that the human mind must be programmed with facts such as language, mathematics, social skills, and so forth, before it can be expected to arrive at conclusions or make decisions. In most individuals, the mechanism for decision making is not present

before the middle or late teens. For this reason, the primary school should emphasize programming on an individual basis so that each child can proceed at the rate at which he can succeed. Ogden Lindsley<sup>1</sup> found that in order for learning to take place, a minimum reinforcement rate of once per ten minutes is necessary. We can, therefore, insure maximum learning (programming) for all of our children only when we are willing to provide individualized programs.

We have almost completely ignored the area of social skills, which must also be programmed into the child. As our society becomes more and more complex and over-crowded, the teaching of social skills should be emphasized above math and science.

Another area of neglect is the teaching of child development and child care. We make sure that our young people receive driver's training but ignore their need for training in the all-important skill of parenthood. This need becomes more acute as our society becomes less family oriented, and the young parent has almost no one to turn to for advice on child care.

It is customary in meetings of this kind to point out the vast areas of need and then conclude with the many reasons why these needs cannot be met. I would like to depart from this custom and explain to you the program which is being developed at DeJarnette. If you are by some chance unaware of the difficulty in changing an institution from a traditional model to any other model, I would recommend that you read *Dynamics of Institutional Change* by Milton Greenblatt (2). It very beautifully points out the psychodynamics of this process.

DeJarnette is a small, self-supporting, adult psychiatric facility owned by the State of Virginia. As of July 1, DeJarnette will be known as The DeJarnette Center for Human Development. It will be changed from Special Fund to General Fund. This is an interesting situation in that no monies were appropriated from the General Fund for the operation of the institution. I will not attempt to point out to you a number of other reasons why the children's program cannot be developed, and merely state that we intend to go ahead with our children's program. Since most likely we are going to be dependent on Federal funding, we will probably have to limit our catchment area to Planning Districts 6 and 10. We surveyed the needs of the two Districts and found that most of these counties may be considered as

<sup>1</sup> From a paper delivered by Ogden Lindsley, Department of Education, University of Kansas, at the DeJarnette State Sanatorium Spring Workshop, 1970.

severe poverty areas. Six counties are considered high risks for institutionalization for mental illness, and eight counties are high risk for institutionalization for mentally retarded persons. Two counties, Highland and Fluvanna, have no special educational program of any type, and nine out of ten counties do not have the services of teachers for emotionally disturbed children or children with learning disabilities. The very conservative incidence figures supplied by the U. S. Office of Education Dunn & Mackie Study indicate that in these two Districts there are 1,336 emotionally disturbed children and 2,007 children with learning disabilities. The Virginia State Department of Education indicates that more than 200 teachers of children with emotional disturbances and learning disabilities are needed and that only nine are available in the two Districts.<sup>2</sup> The Mental Health Clinics of these areas serve approximately 18% of the children who are in need of services. In view of the extreme shortage of trained personnel, we feel compelled to emphasize training as our primary objective at this time. In order to provide the maximum amount of useful instruction, we will accept initially children with problems in specific, most commonly seen behavior categories. The categories are as follows:

1. **Tantrum Behavior.** Includes fighting, hitting, biting, verbal abuse, and negativism.
2. **Withdrawn Behavior.** Withdrawal from adults, peers, or activities.
3. **Dependent Behavior.** School phobias, regressive crawling, baby talk, and bed wetting.
4. **Hyperactive Behavior.** Excessive off-task behavior and short attention span.

We realize that by limiting the categories for admission, we are excluding some individual children with the greatest need and children who we would find most challenging to treat. In providing training, we have worked closely with the institutions of higher education in our District so that students, teachers, and others, are able to receive graduate credit for their work at DeJarnette. We plan to furnish instruction on a community level for parents of emotionally disturbed children; for example, classes would

be offered for parents of children with specific problems such as bed wetting, school phobia, and temper tantrums. Eventually, classes should be offered to train parents how to help their children improve study habits and social skills. Many researchers have shown that parents can be taught to become effective therapists for their children, and in many instances, the child does not need individual professional attention.

From an economic standpoint, we have the distinction of having treated more than 20,000 patients without any cost to the taxpayer. As a matter of fact, even the initial \$100,000 loaned to DeJarnette by Governor Harry Byrd was repaid at 5% interest to the State Treasury.

Unless we receive some Federal or State funding, we will have to continue charging our consumers \$30.00 to \$40.00 per day for services, which is about half the usual cost for child-adolescent programs.

Will our approach to prevention and early intervention be effective? We must build into our program a method of evaluation, and we must never become so defensive that we avoid questions of accountability at all costs. We see our friends fall into the trap of defending programs of uncertain value, and although it is understandable psychodynamically, this attitude certainly cannot be justified.

In conclusion, we have found that an educational and behavioral approach has been most effective in correcting maladaptive behavior in children, and complete success is only limited by our own creativity. We cannot advocate behavior modification for all children because neither we nor our children should adapt to an ineffective educational system. Improvement in programming in both academic and social skills must be of primary emphasis in prevention. We must concentrate our best minds and personnel in the preschool and primary school years. As the child learns to accept the consequences of his behavior, the necessary social skills to meet his needs, and the basic information for decision making, he will be able to approach adulthood with reasonable assurance of success.

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<sup>2</sup> These estimates are based on reports by the Division of Educational Research, State Department of Education, December, 1971.

# The Psychiatric Scene: A Resident's View\*

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The American Psychiatric Association recently realized that from its inception it had denied the one element of the psychiatric community which was perhaps most important in maintaining the longevity of the organization. Prior to 1968 there was little provision for resident involvement. The APA, like many other organizations of its type, was run by the old vanguard. If a young psychiatrist was interested in influencing his profession through the organization, he had to work himself up from the bottom of the ladder which usually took many years. Often when that young psychiatrist finally reached a level of influence he was no longer young.

In 1969, in an effort to get more residents involved, the APA created a special membership category, Member in Training, and instituted the Falk Fellowship Program. The latter, financed by the Maurice Falk Foundation of Pittsburgh, provides the opportunity annually for thirty residents from throughout the country to serve on National APA Committees. It was hoped that this would inform the young psychiatrist of APA structure while providing resident input into its top levels. The program, now in its third year, has been successful but limited in reaching the total resident community. In the Fall of 1971 the APA asked six former Falk Fellows to form a Task Force to find ways of furthering resident involvement and to form better lines of communication between the resident and the APA. I was fortunate to be chosen both as a Falk Fellow and a member of this Task Force. I also served for a year as resident member of the Board of Directors of the Neuropsychiatric Society of Virginia. These assignments afforded me the opportunity to view the psychiatric scene. I would like to share with you a few of my observations.

Psychiatry is in the midst of great change. Once psychiatrists could spend half their lives in training then close themselves off from the rest of the world in double-doored sanctums to treat the financially affluent. As a profession we were rather secure. This group of patients was large enough to pay our bills. As the general public could not afford our fees, in a sense we could be selective. If we did not wish to be involved in community affairs, we could always excuse ourselves with the rationalization, "a psychiatrist should not become socially involved with his patients." Mental illness was seen as strange, a curse, even contagious—those with mental illness were avoided. The psychiatrist was looked upon as a "mind reader," a "mystic," and contact with him was not desired. So for years the double-doored sanctums were not violated.

Today, the general public accepts mental illness and feels psychiatrists have something to offer them. Mental health, once a privilege, is now considered a right which they are demanding we uphold. We can no longer turn them away for lack of funds as they come bearing governmental gifts, Medicaid and Medicare. After reading *Reader's Digest* and *Ladies' Home Journal*, many even consider themselves authorities on mental illness and often come not only demanding treatment but specifying the type of treatment they expect. Psychiatrists, once secure in "doing their thing" behind closed doors, now often find themselves exposed as if practicing in a storefront window.

"Doing our thing" classically has been one-to-one analytically based therapy. It is obvious, however, that with only 23,000 psychiatrists serving a population of over 200,000,000 people, we can satisfy the needs of only a few, using our classical methods. We could change our methods, but as a group we are resistant. Increasing our manpower is difficult because our period of training is long. We defend the latter as necessary to produce a unique

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individual, capable of treating the whole person. We feel the psychiatrist should have knowledge of both the physical and emotional aspects of disease. A long period is also necessary to become well versed in the analytical method which we feel must be used to affect cures rather than render first aid. The public, however, is more crisis-oriented. They seem to be less interested in resolving their repressed childhood conflicts than in receiving advice on handling the crisis at hand. Other professionals such as ministers, social workers, nurses, and psychologists are more willing to supply such needs. They generally are more willing to experiment with new methods, and as their training period is shorter, they can more easily enlarge their manpower pool. These professionals are thus gaining status as therapists which is threatening to the psychiatric community.

We question what will be our roles in the future if the present trend continues. If these mental health professionals treat the emotional aspects of disease and our medical colleagues the physical, what will we do? Some say we will become supervisors, yet these professionals often feel they do not need psychiatric supervision. Others say we will pick up the more difficult cases, those left over, but how much status does this afford? Perhaps we will become administrators, but we are not trained in administration.

There is some confusion over our role as physicians. Psychiatrists were originally members of the medical community, versed in neurology and psychology. Over the years, however, we apparently moved away from our medical colleagues. There was hope that we were moving back when we recently began to discover a more organic basis for mental disease. The American Board of Neurology and Psychiatry, however, has discontinued the requirement for internship and no longer requires the passing of an oral examination in basic neurology. There are even some in the profession who feel psychiatrists should spend less time in medical school. So, in which direction are we really moving?

There is also some confusion as to our social role. There is a very strong caucus in the APA pressuring the organization to speak out on social issues and an equally strong group who says this is not our place. Who is correct?

With such questions of role and status, some say our profession is in the midst of an identity crisis.

How does the psychiatric resident view his profession? Young people today are generally sensitive to social issues, and psychiatric residents are no exception. They have strong feelings about the war in Viet Nam, the plight of the poor, civil rights, and

many are taking active stands. Unlike many of their older colleagues, most residents do not feel psychiatrists, in their role as professionals, should speak out on such issues. Most feel that the expertise of the psychiatrist extends no further than comment on the emotional elements of such issues and that to attempt further involvement is foolhardy.

Due to their sensitivity to social issues most residents agree with any move to offer services to the general public. They do not favor giving up one-to-one patient contact, however, as such a move may be sacrificing quality for quantity. A large percentage of residents also plan to enter private practice, a desire which may seem to contradict their social stand. Allen Axelson, a fellow Task Force member, in his paper, "The Changing Face of Psychiatry—The Resident's Response" (unpublished), points out that residents may feel guilty with this decision. I think residents are just practical and are responding to economic pressure. For one in training for twenty-five consecutive years, financial rewards are inviting.

Residents do wonder what their future roles will be. They are aware of increasing governmental intervention. This awareness was heightened by recent steps to cut National Institute of Mental Health training grants. They question if we are not headed toward socialized medicine. Most training programs emphasize the analytical method which residents find intellectually gratifying, but they wonder if this is what the public will desire in the future. Most, therefore, favor maintaining an analytical core to psychiatric training but providing exposure to group, family, and other more current therapeutic methods. They also desire training in administration and community psychiatry. Residents feel they will need a wide range of skills to function effectively in the future.

Unfortunately, many departments of psychiatry are resistant to change. The resident, seeing himself as a consumer and, therefore, having the right to constructively criticize the product, is pressing for more resident involvement in curriculum planning. Many departmental chairmen have seen this as threatening. They feel the resident is just striving for power. I do not feel this is the case. Most residents I have met are only concerned about the effectiveness of their programs and could care less who runs the show. Many faculty members have commented that the residents are unable to know what is best for them. They feel those more experienced in the profession should plan the curriculum. The residents, however, often find such faculty members out of tune

with their needs. Perhaps the best solution is a joint effort.

Psychiatric residents basically see themselves as physicians, not social scientists. Most are against the drop of internship requirements. They believe that psychiatrists must not only have knowledge of both the physical and emotional aspects of disease but have had experience in managing both aspects. They find the role of primary physician, the involvement with life and death, and the challenge of the emergency room during internship invaluable in helping them keep the perspective of total patient care.

Residents are not as worried about status as their older counterparts. Most welcome the help of non-medical professionals. They are dismayed, however, when they find such professionals attempting to make medical decisions in which the latter have no expertise. Residents are convinced that discoveries of the organic basis of mental illness will continue and thus, it is most important that treatment be viewed from a medical standpoint. Any move away from the medical model, they feel will be detrimental to patient care. Residents see the psychiatrist as a key figure in any therapeutic endeavor due to his unique perspective of the total patient—a perspective necessary for effective treatment.

Until recently there was little interest in organized psychiatry among residents. Their main concerns centered around their residencies. Residents are still basically involved with curriculum, salary, vacation, call schedules, or "how to survive the three years." Increasingly, however, they are recognizing that psychiatry is "a new ball game." With current trends toward governmental intervention and public pressure, they recognize the need for organization to survive. They were impressed by the APA's recent lobbying effort which at least temporarily stalled some of the NIMH cuts. Residents also feel psychiatrists need better communication within the profession and hope that the APA can facilitate this. There is a trend, therefore, toward resident involvement in APA. Many residents, however, are disappointed as they often find the organization somewhat inefficient. Tiah Foster, another Task Force member, in her paper, "A Gap Between the Resident and the APA," states, "At times the APA seems to be like a doddering, aged, dowager duchess." It does seem that various elements in the structure spend a lot of time spinning wheels, getting nowhere. There are numerous meetings but often few tangible results.

Residents would like to see the APA improved. The members of the APA upper echelon agree and challenge the resident to offer suggestions. American Psychiatric Association leaders in general believe that the organization needs new life, and they hope the resident will supply this.

Residents desire efficiency in their profession and agree with suggested certification by the American Board of Psychiatry and Neurology. They are troubled, however, that often the knowledge required by the American Board is not supplied in their residency programs. Perhaps the APA can intercede and provide more continuity.

After eighteen months observing the psychiatric scene, I am optimistic about the future. We do have a lot of problems as a profession, and we will need to put forth much effort to solve them. One of the most important tasks ahead is the reevaluation of our training programs. Are they adequately preparing the resident for the future? The APA also sees this as a major priority and recently applied for a federal grant to support a three-year study project on the education of psychiatrists. I feel we need to resolve role conflicts with our non-medical colleagues. There is enough work for all. We need to place less emphasis on status and more on professional efficiency. Really, what difference does it make who runs the show as long as the patient gets well? Perhaps economics is behind some of our bickering, and we should reevaluate our respective pay scales. I feel residents have a lot to offer. The establishment should not be turned off when residents speak out. Their verbalizations are generally not calls to battle, but cries for help. Residents are basically physicians, and I feel they will move the profession back into the medical community. The APA has a lot to offer, but any organization is only as strong as its members. All of us in the psychiatric community need to become more involved. Now more than ever before, we need to unite through our various professional organizations to pool our efforts to face the demands ahead. With such united effort, I know we will succeed.

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# Progress Report 1972\*

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In a facility which has as many varied activities and commitments as does the Virginia Treatment Center for Children, it would be impossible to give, in this limited space, a detailed account of a year's activities. However, I would like to point out a few landmark occurrences and some of the trends and directions in our continued growth and development as an institution.

While the availability of short-term, intensive psychiatric care for children continues to be unique and will continue to be emphasized, we have found it necessary to increase our activities in two new directions. Currently, there is a national emphasis on child psychiatry reflected in the training of medical students and general psychiatric residents. At the VTCC teaching duties now fill a large part of the professional time of three staff child psychiatrists. The training of mental health professionals, special educators, and other professional and non-professional child workers proceeds to fill a large part of each day. At this point, we can truly be identified as, primarily, a teaching institution.

The second new direction involves the opening of a full-time out-patient clinic for disturbed children which will accept patients to 18 years of age. As with the increased teaching program, the operation of the out-patient clinic must be accomplished without additional funding or additional staff members. The establishment of this service represents the response of a concerned Treatment Center staff to the desperate need for clinic psychiatric services for children in this area. Even with the reopening of the Memorial Guidance Clinic and the acquisition of adequate staff for the Educational Therapy Center, the demand for children's services will exceed that which can be supplied by the combined efforts of all of us.

The Hospital Field Unit, which has been so valuable to our operation over the past five years, is now a permanent part of the Treatment Center. It will continue to serve as a screening agency for potential in-patient candidates and to follow up children who have been discharged from the Center. Field Unit personnel have always been available to lay and professional groups to talk about matters pertaining to the care of disturbed children and they will go on fulfilling this important function. In addition, members of all the mental hygiene clinics throughout the state have been invited to utilize our staff as an available teaching unit willing to help mental health professionals who usually deal with adults become attuned to diagnosis and treatment of disturbed youngsters. We are willing to serve in a resource capacity to recommend the most relevant literature, or to give on-the-scene demonstrations of child psychiatric diagnostic and treatment techniques. Field Unit personnel continue to be available as consultants to those who are interested in the establishment or up-grading of hospital services for disturbed children whether in the private or public sector.

The medical staff of the Treatment Center has now been reorganized in accordance with the recommendations of the Joint Commission on Hospital Accreditation; we have requested an inspection of our hospital, and we expect to be accredited in the near future.

We have, at this time, however, a grave concern. The 1972 Guide for Residency Programs in Psychiatry and Neurology of the American Board of Psychiatry and Neurology and the Council on Medical Education of the American Medical Association, indicates that the minimum number of residents for a training program is two. A request was made of the Legislature to approve the establishment of four child residency positions which is the usual minimal number for a facility of our size and affiliations. We feel

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it was most unfortunate that this request was denied. We now have two child residents each year, their salaries being made up from other positions which are left unfilled. If we find ourselves unable, for some reason, to interest a first-year resident each year, we may well be endangering our child residency program. With four residents, allowance is made for a lean year. Since the law that established the Virginia Treatment Center for Children specifically states that our responsibilities are for service, training, and research, I do not think it would be inappropriate for us to resubmit the request for adequate Child Fellow training positions as well as a request for funds for the establishment of an active research department, which was also denied by the Legislature.

Our close relationship with the State Department of Education, continues to be excellent, and our Special Education Department at the Treatment Center persists in being outstanding in the State. The contribution of this group of special educators, who are actually members of the Richmond Public School System, to the functioning of the Treatment Center in the care of emotionally disturbed children is valuable beyond description.

It is difficult to adhere to the concept of short-term intensive treatment, but somehow this has to be done so that our few beds are utilized in a way which serves the greatest number of children in the most efficient possible way. Our present average length of stay is 4.94 months. This, in spite of the fact that there always will be certain youngsters who have to remain for the absolute maximum time of one year as an in-patient.

Finally, when one talks of any institution one actually talks not about bricks but about people. It is also true that in any institution people come and go with some regularity. I consider myself to be singularly fortunate for having worked with so many talented and dedicated people over the past years. I can report to you that we all remain enthusiastic about the Treatment Center and the contribution it has to make. We are optimistic about the future and of the contributions we shall be able to make to the understanding and care of troubled children. While happy about our past accomplishments, we are not complacent. We will continue to be open to new ideas, new directions, and new opportunities to serve the children and parents of this state.



# The Behavioral Sciences and Juvenile Justice\*

THE HONORABLE KERMIT V. ROOKE, JUDGE, L.L.B.

*Senior Judge, Juvenile and Domestic Relations Court,  
Richmond, Virginia*

I am particularly honored to be included in this program. In such an uncommonly intellectual atmosphere, it will be necessary that I follow the advice I gave an old man in Court a few days ago, when I sentenced him to 12 months in jail. When I imposed the sentence, the man looked up at me and said, "Judge, I'm an old man and my health is bad. I don't believe I'll live long enough to serve that sentence." I advised him, "Just do the best you can."

If it is possible for me to contribute anything to the deliberations here today, I have concluded that the most promising approach is to emphasize needs, rather than accomplishments, for, in my humble judgment, even this distinguished convocation of scientists, just as you are, is not good enough.

We live in a seriously troubled world, which desperately wants what it hopes you have to offer. From the vantage point of the Juvenile Court bench, I watch a growing parade of lost children. I see a great and disturbing need for knowledge and understanding which the law and the government cannot supply, a need for a new and better understanding of illnesses which cripple the mind, the spirit, the soul. My testimony here would be professionally false and intellectually dishonest if I did not tell you that for the pitiful thousands of children who are emotionally disturbed or mentally ill, that which you have done and are doing is not nearly enough. As I view this tragic picture, I see very little which commands applause. Surely, to say the least, this is no time to stop and rest.

I would hope that you might interpret my presumption to speak here in these critical terms as a compliment to your capacity to understand. I do not say the picture is totally bad. Certainly I commend you for the progress you have made, and I am most grateful for the assistance you have given the Juvenile Courts. But we still desperately need more help

for the thousands of children we must try to serve. Those of us who operate the courts are confronted by a behavioral dilemma, so complex and so far-reaching in its consequences that we are apprehensive and concerned for the very foundations of order. For the guidance and assistance we consider necessary, we must now turn to those whom we regard as masters of the science of human behavior.

I would like particularly to stress the role of the behavioral scientist in the effective operation of the Juvenile Court. Perhaps you are not entirely familiar with the modern Juvenile Court operation. Perhaps you regard it as a simple, one-man operation in which the judge has only to look into his law books and there find the answers to all the problems which come his way. This, I assure you, is not the picture. Every day, every hour, the judge is confronted by problems which defy solution. The Court over which I preside has a physical plant which covers eleven acres of ground, a staff of eighty employees, and an annual budget of approximately one million dollars. Justice, in a juvenile case, is a complicated, expensive, elusive commodity. The primary ingredient of juvenile justice, in each case, is an informed understanding of the emotional and mental infirmities which caused the individual human being to be involved in his problem, upon which is based an analysis of his potential and the application of available therapeutic resources to lift him out of his dilemma and set him on proper course. The ability to supply this basic ingredient of juvenile justice is not provided in law school. The behavioral scientist is our indispensable source of supply.

It should be emphasized here that while the fundamental purpose of adult criminal courts and juvenile courts is the regulation of human behavior, the law directs that entirely different methods be employed to accomplish this common objective. Adult criminal courts are directed by law to deter antisocial conduct by punishment. Juvenile courts are directed to accomplish this objective in children's cases by rehabilitation. The judge of the adult court requires the advice of the behavioral scientist only

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in a small percentage of his cases, those wherein the sanity of the defendant becomes an issue. The judge of the Juvenile Court, on the other hand, must base his decision in every case upon the unique mental and emotional characteristics and limitations of the particular child involved. The statute under which juvenile courts operate, Title 16.1, Chapter 8, Code of Virginia, provides that in each case "the court shall proceed upon the theory that the welfare of the child is the paramount concern of the state" and that these courts shall provide the child "such watchful care, custody, discipline, supervision, guardianship and control as may be conducive to the welfare of the child." We are directed to ignore or, at least, subordinate such practical considerations as the anxiety of the community concerning crime, and do what is best for the child. We must chart a course for him, specifically and advisedly designed to provide the best prospect for his individual success. This is not a simple undertaking.

Each case is different from all others. The characteristics, weakness, and antisocial tendencies which bring the child to the attention of the court in most cases have been developing unattended for many years before he is seen by the judge. How does one trained in the law know what is best for a child who is sick? How does one go about healing wounds of the spirit, the scars of emotional deprivation and mental malnutrition, converting weakness into strength, failure into success? Without going into a discussion of the legal procedures prescribed by law, it is sufficient to say that the broad statutory prescription of "rehabilitation" is a meaningless legislative promise unless the knowledge and expertise of the behavioral scientist is made available for the benefit of children in the juvenile courts. A knowledge of the law alone does not qualify one to diagnose or prescribe. If the judicial diagnosis does by chance embody a scientifically accurate appraisal of the condition and needs of the individual child, it is but a futile gesture if facilities and resources cannot be obtained to fill the prescription.

Our social and governmental machinery are designed to funnel these children, by the thousands, into the juvenile courts. Quite frankly, the burden of my message to you today is that, as the total picture is seen from the bench of the Juvenile Court, you and I, your profession and mine, are doing a pitifully inadequate job for these children.

Let me touch upon a few specific areas of concern in which there seems to be a possibility for a judge to be constructively critical of the behavioral scientist.

First, though not necessarily of primary importance, is the matter of communication. For your professional advice, your report, to be of appreciable benefit to the particular child, it is necessary that you have scientific knowledge or information which is relevant, and, further, that you communicate that knowledge to the judge and other court officials who are to deal with the child. I have read psychiatric and psychological reports in thousands of cases and in many instances have had the frustrating feeling that if the good doctor knew anything that would be useful he did a very poor job of getting the message through to me. At your professional conventions it is to be expected that the reports of your fellow scientists would be in the highly technical and scientific language with which you are comfortable, but your professional brethren are not the ultimate beneficiaries of your labors. They are not the people who really need to hear and understand what you have to say. The judge, the clerk, the probation officer have no medical training. A report written in terms they do not understand might as well be written in Latin or Chinese. We need to know what is wrong with the child, the condition and level of his ability to learn, the type of program we should attempt to structure to develop whatever potential he has. I respectfully suggest that some of the popular skepticism and doubt respecting the effectiveness of the behavioral scientist may be attributed to the fact that your reports are in a language which is difficult for most people to understand. Public confidence and acceptance require understanding.

Another related consideration is the tragic inadequacy of facilities and programs for the care and treatment of the mentally ill and emotionally disturbed. As I appraise existing facilities and resources for these humane purposes in Virginia, notwithstanding some progress and without disparaging the dedicated efforts of a few wonderful people, I register a picture of professional indifference to vast areas of suffering and darkness. I attribute this unhappy picture of human misery, this drama of the living dead, in a large measure, to a lack of a driving professional concern on the part of those who are in a position to recognize the gravity and magnitude of the problem. For too many years those who know the story have left the solution to others who neither know nor care. I fully believe that if the people of Virginia realized and understood the great and growing need for these programs and facilities, they would not abide a situation in which the talents and skills of the behavioral

scientist are unavailable to children who desperately need these services. I hope that I may be permitted to challenge you to tell this story to the people of Virginia, in language which they can understand. If you are not challenged by this assignment, I must say, I know of no other group of citizens who will or can be.

Let me suggest another area of challenge, in which it seems that your analytical and diagnostic skills in matters of human behavior are acutely needed, and apparently lacking. We are witnessing in these difficult times a behavioral explosion which threatens to destroy our system of public education. Informed people are openly predicting that our public school system cannot survive unless there is drastic improvement in the school operation. There are doubtless numerous factors involved, but many of us believe that one of the primary causes is the fact that the system operates on the assumption that every child has the same level of scholastic ability and is interested in the same courses of study. This is sheer folly. No two children are alike or exactly equal. As a consequence, millions of children are exposed to courses in which they neither know nor care what the teacher is trying to teach. They are not challenged or motivated, lose all interest in

the educational process and either drop out or become disruptive behavior problems. I believe that you have much to offer in the solution of this dilemma. I can think of no area of concern in which you could be of greater assistance to the youth of America, or in which you could make a more vital contribution to the strength and survival of this nation.

In closing, I would like to refer, and commend to your consideration, the greatest of all behavioral scientists, one whose influence has been stronger than that of all others combined. His formal education was not impressive. Indeed, he was but a carpenter, born and reared in the most humble situation, and his teaching career was brought to an end by his public execution when he was 33 years of age. That was two thousand years ago, but his teachings are still a source of comfort to troubled hearts and minds. In moments of severe judicial stress I talk to him and, while I don't understand exactly how it works, I know it helps. Somehow, thus far, it has kept me in my institution and out of yours. I commend him to you, because I want you to experience the greatest possible success. The troubled world in which we live needs your success, almost as desperately as it needed his.

# Human Interaction in Teaching and Learning: A University Approach to Improvement\*

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Public education, although beset with criticism from its inception, is in the midst of weathering its most severe storm. One need only note the newspaper headlines for a week to see the myriad of demands being placed upon the schools. On one hand, there is increased demand for productivity—what Talcott Parsons, in his book, *The Social System*, would call instrumental education (education for usefulness)—and on the other, there is the insistence upon strengthening humanism in teaching and learning—again drawing on Talcott Parsons—called expressive education (education for self-fulfillment) (1). It seems clear from the volumes being published that expressive education is receiving prime attention at the moment.

Reliable indications point clearly to the notion that instrumental or utility-based education is relatively secure in this country. Although some would argue that education for productivity is often drawn out and tedious, most would admit that professional schools have been rather successful in equipping their graduates to “get the job done.” Further, upward social mobility in American society has traditionally derived from increased education, hence improved work skills. Although admittedly not fully developed, this aspect of the education of children seems to be of

less pressing importance today than the emotional or expressive content of the learning process. Therefore, the “Educational Establishment” may well consider the charge that the time is ripe for the consideration of a variety of kinds of learning, specifically as they relate to individual development, which may be very tightly, or loosely, or not at all, attached to social mobility and vocational skills.

The intent of this discussion is to describe a limited, though highly intensive, effort which is aimed at equipping the teacher of children with a more complete synthesis of knowledge concerning a child’s physical and psychological growth and development. An important aspect of this effort is enabling the teacher to develop a better understanding of his own personality and its impact on the teaching process. The assumption is that this can be done in a manner that is relatively nonthreatening to the teacher, while allowing him to learn more of the factual aspects inherent in the growth and development of children, as he, at the same time, learns more about himself.

Thus, as the teacher gains sensitivity, appreciation, and respect for his own individual make-up, it should follow that he will be in a more favorable position to provide his students greater latitude for learning and developing into healthy human beings.

If one asks any number of grown-up persons about their memories of the adults in their childhood world, one hears answers with as many variations as the different individuals queried. But among these

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many variations, certain patterns of responses are evident. Those questioned begin to sort out the "good" adults from the "bad," those who had a positive and those who had a negative influence on their lives. Further discussion, however, will often reveal that it is not so easy to sort out the "good" from the "bad," and the same qualities many times will be found to exist in the same person.

For example, an extremely "tough" teacher, who on first encounter frightens a young child, may be redeemed in the eyes of the child by a prevailing attitude of fairness to all. On the other hand, an unwitting teacher who humiliates a young child before his peers may contribute to learning blocks that handicap the child for a long time. As a result, subsequent teachers may be met with apprehensive expectations by the child, or the apprehension may attach to the instructional content, and he may never really come to grips with that particular subject. One humiliating experience, with its accompanying social downfall, may be only temporarily debilitating, but a repetition of such experiences can have a devastating effect on a child's learning as well as on his personality development.

We must ask ourselves whether adult memories of childhood experiences are accurate? Not always. Often they are distorted through a screen of intervening years of living. But there is a remarkable similarity among the ideas of adults about what experiences and accompanying feelings were important to them as children. It is also interesting that these adult-expressed ideas, though more circumstantial and sophisticated in their telling, are often quite similar in content to those expressed by older children not so many years removed from the experiences they are recounting.

Somewhere, somehow, in the neuroanatomy-chemistry-physiology of each individual, these memories of life's experiences are imprinted. Though many of them are apparently forgotten, they no doubt continue to have their individual and collective influences on subsequent attitudes and behavior. Fortunately, human beings are thinking as well as feeling organisms, and hopefully throughout our adult lives we discover things about ourselves that are derived from our early experiences in childhood. Fortunately, too, though physical maturity has been reached, we can modify and change in personality through the process of self-discovery. Adults can, and do, continually realign their personality characteristics through living and increased understanding.

Teachers, like parents, are viewed through many glasses, from rose-colored to bilious green or jaun-

diced yellow. This view is shaped to some extent by the beholder's genetic pool and life experiences, and the interactions of the two. Whatever the specific aspect a particular student takes of a teacher, it is subject to modification and change through experience. The change may occur as a result of an awareness by the student that others do not hold the same view, or the student's perception of the teacher may change through direct experience of interaction with the teacher.

It is recognized that few teachers can be all things to all students, and certainly the goal should not be the winning of a popularity poll. If popularity exists, should it not be a by-product of something more important, that is, ability as a teacher? It is generally taken for granted that familiarity with and relative mastery of subject matter is one primary requirement of an effective teacher. In an era of instant knowledge and pseudo-wisdom, this position may be questioned. But at least a teacher, it would seem to some, should have something to teach.

Given a teacher with something to teach, the real challenge becomes the student to be taught. What does the student bring to the learning situation? Each child, though similar to other children, is different, with his own individual style. Yet, parents, taxpayers, students, teachers, professors, and administrators are continually alleging through every media available, that educational programming too often approaches all students as if they were being uniformly processed by a one-product factory, with unwavering specifications for that product.

Everyone can cite individual instances in which such an accusation is unwarranted; any individual can name several teachers, in his own school career, and that of his children, who have approached their teaching tasks as if each student were, truly, singular. Such teachers have been able to assess fairly accurately each person in the class as to emotional temperament as well as to intellectual abilities, to identify the style of learning peculiar to each, and to teach in such a way as to encourage each in his own optimal development as an individual and a responsible member of society.

Traditionally, pedagogy has been manifestly concerned with cognitive function, though with notable exceptions among spokesmen for education, such as John Dewey. Increasingly, however, educators have become more aware of and concerned with and have learned more about, the mentally retarded child, the child with hampering emotional problems, the child with severe learning disabilities, and the disadvantaged child, among other groupings. As a

natural consequence of this concern with children who are not efficient learners in the traditional sense, education has become less purely cognitive and more and more holistic. Such concern has had its greatest expression in regard to those children mentioned above, who are identifiable as requiring special teaching in the attempt to provide them with an optimal educational experience. As a result of this, courses in teacher preparation have multiplied, devoting many hours to study of the characteristics and the methods of teaching a particular group of children. Yet, this has not significantly improved the approach to that large group of normally achieving children who do not carry a specific diagnosis, yet urgently need a modified educational program. These children, approximately 85% of the school population, are the real subjects of this discussion. Education courses have provided the young inexperienced teacher with valuable information. Yet, too often, despite such intensive preparation in curriculum and methodology, the teacher who is on the firing line with his special charges, professes to be too ignorant of the feelings and emotions of his students, and pleads for help from any source to aid him in understanding them.

Perhaps there is no course preparation for a complete understanding of the affective component of education. An open mind with a desire to learn and a rich life experience are no doubt essential factors, and probably this is how most teachers and others have acquired some wisdom to accompany their knowledge. Despite the lack of specificity as to how to accomplish such a goal, the authors of this article have been concerned with trying to give young teachers a broader base for understanding themselves and their students, and have devoted efforts toward this end over the past decade.

Proceeding from the above stated rationale, it was decided to develop a course which would create the opportunity for better understanding by teachers of children's affective as well as cognitive patterns of development. Also, it was assumed that the teacher or prospective teacher participants would gain increased self-perception. Therefore, Human Interaction in Teaching-Learning, a three-hour semester course for three credits was offered.

Throughout the years, the format has been varied, depending on the composition of the group; and many individual projects and assignments have been modified to meet the needs of particular students.

The classes have met one night each week for three hours for a full semester. Initially intended for Special Education students, it early became apparent

that the course would and should fill a general, rather than a specific need; therefore, it has not been limited to those majoring in Special Education or even education. While each class will typically have a preponderance of students from education, others majoring in fields such as psychology, science, rehabilitation counseling, art education, and sociology also have been represented. At first the size of the class was limited to ten or twelve students, but increased demand has necessitated a larger group. Currently, the class is limited to thirty students. Beyond this, the size of the group begins to preclude optimal class participation. Ages vary from the young college student to the middle-aged woman or man who has returned to work on either a baccalaureate or graduate degree. The background of student experience varies from those with no teaching experience to the person who has taught for many years. Either undergraduate or graduate credit is permitted, although the requirements differ somewhat for the two groups.

The basic content of the course is aimed at providing the students with a better understanding of total human development from the newborn period through adolescence. The stages of development, though somewhat empirical in their divisions, are approached in sequence with delineation of the accomplishments that need to take place during these phases. An attempt is made to integrate comprehension of the biological and psychological aspects, stressing the perceptions and feelings that children develop in the course of their life experiences, as well as their reactions to these experiences.

In most of the classes, no specific text has been used, but rather, selected readings. Students present summations of these readings and lead discussions focused around the material presented. Thus, the entire class, with its diverse backgrounds and myriad of experiences serves both as a resource and course content, bringing a wealth of experience to bear on any particular aspect of the material under discussion. The effect is a wholesome introduction of theory and practice, often resulting in much consensual validation. If the idea is new and fresh for a particular student, he has the advantage of hearing of some everyday practical experiences to which he can relate the theory.

Suitable audio-visual material is used to extend the material presented by students. For example, movies on growth and development such as neuromuscular skills at different ages, social interaction in children's play, the effects of early deprivation, and cultural patterns of child rearing have been used. In addition, these groups have had the advantage of

meeting at the Virginia Treatment Center for Children, a children's psychiatric hospital operated by the Commonwealth of Virginia. The setting has permitted the use of applicable video-taped material from the extensive library of case histories available at this institution. Such data from "live" cases have served to give an immediacy to the material and to portray graphically the results of maladaptation of children whose growth and development may have been thwarted for any of a multitude of reasons.

Some of these cases are very complicated, and ensuing discussion makes clearer to the student that often there are few simplistic answers. This is considered to be of value inasmuch as many of these students enter the class with an attitude of "give me a method" for dealing in the classroom with a particular problem. Thus, their thinking is directed toward trying to understand motivations and causes underlying behavior. One student expressed it this way; "As I understand more about children's behavior, I find myself automatically developing more effective methods in my class. I no longer think of every piece of behavior as 'good' or 'bad,' 'disruptive' or 'non-disruptive.'"

A third aspect of an evening's class work is the collection of observations which the students have brought from the previous week. These are in the form of a short sketch from two to four written or typed pages. Generally the observations are of two kinds:

1. *Direct observation of children.* Students may be asked to observe for fifteen to thirty minutes and simply put down what they see—newborn babies in a nursery, two-year olds at play, a mixture of all ages on a public playground, a group of junior high school girls, children in a doctor's waiting room, children attending a presentation of the youth symphony, and many others.

With participants from throughout the metropolitan area, as well as surrounding rural areas, the observations are made in many locations; and the exchange of information and discussions are both enlightening and entertaining.

2. *Recall from students' own childhood.* These short sketches are done as out-of-class assignments and include, among others, such titles as: A Childhood Discovery, A First Day at School, A Childhood Fear, A Big Failure, A Whopping Success, A Childhood Illness, My Least Favorite Teacher, My Favorite Teacher. The direct observations are presented by the

students, and the instructor reads, anonymously, some of the personal sketches.

Both of these exercises never fail to elicit great enthusiasm and discussion with further spontaneous recall. Questions are generated, and the exchange and sharing of ideas narrows the gap, we believe, between philosophy and practice of the educational process. Often, the presentation of observations and sketches takes place during the third hour of the three-hour session. Frequently the level of spirit, participation, and interest is so high that the group wants to continue long past the established closing time.

By dividing the course content into these three segments—student presentation of reading with discussion; movies and/or video-tape presentations; and observations and childhood-recall sketches—a kind of diversity is afforded which appears to be one factor in sustaining interest and enthusiasm over the three-hour class session. Also, a short refreshment break twice during the evening permits students to move around and continue to exchange ideas even more informally, an important consideration for students whether they be seven or seventy.

With the interaction and participation that has resulted from these teaching encounters, we have the distinct impression that examinations are unnecessary. Certainly they are unnecessary from the point of view of the instructor, as there is ample opportunity to observe the student involved in the learning process and for both student and instructor to have a clear understanding of the progress that is being made. In addition to the instructor's evaluation of students, there is also a continuous student-instructor evaluation of the content and method of the course which results in suggested changes being implemented each semester.

Student response has been encouraging, and almost without exception has taken a very positive tone. The following unsolicited comments are typical of many that have been made directly and indirectly over the years: From a psychology (senior) undergraduate major: "This experience has made psychology come alive for me. It has given form and function to all the theory I have been reading and hearing these past four years. I have already recommended it to several of my classmates." A graduate student who had taught elementary school for several years: "This is one of the best classes I have ever had—graduate or undergraduate. I was totally involved." Another teacher: "I really looked forward to each week, and the thing I liked most was the willingness of everyone to share ideas and experiences and to be of help to each other."

An undergraduate senior later wrote a letter: "That class somehow gave me a confidence in myself and my own ideas that I though I'd never have. I was worried all year about even applying for a teaching job, and the thought of interviews petrified me. Somewhere toward the end of the class, I realized that the fear was gone. I believe it was the increased understanding of myself and other people that resulted from the interactions in that class. At any rate, my interviews went well, and I accepted the job I really wanted but was sure I wouldn't be offered. As a matter of fact, each interview resulted in a job offer."

An undergraduate involved in practice teaching: "The material about latency-aged children has been of great help. Just last week I was able to help another teacher who was quite upset when she saw two eight-year-old boys holding hands on the way to the playground. She wanted to intervene and reprimand them for something which she saw as quite flagrant. I said that I thought we should just be aware of it, that at their age it probably didn't mean they were 'abnormal,' and that they probably wouldn't continue the behavior. This is just what has happened. They are good friends and playing like all the

other children. This may be a minor matter, but I felt that it would have done the boys no good to have their passing behavior interpreted as 'abnormal' by an extremely anxious teacher."

An undergraduate: "I have learned a lot about writing and expressing myself in this class. When I'm dealing with ideas and observations where punctuation and syntax don't matter, writing becomes a pleasure. Then these technical details tend to take care of themselves."

And one final observation from an experienced teacher. A year or two later she met one of the instructors on the street and said, "I think about that class often and talk about it to my friends. When they ask what I learned, I can't give them a single, solitary fact. But I always tell them that ever since then I have felt better about myself and the children I teach."

This last response is one that we value most of all.

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# Breaking the Boundary of Separatism: The Challenge for Health and Welfare Service Providers\*

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You may have wondered about the particular relevance of the topic I have chosen to discuss with you at this Child Psychiatry Spring Forum. What, indeed, do separatism and boundaries have to do with providing services for children, and how closely related to child psychiatry is the broader area of health and welfare? I hope my remarks will show that these questions are critical; that they are pertinent not only to administrators, but that they *do* in fact have clear implications for those who treat children both directly and indirectly.

There are a number of issues identified with the area of services for children that point to the boundary problems of isolation, defensiveness, and a narrow view of the child and his family.

Perhaps the most perplexing of these is that of **technology**. The recently published critique of the Joint Commission on Mental Health Report, *Crisis in Child Mental Health*, by the Group for the Advancement of Psychiatry (2), points out a number of polarizing factors in the professional community. These include:

1. The interface between health and sickness, the medical vs. the non-medical model.
2. The prevention and treatment dichotomy.
3. The split forces of those working for children, from those working for adults, with a third group expressing commitment to programs for families.
4. Interdisciplinary competition.
5. Education and therapeutics.

Related to the knowledge base is the problem of **domain**. For example, in cases of combined

emotional disorders and delinquent behavior or retardation and delinquent behavior, we see most clearly our treatment apparatus breaking down. The schools will not accommodate certain behavior, and they exclude the child from their educational responsibility. When a child displays disturbed behavior, the training center hesitates to fulfill its responsibility to resocialize the child. A treatment facility too often will draw the line on tolerant behavior depending on whether the child is sent by the court or by a therapeutic facility. I do not imply criticism here of any of the services systems; rather, I am attempting to describe what appears to occur in our services network, representing daily struggles familiar to all of us. In a real sense, a lack of substantial agreement on treatment models puts us into the posture of defending the decision-making procedures of our own agencies rather than accommodating the child through the maze of eligibility requirements, rules, and agency regulations. Can you wonder at any response other than the need for advocacy?

A third issue is simply the **lack of resources**. What, for example, are the treatment dimensions in Virginia? Our own treatment center is the only one of its kind in the State. A few private facilities exist but are generally inaccessible, and even those are not free of the limitations of technology and domain. The "case creaming" process is common. More serious than that, such transitional accommodations as basic receiving facilities, crisis centers, and temporary residences are badly lacking.

Taken together—our technology, organizational arrangements, and paucity of resources—we have in a nutshell the dilemma of serious needs not being adequately met.

The combination of these issues accounts for the myopia of our present services. The lack of

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meaningful strategies to get at such problems is a further symptom of our separatism posture.

In many ways there is a functional aspect to this "going it alone." It does provide a kind of autonomy in control and it minimizes interference—both from other service systems and from our own clients as well. This low visibility profile is safer, more comfortable, and less harsh in light of the frustrations imposed by our limited knowledge (Are we honest enough about this?), our limited resources, and our perceived need to be protective of our own house.

I am afraid, however, that what might be short-range advantages turn to long-range disasters. For example, in our own State of Virginia the separatism philosophy of avoiding Federal monies for Mental Health and Mental Retardation Programs, has resulted in an unequal service system. Too much of our money has gone for institutions and too little for community programs. But it is worse than that, because even the community system we do have, that is, our State clinics, is limited in the services it provides. This lack of comprehensive community programs has led to inappropriate reliance on our institutions and the stunting of our growth potential, thus impeding the development of a proper partnership between our clinics and institutions. The after-care programs, which in this State are too exclusively oriented to drug monitoring, and the lack of unitization programs across the states are the consequences of foregoing a major national development. The implications of such inaction have affected not only services and training, but have, for some states, laid a foundation for taking advantage of new developments in education and training as well as resources. For example, if revenue sharing were a reality tomorrow, how quickly would we be able to move to make the case for its utility in mental health and mental retardation? I am afraid there are other agencies which might be able to move more adroitly because of their sophistication with data systems and research. They have experience that comes from interacting with other agencies as well as other levels of government. Isolationism and separatism are not conducive to posturing oneself for progress.

Why should a State half our size have a waiting list of five in a mental retardation institution while we have a list of 1,000 at one of our institutions. Obviously, such circumstances suggest an array of services that we cannot provide and do not provide—nursing homes, group homes, halfway houses, and the like.

We are beginning to reverse this situation, but the point is that we have lost untold opportunities from our refusal to engage in programs beyond state borders.

And what is the situation in Virginia? An official of one of the State agencies suggested to me recently that it has been nearly five years since his agency has interacted directly with another agency's central office. One might understand this if the objectives of these departments differed in terms of clientele, but very often, the client for more than one agency is the same person.

Looking at current state trends, one is impressed with some common patterns. Two of significance include:

1. Reorganization of state governments into super human-resource systems.
2. Class actions against state agencies in education, mental health, and mental retardation. These lawsuits in such states as Alabama, Massachusetts, Pennsylvania, and New York are involved with the issues of the right to education and the right to treatment.

The interesting dynamic of *both* of these activities is that dissatisfaction with the traditional state service system is being expressed in a loud and clear manner. On the one hand, its very organization is being changed, and on the other, it is being charged with delivering inefficient and ineffective services.

This is not the place to get into the substantive aspect of human resources reorganization, or the right to treatment and education. One can observe, however, that the tendency of service systems to be highly restrictive in their client selection and extremely selective in their coordinated activities suggests the posture of separatism I have been alluding to.

Now, however, with service systems being besieged by citizen's groups and professionals such as lawyers, the standard of care delivered by these traditionally autonomous operations is being brought into question. Common to this inquiry are:

1. What is the proper ratio of staff to patients?
2. To whom does the burden of proof belong when considering institutionalization?
3. Are legal rights being infringed by our treatment procedures?
4. Can a handicap disqualify a child from a public education?

The implications are indeed profound. Basic

education, for example, becomes intertwined with physical and emotional disabilities; patterns of care become multi-faceted so that community control enters the back ward of the State hospital. The community is being identified as the arena for comprehensive care.

It would appear that dealing with the client as defined by the services network will no longer be acceptable; rather, the needs of the client will determine how the services will be arranged.

Through all of this the traditional boundaries will no longer work. For one thing, the ability to control them has weakened. The increasing visibility of our care systems and professional behavior is apparent. The class actions alluded to above are one expression of community awareness; the de-institutionalization movement in corrections, mental health, and mental retardation is another. And finally, fiscal and organizational rearrangement through service intergration suggests that accountability is being shifted to a larger constituency.

What then is one to make of all this? My own feeling is that our narrow focus, our preoccupation with our own system, has led us to the precipice of limited effectiveness. In attempting to shoulder all the responsibility, we have lost the sense of community, which as Charles Abrams has suggested, "is that mythical state of social wholeness in which each member has his place and in which life is regulated by cooperation rather than competition and conflict." He suggests further that, "it has had brief and intermittent flowerings through history, but always seems to be in decline at any given historical present. Thus, community is that which each generation feels it must rediscover and recreate" (1).

In conclusion, let me share with you two examples which represent our rediscovery of the community. Hopefully, they will demonstrate a beginning of our moving away from separatism toward "social wholeness."

The first is the concept that Dr. Robert Jaslow is developing at the Northern Virginia Training School for the Mentally Retarded. The major emphasis is one of engaging the community itself in the critical pathways of a training and rehabilitation center. Decisions of who should come in will come from the community residents themselves. Each element of the catchment area will have a certain number of beds available to it based on population representation. A committee of residents from each of the catchments will screen for entry and negotiate for exchange if no beds are available. It will not be

a place to discard people. The expectation is that residency will not be permanent but transitional. And the residents-in-house will be seen in relationship to residents in the community. The training center is viewed as a part of the community; both in its sharing of hard decisions as well as in the openness of its living and training patterns.

The second example concerns a project we have requested Federal funds for—an integrated service system for deinstitutionalization. The project assumes that certain residents in our mental hospitals, retardation facilities, and correctional institutions do not belong there.

We will develop assessment and prescription teams for each of the three types of facilities. Membership will be taken from the staffs of the institutions as well as the appropriate agencies in the two target communities. Together they will evaluate the emotional, physical, social, and legal needs of each resident from the communities. Once identified, these needs will then be matched with the resources that are required. Another team will evaluate the adequacy and accessibility of these resources. If gaps exist and their pattern identified, they will be presented to a Committee of Commissioners. This committee will consist of the directors of each of the major State human resource departments. The heads of Education, Health, Mental Health, Vocational Rehabilitation, Welfare and Institutions, Commission on Children and Youth, Commission of the Visually Handicapped, Department of State Planning and Community Affairs, and the Employment Commission will see directly not only the gaps but also how they relate to the responsibility of each agency in providing services to the community. Clearly this will have implications for the committee members' ability to recognize priorities and the impact of that recognition on the problems that will be brought to their attention. Such a set-up will, one hopes, diminish the single track route and focus on the commonality of need, as well as the commonality of the agencies' responsibility. The convenience of separating the person into a behavioral disorder category and a delinquency category, for example, becomes secondary to the major consideration of a person with different problems.

We can see in the first example a partnership between the training center and its constituent community. In the second, we see a full systemic cycle of need, its accommodations, or lack of such, and the recognition of these arrangements by those responsible for obtaining resources and directing their utilization.

It seems to me that these approaches are conducive to dealing more positively with the problems of resources, the state of our technology, and our service structure.

In the end, the client is best served when our concerns transcend the system and focus on the people it was created to serve.

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# "TEDDY":

## (The Task Force for Emotionally Disturbed and Potentially Delinquent Youth)\*

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Some of you may recall a 1964 news story about a grotesque murder committed in Norfolk, Virginia, by a 13-year-old boy. He was termed deeply disturbed emotionally by the professionals who observed and tested him during the hearing. Long-term psychiatric care in a residential treatment center was recommended. Eastern State Hospital could not keep him because he was not diagnosed as psychotic, so he was handled as a juvenile delinquent and sent to a State training school. No psychiatric help could be made available by the State. Five years later, in 1969, this disturbed teenager committed another brutal murder, and he is now serving a life sentence at the State Penitentiary.

The brutality of the crime may not be a typical characteristic of an emotionally disturbed youth, but the startling lack of available, appropriate resources for treatment and rehabilitation of such young people appeared so blatant when the second murder was publicized in 1969, that a group of social workers attending a professional meeting that October, decided to form a committee for the emotionally disturbed child in this State.

The Council on Correction of the National Council of Social Workers invited other Virginia organizations dealing with children to attend a meeting in December, 1969, to form a Task Force for Emotionally Disturbed and Potentially Delinquent Youth. Someone came up with the inspired acronym of TEDDY to avoid the long title while reminding people that this task force spoke for a group of children who need help.

The first meetings were typical of first meetings in any forming organization; confused and confusing.

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well-intentioned, but without a clear focus. Getting it all together wasn't easy. Representatives from the State Department of Welfare and Institutions, from the Special Education Division of the State Department of Education, the Virginia Federation of Womens' Clubs, the National Association of Social Workers, the Virginia Juvenile Officers' Association, the State Commission for Children and Youth, the Virginia Treatment Center, the Family Planning Division of the Richmond Department of Health, Senator Hirst's Study Commission, and the Junior League of Richmond met to express their viewpoints on available services and those that should be available for the emotionally disturbed child in Virginia.

I remember the body language at the first meeting I attended. Speaking of strong vibrations! Foot-tapping and finger-drumming indicated what frustrations people were feeling in attempting to solve such a multi-faceted problem. But there was also, obviously, an enormous energy of concern ready to be directed.

The dilemma was, how could this unwieldy group of representatives from assorted organizations and agencies concerned about emotionally disturbed children make the whole system of State services for children more effective? The needs multiplied in the listing—more Special Education classes, more Special Education teachers, more institutions designed to help emotionally disturbed children and their families, more trained personnel to staff these institutions, and so on. We settled down to studies and reports.

A very thorough study of the emotionally disturbed child and his needs in the State of Virginia was made by Mrs. Roslyn W. Ramsey, a member of the TEDDY committee, who is now a Psychiatric Social Work Supervisor at the Virginia Treatment

Center for Children. Her paper, *Virginia's Dilemma—The Emotionally Disturbed Child*, was published in 1971, and I would like to quote a few of the facts presented therein. "From July 1, 1969, to June 30, 1970, Eastern State [Hospital] admitted 97 children for observation. Only 20 were retained for treatment as legally insane (psychotic). Seventy-seven were returned to their homes as 'not mentally ill.'" It is the disturbed child who falls into that larger group of 77 who were sent back home without treatment who concerns TEDDY. He is TEDDY. "Forty percent of the children who were returned home had made serious threats to injure or kill themselves . . ." and 58% of those sent home had had residential treatment recommended by the hospital authorities. But Mrs. Ramsey's paper points out that the State of Virginia does not have enough facilities to treat more than a fraction of its emotionally disturbed children. To quote again, "Public welfare agencies and the State Department of Education each year pay for the placement of a handful of children in residential treatment centers. Such placements are made at great expense (sometimes over \$10,000 per year per child). Almost all of these children are sent out of state because of the lack of appropriate facilities within the state."

The TEDDY committee also learned that more than 25% of the juveniles committed to State correctional institutions each year by juvenile court judges have committed no actual offense and have broken no laws, but they are "beyond control of their parents or guardians" and the State doesn't have other adequate facilities in which to place them; so they are placed in State training schools for delinquents, which haven't the funds to provide the psychiatric treatment these young people obviously require.

The Committee spent several months gathering pertinent data and committing individuals and organizations to active membership in TEDDY. The greatest need emerged, not surprisingly, as one of funds to provide increased services for children in our State. We determined to concentrate our energies on getting the necessary appropriations from the 1972 General Assembly, and our chaotic concerns focused on informing the general public of the needs of emotionally disturbed children in Virginia. We aimed to stimulate citizens to influence their legislators to provide for our disturbed youth.

As a task force we developed two major goals:

1. To ensure the establishment of one or more State-operated, regionally located *residential treatment centers*, within existing build-

ings, which could be staffed and equipped to serve emotionally disturbed children and youth, as well as their families, for a long period of time to enable them to function more adequately in their home communities and schools.

2. To expedite the funding and development of Comprehensive Community Mental Health Centers for both adults and children throughout the State of Virginia, in various strategic and accessible localities.

Included in our direction toward these two goals was the need for Special Education classes within the centers. There were no experienced politicians or lobbyists in our group, but, with ultimate faith in the democratic system, we settled into tackling the weedy reality of a grass roots movement. First, we broke up into three subcommittees: Information-gathering, Fund-raising, and Communications. The first subcommittee, in its research process, sent a letter-questionnaire to this state's 318 registered psychiatrists with a two-fold purpose in mind. To get some statistics concerning emotionally disturbed children who are treated by psychiatrists in Virginia, and to find out how practicing psychiatrists feel about the need for additional resources for these children. Seventy-eight responses were received. The overwhelming majority of these felt that additional residential treatment centers and out-patient services are needed for children in Virginia. A couple of typical direct quotations from the questionnaire support the goals of TEDDY. "The need is very great. I would make my services available to many, many more children if I could find beds for them" and "In my experience, residential treatment facilities or even day-care centers and special schools are practically nonexistent in the State of Virginia, either private or public." We felt encouraged that these busy professionals had taken the time to make comments of their own.

The Fund-raising committee went through all the painful process of writing letters and making calls to solicit financial help for postage and printing and taping, and they emerged from their campaign with all bills paid and a small balance on hand.

The Communications committee produced speakers for several interested groups, wrote letters to volunteer and professional organizations, and kept in close communication with Senator Hirst's Study Commission on Mentally Ill, Indigent, and Geriatric Patients, addressing the Commission at its Public Hearing and contributing information to its Study through a mutual representative, Mrs. Margaretta Miller, Psychiatric Social Work Con-

sultant. In its early stages, the Communications committee members wrote 30-second and 60-second radio spots to be broadcast on public service time. Mr. John Tansey, Executive Director of WRVA Radio gave us valuable time and advice, and, after listening to our radio spots, very kindly offered to have some of his professional writers redo them and tape them for distribution to stations all over the State. The results were dramatic.

The 1972 Legislature has met and adjourned now, and so have the three working subcommittees of project TEDDY. What did this task force accomplish, and what happens next? It is difficult to pinpoint whether or not TEDDY has been directly responsible for all of the new movements on behalf of emotionally disturbed children, but we certainly feel that we are part of a progressive trend.

The League of Women Voters of Richmond focused its annual meeting this spring on the needs of the disturbed child and is now actively studying the problem. The Junior League of Richmond invited TEDDY to put on an educational panel discussion for its December meeting, and it is now involved in the special education needs of the exceptional child. The Junior League of Norfolk also asked TEDDY to give an educational program, and several Junior Leagues in the State contributed money to TEDDY or distributed radio tapes. An established institution, DeJarnette Hospital, is being converted into a residential hospital for emotionally disturbed youths. An omnibus bill was passed to make special education mandatory in all localities in the State. Tuition grants have been raised to help send some children to private institutions for care. There are still responses coming into TEDDY because of the radio tapes. We feel that substantially more citizens have been made aware of the needs of our disturbed youth.

For the future, members of TEDDY are meeting to consider how we may most effectively continue to work toward our goals by joining efforts with some other established group or groups heading in the same direction. There are several possibilities to be explored. Doctor Heuchert, Assistant Professor of Education, Special Education Department at the University of Virginia is setting up a Council on Children with Behavior Disorders in Virginia. A group such as the League of Women Voters may present another avenue for progress. We are going to study the possibility of working

with Chapter 10 to encourage the establishment of more Comprehensive Community Mental Health Centers, and to make sure that these centers include services to children. We are disappointed that funds were *not* appropriated by the 1972 Legislature to hire more psychologists for State training schools for delinquents, and we foresee that we will have more work to do as the next session of the General Assembly approaches. Plans for a fall forum are now in the making. We would like to see the State of Virginia follow the example of North Carolina which held a forum on the emotionally disturbed child in 1969. The Governor and Lt. Governor of North Carolina participated in the Forum, as did nationally known professional people working in the area of child welfare. The nine Junior Leagues of North Carolina cooperated to co-sponsor this forum with The Honorable Robert W. Scott, Governor of North Carolina, the North Carolina Council of Child Psychiatry, the North Carolina Mental Health Association, and the Governor's Council on Juvenile Delinquency. Over 1,400 people attended this forum in Raleigh.

Recommendations from the forum may give us a guideline for future projects. They included:

1. The establishment of a special legislative study commission to study in depth the situation of the emotionally disturbed child in North Carolina.
2. A certificate renewal course on children's emotional health for local teachers.
3. Formation of a speakers bureau on the topic of children's emotional health.
4. Establishment of a local crisis control answering service for people needing help with a disturbed child.
5. Establishment of regional treatment and training centers.
6. Appointment by the State Department of Mental Health of a high-level person in charge of children's services.
7. Psychological testing of children before they enter school.
8. Special symposiums to train district judges who hear children's cases.

Each of these recommendations has been made a working reality to some extent in North Carolina. I hope that we can do as much for the growing young citizens of the State of Virginia.

# THE BUSINESS SIDE OF MEDICINE



# Accounting Systems and Patient Receivables: Complementary Management Areas\*

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The first segment of my discussion will deal with medical accounting systems and my evaluations of those systems. The second part of the paper will deal with the topic of improving the cash flow from patient receivables. Cash flow is in many ways dependent upon the effectiveness of a doctor's accounting system, and if the system works well and produces timely and accurate information, the cash from patient receivables will flow more efficiently.

**I. ACCOUNTING SYSTEMS.** Accounting is the art of collecting, summarizing, analyzing, and reporting in monetary terms financial information about an organization. The definition of accounting and its underlying data systems is equally applicable to a large corporate structure or to a medical practice, whether it concern a solo practitioner, clinic, large group, or other organization. The analyzing and reporting aspects of accounting are sometimes called "management control." The process of managerial control assures that resources are used efficiently within the organization. It is in this control area that many doctors have needed business and medical consultants. The extent and quality of managerial control tends to be a function of the accounting system being used.

The systems reviewed here are not complete. They are a sub-set of that part of the doctor's full accounting system which deals with bookkeeping and billing. While a Certified Public Accountant may keep the records for personal assets and liabilities, and calculate the depreciation on equipment for tax purposes and net income each year, the accounting system most important to the doctor is the one that revolves around patient receivables.

**Traditional Manual System.** The most common accounting system found in medical offices has been

a manual system. The manual system (I call it the "write-it-twice" system) is a safe one if (1) set up properly and (2) well-maintained. Problems arise more frequently in the latter category because, while most physicians realize that the system they use is all-important, and they get professional assistance to set it up, they or their office aids are deficient in maintaining it. For example, while I was in Los Angeles, I did some consulting work for a medical data-processing computer firm. Part of the computer operation involved converting a doctor's old system to the computer system. The firm had an entire conversion process using girls who would go into the doctor's office and handle the work. On the very first conversion, the girls found that patient charges had not been posted to the patient-ledger cards in six weeks! The payment postings were more up to date but still weeks behind. Four or five girls had to be placed in the doctor's office to post six weeks' worth of patient charges and some payments and, in addition, maintain the current business.

The problem with maintaining the manual system is that one has to write the transaction twice. Many doctors use a patient-visit slip where he writes the specific service that was performed and possibly the charge. He then gives it to his office assistant. The office assistant collects the patient-visit slips and enters the information in a day-book. The day-book shows a chronological listing of patient charges and payments. The doctor may desire a separate day-book for in-office calls, hospital calls, and house calls. This makes the system more complex, for there may be two or three separate input documents to handle and each possibly a different size and shape. Also, there is a greater probability for a lag to develop between performing the medical service and entering it into the day-book. The office assistant has to write service charges and payments into the day-book separately. Unfortunately, the information may be transferred from the patient-visit slip improperly, or it

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may be recorded incorrectly at the hospital by the doctor. If everything goes well, all of the proper charges for medical services performed and payments received will be entered in the day-book. Sometime later the information recorded in the day-book is transferred to a patient-ledger card. Each family, each responsible party, or each patient, depending upon how one organizes the records, has a card which contains a history of charges for medical services rendered, payments received, and an ending balance, if any. Much of this information is used to send out monthly patient statements.

Since the transfer, or posting from the day-book to the patient-ledger card, is done when time is available, it is possible that if very busy with patients, the office aid is not going to have much time to handle the accounting work. A situation could arise where a patient will receive a statement for medical services already paid for simply because this has not yet been reflected on his or her patient-ledger card. Conversely, a patient may go for months before receiving a bill for services performed.

The traditional manual system has its defects, and it is not the most functional system possible, but it is safe.

**The "Write-It-Once" Approaches.** The write-it-once accounting systems can either involve accounting machine processing or a pegboard variation. With accounting machine processing, the office aid accumulates the patient-visit slips and periodically enters the charge and payments received on both a day-book and a patient-ledger card at the same time. In other words, they are superimposed on each other, and the machine handles both at one time. A separate card is used for the day-book, and in back of that is placed the proper patient-ledger card. In some systems, a bank deposit slip might be placed in back of the patient-ledger card.

An office aid may need special training to handle the machine system, or the services of a trained operator may be required. What happens if they are ill? Further, an accounting machine is a fairly expensive piece of equipment. Given the cost and capacity of the machine and a doctor's usage rate, possibly an alternative is desirable. Also, and more important, there is still a lag in posting with the machine approach to a write-it-once system. An office assistant accumulates the patient-visit slips and a list of payments made, and uses the machine whenever there is free time. Again, it is possible that a patient will be billed for charges already paid because of the posting lag.

Among the write-it-once approaches, the peg-

board system is simple and inexpensive and, in addition, prevents posting lags and errors from occurring. A pegboard system consists of a clipboard fitted with pegs down one edge which hold the necessary forms "in register." In other words, forms are arranged on the pegs and held in proper order. The first form will typically be a patient-visit slip, for the charges for services performed, or a receipts slip, for any payments received. Underneath the patient-visit slip or receipt slip (through carbon), lined up "in register," is the day-book. Thus, charges and payments are entered into the day-book simultaneously. Beneath the day-book (through carbon) is the patient-ledger card. Possibly below those forms (with strong carbon) is placed the daily bank deposit for payments received. All of these forms can easily be lined up and handled by just writing the transaction once.

The pegboard system, like the traditional manual system, is safe but not optimal. However, if a doctor does not want to go into computer processing, it is probably the closest he can come to a truly efficient system.

With the systems described thus far, patient statements must be prepared and distributed at the end of the month or on a cycle-billing basis. These statements have to be typed or photocopied from the patient-ledger cards. Further, under these systems, insurance reports must be done by hand with the patient's name, medical services performed, doctor's code number, and charge typed out on the insurance form from the patient's ledger card.

**Computer Systems.** The State of Virginia is very fortunate to be behind in the area of computer systems. The states of New York, New Jersey, Connecticut, and California, because of their high population density, have been besieged, beginning about six or seven years ago, with computer data-processing firms. With a medical computer system for receivables, the end result is either fantastic or disastrous. There doesn't seem to be any middle position.

Four types of medical data-processing firms have been established. First are the software companies. They moved into this area to spread their fixed overhead over more operational packages. Most of them had very little expertise in understanding the operations and intricacies of a medical office. Many of them did not provide computerized insurance reports as part of their service. Many of them really did not give very much thought to the medical data-processing area. It was a sideline to them. Further, some of them developed a cash problem and would have liked to develop a solid medical data-processing service

but didn't have the funds. If a doctor had signed up for their service and were one of seven on the system, whatever problems existed were there to stay. There was no money available to get rid of the "bugs" and to develop the program further. Because of low liquidity and dissatisfied doctors, among other things, many of these companies have gone out of the medical data-processing business. It is easy to imagine where that leaves the doctor.

The second group of data-processing firms have been the individual proprietorships, started mostly by persons with a computer programming background. The individual knew a few doctors and thought it would be a good idea if he put together a package to handle their bookkeeping and billing. There are probably thirty or forty such individuals in Los Angeles who in their spare time, at night, or on weekends, handle doctors' accounts. Many have signed up only one or two doctors and found that their sideline business is unprofitable to them. Here again, many have dropped out of business. This leaves the doctor in a very precarious situation as far as his accounting records are concerned. Some of the individual proprietorships, however, have been successful and sold out their businesses to larger data-processing firms.

The next category of firms going into the medical data-processing area were a number of commercial banks. These banks moved into this area in order to use up their excess computer time and to gain additional bank deposits. Banks have been only moderately successful with the service; their programs are fine and safe but are rarely comprehensive. Most bank programs have excellent methods of maintaining patient receivables and coming up with delinquency reports, but they don't furnish insurance forms. This deficiency occurs because a computerized insurance report requires a thorough understanding of the medical business and the design of good input documents that are geared to each medical specialty. Both take time and funds.

In the last category, are the true, committed medical data-processing firms and proprietary drug firms. These firms have given extensive thought to (1) the development of the input forms required of each medical specialty, (2) the computer output necessary for the doctor, and (3) the conversion to a computer system. Unfortunately, some of these firms handle only the larger groups.

In summary, one has to be very careful in the selection of a computer data-processing firm. I think that we, in Virginia, can learn from the mistakes that have occurred in other states. When medical data

processing finally is established here in earnest, and I think it will come soon, we will be able to obtain better systems with fewer problems.

Why consider computer bookkeeping and billing in the first place? A major advantage is that it probably will increase cash flow. If the system is good, a doctor will have systematic and accurate bookkeeping and timely billing, as he should have under the write-it-once systems. In addition, he will also receive a delinquency report. A delinquency report shows information about patient accounts that are 60 days old, 90 days old, and older, such as the name of the responsible party, telephone number, ending balance, age of oldest charge and date of last payment. Naturally, if the responsible party paid something last week, one would approach it differently than if the last payment were made nine or ten months ago. With a traditional manual or pegboard system, a delinquency report involves much time (and money). An office aid must go to the patient-ledger file, pull every card that has a balance and figure out how much of each balance is delinquent. The aid then has to calculate the exact age of each balance. Unless a doctor has excess aids in his office, he is not going to get that report in time to exercise good managerial control. A good computer system will furnish the delinquency report. This report probably will help to increase cash flow because it provides information for collection from slow-paying patients. Also, one has quick identification of those accounts to turn over for collection. Further, a good computer program will prepare the insurance reports which have created a bottleneck in many medical offices. A computer system without insurance reports may not be a better buy than a pegboard system or even a traditional manual system.

The second main advantage of a computer system is that it can increase the doctor's productivity. With a good accounting system handling the patient accounts, insurance reports, and billing, the doctor can restructure his organization to allow his aids to work more in a paramedical fashion. I believe it is possible for a doctor to see 10% more patients per week simply through the use of better business practices and procedures, including an advanced accounting system.

When evaluating a computer system, one should look at the conversion procedures, the input documents that are necessary, the output documents that are furnished, and the costs.

1. *Conversion*: The conversion from one type of accounting system to a computer system

can be smooth or hectic. Determine if the data-processing firm will make a realistic manpower commitment for the conversion. Get some assurance that they will have two or three people in the medical office to sit down with the aids and make the conversion. Do not choose a firm that will come in on Saturdays, do it part-time, or after business hours. Reassure office aids that their jobs are not in jeopardy and that they are going to be assigned different and more important tasks which will contribute to efficiency and productivity. Find out if the firm has a non-technical operating manual. Many of the manuals are supposedly written in English but have been prepared by computer experts. Office aids may be totally overwhelmed with a technical discussion on how they should enter data into the system. Ask how the manual is distributed to your employees. Does the firm merely leave it without explanation, or do they teach it section by section, so that by the end of the conversion the aids will understand it? Finally, ask how long the conversion will take. This is the function of the manpower commitment, but it has been my experience that any conversion that takes more than a month is bad. The success of the conversion to a computer system will depend on both the doctor and the firm. The computer is not a panacea for a poorly run office. The best conversion and the best computer system operate from a well-run medical office.

2. *Input Documents:* The input required from the medical office is directly related to the frequency of errors and office confusion. Avoid input profusion. Avoid firms that require a sheet for all the in-office charges and another sheet for hospital charges; a sheet for the cash paid in the office; a sheet for all adjustments to the debit side of patient accounts and a sheet for all adjustments to the credit side of patient accounts; and yet another sheet for accounts written off. The better firms operate from two or three easily understandable input forms.
3. *Output Reports:* Very few medical data-processing firms have found a balance between too little and too much information. I have prepared a detailed list of what I consider to be the output necessary for effective management control: (1) a financial sum-

mary giving totals for beginning patient receivables, total charges for the period, total payments for the period, total adjustments, and the ending balance; (2) insurance reports printed up by computer; (3) a summary of insurance reports giving the name of the patient, the carrier involved, and the amount billed; (4) the monthly patient statements printed up by the computer; (5) the delinquency report; (6) a medical service report telling the doctor which medical services he performed during the period, the dollar-volume of each medical service, and the percentage of each medical service to the total charges for the month; (7) the daily journal, which is really the day-book, and (8) a patient's transaction report giving for each patient a record of his visits with the doctor, charges, and payments.

4. *Costs:* Many services charge an installation fee of up to \$.75 per account. The monthly charges per account should be between \$.30 and \$.70 per account per month depending upon whether insurance reports are prepared. (Unfortunately, my observation is that unknowingly the medical computer firms have made cost comparison as difficult as figuring out the cost of insurance.) Firms that have gone through the trouble of programming and marketing the computerized insurance reports will cost more, about \$.70 per account per month. The average doctor has between 400 and 600 active accounts so the costs can be easily calculated. If and when a computerized system is installed, the objective should not be to minimize costs but to maximize net income. If the computer costs are higher than a doctor's present costs, it may be possible for him to restructure his organization to use his office assistants more effectively somewhere else and thus raise his total net income.

When one is approached by a medical data-processing firm, these additional questions should be asked: (1) How long has the firm been in the medical business? (2) How many doctors are they servicing? (3) Can a doctor on their system (who is not also on their board of directors) be contacted to ask him some questions? Try to avoid the medical data-processing firms that are servicing less than 30 doctors.

### Questions and Answers

*Question:* My diagnoses fail to follow a pattern of repetitiveness. Can I still use a computer system for bookkeeping and billing?

*Answer:* I think it depends on the input requirements of the data-processing firm. If you get a large firm that handles these things on a regular basis, I don't think it makes any difference. They would get together with you and design some type of form specifically for you. It will be larger than other doctors' in the specialties, but I think they could do it. It is probably safe to say, the fewer diagnoses you have the better. It is not the computer that is in question here, it is the data-processing firm.

*Question:* Did you say a computer system that does not furnish insurance reports may not be economically justified?

*Answer:* That's exactly what I said. I'm not convinced that the costs of a computer system minus the insurance reports are justified. After all, you still have to hire or retain the aids to do them.

*Question:* Can I use a computer system in my rural location?

*Answer:* You have two problems in rural areas; (1) the conversion factor, in that most of the data-processing firms are located near larger cities and they have to send out crews to the rural location and (2) transmitting your data to the computer and getting the output back. There is one firm in Wisconsin that works through telephone lines and is essentially an "on line system." You communicate from the rural location to the central processing unit, and the information is fed directly back to your office. Unfortunately, I don't know what it costs or how successful it has been. On the bright side, we are now getting to the point where tapes and telephone input and output are making inroads.

*Question:* My accounting system is different from any you mentioned and is working beautifully.

*Answer:* I should have pointed out originally that the systems I have described are really general in nature and that there are literally thousands of different variations of systems depending upon the doctor's preferences and those of his accounting advisors.

**II. PATIENT RECEIVABLES.** In most cases, patient receivables constitute the doctor's largest asset. Obviously then, the average collection period of patient accounts is vital. With the economic downturn

we have experienced nationwide from 1969-1972, the extension of the average medical collection period has been alarming. To what should we attribute this condition? One important reason is that doctors refuse to charge interest on delinquent accounts (which they can do). Picture the individual family—they get their check, they deposit it, they buy food, they pay rent, and they pay all bills where there's an interest charge, small as the penalty might be. Whatever is left over they give to the doctor or dentist. Some months there is nothing left over, and the doctor has to wait. Next month the doctor sends out another bill, and the same process is repeated. Possibly this time around the responsible party is under a little more duress to pay some of his medical bill. You can easily see that when overtime hours are being reduced or eliminated and employment goes down, the average collection period for the doctor's receivables increases.

A good accounting system that contains few opportunities for errors and lags to develop and that produces accurate patient statements will solve over 75% of the receivables problem. Whether a doctor has a traditional manual system, a pegboard system or a computer system is not important. If he can distribute at a certain time each month an accurate statement in diagnoses, charges, payments, and total balance, three quarters of the problem may be solved. Naturally my conclusion will vary among specialties. For example surgeons will deal more with insurance companies and third-party payers. Their collection problem would not be as troublesome, except where they recorded incorrectly diagnoses or charges that exceeded certain limits as modeled by the insurance company. Hence, the following discussion on improving the cash flow from patient receivables, is directed mainly toward General Practitioners and Internists.

Thirty days after an original statement has been sent out and no payment has been received, a certain pattern should be followed. A delinquency report is necessary from the accounting system. A good computer system will provide one. If a computer system is not available, an aid should prepare a delinquency report from the patient-ledger cards. In terms of organization, the second month's statement should be sent out with the knowledge that it is a repeat, and with a dunning message on it. Exactly when a doctor starts dunning and what tone it takes is dependent upon his particular beliefs. If nothing is collected the second month, I would send the third month's statement with a stronger dunning message and ask the office aid to personally call the responsible party to

find out why no payments are being made. This is to let the slow payers know that the doctor is serious about collecting his receivables.

I have seen some doctors who were more aggressive collectors. After only 30 days, the patient would receive a statement with a dunning message and a telephone call. The third month it might be turned over to the professional collector. Whether or not one agrees with this policy, timely second and third notices with some dunning messages attached are definitely needed. I should mention a service offered by a collection firm in Los Angeles. Their experience has been that if you repeatedly contact people they will pay up. Their system produces 10 increasingly threatening letters four days apart. The computer turns them out like clockwork, which the doctor's accounting system would generally not do. The firm has achieved a remarkable 42% collection ratio from that system, which beats the national average by about 22%. When the account is so old that it is being sent to the collection agency, one should count on 20% being collected and 80% being written off—that is the national average.

A certain percentage of patients never intend to pay. They received your services and could care less about paying for them. They must be identified early. Others are just slow payers who are going through the bill-paying cycle mentioned earlier. Again, a doctor should tell all patients via timely, accurate billings, dunning messages, and a telephone call that he is really serious about collecting his receivables.

If collection experiences are futile with some patients, the next step is to turn these accounts over to a professional collector. It should be recognized that the reputation of collection agencies is not high. They have been known to use strong-arm tactics in obtaining funds. Look for a firm that collects the money in a "professional" fashion. Be sure to ask these questions. (1) Does the collection agency handle medical accounts with special care. It is probable that there are no firms that handle medical accounts only, except in larger cities. (2) Do they take pains with small accounts? Many collection agencies will obtain a listing of accounts and, being businessmen, will go after the largest ones first. After all, they receive a commission of roughly 50% of all money collected. A number of agencies simply refuse to go after small accounts, yet many bad accounts will be small—\$7.00, \$10.00, \$15.00. The agency should go after those accounts with equal vigor. (3) Does the agency

send regular status reports to clients? If they collect the receivables, you want to know that information at the end of the week so you can maintain a regular record on it. Also, by holding back reports, the collection agency can use your money longer. (4) Will the agency take proper legal action if necessary? Many firms are hesitant to start legal action because they have to use their own cash to start the process, and they feel that if they are unsuccessful they won't be reimbursed. A doctor should make it clear to them that he will reimburse them for whatever reasonable costs are incurred. (5) Finally, does the firm charge a realistic fee? The range of fees is from 30% to 50%, depending on local competitive forces. With a 20% nationwide success ratio and up to a 50% fee for money collected, each dollar of patient receivables is worth a dime at this point. Thus, one can see the importance of a good accounting system.

### Questions and Answers

*Question:* When should I send out my statements?

*Answer:* It would depend upon where your office is located. If you are in a town which is not dominated by one particular firm or institution, you could either try cycle billing, or the first or last day of the month. If you are in an area which *is* dominated by a firm or institution and they pay their employees on the 15th, then you should think about coming out with your statement on or about the 13th or 14th.

*Question:* How can I increase the amount of cash paid by patients when services are rendered?

*Answer:* Ask them. I think if I went into ten offices today, only one or two would ask me if I wanted to pay at that time.

*Question:* Can I use a collector in my rural setting?

*Answer:* In a rural setting, I think you should give more thought to using your office aid to obtain cash from accounts. I have always tended to shy away from putting the aids in that position because they can easily visualize themselves being on the other end of the telephone someday, and they are not going to try to collect that cash as vigorously as a professional collector. However, my experience has been in large cities. I would think the use of a professional collector would be more "touchy" in a rural situation than in an urban location.

# Internal Control of Cash in the Medical Office\*

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Most individuals have an aversion to a discussion of internal control because the need for such a safeguard stems from an aspect of human behavior we would prefer to ignore. Yet internal control is a necessity for most organizations, large and small.

Opportunities for appropriation of funds arise in many and varied circumstances. More important, persons who do appropriate funds to their personal use are not noticeably different or unusual. As a matter of fact, cases of embezzlement always involve trusted employees. This is obvious for, if the employee were not trusted, he would not have been placed in a position where he could embezzle.

For the purposes of most physicians, internal control has two fundamental objectives. The first and most obvious is the safeguarding of assets, principally the cash asset. Before going into this in detail, however, a second objective of internal control deserves mention and brief discussion. A good system ought to promote accuracy and reliability in accounting data. This is important to physicians for at least three reasons. First, the need for reliable data at income tax time is obvious and becomes doubly significant when one considers the fact that income levels of physicians make their tax returns especially suitable for detailed examination and possible audit. Perhaps most critical is the reporting of the income; unless specifically excluded under the tax law, all receipts are considered part of gross income for tax purposes. Failure to account for and report such receipts may result in charges of income tax evasion; a good system of internal checks and balances ought to prevent such failure. Second, accuracy in recording customer billings and payments is essential for maintaining good relationships with patients. Patients are especially disturbed if they are billed for services not rendered or at rates which

are inconsistent with the type of service rendered. Third, good money management requires the timely use, whether for investment or for daily business matters, of cash resources. Delays in handling and recording of such receipts reduce the cash flow and minimize the return on such resources.

Returning to the objective of internal control as a means of safeguarding cash, there are certain elements or characteristics common to good systems. They are as follows:

1. *Appropriate division of duty.* This is as fundamental to good internal control as pitching is to baseball. No employee should be allowed to do so much that it becomes relatively easy for him to embezzle funds and to conceal his embezzlement in the accounting records. In other words, the *custody* of cash and the *recording* of cash receipts and disbursements should be handled by separate persons in order that one may serve as a check upon the other. *A single employee should never be permitted to serve in the dual role of cashier and accountant.* Such division of duty does not require large numbers of employees. Consider, for a moment, theaters, where relatively good internal control exists despite the fact that only two employees, a cashier and a doorman, are involved. (Admittedly, an automatic ticket dispensing device contributes significantly to effective internal control.) Certainly, equally good internal control can be obtained in the vast majority of doctors' offices with as few employees. Remember: Distribute duties among employees so that they will check on each other.
2. *Responsibility for handling cash ought to be clearly fixed in one individual.* This helps to avoid those situations where accountability for cash shortages cannot be determined because more than one person has access to cash.

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3. The *use of prenumbered business documents* is highly desirable. Responsibility for missing documents can be assigned to the appropriate individual, thus making it much more difficult to conceal shortages through the destruction of supporting papers.
4. The *careful selection of employees* is essential to good internal control. A few minutes spent in thoroughly screening and reviewing the backgrounds of potential employees may save considerable embarrassment, as well as financial resources, at a later time.
5. Finally, serious consideration should be given to having a Certified Public Accountant *conduct an annual audit*. Such an audit offers several advantages. First, parts of the audit can be done on a surprise basis which could very well permit the detection of embezzlement. Second, where weaknesses in internal control do exist, a CPA should be able to recommend the appropriate corrective action. Third, the fact that your employees know that an annual audit is conducted provides in itself a deterrent to embezzlement. Fourth, a CPA in the course of his audit will become very familiar with the business aspects of your practice and will be in a good position to provide sound advice on tax and other business matters.

Now that some of the characteristics of good internal control have been noted, we can turn our attention to a few methods which are commonly used in perpetrating embezzlement. Incidentally, the methods cited are only illustrative and by no means all-inclusive.

1. An office assistant may perform a service, such as giving injections, fail to record the service, and appropriate for his or her own purposes any cash received in payment of the service.
2. An office aid may convince the employer that certain patients' accounts are uncollectible and that such accounts should be written off to "bad debts." If the aid has been setting aside collections from these or other patients for personal use, the write-off of the "worthless" accounts enables him or her to conceal the shortage.
3. An office assistant may prepare a check, payable to a fictitious person, give it to an unsuspecting physician for his signature, and

pocket the proceeds. This usually involves the submission of equally fictitious invoices to be signed by the physician as documentary support for checks. A variation of this same method involves the overpayment of invoices for later personal kickback.

4. An office assistant may embezzle funds and conceal the shortage by delaying the recording of cash receipts. This process typically involves a) the failure to record all cash receipts, b) the abstraction by the assistant of the unrecorded receipts, and c) the crediting of subsequent receipts to the wrong account. Because certain patient accounts are not posted accurately, this method has limitations. A shrewd assistant, however, may be able to manipulate accounts for an extended period before being confronted with more complaints than he or she can handle.

There are many other ways that embezzlement can be committed. Endorsements may be forged. Misuse of petty cash may occur. Regardless of method, however, the concealment of shortages typically requires that the embezzler in some way manipulate patient accounts and/or falsify documents supporting the disbursement of cash.

The alert physician will recognize any cues or signals that may cause one to suspect the possibility of embezzlement by an office aid. One such signal is the spending pattern of employees. Does their standard of living seem excessive in view of their supposed level of income? One case with which the writer is familiar involved the major officer of a small credit union. One factor that contributed to the detection of his defalcation was an observant director of the credit union who noted that the embezzler lived exceedingly well, given his income. This is not, of course, a foolproof test; there is the little old lady who embezzled hundreds of thousands of dollars but who lived very frugally and gave rather liberally to charity. She was a modern-day Robin Hood. Nonetheless, spending patterns of employees may suggest the possibility of embezzlement.

Frequent complaints by patients about billing errors may also point to something amiss. As noted previously, manipulation of patient accounts is a common method of concealing shortages. If patients are calling often concerning their bills, further inquiry is desirable.

Excessive commitment to the job may again signal the existence of problems. Do employees



avoid taking vacations or do they find it necessary to work inordinate amounts of overtime, either in the office or by taking records home? The aforementioned little old lady had not taken a vacation in years, and her embezzlement was discovered only when she became ill and others performed her work in her absence. Where such unusual devotion to the job exists, investigation may be justified.

Finally, frequent borrowing by employees, especially from office cash, may suggest financial stress. In any event, it is not a practice to be encouraged.

It is hoped that by now certain desirable internal control procedures are readily apparent. The following list may serve to summarize those safeguarding devices which physicians should consider.

1. Separate functional responsibility. Do not let one person be both accountant and cashier. Have your CPA reconcile your bank accounts. Where adequate checks and balances are provided through internal control, embezzlement becomes very difficult in the absence of collusion.
2. Use prenumbered forms and then account for them. This provides both a chronological and permanent file of transactions.
3. Have an annual audit by your CPA. The benefits to be derived have already been noted.
4. If possible, rotate employees to various positions at unannounced intervals. The deterrent factor here is obvious.
5. Deposit cash daily. Cash is too tempting to be left in the office very long.
6. Do not write off patient receivables to bad debts without your careful consideration and approval.
7. Bond your employees. Insurance coverage of this kind is the ultimate protection and \$10,000 coverage ought to be sufficient in the vast majority of cases.
8. Review supporting documents to determine that disbursements are legitimate and represent payments for value received before signing that check (or reimbursing petty cash). In some way cancel supporting documents so that they cannot be submitted a second time for payment.
9. Maintain physical control over accounting records during non-business hours.
10. Screen prospective employees carefully.
11. Require that employees take vacations and that they work usual hours.
12. Be observant. Be alert to danger signals that suggest wrongdoing by an office aid.
13. Test the effectiveness of your accounting system. For example, periodically review the deposit slip and compare its total with that of the daysheet or occasionally check a few patients' statements to determine their consistency with services rendered or accuracy of charges and/or payments. This will require but a few minutes and could be time well spent.

From the foregoing, it is evident that the implementation of internal control procedures does not require much more than the exercise of prudent behavior and a little common sense. Such exercise may save considerable grief, both emotional and financial, at a later time.

# Financing an Office, Personal Investments, and Money Management\*

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Today's medical doctor is very much like today's lawyer, engineer, or accountant in that he is trained very highly in his own field, but has received very little educational background for successfully managing the office he operates. Although I am not an expert in any of the areas which I am about to discuss, I would like to pass along some observations, most of which are drawn from experiences I have had while practicing as a CPA. There is no set way to handle many of these problems, and I can only present some of the pros and cons I have heard and experienced over the years in these different areas.

The first question that comes to mind when one considers financing an office is that of lease versus purchase. Generally, the main advantages given for a lease are the current deduction of the rental or lease payments for income tax purposes (a tax advantage) and the improvement of the lessor's balance sheet as a result of not having to include as a liability the money borrowed for the purchase of the asset (a financial advantage). In most instances, there no longer exists any tax advantage in leasing. The tax law now permits what we call accelerated depreciation which usually affords as much deduction for purchasing. More often, the outright purchase of the asset will result in greater tax deductions in the earlier years than leasing. The financial advantage of improving the lessor's balance sheet could be worthwhile in some instances. However, I doubt if many doctors will have much of a problem with the acceptance of their personal balance sheet by financial institutions over their years of practice. The only way to really figure the comparative cost of a lease or a purchase is to take into consideration all of the tax and financial

factors. I believe, however, that for most items, including automobiles and office equipment, the cost will be greater when an item is leased than when it is purchased.

There are many methods of financing. An important factor is the advantage doctors have over other people seeking to borrow money for somewhat the same purpose. While many doctors will not have very good financial statements, or for that matter very good earnings records when they first set up practice, banks recognize their potential earning power, and in most cases are eager to do business with them. When dealing with a bank, one should keep in mind that usually they have two departments in which they make most of their loans. The first of these is the installment loan department common to all banks, and it is from here that they generally prefer to loan money. The reason for this is simply that consumer or installment loans for the most part carry a much higher interest rate. The other department is the commercial loan department, and it is here that customers are charged the better interest rates. When borrowing money from a bank, one should make sure they quote the effective simple interest rate, because a simple interest rate of 6% is about 60% of a 6% installment interest rate. Often, if the borrower says nothing, the bank will give him an installment interest rate loan, so it is very important for a doctor to let the bank know that he is aware of the difference.

Equipment suppliers are another source of money when funds are needed for setting up an office. Since the financing of the equipment is just one part of the total purchase arrangement, it is often possible to get just as good a deal from the supplier as it is from the local bank. However, in general the interest rates charged by equipment suppliers are greater than those charged by a local bank and other financial institutions.

There are other methods of financing. The

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Small Business Administration has commercial programs which, though not specifically designed for doctors, permit them to loan money to these professionals. One particularly good area is the loans they will make for a doctor to construct an office building. Although the SBA has had a reputation for requiring a lot of red tape, this is no longer true. An SBA loan now presents no more difficulty than a similar loan secured from a bank. In addition, it is possible to save interest costs, because in many instances the SBA will lend money at lesser rates of interest than can be obtained commercially.

Whether or not a doctor buys or leases office space depends a great deal on the town in which he practices. The medical buildings constructed through a cooperative effort by doctors in our area have been extremely successful. Not only have they proven beneficial in terms of the doctors' practices, but also the doctors' stock investments in the corporations established for this purpose have greatly appreciated in value. Thus, the cooperative construction of medical buildings is a good way for a doctor to acquire the type of office space he wants at a desirable monthly rent and at the same time make an attractive investment in the capital stock of a growing corporation.

Working capital may or may not be a major item to finance. If a doctor's practice is properly managed it should require very little working capital; if poorly managed it will take a great deal. The most significant factor in this category is the accounts receivable. These are usually the most difficult to control. Even if a doctor does a good job of collecting his receivables, he should keep in mind that when he sets up a practice, a large part of his work will go on the books and that it will be 30, 60, or 90 days before he collects some of his accounts. With this in mind, when he first talks to a banker, it might be a good idea for him to request that some additional money be included in any loans he receives, to pay his office and personal living expenses for two or three months.

A doctor who sets up his office operations properly should start making money. Once this happens he will become very conscious of the taxes he is paying and the little amount he is able to set aside for savings or investments. In general, there are two reasons why people take some of their current income and set it aside for an investment or savings program. First, is the desire to save taxes. Second, is the wish to lay aside something for a rainy day. When investing for tax savings, beware of salesmen and brokers selling tax sheltered investment pro-

grams. Certainly most of these people are honest, competent, and reliable but there are, unfortunately, many who either misrepresent what they are selling or who are simply incompetent. Doctors should also be aware that most revenue agents, and the Internal Revenue Service as a whole, dislike tax sheltered programs and will give you a rough time about them when your tax return is examined. Also, many of these programs are covered by tax laws and regulations which are very vague and which can be interpreted differently by the Government and the taxpayer.

Investments in the oil and gas industry enjoy a significant tax advantage. But this is an area which the Government is starting to attack, and many of the programs sold by salesmen and brokers are not as black and white as they may seem. Recently there have been three or four cases reported in *The Wall Street Journal* where the Internal Revenue Service is taking to court several limited partnerships which had millions of dollars invested by ordinary professionals. If won by the Government, these cases will result in disaster for the investors concerned. Thus, any investment in the oil and gas industry should be investigated thoroughly, and it is a good idea to have a tax adviser review the program before money is put into it.

Real estate is becoming popular with high income people because it is one of the few investments that can be paid for from the income of the property. It is difficult to pay for stock with just the dividends one receives, but it is often possible to pay for a building with the rent received. Real estate enjoys a significant tax advantage in that in the early years the owner gets to depreciate, or write off, the cost of the building in addition to the interest he is paying on the loan, and the total of these two is sometimes greater than the rental income received which results in a tax loss. In the last couple of years we have seen the formation of many limited partnerships in Virginia which are established to enable the high income investor to make an investment without the risk he would normally incur as the sole owner or as a general partner in a partnership. I believe that real estate is a good area in which to invest if some tax advantage is desired and appreciation rather than income is your investment goal.

Agriculture is a big enterprise, and all of us have heard about doctors who buy farms to save income taxes. This is not as easy as it once was, and many farm losses are now being disallowed because of the Government's position on hobby losses. How-

ever, a farm, even if run for profit, can be a very attractive tax-savings vehicle and one that, if managed and operated properly, can reap significant returns over the years. In recent years, many large agricultural companies have been forming limited partnerships to enable the ordinary investor to make an investment in some sort of an agricultural program. Most of these partnerships are cattle operations, and most of them involve significant tax write-offs, which are sometimes more than the investment itself in the earlier years. A lot of people have gotten burned while making investments in this area simply because the cattle that were put into the limited partnership by the general partner (usually the seller) were priced too high, and it was impossible for the investor to ever come out even. However, again through thorough investigation and consultation with a tax adviser, it is possible to make an investment which will save some taxes and at the same time result in some savings.

There are also many tax advantages in qualified profit sharing and pension plans, and probably more people set up these plans for the tax advantages than for the investment advantages. If tax shelter is desired and if there is money to set aside and save, in my opinion this is the very first direction that one should take to accomplish these objectives. Such programs are tax deductible (a tax shelter), and one is given a great deal of flexibility as to the nature of investments from which one chooses.

Tax-free bonds offer yields which vary with the times. In other words, economic conditions influence the rate of return that one receives. Just two years ago, it was possible to invest in these bonds and receive rates that are unheard of now. These bonds offered a very good investment at the time; however, since then, the rate of interest paid to the bondholder has decreased, and now a person has to really look around before he can find tax-free bonds that compare favorably to some of the taxable commercial bonds that are available for investment.

For those who want to invest for reasons of security and who are not interested in a tax shelter program, there are the recognized principal areas of investment. I should mention at this point that everyone ought to have some savings such as a savings account in a bank or a certificate of deposit which can be used in case of emergency. I have heard many times the suggestion that a man's investments ought to be in two principal areas. Fifty percent should be of the kind that vary up and down with the times, such as stocks and real estate, and the other fifty percent should be of an invariable nature, such as savings ac-

counts and insurance, which are always available if needed. As a variable area of investment, stocks and bonds are unique, and it is recommended that one obtain a competent adviser in this area. For professional men to get involved in the stock market to the extent of being their own adviser is very impractical and foolish.

It is possible sometimes to make investments in closely-held companies that reap a much larger return than could be obtained in the stock market. However, because of a doctor's income and status in his community, he will be approached often by people who want him to make an investment in some kind of deal they have put together. Many of these schemes will be good, but there will be a significant number that are bad. Here again, careful investigation is recommended. So many times I have seen doctors, like other high income individuals, invest in a small company with disastrous results simply because they did not take the time or seek the counsel necessary to insure that they were making a sound investment.

Insurance is an item that inspires many different opinions. Most doctors will need a fair amount of insurance until their children are through college and most of their debts are paid. There are two schools of thought regarding the type of insurance one should buy. One contends that term insurance is all that is needed, and the other believes that everyone should buy permanent insurance. The difference in the two is basically this: Term insurance in the long run is generally the more expensive. But if you do not have an abundance of cash, particularly in the earlier years of your practice, term insurance will provide protection with much less out-of-pocket cost. When considering life insurance, one should not overlook some sort of plan for income protection. For most doctors, their greatest asset will be their education and ability to practice as a physician. It is as bad financially for a doctor to become disabled and cease having any income as it is for him to die.

I just want to say two things regarding the withdrawal of cash from the medical office. First of all, there is an advantage in having a bank account for the office practice and a personal account for personal matters. It is best to draw a set amount each week or each month from the office account and put it into the personal account rather than drawing out whatever is there or spending whatever happens to be needed. There is no question that the high income professional gets into just as much financial trouble by spending too much of his income as does the lower paid factory worker. The advantages of systematic

withdrawals from the office cannot be overemphasized.

Most doctors will be paying their income tax on a quarterly estimated basis, and most of them will prepare this year's estimate based on last year's tax. The result of this is that a doctor will have to pay additional tax on the increase in his income from one year to the next, and provision for this extra tax is absolutely necessary. Professionals take care of this in a variety of ways. For example, a doctor can simply keep track of his income and ask his tax adviser to let him know where he stands during the year. Another method that works very well for some people is that of taking a percentage of all withdrawals made from their office and placing it into what they would call a tax account from which they make all of their tax payments. This is a good way to insure that money that will belong to the Government when the tax return is filed will not be spent. On this subject, the method of tax accounting a doc-

tor chooses will greatly affect his working capital needs. If he elects the cash basis of accounting, then he doesn't have to report as income his fees until they are paid. Thus he will not have to pay income tax on income which is not in cash form. In my opinion there would practically never be an instance where the accrual basis of accounting would be preferable over the cash basis.

I mentioned earlier that accounts receivable are the major item included in the working capital. The type of billing system and the method of follow-up a medical office will have for accounts receivable is extremely important and if properly handled will result in the need for much less working capital. If a doctor has the right tax method of accounting and a good billing system for his accounts receivable, he will find in most instances that his demands for cash will diminish very shortly after he goes into practice, thus enabling him to spend more of his time on medical matters for which he is better trained.

SCRIPTA MEDICA

# Problems in the Delivery of Health Care\*

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Mr. President, Members of the Faculties and Administration, Members of the Largest Classes ever to Graduate from the Medical College of Virginia, the Health Sciences Division, Ladies and Gentlemen:

I feel very much honored by the opportunity to present this Commencement address. Like a friend of mine who loves to talk, I prefer a large audience; thus it is a particular pleasure to be here, since you make up the largest group to whom I have ever spoken face to face.

The news these days is generally bad. Much of it is concerned with the inadequacies in the provision of medical care; its great cost; the shortage of health care personnel; and the maldistribution of the personnel available. All are blamed on the present system, or "non-system."

Yet we of the health professions may take heart from the many notable advances made in this century. A few examples are the development of the chemotherapeutic agents and antibiotics; the isolation and identification of hormones, such as insulin and cortisone; and the preparation of vaccines against polio, measles, and whooping cough.

Between 1958 and 1968, the death rate from polio dropped virtually to zero and that from tuberculosis decreased by 90 percent. The infant mortality rate dropped 45 percent per 1,000 births and that for maternal mortality 88 percent.

Between 1900 and 1970, the life expectancy at birth for females has increased from 50 to 74.2 years and for males from 48 to 67 years. A child born today may expect to live twenty years longer than if he had been born in 1900.

Obviously many serious problems remain. High on the list is the question of how to provide health care of the first class for everyone. Such health care is coming to be regarded as much a right as "life, liberty, and the pursuit of happiness," repre-

sentation by counsel in criminal cases, and access to an education.

When we talk about health care, we are really talking about services; these are what are demanded, supplied, and purchased. More services may be made available by:

- I. Increasing the number of providers.
  - a. Enlarging all our professions as is now being done. Thus there were 7,081 physicians graduated in the United States in 1960 and 8,367 in 1970. Your class of 478 doctors, nurses, dentists, pharmacists, graduate students, and allied health personnel is the largest ever turned out here. Specifically, the class of 120 in medicine is the largest since 1952 (102 graduates) when we were associated with the then two-year school in West Virginia; furthermore, this class contains eight members who are receiving the M. D. degree at the end of three years. This experiment is being carried out in a number of medical schools with the belief that, under the proper circumstances, the long process of medical education may be significantly shortened.
  - b. Relying more on other health personnel for services now provided by physicians. This especially applies to nurses, as nurse midwives, nurse anesthetists, and nurses especially trained for first-line care in office and home practice. Unfortunately, these activities remove the nurse from nursing.

Cooperative efforts are developing between physicians and pharmacists, especially in hospital practice; in fact, a fresh breeze of concern for total health care is blowing throughout the health professions.

\* Commencement address delivered June 5, 1971, at the Medical College of Virginia, Richmond.

- c. Training new types, such as physicians' assistants. Outstanding examples are the programs at Duke University, Alderson-Broadus College in Phillipi, West Virginia, and the Medex program at the University of Washington in Seattle. Many other experimental approaches are under study.
- II. Increasing the efficiency of the present personnel: in the organization of neighborhood health centers, group practice, and health maintenance organizations where personal and continuing care with emphasis on preventive medicine can be provided; in hospital emergency rooms where that new specialist created by public demand, the emergency room physician, supplies all comers on a 24-hour basis with first-class care at a reasonable cost; and in multiphasic screening programs where in several hours at a modest cost walking patients receive a battery of tests, the results of which are quickly available to the physician, thus allowing him to provide better care for more people at less cost.
- III. Limiting the demand.

Many studies attest to the remarkable increase in the demand for and use of medical services. Thus, in 1968, expenditure for such services made up 6.6 percent of the gross national product, almost double that of 1929.

No way of limiting these is apparent; in fact, a further increase is expected, especially when economic barriers are removed as illustrated by Medicare and Medicaid. For example, in this latter program in our state, a model for the nation, the projected number of beneficiaries at its beginning in July, 1969, was 100,000. At the end of the first year, 197,000 had registered

A clearcut way to limit demand would be to limit the number of demanders, that is the number of people. Everyone is concerned with this problem from their own particular angle. For a while there seemed to be some hope, since the birth rate per thousand declined from 22.4 in 1962 to 17.4 in 1968; however, the best available evidence indicates a new increase to 18.2 in 1970.

In this connection, progress should result from the widespread efforts at education about birth control, the relaxed abortion laws, and the development of improved methods of contraception, such as periodic

vaccination against pregnancy, harmless and reversible sterilization, and new types of "The Pill," regarded by many as the greatest invention since gunpowder.

- IV. Correcting maldistribution which exists in at least two forms: one, geographic, in which there are "too many" health professionals in some areas, such as the suburbs, and not enough in others, such as rural communities and parts of cities; and the other, by type of work, in which there are too many personnel of one kind and too few of others; in medicine the deficit seems especially severe in those who provide primary, continuing, and comprehensive care to the family.

In both of these there is a large economic element.

Attempts to resolve the geographic aspect have included special scholarships for those who would agree to practice in an area of need for a designated length of time. These have been about 25 percent effective. Efforts also have been made to interest natives of the deprived area in the profession needed and get them into that profession with the idea that they would return to practice in their native community. The experience is that only 20 percent of country boys return to country practice.

It has been suggested that all graduates be required to serve a period of time in an area of need, that is, a draft for community rather than military service.

There is no ready answer to the question of maldistribution by specialty. I believe that the concern you young men and women have shown for the needs we are discussing, plus the development everywhere of programs to broaden the scope of your activities, such as those to teach and train family doctors, will bring about a very desirable change in the mix of our professions.

Throughout the discussions of maldistribution, solution by regimentation always arises. I find this particularly distasteful and hope it does not become necessary.

It is important to realize that there is no conceivable way that the demanded services can be supplied in the immediate future. The situation is hopeless. If this is understood, there will be less disappointment and frustration as we attack the problem with new or changing methods.



If it were possible to make such services available, how should they be paid for and delivered?

I believe that the interests of all concerned are best served by the fee-for-service system where the patient selects his own physician for whatever reason, sees him whenever necessary, and lets this doctor work out the problem as best he can. The patient expects to pay, the doctor expects him to pay, and there is no third-party interference of any kind. For this arrangement the United States is the last frontier. This system has never been available to, or apparently is not wanted by, large numbers of our citizens.

In the past fifty years, efforts to meet the need for funding have resulted in the development of the vast health insurance industry; the tremendous increase in the amount of health care provided by salaried physicians in industry, private clinics and groups, medical centers, and governmental agencies; and, for those who cannot pay, direct support from tax funds as illustrated by Medicare and Medicaid.

Yet there is general dissatisfaction. The trend toward a federal system of medical insurance continues and is gathering momentum. Plans include those of the National Health Insurance Committee, the American Medical Association's Mediredit, the American Hospital Association's Ameriplan, the ideas of the private insurance industry, and those expressed by the President and various members of Congress.

All these groups are responsive to large num-

bers of people with different backgrounds and interests. One cannot escape the idea that there is a basic, popular, or grass roots demand for some national system of providing medical care. The question is when and how this will be done.

Ladies and gentlemen of the graduating classes, I believe that hope for a sound plan lies in a joint effort between informed citizens—the consumers—and members of the health professions, namely you—the providers.

Over the next few years you will decide what special area of your profession you will enter, and where you will live and work. Let me urge you, on the one hand, to **participate** in the attempts to solve these problems, and, on the other hand, to **cooperate** among yourselves and with the other citizens in such efforts.

The watchwords are **participation** and **cooperation**.

Let me quote from "The Devotions of John Donne" written in 1623.

"No man is an island entire of itself; every man is a piece of the continent, a part of the main; if a clod be washed away by the sea, Europe is the less, as well as if a promontory were, as well as if a manor of thy friends or of thine own were; any man's death diminishes me, because I am involved in mankind; and therefore never send to know for whom the bell tolls; it tolls for thee."

Good-bye and good luck!

# Musculoskeletal Sarcoidosis and Rheumatoid Factor\*

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An extensive review of sarcoidosis in 1952, reported that one of the characteristics of the disease is the unaffected joints (8). However, a careful reading of this article reveals gross photographs and radiographs which are quite compatible with inflammatory arthritis. In that same year it was emphasized that sarcoidosis can present itself as arthritis (10). The association of sarcoidosis with hilar adenopathy, erythema nodosum, and polyarthritis was described in 1953 (Löfgren's Syndrome) (7). Five cases of sarcoid arthritis were reported by Sokoloff and Bunim in 1959, and synovial granulomata were noted in three of the five patients studied (12). Subsequently, a number of articles have appeared in the literature reporting the musculoskeletal involvement of sarcoidosis to vary between 2.2 and 38% (9, 13). Usually associated with hilar adenopathy and erythema nodosum, musculoskeletal sarcoidosis is less frequently linked with transient arthritis, arthralgia, or periarticular inflammation. Its relationship to destructive polyarthritis, myopathy, or tendinitis is relatively uncommon.

The discovery of the rheumatoid factor in sarcoidosis (6, 11), coupled with the observed musculoskeletal involvement, prompted a review of our experience at the Medical College of Virginia.

The charts of 224 patients with sarcoidosis were examined. Of the 224, those selected for our study were at the time being followed as outpatients because of their condition. Sixty such patients were

available for personal observation and evaluation. These 60 patients had been followed at MCV from 1 to 372 months with an average of 46.8 months.

In making a histologic diagnosis of sarcoidosis, we rely primarily on peripheral lymph nodes. Excised palpable cervical, epitrochlear, and axillary nodes have been our first choice for biopsy material. In the absence of palpable lymph nodes, we usually perform a scalene node biopsy, and in about 90% of these cases, non-caseating granulomata have been revealed when the clinical findings suggested sarcoidosis. In a few patients, a skin lesion has been used as material for microscopic examination, but in most cases when the skin has been biopsied we have obtained a second source of material. A lung biopsy has been performed in about 5% of our patients; in most instances the clinical manifestations were atypical, and a lung biopsy was considered a better source of material for bacteriological as well as for histological studies. We generally have not relied on liver biopsies where the yield of granulomata is around 75% (1).

The following serologic procedures were employed.

1. Sensitized Sheep Cell (SSC): The SSC test used was the Heller (4) modification of the Waaler-Rose test. Test sera were absorbed with unsensitized sheep cells and diluted in saline. Sheep cells, from a constant source, were sensitized with 1/20 the basic agglutinin titer of rabbit anti-sheep cell serum. Titers of 1:20 and above were considered positive. The SSC test was standardized in this way in order to obtain relative specificity although it is not as

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sensitive a test as those used in other laboratories.

2. Sensitized Human Cell (SHC): A selected DCE/DCE test cell was sensitized with Ripley serum (high-titered anti-DC), diluted 1:10. The Rh positive cells were sensitized for 30 minutes at 37°C and then washed three times with saline. Test sera were titrated in saline in 0.1 ml volumes. Titers of 1:20 or above were considered positive. The SHC test was especially valuable in obtaining reproducible titers of rheumatoid factor in those individuals who were negative with the SSC test.
3. Latex Test: This test was performed with the commercial reagents supplied by the Hyland Laboratories, Los Angeles, California. Reactions with the sera diluted 1:20 were considered positive.

The results of our studies are illustrated in the accompanying tables. Table 1 lists the average age of the patients when sarcoidosis was first diagnosed. Of the 60 patients, 38 were Negro females (63.3%).

Table 2 lists the presenting symptoms or why a diagnosis of sarcoidosis was suspected. It is noted that 22 of the 60 patients (36.6%) were asymptomatic, but sarcoidosis was suspected from screening chest radiographs and was subsequently proved.

Table 3 lists the types of musculoskeletal involvement present in 19 patients. Nine of the 60 patients (15%) presented with arthritis as the initial manifestation of sarcoidosis. Five of these nine had the syndrome of migratory arthritis, erythema nodosum, and radiographic findings of hilar and right paratracheal lymphadenopathy. Two patients had arthritis and an abnormal chest radiograph but did not have erythema nodosum. One patient, a 20-year-old white female, had the recently described condition of periarticular ankle inflammation and bilateral hilar adenopathy (2). The arthritis and pulmonary radiographic findings cleared spontaneously within four weeks in eight of these nine patients. One patient progressed to destructive polyarthritis

TABLE 1. AGE, RACE, AND SEX OF 60 PATIENTS WITH SARCOIDOSIS

	NM	NF	WM	WF
	9	38	4	9
Ages:	(14-48)	(13-72*)	(27-61)	(24-50)
Av:	25	28	38	35

\* Only 1 patient over 52

TABLE 2. PRESENTING SYMPTOMS OR WHY SARCOIDOSIS WAS SUSPECTED IN 60 PATIENTS

	No.
1. Routine chest film	22
2. Chronic cough	7
3. Fever of undetermined origin	6
4. Erythema nodosum and arthritis	5
5. Uveitis	5
6. Arthritis	4
7. Lymphadenopathy	4
8. Dyspnea	3
9. Hoarseness	2
10. Fatigue	2

which spontaneously entered a permanent remission in two years.

Six of the remaining ten patients (32% of total) developed short-lived arthralgia during their course of follow-up. Four of the six progressed from Stage 1 pulmonary disease (hilar lymphadenopathy) to Stage 2 disease (hilar lymphadenopathy and pulmonary infiltration). Two patients had Stage 1 pulmonary disease which became normal in six months.

The other four patients (21% of total) developed either short-lived oligo- or polyarthritis. Three of these patients progressed from Stage 1 to Stage 2 pulmonary disease. One patient progressed from Stage 2 to Stage 3 (pulmonary infiltration and fibrosis).

**Other Organs Involved.** Liver function studies, other than serum protein determinations, were not routinely performed. Liver biopsy was carried out

TABLE 3. TYPES OF MUSCULOSKELETAL INVOLVEMENT PRESENT IN 19 OF 60 PATIENTS WITH SARCOIDOSIS

I.	Erythema nodosum, hilar adenopathy, arthritis				
	Total	NM	NF	WM	WF
	5	:	4	1	
II.	Transient arthritis				
	Total	NM	NF	WM	WF
	6	:	3	2	1
III.	Transient arthralgia				
	Total	NM	NF	WM	WF
	6	:	3	1	2
IV.	Periart. inflam. and hil. adenopathy				
	Total	NM	NF	WM	WF
	1	:			1
V.	Destructive polyarthritis				
	Total	NM	NF	WM	WF
	1	:	1		
Total:		0	11*	4	4

\* The preponderance of Negro females is in accord with the observations of others.

in only one patient, and this revealed non-caseating granulomata. Marked hepatomegaly was noted in three patients. Six patients had uveitis. One patient had uveoparotid fever and one asymptomatic parotid swelling. Laryngeal involvement in two patients was manifested by hoarseness, and one required a tracheostomy. Skin involvement of our patients could not be evaluated since careful skin examination was not performed at each visit. Only three patients, however, were noted to have skin involvement initially.

**Synovial Fluid.** Synovial fluid examination was performed in only two patients. One patient was a 25-year-old Negro female who entered the hospital because of fever of unknown origin. Polyarthritides subsequently developed. Synovial fluid examination revealed a poor mucin clot; leukocyte count of 24,700/mm<sup>3</sup> with 87% polymorphonuclear cells and 13% mononuclear cells; sugar 30 mg per 100 ml; and protein 4.2 gms per 100 ml. No crystals were observed. Percutaneous synovial biopsy revealed a non-specific chronic synovitis.

The other patient, a 30-year-old white male, had Löfgren's syndrome. The mucin clot test was poor; leukocyte count 42,500/mm<sup>3</sup> with 90% polymorphonuclear cells and 10% mononuclear cells; and sugar 78 mg per 100 ml with simultaneous blood sugar of 102 mg per 100 ml. No crystals were observed. Synovial fluid protein was not done. In neither of these fluids was rheumatoid factor found.

**Miscellaneous Blood Studies.** Four of the 60 patients had peripheral leukocyte counts of less than 4,500/mm<sup>3</sup>. In none of these was there peripheral lymphadenopathy or splenomegaly.

Serum calcium levels were determined in all 60 patients. In only one case was there an elevated level—12.4 mg per 100 ml.

Serum uric acid levels were performed in all 19 of the patients with articular symptoms and in 23 of the other patients. No elevations were found.

**Rheumatoid Factor and Serum Proteins.** Reactive slide latex flocculation tests with negative sensitized human cell tests were noted in only two of the 60 patients (3.3%). One of these patients was a 32-year-old Negro female with Stage 3 lung disease (pulmonary infiltration and fibrosis) of at least seven years' duration. Articular symptoms were denied. The serum gamma globulin was diffusely elevated. She was receiving long-term adrenocorticosteroids. The other patient was a 30-year-old Negro female who had similar history and laboratory findings.

Serum protein electrophoresis was performed on

47 of the 60 patients. An elevated gamma globulin of the diffuse type was noted in 35 (74%).

**Conclusion.** Articular manifestations of sarcoidosis were present in 19 of our 60 patients (32%). This correlates with previously reported studies. In all of our cases but one, the articular manifestations subsided in eight weeks. This fact and the absence of hyperuricemia are in contradistinction to other studies for which we have no adequate explanation (13, 5, 3).

The finding of reactive latex flocculation tests in only two of 60 patients is an interesting observation and deserves further comment.

It has become apparent that rheumatoid factors are not abnormal antibodies but rather normal serum components present in low titer in normal as well as diseased persons. These "heterophile" anti-globulin antibodies reach their highest titers in rheumatoid arthritis, and the diagnostic value of high titers of these antibodies may be compared with the diagnostic value of titers of another heterophile, the anti-sheep erythrocyte antibody and the associated disease, infectious mononucleosis.

Positive slide latex tests have very little diagnostic value except possibly in the negative sense. The percentage of positive tests in a non-rheumatic population is apparently related to the degree of hypergammaglobulinemia.

In our geographic area, the young Negro female, in accordance with our study, was most prone to sarcoidosis. This segment of the population is not characterized by an unusually high incidence of positive latex tests, and thus we were not surprised to find that our patients with sarcoidosis did not show an increased incidence of positive tests for rheumatoid factor. None of these patients showed positive SHC or SSC tests.

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# A Modification of the Spectrophotometric Method for Determining Oxyhemoglobin Affinity\*

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The role of hemoglobin as a carrier of oxygen in the blood was established in 1859 by Hoppe-Seyler (12). Bert (3, 4), using whole blood, furnished experimental data whereby an oxyhemoglobin affinity curve could be plotted. In 1886, C. Bohr published data on purified hemoglobin for the second curve of oxyhemoglobin affinity (23). By 1903, Bohr had established that the oxyhemoglobin affinity curve was S-shaped for both whole blood and hemoglobin in solution. Since that time, various methods have been reported, or modifications thereof, to estimate oxyhemoglobin affinity (2, 14, 15, 16, 18, 19, 24, 25, 26, 27).

The curve resulting from a plot of the degree of hemoglobin saturation as a function of ambient oxygen pressure is conventionally described in terms of the empirical equation derived by Hill (17),

$$\frac{y}{100} = \frac{KP^n}{1 + KP^n}$$

where  $y$  is the percent saturation of hemoglobin,  $P$  is the partial pressure of oxygen, and  $K$  and  $n$  are constants. But as noted by Adair (1), this equation does not hold for all values of  $y$ . Deviation from the Hill approximation occurs when there are negative interactions between hemes and during progressive oxygenation of the molecule leading to a marked change in the strength of interaction, (21). The interactions of the hemes account for the sigmoid oxyhemoglobin affinity curve.

There are two shape parameters defined by the Hill equation,  $n$  and  $k$ . Called the sigmoid coefficient (11), because it denotes the degree of departure of the curve from a rectangular hyperbola,  $n$  has been shown from thermodynamic studies to be closely related to the average free energy of

interaction of the oxygen-binding sites on the same molecule (29). The value of  $n$  can be estimated from a logarithmic plot of the Hill equation. From the equation it can be shown that

$$\log \frac{y}{100 - y} = \log K + n \log P$$

so that a plot of

$$\log \frac{y}{100 - y}$$

as a function of

$$\log P$$

yields a straight line in the range over which the equation holds; the slope of the line at the point of half-saturation (where  $y = 50\% = P_{50}$ ), is  $n$ .

If  $n = 1$ , the sites are independent of each other; if  $n > 1$ , positive interactions between binding sites are indicated; if  $n < 1$ , the interactions are negative and the Hill equation fits the data poorly (22).

Frequently called the equilibrium constant,  $K$  can be shown by algebraic rearrangement of the Hill equation to be equal to  $(1/P_{50})^n$  where  $P_{50}$  is the oxygen tension at which the hemoglobin is 50% saturated. The  $P_{50}$  is usually reported instead of  $K$  because it can be easily estimated from the plot of experimental values of oxygen tension and percentage hemoglobin saturation. A  $P_{50}$  value has physiological significance (20) as the unloading tension occurring in blood capillaries when oxygen is unloaded to tissue cells. The  $P_{50}$  value is also used to indicate the relative affinity of hemoglobin for oxygen. Hemoglobin which remains highly saturated or does not give up its oxygen at low oxygen tensions (a low  $P_{50}$ ) has a high affinity for oxygen; the converse is also true. Therefore, the oxygen affinity of hemoglobin, or another respiratory pig-

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ment, can under many conditions, be quite accurately represented by the Hill approximation as

$$\frac{y}{100} = \frac{\left(\frac{P}{P_{50}}\right)^n}{1 + \left(\frac{P}{P_{50}}\right)^n}$$

**Description of the spectrophotometric method and modification.** I would like to describe a modification (9) of the spectrophotometric method (7, 10) for determining an oxyhemoglobin affinity curve on hemoglobin solutions. The essential point in this method is that a buffered hemoglobin solution is prepared (6), placed in a tonometer (separatory funnel) attached to a cuvette via a rubber stopper, equilibrated with 100% oxygen, and placed in a spectrophotometer for an optical density reading. Subsequently, the tonometer is evacuated at intervals. At each interval, after an equilibration, an O. D. reading is made. Ultimately, the hemoglobin solution is reduced with sodium hydrosulfite or by nitrogen equilibration, and the final O. D. reading is made. Oxyhemoglobin saturation and  $PO_2$  are then calculated (7). Other factors which affect oxyhemoglobin affinity, such as ionic strength of salt solutions, pH, carbon dioxide tension and temperature, must be kept constant. In this way, points for the construction of an oxyhemoglobin affinity curve can be obtained by varying only the  $PO_2$ .

The major difference between the spectrophotometric method and the modification described below is that a hemoglobin sample is removed at intervals from the tonometer and placed in the microgasometer for a BOC determination instead of putting the sample in the spectrophotometer to measure the percentage of oxyhemoglobin saturation.

There was some difficulty in transferring a hemoglobin solution from the tonometer, at intervals of evacuation, to the microgasometer. This difficulty was overcome by the construction and use of the adapter chamber illustrated in figure 1. The adapter consists of two 2-way stopcocks fused together to form a chamber between them to hold about 0.5 to 1 ml of solution.

The procedure in the modified method is as follows. The prepared hemoglobin solution is placed in the tonometer exactly as described for the spectrophotometric method. The adapter (fig. 1) is attached via its rubber stopper to the tonometer in place of the cuvette. Both stopcocks are closed. After equilibration 39.3 cmm (13) of solution, under oil, is removed from the tonometer with a micropipette. To do this, the lower stopcock is

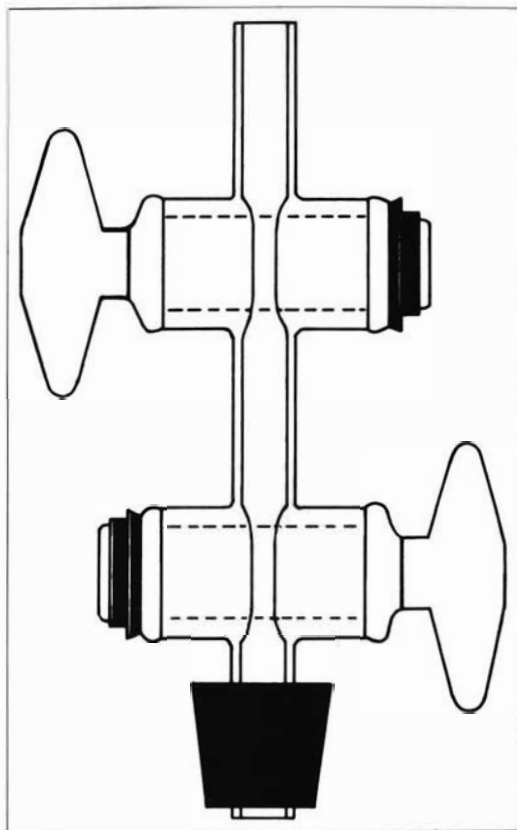


Fig. 1—The adapter is shown to consist of 2 two-way stopcocks fused together so that a chamber is formed between them having a capacity of 0.5 to 1 ml of hemoglobin solution.

opened and the tonometer is inverted gently to allow the solution to fill the chamber. The lower stopcock is then closed, and the upper stopcock is opened for pipette access to the chamber. After the sample is removed, the upper stopcock is closed and the lower one opened to allow the hemoglobin solution to flow back into the tonometer. The lower stopcock is closed in preparation for the next evacuation and equilibration. The hemoglobin solution in the micropipette is transferred, under oil, to the capillary cup of a microgasometer (28) for a BOC determination. The BOC analysis is as easy to make for hemoglobin solution as it is for the blood of various vertebrates (8), and the time for an analysis is shortened from 12 to about 7 minutes since equilibration is done in the tonometer.

**Results.** Hemoglobin solutions for oxyhemoglobin analysis were prepared from pooled blood samples which were collected in the MCV Clinic

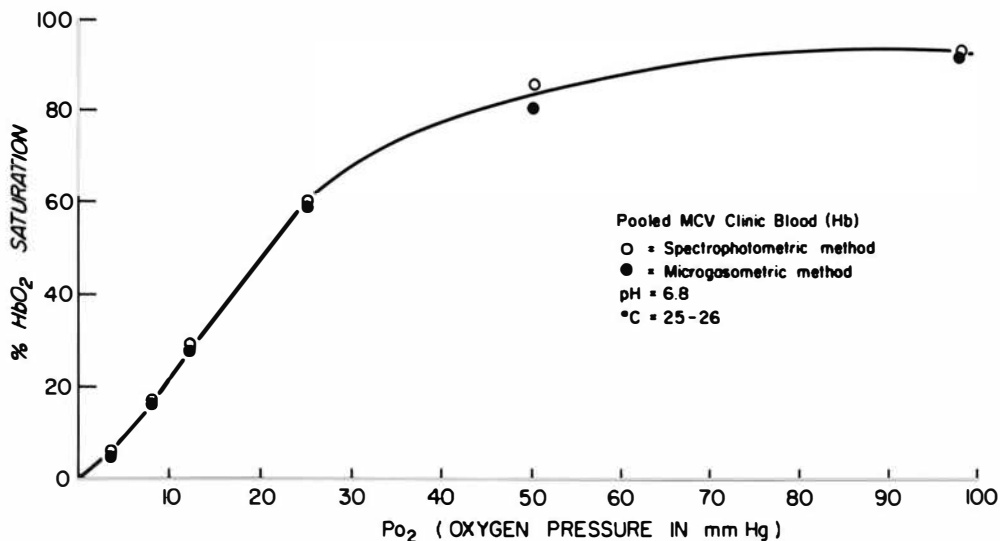


Fig. 2—An oxyhemoglobin affinity curve is shown as determined by both the spectrophotometric and the microgasometric methods. The data plotted were obtained on a 3% human hemoglobin solution. The analyses were made on aliquots of the same sample.

and kindly furnished by Dr. Lyman Fisher. The oxyhemoglobin affinity curve plotted in figure 2 represents a typical analysis by each of the two methods, determined simultaneously. The data were treated statistically for a closeness of fit. The coefficient of correlation ( $r$ ) for the two methods is 0.99 ( $P < 0.001$ ), and the slope of the line ( $b$ ) is 0.95.

From these data it may be concluded that the microgasometric method yields results which are as accurate and precise as those obtained using the spectrophotometric method. In addition, there is a reduction of time and cost factors when the inexpensive microgasometer is substituted for the spectrophotometer in measuring oxyhemoglobin affinity at various  $PO_2$ 's. The substitution is feasible when the adapter described is used in the transfer of the hemoglobin solution from the tonometer to the microgasometer.

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