Summer 1980

Oral Health Care Services Available to Mentally Retarded Individuals in Public Residential Facilities

Marilynn Mattox
Old Dominion University

ORAL HEALTH CARE SERVICES AVAILABLE TO MENTALLY RETARDED INDIVIDUALS IN PUBLIC RESIDENTIAL FACILITIES

by

Marilynn Mattox
B.S. in Physical Education, August 1973, West Virginia University
Certificate in Dental Hygiene, May 1976, Howard University

A Research Proposal Submitted to the
Faculty of Old Dominion University
in Partial Fulfillment of the
Requirement for the Degree of

MASTER OF SCIENCE

DENTAL HYGIENE

OLD DOMINION UNIVERSITY
August 1980

Approved by:

Michele Darby (Director)

ACKNOWLEDGEMENTS

The author wishes to express gratitude to the following persons for their invaluable contributions to this investigation:

Michele Darby, R.D.H., M.S., thesis director, for her patience, professional expertise, and guidance throughout the investigation.

Deanne Allen, R.D.H., M.S.; and Lindsay Rettie, R.D.H., M.S.; thesis committee members, for their support and assistance throughout the investigation.

Arthur J. Nowak, D.M.D., Department of Pedodontics, University of Iowa; and Marybeth Saunders, Educational Foundations and Special Programs, Old Dominion University; thesis committee consultants, for their support and constructive criticism in reviewing the manuscript.

Balfour D. Mattox, D.D.S. and Frances C. Mattox for their financial and moral support which made this study possible.

Debby Mitchell, National Association of State Mental Retardation Program Directors, Inc., for her advice and assistance in obtaining the names and addresses of public residential facilities and information essential for the initiation of this study.

Fred Levitin, National Foundation of Dentistry for the Handicapped, for his consultation on the legalities of dentistry for handicapped persons and current research in the field.

Joseph M. Doherty, D.D.S., M.P.H., Dental Director, Virginia State Department of Health and Mary G. Young, R.D.H., Southeastern Virginia Training Center for the Mentally Retarded, for their review and comments on the initial proposal and questionnaire.

Richard A. Skinner, Director, Computer-Based Lab for Instruction and Analysis, for his consultation on coding and statistical analysis.

Barbara H. Zick, Assistant Director, Computer-Based Lab for Instruction and Analysis, and Kristin Klow, M.S., for their encouragement and assistance in the computer programming and analysis of the research data.

Rebecca L. Godwin, C.D.A., R.D.H., M.S. for her contribution as a research assistant in the preparation of survey materials, the manuscript, and for her personal support and encouragement throughout the investigation.

Laura McQuiston, R.D.H., B.S. and Karen Mattox, R.D.H., M.S. for their personal support and clerical assistance. Judy Field and Becky Alden for their secretarial assistance. Ernestine Gillard merits special recognition for her secretarial expertise during the preparation of this manuscript.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF TABLES. continued

LIST OF FIGURES

LIST OF FIGURES. continued

Chapter 1

INTRODUCTION

A growing awareness of the rights of institutionalized persons to receive comprehensive health care, including dentistry, has led to increased legislation in favor of handicapped individuals including the mentally retarded.[31] Mentally retarded persons have a right to adequate health care, education, training rehabilitiation, and guidance that will enable them to develop their ability and maximum potential.[14]

Mental retardation has in the past been defined as a condition that exists solely within an individual; more recent definitions have shifted to include "a condition that is an interaction between an individual and a particular environment.[26] The environment in which a mentally retarded person resides greatly influences his/her ability to reach maximum developmental potential.[35,37] For example, living in home-like settings provides retarded persons the opportunity to develop adaptive behaviors.[35] The realization of the significance of environmental stimuli on development has led to the trend of "mainstreaming" of many mentally retarded citizens. Mainstreaming involves the relocation of some institutionalized mentally retarded individuals into the community with their family or in a home-like setting to facilitate their development. In the case of severely retarded residents, the institutions are trying to provide a home-like environment within the institution.[35]

The theory behind mainstreaming is related to the principle of "normalization."

> . . . The normalization principle means making available to all mentally retarded people patterns of life and conditions of everyday living which are as close as possible to the regular circumstances and ways of life of society.[35]

The opportunity to maintain optimal oral health might facilitate the normalization process of mainstreamed and institutionalized individuals, as oral health is an integral part of total health.

Mentally retarded and other handicapped citizens experience more difficulty in obtaining dental treatment than any other single group of people.[36] Those mentally retarded individuals who reside in institutions typically do not receive preventive dental care but rather experience emergency care of "crisis" dentistry which usually results in tooth removal.[36,52] Legislation such as the Bill of Rights Act for the Mentally Retarded and Other Persons with Developmental Disabilities provides for specific rights including the right to appropriate and sufficient medical and dental services.[49] The law is particularly applicable to developmentally disabled persons requiring institutionalization. Specifically the law states:

> . . . the developmentally disabled have a right to appropriate treatment, services and habilitation; that such treatment, services and habilitation should be designed to maximize the developmental potential of the person and be provided in the setting that is least restrictive to his personal liberty; that the Federal government and the States have an obligation to assure that public funds are not provided in programs which do not provide appropriate treatment, services and habilitation or do not meet minimum standards respecting diet, medical and dental services . . .[49]

The major objective of this survey was to determine the oral health care services, dental facilities, and dental personnel available for the dental treatment of mentally retarded persons in public residential

facilities. Another objective was to assess the knowledge of administrators of public residential facilities regarding the availability of community dental resources for mainstreamed retarded citizens.

Statement of the Problem

The investigation addressed the following questions:

1. What oral health care services are provided to residents of public residential facilities for the mentally retarded?

2. What dental facilities exist for the delivery of oral health care services to mentally retarded residents of public residential facilities?

3. What dental personnel are employed by public residential facilities for the mentally retarded?

4. Based on the knowledge of administrators of public residential facilities, what community resources are available for the oral health maintenance of discharged residents of public residential facilities?

Significance of the Problem

Nationwide studies which would yield information on the current dental services for mentally retarded persons are lacking. Answers to the questions raised in this study might provide information regarding the oral health services available to residents of state supported institutions for mentally retarded persons nationally. The assessment of administrator's knowledge of community resources might provide information on the availability of dental care for mentally retarded individuals who have been mainstreamed into the community.

The opportunity for mentally retarded citizens to seek dental services could be increased by using the data from this survey to inform dental and dental auxiliary students and dental professionals of current provisions for the dental care of retarded persons. Dental professionals and students might have an increased interest in working with mentally retarded populations if they became aware that a need exists; oral health professionals in private practice might be more willing to treat "deinstitutionalized" retarded citizens if they were aware that many mentally retarded persons have received previous dental care in residential facilities. Information could also be used to inform mentally retarded individuals of their right to seek dental care. Creating public and professional awareness of the right to dental care might potentially increase the availability and accessibility of community dental resources for the oral health care of mainstreamed retarded citizens.

Survey results shared with state dental directors and institutional administrators could be used to compare data of available dental services, facilities, personnel, and community resources in their district to other standard federal regions nationwide (see Appendices A and B). Such comparisons might enable districts to justify the need for further development of dental health programs.

Development of dental programs for treating mentally retarded persons in private or public settings can facilitate their "normalization" process. Provisions for adequate dental care of such individuals might enable mentally retarded persons to attain optimum oral health, a state which contributes to the social, mental, and physical well-being of mentally retarded people, and encourages the concept of

"normalcy."[34,47] Freedom from dental disease and pain contributes to physical and mental comfort. Proper nutrition to maintain health can be influenced by the ability to masticate food, which is affected by adequate dental care. Oral health, an integral part of total health, indirectly influences the development of mentally retarded persons to their maximum capacity.

Definition of Terms

Significant terms used in this study were defined as follows:

Oral health care services - preventive and therapeutic services such as oral examination, disease control instruction, oral prophylaxis, radiographs as well as diagnosis and treatment of oral diseases. Oral health care and dental health care are used synonymously throughout this paper.

Oral health care facilities and equipment - armamentaria necessary to render oral health care services and may include a dental operatory, oral health education room, a dental laboratory facility, equipment for exposing and developing radiographs, an ultrasonic dental unit, and preventive oral hygiene aids.

Dentist - a person with the degree of Doctor of Dental Surgery or Doctor of Dental Medicine licensed to perform dental operations of any kind, including diagnosis and treatment of diseases of the oral cavity and associated structures. The licensed dentist may extract teeth, correct malpositions of the teeth or jaws, take impressions, supply or repair artificial teeth as substitutes for natural teeth, place in the mouth and adjust such substitutes, use radiographs or administer local or general anesthetic agents for dental treatment or dental diagnostic purposes.[50]

Consulting dentist - a dentist who on a contractural basis renders oral health care ot residents and/or reinforces oral health care concepts to staff members in institutions. The consulting dentist also might refer residents to appropriate community resources such as a private dentist or hospital dental clinic for oral health care.

Dental hygienist -

> . . . a licensed professional, oral health educator an clinical operator who, as an auxiliary to the dentist, uses preventive, therapeutic, and educational methods for the control of oral diseases to aid individuals and groups in attaining optimum oral health. The services of the dental hygienist are utilized in general and specialty dental practices, the armed services, and in programs for research, professional education, public health, industrial health, and institutional care.[51]

Dental assistant -

> . . . the educationally qualified dental assistant is a highly competent individual possessing skills and knowledge of value in patient care. [s/he] is able to relieve the dentist of those activities which do not require his professional skill and judgement; however, the responsibilities assigned . . . are limited by the regulations of the dental practice act of the [particular] state . . . . In some states dental assistants are licensed either in their expanded responsibilities or in specific areas such as radiography. Dental assistants may work as generalists, servicng in all areas of the practice, or they may perform the more specialised duties of the chairside assistant, secretarial assistant, or expanded functions specialist.[46]

Mental retardation -

> . . . refers to significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the development period.[4]

General intellectual functioning -

> . . . the results obtained by assessment, with one or more of the individually administered general intelligence tests developed for that purpose.[4]

Significantly subaverage -

> . . . IQ more than two standard deviations below the mean for the test.[4]

Adaptive behavior -

> . . . the effectiveness or degree with which an individual meets the standards of personal independence and social responsibility expected for age and cultural group.[4]

Developmental period -

> . . . period of time between birth and the 18th birthday.[4]

Public residential facility -

> . . . facilities offering 24 hour service which may include short-term, long-term, diagnostic or special programs and may be used in a continuum of community services.[4]

Assumptions

The following assumptions were made:

1. Public residential facilities for the mentally retarded provide some type of dental care for residents whether it be within the institution or through referral to a community resource.

2. A shortage of oral health care services for deinstitutionalized mentally retarded persons exists in most communities.

3. The budget of each facility is assumed to be related directly to the population size and is derived from public funds.

4. The director and staff members of public residential facilities for the mentally retarded are able to supply accurate information regarding oral health care services rendered to residents within their institutions.

Limitations

The following factors might have threatened internal validity:

1. The self-designed questionnaire has no established reliability and validity; however, a pilot study was conducted to establish content validity. Due to a generally low response rate of the pilot

study, test-retest reliability was not determined.

2. Current interest in the rights of handicapped persons, including their right to comprehensive health care, might have biased respondents' answers and comments on the questionnaire. Respondents might have made replies that reflect favorably on their institutions. These problems were minimized by maintaining respondents' anonymity.

3. The lack of community resources for the dental treatment of mentally retarded individuals cannot be assumed if the directors of residential facilities are unaware of the community services.

4. Mail surveys generally have a low response. Follow-up postcard appeals were used to encourage participation.

5. Subject-selection bias might exist since respondents to the questionnaire were volunteers. Volunteers characteristically exhibit higher interest and motivation than nonvolunteers.[7]

Methods

A self-designed questionnaire was used to collect information on the dental services, facilities, and oral health personnel available in public residential facilities for the mentally retarded (see Appendis C). The questionnaire was reviewed by faculty members from Old Dominion University, a state dental director, a dental consultant to the President's Committee on Mental Retardation, and a dental hygienist from a public residential facility. Comments received were used to revise the questionnaire for the pilot study. The Oral Health Services, Facilities, and Dental Personnel Questionnaire was sent to all public residential facilities for the mentally retarded in the United States (N = 280). Responses from 236 questionnaires (84%) were analyzed to

obtain information on the research questions originally posed. Data were analyzed according to appropriate descriptive statistical methods.

Chapter 2

REVIEW OF THE LITERATURE

The literature review is divided into the following subject areas: oral health status of mentally retarded persons, the education of dental professionals to treat handicapped populations, and in-service training programs for staff members of institutions.

Oral Health Status of Mentally Retarded Persons

A study of 201 mentally retarded children between the ages of three and 14 years, with an IQ range from 20 to 80, was conducted by Gullikson[21] to demonstrate the medical and dental needs of retarded children. The subjects engaged in a Comprehensive Pilot Multiple Discipline program which was developed at Crippled Children's Division, University of Oregon Medical School. The philosophy of the program is that in order for child to function at a maximum level intellecturally, s/he must be in optimum health. While in the program, each child underwent complete evaluation medically, dentally, socially, and psychologically. Dental diagnosis was obtained through a complete oral evaluation including intraoral and lateral jaw radiographs, as well as study casts. Gullikson[21] found that 55 percent of all subjects examined exhibited active caries, 20 percent were caries free, and 17 percent had periapically involved teeth. Oral health was rated good in 18 percent, fair in 43 percent, and poor in 29 percent of the population. Forty-seven percent of the sample of mentally retarded children had been to a dentist. Malocclusion was evident in 67 percent

of the subjects; congenitally missing teeth were evident in 15 percent of the subjects, while anomalies of the palate, teeth, or tongue were exhibited by 64 percent. All dental treatment was rendered to subjects without hospitalization or general anesthesia, but 27 percent of the children required sedation or tranquilization before treatment was successfully rendered. Gullikson[21] concluded that dental treatment can be rendered to retarded children using office equipment, medication when indicated, understanding, and perseverance, as opposed to exposing children to "the risk involved in using general anesthesia."[21] Results of the study indicated an apparently high rate of anomalies of the oral structures, a lack of good oral health, and a lack of previous dental care among the retarded children. Further investigation into the oral health status of mentally retarded persons was implicated.

A study by Brown and Cunningham[10] of 80 institutionalized persons with Down's Syndrome revealed results on oral anomalies similar to those found by Gullikson. Other characteristics of mentally retarded persons with Down's Syndrome include a low caries rate and high prevalence and severity of periodontal disease.[10,15,16]

An investigation of the oral health status of mentally retarded children in Georgia was conducted in 1976. Butts[12] related data obtained in a year long study conducted by the Georgia Department of Public Health, Branch of Dental Health, to the oral problems of mentally retarded children. Dental examinations were conducted by calibrated dentist of 543 institutionalized and 1,343 non-institutionalized mentally retarded children. Indices used include the Decayed, Missing, and Filled Teeth Index (DMFT); the Decayed, Filled Index (df);

the Simplified Oral Hygiene Index (OHI-S); and Russell's Periodontal Index (RPI). Examinations were performed with natural light or with flashlights and without radiographs. Conclusions presented from the data indicated that mentally retarded children experienced a lower rate of carious lesions, a higher prevalence of untreated caries, poorer oral hygiene, and significantly more periodontal disease than their nonretarded counterparts.[12] With regard to the DMF, OHI, RPI and percentage of caries-free children, the more severely retarded children varied more widely from the nonretarded population and less severely retarded persons; however, significant differences were also found between the less severely retarded and nonretarded children.[12]

A high prevalence in diseases of the periodontium among institutionalized mentally retarded individuals is cited in the literature.[18,22,30,41] When the oral health status of mentally retarded persons was compared to that of nonretarded persons, Cutress[18] indicated that periodontal disease was more prevalent among institutionalized subjects. The results suggested that factors in the institutional environment might play an important role in the advancement of periodontal disease. Brown and Schodel[11] found that the apparent high prevalence of periodontal disease among institutionalized populations ". . . is likely to be related to less adequate oral hygiene for handicapped persons under the care of institutions"[11] because these individuals are often dependent on someone else for the performance of daily oral hygiene procedures.

Education of Dental Professionals to Treat Handicapped Populations

A problem cited in the literature[28] which might influence the quality and availability of dental services to mentally retarded

persons involves the limited educational training and experience of dental professionals in the treatment of handicapped populations. In 1969, Latimer[27] described the results of a study in which a majority of the dentists questioned confirmed that the oral hygiene of mentally retarded clients was poor compared to nonretarded clients. The Tri-State Mental Retardation Project explored the availability of dental care for mentally retarded persons through services of private dental practitioners. The areas which made up the Tri-State Project include counties in Kentucky, Ohio, and Indiana. Two students from the Department of Community Dentistry, University of Kentucky, personally interviewed 148 dentists, and surveyed an additional 104 dentist by mail. Dental services were provided to a total of 1,100 mentally retarded clients by the 132 interviewed dentists. Seventy-two surveyed dentists reported that they provided dental treatment for persons with mental retardation. Results also indicated that 55 percent of the interviewed dentists and 62 percent of the surveyed dentists felt that their educational efforts were unsuccessful in improving the oral hygiene status of mentally retarded clients.

Increased emphasis has been placed on educating dental professionals to mange the special dental needs of handicapped persons. Federal funding and private grants have influenced dental educators in expanding curricula in dentistry to include instruction in an experience with the care of handicapped individuals.

In 1961, pilot studies conducted in ten dental schools by the Division of Dental Health, U.S. Public Health Service

> . . . demonstrated that undergraduate dental students were capable of managing patients with handicaps and accepting the challenge of not only the dental treatment but the unique management problems associated with handicapped patients.[31]

In contrast, other studies have shown a lack of education and clinical exposure in dental programs to train dental professionals in the treatment and mangement of special clients.[19,28,32] Mathewson and Beaver[28] conducted a survey to determine sources for the training of dentists in providing care for the handicapped client. Through a mail survey data were collected from 1,142 dentists who were members of the American Academy of Pedodontics or the American Dental Association. The survey found that educational resources for preparing dentists in the care of handicapped clients were significantly limited in scope from undergraduate through continuing education programs.

In recent years, however, the opportunity for experience in the care of handicapped persons has increased. In 1966, undergraduate programs in 38 of the existing 48 dental schools provided students with at least one to three hours of lecture and general clinical observation of dental care for the handicapped client. Varying amounts of time were allocated to the care of the handicapped client through graduate and postgraduate pedodontic programs in 28 dental schools. Continuing education courses in dental care for the handicapped client were offered in 12 schools and three of these provided such courses regularly.[31]

In 1973, the Robert Wood Johnson Foundation awarded $4.7 million in grants to 11 dental schools for developing or expanding programs to train dental students in the care of nonhospitalized handicapped individuals.[3,23,31] The grants were announced jointly with the Foundation and the American Fund for Dental Education (currently the American Fund for Dental Health).

> The decision to award a grant of this size was the culmination of several months of discussion between officials of the foundation and an ad hoc committee which had been established to explore several methods for improving access to dental health care.[3]

A rationale behind the grants was to increase the availability of dental care for the noninstitutionalized handicapped population since "a large percentage of the 35 million mentally and physically handicapped Americans were not receiving basic dental care because they were not in hospitals or other institutions."[3] In an effort to communicate the results of these programs and share information with concerned professionals, a National Conference on Dental Care for Handicapped Americans was held in 1979 in Washington, D.C. This conference was sponsored by the American Fund for Dental Health and cosponsored by the American Dental Association and the American Association of Dental Schools, as a sequel to the pilot training programs under the Robert Wood Johnson Foundation grant project.

Evaluation of the four year pilot programs implemented under the foundation grant in 1974 indicated participants came to the concensus:

> . . . that formal, organized teaching programs in dentistry for the handicapped, as a part of the dental school curriculum are very effective in developing positive motivation for treatment of handicapped individuals by the future dental practitioner.[3]

On the basis of this conclusion, the suggestion was made for dental schools to consider modification of curricula to include training in dentistry for the handicapped.

As a result of receiving one of the Robert Wood Johnson Foundation grants, the University of Washington School of Dentistry has successfully incorporated into its general curriculum a program

of instruction in the care of disabled persons.[42] Through this program undergraduate dental and dental hygiene students are trained in the care of special clients, including mentally retarded persons. In addition, the Rehabilitation Services Administration of the Department of Health, Education and Welfare has funded a program at the University of Washington, School of Dentistry to include a series of eight-week postgraduate traineeships for dentists and dental auxiliaries in dental care of the disabled.[3] As a result of the National Conference on Dental Care for Handicapped Americans it was suggested that data from such a program might be used to consider development of future programs for the training of dental school faculty at several regional sites. Such programs have the potential to serve as a significant resource for non-faculty dental personnel by providing a means for upgrading and continuing development of the quality of oral health services.

Block and Walken[9] related a study of an extramural program instituted at the University of North Carolina, School of Dentistry. The program provided senior dental students the opportunity to treat mentally retarded persons, thereby affording students experience in the delivery of dental care for this segment of the population. In 1972, all senior students had a one week experience treating clients at two centers for mentally retarded persons. In 1976, a six-week extramural program in community and hospital dentistry was expanded to include two-weeks in the treatment and mangement of the mentally retarded client. The program enabled students to confront fears and anxieties about working with handicapped clients. Experiences afforded through the program decreased this fear and anxiety and increased

positive attitudes toward treating mentally retarded clients.[9] Over a five-year period, 269 students participated in the extramural program. Prior to the extramural experience, 66 percent of the students indicated that they had reservations about treating mentally retarded individuals; however, by the end of the rotation, 95 percent of the students indicated that they would provide treatment for mentally retarded persons in their private practice.[9] A future post-graduation study is planned to determine any difference in the number of handicapped clients treated by those who had the extramural experience and those who did not.

University Affiliated Facilities (UAFs) have also been influential in preparing dental personnel for treating special populations and in providing comprehensive multidisciplinary training for specialists in the care of handicapped individuals. These government sponsored programs grant annual stipends for trainees in all health fields including fifteen stipends for the training of pedodontists.[13,32] Training of pedodontists in the treatment and management of handicapped clients is important as demonstrated by the Mathewson and Beaver[28] study which indicated that a greater percentage of handicapped persons seek oral health care services through the pedodontist than through the general dental practitioner. The limited number of such programs has led to inadequate educational preparation of dental professionals in dealing with the exceptional client.[19,28,32] Roberts[38] pointed out that availability of "special" services by capable dental professionals is dependent on the practitioner's willingness to treat handicapped persons.

During the American Dental Association's Annual Meeting in the Fall of 1979 the Board of Trustees submitted an informative report to the ADA House of Delegates proposing a program to improve access to comprehensive dental care for certain sectors of society. Handicapped, institutionalized, and homebound persons were identified as one of the five sectors. The proposed program is intended to give "special attention" to persons with limited access to dental care as a result of poverty or developmental disability. Access in this case refers to utilization of dental services in the prevention and control of oral diseases by affording each person the opportunity to participate in the dental care system. The report also recognized inadequacies in the present dental care delivery system. The first inadequacy cited dealt with the client's inability to pay for services due to poverty, lack of prepayment coverage, and deficiencies in the current Medicare and Medicaid systems. The second inadequacy was related to partial or total inaccessibility to dental care in many communities. Finally, the "fixed nature of most facilities of care"[5] was mentioned in relation to the difficulty of handicapped persons to obtain oral health services. Another intent of the access program is to increase collaborative efforts of the ADA and outside agencies "to emphasize the need for making prevention and control of dental disease a high priority."[5] A list of the Board of Trustees' intended actions regarding handicapped persons both institutionalized and homebound may be found in Appendix D.

Svatun[44] indicated that dental hygienists in Norway experience 250 hours of training in dental management of handicapped individuals. Guidelines for the preparation of dental hygienists in the United States to manage special populations have been established by the

American Dental Hygienists' Association.[17] In accordance with these guidelines, it is suggested, not required, that dental hygiene curricula provide students clinical instruction and clinical experience in delivering dental hygiene care to special clients. Seven types of special clients are mentioned including "mentally handicapped." The guidelines are suggestions and do not insure that all dental hygiene students will have the opportunity to render services to each type of special client.

In-Service Training Programs to Staff Members of Institutions on the Oral Health Care of Residents

Reducing the need for dental treatment among mentally retarded individuals might be accomplished by placing increased emphasis on the prevention of dental disease. The philosophy that most oral disease can be prevented is the basis of the rationale for training institutional staff members to participate actively in plaque control programs for residents.

Two dental hygiene students conducted a study[25] involving the effect of a dental health education program for staff members on the oral health of institutionalized mentally retarded young adults. The study involved seven staff members and 20 residents. Ages of the residents ranged from 17 to 24 years. During a ten week period, students discussed and demonstrated the role of bacterial plaque in dental disease and methods of plaque removal to the staff. An average of eight one-half hour sessions were used by the students to instruct the staff. In turn, staff members spent about ten minutes per week instructing residents in oral health procedures. The effect of instruction on the residents' oral hygiene was measured by recording three different measurements of the PHP, GI, and OHI-S indices. A total

of 54 percent reduction in PHP, 49 percent reduction in GI, and 81 percent reduction in OHI-S scores was exhibited by the subjects. Kass[25] concluded that a plaque control program initiated by dental personnel can be effective in educating the staff to carry out a satisfactory oral health maintenance program for mentally retarded residents. Results of a similar study[20] conducted at the University of Iowa Hospital support the findings of Kass.

Full et al.[20] demonstrated that an in-service educational program for attendants increased the amount of plaque removed from the teeth of institutionalized handicapped children. Strum[43] developed a mediated instructional package to teach oral health concepts to 19 staff members of a facility for mentally retarded persons. Analysis of the pretest and posttest scores of the experimental and control groups indicated a statistically significant difference at the 0.20 level in knowledge of oral health concepts gained by the experimental group who used the package materials. Results indicated that the package did provide oral health information to the staff.

Albertson[1] emphasized an interdisciplinary approach to aid staff members in establishing a dental plaque control program for residents of institutions. Support of administrative, medical, and staff personnel was considered important for the establishment of an effective plaque control program along with the enthusiam of the dental director and dental auxiliaries. Because the attitude of dental personnel in the education of staff members may affect their level of participation in plaque control programs, Albertson[1] suggested that dental personnel should show sensitivity toward the feelings of attendants. Moreover, the approach in teaching attendants oral health

procedures for residents should be one of helping them to learn, not telling them what to do.

Albertson and Johnson[2] related specific home care instructions which may be used by parents, guardians, or institutional staff to aid in the oral health maintenance of handicapped individuals. Specifically, they indicated that an effective plaque control program should consist of positioning (restraining and mouth propping), staining, flossing, toothbrushing, fluoride application, and nutritional counseling. Moreover, systematic removal of plaque by the individual responsible for the handicapped child will provide the opportunity for the handicapped person to achieve and maintain good oral health.

Information on acutal institutional practices in regard to plaque control programs for mentally retarded residents was not found in the literature reviewed. The literature also lacked information regarding the frequency of dental in-service training for staff members of institutions for mentally retarded individuals. Bensberg[8] criticized in-service education programs of residential facilities for mentally retarded persons from an administrative point of view. The criticism of residential facilities in-service training programs involved the difficulty of participants in applying the content of such programs to daily job responsibilities with mentally retarded residents. Bensberg[8] suggested that the content of in-service training programs should be relevant to the attendants perceived responsibilities and designed so that the learner directly participates in the activity to be performed on-the-job. Prior to the training program a measure of the learner's current performance level of the desired behavior should be obtained. Additionaly, specific objectives of the behaviors

to be learned during in-service training should be developed to enable measurement of the proficiency level attained by attendants.

Summary

The review of the literature discusses oral anomalies which pose an obstacle to the attainment of optimum oral health in mentally retarded persons. The high prevalence of diseases of the periodontium exhibited among mentally retarded persons, whether institutionalized or not, suggested the need for improved oral health education and care of such persons.[20,27,32,41] In view of the discussion of the literature, the importance of the availability of oral health care services for mentally retarded persons can be recognized.

The present national study was designed to assess the oral health care available to mentally retarded individuals in state supported institutions. Dental personnel employed, as well as, the provisions made for in service training programs concerning the maintenance of residents' oral health were also ascertained.

Chapter 3

METHODS AND MATERIALS

A self-designed questionnaire was sent to each public residential facility for the mentally retarded in the United States to obtain data on oral health care services, facilities, and dental personnel available to residents of such institutions. Additionally, items in the questionnaire were designed to elicit respondents' views regarding community resources available to meet the dental needs of mentally retarded citizens.

Sample Description

The sample included the total population of public residential facilities for the mentally retarded in the United States (N = 280). Public residential facilities provide mentally retarded individuals with a protective residential setting on a 24 hour, seven days a week basis. Specific characteristics of resident populations, programs, and professional staffing of public residential facilities (PRFs) which follow were determined for the fiscal year 1976-77 in a study by Scheerenberger.[40] Approximately 16 percent of the PRFs are considered to be overcrowded in regard to the individual rated bed capacity. Resident populations range from nine to 2,839 individuals with a mean of 40.3 individuals per facility. Small communities with less than 50,000 people are the locales of 60 percent of the PRFs. The staff to resident ratio of medical professionals (including physicians, dentists and registered nurses) is 1:19.

In regard to other characteristics, Scheerenberger[40] determined that 73 percent of the PRFs residents are 22 years of age. Severely or profoundly retarded residents comprise 74 percent of the PRF population while other residents function on a moderately retarded or higher functioning level. Adaptive behaviors and the percentage of residents that can perform them unassisted include walking, 74 percent; dressing, 44 percent; and eating, 89 percent. Ninety-three percent can understand the spoken work and 84 percent can communicate verbally. Approximately 62 percent of the residents of PRFs exhibit major multiple physical handicapping conditions, 55 percent have severe emotional disorders, and 35 percent of the residents have more than one disorder or handicapping condition.

Methods

A pilot study was conducted to determine the content validity of the self-designed questionnaire and the appropriateness and clarity of the questions. The pilot sample included 15 percent (N = 30) of the private residential facilities for mentally retarded persons listed in the Directory for Exceptional Children: A Listing of Educational and Training Facilities.[39] The sample was obtained by systematically choosing every third name on the list. After the first phase, several revisions of the questionnaire were made. Items numbered 12, 13, and 14 were re-worded to achieve clarity. Two questions were added to assess the presence or absence of optimally fluoridated water in the facility and community since fluoride can affect the dental needs of a population. The addition of intramuscular and intravenous sedation to the list of choices in item number 17 also was made to determine the

the use of sedative methods in providing dental treatment for residents. One question was added to allow for voluntary comments concerning oral heatlh programs. Revisions also resulted in an additional item in which the respondent was asked to identify his/her position or title in the institution.

The revised questionnaires were mailed to the same pilot sample to establish test-retest reliability. Due to a low response rate during both phases of the pilot study, test-retest reliability could not be determined.

A descriptive survey approach using the self-designed questionnaire obtained information about the status of oral health care for mentally retarded residents in state supported institutions. Data obtained from responsess to questionnaire items which dealt with oral health care services, dental facilities, and dental personnel were tabulated into frequencies and percentages and grouped according to geographic region.

To control for low return of the mailed questionnaire packet, a cover letter was included which explained the purpose of the study and assured anonymity to the respondent. The packet included a self-addressed, stamped postcard which allowed respondents to request a copy of survey results. Return of the questionnaire was enhanced by the inclusion of a self-addressed, stamped envelope. A reminder postcard was sent to non-respondents three weeks after the initial mailing. During the fourth week of the study, non-respondents were sent another packet containing the questionnaire, postcared, self-addressed envelope, and a new cover letter.

Questionnaire

Faculty members from Old Dominion University, a dental consultant to the President's Committee on Mental Retardation, a state dental director, and a dental hygienist from a residential facility critically reviewed the Oral Health Services, Facilities, and Dental Personnel Questionnaire. Comments from these individuals were used to revise the questionnaire.

The first item in the questionnaire was included to determine the number of 24-hour-a-day residents as well as day residents of each institution. Information on the approximate operating budget of each institution was elicited through response to question 2. Provisions for funding the dental care of residents through budget allocations were assessed from responses to item 3 while item 4 asked for the dollar amount of dental care covered annually by Medicare and Medicaid. Item 5 elicited responses regarding any provision in the budget for in-service education of staff members.

Responses to questions 6 and 7 indicated whether pre-service or in-service training programs on the maintenance of resident oral health were provided to staff members. Persons responding affirmatively to item 7 were asked to complete items 8 through 10. Responses to item 8 indicated the number of times per year oral health in-service was provided. Dental health topics studied by staff members and those provided to residents were assessed through responses to items 9 and 12, respectively. Identification of the types of personnel implementing dental in-service training programs was provided through responses to question 10. Persons responding negatively to item 7 were referred to question 11 which asked the respondent to indicate whether his/her

institution could benefit form in-service training programs on the maintenance of resident oral health. Provisions for instruction in proper oral hygiene to the parent or guardian of mainstreamed mentally retarded individuals were assessed through question 13.

Responses to items 14 and 15 established the number of full-time, part-time, and volunteer dental personnel providing services to residents of public residential facilities. Item 16 elicited information indicating the types of dental facilities and equipment located on the premises of the institution. The availability of optimally fluoridated water in the institution and in the community were assessed by questions 17 and 18. Information regarding the provision of comprehensive dental diagnostic services and a recall system was elicited by items 19 and 20, respectively. The respondent was asked in item 21 whether 100 percent of the residential population receives routine dental care. A space was provided for explanation of negative responses. Item 22 dealt with the types of treatment rendered to residents and where such services are provided. Question 23 provided the respondent with the opportunity to express personal views regarding the need for dental health programs. The frequency with which discharged residents of institutions are referred to community dental professionals for continued oral health maintenance was determined by item 24. Answers to question 25 indicated the types of community dental resources used in the treatment of mentally retarded persons. Space was provided for respondents to comment on their reply to item 26 which asked whether adequate community resources are available to meet the dental needs of mainstreamed mentally retarded persons. Item 27 elicited comments on development

of potential community resources needed by deinstitutionalized mentally retarded persons. Inquiry into the position or title held by the respondee was obtained by item 28. Item 29 was included to determine the geographical location of the facility according to standard federal regions. The questionnaire was color coded to enable identification of the regions in the event that item 29 was not answered.

Statistical Treatment

The questionnaire was analyzed by modal and percentage responses according to geographic location of the public residential facility. Responses to several items were arranged in tables and figures.

Chapter 4

RESULTS AND DISCUSSION

Two hundred eighty public residential facilities (PRFs) for the mentally retarded were sent the Oral Health Services, Facilities, and Dental Personnel Questionnaire. One hundred ninety-nine questionnaires (71%) were returned from the first mailing and 37 (13%) were returned from the second mailing. A decision was made to include ten questionnaires postmarked within the first week after the set deadline. The total number of returned questionnaires was 236, resulting in an 84 percent response rate. Non-respondents numbered 39 and five PRFs were excluded from the study (see Appendix L). Number and percentage of PRFs responding from each region are listed in Table 1.

Results obtained from each questionnaire item are reported in Appendix M. Percentages reported hereafter are relative frequencies that include incomplete data and/or not applicable responses resulting in a possible underestimation of the total percentage. Appendix M includes the adjusted frequency which excludes incomplete data and not applicable categories.

Items 22, 16, and 14 are analyzed in detail because responses to these items reflect results to the questions initially posed in the study. Overall responses to these items are reported and results are presented by geographic region in relation to the following: availability of oral health care services to residents of PRFs, types of dental facilities and equipment located on the premises of PRFs.

Table 1

Number of Responding PRFs According to Standard Federal Regions

Region	Total number of PRFs in region	Number of responding PRFs in region	Percent
I	29	25	86.2
II	26	20	76.9
III	41	33	80.5
IV	40	35	87.5
V	61	50	82.0
VI	35	30	85.7
VII	14	12	85.7
VIII	10	10	100.0
IX	17	14	82.4
X	10	7	70.0

and various dental personnel employed by PRFs for the oral health maintenance of resident mentally retarded persons. Results obtained from several other items relating to the oral health care of PRF residents are reported. Additional responses to items on the provision for in-service programs and the availability of oral health care resources in the community were used to interpret overall responses.

Results

Answers to item 22 reflect data on the first questions addressing availability of oral health care services to mentally retarded persons in public residential facilities. Respondents indicated whether the service was provided to residents "within", "outside", or both "within and outside" the public residential facility. Overall responses (N = 236) indicated that preventive services are provided most frequently "within" 168 PRFs (71.2%), orthodontic services were provided most frequently "outside" 89 PRFs (37.7%), and oral surgery services were provided most frequently both "within and outside" 93 PRFs (39.4%) (see Appendix M).

Responses which indicate that an institution provided services "within", "outside", or both "within and outside" an institution were combined to reflect services most "available" to residents; data indicated that 231 PRFs (97.8%) have restorative services and 224 PRFs (95%) have oral surgery and preventive services. One hundred twenty-four PRFs (52.6%) have orthodontic services "available"; however, orthodontic treatment is the service least "available" to residents (see Table 2).

Table 2

Oral Health Services "Available" to Residents of Public Residential Facilities (N = 236)

Oral health services	"Available"		Not "available		Incomplete data	
	N	%	N	%	N	%
Restorative	231	97.8	1	0.4	4	1.7
Oral Surgery	224	95.0	8	3.4	4	1.7
Preventive	224	94.9	8	3.4	4	1.7
Prosthetics (removable)	213	90.2	19	8.1	4	1.7
IM sedation	209	86.4	28	11.9	4	1.7
Periodontics	200	84.7	32	13.6	4	1.7
Endodontic/pulp therapy	196	83.1	36	15.3	4	1.7
Prosthetics (fixed)	192	83.3	40	16.9	4	1.7
IV sedation	168	71.2	63	26.7	4	1.7
Orthodontics	124	52.6	106	44.9	4	1.7

N = number of public residential facilities

Note: Figures may not add up to 100% due to rounding.

Answers to item 16 reflect data on the second question addressing the types of dental facilities and equipment located on the premises of the institution which might be used in rendering oral health care services to residents. Table 3 displays in rank order percent the number of institutions having dental facilities and equipment on the premises. Overall responses (N = 236) indicated that the largest number of institutions, 220 PRFs (93.2%), have sinks and toothbrushes. Facilities and equipment available in a smaller number of institutions follow: 207 PRFs (87.7%) have a dental chair, 205 PRFs (86.9%) have an autoclave, 201 PRFs (85.2%) have mirrors, 199 PRFs (84.3%) have a stationary dental unit, 193 PRFs (81.8%) have dental floss, 191 PRFs (80.9%) have a stationary dental radiographic unit, and 189 PRFs (80.1%) have radiographic processing and developing equipment. Other facilities and equipment provided for resident oral health maintenance include: 180 PRFs (76.3%) with topical or supplemental fluoride materials, 166 PRFs (70.3%) with an ultrasonic dental unit, 165 PRFs (69.9%) with a dental treatment room, 163 PRFs (69.1%) with disclosing materials, and 134 PRFs (56.8%) with a barrier-free dental treatment room. The facilities and equipment least available were revealed by data indicating that 114 PRFs (48.3%) have audio-visual aids for resident education, 108 PRFs (45.8%) have a dental laboratory facility, 69 PRFs (25.8%) have an oral health education room, and 53 PRFS (22.5%) have a portable dental radiographic unit.

The questionnaire used in the study elicited information on a third problem regarding the number of full-time and part-time dental personnel employed by public residential facilities for mentally retarded persons. Item 14 obtained data on the number of resident

Table 3

Number and Percentage of Public Residential Facilities (N = 236) Having Dental Facilities and Equipment on the Premises

	YES		NO		Incomplete data	
	N	%	N	%	N	%
SINKS	220	93.2	14	5.9	2	0.8
TOOTHBRUSHES	220	93.2	14	5.9	2	0.8
DENTAL CHAIR	207	87.7	27	11.4	2	0.8
AUTOCLAVE	205	86.9	29	12.3	2	0.8
MIRRORS	201	85.2	32	13.6	3	1.2
DENTAL UNIT (STATIONARY)	199	84.3	35	14.8	2	0.8
FLOSS	193	81.8	41	17.4	2	0.8
DENTAL RADIOGRAPHIC UNIT (STATIONARY)	191	80.9	43	18.2	2	0.8
RADIOGRAPHIC PROCESSING & DEVELOPING EQUIPMENT	189	80.1	45	19.1	2	0.8
TOPICAL OR SUPPLEMENTAL FLUORIDE MATERIALS	180	76.3	54	22.9	2	0.8
ULTRASONIC DENTAL UNIT	166	70.3	68	28.8	2	0.8
DENTAL TREATMENT ROOM	165	69.9	69	29.2	2	0.8
DISCLOSING MATERIALS	163	69.1	70	29.7	3	1.2
BARRIER-FREE DENTAL TREATMENT ROOM	134	56.8	100	42.4	2	0.8
AUDIO-VISUAL AIDS FOR RESIDENT EDUCATION	114	48.3	120	50.8	2	0.8
DENTAL LABORATORY FACILITY	108	45.8	126	53.4	2	0.8
DENTAL HYGIENE EDUCATION ROOM	61	25.8	173	73.3	2	0.8
DENTAL UNIT (PORTABLE)	53	22.5	180	76.3	3	1.2
DENTAL RADIOGRAPHIC UNIT (PORTABLE)	51	21.6	183	77.5	2	0.8

Note: Figures may not add up to 100% due to rounding.

Table 4

Summary of the Number and Percentage of PRFs (N = 236) Employing Dental Personnel

Dental Personnel Employed	Number of PRFs	Percent
Full-time resident dentist(s)	153	64.9
Full-time dental assistant(s)	149	63.1
Full-time dental hygienist(s)	107	45.4
Part-time consulting dentist(s)	64	27.0
Part-time resident dentists(s)	43	18.1
Part-time dental hygienist(s)	30	2.7
Full-time consulting dentist(s)	20	8.3
Part-time dental assistant(s)	19	8.0
Full-time dental laboratory technician(s)	6	2.5
Part-time dental laboratory technician(s)	2	0.8

N = number of public residential facilities

% = relative frequency which includes incomplete data resulting in a possible underestimation

dentists, consulting dentists, dental hygienists, dental assistants, and dental laboratory technicians employed by each facility. Responses (N = 236) to item 14 are summarized in Table 4 showing the number of institutions employing at least one of the indicated personnel full-time or part-time. Analysis of responses indicated that the most commonly employed dental personnel are full-time resident dentists in 153 PRFs (64.9%) and full-time dental assistants in 149 PRFs (63.1%); and the least employed are dental laboratory technicians.

In addition to results obtained for items 22, 16, and 14 findings from several other items relating to the oral health care of PRF residents were analyzed. Responses to item 19 revealed that 214 PRFs (90.7%) provide comprehensive diagnostic services. Of these facilities, 208 PRFs (97.2%) provide intraoral examinations, 210 PRFs (98.1%) provide dental charting, 146 PRFs (68.2%) provide periodontal charting, and 197 PRFs (92.0%) provide dental radiographic examination.

Results for item 20 indicated that 223 PRFs (94.5%) have a dental recall system to monitor the oral health status of residents. Furthermore, responses for item 21 revealed that 203 PRFs (86.0%) provide 100 percent of their mentally retarded population with routine dental care. Additional comments to the item indicated that residents who do not receive routine dental care are often severely retarded, unmanageable, or uncooperative.

Staff members of 216 PRFs (91.5%) are provided with in-service training programs on the maintenance of residents' oral health. Results further indicated that the number of times PRFs provide

in-service training programs ranged from once a year to continually. Moreover, results indicated that in-service programs are most frequently conducted by resident dentists or dental hygienists. Written comments indicated that non-dental personnel are sometimes responsible for in-service programs (see Appendix M - items 7, 8, and 10).

Data for item 15 revealed that 27 PRFs (11.4%) have community dental professionals donating services which specifically include 14 PRFs (5.3%) with one or more consulting dentists, four PRFs (1.7%) with a dental hygienist, one PRF with a dental assistant, and one PRF with a dental laboratory technician.

Items 17 and 18 revealed that 131 PRFs (55.5%) have optimally fluoridated water in their facility while 146 PRFs (61.9%) have optimally fluoridated community water.

Results reported for each region are displayed in Tables 5, 6, and 7. Table 5, pages 38-42 relates data on the availability of oral health care services and Table 6, pages 44-47 displays information concerning dental facilities and equipment on the premises of public residential facilities. The number of dental personnel in each category have been specified for each region using numbered categories of 0, 1, 2, 3. 4, and $\geq$5 (see Table 7, pages 48-50). The last category, $\geq$5 was sufficient for the study because few facilities employ more than five dental personnel.

Region I (N = 25). Data obtained for Region I indicated that restorative and oral surgery services are "available" to residents of 24 PRFs (96%). Other oral health care services include preventive dentistry, removable prosthetics, and periodontal treatment "available" to residents of 23 PRFs (92%); and intramuscular sedation,

Table 5

Oral Health Care Services Provided to Residents of Public Residential Facilities for the Mentally Retarded According to Geographic Region

Oral Health Care Service	Region I (N = 25)					Region II (N = 20)				
	w/in	outsd	both	neither	ID	w/in	outsd	both	neither	ID
IM Sedation	5 20%	12 48%	5 20%	2 8%	1 4%	14 70%	2 10%	2 10%	2 10%	-
IV Sedation	2 8%	20 80%	- -	2 8%	1 4%	9 45%	8 40%	2 10%	1 5%	-
Preventive	12 48%	4 16%	7 28%	1 4%	1 4%	16 80%	- -	4 20%	- -	-
Restorative	7 28%	11 44%	6 24%	- -	1 4%	12 60%	- -	8 40%	- -	-
Endo/Pulp Therapy	7 28%	11 44%	4 16%	2 8%	1 4%	9 45%	1 5%	8 40%	2 10%	-
Oral Surgery	3 12%	14 56%	7 28%	- -	1 4%	8 40%	- -	12 60%	- -	-
Prosthetics (fixed)	6 24%	13 52%	3 12%	2 8%	1 4%	12 60%	2 10%	4 20%	2 10%	-
Prosthetics (removable)	6 24%	13 52%	4 16%	1 4%	1 4%	16 80%	1 5%	3 15%	- -	-
Periodontics	5 20%	14 56%	4 16%	1 4%	1 4%	9 45%	1 5%	8 40%	2 10%	-
Orthodontics	2 8%	15 60%	2 8%	5 20%	1 4%	3 15%	10 50%	1 5%	6 30%	-

Table 5 — Continued

Oral Health Care Service	Region III (N = 33)					Region IV (N = 35)				
	w/in	outsd	both	neither	ID	w/in	outsd	both	neither	ID
IM Sedation	16 48.5%	5 15.2%	4 12.1%	7 21.2%	1 3%	26 74.3%	- -	7 20%	-	2 5.7%
IV Sedation	4 12.1%	14 42.4%	1 3%	13 39.4%	1 3%	12 34.3%	6 17.1%	5 14.3%	10 28.6%	2 5.7%
Presentive	22 66.7%	2 6.1%	7 21.2%	1 3%	1 3%	26 74.3%	- -	6 17.1%	1 2.9%	2 5.7%
Restorative	17 51.5%	7 21.2%	7 21.2%	1 3%	1 3%	27 77.1%	- -	6 17.1%	- -	2 5.7%
Endo/Pulp Therapy	9 27.3%	7 21.2%	4 12.1%	12 36.4%	1 3%	25 71.4%	3 8.6%	2 5.7%	3 8.6%	2 5.7%
Oral Surgery	8 24.2%	12 36.4%	10 30.3%	2 6.1%	1 3%	12 34.3%	2 5.7%	17 48.6%	2 5.7%	2 5.7%
Prosthetics (fixed)	9 27.3%	10 30.3%	2 6.1%	11 33.3%	1 3%	24 68.6%	2 5.7%	2 5.7%	5 14.3%	2 5.7%
Prosthetics (removable)	20 60.6%	5 15.2%	4 12.1%	3 9.1%	1 3%	27 77.1%	2 5.7%	2 5.7%	2 5.7%	2 5.7%
Periodontics	15 45.5%	5 15.2%	3 9.1%	9 27.3%	1 3%	19 54.3%	4 11.4%	6 17.1%	4 11.4%	2 5.7%
Orthodontics	2 6.1%	10 30.3%	- -	20 60.6%	1 3%	2 5.7%	9 25.7%	3 8.6%	19 54.3%	2 5.7%

Table 5 — Continued

Oral Health Care Service	Region V (N = 50)					Region VI (N = 30)				
	w/in	outsd	both	neither	ID	w/in	outsd	both	neither	ID
IM Sedation	30	3	10	7	-	16	4	4	6	-
	60%	6.0%	20%	14%	-	53.3%	13.3%	13.3%	20%	-
IV Sedation	14	16	4	16	-	8	10	1	11	-
	28%	32%	8%	32%	-	26.7%	33.3%	3.3%	36.7%	-
Preventive	39	3	6	2	-	21	3	4	2	-
	78%	6%	12%	4%	-	70%	10%	13.3%	6.7%	-
Restorative	39	4	7	-	-	19	7	4	-	-
	78%	8%	14%	-	-	63.3%	23.3%	13.3%	-	-
Endo/Pulp Therapy	31	8	6	5	-	16	6	3	5	-
	62%	16%	12%	10%	-	53.3%	20%	10%	16.7%	-
Oral Surgery	19	13	18	-	-	5	9	14	2	-
	38%	26%	36%	-	-	16.7%	30%	46.7%	6.7%	-
Prosthetics (fixed)	34	7	3	6	-	13	9	3	5	-
	68%	14%	6%	12%	-	43.3%	30%	10%	16.7%	-
Prosthetics (removable)	37	6	3	4	-	16	8	3	3	-
	74%	12%	6%	8%	-	53.3%	26.7%	10%	10%	-
Periodontics	33	8	6	3	-	15	6	5	4	-
	66%	16%	12%	6%	-	50%	20%	16.7%	13.3%	-
Orthodontics	3	21	1	24	1	1	11	4	14	-
	6%	42%	2%	48%	2	3.3%	36.7%	13.3%	46.7%	-

Table 5 — Continued

		Region VII (N = 12)					Region VIII (N = 10)				
		w/in	outsd	both	neither	ID	w/in	outsd	both	neither	ID
Oral Health Care Service	IM Sedation	9 75%	- -	1 8.3%	2 16.7%	- -	6 60%	- -	2 20%	2 20%	- -
	IV Sedation	5 41.7%	2 16.7%	2 16.7%	3 25%	- -	5 50%	- -	1 10%	3 30%	1 10%
	Preventive	10 83.3%	- -	1 8.3%	1 8.3%	- -	8 80%	1 10%	1 10%	- -	- -
	Restorative	10 83.3%	- -	2 16.7%	- -	- -	5 50%	2 20%	3 30%	- -	- -
	Endo/Pulp Therapy	7 58.3%	1 8.3%	1 8.3%	3 25%	- -	5 50%	1 10%	2 20%	2 20%	- -
	Oral Surgery	7 58.3%	1 8.3%	4 33.3%	- -	- -	4 40%	- -	4 40%	2 20%	- -
	Prosthetics (fixed)	8 66.7%	- -	1 8.3%	3 25%	- -	6 60%	1 10%	1 10%	2 20%	- -
	Prosthetics (removable)	10 83.3%	1 8.3%	1 8.3%	- -	- -	5 50%	- -	2 20%	3 30%	- -
	Periodontics	7 58.3%	2 16.7%	1 8.3%	2 16.7%	- -	6 60%	- -	1 10%	3 30%	- -
	Orthodontics	3 25%	4 33.3%	- -	4 33.3%	1 8.3%	4 40%	- -	1 10%	5 50%	- -

Table 5 — Continued

Oral Health Care Service	Region IX (N = 14)					Region X (N = 7)				
	w/in	outsd	both	neither	ID	w/in	outsd	both	neither	ID
IM Sedation	9 64.3%	3 21.4%	1 14.3%	- -	- -	5 71.5%	2 28.6%	- -	- -	- -
IV Sedation	5 35.7%	6 42.9%	- -	3 21.4%	- -	3 42.9%	2 28.6%	1 14.3%	1 14.3%	- -
Preventive	10 71.4%	2 14.3%	2 14.3%	- -	- -	4 57.1%	1 14.3%	2 28.6%	- -	- -
Restorative	7 50%	3 21.4%	4 28.6%	- -	- -	5 71.4%	1 14.3%	1 14.3%	- -	- -
Endo/Pulp Therapy	8 57.1%	2 14.3%	3 21.4%	1 7.1%	- -	4 57.1%	2 28.6%	- -	1 14.3%	- -
Oral Surgery	6 42.9%	3 21.4%	5 35.7%	- -	- -	2 28.6%	3 42.9%	2 28.6%	- -	- -
Prosthetics (fixed)	5 35.7%	5 35.7%	2 14.3%	2 14.3%	- -	3 42.9%	2 28.6%	- -	2 28.6%	- -
Prosthetics (removable)	8 57.1%	4 28.6%	2 14.3%	- -	- -	4 57.1%	- -	- -	3 42.9%	- -
Periodontics	8 57.1%	3 21.4%	3 14.3%	1 7.1%	- -	3 42.9%	1 14.3%	- -	3 42.9%	- -
Orthodontics	- -	5 35.7%	3 21.4%	6 42.9%	- -	- -	4 57.1%	- -	3 42.9%	- -

Table 5

Key

w/in = service available within the institution only

out = service available outside the institution only

both = service available both within and outside the institution

neither = service available neither within nor outside the institution

ID = incomplete data

NOTE: Figures may not add up to 100% due to rounding.

Table 6

Dental Facilities and Equipment Existing in Public Residential Facilities for the Mentally Retarded According to Geographic Region

Dental Facilities and Equipment on Premises		Geographic Region															
		I(N=25)		II(N=20)		III(N=33)		IV(N=35)		V(N=50)		VI(N=30)		VII(N=12)		VIII(N=10)		IX(N=14)		X(N=7)	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Barrier-free Dental Treatment Room	Yes	11	44	11	55	17	51.5	21	60.0	32	64	14	46.7	11	91.7	8	80	5	35.7	4	57.1
	No	13	52	9	45	16	48.5	13	37.1	18	36	16	53.3	1	8.3	2	20	9	64.3	3	42.9
	ID	1	4	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
Dental Treatment Room	Yes	13	52	18	90	22	66.0	25	71.4	37	74	19	63.3	9	75.0	6	60	10	71.4	6	85.7
	No	11	44	2	10	11	33.3	9	25.7	13	26	11	36.7	3	25.0	4	40	4	28.6	1	14.3
	ID	1	4	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
Dental Unit (stationary)	Yes	13	52	20	100	27	81.8	31	88.5	46	92	24	80.0	12	100.0	9	90	11	78.6	6	85.7
	No	11	44	-	-	6	18.2	3	8.6	4	8	6	20.0	-	-	1	10	3	21.4	1	14.3
	ID	1	4	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
Dental Unit (portable)	Yes	3	12	8	40	6	18.2	11	31.4	10	20	2	6.7	2	16.7	5	50	3	21.4	3	42.9
	No	20	80	12	60	27	81.8	23	65.7	40	80	28	93.3	10	83.3	5	50	11	78.6	4	57.1
	ID	2	8	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
Dental Chair	Yes	18	72	20	100	27	81.8	33	94.3	47	94	25	83.3	12	100.0	9	90	10	71.4	6	85.7
	No	6	24	-	-	6	18.2	1	2.9	3	6	5	16.7	-	-	1	10	4	28.6	1	14.3
	ID	1	4	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
Autoclave	Yes	17	68	20	100	26	78.8	32	91.4	47	94	26	86.7	12	100.0	9	90	10	71.4	6	85.7
	No	7	28	-	-	7	21.2	2	5.7	3	6	4	13.3	-	-	1	10	4	28.6	1	14.3
	ID	1	4	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-

Table 6 - Continued

Dental Facilities and Equipment on Premises		Geographic Region															
		I(N=25)		II(N=20)		III(N=33)		IV(N=35)		V(N=50)		VI(N=30)		VII(N=12)		VIII(N=10)		IX(N=14)		X(N=7)	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Dental Radiographic Unit (stationary)	Yes	14	56	19	95	25	75.8	32	91.4	42	84	24	80.0	10	83.3	9	90	10	71.4	6	85.7
	No	10	40	1	5	8	24.2	2	5.7	8	16	6	20.0	2	16.7	1	10	4	28.6	1	14.3
	ID	1	4	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
Dental Radiographic Unit (portable)	Yes	4	16	10	50	6	18.2	9	25.7	8	16	4	13.3	2	16.7	2	20	3	21.4	3	42.9
	No	20	80	10	50	27	81.8	21	71.4	42	84	26	86.7	10	83.3	8	80	11	78.6	4	57.1
	ID	1	4	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
Radiographic Processing and Developing Equipment	Yes	12	48	19	95	26	78.8	31	88.6	44	88	24	80.0	11	91.7	7	70	10	71.4	5	71.4
	No	12	48	1	5	7	21.2	3	8.6	6	12	6	20.0	1	8.3	3	30	4	28.6	2	28.6
	ID	1	4	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
Ultrasonic Dental Unit	Yes	13	52	18	90	17	51.5	31	88.6	40	80	17	56.7	9	75.0	6	60	9	64.3	6	85.7
	No	11	44	2	10	16	48.5	3	8.6	10	20	13	43.3	3	25.0	4	40	5	35.7	1	14.3
	ID	1	4	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
Dental Hygiene Education Room	Yes	6	24	5	25	9	27.3	11	31.4	11	22	6	20.0	4	33.3	5	50	3	21.4	1	14.3
	No	18	72	15	75	24	72.7	23	65.7	39	78	24	80.0	8	66.7	5	50	11	78.6	6	85.7
	ID	1	4	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
Mirrors	Yes	20	80	20	100	25	78.8	30	85.7	46	92	26	86.7	11	91.7	6	60	11	78.6	5	71.4
	No	4	16	-	-	7	21.2	4	11.4	4	8	4	13.3	1	8.3	4	40	2	14.3	2	28.6
	ID	1	4	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	1	7.1	-	-

Table 6 - Continued

Dental Facilities and Equipment on Premises		Geographic Region																	
		I(N=25)		II(N=20)		III(N=33)		IV(N=35)		V(N=50)		VI(N=30)		VII(N=12)		VIII(N=10)		IX(N=14)		X(N=7)	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Sinks	Yes	24	96	20	100	28	84.4	31	88.6	49	98	29	96.7	11	91.7	9	90	13	92.9	6	85.7
	No	-	-	-	-	5	15.2	3	8.6	1	2	1	3.3	1	8.3	1	10	1	7.1	1	14.3
	ID	1	4	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
Toothbrushes	Yes	23	92	19	95	29	87.9	32	91.4	47	94	29	96.7	12	100.0	10	100	13	92.9	6	85.7
	No	1	4	1	5	4	12.1	2	5.7	3	6	1	3.3	-	-	-	-	1	7.1	1	14.3
	ID	1	4	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
Floss	Yes	21	84	18	90	25	75.8	31	88.6	42	84	25	83.3	9	75.0	6	60	12	85.7	4	57.1
	No	3	12	2	10	8	24.2	3	8.6	8	16	5	16.7	3	25.0	4	40	2	14.3	3	42.9
	ID	1	4	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
Disclosing Materials	Yes	15	60	15	75	18	54.5	28	80.0	37	74	22	73.3	10	83.3	6	60	8	57.1	4	57.1
	No	9	36	4	20	15	45.5	6	17.1	13	26	8	26.7	2	16.7	4	40	6	42.9	3	42.9
	ID	1	4	1	5	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
Audio-visual Aids	Yes	10	40	14	70	15	45.5	19	54.3	25	50	11	36.7	6	50.0	4	40	7	50.0	3	42.9
	No	14	56	6	30	18	54.5	15	42.9	25	50	19	63.3	6	50.0	6	60	7	50.0	4	57.1
	ID	1	4	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
Topical or Supplemental Fluoride	Yes	11	44	18	90	20	60.6	30	85.7	43	86	23	76.7	11	91.7	6	60	12	85.7	6	85.7
	No	13	52	2	10	13	39.4	4	11.4	7	14	7	23.3	1	8.3	4	40	2	14.3	1	14.3
	ID	1	4	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-

Table 6 - Continued

Dental Facilities and Equipment on Premises		Geographic Region															
		I(N=25)		II(N=20)		III(N=33)		IV(N=35)		V(N=50)		VI(N=30)		VII(N=12)		VIII(N=10)		IX(N=14)		X(N=7)	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Dental	Yes	6	24	13	65	8	24.2	21	60.0	32	64	7	23.3	6	50	4	40	8	57.1	3	42.9
Laboratory	No	18	72	7	35	25	75.8	13	37.1	18	36	23	76.7	6	50	6	60	6	42.9	4	57.1
Facility	ID	1	4	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-

N = number of institutions
ID = incomplete data
% = relative frequency which includes incomplete data resulting in a possible underestimation

NOTE: Figures may not add up to 100% due to rounding.

Table 7

Number of Dental Personnel Employed in Public Residential Facilities for the Mentally Retarded According to Geographic Region

Dental Personnel		Geographic Region															
		I(N=25)		II(N=20)		III(N=33)		IV(N=35)		V(N=50)		VI(N=30)		VII(N=12)		VIII(N=10)		IX(N=14)		X(N=7)	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Number of Full-Time Dentists Employed	0	14	56	2	10	15	45.5	8	22.9	10	20.0	16	53.3	1	8.3	5	50	4	28.6	2	28.6
	1	7	28	7	35	7	21.2	14	40.0	25	50.0	12	40.0	9	75.0	4	40	2	14.3	4	57.1
	2	2	8	8	40	5	15.2	7	20.0	14	28.0	2	6.7	1	8.3	1	10	2	14.3	1	14.3
	3	-	-	1	5	3	9.1	4	11.4	-	-	-	-	1	8.3	-	-	6	42.9	-	-
	4	-	-	2	10	1	3.0	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
	≥5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ID	2	8	-	-	2	6.1	1	2.9	1	2.0	-	-	-	-	-	-	-	-	-	-
Number of Part-Time Dentists Employed	0	19	76	16	80	23	69.7	30	85.7	37	74.0	25	83.3	9	75.0	7	70	13	92.9	6	85.7
	1	1	4	3	15	6	18.2	4	11.4	8	16.0	2	6.7	3	25.0	1	10	-	-	1	14.3
	2	1	4	1	5	2	6.1	-	-	2	4.0	-	-	-	-	-	-	1	7.1	-	-
	3	-	-	-	-	2	6.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	2	4.0	-	-	-	-	-	-	-	-	-	-
	≥5	2	8	-	-	-	-	-	-	-	-	1	3.3	-	-	-	-	-	-	-	-
	ID	2	8	-	-	-	-	1	2.9	1	2.0	2	6.7	-	-	2	20	-	-	-	-
Number of Full-Time Consultants Employed	0	22	88	17	85	31	93.9	24	68.6	47	94.0	27	90.0	12	100.0	10	100	13	92.9	5	71.4
	1	1	4	2	10	-	-	3	8.6	1	2.0	1	3.3	-	-	-	-	-	-	2	28.6
	2	-	-	-	-	1	3.0	3	8.6	-	-	1	3.3	-	-	-	-	1	7.1	-	-
	3	-	-	1	5	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
	≥5	-	-	-	-	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
	ID	2	8	-	-	1	3.0	2	5.7	2	4.0	1	3.3	-	-	-	-	-	-	-	-

Table 7 - Continued

Dental Personnel		Geographic Region																	
		I(N=25)		II(N=20)		III(N=33)		IV(N=35)		V(N=50)		VI(N=30)		VII(N=12)		VIII(N=10)		IX(N=14)		X(N=7)	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Number of Part-Time Consulting Dentists Employed	0	14	56	14	70	19	57.6	27	77.1	38	76	16	53.3	10	83.3	9	90	10	71.4	5	71.4
	1	2	8	-	-	5	15.2	4	11.4	6	12	8	26.7	2	16.7	1	10	1	7.1	1	14.3
	2	3	12	1	5	4	12.1	1	2.9	4	8	2	6.7	-	-	-	-	2	14.3	1	14.3
	3	2	8	2	10	2	6.1	1	2.9	-	-	1	3.3	-	-	-	-	-	-	-	-
	4	-	-	2	10	1	3.0	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
	≥5	2	8	1	5	1	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ID	2	8	-	-	1	3.0	1	2.9	2	4	3	10.0	-	-	-	-	1	7.1	-	-
Number of Full-Time Dental Hygienists Employed	0	14	56	1	5	18	54.4	10	28.6	36	72	15	50.0	9	75.0	5	50	8	51.1	5	71.4
	1	6	24	11	55	12	36.4	15	42.9	12	24	9	30.0	2	16.7	4	40	5	35.7	2	28.6
	2	3	12	6	30	2	6.1	7	20.0	1	2	4	13.3	-	-	1	10	1	7.1	-	-
	3	-	-	2	10	-	-	2	5.7	-	-	-	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	≥5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ID	2	8	-	-	1	3.0	1	2.9	1	2	2	6.7	1	8.3	-	-	-	-	-	-
Number of Part-Time Dental Hygienists Employed	0	18	72	18	90	26	78.8	30	85.7	45	90	29	96.7	10	83.3	5	50	12	85.7	6	85.7
	1	4	16	1	5	6	18.2	3	8.6	4	8	1	3.3	1	8.3	3	30	2	14.3	1	14.3
	2	1	4	1	5	1	3.0	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	≥5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ID	2	8	-	-	-	-	1	2.9	1	2	-	-	1	8.3	2	20	-	-	-	-

Table 7 - Continued

Dental Personnel		Geographic Region															
		I(N=25)		II(N=20)		III(N=33)		IV(N=35)		V(N=50)		VI(N=30)		VII(N=12)		VIII(N=10)		IX(N=14)		X(N=7)	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Number of Full-Time Dental Assistants Employed	0	15	60	4	20	18	54.5	7	20.0	13	26	10	33.3	-	-	6	60	3	21.4	2	28.6
	1	2	8	8	40	10	30.3	8	22.9	18	36	10	33.3	6	50.0	2	20	3	21.4	3	42.9
	2	6	24	4	20	3	9.1	10	28.6	14	28	3	10.0	3	25.0	2	20	2	14.3	2	28.6
	3	-	-	1	5	1	3.0	4	11.4	4	8	1	3.3	1	8.3	-	-	5	35.7	-	-
	4	-	-	1	5	1	3.0	4	11.4	-	-	1	3.3	2	16.7	-	-	1	7.1	-	-
	≥5	-	-	2	10	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
	ID	2	8	-	-	-	-	1	2.9	1	2	5	16.7	-	-	-	-	-	-	-	-
Number of Part-Time Dental Assistants Employed	0	20	80	19	95	30	90.9	32	91.4	43	86	28	93.3	11	91.7	7	70	14	100.0	7	100.0
	1	2	8	1	5	1	3.0	2	5.7	4	8	2	6.7	1	8.3	1	10	-	-	-	-
	2	-	-	-	-	1	3.0	-	-	1	2	-	-	-	-	1	10	-	-	-	-
	3	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-
	4	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	≥5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ID	2	8	-	-	1	3.0	1	2.9	1	2	-	-	-	-	1	10	-	-	-	-
Number of Full-Time Dental Laboratory Technicians Employed	0	23	92	17	85	31	93.9	34	97.1	48	96	30	100.0	12	100.0	10	100	13	92.9	7	100.0
	1	-	-	3	15	1	3.0	-	-	1	2	-	-	-	-	-	-	1	7.1	-	-
	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	≥5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ID	2	8	-	-	1	3.0	1	2.9	1	2	-	-	-	-	-	-	-	-	-	-

Table 7 - Continued

Dental Personnel		Geographic Region															
		I(N=25)		II(N=20)		III(N=33)		IV(N=35)		V(N=50)		VI(N=30)		VII(N=12)		VIII(N=10)		IX(N=14)		X(N=7)	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Number of Part-Time Dental Laboratory Technicians Employed	0	23	92	92	95	33	100	33	94.3	49	98	30	100	12	100	10	100	14	100	7	100
	1	-	-	1	5	-	-	1	2.9	-	-	-	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	≥5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ID	2	8	-	-	-	-	1	2.9	1	2	-	-	-	-	-	-	-	-	-	-

N = number of institutions
ID = incomplete data
% = relative frequency which includes incomplete data resulting in a possible underestimation

NOTE: Figures may not add up to 100% due to rounding.

endodontic therapy, and fixed prosthetics "available" to residents in 19 PRFs (76%) (see Figure 1). Data in Table 5, indicated that services in Region I are most commonly available through "outside" sources with the exception of preventive services which are available most commonly "within" the institution.

Data regarding institutions in Region I having various dental facilities and equipment on the premises are presented in Table 6 and Figure 2. Dental facilities and equipment located in the largest number of institutions follow: 24 PRFs (96%) have sinks, 23 PRFs (92%) have toothbrushes, 21 PRFs (84%) have dental floss, and 20 PRFs (80%) have mirrors. A smaller number of institutions have the following dentally related items: 18 PRFs (72%) have a dental chair; 17 PRFs (68%) have an autoclave; 15 PRFs (60%) have disclosing materials; 14 PRFs (56%) have a stationary dental radiographic unit; 13 PRFs (52%) have a dental treatment room, an stationary dental unit, and an ultrasonic dental unit; and 12 PRFs (48%) have equipment for processing and developing radiographs. Number and percent of institutions with additional facilities and equipment located on the premises include 11 PRFs (44%) with a barrier-free dental treatment room and topical or supplemental fluoride materials, and ten PRFs (40%) with audio-visual aids for resident education. Twenty-five percent or less of the facilities in Region I have a dental laboratory facility, an oral health education room, a portable dental radiographic unit, and a portable dental unit.

The greatest neumber of dental personnel employed in Region I include a full-time resident dentist(s), a part-time consulting dentist(s), and a full-time dental hygienist(s) in nine PRFs (36%);

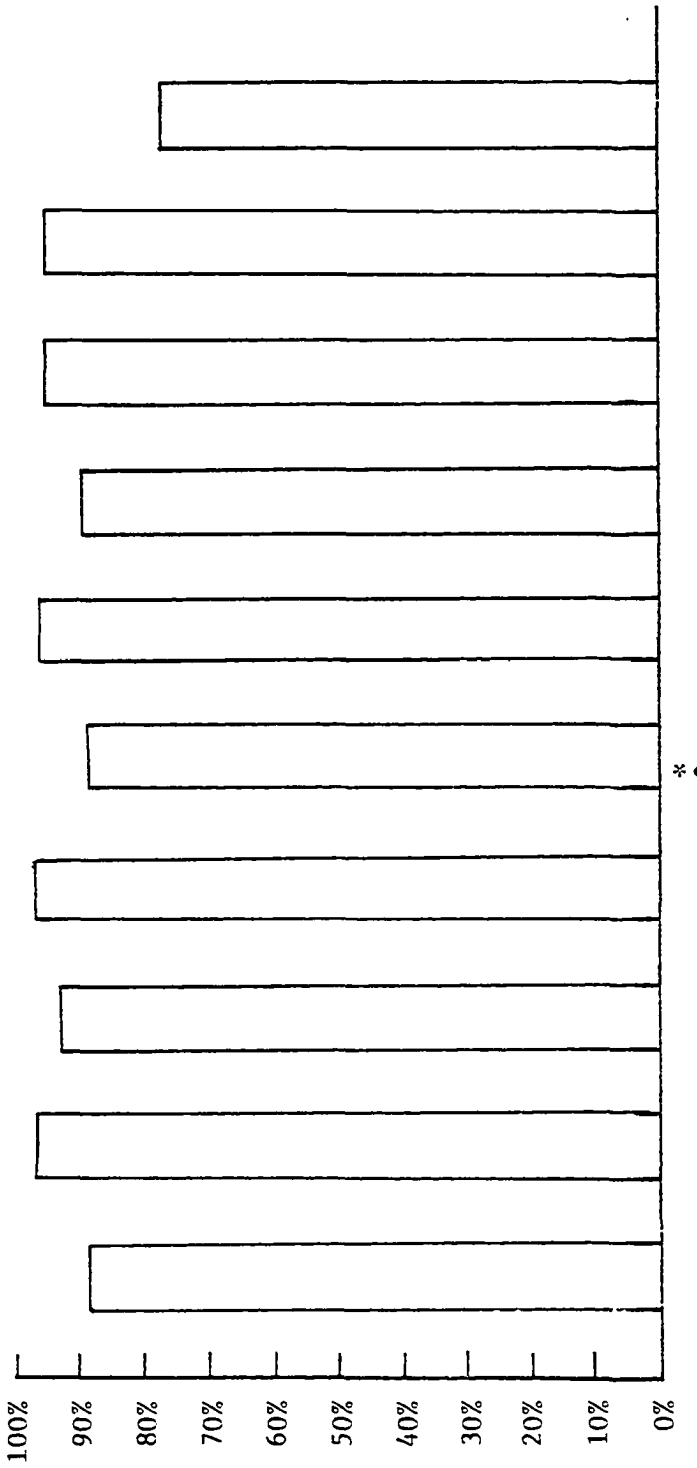


Figure 1. Oral health services available within and/or outside public residential facilities in Region I (N = 25)

*Percentage does not account for incomplete data resulting in a possible underestimation.

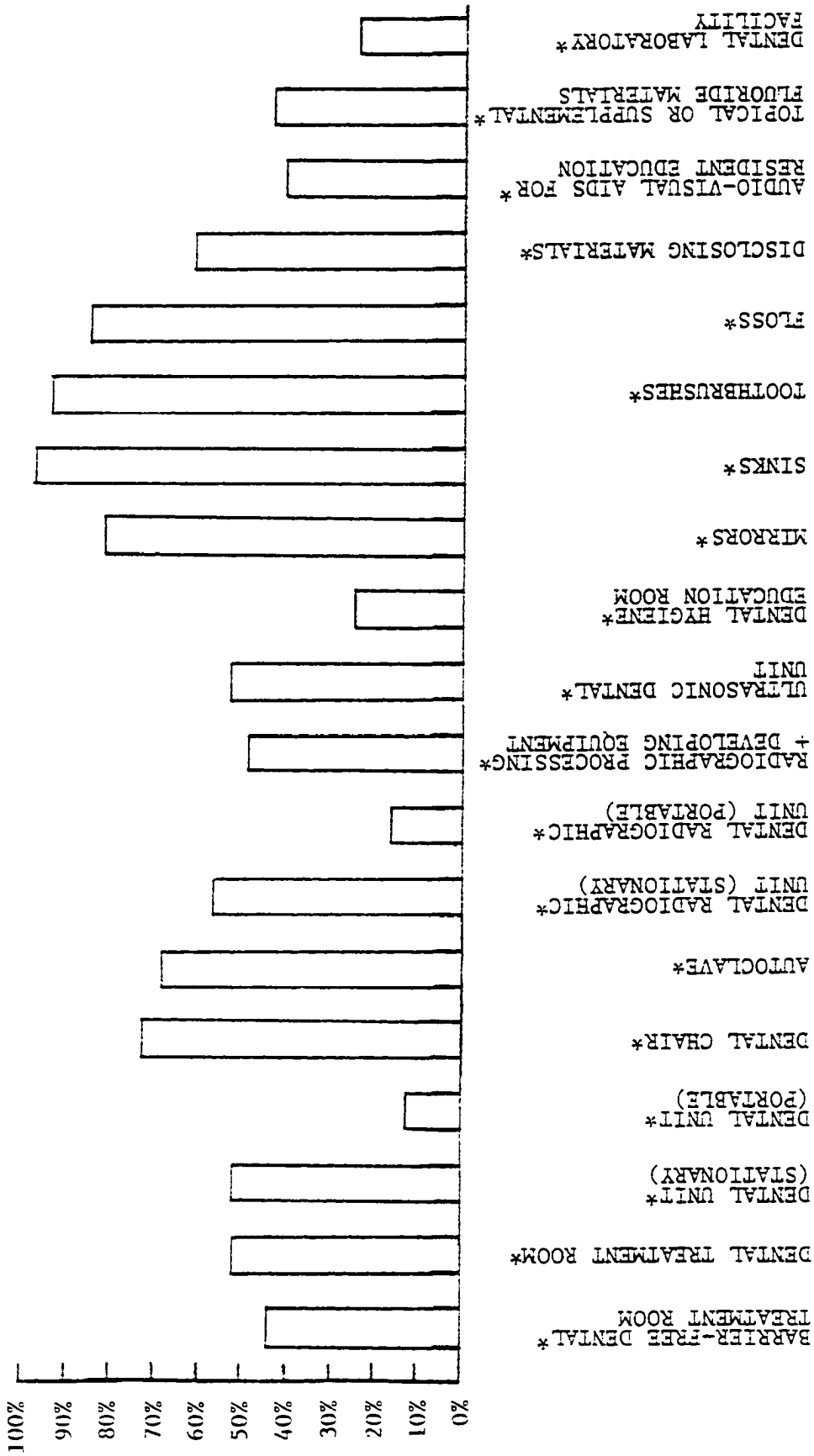


Figure 2. Percentage of public residential facilities that have dental facilities and equipment located on the premises in Region I (N = 25)

*Percentage does not account for incomplete data resulting in a possible underestimation.

Table 8

Public Residential Facilities Employing Dental Personnel in Region I (N = 25)

Type of Dental Personnel	Number of Dental Personnel												Incomplete Data	
	0		1		2		3		4		≥ 5			
	N	%	N	%	N	%	N	%	N	%	N	%		
Part-time Consulting Dentists	14	56.0	2	8.0	3	12.0	2	8.0	--	--	2	8.0	2	8.0
Full-time Dental Hygienists	14	56.0	6	24.0	3	12.0	--	--	--	--	--	--	2	8.0
Full-time Resident Dentists	14	56.0	7	28.0	2	8.0	--	--	--	--	--	--	2	8.0
Full-time Dental Assistants	15	60.0	2	8.0	6	24.0	--	--	--	--	--	--	2	8.0
Part-time Dental Hygienists	18	72.0	4	16.0	1	4.0	--	--	--	--	--	--	2	8.0
Part-time Resident Dentists	19	76.0	1	4.0	--	--	--	--	--	--	--	--	2	8.0
Part-time Dental Assistants	20	80.0	2	8.0	--	--	--	--	1	4.0	--	--	2	8.0
Full-time Consulting Dentists	22	88.0	1	4.0	--	--	--	--	--	--	--	--	2	8.0
Full-time Dental Laboratory Technicians	23	92.0	--	--	--	--	--	--	--	--	--	--	2	8.0
Part-time Dental Laboratory Technicians	23	92.0	--	--	--	--	--	--	--	--	--	--	2	8.0

and a full-time dental assistant(s) in eight PRFs (32%). Tables 7 and 8 display data related to the number of dental personnel employed within Region I. No full-time or part-time laboratory technicians are employed by PRFs within the region.

Region II (N = 20). Preventive oral health services, restorative dentistry, oral surgery, and removable prosthetics are "available" to residents of all PRFs in Region II. Other services such as intramuscular sedation, intravenous sedation, endodontic therapy, fixed prosthetics, and periodontal treatment are "available" to residents of 18 PRFs (90%). Fourteen PRFs (70%) indicated that orthodontic services also are "available" to residents (see Figure 3). Data in Table 5 generally indicated that services are provided frequently "within" PRFs except for orthodontic treatment.

Data from Region II indicated that all PRFs have a stationary dental unit, a dental chair, an autoclave, mirrors, and sinks. The following facilities and equipment are present in 19 PRFs (95%): a stationary dental radiographic unit, radiographic processing and developing equipment, and toothbrushes. Eighteen PRFs (90%) indicated that a dental treatment room, ultrasonic dental unit, dental floss, and topical or supplemental fluoride materials are located on the premises. Fifteen PRFs (75%) have disclosing materials and 14 PRFs (70%) have audio-visual aids for resident education which is the highest percentage for audio-visual aids of any region. A smaller number of institutions have the following dental facilities and equipment: 13 PRFs (65%) have a dental laboratory facility, 11 PRFs (55%) have a barrier-free dental treatment room, ten PRFs (50%) have a portable dental radiographic unit, and eight PRFs (40%) have a portable dental

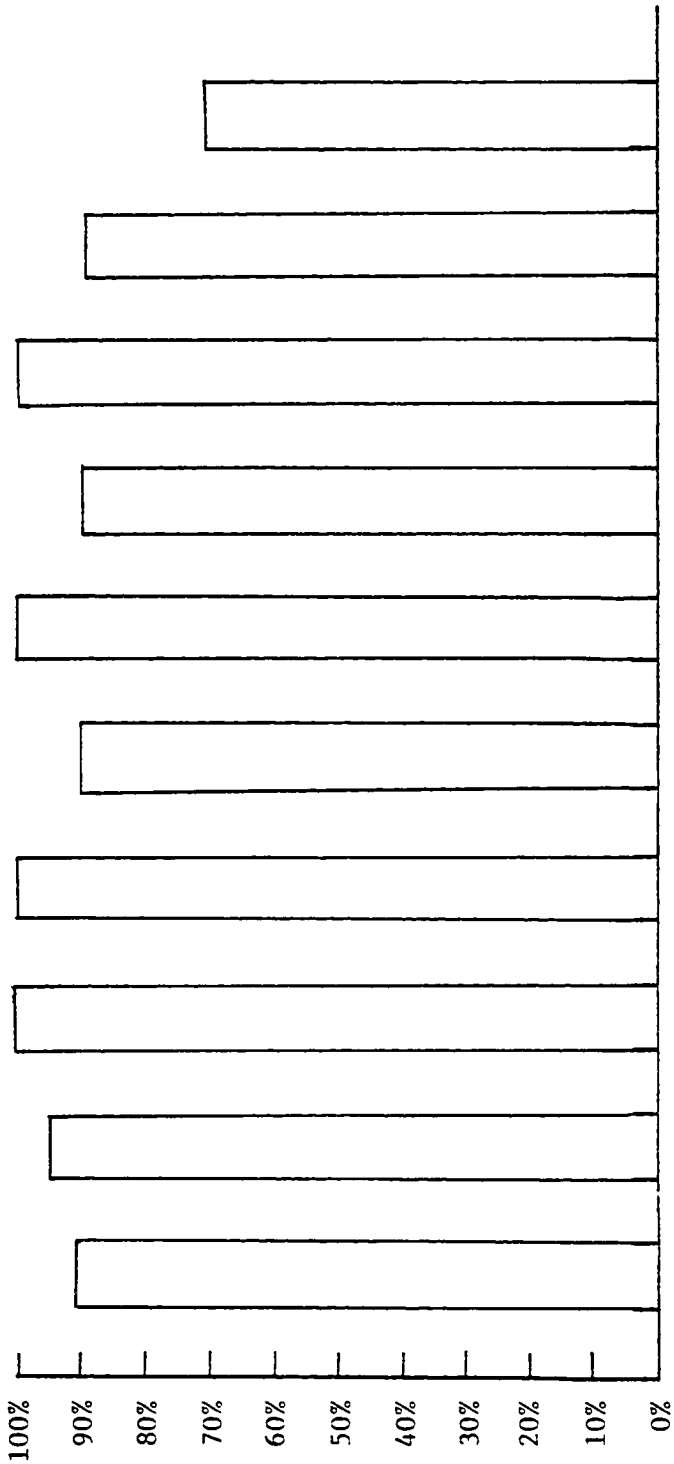


Figure 3. Oral health services available within and/or outside public residential facilities in Region II (N = 20).

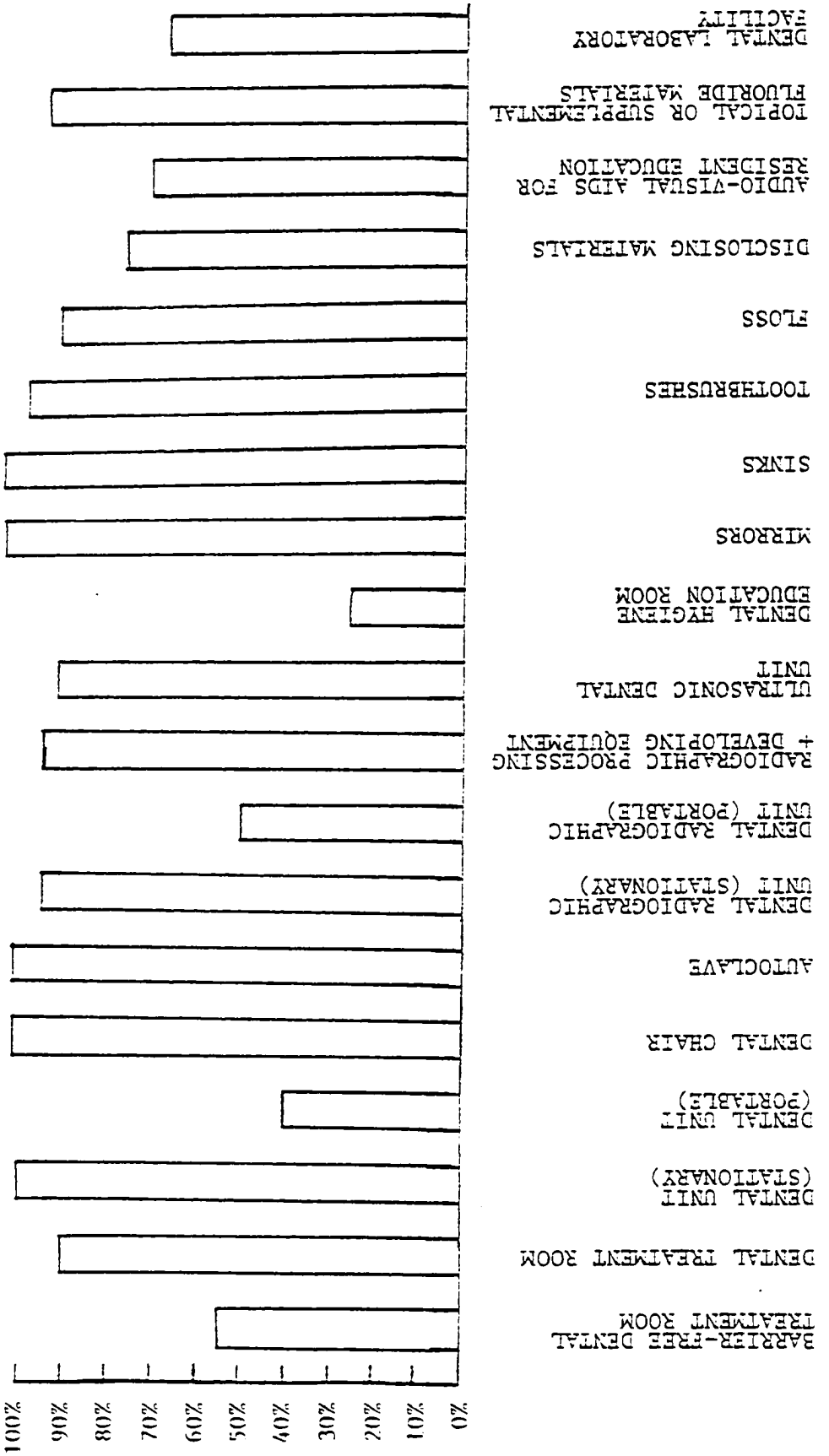


Figure 4. Percentage of public residential facilities that have dental facilities and equipment located on the premises in Region II (N = 20)

Table 9

Public Residential Facilities Employing Dental Personnel in Region II (N = 20)

Type of Dental Personnel	Number of Dental Personnel													
	0		1		2		3		4		≥ 5		Incomplete Data	
	N	%	N	%	N	%	N	%	N	%	N	%		
Full-time Dental Hygienists	1	5	11	55	6	30	2	10	--	--	--	--	--	--
Full-time Resident Dentists	2	10	7	35	8	40	1	5	2	10	--	--	--	--
Full-time Dental Assistants	4	20	8	40	4	20	1	5	1	5	2	10	--	--
Part-time Consulting Dentists	14	70	--	--	1	5	2	10	2	10	1	5	--	--
Part-time Resident Dentists	16	80	3	15	1	5	--	--	--	--	--	--	--	--
Full-time Consulting Dentists	17	85	2	10	--	--	1	5	--	--	--	--	--	--
Full-time Laboratory Technicians	17	85	3	15	--	--	--	--	--	--	--	--	--	--
Part-time Dental Hygienists	18	90	1	5	1	5	--	--	--	--	--	--	--	--
Part-time Dental Assistants	19	95	1	5	--	--	--	--	--	--	--	--	--	--
Part-time Dental Laboratory Technicians	19	95	1	5	--	--	--	--	--	--	--	--	--	--

unit. Only five PRFs (25%) have an oral health education room (see Table 6 and Figure 4).

Data from Region II indicated that a full-time dental hygienist(s) is employed by 19 PRFs (95%), a full-time resident dentist(s) is employed by 18 PRFs (90%), and a full-time dental assistant(s) is employed by 16 PRFs (80%). Although other dental personnel are employed by 30 percent or less of the facilities, data indicated that institutions within Region II employ more dental laboratory technicians than any other region. Three PRFs (15%) employ a full-time dental laboratory technician while one PRF employs a part-time dental laboratory technician (see Tables 7 and 9).

Region III (N = 33). One facility in Region III failed to respond to the item regarding services "available". With regard to the services most frequently "available", data indicate the following: preventive oral health services and restorative services are "available" to residents of 31 PRFs (94%), oral surgery is "available" to residents of 30 PRFs (90%), and removable prosthetics are "available" to residents of 29 PRFs (87.9%). "Availability" of intramuscular sedation, periodontal treatment, fixed prosthetics, endodontic therapy, and intravenous sedation services range from 19 PRFs (57.5%) providing intramuscular sedation to 25 PRFs (75.8%) providing intravenous sedation. Data for Region III further indicated that only 12 PRFs (36.4%) have orthodontic services "available" to residents (see Figure 5). Data presented in Table 5 indicated that preventive oral health services are most often provided "within" PRFs. Other oral health care services available "within", "outside", or both "within and outside" PRFs in Region III vary greatly.

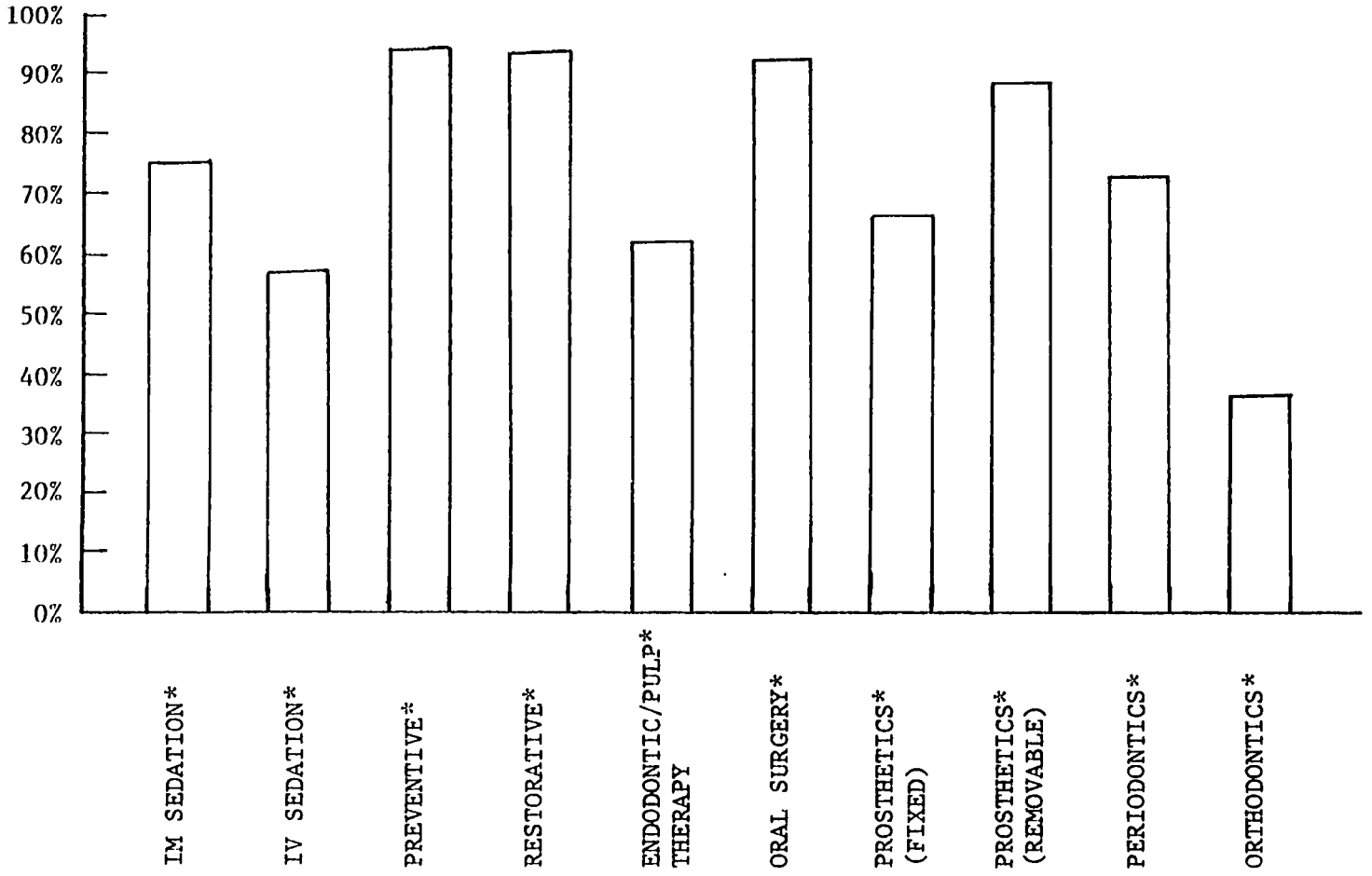


Figure 5. Oral health services available within and/or outside public residential facilities in Region III (N = 33)

*Percentage does not account for incomplete data resulting in a possible underestimation.

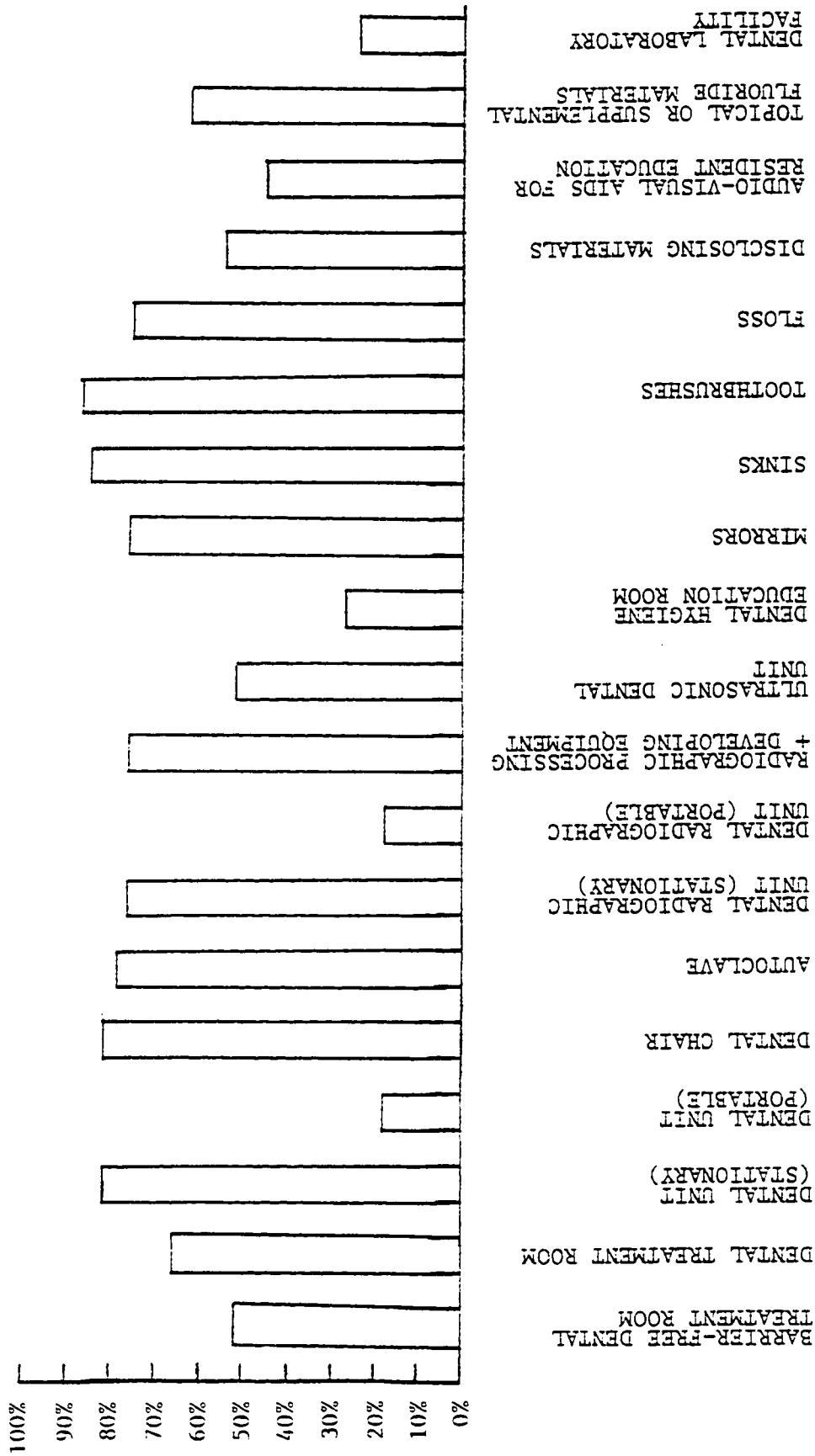


Figure 6. Percentage of public residential facilities that have dental facilities and equipment located on the premises in Region III (N = 33).

Table 10

Public Residential Facilities Employing Dental Personnel in Region III (N = 33)

Type of Dental Personnel	Number of Dental Personnel													
	0		1		2		3		4		≥ 5		Incomplete Data	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Full-time Resident Dentists	15	45.5	7	21.2	5	15.2	3	9.1	1	3.0	--	--	2	6.1
Full-time Dental Assistants	18	54.5	10	30.3	3	9.1	1	3.0	1	3.0	--	--	--	--
Full-time Dental Hygienists	18	54.4	12	36.4	2	6.1	--	--	--	--	--	--	1	3.0
Part-time Consulting Dentists	19	57.6	5	15.2	4	12.1	2	6.1	1	3.0	1	3.0	1	3.0
Part-time Resident Dentists	23	69.7	6	18.2	2	6.1	2	6.1	--	--	--	--	--	--
Part-time Dental Hygienists	26	78.8	6	18.2	1	3.0	--	--	--	--	--	--	--	--
Part-time Dental Assistants	30	90.9	1	3.0	1	3.0	--	--	--	--	--	--	1	3.0
Full-time Consulting Dentists	31	93.9	--	--	1	3.0	--	--	--	--	--	--	1	3.0
Full-time Dental Laboratory Technicians	31	93.9	1	3.0	--	--	--	--	--	--	--	--	1	3.0
Part-time Dental Laboratory Technicians	33	100	--	--	--	--	--	--	--	--	--	--	--	--

Institutions in Region III most often have the following dental facilities and equipment on the premises: 19 PRFs (87.9%) have toothbrushes; 28 PRFs (84.8%) have sinks; 27 PRFs (81.8%) have a stationary dental unit and a dental chair; 26 PRFs (78.8%) have an autoclave, radiographic processing and developing equipment, and mirrors; and 25 PRFs (75.8%) have a stationary dental radiographic unit, and dental floss. Other dental facilities and equipment located within a smaller percentage of institutions include: 22 PRFs (66%) with a dental treatment room; 20 PRFs (60.6%) with topical or supplemental fluoride materials; 18 PRFs with disclosing materials; 17 PRFs (51.5%) with a barrier-free dental treatment room, and an ultrasonic dental unit; and 15 PRFs with audio-visual aids for resident education. Nine PRFs (27.3%) or less have an oral health education room, a dental laboratory facility, a portable dental unit, or a portable dental radiographic unit (see Table 6 and Figure 6).

The most frequently employed dental personnel in Region III include: a full-time resident dentist(s) employed by 16 PRFs (48.5%), a full-time dental assistant(s) by 15 PRFs (45.4%), and a full-time dental hygienist(s) by 14 PRFs (42.5%). Other personnel employed to a lesser extent include: a part-time dental consultant(s) by 13 PRFs (39.4%) and a part-time resident dentist(s) employed by nine PRFs (30%). Twenty-one percent or less of the PRFs employ other dental personnel. Specific information on dental personnel employed within Region III is located in Tables 7 and 10.

Region IV (N = 35). Responses of two PRFs in Region IV were considered incomplete. Intramuscular sedation and restorative services are most often "available" to residents of 33 PRFs (94.3%).

Other services "available" include: removable prosthetics to residents of 31 PRFs (88.5%), endodontic therapy to residents of 30 PRFs (85.7%), periodontal therapy to residents of 29 PRFs (82.8%), fixed prosthetics to residents of 28 PRFs (80%), and intravenous sedation to residents of 23 PRFs (65.7%), Of all dental services, orthodontic care is least "available" to PRF residents and is provided by only 14 (40%) of the institutions (see Figure 7). Data displayed in Table 5 indicated that more services are provided "within" PRFs in Region IV than "outside" with the exception of orthodontic treatment which is obtained more often "outside" the institution.

In Table 6 and Figure 8 data indicated that institutions in Region IV most commonly have the following dental facilities and equipment: 33 PRFs (94.3%) have a dental chair; 32 PRFs (91.4%) have an autoclave, a stationary dental radiographic unit, and toothbrushes; 31 PRFs (88.6%) have a stationary dental unit, dental floss, radiographic processing and developing equipment, an ultrasonic dental unit, and sinks; 30 PRFs (85.7%) have topical or supplemental fluoride materials and mirrors; and 28 PRFs (80%) have disclosing materials. Institutions with other dental facilities and equipment present to a lesser extent include 25 PRFs (71.4%) with a dental treatment room; 21 PRFs (60%) with a barrier-free dental treatment room and a dental laboratory facility; and 19 PRFs (54.3%) with audio-visual aids for resident education. Eleven PRFs (31.4%) or less have an oral health education room, portable dental unit, or a portable dental radiographic unit on the premises.

Dental personnel employed by the largest number of facilities in Region IV include: a full-time dental assistant(s) by 27 PRFs

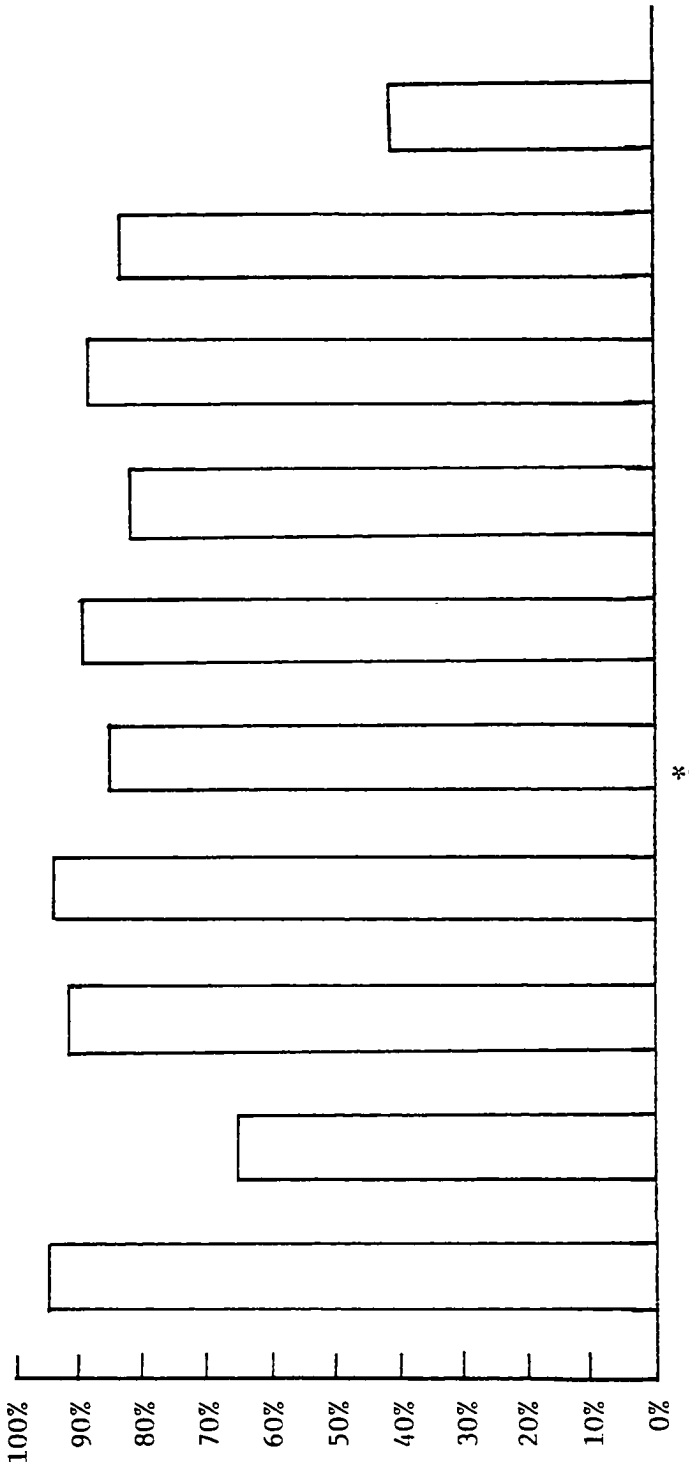


Figure 7. Oral health services available within and/or outside public residential facilities in Region IV (N = 35)

*Percentage does not account for incomplete data resulting in a possible underestimation.

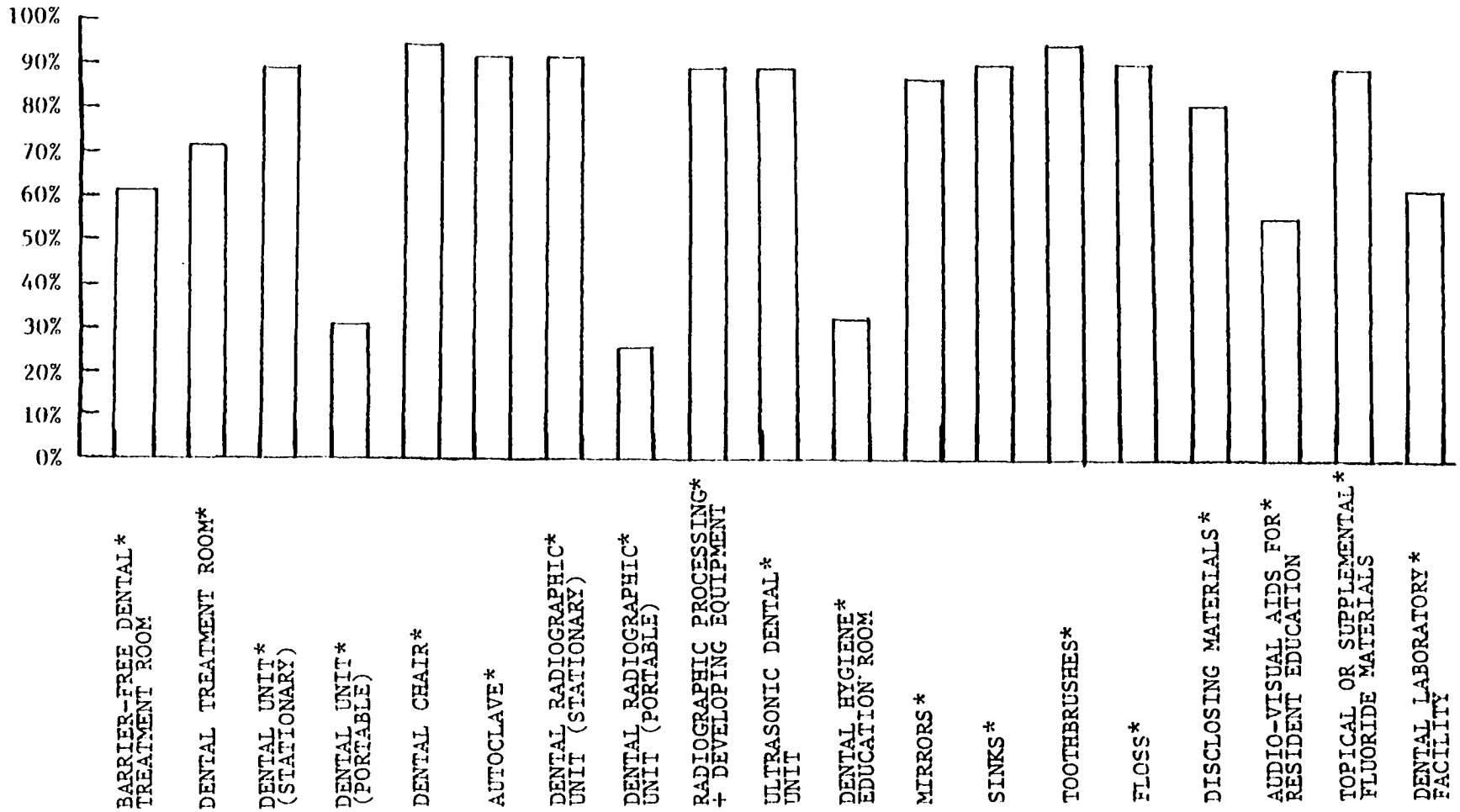


Figure 8. Percentage of public residential facilities that have dental facilities and equipment located on the premises in Region IV (N = 35)

*Percentage does not account for incomplete data resulting in a possible underestimation.

Table 11

Public Residential Facilities Employing Dental Personnel in Region IV (N = 35)

Type of Dental Personnel	Number of Dental Personnel													
	0		1		2		3		4		≥ 5		Incomplete Data	
	N	%	N	%	N	%	N	%	N	%	N	%		
Full-time Dental Assistants	7	20.0	8	22.9	10	28.6	4	11.4	4	11.4	1	2.9	1	2.9
Full-time Resident Dentists	8	22.9	14	40.0	7	20.0	4	11.4	1	2.9	--	--	1	2.9
Full-time Dental Hygienists	10	28.6	15	42.9	7	20.0	2	5.7	--	--	--	--	1	2.9
Full-time Consulting Dentists	24	68.6	3	8.6	3	8.6	1	2.9	1	2.9	1	2.9	2	5.7
Part-time Consulting Dentists	27	77.1	4	11.4	1	2.9	1	2.9	1	2.9	--	--	1	2.9
Part-time Resident Dentists	30	85.7	4	11.4	--	--	--	--	--	--	--	--	1	2.9
Part-time Dental Hygienists	30	85.7	3	8.6	1	2.9	--	--	--	--	--	--	1	2.9
Part-time Dental Assistants	32	91.4	2	5.7	--	--	--	--	--	--	--	--	1	2.9
Part-time Dental Laboratory Technicians	33	94.3	1	2.9	--	--	--	--	--	--	--	--	1	2.9
Full-time Dental Laboratory Technicians	34	97.1	--	--	--	--	--	--	--	--	--	--	1	2.9

(77.2%), a full-time resident dentist(s) by 26 PRFs (74.3%), and a full-time dental hygienist(s) by 24 PRFs (68.6%). A full-time consulting dentist(s) is employed by nine PRFs (25.9%), a part-time consulting dentist(s) by seven PRFs (20.1%) while other dental personnel are employed by less than 12 percent of the facilities in Region IV (see Tables 7 and 11).

Region V (N = 50). Services "available" to residents of all PRFs in Region V include oral surgery and restorative servcies. Other services "available" to residents of PRFs are: preventive dentistry by 48 PRFs (96%), periodontal therapy by 47 PRFs (94%), removable prosthetics by 46 PRFs (92%), endodontic therapy by 45 PRFs (90%), fixed prosthetics by 44 PRFs (88%), intramuscular sedation by 43 PRFs (86%), and intravenous sedation by 35 PRFs (68%). The least "available" service, orthodontic treatment, is provided to residents of 25 PRFs (50%) (see Figure 9). Data in Table 5 indicated that the majority of services are provided most frequently "within" PRFs. Two exceptions are: orthodontic treatment which is more commonly obtained through "outside" sources and intravenous sedation and oral surgery which are available "within" or "outside" PRFs.

Data revealed that a large number of institutions in Region V have the following facilities or equipment located on the premises: 49 PRFs (98%) have sinks; 47 PRFs (94%) have a dental chair, and autoclave, and toothbrushes; and 46 PRFs (92%) have mirrors (see Table 6 and Figure 10). Institutions with a smaller percentage of dental facilities and equipment include: 44 PRFs (88%) with radiographic processing and developing equipment; 43 PRFs (86%) with fluoride materials; 42 PRFs (84%) with a stationary dental radiographic unit

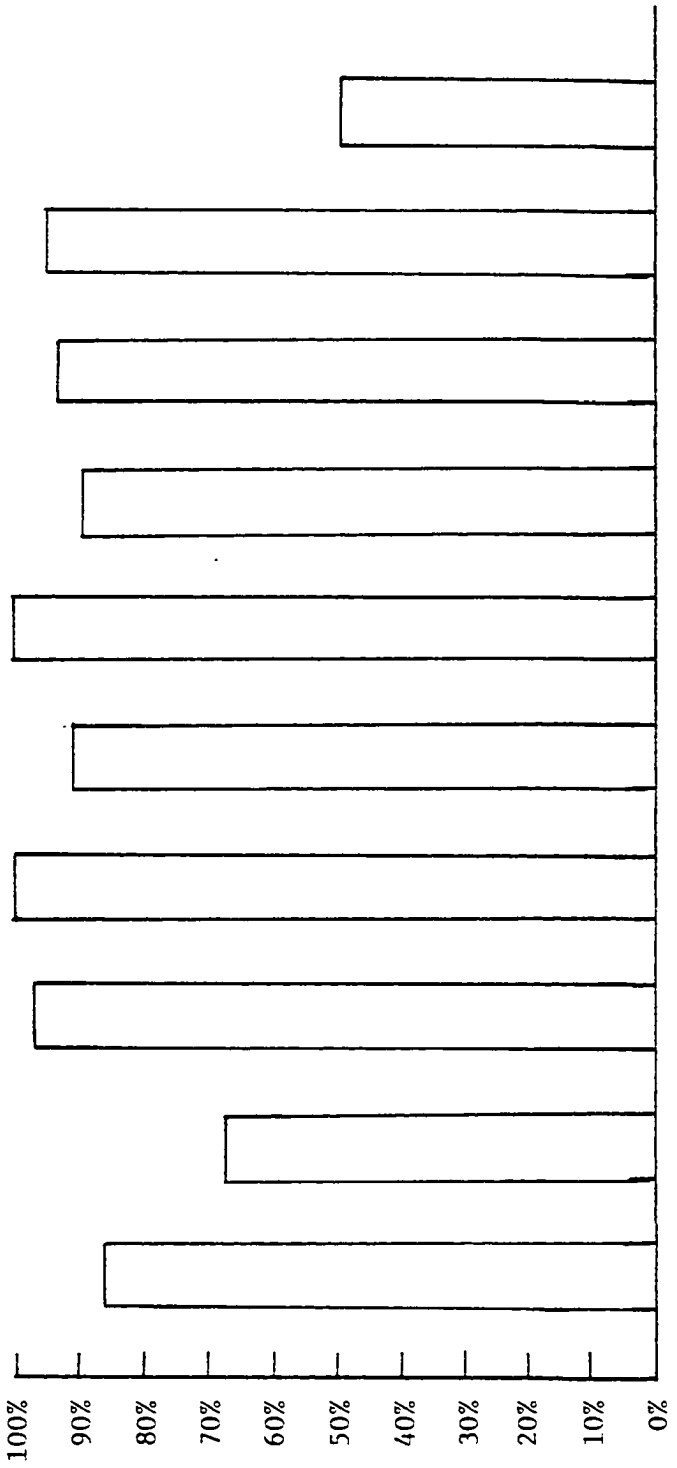


Figure 9. Oral health services available within and/or outside public residential facilities in Region V (N = 50)

*Percentage does not account for incomplete data resulting in a possible underestimation.

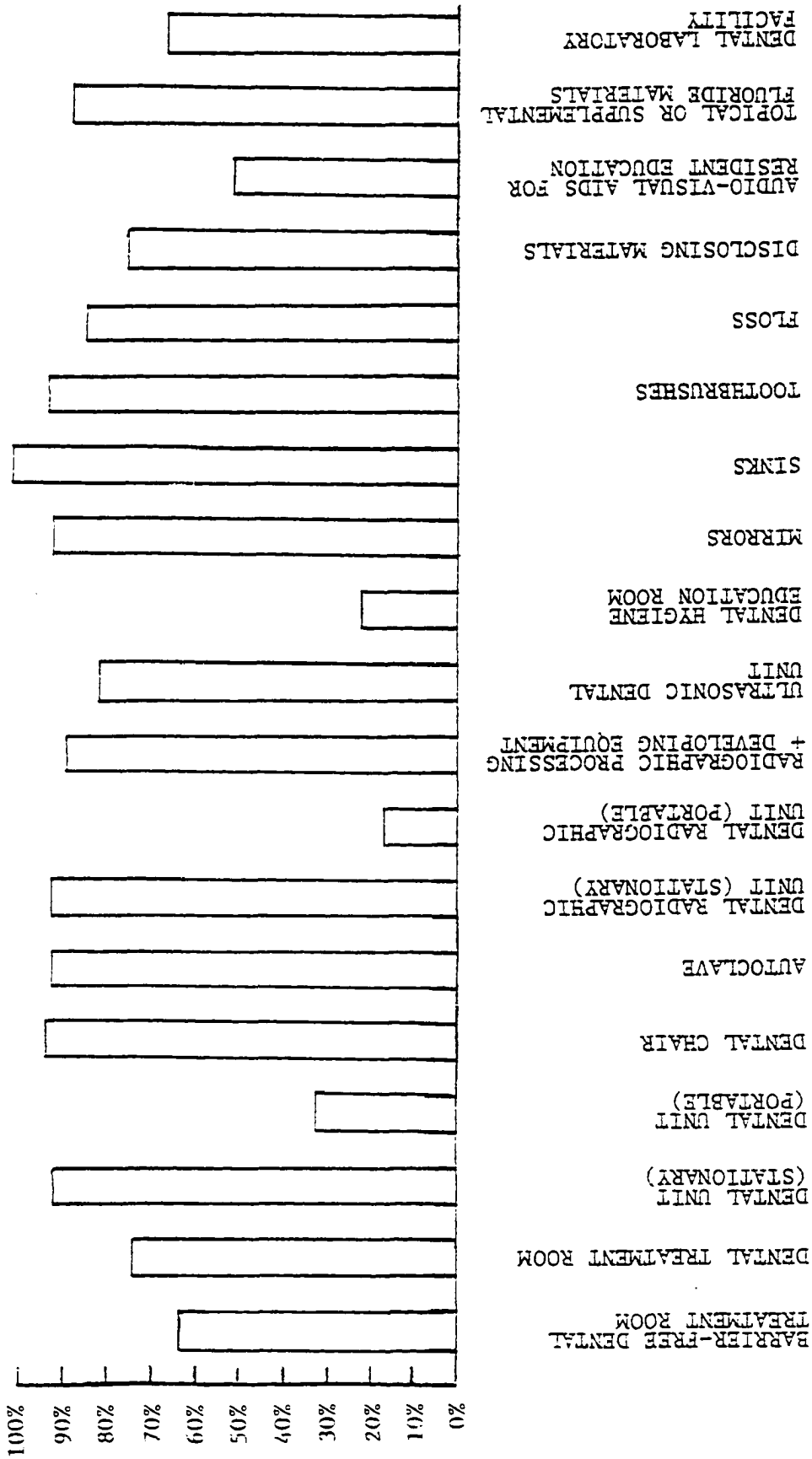


Figure 10. Percentage of public residential facilities that have dental facilities and equipment located on the premises in Region V (N = 50)

Table 12

Public Residential Facilities Employing Dental Personnel in Region V (N = 50)

Type of Dental Personnel	Number of Dental Personnel													
	0		1		2		3		4		≥5		Incomplete Data	
	N	%	N	%	N	%	N	%	N	%	N	%		
Full-time Resident Dentitst	10	20.0	25	50.0	14	28.0	--	--	--	--	--	--	1	2.0
Full-time Dental Assistants	13	26.0	18	36.0	14	28.0	4	8.0	--	--	--	--	1	2.0
Full-time Dental Hygienists	36	72.0	12	24.0	1	2.0	--	--	--	--	--	--	1	2.0
Part-time Resident Dentists	37	74.0	8	16.0	2	4.0	--	--	2	4.0	--	--	1	2.0
Part-time Consulting Dentists	38	76.0	6	12.0	4	8.0	--	--	--	--	--	--	2	4.0
Part-time Dental Assistants	43	86.0	4	8.0	1	2.0	1	2.0	--	--	--	--	1	2.0
Part-time Dental Hygienists	45	90.0	4	8.0	--	--	--	--	--	--	--	--	1	2.0
Full-time Consulting Dentists	47	94.0	1	2.0	--	--	--	--	--	--	--	--	2	4.0
Full-time Dental Laboratory Technicians	48	96	1	2.0	--	--	--	--	--	--	--	--	1	2.0
Part-time Dental Laboratory Technicians	49	98	--	--	--	--	--	--	--	--	--	--	1	2.0

and dental floss; and 40 PRFs (80%) with an ultrasonic dental unit. Institutions having other dental facilities and equipment are: 37 PRFs (74%) with a dental treatment room and disclosing materials; 32 PRFs (64%) with a barrier-free dental treatment room and a dental laboratory facility; and 25 PRFs (50%) with audio-visual aids for resident education. Twenty-two percent (11 PRFs) or less have an oral health education room, a portable dental unit, or a portable dental radiographic unit.

In Tables 7 and 12 data revealed that a full-time resident dentist(s) employed by 39 PRFs (78%) and a full-time dental assistant(s0 employed by 36 PRFs (72%) are the most frequently employed dental personnel in Region V. Data also indicated that 13 PRFs (25%) employ a full-time dental hygienist(s) while the percentage of other dental personnel employed consistently decreases.

Region VI (N =30). Restorative services are "available" to residents of all PRFs in Region VI. Other services in rank order of "availability" to residents include: both oral surgery and preventive services by 28 PRFs (93.4%), removable prosthetics by 27 PRFs (90%), periodontal therapy by 26 PRFs (86.7%), fixed prosthetics and endodontic therapy by 25 PRFs (83.3%), intramuscular sedation by 24 PRFs (80%), and intravenous sedation by 19 PRFs (63.3%). Data indicated that orthodontic care "available" to residents of 16 PRFs (53.3%), is the least available service (see Figure 11). Data displayed in Table 5 indicated that preventive and restorative services are most commonly provided "within" PRFs while orthodontic services are obtained most frequently through "outside" sources. Availability of other services

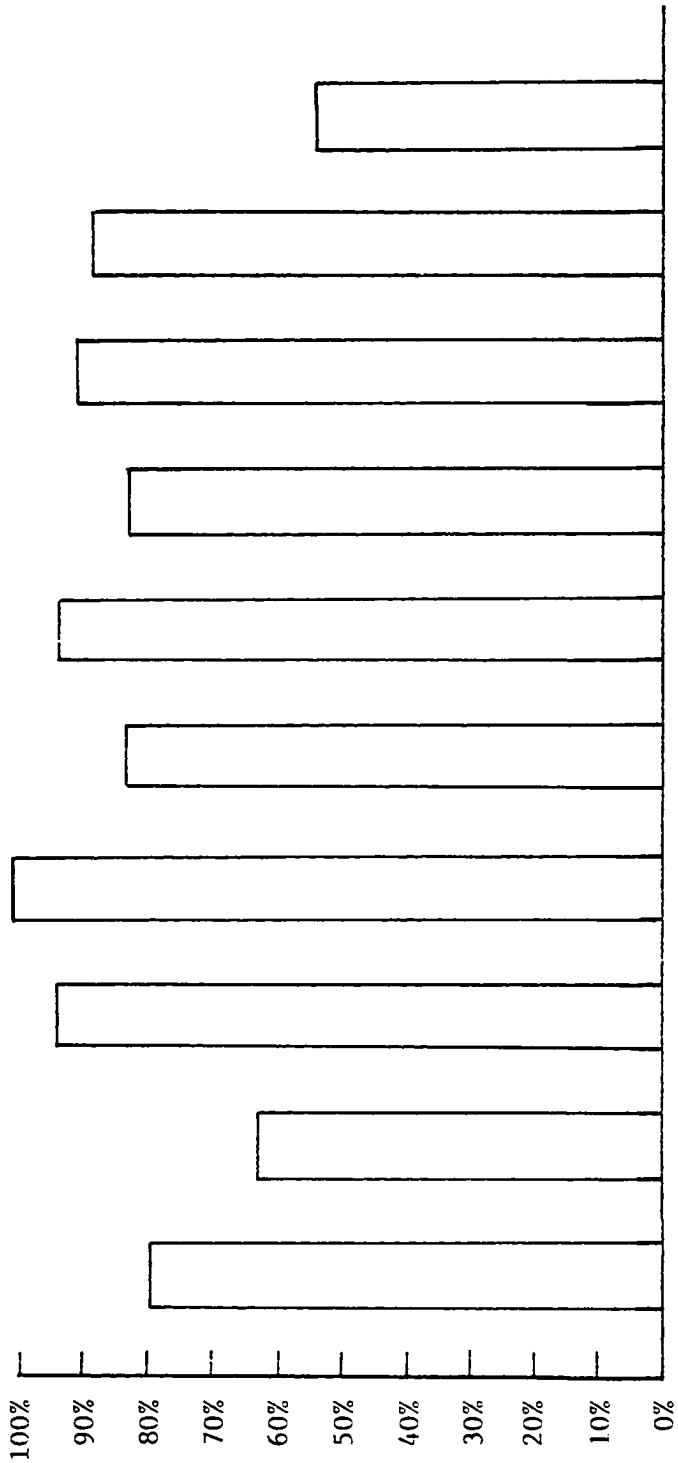


Figure 11. Oral health services available within and/or outside public residential facilities in Region VI (N = 30)

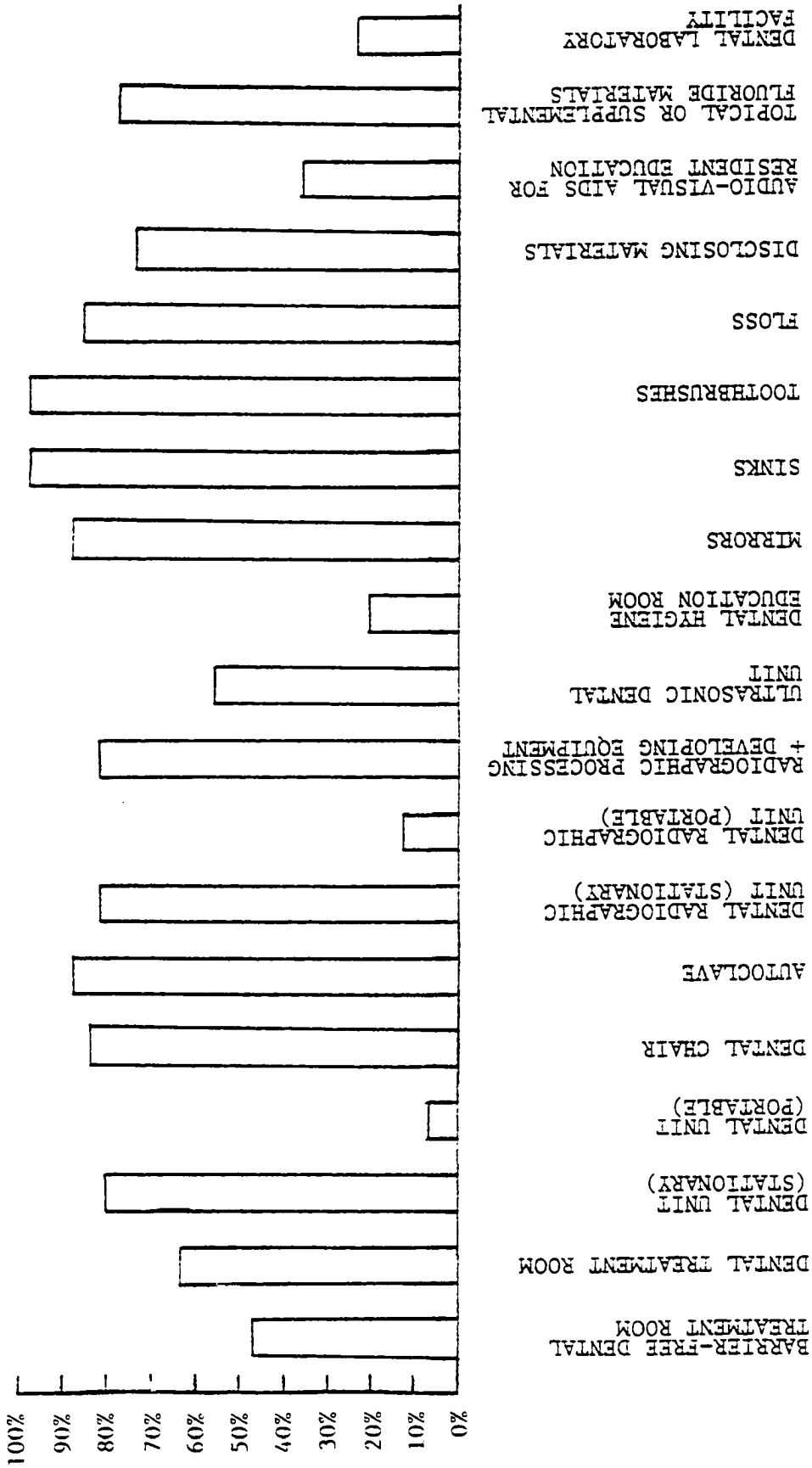


Figure 12. Percentage of public residential facilities that have dental facilities and equipment located on the premises in Region VI (N = 30)

Table 13

Public Residential Facilities Employing Dental Personnel in Region VI (N = 30)

Type of Dental Personnel	Number of Dental Personnel													
	0		1		2		3		4		≥ 5		Incomplete Data	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Full-time Dental Assistants	10	33.3	10	33.3	3	10.0	1	3.3	1	3.3	--	--	5	16.7
Full-time Resident Dentists	16	53.3	12	40.0	2	6.7	--	--	--	--	--	--	--	--
Full-time Dental Hygienists	15	50	9	30.0	4	13.3	--	--	--	--	--	--	2	6.7
Part-time Consulting Dentists	16	53.3	8	26.7	2	6.7	1	3.3	--	--	--	--	3	10.0
Full-time Consulting Dentists	27	90.0	1	3.3	1	3.3	--	--	--	--	--	--	1	3.3
Part-time Resident Dentists	25	83.3	2	6.7	--	--	--	--	--	--	1	3.3	2	6.7
Part-time Dental Assistants	28	93.3	2	6.7	--	--	--	--	--	--	--	--	--	--
Part-time Dental Hygienists	29	96.7	1	3.3	--	--	--	--	--	--	--	--	--	--
Full-time Dental Laboratory Technicians	30	100.0	--	--	--	--	--	--	--	--	--	--	--	--
Part-time Dental Laboratory Technicians	30	100.0	--	--	--	--	--	--	--	--	--	--	--	--

is widely distributed "within", "outside", or both "within and outside" PRFs.

Institutions within Region VI having dental facilities and equipment most frequently on the premises include: 29 PRFs (96.7%) with sinks and toothbrushes; 26 PRFs (86.7%) with an autoclave and mirrors; 25 PRFs (83.3%) with a dental chair and dental floss; 24 PRFs (80%) with a stationary dental unit, a stationary dental radiographic unit, and radiographic processing and developing equipment. Data displayed in Table 6 and Figure 12 indicated that institutions with other dental facilities and equipment on the premises include: 23 PRFs (76.7%) with topical and supplemental fluoride materials; 22 PRFs (73.3%) with disclosing materials; 19 PRFs (63.3%) with a dental treatment room; 17 PRFs (56.7%) with an ultrasonic dental unit; 14 PRFs (46.7%) with a barrier-free dental treatment room; and 11 PRFs (36.7%) with audio-visual aids for resident education. Twenty-three percent or less of the institutions have a dental laboratory facility, and oral health education room, a portable dental radiographic unit, or a portable dental unit.

Tables 7 and 13 display data for Region VI which indicated that 15 PRFs (49.9%) employ a full-time dental assistant(s), 14 PRFs (46.7%) employ a full-time resident dentist(s), and 13 PRFs (43.3%) employ a full-time dental hygienist(s). PRFs employing other dental personnel less frequently include: 11 PRFs (36.7%) with a consulting dentist(s) and two PRFs (6.6%) with a part-time resident dentist(s), a part-time dental assistant(s), and a full-time consulting dentist(s). One facility employs a part-time dental hygienist while dental laboratory technicians are not employed by any facility in Region VI.

Region VII (N = 12). Within Region VII, the following services are "available" to residents of all PRFs: restorative dentistry, oral surgery, and removable prosthetics. The following is indicative of other services "available" to residents of institutions in Region VII: intramuscular sedation and periodontal therapy by ten PRFs (83.3%); and intravenous sedation, endodontic therapy, and fixed prosthetics by nine PRFs (75.1%). The least "available" service, orthodontic treatment, is "available" to residents of seven PRFs (58.3%) (see Figure 13). In general, all services are provided most often "within" the facility except for orthodontic treatment which is obtained by four PRFs (33.3%) through "outside" sources (see Table 5).

Data in Table 6 and Figure 14 indicated that all institutions in Region VII have a stationary dental unit, a dental chair, an autoclave, and toothbrushes on the premises. Dental facilities and equipment present in 11 PRFs (91.7%) include: a barrier-free dental treatment room, radiographic processing and developing equipment, mirrors, sinks, and topical or supplemental fluoride materials. Ten PRFs (83.3%) have a stationary dental radiographic unit and disclosing materials on the premises. Nine PRFs (75%) have a dental treatment room, an ultrasonic dental unit, and dental floss. Fifty percent or six PRFs have audio-visual aids for resident education and a dental laboratory facility. Only four PRFs (33.3%) have an oral health education room and two PRFs (16.7%) have a portable dental unit, and a portable dental radiographic unit.

The most frequently employed dental personnel in Region VII include: a full-time dental assistant(s) by all PRFs and a full-time resident dentist(s) by 11 PRFs (91.6%). Additionally, data indicated

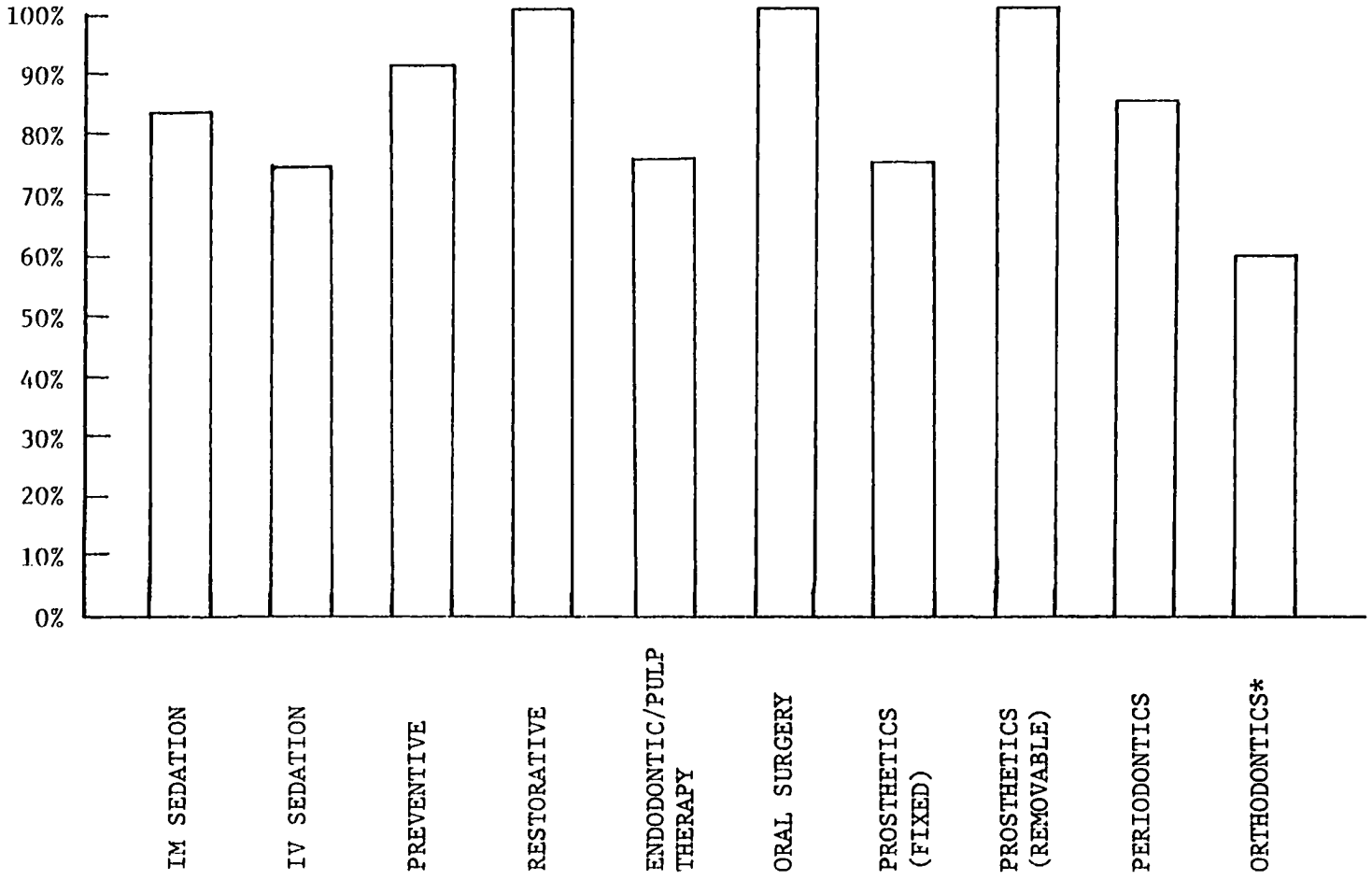


Figure 13. Oral health services available within and/or outside public residential facilities in Region VII (N = 12)

*Percentage does not account for incomplete data resulting in a possible underestimation.

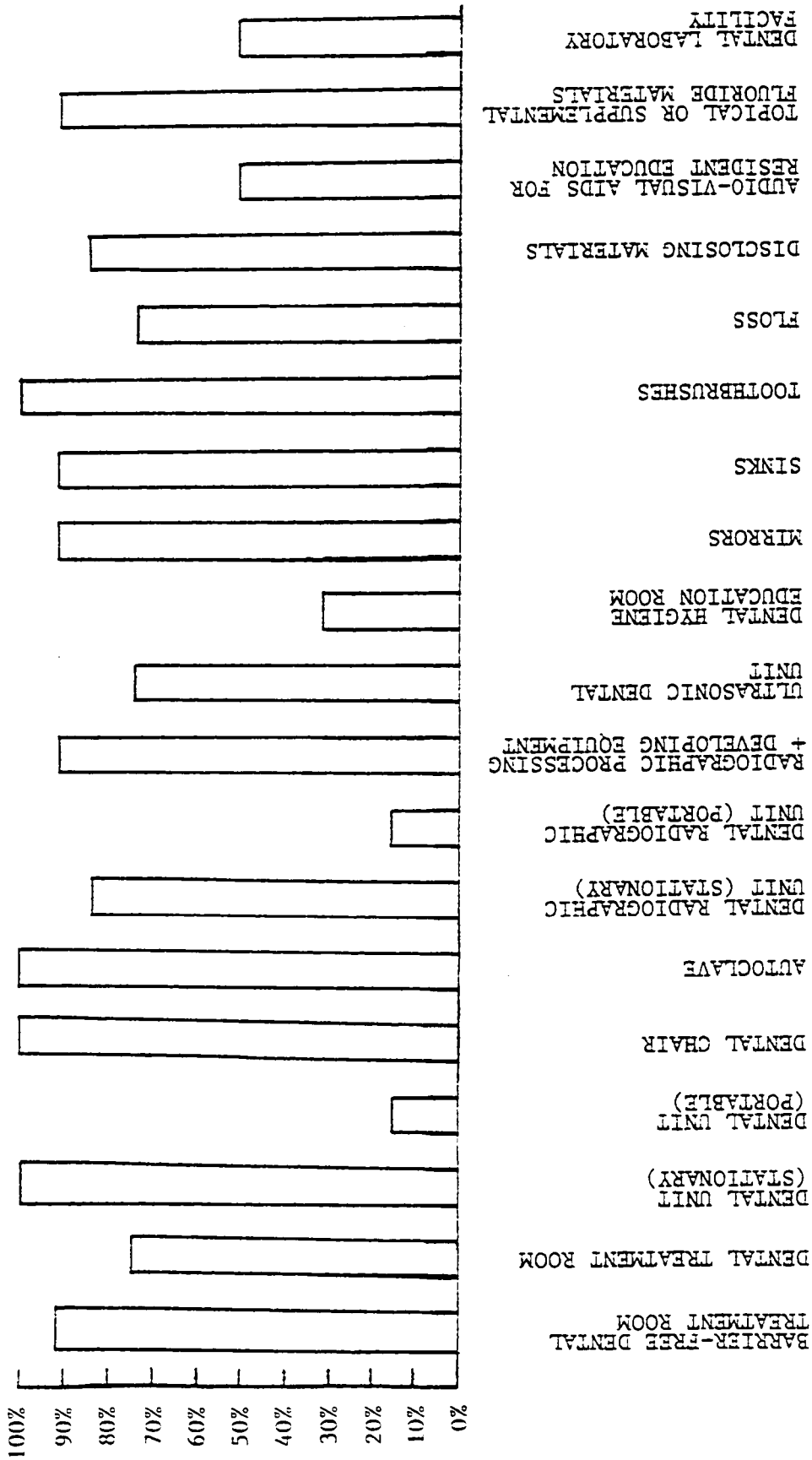


Figure 14. Percentage of public residential facilities that have dental facilities and equipment located on the premises in Region VII (N = 12)

Table 14

Public Residential Facilities Employing Dental Personnel in Region VII (N = 12)

Type of Dental Personnel	Number of Dental Personnel													
	0		1		2		3		4		≥ 5		Incomplete Data	
	N	%	N	%	N	%	N	%	N	%	N	%		
Full-time Dental Assistants	--	--	6	50.0	3	25.0	1	8.3	2	16.7	--	--	--	--
Full-time Resident Dentists	1	8.3	9	75.0	1	8.3	1	8.3	--	--	--	--	--	--
Part-time Resident Dentists	9	75.0	3	25.0	--	--	--	--	--	--	--	--	--	--
Part-time Consulting Dentists	10	88.3	2	16.7	--	--	--	--	--	--	--	--	--	--
Full-time Dental Hygienists	9	75.0	2	16.7	--	--	--	--	--	--	--	--	1	8.3
Part-time Dental Hygienists	10	83.3	1	8.3	--	--	--	--	--	--	--	--	1	8.3
Part-time Dental Assistants	11	91.7	1	8.3	--	--	--	--	--	--	--	--	--	--
Full-time Consulting Dentists	12	100.0	--	--	--	--	--	--	--	--	--	--	--	--
Full-time Dental Laboratory Technicians	12	100.0	--	--	--	--	--	--	--	--	--	--	--	--
Part-time Dental Laboratory Technicians	12	100	--	--	--	--	--	--	--	--	--	--	--	--

that three PRFs (25%) employ a part-time resident dentist(s) and other dental personnel are employed by 16.7 percent or less of the facilities. Exceptions include full-time consulting dentist(s), full-time dental laboratory technician(s), and part-time dental laboratory technician(s) which are not employed by any facility in Region VII (see Tables 7 and 14).

Region VIII (N = 10). Data for Region VIII indicated that preventive and restorative services are "available" to residents of all PRFs (see Figure 15). Services reported in rank order of "availability" are: intramuscular sedation, endodontic therapy, oral surgery, and fixed prosthetics by eight PRFs (80%); removable prosthetics and periodontal therapy both offered by seven PRFs (70%); and intravenous sedation by six PRFs (60%). Orthodontic services are "available" to residents of five PRFs (50%). Data presented in Table 5 indicated that services are most frequently provided "within" the institution.

Toothbrushes are present in every PRF in Region VIII (see Table 6 and Figure 16). Dental facilities and equipment present in nine PRFs (90%) are: a stationary dental unit, a dental chair, an autoclave, a stationary dental radiographic unit, and sinks. Eighty percent or eight PRFs have a barrier-free dental treatment room while seven PRFs (70%) have radiographic processing and developing equipment. Six PRFs (60%) have a dental treatment room, and ultrasonic dental unit, mirrors, dental floss, disclosing materials, and topical or supplemental fluoride materials. Five PRFs (50%) have a portable dental unit and an oral health education room while four PRFs (40%) have audio-visual aids for resident education and a dental laboratory

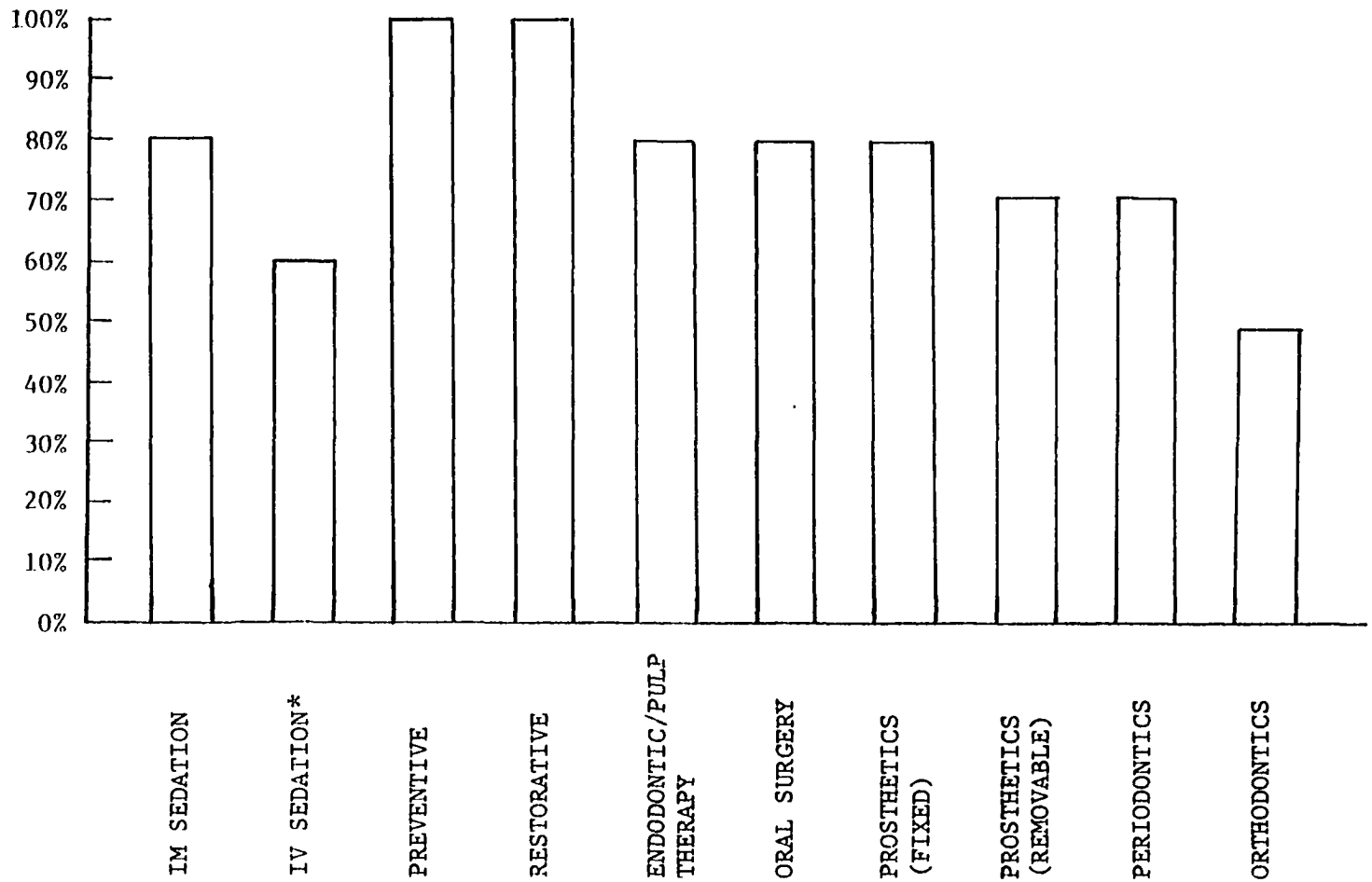


Figure 15. Oral health services available within and/or outside public residential facilities in Region VIII (N = 10)

*Percentage does not account for incomplete data resulting in a possible underestimation.

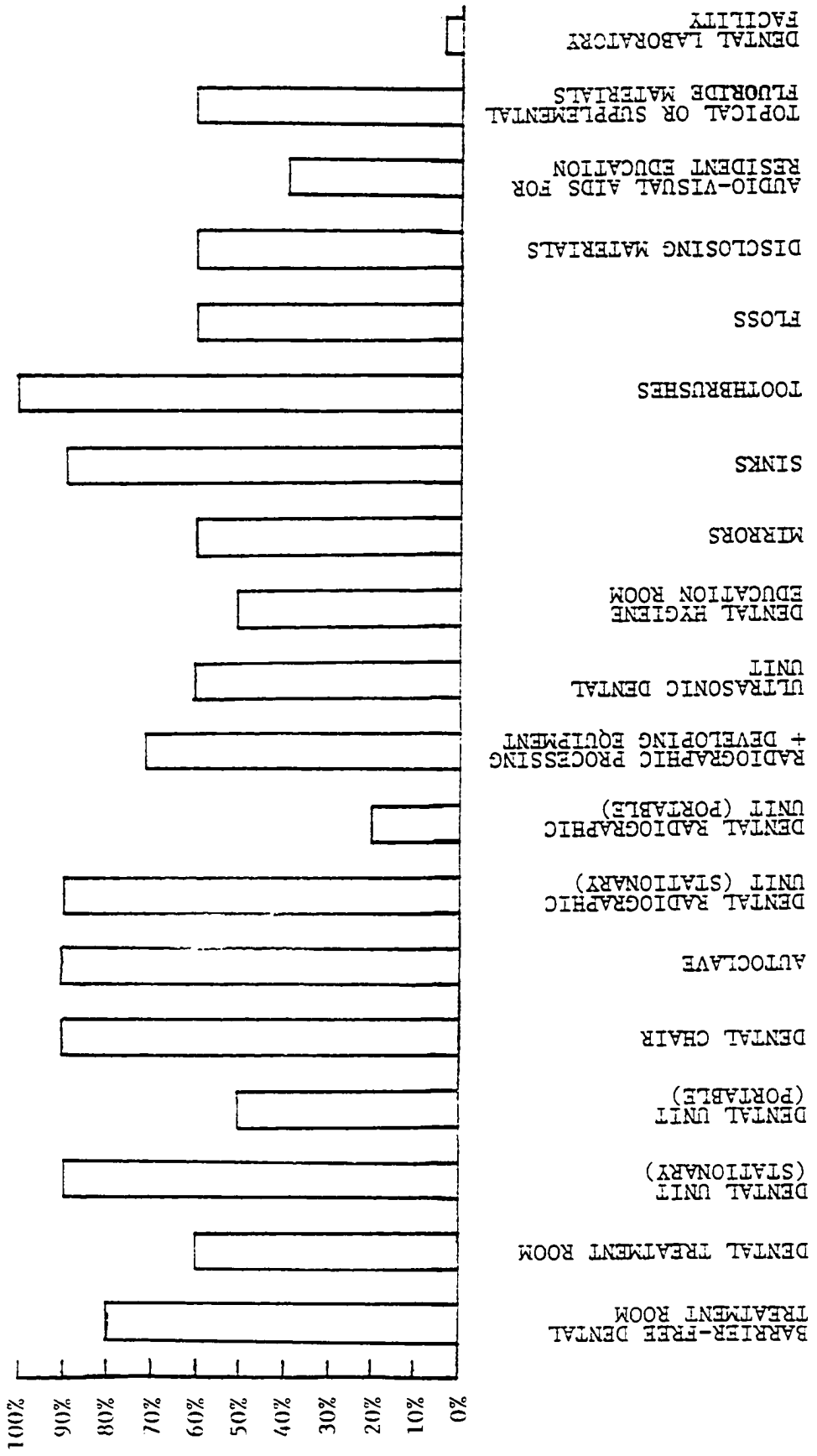


Figure 16. Percentage of public residential facilities that have dental facilities and equipment located on the premises in Region VIII (N = 10)

Table 15

Public Residential Facilities Employing Dental Personnel in Region VIII (N = 10)

Type of Dental Personnel	Number of Dental Personnel												Incomplete Data	
	0		1		2		3		4		≥ 5			
	N	%	N	%	N	%	N	%	N	%	N	%		
Full-time Resident Dentists	5	50	4	40	1	10	--	--	--	--	--	--	--	--
Full-time Dental Hygienists	5	50	4	40	1	10	--	--	--	--	--	--	--	--
Full-time Dental Assistants	6	60	2	20	2	20	--	--	--	--	--	--	--	--
Part-time Dental Hygienists	5	50	3	30	--	--	--	--	--	--	--	--	2	20
Part-time Dental Assistants	7	70	1	10	1	10	--	--	--	--	--	--	--	--
Part-time Resident Dentists	7	70	1	10	--	--	--	--	--	--	--	--	2	20
Full-time Consulting Dentists	10	100	--	--	--	--	--	--	--	--	--	--	--	--
Part-time Consulting Dentists	9	90	1	10	--	--	--	--	--	--	--	--	--	--
Full-time Dental Laboratory Technicians	10	100	--	--	--	--	--	--	--	--	--	--	--	--
Full-time Dental Laboratory Technicians	10	100	--	--	--	--	--	--	--	--	--	--	--	--

facility. Only two PRFs (20%) have a portable dental radiographic unit on the premises.

Data displayed in Tables 7 and 15 indicated that within Region VIII dental personnel employed on a full-time basis by five PRFs (50%) include a resident dentist(s) and a dental hygienist(s). A part-time dental assistant(s) is employed by four PRFs (40%). Other dental personnel are employed by three PRFs (30%) or less with zero employment of dental laboratory technicians or part-time consulting dentists.

Region IX (N = 14). Services "available" to residents of all PRFs in Region IX are: intramuscular sedation, preventive dentistry, restorative dentistry, oral surgery, and removable prosthetics. Additional dental services "available" to residents of institutions include: both endodontic and periodontal therapy by 13 PRFs (92.8%), fixed prosthetics by 12 PRFs (85.7%), and intravenous sedation by 11 PRFs (78.6%). Orthodontic treatment, although "available" to residents of eight PRFs (37.1%) is the least "available" service in Region IX (see Figure 17). All services are provided "within" PRFs to some extent. Orthodontic services and intravenous sedation are obtained more often "outside" PRFs while fixed prosthetics are available both "within" and "outside" the facilities (see Table 5).

Table 6 and Figure 18 exhibit data for Region IX which indicated that 13 PRFs (92.9%) have sinks and toothbrushes, 12 PRFs (85.7%) have dental floss and topical or supplemental fluoride materials, and 11 PRFs (78.6%) have a stationary dental unit and mirrors on the premises. Dental facilities and equipment less frequently available on the premises of ten PRFs (71.4%) include a dental treatment room, a dental chair, an autoclave, a stationary dental

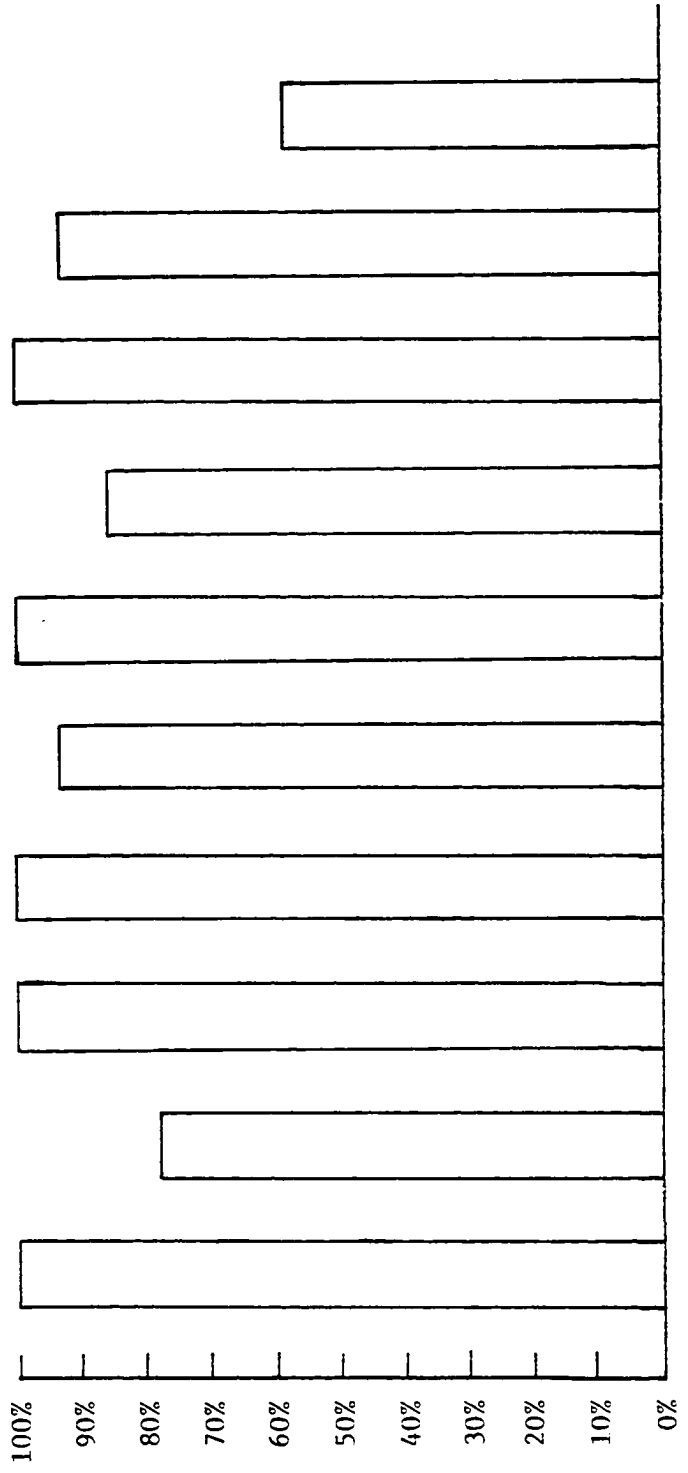


Figure 17. Oral health services available within and/or outside public residential facilities in Region IX (N = 14)

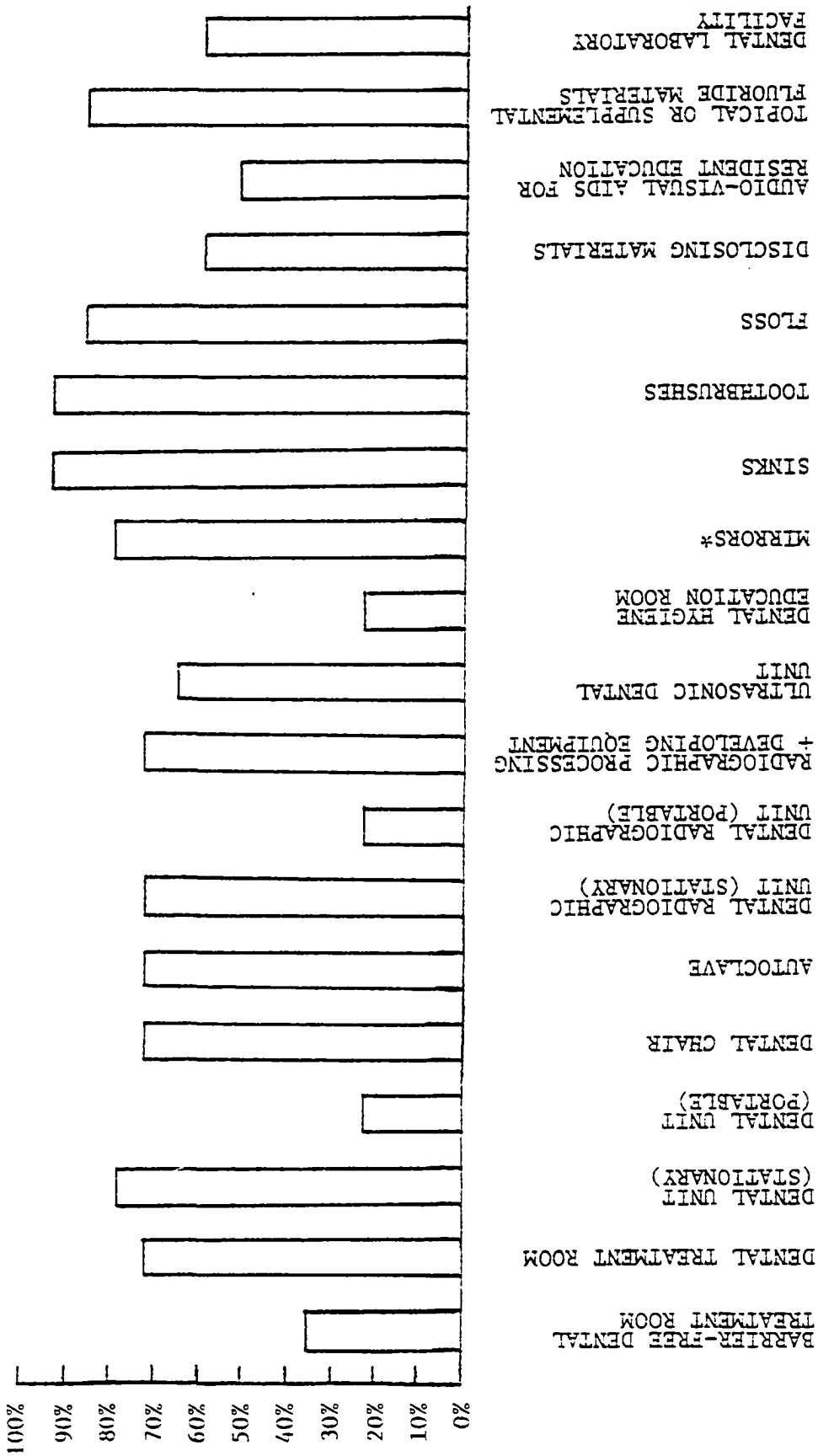


Figure 18. Percentage of public residential facilities that have dental facilities and equipment located on the premises in Region IX (N = 14)

*Percentage does not account for incomplete data resulting in a possible underestimation.

Table 16

Public Residential Facilities Employing Dental Personnel in Region IX (N = 14)

Type of Dental Personnel	Number of Dental Personnel													
	0		1		2		3		4		≥ 5		Incomplete Data	
	N	%	N	%	N	%	N	%	N	%	N	%		
Full-time Dental Assistants	3	21.4	3	21.4	2	14.3	5	35.7	1	7.1	--	--	--	--
Full-time Resident Dentists	4	28.6	2	14.3	2	14.3	6	42.9	--	--	--	--	--	--
Full-time Dental Hygienists	8	57.1	5	35.7	1	7.1	--	--	--	--	--	--	--	--
Part-time Consulting Dentists	10	71.4	1	7.1	2	14.3	--	--	--	--	--	--	1	7.1
Part-time Dental Hygienists	12	85.7	2	14.3	--	--	--	--	--	--	--	--	--	--
Part-time Resident Dentists	13	92.9	--	--	1	7.1	--	--	--	--	--	--	--	--
Full-time Consulting Dentists	13	92.9	--	--	1	7.1	--	--	--	--	--	--	--	--
Full-time Dental Laboratory Technicians	13	92.9	1	7.1	--	--	--	--	--	--	--	--	--	--
Part-time Dental Assistants	14	100.0	--	--	--	--	--	--	--	--	--	--	--	--
Part-time Dental Laboratory Technicians	14	100.0	--	--	--	--	--	--	--	--	--	--	--	--

radiographic unit, and radiographic processing and developing equipment. Other institutions with dental facilities and equipment include: nine PRFs (64.3%) with an ultrasonic dental unit; eight PRFs (57.1%) with disclosing materials, and topical or supplemental fluoride materials; seven PRFs (50%) with audio-visual aids for resident education; and five PRFs (35.7%) with a barrier-free dental treatment room. The least available facilities and equipment located on the premises of only three PRFs (21.9%) include: a portable dental unit, a portable dental radiographic unit, and an oral health education room.

Within Region IX dental personnel most extensively employed include: a full-time dental assistant(s) by 11 PRFs (78.5%), a full-time resident dentist(s) by ten PRFs (71.5%), and a full-time dental hygienist(s) by six PRFs (42.8%). Additional dental personnel are employed by 21.4% or less of the facilities. Part-time dental assistants or dental laboratory technicians are not employed by any facility in Region IX (see Tables 7 and 16).

Region X (N = 7). Intramuscular sedation and preventive, restorative, and oral surgery services are "available" to residents of all PRFs in Region X. Data for this region indicated that both intravenous sedation and endodontic therapy services are "available" to residents of six PRFs (85.7%) and fixed prosthetics are "available" to residents of five PRFs (71.4%). Although services such as removable prosthetics, periodontics, and orthodontics are "available" to residents of four PRFs (57.1%), the data for Region X indicated that these are the least "available" services in the region (see Figure 19). Table 5 displays data indicating that services are most frequently available "within" PRFs. Exceptions are orthodontic care and oral surgery services

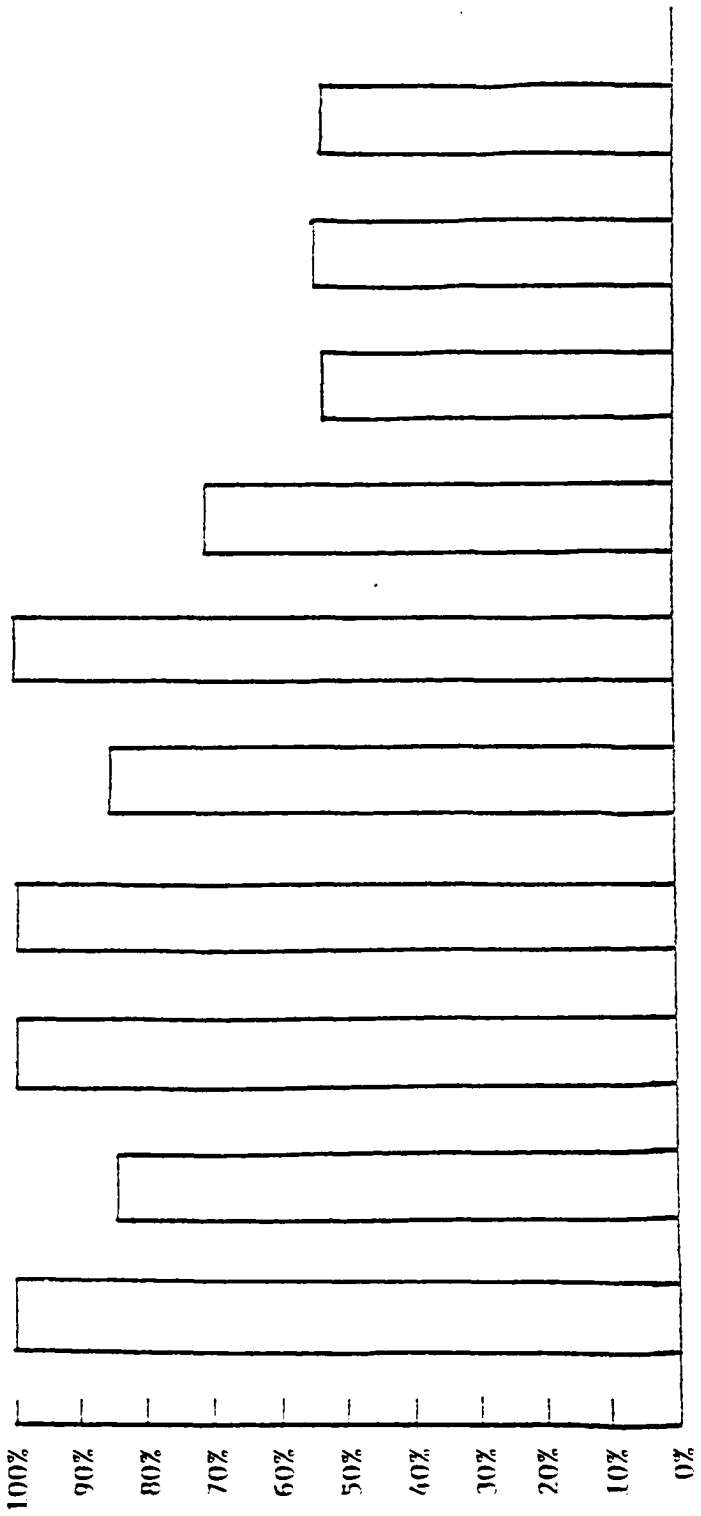


Figure 19. Oral health services available within and/or outside public residential facilities in Region X (N = 7)

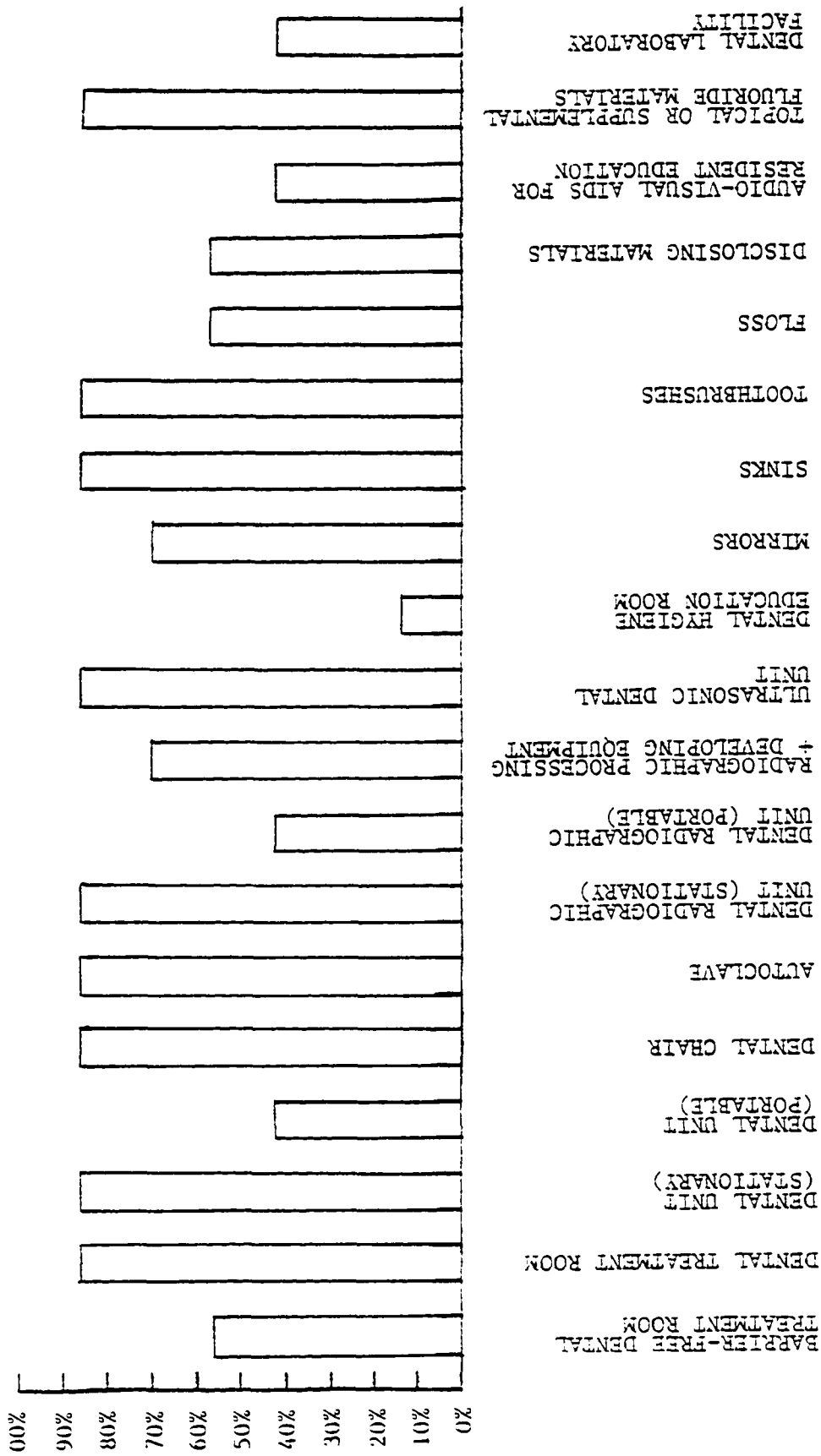


Figure 20. Percentage of public residential facilities that have dental facilities and equipment located on the premises in Region X (N = 7)

Table 17

Public Residential Facilities Employing Dental Personnel in Region X (N = 7)

Type of Dental Personnel	Number of Dental Personnel												Incomplete Data	
	0		1		2		3		4		≥ 5			
	N	%	N	%	N	%	N	%	N	%	N	%		
Full-time Dental Assistants	2	28.6	3	42.9	2	28.6	--	--	--	--	--	--	--	--
Full-time Resident Dentists	2	28.6	4	57.1	1	14.3	--	--	--	--	--	--	--	--
Full-time Consulting Dentists	5	71.4	2	28.6	--	--	--	--	--	--	--	--	--	--
Part-time Consulting Dentists	5	71.4	1	14.3	1	14.3	--	--	--	--	--	--	--	--
Full-time Dental Hygienists	5	71.4	2	28.6	--	--	--	--	--	--	--	--	--	--
Part-time Resident Dentists	6	85.7	1	14.3	--	--	--	--	--	--	--	--	--	--
Part-time Dental Hygienists	6	85.7	1	14.3	--	--	--	--	--	--	--	--	--	--
Part-time Dental Assistants	7	100.0	--	--	--	--	--	--	--	--	--	--	--	--
Full-time Dental Laboratory Technicians	7	100.0	--	--	--	--	--	--	--	--	--	--	--	--
Part-time Dental Laboratory Technicians	7	100.0	--	--	--	--	--	--	--	--	--	--	--	--

which are available most often through "outside" sources.

Data for Region X indicated that the following dental facilities and equipment are "available" in sis PRFs (85.7%): a dental treatment room, a stationary dental unit, a dental chair, and autoclave, a stationary dental radiographic unit, an ultrasonic dental unit, sinks, toothbrushes, and topical or supplemental fluoride materials (see Table 6 and Figure 20). Five PRFs (71.4%) have radiographic processing and developing equipment and mirrors while only four PRFs (57.1%) have a barrier-free dental treatment room, dental floss, or disclosing materials. Three PRFs (42.9%) indicated the presence of a portable dental unit, a portable dental radiographic unit, audio-visual aids for resident education, and a dental laboratory facility. Only one PRF has an oral health education room on the premises.

Data in Tables 7 and 17 indicated that the highest number of dental personnel employed within Region X include: a full-time dental assistant(s) and a full-time resident dentist(s) both employed by five PRFs (71.5%). All other dental personnel are employed by two PRFs (28.6%) or less. Dental personnel not employed by PRFs in Region X include part-time dental assistants and full-time or part-time dental laboratory technicians.

Discussion

Analysis of results are discussed by geographic region in relation to the initial research questions. A general discussion on the overall availability of oral health care services, facilities, and personnel to PRF residents follows. As a final point, findings are discussed in relation to the current philosophy regarding the oral health care of mentally retarded clients.

Region I (N = 25). Oral health care services available to residents of institutions in Region I (N = 25) are provided frequently through "outside" sources. Although the region is limited in dental facilities and equipment located within institutions, at least 75 percent of the institutions have resources such as sinks, toothbrushes, dental floss, and mirrors which might be used to render preventive oral health care to residents. Comparision of results indicated that Region I employs a low number of dental personnel which might be related to the limited facilities and equipment "within" institutions and the high dependence on "outside" sources for oral health services. This region most frequently employs part-time consulting dentist(s). Based upon these findings, the PRFs in this region could emphasize a strong preventive oral health program within the institutions. Emphasis on preventive oral health programs for PRF residents may limit the need for "outside" restorative and therapeutic dental services through the prevention of dental disease.

Region II (N = 20). Region II appears to be one of the most comprehensive of all regions in regard to oral health services "available" to residents of institutions. With the exception of orthodontic services, oral health services most frequently are provided "within" these institutions. Although intravenous sedation is available "within" approximately one-half of the institutions, the service is frequently obtained through "outside" sources. Limited availability of intravenous sedation "within" institutions might explain respondents added comments on the need for general anesthesia facilities and equipment within this region. In comparison to other regions, Region II has an abundance of dental facilities and equipment.

Institutions extensively employ full-time resident dentists and full-time dental assistants. In addition, more full-time dental hygienists are employed by facilities in Region II than in any other region. Although dental personnel are extensively employed within this region, respondents indicated that a need exists for the increased education of staff and residents on preventive oral health care. Other comments suggested a lack of community dental professionals willing to treat mentally retarded clients. Perhaps this explains why the majority of PRFs in Region II provide dental care "within" their institutions.

Based on these findings it appears that the dental professionals employed by PRFs in Region II could be encouraged to increase the knowledge of institutional staff members and residents in proper oral hygiene techniques and possibly establish an out-reach program to sensitize community dental professionals to the needs and treatment of mentally retarded clients. Furthermore, continuing education for dental professionals on the oral health care of mentally retarded individuals also would be beneficial.

Region III (N = 33). Region III does not appear to provide oral health services as comprehensively as other regions. Preventive and restorative dentistry are the most common services available to PRF residents and are often available "within" PRFs. Removable prosthetics, although less frequently available is often a "within" institution service. Oral surgery services are obtained often through outside sources while other services vary greatly in availability throughout the region. A moderate number of PRFs in Region III have dental facilities and equipment located on the premises as compared with the other regions. Institutions in Region III most often have

toothbrushes and sinks on the premises. Dental facilities and equipment related to performing operative dentistry are available in 75 to 82 percent of the PRFs even though less that 50 percent of the PRFs in Region III employ full-time dental personnel. Institutions appear to rely heavily on part-time dentists and auxiliaries.

Several institutions are lacking in preventive aids such as dental floss (24.1%), fluoride (39.4%), and plaque disclosing materials (45.5%). Since preventive services were reported as the service most "available" to residents, perhaps institutions in this region should evaluation the utilization of their oral physiotherapy aids and fluorides to determine if the acquisition of more aids is needed, or if more resident/staff education if the use of these aids should be initiated. Respondents' comments concerning needed improvements in current oral hygiene programs suggest a desire for better education of staff and residents in oral hygiene techniques and the need for general anesthesia to treat uncooperative clients.

Region IV (N = 35). Comprehensive oral health services are "available" to residents of 80 to 95 percent of the institutionss in Region IV, with the exception of intravenous sedation and orthodontic services which are "available" in a smaller percentage of institutions. Intramuscular sedation, restorative services, and preventive services are "available" to residents of more institutions in Region IV than any other services and are commonly available "within" the institution.

Dental facilities and equipment related to preventive and restorative services are on the premises of 80 to 94 percent of the PRFs. The majority of institutions employ full-time dental personnel

yet results indicated extensive employment of part-time dentists and dental auxiliaries within this region.

Respondents repeatedly commentd on the following areas for improvement of current dental health programs within PRFs: a) the need for expansion of preventive and periodontal services, b) increase training and cooperation of direct care staff, and c) more on-site general anesthesia facilities. Comments on the continued oral health care of discharged residents indicated that community dental professionals are often reluctant to treat mentally retarded clients and that discharged clients frequently return to the PRF on an out-patient basis for continued oral health care. Based on thes results, PRFs in this region might, through increased emphasis on preventive aspects of oral health, decrease the restorative needs of residents. Comprehensive oral health education for staff and residents through the use of dental auxiliaries might aid in decreasing restorative needs and increasing the time available for dentists to perform specialty services beyond the scope of preventive services. Instigation of continuing education programs to increase dentists' knowledge and experience in the treatment and management of mentally retarded clients might reduce their existing reluctance to provide services for mentally retarded persons. Although numerous facilities employ consulting dentists within Region Iv, few part-time resident dentists are employed. Through continuing education programs, dentists might be encouraged to render servi-es to PRF residents on a part-time basis.

Region V (N = 50). Restorative dentistry and oral surgery services are "available" to residents of all PRFs, preventive services also are "available" to residents of a large number of institutions.

Additionally, more PRFs (44%) have periodontal services "available" to residents in Region V than in any other region.

A high percentage of PRFs have a large variety of dental facilities and equipment located on the premises. Although dental laboratory facilities are one of the least available facilities in Region V, this region has the second highest percentage of PRFs with dental laboratory facilities in the nation.

Full-time dental personnel employed by a majority of institutions include resident dentists and dental assistants. A smaller number of PRFs employ full-time dental hygienists and part-time resident and consulting dentists. The need for more dental auxiliary personnel to instruct staff and residents in oral hygiene education was a frequent comment of respondents. Although the need for general anesthesia was expressed, the need did not appear to be as prevalent as in other regions.

Opinions expressed regarding community resources available indicated reluctance of the general dental practitioner to accept mentally retarded clients. Respondents views on reasons for this reluctance suggested a) the dentists fear of treating mentally retarded clients, b) the disruptiveness experienced when treating mentally retarded clients, c) the lack of experience on the part of dental personnel, and d) the typically low fee-for-service reimbursement schedule provided by social welfare agencies. The reluctance of general dental practitioners to treat mentally retarded clients has been a common problem nationally.[19,28,48] Provisions for increasing initial and continuing education learning experience for dental professionals in the treatment and management of mentally retarded

clients might yield future dental personnel more capable and willing to render services to these individuals. The complaint that mentally retarded clients disrupt an office schedule might be minimized through increased experience in managing such clients. Furthermore, increased emphasis on preventive oral health care both "within" and "outside" PRFs might decrease the need for restorative services thereby decreasing the need for dentists to provide restorative procedures.

Region VI (N = 30). Residents of every PRF in Region VI have restorative services "available" to them. The least "available" services include orthodontic care and intravenous sedation which are more often available through "outside" sources. Oral surgery services, also obtainable through "outside" sources, are "available" to residents in a large number of facilities. Other oral health services are most often available "within" institutions but also are moderately available through "outside" sources.

Dental facilities and equipment located in the highest number of institutions are sinks and toothbrushes. Eighty-seven percent or less of the PRFs have other dental facilities or equipment. Two items least often located in PRFs within Region VI are audio-visual aids for resident education and a dental laboratory facility; Region VI is also the lowest of all the regions on the basis of these two items.

Region VI is similar to Region III in that a wide variety of dental personnel are employed by institutions, but no more than 50 percent of the PRFs employ any one type of dental professional. Regarding comments on community resources available for the oral health care of discharged residents, respondents indicated a need for more dentists willing to and capable of working with mentally retarded clients.

In relation to communities with resources for dental care of discharged mentally retarded residents, two barriers to accessibility of that care were mentioned. First, the family or resident may have a problem finding the available resource and then utilizing the services and second, mentally retarded clients often make minimum wage and are discouraged from seeking continual oral health care due to high fees for services rendered. Based on the limited availability of services "within" institutions and the dependence of PRFs on "outside" resources for oral health care, it appears that mentally retarded persons in Region VI might benefit from increased development of community resources. Suggestions offered by respondents for improvements in community resources are: a) to develop a directory, for family and resident use, of all services and professionals willing to render dental services in the community; b) to introduce dental personnel to the mentally retarded client in order to develop closer ties with the private sector of dentistry; c) to establish special clinics for developmentally disabled through the Department of Human Resources (State Department of Health); and d) to increase utilization of local dental hygiene students in preventive oral hygiene care for residents which would be economical for the institution and beneficial to students in experiencing management of mentally retarded clients.

Region VII (N = 12). Oral health services available to residents of all PRFs in Region VII are restorative dentistry, oral surgery, and removable prosthetic services. Additional oral health services with the exception of orthodontics, are "available" to residents of 75 to 92 percent of the PRFs and are most frequently available "within" the institution.

Region VII is unique in that the following dental facilities and equipment are located on the premises of all institutions: a stationary dental unit, a dental chair, an autoclave, toothbrushes, and a barrier-free dental treatment room. Moreover, all institutions have a full-time dental assistant and all but one have a full-time resident dentist. Part-time dentists are employed to a lesser extent as are other dental auxiliaries.

Respondents commented on the need for more in-service training of staff in oral health education. Comments from respondents varied greatly on what community resources need to be developed. Responses indicated a need for more dentists willing to treat mentally retarded clients; a need for a dental referral system including a list of dentists willing to treat mentally retarded individuals and who accept welfare clients; and a need to develop increased hospital connections enabling safe use of general anesthesia. One respondent indicated a need for fluoridation. Based upon these results it appears that more comprehensive preventive oral health programs within PRFs might be attained through the increased use of dental assistants and the increased employment of dental hygienists. Both dental assistants and dental hygienists could implement in-service training for staff/residents in oral hygiene care. Furthermore, increased employment of dental hygienists to perform dental hygiene services would allow the dentist to function on a more cost-effective basis. Efforts to extend use of the abundant dental resources "within" PRFs in Region VII might result in the most comprehensive oral health program for PRFs residents of any region.

Region VIII (N = 10). Preventive oral health care and restorative dental services are "available" to residents of all PRFs in Region VIII. Preventive services are most frequently available "within" 80 percent of the facilities. Toothbrushes are on the premises of all PRFs while other items related to performing preventive oral health services such as mirrors, floss, disclosing materials, and topical or supplemental fluoride materials are located on the premises of only 60 percent of the facilities. Results indicated that institutions have limited dental facilities and equipment, limited employment of dental personnel, and rather limited availability of "outside" oral health services. Comments regarding development of existing dental health services. Comments regarding development of existing dental health programs suggested a need for more dental staff and oral health in-service for PRF staff members including teachers, psychologists, nurses, and other support persons. An example of other support persons may include social workers who are often in charge of referrals and placement of discharged individuals. Oral health in-service programs to educate support persons on the dental needs and community resources available to mentally retarded persons may facilitate the practice of dental referrals for such persons while residing in PRFs and upon discharge into the community.

Additionally, one institution indicated that they have a yearly "fluoride brush-in" involving community dental professionals. Perhaps other institutions within the region could benefit from similar programs designed to meet needs of residents as well as increase clients.

Region IX (N = 14). Intramuscular sedation, preventive dentistry, restorative treatment, oral surbery, and removable prosthetic

services are available to residents of all PRFs in Region IX. Although some "outside" sources are used to obtain oral health services, most are available "within" PRF's. Exceptions include intravenous sedation and orthodontic services which are more frequently available through "outside" sources, and fixed prosthetics which are equally available "within" and "outside" institutions.

Dental facilities and equipment related to preventative oral health care are located on the premises of a majority of PRFs in Region IX. In comparison, the number of PRFs with dental facilities and equipment in Region IX is lower than other regions.

Full-time dental assistants and dentists are employed by 72 to 78 percent of the institutions; full-time dental hygienists are employed by 42 percent of the institutions. Other dental personnel are employed by a much smaller percentage of institutions.

In general, comments made regarding the improvement of existing oral health programs included a need for employment of more dental auxiliaries, a need to develop better oral health programs and in-service training, and the need for access to general anesthesia equipment. According to respondents, many communities surrounding PRFs lack dentists willing to accept mentally retarded clients. Respondents expressed a need to develop community public relations to encourage treatment of mentally retarded clients in the private sector and to develop a funding source supporting dental care for mentally retarded persons. As with other regions the need for adequate training of dental professionals to treat disabled clients

was expressed. Based upon results indicating that preventive oral health aids are the most prevalent of dental facilities and equipment existing in PRFs in Region IX, it appears that emphasis on an extensive preventive oral hygiene program may be effective in reducing residents oral health needs.

Region X (N = 7). Although all PRFs in Region X have intramuscular sedation, preventive dentistry, restorative treatment, and oral surgery services "available" to residents, at least 43 percent of the institutions have no provisions for removable prosthetics, periodontal treatment or orthodontic services. Oral health services are often obtained through "outside" sources. Dental facilities and equipment are located on the premises of 86 percent of the PRFs or less. In comparision to other regions, Region X has the lowest percentage of PRFs with an oral health education room, toothbrushes, or floss. Dental personnel are employed to a moderate extent as 72 percent of the facilities employ full-time dental assistants and/or resident dentists. Other dentists and dental auxiliaries are employed by less than 29 percent of the PRFs. Respondents indicated that improvements in current oral health programs might be attained through more funding for the employment of staff attendants and dental personnel, and for providing crown and bridge services. Other needs included better in-service training and development of staff cooperation in aiding residents with daily oral hygiene. In regard to community resources a general reluctance of dental professionals willing to treat mentally retarded clients was indicated. Lack of dental manpower in the surrounding community was expressed by one respondent. Several suggestions for developing community resources

for the continued oral health care of discharged residents include: a) better public education and awareness regarding the need for oral health maintenance of discharged residents; b) employment of dental hygienists to follow-up on clients placed outside of the institution; c) implementation of a state sponsored mobile dental unit for providing care to residents placed in homes or facilities outside the instituion; and d) development and community support of training programs for dental professionals. Based on the results, dental hygienists could be more fully employed in this region to conduct in-service oral hygiene programs for staff, residents, and family and monitor the oral health care received by mentally retarded clients placed outside the facility.

In order to comprehensively address problems in providing oral health services to PRF residents nationwide, overall results for several additional items are discussed. Although responses indicated that approximately 86 to 95 percent of the PRFs provide comprehensive diagnostic services, routine dental care, or have a dental recall system to monitor residents' oral health, certain limitations should be considered in viewing the results for items 19, 20, and 21. Comprehensive diagnostic services, routine dental care, and a dental recall system were not defined thus the interpretation of each term may have varied among respondents. Furthermore, comments in the "other" category indicate that some respondents might have interpreted the meaning of diagnostic as preventive services. Additionally, some respondents did not know the meaning of a dental recall system. However, added comments to the aforementioned items revealed a common problem, namely the difficulty of providing routine dental care for

severely mentally retarded residents. Respondents' voluntary comments explaining why 100 percent of the residents do not receive routine dental care often mentioned that the severely retarded or behaviorally complex client was unmanageable without general anesthesia. In cases where not all residents received routine dental care, the lack of general anesthesia equipment or personnel trained in the use of general anesthesia were often the reasons cited.

Numerous observations were made regarding dental facilities and equipment which might be used for providing oral health services to PRF residents. Portable radiographic units and portable dental units were least available. Presence of portable equipment might aid dentists and dental hygienists in rendering service to non-ambulatory residents by enabling performance of dental procedures in areas other than the dental treatment room. Institutions with a dental treatment room which is not barrier-free may find the oral health management of complex handicapped individuals difficult if not impossible. Although results indicated that 40 percent of the PRFs do not have a barrier-free dental treatment room and 30 percent of the PRFs do not have a dental treatment room, these figures might have been smaller if the difference between the types of rooms had been defined. No attempt was made to ascertain the type of dental treatment rooms in settings outside the institution.

Less than 50 percent of the PRFs have a dental laboratory facility although prosthetic services are provided "within" 60 to 73 percent of the PRFs. Prostheses made in a dental laboratory facility may be done through contractual services by an outside laboratory, which may account for the low number of PRFs with dental laboratory facilities.

An oral health education room is the third least available dental facility located on the premises of only 25.8 percent of the PRFs. Such a facility might be extremely useful for conducting staff/resident in-service on an individual or group basis and for routine monitoring of the effectiveness of oral hygiene techniques taught.

In-service education programs on the maintenance of residents' oral health are provided to staff members of 216 PRFs (91.5%) and approximately 44 percent of those PRFs provide such programs only once or twice a year (see Appendix M). Fifteen PRFs have no provisions for oral health in-service while other facilities provide in-service programs from five to 66 times per year or continually. Results might have been more significant if respondents had been asked the number of times per year in-service programs are provided on a group basis versus an individual basis. Respondents often commented that in-service education is provided to staff members individually on a mandatory basis when initially employed and in-service attendance thereafter was on a voluntary basis or provided upon request. Policies and procedures for oral health in-service education of staff and residents of PRFs is an area needing further investigation.

Audio-visual aids for resident education are on the premises of only 48.3 percent of the PRFs and could be an asset to resident education and staff in-service programs. Respondents' comments indicated a lack of cooperation of staff attendants in performing or monitoring daily oral hygiene of residents. A possible reason for lack of cooperation might be the attendants low level of knowledge on oral health needs of residents and techniques of proper oral hygiene. Audio visual aids in the form of a mediated instructional package have

been shown to be effective in increasing attendants' knowledge of oral health concepts.[43] Development or acquisition of audio-visual aids used to educate staff and/or residents might increase the level of oral health knowledge needed to promote the control and reduction dental disease in PRF residents.

Data on dental facilities and equipment located on the premises of the PRFs should be viewed in light of the fact that some institutions obtain "outside" dental care. Since not all institutions provide therapeutic and specialty services "within" their facility, one would expect to find a high percentage of institutions with at least the supplies needed for preventive oral hygiene care such as mirrors, toothbrushes, dental floss, disclosing materials, and topical or supplemental fluorides.

The absence of disclosing materials on the premises of 29.7 percent of the PRFs indicated a possible need for the evaluation of oral health education programs and daily oral hygiene techniques used with PRF residents. Other questionnaire items related to prevention indicated that topical or supplemental fluoride materials are not present in approximately 23.9 percent of the PRFs. Additionally, the water is not optimally fluoridated in 39.4 percent of the institutions and 35.6 percent of the facilities indicated a lack of optimally fluoridated community water. Fluoridated water and topical or supplemental fluorides would influence the need for dental treatment by reducing dental disease.

Resident dentists employed by 64.9 percent of the PRFs and dental assistants employed by 63.1 percent of the PRFs are the most extensively employed dental personnel in PRFs nationwide. Although

dental hygienists are employed in 45.4 percent of the PRFs, it is apparent that the dental hygienist might be a relatively untapped resource for improving oral hygiene programs in PRFs. Without the employment of a dental hygienist, the dentist would be responsible not only for restorative and other dental services, but also the preventive oral health services that a dental hygienist is trained and licensed to perform. Employment of dental hygienists to perform preventive services would result in the dentist having more time to render dental services to PRF residents. The extensive employment of dental assistants and limited employment of dental hygienists might be related to the legalities of "supervision" in state dental practice acts. In order for a dental hygienist to perform many preventive oral health services, a dentist must be present. The need for a dentist's supervision restricts the scope of preventive services that a dental hygienist could provide. Relaxation of the supervision clause in state practice acts might increase PRF residents accessibility to preventive oral health services. The Council of State Governments National Task Force on State Dental Policies reported the following in regard to the effect of supervision:

> . . . The common justifications for requiring supervision of hygienists, the need for diagnosis or screening by a dentist, is an abstract ideal in an imperfect world. In the name of delivering a single best standard of care, none at all is delivered to millions of young, isolated, or disabled Americans.[45]

Investigation into the reasons for limited employment of dental hygienists is indicated.

Only 11.4 percent of the PRFs have community dental professionals donating services. Recruitment of dental personnel willing to

donate services might be a means of providing more oral health care to residents at a cost-effective level. Examination of a possible tax-deduction for the dental professional donating services might help recruitment. Promoting awareness of residents' oral health needs by working with local professional dental and dental auxiliary organizations might help the PRF who is in need of donated or low cost services.

Analysis of the data imply that the majority of public residential facilities have oral health care services "available" for treatment of residents; however, this study made no attempt to determine the extent to which residents benefit from the services. "Available" services, the maintenance of dental facilities and equipment, and the employment of dental personnel does not imply oral health. For example, no implications can be made from this study regarding the quality of care rendered, condition of dental facilities and equipment, and the qualifications of dental personnel employed.

Chapter 5

SUMMARY AND CONCLUSIONS

The high prevalence of diseases of the teeth and periodontium among mentally retarded persons and the frequence of oral anomalies which pose an obstacle to the attainment of optimum oral health in mentally retarded persons, indicate the importance of accessibility to oral health care by this population. Prior to the current study, no nationwide survey had been conducted to determine the availability of oral health services, facilities, and dental personnel for the oral health maintenance of mentally retarded persons residing in public residential facilities. Additionally, this study was designed to obtain information on the availability of community dental resources to PRF residents and discharged PRF clients.

After implementing a pilot study to establish content validity of the instrument, the Oral Health Services, Facilities, and Dental Personnel Questionnaire was sent to the total population of PRFs (N = 280) in the United States. Data was obtained from 236 returned questionnaires (84%) and tabulated into frequencies and percentages.

Findings of this study indicated that restorative dentistry, oral surgery, and preventive oral health care are the services most often available to PRF residents. Intravenous sedation and orthodontic treatment are the services least available to mentally retarded residents of PRFs.

Dental facilities and equipment located on the premises of the majority of PRFs include sinks, toothbrushes, a dental chair, an autoclave, mirrors, a stationary dental unit, dental floss, a stationary dental radiographic unit, and radiographic processing and developing equipment. Although dental plaque disclosing agents and topical or supplemental fluorides are present in a majority of the PRFs, their presence is considered limited. The majority of PRFs do not have the following dental facilities and equipment: audio-visual aids for resident education, a dental laboratory facility, a dental hygiene education room, a portable dental unit, and a portable dental radiographic unit.

Findings also revealed that full-time resident dentists, dental assistants, and to a lesser extent dental hygienists are the most commonly employed dental personnel in PRFs. In addition to the lack of part-time dental personnel employed, findings indicate that few full-time consulting dentists are employed by PRFs. Employment of dental laboratory technicians in PRFs is almost non-existent.

Analysis of respondents' comments to several open-ended items resulted in the following suggestions for increasing the availability of oral health care services, facilities, and personnel to mentally retarded persons residing in PRFs or surrounding communities:

1. Increase initial and continuing education for dental professionals on the treatment and management of mentally retarded persons.
2. Increase availability of general anesthesia equipment and personnel trained to use it in the oral health care of mentally retarded persons.

3. Develop and maintain oral health in-service programs for staff and residents, family, and guardians.
4. Increase public awareness of the oral health needs of mentally retarded persons through community out-reach programs involving local, state, and national dental and dental auxiliary organizations.
5. Investigate possible means of funding dental care for mentally retarded persons.

Considering the results and limitations of this study, the following recommendations for future study are made:

1. Replication of this study comparing results to determine if any significant changes have occurred in the availability of oral health services, facilities, and dental personnel.
2. Conduct an in-depth study of the following areas using a revised questionnaire:
   a) Investigate oral health services available to PRF residents and discharged residents.
   b) Investigate the number and types of dental facilities and equipment located on the premises of PRFs.
   c) Investigate the number and type of dental personnel employed by PRFs and their educational training and experience in treatment of mentally retarded individuals.
   d) Investigate policies and procedures for oral health in-service programs provided staff and residents of PRFs.
   e) Compile information from studies "a" through "d" to develop a minimum set of standards for oral health

services, facilities, and dental personnel to serve as a guideline for self-evaluation of oral health programs in PRFs.

3. Conduct a nationwide investigation of the current clinical and didactic experiences dental hygiene students have in the treatment and management of mentally retarded persons.
4. Conduct a survey of a random sample of PRF employees from administrators to support persons investigating their knowledge of oral health concepts; and attitudes, policies, and procedures in the daily oral hygiene of PRF residents.
5. Study the curricular content of nursing, special education, and social work programs to determine the exposure of such professionals to oral health concepts.
6. Study the current reimbursement system through social welfare agencies for the purchase of oral health care services by many mentally retarded persons.

In conclusion, this study suggests that comprehensive oral health services are available to public residential facility residents with the exception of orthodontics. However, respondents' comments suggested that availability of oral health services does not ensure provision of services to all residents. Findings also suggest that supplies and equipment which might be used in a comprehensive preventive oral health program for public residential facility residents and the dental personnel to implement such programs are limited. Furthermore, there is a definite deficiency in the number of dental hygienists employed by public residential facilities. Considering

that oral health education and preventive oral hygiene service is the basis of the dental hygiene profession, reasons for underutilization of this profession's expertise need to be investigated.

BIBLIOGRAPHY

1. Albertson, Diane. Prevention and the handicapped child. Dent. Clin. N.A. 18:595-608, July 1974.

2. Albertson, Diane and Johnson, Ronald. Plaque control for the institutionalized child. Am. Dent. A.J. 87:1394-98, Dec. 1974.

3. American Association of Dental Schools. National conference on dental care for handicapped Americans: education programs in dentistry for the handicapped. Spec. Issue, J. Dent. Educ., 43:1-41, Spet. 1979, part 2 of 2.

4. American Association on Mental Deficiency. Manual on terminology and classification in mental retardation. Baltimore, Garamond/ Pridemark Press, 1977, xii+204p (p.5, 11).

5. American Dental Association. Report 5 of Board of Trustees to House of Delegates: prevention and control of dental disease through improved access to comprehensive care. p. 324-357 (in 1979 Supplement one to annual reports and resolutions. American Dental Association 120th Annual Session, Dallas, Texas, October 21-21, 1979. p. 257-374)

6. Anderson, J.L. Dental treatment for homebound and institutionalized patients. P. 211-24. (in Nowak, A.J. Dentistry for the handicapped patient. St. Louis, Mosby, 1976. xii+419 p.)

7. Ary, Donald, Jacobs, Lucy, and Razavieh, Asghar. Introduction to research in education. New York, Holt, Rinehart and Winston, Inc., 1972. vi+378 p. (p. 233).

8. Bensberg, G.J. Administration and staff development in residential facilities. Mental Retardation, 12:29-32, Aug. 1974.

9. Block, M.J. and Walken, Jennifer W. Effect of an extramural program on student attitudes toward dental care for the mentally retarded. J. Dent. Educ. 44:148-61, March 1980.

10. Brown, H.R. and Cunningham, W.H. Some dental manifestations of Mongolism. Oral Surg. 14:664-76, June 1961.

11. Brown, J.P. and Schodel, D.R. A review of controlled surveys of dental disease in handicapped persons. J. Dent. Child., 31:17-24, Sept.-Oct. 1976.

12. Butts, J.E. Dental status of mentally retarded children. II. A survey of the prevalence of certain dental conditions in mentally retarded children in Georgia. J. Pub. Health Dent., 27:195-211, Fall 1967.

13. Capute, A.J. Developmental disabilities: An overview. Dent. Clin. N.A., 18:557-77, July 1974.

14. Cleland, C.C. Mental retardation: a developmental approach. Englewood Cliffs, New Jersey, Prentice-Hall, Inc., 1978. xx+375p. (p. 183)

15. Cohen, M.M. and Winer, R.A. Dental and facial characterisitics in Down's Syndrome (Mongolism), J. Dent. Res., 44:197-208, Jan.-Feb. 1965.

16. Cohen, M.M., et. al. Oral aspects of Mongolism Part I. Periodontal disease in Mongolism. Oral surg., 14:92-107, Jan. 1961.

17. Committee on Dental Hygiene Education and the Subcommittee on Curriculum Essentials. Curriculum guidelines for dental hygiene education: performance standards based on task analysis and instructional objectives. 4th ed. American Dental Hygienists' Association. 1977.

18. Cutress, T.W. Periodontal disease and oral hygiene in Trisomy 21. Arch. Oral Biol., 16:1345-55, Nov. 1971.

19. Dicks, J.L. and Till, M.J. Dental care for mentally retarded children. Northwest Dent., 52:234-40, July-Aug. 1973.

20. Full, C.A. et al. Oral health maintenance of the institutionalized handicapped child. Am. Dent. A.J., 94:111-13, Jan. 1977.

21. Gullikson, J.S. Oral findings of mentally retarded children. J. Dent. Child., 25:58-63, Mar.-Apr. 1969.

22. Hobdell, M.H., Burt, B.A. and Longhurst, Peter. A method of planning a dental treatment program for an institutionalized population. Comm. Dent. Oral Epidemiol., 3:166-73, Aug. 1975.

23. Jones, Frank. The Robert Wood Johnson Foundation's program in dental care. J. Dent. Educ., 41:135-8, March 1977.

24. Johansen, J.R., Gjermo, P. and Bellini, H.T. A system to classify the need for periodontal treatment. Acta Odontol. Scand., 34:297-305, 1973.

25. Kass, Laurie. Dental health program for the institutionally mentally retarded. Dent. Hyg., 3:76-8, Feb. 1979.

26. Kirk, S.A. and Gallagher, J.J. Educating exceptional children. 35d ed. Boston, Houghton Mifflin Company, c. 1979. xiv+545p.

27. Latimer, Ruth. Dental care for mentally retarded persons, a profession meets a challenge. J. Pub. Health Dent., 29:127-9, Spring 1969.

28. Mathewson, R.J. and Beaver, H.A. A survey of dental care for Handicapped children. J. Pub. Health Dent., 30:45-52, Winter 1970.

29. Miller, Marge. Oral hygiene management of the moderate to severely mentally retarded child. Dent. Hyg., 53:265-68, June 1979.

30. Miller, M.F. and Ship, I.I. Periodontal disease in the institutionalized Mongoloid. J. Oral Med., 32:9-13, Jan.-Mar. 1977.

31. Nowak, A.J. Dentistry for the handicapped patient. St. Louis, Mosby, 1976. xii+419 p. (p. 211)

32. Nowak, A.J. The role of dentistry in the normalization of the mentally retarded person. J. Dent. Child., 30:35-8, Nov-Dec. 1974.

33. Office of the Federal Register, National Archives and Records Service, General Service Administration. United States Government manual 1979-1980. Washington, Government Printing Office, May 1, 1979. vii+914p. (p. 861)

34. Pool, D. Dental care and the handicapped person: the dental needs of handicapped children. Roy. Soc. Health J., 4:175-77, April 1975.

35. President's Committee on Mental Retardation. Changing patterns in residential services for the mentally retarded. (Revised ed.) DHEW Publication No. (OHD) 76-21015. Washington, Government Printing Office, 1976. vii+377p. (p. 232).

36. President's Committee on Mental Retardation. MR 74: a friend in Washington. DHEW Publication No. (OHD) 75-21010. Washington, Government Printing Office, June 1975. iv+44p. (p. 9).

37. President's Committee on Mental Retardation. New neighbors, the retarded citizen in quest of a home. DHEW Publication No. (OHD) 74-21004. Washington, Government Printing Office, 1974. xii+190p. (p. 79, 112, 120).

38. Roberts, R.E. et al. Dental care for handicapped children reexamined: II Dimensions of dental practice. J. Pub. Health Dent., 38:136-47, Spring 1978.

39. Sargent, Kathryn J. The directory for exceptional children. A listing of educational and training facilities. 8th ed. Porter Sargent Publishers, Inc., 1978. 1299p. (p. 722-804).

40. Scheerenberger, R.C. Public residential services for the mentally retarded. National Association of Superintendents of Public Residential Facilities for the Mentally Retarded, 1978. 31p.

41. Snyder, J.R., Knopp, Judith and Jordan, W.A. Dental problems of non-institutionalized mentally retarded children. Northwest Dent., 41:11-15, 17 Jan. - Feb. 1962.

42. Stiefel, Doris J. Inclusion of a program of instruction in care of the disabled in a dental school curriculum. J. Dent. Educ., 43:262-70, May 1979.

43. Strum, Anne B. The use of a mediated instructional package to teach oral health concepts to paraprofessionals. Master's Thesis. Norfolk, Virginia, Old Dominion University, 1977. v+75p.

44. Svatun, Bjarne. The provision of dental care for institutionalized mentally abnormal persons in Norway. Community Dent. Oral Epidemiol., 2:155-60, 1974.

45. The Council of State Governments. National Task Force on State Dental Policies, Issues in dental health policies. Spec. Issue, J. Dent. Educ. 43:1-61, Oct. 1979, part 2 of 2.

46. Torres, Hazel, and Ehrlich, Ann. Modern dental assisting. Philadelphia, W.B. Saunders, 1976. ix+1119p. (p. 4-6).

47. Troutman, K.C. Prevention of dental disease for the handicapped patient. p. 207-226. (In DePaola, D.P. and Chesney, H.G. Preventive dentistry. Littleton, Massachusetts, PSG Publishing Company, 1979.

48. U.S. Bureau of Community Health Services. Specialized Training for dentists treating children with handicaps: an evaluation. DHEW Publication No. (HSA) 78-5218. Washington, Government Printing Office, 1978. 149p. (p. 1).

49. U.S. Congress. Bill of rights act P.L. 94-103. 94th Cong., 1st sess., 1975, p. 919-64. (In United States code, congressional and administrative news. Vol. 2. St. Paul, Minn. West Publishing Co. c. 1976.)

50. Virginia Board of Dentistry. Dental laws of Virginia. Charlottesville, The Michie Company, c. 1976. 31p. (p. 6).

51. Wilkins, Esther. Clinical practice of the dental hygienist. 4th ed. Philadelphia, Lea and Febiger, 1976. xii+799p. (p. 3).

52. Young, W.O., and Striffler, D.F., eds. The dentist, his practice, and his community. 2nd ed. Philadelphia, Saunders, 1969. xvi-344p. (p. 250, 252).

APPENDIX A

STANDARD FEDERAL REGIONS[33]

REGION I. - Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

REGION II. - New Jersey, New York, Puerto Rico, Virgin Islands

REGION III. - Delaware, Washington, D.C., Maryland, Pennsylvania Virginia, West Virginia

REGION IV. - Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee

REGION V. - Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin

REGION VI. - Arkansas, Louisiana, New Mexico, Oklahoma, Texas

REGION VII. - Iowa, Kansas, Missouri, Nebraska

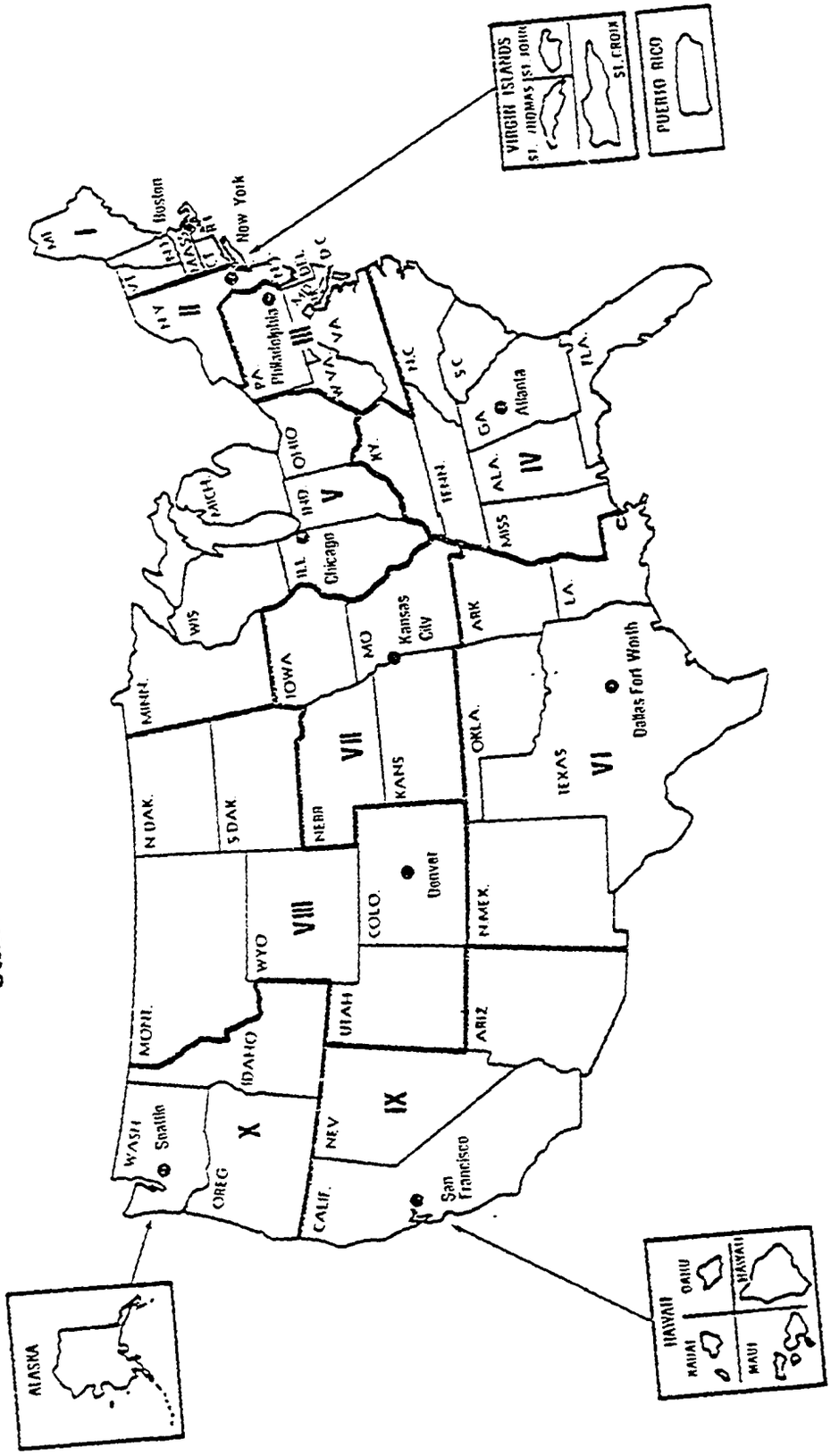
REGION VIII. - Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming

REGION IX. - American Samoa, Arizona, California, Guam, Hawaii, Nevada, Pacific Trust Territories

REGION X. - Alaska, Idaho, Oregon, Washington

APPENDIX B

MAP OF STANDARD FEDERAL REGIONS[33]



APPENDIX C

ORAL HEALTH SERVICES, FACILITIES, AND DENTAL PERSONNEL QUESTIONNAIRE

ORAL HEALTH SERVICES, FACILITIES, AND DENTAL PERSONNEL QUESTIONNAIRE

DIRECTIONS: Place a check (√) in the box next to the item which best represents characteristics or practices of your institution. Check only one response unless otherwise indicated. Lines have been provided for your response to open-ended questions.

1. Approximately how many mentally retarded individuals:

   A. reside at your institution on a 24 hour basis? #_____

   B. are day-care clients? #_____

2. What is the approximate operating budget of the institution?

   $_____

3. Is there a provision in the budget allocating funds for the dental care of residents?

   ☐ YES, approximately $_____

   ☐ NO

4. In terms of dollars, how much oral health care is covered annually by:

   A. Medicare $_____

   B. Medicaid $_____

5. Is there a provision in your operating budget allocating funds for in-service education of your staff?

   ☐ YES, approximately $_____

   ☐ NO

6. Is dental health instruction included in any pre-service staff training program?

   ☐ YES

   ☐ NO

7. Does your institution provide staff members with in-service training programs on the maintenance of residents' oral health?

   ☐ YES

   ☐ NO

   If YES, please answer questions 8,9,10

   If NO, please go on to question #11.

8. Approximately how many times per year are staff members provided in-service training on the maintenance of residents' oral health?

   _____

9. Indicate the dental health topics studied by the staff of your institution during in-service training. (You may check more than one.)

   ☐ etiology of dental decay and periodontal disease

   ☐ techniques of proper oral hygiene (brushing, flossing, disclosing, oral irrigation)

   ☐ diet and nutrition

   ☐ role of sugar in dental decay

   ☐ restraints, patient positioning, mouth props, or adaptive devices used in daily oral hygiene with residents

   ☐ other, specify _____

   _____

10. Who conducts dental in-service training programs? (You may check more than one.)

- ☐ resident dentist
- ☐ consulting dentist
- ☐ dental hygienist
- ☐ dental assistant
- ☐ other, specify _____

_____

11. Do you feel that in-service training programs on the maintenance of resident oral health could be beneficial to your institution?

- ☐ YES
- ☐ NO

12. Indicate the topics of dental health instruction provided for residents of your institution. (You may check more than one.)

- ☐ flossing
- ☐ toothbrushing
- ☐ disclosing materials
- ☐ diet and nutrition
- ☐ dental plaque
- ☐ sugar and dental decay
- ☐ oral irrigation devices
- ☐ other, specify _____

_____

13. When an individual is mainstreamed into the community, is the parent or guardian provided with instructions on the maintenance of proper oral health for the mentally retarded individual?

- ☐ YES
- ☐ NO

14. What dental personnel are employed by your institution?

number employed full-time	number employed part-time	
_____	_____	resident dentist(s)
_____	_____	consulting dentist(s)
_____	_____	dental hygienist(s)
_____	_____	dental assistant(s)
_____	_____	dental laboratory technician(s)
_____	_____	other, specify _____

_____

15. Are any community dental professionals donating their services to the facility?

- ☐ YES
- ☐ NO

If you answered YES, please indicate the number of professionals donating services.

_____ resident dentist(s)

_____ consulting dentist(s)

_____ dental hygienist(s)

_____ dental assistant(s)

_____ dental laboratory technician(s)

_____ other, specify _____

_____

16. From the following list, please indicate the dental facilities and equipment located on the premises of your institution. (You may check more than one.)

- ☐ barrier-free dental treatment room
- ☐ dental treatment room
- ☐ dental unit (stationary)
- ☐ dental unit (portable)
- ☐ dental chair
- ☐ autoclave
- ☐ dental radiographic unit (stationary)
- ☐ dental radiographic unit (portable)
- ☐ radiographic processing and developing equipment
- ☐ ultrasonic dental unit
- ☐ dental hygiene education room
- ☐ mirrors
- ☐ sinks
- ☐ toothbrushes
- ☐ floss
- ☐ disclosing materials
- ☐ audio-visual aids for resident education
- ☐ topical or supplemental fluoride materials
- ☐ dental laboratory facility
- ☐ other, specify _____

_____

17. Is the water in the facility optimally fluoridated?

- ☐ YES
- ☐ NO

18. Is the community water optimally fluoridated?

- ☐ YES
- ☐ NO

19. In regard to dental care, does your institution provide comprehensive diagnostic services?

- ☐ YES
- ☐ NO

If you answered YES, please indicate those diagnostic services that are provided. (You may check more than one.)

- ☐ intraoral examination
- ☐ dental charting
- ☐ periodontal charting
- ☐ dental radiographs
- ☐ other, specify _____

_____

20. Does your institution have a dental recall system to monitor the oral health status of residents?

- ☐ YES
- ☐ NO

21. Does 100 percent of your mentally retarded population receive routine dental care?

- ☐ YES
- ☐ NO

If NO, please explain _____

_____

_____

_____

_____

_____

4

22. Please indicate with a check mark (√) if any of the following dental services are provided to the residents within your institution; outside your institution; or both inside and outside your institution. (You may check more than one.)

WITHIN INSTITUTION		OUTSIDE DENTAL FACILITY
_____	IM sedation	_____
_____	IV sedation	_____
_____	preventive	_____
_____	restorative	_____
_____	endodontic/pulp therapy	_____
_____	oral surgery	_____
_____	prosthetics (fixed)	_____
_____	prosthetics (removable)	_____
_____	periodontics	_____
_____	orthodontics	_____
_____	other, specify _____	_____

23. In your opinion, what areas of your dental health program need expansion and development?

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

24. Are mentally retarded individuals who are discharged from your institution referred to community dental professionals for their continued oral health maintenance?

- ☐ Always
- ☐ Frequently
- ☐ Occasionally
- ☐ Seldom
- ☐ Never

Comment: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

25. Indicate the types of dental resources utilized in nearby communities for the treatment of mentally retarded persons. (You may check more than one.)

- ☐ Pedodontist
- ☐ General dental practitioner
- ☐ Hospital dental clinic
- ☐ Public health dental clinic
- ☐ Other, specify _____

_____

26. Do you feel that there are adequate community resources available in the areas around your institution to meet the dental needs of mentally retarded persons mainstreamed into the community?

☐ YES

☐ NO

COMMENT: _____

27. What community resources and support systems do you feel should be developed in order to meet the dental needs of deinstitutionalized mentally retarded persons?

28. Please check the appropriate space to indicate who completed the questionnaire. (You may check more than one.)

☐ director

☐ administrator

☐ dental director

☐ other, specify _____

29. State in which your facility is located.

_____

THANK YOU FOR YOUR TIME AND COOPERATION IN RESPONDING TO THE QUESTIONNAIRE.

Please return the completed questionnaire to:

Marilynn Mattox, R.D.H., B.S.
Department of Dental Hygiene
Old Dominion University
Norfolk, Virginia 23508

APPENDIX D

AMERICAN DENTAL ASSOCIATION BOARD OF TRUSTEES INTENDED ACTIONS REGARDING INSTITUTIONALIZED AND HOMEBOUND HANDICAPPED PERSONS[5]

1. Develop a program to provide assistance and information to state and local societies to assist dentist in caring for handicapped and disabled patients.

2. Maintain support of the National Foundation of Dentistry for the Handicapped.

3. Identify and publicize other sources of care for the handicapped, institutionalized and homebound.

4. Develop a better information base on the dental health needs of the long-term homebound.

5. Help establish appropriate continuing education for practitioners and cooperate with dental educators regarding any necessary additions to the undergraduate and postgraduate dental school curricula.

6. Implement appropriate methods of providing more accessible dental care to nursing home residents.

7. Explore the potential for resolving problems of limited health manpower and capital resources in nursing homes through the use of the National Health Service Corps.

APPENDIX E

COVER LETTER - INITIAL MAILING TO PILOT SAMPLE

The enclosed questionnaire is part of a pilot study for a nationwide survey to be implemented later this summer. The goal of the study is to assess the availability of oral health care services, facilities, and dental personnel in residential facilities for the mentally retarded. Your completion of the questionnaire would be valuable in establishing validity of the instrument. Results will be tablulated in group form so that individual responses will remain anonymous.

This project should yield valuable information about the dental care of residential populations of mentally retarded persons in institutions. Please complete the enclosed questionnaire and indicate any areas that you feel should be added, deleted, or revised. You may want to consult a member of the dental staff to assist you in this task. Return the completed questionnaire and comments in the stamped, self-addressed envelope provided on or before June 5, 1979. By forwarding the enclosed postcard we will have a record of your response.

Thank you for your cooperation.

Sincerely,

Marilynn Mattox, R.D.H., B.S.
Dental Hygiene Graduate Student

APPENDIX F

COVER LETTER - SECOND MAILING TO PILOT SAMPLE

Recently, you were sent a questionnaire to complete and make comments on regarding areas to be added, deleted or revised. Based on thsoe comments a second, revised questionnaire has been developed. Your completeion of the enclosed questionnaire would be valuable in establishing validity of the instrument which will be used in a nation-wide survey later this summer. The goal of the study is to assess the availability of oral health care services to mentally retarded persons in residential facilities.

Please complete the questionnaire and indicate any areas you feel should be added, deleted, or revised. You may want to consult a member of the dental staff to assist you in this task. All responses and comments will remain confidential. Please return the completed questionnaire and comments in the stamped, self-addressed envelope provided prior to June 18, 1979.

Thank you for your itme and cooperation, and for participating in the pilot study.

Sincerely,

Marilynn Mattox, R.D.H., B.S.
Dental Hygiene Graduate Student

APPENDIX G

COVER LETTER - INITIAL MAILING TO PUBLIC RESIDENTIAL FACILITIES

I am conducting a nationwide study to assess the availability of oral health care services, facilities, and dental personnel in public residential facilities for mentally retarded individuals. Your participation in this survey wil provide information presently unavailable and contribute to the development of oral health care for institutionalized mentally retarded citizens. Specifically, this study should yield information which will aid planners and administrators in meeting the dental needs of residential populations of mentally retarded persons.

The enclosed 29 item questionnaire will take approximately 20 minutes to complete. Please complete the questionnaire on or before July 10, 1979. You may want to consult a member of the dental staff to assist you in this task. Upon completion, please return the questionnaire using the stamped, self-addressed envelope provided.

Return the enclosed postcard separately from the questionnaire to maintain anonymity. Check the appropriate space on the postcard if you desire a summary of the results. Findings of the study will be presented in group form only. Thank you for your participation and support in making this study possible.

Sincerely,

Marilynn Mattox, R.D.H., B.S.
Dental Hygiene Graduate Candidate

APPENDIX H

INITIAL POSTCARD

I have completed an mailed the questionnaire on dental care for the institutionalized mentally retarded.

NAME _____

FACILITY _____

ADDRESS _____

_____

_____ Please send results of the survey.

_____ Please do not send results of the survey.

Marilynn Mattox, R.D.H.
Department of Dental Hygiene
Old Dominion University
Norfolk, Virginia 23508

APPENDIX I

POSTCARD APPEAL TO NON-RESPONDENTS OF PUBLIC RESIDENTIAL FACILITIES

I have not yet received your response to the questionnaire on the availability of oral health care services in Public Residential Facilities for mentally retarded persons. Kindly complete the questionnaire sent to you on June 22 and return it to the Old Dominion University, Department of Dental Hygiene, Norfolk, Virginia, 23508. A second questionnaire will be mailed to you around July 18, 1979 in case you have misplaced the first one.

If you have already returned the questionnaire please ignore this postcard. Thank you for your support.

Sincerely,

Marilynn Mattox, R.D.H., B.S.
Dental Hygiene Graduate Candidate

APPENDIX J

FOLLOW-UP COVER LETTER OF SECOND QUESTIONNAIRE PACKET MAILED TO NON-RESPONDENTS OF PUBLIC RESIDENTIAL FACILITIES

Recently you were sent a questionnaire to complete concerning oral health care services available to mentally retarded persons in public residential facilities. I have not yet received your response to the questionnaire. In order for this survey to be representative of the population it is important that I receive as many responses as possible. This study is a graduate research project which I am conducting nationwide to obtain information that could aid planners and administrators in meeting the dental needs of residential populations of mentally retarded persons.

For your convenience, a second questionnaire, return envelope, and postcard are enclosed. You may wish to consult a member of the dental staff to assist you in completing it. Return of the completed questionnaire on or before July 28, 1979 would be appreciated. Please return the postcard separately from the questionnaire to maintain anonymity and check the appropriate space if you desire a summary of the results. Findings of the study will be presented in group form only. Your cooperation in participating in this study is deeply appreciated.

Sincerely,

Marilynn Mattox, R.D.H., B.S.
Graduate Dental Hygiene Candidate

APPENDIX K

SECOND POSTCARD

I have completed and mailed the questionnaire on dental care for institutionalized mentally retarded persons.

NAME _____

FACILITY _____

ADDRESS _____

_____

_____ Please send a summary of the results.

_____ Please do not send results of the survey.

Marilynn Mattox, R.D.H. B.S.
Department of Dental Hygiene
Old Dominion University
Norfolk, Virginia 23508

APPENDIX L

REASONS FOR NON-PARTICIPATION

Region 1. Two PRFs were excluded from the study because a letter concerning their dental health programs was received in place of questionnaires and the information could not be interpreted.

Region III. One institution was unable to return the questionnaire for an extended amount of time.

Region V. One PRF superintendent declined participation "due to purchase of outside dental orthodontics."

Another PRF declined participation in the study since the facility was no longer a residential facility but an out-patient facility.

APPENDIX M

SUMMARY OF RESPONSES TO THE ORAL HEALTH SERVICES, FACILITIES, AND DENTAL PERSONNEL QUESTIONNAIRE

Item 1. Approximately how many mentally retarded individuals:

A. reside at your institution on a 24 hour basis?

Number of residents	Number of PRFs	Relative frequency	Adjusted Frequency
0-250	85	36.0%	36.3%
251-500	57	24.2%	24.4%
501-750	37	15.7%	15.8%
751-1000	17	7.2%	7.3%
1001-1500	23	9.7%	9.8%
$\geq$ 1501	15	6.4%	6.4%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

B. are day-care clients?

Number of residents	Number of PRFs	Relative frequency	Adjusted frequency
0	75	31.8%	52.4%
1-100	54	22.9%	37.8%
101-300	7	3.0%	4.9%
400-500	4	1.7%	2.8%
1600	2	0.8%	1.4%
2200	1	0.4%	0.7%
incomplete data	93	39.4%	missing

(N = 236; valid cases = 143; missing cases = 93)

Item 2. What is the approximate operating budget of the institution?

Range $70,000 - $47,798,000

Median $9,441,431

(N = 236; valid cases = 190; missing cases = 46)

Item 3. Is there a provision in the budget allocating funds for the dental care of residents?

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	203	86.0%	89.4%
NO	24	10.2%	10.6%
incomplete data	9	3.8%	missing

(N = 236; valid cases = 227; missing cases = 9)

YES, approximately

Range $200 - $1,162,000

Median $50,052

(N = 203; valid cases = 130; missing cases = 73)

Item 4. In terms of dollars, how much oral health care is covered annually by:

A. Medicare	Number of PRFs	Dollar amount covered by Medicare
	79	$0
	16	$500 - $1,200,000

Range $0 - $1,200,000

Median $0

(N = 236; valid cases = 95; missing cases = 141)

B. Medicaid	Number of PRFs	Dollar amount covered by Medicaid
	65	$0
	32	$500 - $2,300,000

Range $0 - $2,300,000

Median $0

(N = 236; valid cases = 97; missing cases = 139)

Item 5. Is there a provision in your operating budget allocating funds for in-service education of your staff?

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	175	74.2%	79.5%
NO	45	19.1%	20.5%
incomplete data	16	6.8%	missing

(N = 236; valid cases = 220; missing cases = 16)

YES, approximately

Number of PRFs	Approximate dollar amount in budget
79	$100 - $400,000
45	not applicable
51	incomplete data

Range $100 - $400,000

Median $7,875

(N = 175; valid cases = 79; not applicable = 45; missing cases = 51)

Item 6. Is dental health instruction included in any pre-service staff training program?

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	186	78.8%	79.5%
NO	48	20.3%	20.5%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

Item 7. Does your institution provide staff members with in-service training programs on the maintenance of residents' oral health?

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	216	91.5%	93.5%
NO	15	6.4%	6.5%
incomplete data	5	2.1%	missing

(N = 235; valid cases = 231; missing cases = 5)

Item 8. Approximately how many times per year are staff members provided in-service training on the maintenance of residents' oral health?

Times per year	Number of PRFs	Relative frequency*	Adjusted frequency*
1	60	25.4%	30.2%
2	44	18.6%	22.1%
3	10	4.2%	5.0%
4	21	8.9%	10.6%
5	6	2.5%	3.0%
6	9	3.8%	4.5%
8	2	0.8%	1.0%
9	1	0.4%	0.5%
10	2	0.8%	1.0%
11	1	0.4%	0.5%
12	17	7.2%	8.5%
15	1	0.4%	0.5%
16	2	0.8%	1.0%
24	4	1.7%	2.0%
26	1	0.4%	0.5%
52	2	0.8%	1.0%
54	1	0.4%	0.5%
61	1	0.4%	0.5%
62	1	0.4%	0.5%
66	1	0.4%	0.5%
continually	12	5.1%	6.0%
not applicable	15	6.4%	not applicable
incomplete data	22	9.4%	missing

(N = 236; valid cases = 199; not applicable = 15, missing cases = 22)

Item. 9. Indicate the dental health topics studied by the staff of your institution during in-service training.

Etiology of dental decay and periodontal disease

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	176	74.6%	81.1%
NO	41	17.4%	18.9%
not applicable	15	6.4%	not applicable
incomplete data	4	1.7%	missing

(N = 235; valid cases = 217; not applicable = 15; missing cases = 54)

Techniques of proper oral hygiene (brushing, flossing, disclosing, oral irrigation)

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	216	91.5%	99.1%
NO	2	0.8%	0.9%
not applicable	15	6.4%	not applicable
incomplete data	3	1.3%	missing

(N = 236; valid cases = 218; not applicable = 15; missing cases = 3)

Diet and nutrition

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	178	75.4%	81.7%
NO	40	16.9%	18.3%
not applicable	15	6.4%	not applicable
incomplete data	3	1.3%	missing

(N = 236; valid cases = 218; not applicable = 15; missing cases = 3)

Role of sugar in dental decay

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	173	73.3%	79.7%
NO	44	18.6%	20.3%
not applicable	15	6.4%	not applicable
incomplete data	4	1.7%	missing

(N = 236; valid cases = 217; not applicable = 15; missing cases = 4)

Restraints, patient positioning, mouth props, or adaptive devices used in oral hygiene with residents.

Response	Number of PRFs	Relative frequency*	Adjusted frequcncy
YES	135	57.2%	61.9%
NO	83	35.2%	38.1%
not applicable	15	6.4%	not applicable
incomplete data	3	1.3%	missing

Seven YES respondents crossed out restraints on the questionnaire.

(N = 236; valid cases = 218; not applicable = 15; missing cases = 3)

Item 9. other, specify

- oral health and total body health relatedness; psychological importance of good oral health; and identification of good health and poor health conditions
- dental conditions related to other physically and mentally handicapping conditions
- developmental defects
- various additional facets of dentistry
- special needs of individual patients
- specific requirements of individual patients
- specific topics dealing with mental retardation
- slide presentations of various dental problems especially those our residents are prone to have
- all phases of dentistry carried on by our department
- edentulous patient care, recognition of problems and referral
- exam for oral soft tissue lesions
- dental growth/development, and relationship of dental diseases to mental disabilities

Item 9. other, specify continued

- strategy of scheduling oral care programs
- in-cottage consultation with residential staff
- special brush and technique of use for physically handicapped, and management of oral hygiene
- dental plaque scoring
- care of bridges, partials, etc.
- care of removable appliances and prosthetics and care of orthodontic patient
- dentures, partials, malocclusions, cancers of the mouth, and orthodontia
- denture care
- care of toothbrushes, common abnormalities seen in developmentally disabled clients, importance of continuous comprehensive dental care, and exfoliative patterns
- post surgical treatment, etiology of gingival hyperplasia, water fluoridation and its value, and how to make referrals to the dental department
- dental emergencies and post operative care
- dilantin hyperplasia, fluoridation, dental emergencies, complications following dental surgery, explanation of operative procedures, and care of removable appliances
- daily fluoride rinse
- dilantin hyperplasia
- fluorides, toothbrush hygiene, and dilantin hyperplasia
- oral pathology in dilantin hyperplasia
- drug therapy; dilantin
- drug induced gingival hyperplasia
- emergency procedures
- emergency situations and how to handle them
- dental clinical assisting

Item 9. other, specify continued

- periodontal disease
- cardio-pulmonary resuscitation
- flossing is NOT considered due to danger of being bitten
- continuing education outside institution
- active role of attendant staff working with resident along with dental staff
- toothbrushing demonstration with residents
- role of direct care staff in providing oral hygiene
- responsibility of attendant for each resident as needed

Item 10. Who conducts dental in-service training programs?

Resident dentist

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	131	55.5%	60.1%
NO	87	36.9%	39.9%
not applicable	15	6.4%	not applicable
incomplete data	3	1.3%	missing

(N = 236; valid cases = 218; not applicable = 15; missing cases = 3)

Consulting dentist

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	128	54.2%	59.0%
NO	89	37.7%	41.0%
not applicable	15	6.4%	not applicable
incomplete data	4	3.7%	incomplete data

(N = 236; valid cases = 218; not applicable = 15; missing cases = 3)

Dental hygienist

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	128	54.2%	59.0%
NO	89	37.7%	41.0%
not applicable	15	6.4%	not applicable
incomplete data	4	3.7%	incomplete data

(N = 236; valid cases = 217; not applicable = 15; missing cases = 4)

Dental assistant

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	58	24.6%	26.9%
NO	158	66.9%	73.1%
not applicable	15	6.4%	not applicable
incomplete data	5	2.1%	missing

(N = 236; valid cases = 216; not applicable = 15, missing cases = 5)

Item 10. other, specify

- occupational therapist, physical therapist, and registered nurse
- nursing service
- registered nurse (indicated by 14 respondents)
- nursing staff
- registered nurse - staff development
- registered nurse - training staff
- nursing education staff
- registered nurses and others
- registered nurse and a physician

Item 10. other, specify continued

- two staff dentists
- dental department head and staff dentist
- contracted local dentist, part-time
- two consulting dental hygienists
- dental hygiene and dental assisting students
- coordinated with a Dental Hygiene School (indicated by two respondents)
- summer dental student assistants
- dental educator's assistants
- dental staff assistant
- dietician
- IST officer
- IST director, film strips
- in-service training staff
- in-service instructor
- training office
- education department, education and training services
- teachers in school, dorm staff
- staff trainers
- STD staff
- staff development
- staff development supervisor
- funds provided for attending university and other courses

Item 11. Do you feel that in-service training programs on the maintenance of resident oral health could be beneficial to your institution?

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	15	6.4%	88.2%
NO	2	0.8%	11.8%
not applicable	216	91.5%	not applicable
incomplete data	3	1.3%	missing

(N = 236; valid cases = 17; not applicable = 216; missing cases = 3)

Item 12. Indicate the types of dental health instruction provided for residents of your instruction.

Flossing

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	132	55.9%	57.9%
NO	96	40.7%	42.1%
incomplete data	8	3.3%	missing

(N = 236; valid cases = 228; missing cases = 8)

Toothbrushing

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	223	94.5%	97.8%
NO	5	2.1%	2.2%
incomplete data	8	8.3%	missing

(N = 236; valid cases = 228; missing cases = 8)

Disclosing materials

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	95	40.3%	41.7%
NO	133	56.4%	58.3%
incomplete data	8	3.3%	missing

(N = 236; valid cases = 228; missing cases = 8)

Diet and nutrition

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	141	59.7%	61.8%
NO	87	36.9%	38.2%
incomplete data	8	3.3%	missing

(N = 236; valid cases = 228; missing cases = 8)

Dental plaque

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	133	56.4%	58.3%
NO	95	40.3%	41.7%
incomplete data	8	3.3%	missing

(N = 236; valid cases = 228; missing cases = 8)

Sugar and dental decay

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	145	61.4%	63.6%
NO	83	35.2%	36.4%
incomplete data	8	3.3%	missing

(N = 236; valid cases = 228; missing cases = 8)

Oral irrigation devices

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	68	28.8%	30.0%
NO	159	67.4%	70.0%
incomplete data	9	3.8%	missing

(N = 236; valid cases = 227; missing cases = 8)

Item 12. other, specify

- relationship of dental health to general health
- adaptive devices as per individual needs
- electric toothbrushes (indicated by four respondents)
- electric toothbrush, digital massage
- gingival stimulation
- use of mouthwash
- cleaning bridges, dentures, etc.
- care of removable appliances, floss-aid instruction, and role of fluoride
- dentures, partials, orthodontia, and cancer of the mouth
- care of dentures and removable appliances

Item 12. other, specify continued

- denture care
- maintenance and care of prosthesis
- denture care, proper care of brushes
- drugs causing gum disorders
- discuss seizure prescriptions and periodontal problems
- programs, fluorides, and gingival problems
- topical fluorides
- fluorides
- desensitization to accept professional dental treatment
- sixty-nine percent of our population is profound and severely retarded
- mostly not applicable to our residents
- most have oral hygiene procedures done for them
- incapable of having individual instruction
- more time spent with staff than residents due to learning capacity
- all instruction is geared to the functioning level of the client

---

Item 13. When an individual is mainstreamed into the community, is the parent or guardian provided with instructions on the maintenance of proper oral health for the mentally retarded individual?

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	141	59.7%	64.7%
NO	77	32.6%	35.3%
incomplete data	18	7.7%	missing

(N = 236; valid cases = 218, missing cases = 18)

Item 14. What dental personnel are employed by your institution?

Number of full-time resident dentists	Number of PRFs	Relative frequency	Adjusted frequency
0	77	32.6%	33.5%
1	91	38.6%	39.6%
2	43	18.2%	18.7%
3	15	6.4%	6.5%
4	4	1.7%	1.7%
incomplete data	6	2.5%	missing

(N = 236; valid cases = 230; missing cases = 6)

Number of part-time resident dentists	Number of PRFs	Relative frequency*	Adjusted frequency*
0	208	88.1%	91.2%
1	10	4.2%	4.4%
2	6	2.5%	2.6%
3	2	0.8%	0.9%
4	1	0.4%	0.4%
10	1	0.4%	0.4%
incomplete data	8	3.4%	missing

(N = 236; valid cases = 228; missing case = 8)

Number of part-time consulting dentists	Number of PRFs	Relative frequency*	Adjusted frequency*
0	162	68.6%	71.7%
1	30	12.7%	13.3%
2	18	7.6%	7.9%
3	8	3.4%	3.5%
4	4	1.7%	1.8%
6	2	0.8%	0.9%
10	2	0.8%	0.9%
incomplete data	10	4.2%	missing

(N = 236; valid cases = 226; missing cases = 10)

Number of full-time dental hygienists	Number of PRFs	Relative frequency*	Adjusted frequency
0	121	51.3%	53.1%
1	78	33.1%	34.2%
2	25	10.6%	10.9%
3	4	1.7%	1.8%
incomplete data	8	3.4%	missing

(N = 235; valid cases = 228; missing cases = 8)

Number of part-time dental hygienists	Number of PRFs	Relative frequency	Adjusted frequency
0	199	84.3%	86.9%
1	26	11.0%	11.4%
2	4	1.7%	1.7%
incomplete data	7	3.0%	missing

(N = 236; valid cases = 229; missing cases = 7)

Number of full-time dental assistants	Number of PRFs	Relative frequency	Adjusted frequency
0	78	33.1%	34.4%
1	70	29.7%	30.8%
2	49	20.8%	21.5%
3	17	7.2%	7.5%
4	10	4.2%	4.4%
5	2	0.8%	0.9%
6	1	0.4%	0.4%
incomplete data	9	3.8%	missing

(N = 236; valid cases = 227; missing cases = 9)

Number of part-time dental assistants	Number of PRFs	Relative frequency*	Adjusted frequency
0	211	89.4%	91.8%
1	14	5.9%	6.1%
2	3	1.3%	1.3%
3	1	0.4%	0.4%
4	1	0.4%	0.4%
incomplete data	6	2.5%	missing

(N = 236; valid cases = 230; missing cases = 6)

Number of full-time dental laboratory technicians	Number of PRFs	Relative frequency*	Adjusted frequency
0	225	95.3%	97.4%
1	6	2.5%	2.6%
incomplete data	5	2.1%	missing

(N = 236; valid cases = 231, missing cases = 5)

Number of part-time dental laboratory technicians	Number of PRFs	Relative frequency*	Adjusted frequency
0	230	97.5%	99.1%
1	2	0.8%	0.9%
incomplete data	4	1.7%	missing

(N = 236; valid cases = 232; missing cases = 4)

Item 14. other, specify (comments presented by Region)

Region I:	1 contracted dentist, part-time; 1 dental chief, staff dentist, and oral hygiene aide; use dentists in community; dentist available for emergency and screening appointments; 1 dental extern, full-time; 3 general practice residents, full-time; 2 oral hygiene aides, full-time; dental assistants from vocational training; service provided through contract; and 1 dental secretary/receptionist, full-time
Region II:	1 dental chief, full-time; 2 dental aides, full-time; 1 secretary, part-time; and 1 clerical person, part-time
Region III:	2 health, medical assistants, full-time, 1 clerk, full-time; 7 dental educator assistants, full-time; 2 dentists, part-time contract; dentist by contract; and outside lab used
Region IV:	2 oral surgeons, part-time and 4 dental aides, part-time; 1 nurse, full-time; 1 anesthesia personnel, part-time; dental and dental hygiene students; 1 consulting orthodontist, part-time; and 1 clerk, full-time
Region V:	6 technicians, full-time; 1 clerk typist, full-time; 2 dental assistants and 1 dental hygiene student for approximately 12 weeks, part-time; nurse anesthetist; student hygienists-spring only four weeks; 1 licensed practical nurse, full-time; 1 person for escort service to clinic appointments, full-time; and all contractual services
Region VI:	nurse's aide; 1 therapy aide, full-time; surgery and orthodontic consultants as needed, part-time; and 1 orthodontist, part-time, 16 dental students, part-time; and 4 anesthesiologists, part-time
Region VII:	1 nurse anesthetist, part-time and 1 typist, full-time; and 2 dentists, part-time contract
Region VIII:	dentist(s), hygienist(s), and dental assistant(s) through contract services; and one dental staff assistant (secretary), full-time
Region IX:	6 community dentists and their staff who provide our dental work and program; and all contractual services
Region X:	7 dental students, part-time; and outside lab used

Item 15. Are any community dental professionals donating their services to the facility?

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	27	11.4%	11.9%
NO	200	84.7%	88.1%
incomplete data	9	3.8%	missing

(N = 236; valid cases = 227; missing cases = 9)

YES, number of professionals donating services

Resident dentist(s)

Number donating services	Number of PRFs	Relative frequency	Adjusted frequency
0	26	11.0%	100%
not applicable	209	88.6%	not applicable
incomplete data	1	0.4%	missing

(N = 236; valid cases = 26; not applicable = 209; missing cases = 1)

Consulting dentist(s)

Number donating services	Number of PRFs	Relative frequency	Adjusted frequency*
0	12	5.1%	46.2%
1	9	3.8%	34.6%
2	3	1.3%	11.5%
3	1	0.4%	3.8%
6	1	0.4%	3.8%
not applicable	209	88.6%	not applicable
incomplete data	1	0.4%	missing

(N = 236; valid cases = 26; not applicable = 209; missing cases = 1)

Dental hygienist(s)

Number donating Services	Number of PRFs	Relative frequency	Adjusted frequency
0	21	8.9%	84.0%
1	4	1.7%	16.0%
not applicable	209	88.6%	not applicable
incomplete data	2	0.8%	missing

(N = 236; valid cases = 25; not applicable = 209; missing cases = 2)

Dental assistant(s)

Number donating services	Number of PRFs	Relative frequency	Adjusted frequency
0	26	11.0%	96.3%
1	1	0.4%	3.7%
not applicable	209	88.6%	not applicable

(N = 236; valid cases = 27; not applicable = 209)

Dental laboratory technician(s)

Number donating services	Number of PRFs	Relative frequency	Adjusted frequency
0	26	11.0%	96.3%
1	1	0.4%	3.7%
not applicable	209	88.6%	not applicable

(N = 236; valid cases = 27; not applicable = 209)

Item 15. other, specify (comments presented by Region)

Region I: periodontist, oral surgeon; dental hygiene students; 6 students: and 5 dental students

Region II: 4 consulting dentists; 2 dental laboratory technicians (for a fee)

Region III: 1 dentist and 1 dental assistant performs screening on campus

Region IV: 26 dental hygiene students

Region V: none

Region VI: oral surgeon

Region VII: none

Region VIII: once a year the state and community professionals i.e. dentists, hygienists, and assistants participate in a fluoride brush-in for all the residents

Region IX: none

Region X: none

Item 16. Indicate the dental facilities and equipment located on the premises of your institution.

Barrier-free dental treatment room

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	134	56.8%	57.3%
NO	100	42.4	42.7%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

Dental treatment room

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	165	69.9%	70.5%
NO	69	29.2%	29.5%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

Dental unit (stationary)

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	199	84.3%	85.0%
NO	35	14.8%	15.0%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

Dental unit (portable)

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	53	22.5%	27.7%
NO	180	76.3%	77.3%
incomplete data	3	1.2%	missing

(N = 236; valid cases = 233; missing cases = 3)

Dental Chair

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	207	87.7%	88.5%
NO	27	11.4%	11.5%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

Autoclave

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	205	86.9%	87.6%
NO	29	12.3%	12.4%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

Dental radiographic unit (stationary)

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	191	80.9%	81.6%
NO	43	18.2%	18.4%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

Dental radiographic unit (portable)

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	51	21.6%	21.8%
NO	183	77.5%	78.2%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

Radiographic processing and developing equipment

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	189	80.1%	80.8%
NO	45	19.1%	19.2%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

Ultrasonic dental unit

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	166	70.3%	70.9%
NO	68	28.8%	29.1%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

Dental hygiene education room

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	61	25.8%	26.1%
NO	173	73.3%	73.9%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

Mirrors

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	301	85.2%	86.3%
NO	32	13.6%	13.7%
incomplete data	2	1.3%	missing

(N = 236; valid cases = 234; missing cases = 3)

Sinks

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	220	93.2%	94.0%
NO	14	5.9%	6.0%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

Toothbrushes

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	220	93.2%	94.0%
NO	14	5.9%	6.0%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

Floss

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	193	81.8%	82.5%
NO	41	17.4%	17.5%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

Disclosing materials

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	163	69.1%	70.0%
NO	70	29.7%	30.0%
incomplete data	3	1.2%	missing

(N = 236; valid cases = 233, missing cases = 3)

Audio-visual aids for resident education

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	114	48.3%	48.7
NO	120	50.9%	51.3
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

Topical or supplemental fluoride materials

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	114	76.3%	76.9%
NO	120	22.9%	23.1%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

Dental laboratory facility

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	108	45.8%	46.2%
NO	126	53.4%	53.8%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

Item 16. other, specify (comments presented by Region)

Region I:	dental clinic on grounds not functional yet; wheel chair adaptor, operating room for dental treatment is planned; operating room for general anesthesia; and panorex
Region II:	panorex and sedation (N_2O unit); portable N_2O machine; intravenous sedation and general anesthesia; electro-surgical unit; operating room for general anesthesia; and an operating room
Region III:	have borrowed audio-visual aids from the Health Department for resident education; and dental office being installed
Region IV:	dental library; panoramic radiograph unit; and operating room (indicated by two respondents)
Region V:	electrosurgical unit; 86 percent of rehabilitation work done in surgical suite with general anesthesia; panorex x-ray unit, electrosurgical unit, nitrous-oxide unit; cavitran lathe, model trimmer; treatment cart and Papoose boards; general anesthesia machine; and dental surgery
Region VI:	panorex
Region VII:	operating room; and water pics, dental laboratory facility on contract; radiographs taken by Radiology Department
Region VIII:	nitrous-oxide anesthesia; small dental library and office; and panorex
Region IX:	all dental work done in off-campus dentist's office
Region X:	electrosurgical machine, nitrous and general anesthesia machine, Nuvalite, cavitron; and staff and patient lounge, sterilization and supply room

Item 17. Is the water in the facility optimally fluoridated?

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	131	55.5%	58.5%
NO	93	39.4%	41.5%
incomplete data	12	5.1%	missing

(N = 236; valid cases = 224; missing cases = 12)

Item 18. Is the community water optimally fluoridated?

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	146	61.9%	63.5%
NO	84	35.6%	36.5%
incomplete data	6	2.5%	missing

(N = 236; valid cases = 230; missing cases = 6)

Item 19. In regard to dental care, does your institution provide comprehensive diagnostic services?

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	214	90.7%	91.8%
NO	19	8.1%	8.2%
incomplete data	3	1.3%	missing

(N = 236; valid cases = 233; missing cases = 3)

If yes, indicate those diagnostic services provided.

Intraoral examination

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	208	97.2%	98.1%
NO	4	1.9%	1.9%
incomplete data	2	0.9%	missing

(N = 214; valid cases = 212; missing cases = 2)

Dental charting

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	210	98.1%	99%
NO	2	0.9%	0.9%
incomplete data	2	0.9%	missing

(N = 214, valid cases = 212; missing cases = 2)

Periodontal charting

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	146	68.2%	68.9%
NO	66	30.8%	31.1%
incomplete data	2	0.9%	missing

(N = 214; valid cases = 212; missing cases = 2)

Dental radiographs

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	197	92.1%	93.4%
NO	14	6.5%	6.6%
incomplete data	3	1.4%	missing

(N = 214; valid cases = 211; missing cases = 3)

Region I: panorex x-rays (three PRFs); orthodontic exam (two PRFs)

Region II: panorex x-rays; pulp testing; and study models (two PRFs)

Region III: oral cancer exam; oral prophylaxis; and services obtained

Region IV: orthodontic clinic; study models; and head and neck exam

Region V: oral pathology evaluation; and peri-oral structures

Region VI: extraoral exam; and exams by specialists

Region VII: soft tissue exam; and oral surgery consultant

Region VIII: none

Region IX: consultants; three month recall; and outside services

Region X: complete head and neck exam

Item 20. Does your institution have a dental recall system?

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	223	94.5%	96.1%
NO	9	3.8%	3.9%
incomplete data	4	1.7%	missing

(N = 235; valid cases = 232; missing cases = 4)

Item 21. Does 100 percent of your mentally retarded population receive routine dental care?

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	203	86.0%	86.8%
NO	31	13.1%	13.2%
incomplete data	2	0.8%	missing

(N = 236; valid cases = 234; missing cases = 2)

If NO, please explain (comments presented by Region)

Region I: One hundred percent of the clients who reside at the center on a 24 hour basis are recalled every six months if not more frequently. These clients are moderately to borderline retarded. Clients who are in day care programs, approximately 90 individuals, are severe and profoundly retarded--multiply handicapped and receive minimal to no restorative or prophylactic dental care from dental professionals. It is near impossible to obtain community based professionals to provide services as the states welfare system reimburses these professionals so little monies. The time required to provide thorough dental services to multiply handicapped clients is not commensurate with monetary reimbursement. No incentives.

At present only residential clients receive regular routine dental care.

We do not at this time have a program utilizing general anesthesia in a hospital setting for clients who are otherwise unapproachable.

All residents are required to visit a dentist at least yearly.

Two percent do not get full care, but are examined routinely.

Uncooperative residents receive minimal or no care.

Region II: One hundred percent receive annual assessment - not all are able to be treated routinely.

Residents - yes, outpatients - no.

Item 21. If NO, please explain continued

We have a sedation file for those residents who cannot be treated in the chair due to extreme behavioral problems, etc. These individuals are treated at outside facilities (under general anesthesia).

Region III: Outpatient clients have own dental care.

No sedation for operative dentistry.

Some children are so unmanageable that they cannot be treated, at this time there is no hospital that has proper dental equipment to provide general anesthesia.

Some are so severely mentally retarded that we cannot control them at this institution. For emergency treatment we refer to oral surgeons at a nearby hospital.

All patients are not cooperative.

Some residents will not cooperate sufficiently to allow examining properly or professional prophylaxis by the hygienist.

Region IV: There are not funds or staff.

Some patients extremely uncooperative. General anesthesia sometimes.

Those who require general anesthesia do not.

Region V: Only emergency now - routine coming soon through community services.

We do not always get cooperation in getting adequate premedication to do operative services on difficult patients.

We have a few residents that need a general anesthetic for their dental treatment.

Management difficulty.

Region VI: Too hard.

Guardians request responsibility for completion of dental care and follow-up for some residents.

Only residents. We have 100 commuters - aprents responsible for this.

Yes - but we do have some residents that are so uncooperative that only a limited examination is possible.

Item 21. If NO, please explain continued

We have about ten residents who refuse routine dental care. (Our residents are all 18 years of age or older).

We are in the process of seeing and evaluating 100 percent of all the residents in the hospital.

Region VIII: Because of contract.

Some are very difficult management cases. These are treated at a local hospital under general anesthesia.

Parents of residents are responsible for dental needs.

Insufficient staff.

Region IX: (no comments)

Region X: We have about ten percent who need to be under anesthesia before care can be provided and we do not have the people available to do the work except under special conditions.

Item 22. Please indicate dental services provided to the residents within your institution; outside your institution; or both within and outside your institution.

IM Sedation

Response	Number of PRFs	Relative frequency	Adjusted frequency*
within	136	57.6%	58.6%
outside	31	13.1%	13.4%
both	37	15.7%	15.9%
neither	28	11.9%	12.1%
incomplete data	4	1.7%	missing

(N = 236; valid cases = 232, missing cases = 4)

IV Sedation

Response	Number of PRFs	Relative frequency	Adjusted frequency*
within	67	28.4%	29.0%
outside	84	35.6%	36.4%
both	17	7.2%	7.4%
neither	63	26.7%	27.3%
incomplete data	5	2.1%	missing

(N = 236; valid cases = 231; missing cases = 5)

Preventive

Response	Number of PRFs	Relative frequency*	Adjusted frequency*
within	168	71.4%	72.4%
outside	16	6.8%	6.9%
both	40	16.9%	17.2%
neither	8	3.4%	3.4%
incomplete data	4	1.7%	missing

(N = 236; valid cases = 232; missing cases = 4)

Restorative

Response	Number of PRFs	Relative frequency*	Adjusted frequency
within	148	62.7%	63.8%
outside	35	14.8%	15.1%
both	48	20.3%	20.7%
neither	1	.4%	.4%
incomplete data	4	1.7%	missing

(N = 236; valid cases = 232, missing cases = 4)

Endodontic/Pulp Therapy

Response	Number of PRFs	Relative frequency*	Adjusted frequency
within	121	51.3%	52.2%
outside	42	17.8%	18.1%
both	33	14.0%	14.2%
neither	36	15.3%	15.5%
incomplete data	4	1.7%	missing

(N = 236; valid cases = 232, missing cases = 4)

Oral Surgery

Response	Number of PRFs	Relative frequency*	Adjusted frequency
within	74	31.4%	31.9%
outside	57	24.2%	24.6%
both	93	39.4%	40.1%
neither	8	3.4%	3.4%
incomplete data	4	1.7%	missing

(N = 235; valid cases = 232; missing cases = 4)

Prosthetics (fixed)

Response	Number of PRFs	Relative frequency*	Adjusted frequency*
within	120	50.8%	51.7%
outside	51	21.6%	22.0%
both	21	8.9%	9.0%
neither	40	16.9%	17.2%
incomplete data	4	1.7%	missing

(N = 236; valid cases = 232; missing cases = 4)

Prosthetics (removable)

Response	Number of PRFs	Relative frequency	Adjusted frequency*
within	149	63.1%	64.2%
outside	40	16.9%	17.2%
both	24	10.2%	10.3%
neither	19	8.1%	8.2%
incomplete data	4	1.7%	missing

(N = 236; valid cases = 232; missing cases = 4)

Periodontics

Response	Number of PRFs	Relative frequency	Adjusted frequency
within	120	50.8%	51.7%
outside	44	18.6%	19.0%
both	36	15.3%	15.5%
neither	32	13.6%	13.8%
incomplete data	4	1.7%	missing

(N = 236; valid cases = 232; missing cases = 4)

Orthodontics

Response	Number of PRFs	Relative frequency*	Adjusted frequency
within	20	8.5%	8.7%
outside	89	37.7%	38.7%
both	15	6.4%	6.5%
neither	106	44.9%	46.1%
incomplete data	6	2.5%	missing

(N = 236; valid cases = 230; missing cases = 6)

Item 22. other, specify (comments presented by Region)

Region I: general anesthesia; desensitization (within)

Region II: mild oral sedation (within); adjunct speech therapy (within); N_2O sedation and general anesthesia (outside); N_2O sedation (within); and general anesthesia

Region III: fluoride therapy (outside); and prophylaxis, oral and radiological exam (within)

Region IV: N_2O sedation (outside); P.O. sedation (both); general anesthesia (within)(indicated by two respondents); and general anesthesia (both)

Region V: general anesthesia (within); and general anesthesia (outside)(indicated by two respondents)

Region VI: fluoride therapy (within); general anesthesia (within); and general anesthesia (outside)

Region VII: none

Region VIII: none

Region IX: general anesthesia (within); general anesthesia (outside); and pedodontia (within)

Region X: premedication and general anesthesia (within); and general anesthesia (outside) indicated by two respondents

Item 23. In your opinion, what areas of your dental health program need expansion and development? (Comments presented by Region)

Region I: In-service.

Total community dental health program development.

More staff - more space - more equipment. Better community care for those residents leaving the institution.

Continued observation and supervision of oral hygiene by staff to all clients.

Service adequate obtained entirely from community resources.

Item 23. Region I comments continued

Dental surgery facility, hygienists.

Public education, intensive education pre-school through adult and preventive dentistry.

Need to develop use of radiographic developing - also, making sure that x-rays are not transmitted from room; use of topical fluorides; and dietary counseling for residents with high caries index.

In staff training, and more money for dental treatment aids example: papoose blanket, brushing and flossing aids.

Increase dental hygienist's hours, have consulting dentists on staff and facilities for special needs.

In-service to cottages and group homes, teachers, residential unit staff, and upgrading of qualified hygienists to attract them to work in an institution monetary-wise.

Comprehensive dental care utilizing general anesthesia in a hospital setting, staff to follow through on community clients examine in our out-reach program.

None at present.

Dentists in this area need exposure to mentally retarded clients. Most dentists seem to feel preventive dentistry is not necessary and frequently end up pulling teeth instead of restoring them.

Community awareness of existence of dental services for community based handicapped persons at our facility.

More money for more personnel for preventive daily oral hygiene procedures.

On site care - education of staff and clients in daily preventive dental care.

Out-reach programs to halfway homes and community residences.

Direct dental health education of clients.

More community awareness and involvement.

Laboratory facility and office space to free up treatment areas now used as office.

Item 23. comments continued

Prosthetics: fixed and removable.

Adequate at present.

Preventive, in-service for staff, and proper dental care education for residents.

Region II: Facilities for dentistry under general anesthesia.

Staff training, resident education.

Staff education in oral hygiene and supervision of resident oral health care and training residents to improve oral hygiene.

Oral hygiene programming and toothbrushing clinics on unit basis in the buildings for clients.

None apparent at present time.

Preventive dentistry is an area for expansion and development. Hopefully in time we will have an oral health educator and aides working full-time in the residential units. The part-time efforts of the hygienists in the units leave a lot to be desired.

Need for general anesthesia facilities on site.

Sedation and general anesthesia.

None.

The need to know the reactions and cross reactions of the various sedative drugs that are used on individuals receiving many daily drugs on a regular basis.

Fluoridation of water.

Staff orientation and re-enforcement.

More convenient facilities for dental treatment using general anesthesia.

Programs on oral hygiene.

Oral hygiene - resident ratio of dental hygienists very low statewide.

None - (more staffing if funds available for preventive programming of residents).

Item 23. comments continued

There is a need for more general anesthesia.

There first of all needs to be better communication between the dental clinic and cottage personnel. Then our dental staff needs to be increased to meet daily needs as well as carry out in-services and proper training for staff and residents. We are in the process of doing this, but due to limited staff it is going to be a slow process (especially considering the residential population).

Region III: Equipment, dental hygiene.

Staff, equipment.

We are a new facility, at present we are very pleased with present arrangements.

We need dental hygienists.

Development of better methods to meed the needs of the severe behavior problems.

Dental care for those outside the facility.

Oral hygiene training of staff.

Oral hygiene, general anesthesia in community hospitals.

The use of general anesthesia in community hospitals.

Improved teaching of daily teeth care by unit staff.

Oral hygiene and toothbrushing instructions to aides. Better understanding of nutrition by staff. Improved attitudes toward Dental Department.

Fixed prosthetics.

Ideally - attendants hired specifically to provide daily oral health care would be great.

Periodontal care.

In-service education for staff by the dental department.

Removing plaque, more prevention, preserve present teeth.

Patients self care.

Family training and discharge plan of care.

Item 23. comments continued

Parent/guardian dental health in-services to insure proper home care.

Training for residents in self-help skills.

Preventive.

We need an outside hospital to provide proper dental equipment to treat out patients under general anesthesia. This means general dentistry not only oral surgery.

Periodontics (electro-surgery). Consultant to do general anesthesia at the facility.

An overall oral hygiene program that could be and would be supervised and/or performed by ward personnel.

All.

Flossing techniques.

Documentation of services provided, better training of staff in correct oral hygiene techniques.

Region IV: This program is just developing at our center so this question is hard to answer. We are trying to establish a comprehensive program.

Develop pre-service staff training for oral hygiene.

Periodontal services expanded in area of prophylactic periodontics, and hospital dentistry.

Direct care personnel.

General anesthesia.

The dental suite and equipment needs to be renovated, so the clients with severe physical handicaps can be served more efficiently. Also more involvement from the community dentist is needed.

We have no facility for general anesthetic. Not sufficient visual aids.

More staff.

Dental care needs higher priority.

Training of staff in direct care and better resident oral hygiene monitoring.

Item 23. comments continued

In-service training and premedication.

Oral hygiene program.

Outreach to senior and post-graduate dental students.

Oral hygiene.

Preventive.

Resident instruction program development and follow-up.

We need at least an oral hygiene program.

Staff development.

Our program is good. We need more cooperation from direct care staff in living units.

Need on-site general anesthesia facilities for residents that are otherwise unmanageable.

Periodontal.

Preventive and patient education.

Periodontics, preventive and therapeutic; interceptive orthodontics and fixed prosthodontics.

Larger facility and increased staff - this will happen in about a year from now.

Education - staff and residents, equipment staff space, requirements.

Presentation.

General anesthesia so that complete treatment can be given - improved oral hygiene.

Prevention, hygiene department, treatment, and personnel.

Region V: More dentists.

Oral hygiene instructor.

Need addition of a dental hygienist to staff.

Restorative work, oral surgery and periodontics done under general anesthetic.

Item 23. comments continued

Facilities equipped with general anesthesia. Education.

None.

More auxiliary dental personnel.

Use of general anesthesia should be employed in dental treatment.

More avenues to increase the emphasis and importance of proper daily care rendered to the residents by the direct care technicians, who in the main, give dental health a low priority because of their socio-cultural status.

Addition of dental hygienist (3) to dental staff.

General dental procedures are presently at a disadvantage because of our obsolete and limited equipment.

Personnel to teach and supervise individual oral hygiene.

Personnel oral health care in module areas.

A dental hygienist and a six month to one year prophylaxis.

The in-service training program. The patient education program.

Oral care at the cottage level, brushing needs to be increased. M & M candy used by programmers should be eliminated.

More individuals to perform oral hygiene for residents (all severely retarded).

Expanded follow-up of foster care and convalescent status in AIS homes.

Intravenous sedation and general anesthesia.

Routine service soon to be implemented should be all inclusive.

Staff instruction, which is probable in the near future, with the possible addition of a hygienist. Facility to treat our very uncooperative residents, with general anesthesia available, and staff which performs all dentistry, not only oral surgery.

Item 23. comments continued

With both the dentist and hygienist being only part-time we do not have adequate time to do the oral hygiene education which could greatly benefit the residents - we need to staff the dental clinic full-time with one professional but the budget will not allow it.

There is always room for improvement in the are of resident oral hygiene.

We are a full service dental facility.

Training of staff in how to train residents.

Intravenous sedation should be done at this facility.

The most difficult area is maintenance of good - excellent oral hygiene - to instill the desire of staff to do an adequate oral hygiene maintenance program as determined by Dental Department.

Progression of hyperplasia of patients on Dilantin and Group Dental Health moveis for mentally ill.

Daily oral preventive care. The quantity of care is sufficient, but the qualify is sometimes poor.

Oral hygiene instruction to aides.

In-service for direct care staff.

None.

Periodontal prevention and treatment.

Resident training for brushing.

Daily oral maintenance and in-cottage training by direct care staff.

Addition of auxiliary personnel, namely hygienists and assistants. Additiona of general anesthesia equipment and personnel.

Oral surgical services utilizing general anesthesia in an operating room setting.

More cooperation and help from direct care staff in providing oral hygiene practices and encouragement to residents in proper oral hygiene, diet, etc.

Item 23. comments continued

Within institution need more in-service, need facilities for intraoral exam, preliminary exam and periodic cleaning.

Orthopantomograph orthoceph x-ray machine.

Oral hygiene is our greatest problem and we are always looking for ways to improve it.

Community education.

Ward supervision of oral hygiene care.

Dental hygienist position.

Region VI: Being a very small facility, it would be convenient to have a dentist on call within the immediate community.

Aide training.

None at present.

On grounds facility for restorative treatment.

In-service training in proper oral hygiene.

Sedation. Education and preventive training by institution personnel.

Oral hygiene first then perhaps on to bigger things.

Preventive and oral surgery.

More dentists willing to work at what the state is willing to pay. Perhaps Congress could pass a law requiring all dentists to wish so strongly to work with the profoundly retarded that we could get needed services.

In-service training for direct care staff personne.

None.

The cottage centered daily oral hygiene regimen has had slow and reluctant acceptance by many of direct care staff. Much of our efforts are directed toward solving this problem of learning inertia.

In-service training on dental care.

We feel we have a good, comprehensive dental program.

We need general anesthesia capability for handling the

Item 23. comments continued

severely uncooperative residents in order to do restorative, prophylaxis, and extractions, etc. General anesthesia is available to consult oral surgeon for extractions, reduction, etc., at a state hospital.

Fixed prosthetics. Prevention.

Physical facilities (sq. ft.) Monitor equipment for intravenous sedation.

Development orthodontics.

The functional aspect of the dentition: evaluate and develop chewing, swallowing; sucking, etc., and teach this to the mentally retarded.

Oral hygiene program for staff members.

Region VII: Crown and bridge.

In-service training and patient education.

In-service training and instructions to residents. Methods of doing dental work on uncooperative residents.

Better oral hygiene and reduce the use of edible reinforcers.

All.

More cooperation between dental department and client care personnel - this is being helped by talks to the aides.

Need general anesthesia or Ketalar/Ketamine administration.

Region VIII: More dentist time spent. More hygienist time spent.

Attendant hygiene program, fluoride program, in-service program and a building.

Develop our own program.

Home care (dental) by staff. They are non-compliant, if not resistant, to accept the health benefits of good, daily oral hygiene habits. We

Item 23. comments continued

are short of staff, but I feel they are much like the general public - not too interested in preventive dentistry.

Staff.

Yearly exams and follow-up.

More staff.

In-service training for house parents with more dental staff participation with the daily oral hygiene routine. In-service training for other professional staff, especially teachers, psychologists, and nurses.

Increase checks on residential areas.

More service.

Region IX: Surgery and oral hygiene.

Training of the residents, follow along training, coordination of program when client leaves the facility.

Education to staff, clients, parents, and quardians.

Could use more dental hygienists. We have two good prospects for two vacant positions.

Dental hygiene with appropriate personnel.

Better oral hygiene program. More frequent staff training in oral hygiene.

Adequate on above at present in this institution.

Intravenous sedation in clinic, prosthetics, interceptive orthodontics, general anesthesia capability within hospital, and expanded oral care on units (ward).

Increase in auxiliary personnel.

Re-initiate a general anesthesia program.

Restorative dentistry under general anesthesia and orthodontics.

Increase in self-help toothbrushing skills of the severe-profound range mentally retarded clients.

Item 23. comments continued

General in-service area and more training for direct care staff.

None.

Region X: Continue and improve what we have at present.

More money to pay for bridges, crowns, etc. More staff cooperation in helping residents keep good oral health.

Hygienist and personnel to implement oral care on the living units. Our residents are profoundly mentally and physically retarded and cannot do for themselves.

Need consultant dental hygienist.

More funding is needed for attendants who do daily home-care i.e. a better staff/resident ratio.

Appears satisfactory.

Better in-service training of hall staff to help improve daily oral hygiene care.

Item 24. Are mentally retarded individuals who are discharged from your institution referred to community dental professionals for their continued oral health maintenance?

Response	Number of PRFs	Relative frequency	Adjusted frequency
always	72	30.5%	34.6%
frequently	38	16.1%	18.3%
occasionally	40	16.9%	19.2%
seldom	32	13.6%	15.4%
never	26	11.0%	12.5%
incomplete data	28	11.8%	missing

(N = 236; valid cases = 208; missing cases = 28)

Item 24. Comments presented by Region

Region I: Placed in their own home - family is responsible. Group home and Nursing Home - staff at those places are responsible. Oral care varies from home to home.

Through social services.

All clients discharged from the center into the community are strongly urged and encouraged to continue their twice yearly dental visits.

Usually I (dental hygienist) do not receive the information necessary for referrals. I am not notified as to where these clients are sent. Also, only one has been transferred from here since my job has begun.

A great number of our resident clients receive their professional dental care in the community.

But many mentally retarded persons cannot find dentists willing to treat them because of their retardation. Also since dentistry is so expensive, many discharged individuals come back to us to have dental work done free.

They are referred if community dentists are willing to accept them, but most return here for dental care.

Always sent but don't know how many actually get there.

Discharged persons are encouraged to continue their contact with the state school as out-patients in the dental clinic.

Plans to deal with need are in progress. I expect that we will use: community dentists, (an area) dental facility, and National Foundation of Dentistry for the handicapped referral service.

As a statewide service of clinics, individuals are referred to the closest clinic. When a community dentist is identified - patients records and information are sent.

Community social worker responsible for follow through. Dental department checks every six months the entire list of placements and checks to see when they were last seen. If more than the appropriate time, we contact social worker.

Patients are referred with summary of dental treatment and recommendations as to sedation course of therapy. Both individually and as part of P.I.P. (Post Institutional Plan).

Item 24. comments continued

Region II: When individuals are released into the community, they fall under the jurisdiction of the local social workers who are supposed to follow through with routine health maintenance by community facilities.

Very difficult to get dentists to accept mentally retarded clients.

A discharge dental form containing a summary of the previous work done and specific instructions for that individual is included with his complete file.

The caseworkers have the responsibility of arranging for dental care when the resident goes into the community. However, often they cannot find interested dentists, the individual, in the absence of an interested outside dentist, is then brought back to our clinic for treatments.

Not all clients in community are accepted by private practitioners due to low rate of reimbursement through Medicaid.

Limited interest.

Attempts by community case managers are made to seek out interested and concerned dentists in the community to provide dental care. I do not feel there is the continuing follow up that is necessary for the retarded/handicapped individual.

All residents going out have out-patient services because they cannot always find adequate services in the community.

This does not mean that the discharged individual attends to the referred dentist.

None available in community willing to accept Medicaid rate for difficult client.

None have been discharged as yet.

At present we have not had many individuals to leave, but when requested to contact outside facilities then we follow through.

Region III: We are a new facility in the process of opening. No experience available to answer this question.

Item 24. comments continued

Region III: Even though referrals are made, financial problems prevent the patient from seeking preventive dental care. When an emergency situation arises then a dentist is contacted.

Comes under direction of case worker outside of institution.

None available in area willing to accept.

Unable to answer.

In our system we provide complete copy of record, but do not have follow-up information.

There has been no communication, regarding this area, between the dental department and the social service or psychological departments.

Referrals are made upon request of the parent or guardian.

Referred to community agency for guidance.

Only available on a very limited basis, emergency only.

We have so few discharged. We have not become involved in this aspect. It seems we certainly need to look into it.

Unaware of who will be the dentist in the community. Parents of residents often handle the responsibility. Our agency should improve on this.

Region IV: Since I am new here I have not had this experience.

Seldom continue formal health maintenance five years after discharge.

This facility dental clinic has no control on continued oral health maintenance for discharged patients.

Referred to most appropriate resource.

Upon discharge resident can seek his own community dentist. Although we encourage them to seek a dentist we do not make referrals unless asked.

Always go to other institutions and/or nursing homes.

Dental referral if available, then if not, our clinic will provide services.

Item 24. comments continued

Region IV: Adults always are referred, children are released to parents and are seldom referred.

Many individuals who are released return to our clinic for maintenance.

We continue to see discharged residents who so desire.

We continue to see them at the institution as dental patients on an out-patient basis.

It depends upon which area the resident might be discharged to. If there is a dentist that we are familiar with who accepts referrals of this type and with whom we have worked, yes. If not, we will sometimes continue service on an out-patient basis.

Very little turn over of mentally retarded patients.

A consulting dentist is retained for some community centers. For the most part oral health maintenance becomes the responsibility of the resident or his family. Protocol among dental, regional, and social services needs to be established in this area.

If they do not have a dentist in the community or if they do not have money we see them here again.

The outreach worker is in charge of this area.

As much as possible depending on availability of dentists who will treat handicapped residents.

Most mentally retarded individuals go either to other institutions or to half-way houses in which case, we see them as out-patients. Some mainstreamed still come back as out-patients.

Region V: Greater effort is being made to identify this need at the time of discharge planning.

Most discharges go to sheltered living facilities or nursing homes which have their own dental care programs with communities.

This institution provides free dental services to all discharged and developmentally disabled out-patients who are either unable to obtain dental services in the community or prefer to return to the institution for these dental services.

Item 24. comments continued

Region V: Residents on convalescent status must have form filed with institution for dental treatment recieved in community at least annually.

Community mental health facilities act as referral agencies for dental services in the communities.

They are supposed to be seen by community dentist if at all possible.

Many come back from time to time for checkup and necessary service.

The assumption that a licensed care facility to maintain licensure will be required to have residents/patients receive dental treatment. Other placements are still beyond our control and in the hands of County Welfare Departments.

Most referrals would be done by social workers.

The few who are discharged, return to their family and are cared for by their family dentist.

By law and authority the responsibility ends as they leave.

(As far as we know) all outside residential areas are provided with copies of dental charts and summaries.

Not to any specific dentist.

They are educated as to need for continued care but are not directly referred.

It is difficult for private dentists to provide dental care for the retarded individual. They often are equipped or experienced to handle the retarded patient, as the dentists working directly with the retarded in the institutions.

No arrangement has been made as group homes usually contract for services needed. These services may not be rendered by the same consultant.

Most of our residents go to nursing homes, some to group homes.

Our resident population is mainly severe to profound with small percentage EDMR (emotionally disturbed-mentally retarded). Discharge usually involves another facility - dental discharge summary and history sent - also dental x-rays.

Item 24. comments continued

Those discharged go into homes or facilities which conduct their own programs.

Region VI: If transferred to another unit, dental files always accompany resident and dental program is re-established. If discharged home, parents are worked with to degreee possible.

No direct referrals are made, residents are instructed on the availability.

Continued oral health is maintained at our institution.

Very few are discharged, we have long term residents.

High level patients are referred to their community dentist upon discharge.

Unknown - dental charts sent with discharge papers.

There is only a limited number of private practitioners in our area who will treat developmentally disabled patients. We have had only limited success in assisting with referrals.

Parents, guardians, or family are asked to assume this responsibility.

This is included in our booklet each family receives at discharge. No specific dentist is referred - the need for regular dental visits is stressed.

Always referred - if client is eligible for Medicare or Medicaid.

Residents are placed in half-way houses and discharged months or years later with no consultation with dental department.

A list is available to parents - of dentists who will work on retarded people.

Not to a specific dentist but rather client's specific requirements (i.e. prophylaxis every six months and dental exam every year).

Most are referred to Public Health Dental Clinics.

Region VII: Our residents are routinely sent to ICF and ICF/MR community institutions which have their own arrangements.

Item 24. comments continued

The discharging business is done at a remote site in the institution - we seldom know about it. In case an interested parent requests consultation, it is given.

Most of the residents who are discharged from here are referred back for their treatment.

we provide complete records but community programs are responsible for the adequacy of dental care. We have no referral list of private general dentists.

Region VIII: Since we are presently a five day care facility, the parents are mainly responsible for all dental care. Only emergency care and requests from parents (very few) are handled at the facility.

They are referred indirectly, but a referral manual for the whole state is supplied listing the dental practitioners that treat handicapped patients (listed be geographic areas).

Region IX: Definite lack of dental service is apparent in the community.

No offices are prepared to accept this type of patient.

Regional centers are charged with this responsibility.

Region X: Our residents usually are transferred or discharged to other group homes, nursing homes etc. whereby dental care is followed.

But without money some don't get seen.

Very seldom discharged.

This depends on the placement. Most Group Homes for example, have a dentist in the community. Occasionally patients return to the institution for dental care.

A list of practicing dentists who will see handicapped patients is used as a referral source when requested. by placement facilities. It is seldom requested.

Item 25. Indicate the types of dental resources utilized in nearby communities for the treatment of mentally retarded persons.

Pedodontist

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	87	36.9%	40.3%
NO	129	54.7%	59.7%
incomplete data	20	8.5%	missing

(N = 236; valid cases = 216; missing cases = 20)

General Dental Practitioner

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	139	58.9%	64.4%
NO	77	32.6%	35.6%
incomplete data	20	8.5%	missing

(N = 236; valid cases = 216; missing cases = 20)

Hospital Dental Clinic

Response	Number of PRFs	Relative frequency*	Adjusted frequency
YES	108	45.8%	50.0%
NO	108	45.8%	50.0%
incomplete data	20	8.5%	missing

(N = 236; valid cases = 216; missing cases = 20)

Public Health Dental Clinic

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	37	15.7%	17.1%
NO	179	75.8%	82.9%
incomplete data	20	8.5%	missing

(N = 236; valid cases = 216; missing cases = 20)

Item 25. other, specify (summary of other dental resources utilized in nearby communities)

Other response	Number of PRFS
institution's dental clinic	3
other residential facilities	2
university dental clinic	7
community college students	1
specialists	1
endodontist	2
oral surgeon	18
maxillo-facial team	1
orthodontist	6
periodontist	8
prosthodontist	1
outside hospital for general anesthesia	6
oral surgery consultant	2
endodontic consultant	1
orthodontic consultant	1
dental laboratory	1
very limited resources	2
none - apathetic communities	1
none nearby	3
none	3

Item 26. Do you feel that there are adequate community resources available in the areas around your institution to meet the dental needs of mentally retarded persons mainstreamed into the community?

Response	Number of PRFs	Relative frequency	Adjusted frequency
YES	114	48.3	51.1
NO	109	46.2	48.9
incomplete data	13	5.4	missing

(N = 236; valid cases = 223; missing cases = 13)

Item 26. Comments presented by Region

Region I: Many community dentists are hesitant to treat the mentally retarded.

Not many dental office are available to care for the mentally retarded. I can name one that takes higher functioning patients.

There is adequate transportation and facilities. There is also adequate manpower but due to "limited federal funds" and peon state authorization this manpower is not used to its fullest.

Resources are available, however, some practitioners may not wish to provdie services to the mentally retarded.

Transportation is a "BIG PROBLEM".

We are continually expanding our referral list.

But dental professionals are very reluctant (as a whole) to treat handicapped individuals.

We are training more community dentists every year.

Not enough emphasis by group home staff to continue routine dental and medical care.

Not as yet.

Forty plus dentists take part in our treatment of placement persons. I feel further education in treatment

Item 26. comments continued

regimes is needed for many dentists. Requirements for dentists to have contact with special patients in dental school would be helpful.

We have contacted all major agencies in the state and none of them provide dental service to the developmentally disabled population.

Not at present - many offices refuse to see patients.

Region II: Very difficult to get dentists to accept mentally retarded clients.

There is difficulty in finding dentists trained to handle or willing to accept present fee schedule. There are no clinics available in our community.

Many dentitst in private practive avoid working on the mentally retarded. There should be clinics available that are public funded and the compensation to the dentist is based on hours worked rather than fees for specific work done.

Because of difficulty in dentists accepting Medicaid fees.

Resources are available but some of our residents cannot be handled in private dental offices.

Most general practitioners in the immediate area are not familiar with the treatment of the mentally retarded and consequently are very hesitant about incorporating them into their practice.

Difficult for mainstreamed persons to locate a dentist or physician willing to accept them as patients.

Dentists not prepared to cope with this type of patient nor does s/he understand the need for comprehensive dental treatment including orthodontics, prosthetics, etc.

Most dentists in this area refuse to treat the mentally retarded.

Region III: The resources are adequate, however there is occasionally a reluctance on the part of the provider to accept mentally retarded individuals into their office.

Item 26. comments continued

There is adequate coverage for the individual under 21 years of age, but not for those over 21. Health Departments are equipped with dental suites but do not have the funds to operate them. Some Health Departments do not have dental facilities at all.

Geographic area deficient in adequate facilities and qualified personnel willing to work for welfare fees.

There are not community resources nearby to provide dental care for the mentally retarded.

Most general practitioners do not want referrals. Little prosthodontia is available at Medical Assistance rates.

Unknown.

Expertise in the care of unmanageable profoundly retarded people is not available without general anesthesia.

They are present but will not accept mentally retarded individuals except on a very limited basis.

Very few general practitioners treat mentally retarded and physically handicapped patients due to lack of adequate renumeration for the extra time needed to complete any particular procedure.

Our dentist has had intensive training in working with the handicapped.

Region IV: Not readily used.

Resources are available but experience has shown dental health suffers due to apathy and/or ignorance of guardian or foster home parents.

If properly utilized.

If needs means people that show up for treatment with a little more staff, yes.

Financial and patient management barriers still exist.

Facilities available but do not specialize in work with mentally retarded.

Very, very few dentists will accept a mentally retarded patient.

Item 26. comments continued

Inadequate number of local trained DMD's to care for mentally retarded.

A major percentage of community dentists have not been trained to work with developmentally disabled.

Only for those that are fully receptive.

Our community is the western 36 counties of the state.

Reluctance of most dentists to treat mentally retarded in the private sector.

The limited incomes and funds available to mainstreamed residents preclude the type of dentistry, in many cases, that they need. There are adequate practitioners to provide fee-for-service dentistry.

Attitude must be changed.

There is not one dentist, dental hygienist, or dental assistant completely dedicated to treat mentally retarded. All we have is on-the-job training.

Almost no general dentist will take these persons.

Region V: The lack of a hospital dental program. Reluctance of community general practitioners to work on mentally retarded patients.

Low fee structure by the state for services rendered to mentally retarded patients - private practitioners refuse to accept Welfare patients.

Most dentists in the community are not receptive to the mentally retarded (developmentally disabled).

The main complaints of the community dentists is that Medicaid cuts back the dental fees and, of course, the hassle of paper work and correspondence involved with Medicaid. One of our county areas provides hospital dental services under general anesthesia if needed which this institution cannot provide.

Very resistant residents can be brought back to institution for dental treatment.

Yes, if private dentists will accept them, otherwise, no.

Physical plants may be adequate, but the acceptance of many such individuals has always been resisted in offices and

Item 26. comments continued

other facilities, though gradually this may be improving.

Although the facilities are available, our observation on residents returning to our facility from the community indicates these residents did not adequately utilize these facilities.

General practitioners do not like mentally retarded patients (the type we treat profoundly handicapped). We have very, very few "mainstreamed" ours is a profoundly retarded facility.

Most community dentists do not wish to treat mentally retarded persons. They are afraid of the unknown. They have never had any experience treating them and are afraid to try.

The community dentist does not want to be bothered with the type of patient we treat here because it takes too much time and is disruptive to his schedule.

Private dentist's patient workload is already too heavy.

Our residents are not "mainstreamed" into community. Facilities are available since we are essentially in a metropolitan area.

Region VI: If clients are not on Medicaid the community will serve them.

The resources are available; however, the determing factor is the dentist's attitude toward working with the mentally handicapped.

Many community dentists do not have the knowledge of "how to" treat or handle the mentally retarded patient.

Very few dentists will take time or have patients to help the retarded.

Not many dentists are able to work with profoundly retarded individuals. The dental techniques now known cause people to be afraid to go to dentists - so are the retarded.

Public health dental clinic would possibly be more accessible.

We need more dentists that would be willing to work on mentally retarded persons.

There are plenty of dentists in the area - but most prefer

Item 26. comments continued

not to treat severely handicapped patients probably due to facilities problems or lack of training.

No agencies available for dental care in this immediate area.

There are a number of dentists willing to treat mentally retarded persons, the problem is the family or resident finding them and then utilizing the services.

There are dentists in this community that will care for our people but these people usually make minimum wage and fees discourage their continually seeking care.

Not adequate - most dentists will not treat anyone who is not completely cooperative.

Many dentists still feel they do not have the knowledge or equipment.

The majority of private dentists do not care to deal with the retarded person. Some admit lack of training in handling the mentally retarded person.

Region VII: One dentist.

I have not heard of it as being a problem. Our residents go to other community institutions and houses in larger communities. Our small community seems to take cre of its own.

Some are brought into the institution as need arises.

Region VIII: Not enought communtiy dentists who will treat mentally retarded persons. General anesthesia facilities for the very difficult mentally retarded are not available except at one place. Better and more dental care should be available for rest home patients.

The resources are there, if they seek them. This is similar to the general population. They must be educated. Third part pay plans will probably enhance regular dental visits and care.

Many dentists refuse to work on developmentally disabled people.

Only 28 percent of dentists in the state provide care for the handicapped, leaving some areas unreached and causing those seeking care to have to travel farther than is conveniently desired.

Item 26. comments continued

Region IX: Nobody wants to handle the.

Funding sources are often a barrier for some client's families.

Type of patient not welcomed into a private practice because of management problems. Time consuming and disruptive of regular office routines.

These patients are too difficult to be done in the average dental office.

Community dentist not familiar with treatment of more severely retarded individuals. Medical fees not adequate for additional time required for treatment.

Region X: Only one dentist (general) is available in our community. No dental hygienist is available in our community.

There is not money to pay for their care outside unless they are under 21.

Problem finding dental hygienist.

There are too few dental professionals who are trained to work with handicapped patients.

Care presently includes federally funded Dental Education in the Care of the Disabled (DECOD) at the University of Washington Medical and Dental schools, reaching the young professionals; plus continuing education.

Dentists who will see Welfare patients, and also retarded ones are the main source of dental care for these people. This results in very poor and only occasional care for these persons.

Item 27. What community resources and support systems do you feel should be developed in order to meet the dental needs of deinstitutionalized mentally retarded persons? (Comments presented by Region)

Region I. Good liaison person.

Acceptable Medicaid rates that dentists could live with, sufficient public information programs to encourage dentists to serve mentally retarded children and adults,

Item 27. comments continued

None special - adequate services in Boston.

More training of community dental personnel to handle the needs of mentally retarded and/or developmentally disabled.

Dental health education of clients in group homes and private residences. Nutrition awareness programs for same population.

This type of facility represents a model resource system to meet the dental needs.

Closely monitored recall system. Courses and contacts to provide support for dentists treating mentally retarded patients. Payment to dentists for behavior modification visits which allow them to treat mentally retarded without reliance on drug regimes.

Private dentists that will accept developmentally disabled patients, transportation to and from offices, increase rates for dental treatment so private practitioners can afford to treat developmentally disabled population. Barrier-free environment for treatment.

Training of dental personnel in treating mentally retarded.

Greater availability of clinic services for both children and adults which are staffed by individuals specifically trained to provide services for the mentally retarded.

Region II: General dentists with working knowledge of mental retardation and are capable of recognizing, coordinating and providing direct care on a continuous basis; dental auxiliaries capable of working with retarded individuals; dental facilities, in addition to private offices, that are specifically equipped for the special needs of the retarded individual.

Continuing education courses in the treatment of mentally retarded and handicapped persons.

Dental clinics who would treat mentally retarded population.

Former residents should be returned to state dental clinics to determine if they are receiving proper care.

They should be treated on individual basis either by their own dentist in the community or by appointment as outpatient in facilities' dental clinic.

Item 27. comments continued

Out-patient clinics should be made available at developmental centers or other convenient locations.

Many dentists in private practice avoid working on the mentally retarded. There should be clinics available that are public funded and the compensation to the dentist based on hours worked rather than fees for specific work done.

Revision upward of Medicaid reimbursement rate for dentist and physicians.

More dentists trained in care of the handicapped.

More dentists who will accept Medicaid fees or higher Medicaid fees.

None - many dentists do not treat residents because they feel they do not look good in waiting rooms. Many dentists are unwilling to treat the hard to manage patient.

Education of the general practitioner in the treatment of the mentally retarded and physically handicapped.

The resources are there in most cases already - but possibly have not been developed to the extent they should be.

Adequate dental and medical resource facilities.

Needs being met.

Regular dental clinics (public health).

More dentists trained in the use of general anesthesia.

Concerned organizations should educate the public as to the needs of the mentally retarded. Private and public facilities should donate or at least make known their services available for these special individuals.

Region III: List of dentists who will service the mentally disabled.

Additional training of community general dental practitioners and their staff in the care and delivery of dental services to the deinstitutionalized mentally retarded.

Enlarge public health clinics.

Item 27. comments continued

and clinic to accept mentally retarded persons who may need special services.

Education of the community dentist so that he will be willing to accept these patients. Financial funding comparable to the private sector.

Continue to have local dentist send automatic appointments for six month oral exams and prophylaxis.

Routine acceptance by dental practitioners.

Mentally retarded individuals living independently in the community need on-going "Health" supervision by a health professional to ensure the continued optimal level of dental, oral, physical, emotional, mental health, and well being ex. visiting nurse.

Dental offices should report to institutions stating that they would like to have referrals from the institution. Or, community health centers should be ready to help those that are sent out, especially to group homes.

More federal and state funding to be applied to dental fees.

Funding sources to pay balance of fees not lowered by state and/or federal funds.

Education - most dentists are afraid their private patient load will decrease due to fear of the unknown. Also, most clients are on Title 19 - and since they cannot always pay on time they are not thrilled about taking on new clients. In-services to parents of children living at home especially those receiving Dilantin.

Continued educational programs for professionals both graduate and undergraduate to desensitize them toward treating mentally retarded clients in private practice.

More exposure to special needs in professional education plus funding by government to provide renumeration to dentists who might be willing to work on retarded.

There needs to be some kind of a financial resource for paying for in-hospital dental services. Medicaid and Medicare cover the hospitalization fees, but not the dentists fee. Some residents must be sedated and dentists will only work on sedated residents in our hospital.

Further training of community dentists in management of developmentally disabled patients.

Item 27. comments continued

Hopefully each resident will be able to have a dentist of choice. We as institutions can help to educate our communities and professional consultants in regard to our principles of normalizations for retarded citizens.

The resources are adequate, however there is occasionally a reluctance on the part of the provider to accept mentally retarded individuals into their office.

Health departments should have the funds and equipment to operate dental clinics at least part-time. Finances are always the biggest problem.

More dental professionals should have training in treating mentally retarded. (Primarily training in management)

Special dental clinics.

More emphasis on the subject in the dental school. More continuing education courses on the graduate level. Better working relationship between caseworkers and dentist. Increase in medical assistance dental fees. More empathy should be shown by dentists in private practice.

Better fees. Special training in dental schools.

Community health centers should be established which would include dentistry and other health services. These centers should employ the professional staff from the institutions, who are familiar with and are attuned to the management of the mentally retarded.

Better training of dental students and residents. Mobile dental clinics or use of hospital dental facilities would be helpful. Periodic education for profession in techniques for mentally retarded.

Unknown.

The dental school which is only 25 miles away must become involved with externship here and possibly treating residents at the school itself. The hygiene school must make the same commitment.

Specialized training for general practitioners to enable them to treat retarded people in a routine and profitable manner.

More resources and support systems that accept medical assistance payments for services.

Item 27. comments continued

A possitive attitude needs to be "developed" among members of the dental profession to enable them to offer comprehensive dental treatment ot the mentally retarded as they would any "normal" patient - without fear of hesitation. Dentistry for the handicapped patient needs to be stressed at the college level and in continuing education courses to stimulate a growth of knowledge, understanding and acceptance of the mentally retarded patient.

Public health clinic.

This is a community responsibility of the general dentist and public health services.

Hospital general dentistry general anesthesia program an the money to fund it.

Not sure.

Not aware of any such system in existence in or near our community.

Primary health centers.

Full-time dental program five times per week with follow up.

Region IV: Perhaps more education of the private practitioner to treatment of the mentally retarded individual.

Training of community dentists in behavior management and special needs of the mentally retarded patient.

Commitment of the dental professiona to encourage and provide services to the retarded after discharge from the facility.

Resources are present - education of guardian or foster home parents.

Qualified dentist in treating mentally retarded patients.

Out-pateint clinics need to be established in all areas, and working hours need to be flexible. Some after 5 p.m. for the clients who work.

Increase the availability of the use of local hospital for dental treatment.

Training practitioners in management of mentally retarded clients.

Item 27. comments continued

A hospital dental program utilizing a general anesthesia program.

I presume their dental needs are being met by the community dental professionals.

An elaborate community based system exists in this area to meet all types of service needs.

A need for general dentists in the community to treat this type of person. Transportation to clinics.

None.

Fair and just compensation for services rendered.

Adequate general anesthesia facilities both in private offices and hospitals.

Because of the low degree of ability, interest, financial returns that the private practitioner has in meeting the dental needs of the mentally retarded a type of distinct dental health center - based on comprehensive care center philosophy - funded by Department of Mental Health and peer review from area dental society.

Specialist dentists and dental hygienists trained to work with the mentally retarded (developmentally disabled).

More pedodontists with specially equipped operatories.

Develop an out-patient dental clinic at the State Hospital for Mentally Retarded Residents.

A better fee-for-services rendered system.

Most communities lack dentists.

Education of community dentists.

Principle problem seems to be one of adequate financing for dental services.

The same as for the general population - service practitioners should do it.

Most could be treated in existing facilities, but are not. If not, possibly a central, regional clinic might be the answer, with facilities for general anesthesia, and pre- and post-treatment capabilities.

Item 27. comments continued

Money, education.

Education of dentists to treat these people and willingness to have them in their practice.

Community in-service training to dental health professionals. Financial support to group homes and community living arrangements for dental needs.

Public health dental service. This state has virtually none.

Increased awareness within the dental professionals of the importance of good dental treatment with these people and more willingness to accept them as patients.

More group homes which are well supervised insuring proper brushing habits by the mentally retarded.

Externships for dentists in training at mental retardation centers - more empirical experience and knowledge will increase the likelihood of dentists opening their doors to this seemingly rejected population.

Young dentists trained through extension programs while in dental school before they have a chance to become inflexible in thought and burdened with the pressures of a private practice.

List of private dentists in the area who are willing to see patients in their office.

Mutual fund dental insurance. Instructional (annual) dental health programs at workshops or group gatherings.

Either by voluntary services provided by the community dentists or a federally supported dental facility.

Transportation, education and civic groups.

Better trained dentist to take care of this population.

More special treatment centers for these persons.

Public health facilities where services can be obtained at a reasonable cost.

Region V: Sufficient funding to pay for adequate care. Dentists who accept Medicaid and who know how to deal with mentally retarded.

More dentists who will serve mentally retarded.

Item 27. comments continued

First there has to be an interest in the community homes where the residents are placed. It seems tooth care is last on their list of priorities! A clinic for those residents who are no longer in institutions would be a great idea!

The community dental offices . . . dentists in the community are going to have to receive these patients with the same acceptance as their other patients.

Continuing education programs that acquaint a general community dentist with retarded and handicapped individuals. (A fine course is now being offered at the University of Michigan Kellogg Center.)

University of Michigan Dental School is training dentists to specifically work on the mentally retarded.

Education of dentists.

The dental schools need to teach their students how to work with these persons to reduce the element of fear of the unknown. The same should be done for practicing dentists in continuing education classes.

Patients are better treated in the hospital facilities rather than hauling them all over for medical and dental services. Patients at our institution are not charged for any dental work unless a laboratory fee is involved. If the patient or some relative cannot pay for the work, some is covered by medical assistance or county funds.

More dentists who are willing to accept mentally retarded patients.

Central recall system. Portable facilities. Transport system.

Money. Dental facilities should be a part of community hospitals. Dentists should be full-privilege staff members of hospitals and should receive graduate education on mentally retarded treatment.

A special team to treat highly active and uncooperative patients with intravenous and inhalation general anesthesia.

Residents should be referred back to the dentists at the institution who is experienced in treating retarded people, and has the time to devote to them.

Coordinated effort for continuing dental care is needed.

Item 27. comments continued

Facilities for doing dental work under general anesthesia.

I believe if the retarded person cannot be handled in the dental office, hospital dental facilities should be available where the necessary work can be done under general anesthesia or sedation.

Resources are available - education to their existence is perhaps weak as in motivation to seek regular dental care by higher level mentally retarded persons rather than emergency treatment. Moderate and below need supervision to obtain - maintain high level dental service.

There appears to be a sufficient program in the area for any who are willing to take part in it.

Health services should have a dental office.

None.

All dentists should be familiar with the mentally retarded and the fact that they are not "different" from other patients.

Community health clinics should perform screening referral and training with reference to oral hygiene.

None.

In-service training.

Increased community resources. Increased dental interest.

AVCAP - government agency only agency that helps.

More in-service training programs for the community on oral hygiene for the retarded.

No known system will change the character of man - that is what is required.

Broadened resources through public health.

There need to be some funds provided to help the retarded persons not in institutions pay for dental work.

Those training to work with severe and profoundly, non-verbal retarded.

It does not seem too likely that ordinary fee-for-service dentistry is a workable solution for these needs due to

Item 27. comments continued

low profit because more time used in the procedures. For a community with a large number of developmentally disabled persons (750 +), it would make sense for at least one dentist and one hygienist to operate full-time in a sponsored clinic.

Internships with mentally retarded persons so private dentists feel more confident working with difficult to manage patients. Many will not see the severe/profound as private patients.

None, we are adequate.

Public health dental services for those who cannot afford dental care on a private basis. (There are many private practitioners in the area.)

General practitioners of dentistry need more training and continuing education in the field of dental care for the developmentally disabled individuals.

A directory of all services and professionals willing to render those services in the community would be helpful to the family and resident.

More utilization of the college (local) Dental Hygiene Program for prevention and more economical.

Special clinics for developmentally disabled should be established by Department of Human Resources (State Department of Health).

Further education to enlighten dentists concerning the mentally retarded.

Closer ties with the private sector of dentistry to introduce them to the mentally retarded client which may make the client more readily accepted by the private office.

More training for dealing with the problems of the mentally retarded person.

Deinstitutionalized mentally retarded persons should utilize existing community facilities.

Region VII: Adequate community resources.

Need more dentists.

Item 27. comments continued

Need a list of dentists (local) who will take developmentally disabled. (However, as small as our community is this probably is not a problem here.)

Dentist referral system, oral hygiene and diet counseling to mentally retarded and parents.

Fluoridation and better encouragement of general dentists.

Dentist that will admit these persons into their practice.

This area needs more hospital connections/dentists capable of treating mentally retarded or developmentally disabled type patients plus dentists who will accept Medicaid or welfare type patients.

Encourage regional general practitioners to accept such patients.

Should be able to bring mentally retarded into hospitals easily so that general anesthesia can be used safely when necessary.

Region VIII: A center where general anesthesia is available for dental procedures. Teaching source for oral hygiene those not in an institution. An organized referral service for mentally retarded persons when there is no service available.

Strong dental program within our own system and not through contract services.

Educate all concerned: dental personnel, mentally retarded, parents, social workers, citizen advocates, medical personnel, and guardians.

Training in dealing with developmentally disabled people so dental work can be done more easily.

Worksheets for community health nurses, social workers, etc. (which we are doing).

Additional dentists.

Region IX: Community hospitals for oral surgery, orthodontics, etc.

Public relations developed in the community, a systems approach to development of dental services, and a funding source.

Dental health education.

Item 27. comments continued

Training programs for community dentists in understanding of developmentally disabled. Higher pay for services.

Do not see proper care short of subsidized clinical practice.

Dental school training in care of the disabled.

All resources will need to be developed to accept 1500 patients in the surrounding community. None are available now, practitioners are not equipped to handle this type of patient.

Out-patient clinic service.

A better understanding of mental retardation, educating dental students, and educating practicing dentists through dental societies.

Seminars and clinics to familiarize community dentists to techniques on how to work with mentally retarded clients.

Region X: Few residents will be discharged in this community so there really is not any need here.

Dental care for all. Hygienists to follow-up on clients placed outside.

Dentists with special interest and/or training to care for the developmentally disabled person.

Training programs for graduate dental professionals should be developed and supported by the community.

Improved monitoring of placement areas, so that the individual does not become bypassed; better public education and awareness regarding this need.

More dentists trained and willing to see retarded patients, and possibly a state sponsored van to visit placement facilities and provide care outside our clinic.

Item. 28. Please indicate who completed the questionnaire.

Response	Number of Responses	Percent
Director	15	6.4
Administrator	19	8.1
Dental Director	103	43.6
Other, specify	95	40.2
Incomplete data	4	1.7

(N = 236; valid cases = 232; missing cases = 4)

Other, specify. Comments indicated that numerous titles are given to PRF administrators and staff members. The following is a sample of the varied responses:

Chief or staff dentist
Dental consultant
Dental hygienist
Dental assistant
Dental health educator
Director/deputy director of clinical affairs
Director of health care services
Medical department head
Nursing coordinator, director, head, or supervisor
Registered nurse
Medical assistant coordinator
Psychologist
Program coordinator
Business administrator or manager
Budget director or accountant
Administrative assistant or executive secretary
Clerk typist

Item 29. State in which your facility is located.

Data for this item is confidential.

Results in Appendix M are reported using the following terms:

Relative frequency - the percentage obtained analyzing the total number of responses for that item, which may be an underestimation due to the inclusion of incomplete data and not applicable categories.

Adjusted frequency - the percentage based on the number of responses or valid cases for an item excluding incomplete data and not applicable categories

Incomplete data - uninterpretable or missing responses for an item or variable within an item were considered incomplete data and are noted as missing cases.

Not applicable - refers negative response to items in which affirmative respondents completed additional items or variables within an item.

* = figures may not add up to 100 percent due to rounding

APPENDIX N

SUGGESTIONS FOR REVISION OF THE QUESTIONNAIRE

Item 1. An item should be added to indicate the specific nature of the PRF enabling differentiation between a facility with a unit for mentally retarded individuals, and an intermediate care facility or public residential facility specifically for mentally retarded persons.

Item 2. Establish ranges for forced choice questions on PRF budget.

Item 3. Clarify "funds for dental care of residents" by including area funds are used for such as salaries, supplies, and outside dental services.

Item 4. Eliminate this item as minimal funds are used for dental care.

Item 5 and 6. Define in-service and pre-service for respondent.

Item 8. Adapt item to forced choices. Add items to determine whether in-service is voluntary, mandatory and if provided on an individual or group basis.

Items 9, 10, and 12. Add choices from comments received.

Item 11. Add comment to emphasize the item is to be completed only by persons responding negatively to item 7.

Item 14. Clarify roles of a resident and consulting dentist. Emphasize indicating the number of dental professionals employed. Add a category for dental professionals providing services outside the facility on a contractual basis.

Item 16. An entire study could be done on facilities and equipment. Analysis of facilities, equipment, and supplies related to all dental specialties could be listed under a category for

Item 16. continued.

example, preventive oral health might have listed under it toothbrushes, dental floss, disclosing materials, audio-visual aids, dental hygiene education room, topical fluorides, supplemental fluorides, etc.

Item 17 and 18. Include "unknown" as a choice.

Item 19. Eliminate "yes" and "no" choices and change "intraoral examination" to complete intra and extraoral cancer examination.

Item 20. Develop item to determine specific procedures performed during recall visit.

Item 21. Clarify routine dental care.

Item 22. Eliminate sedation choices and develop into a separate item to differentiate intramuscular, intravenous, oral, and inhalation methods for sedation or anesthesia.

Items 23-27. An entire study could be developed from responses.

Item 28. Add categories to choose from based on responses and ask respondents to check the title which most closely corresponds to their position.

Item 29. Ask respondents to indicate the state the PRF is located in to analyze data by states not just regions.