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# Dental Care in Long-Term Care Facilities of Warren County, Kentucky

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Dean,

Lesa Kim

1986

DENTAL CARE IN LONG-TERM CARE FACILITIES  
OF WARREN COUNTY, KENTUCKY

A Thesis

Presented to

the Faculty of the Department of Health and Safety

Western Kentucky University

Bowling Green, Kentucky

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

by

Lesa Kim Dean

August 1986



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DENTAL CARE IN LONG TERM CARE FACILITIES  
OF WARREN COUNTY, KENTUCKY

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DENTAL CARE IN LONG-TERM CARE FACILITIES  
OF WARREN COUNTY, KENTUCKY

Lesa Kim Dean

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Directed by: T. J. Nicholson, R. W. Wilson, and J. G. Lohr

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Many physical changes occur as one ages, including changes associated with the oral cavity. A review of the literature suggests that the provision of dental care to institutionalized elderly patients presents problems due to a variety of factors. The purpose of this study is to assess the level of dental care provided to residents of long-term care facilities located in Warren County, Kentucky. In addition, secondary objectives include the ascertainment of who provides dental care to residents and the amount of in-service dental training made available to staff members of the facility.

Each administrator of the long term care facilities located in Warren County participated in an interview conducted by the author. During the interview, information was obtained for a 21 item questionnaire concerning the facility, the number and age range of the residents, and types of dental services provided within the facility.

Results obtained from the questionnaire indicated



that 77 percent of the residents in long-term care facilities in Warren County are 70 years of age or older. No significant differences were noted in the types of dental services provided to residents. However, the dental services provided ranged from those that were obtained in a private dental office via transportation of the resident to outside dental facilities to routine oral hygiene measures carried out by staff members employed by the facility.

The findings revealed significant differences in the dental status of the MRDD residents when compared to the nursing home residents. Other findings indicated that none of the long-term care facilities had dental operatories or dental radiographic equipment on the premises.

Additional research would be required in order to address uncertainties discovered in the study. A follow-up to the questionnaire interview with the consulting dentists may be included to determine to what capacity and to what extent they are utilized by the facilities. Other recommendations include the utilization of entrance dental examinations to determine if services offered do meet the needs of the residents and periodic dental examinations to aid in detection and thus reduce the prevalence of dental diseases in this population.



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## CHAPTER ONE

### Introduction

The elderly population is defined as persons aged 65 and over. Demographers predict that by the year 2000, 12.5 percent of the population will be elderly and that by the year 2030, the percent of the elderly population will increase to somewhere between 17 and 20 percent.<sup>1</sup> The elderly population in this country has increased almost 600 percent in this century and for those 85 years and older the increase is by 920 percent.<sup>2</sup> The majority of senior citizens are ambulatory and living at home, while roughly five percent are confined to institutions.<sup>3</sup>

The manifestations of chronic disease which afflicts the elderly often aggravate the fragility brought about by senescence. Persons who live to an advanced age suffer a variety of health problems, which may affect their ability to maintain optimum oral hygiene. The majority of elderly patients in nursing homes suffer from chronic conditions such as dementia, loss of memory, cardiovascular conditions, arthritis,



diabetes, high blood pressure, and visual and auditory impairments. <sup>4</sup> These factors may contribute to the oral uncleanliness in the elderly population. Other contributing factors include the lack of treatment facilities within the nursing home, lack of transportation to outside facilities, low priority given to the elderly's dental needs, financial limitations, attitudes and opinions of the elderly toward dental care, and the dental profession's negative attitudes and lack of training regarding geriatric dentistry. <sup>5</sup>

Changes are occurring, however, and more research is being conducted to help overcome the barriers contributing to the unmet dental needs of the elderly population, particularly of those who are confined to nursing homes. Gerodontology is a term coined as a descriptive word representing geriatric dentistry and is defined as "The branch of dental science which is concerned with the effects of aging upon the occurrence, prevention and treatment of dental disease." <sup>6</sup>

While dental health is only one facet of total general health, overall health can be more easily maintained with a healthy oral condition. For the elderly population the advantages of good oral health care in the prevention, early detection, and cure of malignancies and other oral pathologies are significant. It must be remembered however, that what may be thought



of as normal in the elderly would often be considered as abnormal in the younger patient. Therefore, it is important to recognize the oral changes which occur in the aging individual.

The institutionalized and the homebound patient requires special considerations regarding dental treatment. The institutionalized patient may be defined as any patient who is confined to a hospital setting for an indefinite period of time. The homebound patient is defined as any patient who is confined to a nonhospital environment and who is unable to seek dental care outside the confines of that setting.<sup>7</sup> Odom has indicated that it may be helpful to focus on the problem of dental care for the institutionalized and homebound patient by considering two factors: (1) the severity and character of their general health and (2) the severity and character of their dental health condition.<sup>8</sup> Many elderly patients have severe general health problems which may effect the type of dental treatment rendered. This factor may contribute to elderly patients having unmet dental needs. For example, dental conditions may take a lower priority when one considers the general health conditions. Elderly persons having severe general health problems may be unable to tolerate dental treatment of any type, preventive or therapeutic.

### Purpose of the Study

The purpose of this study is to assess preventive and therapeutic dental care provided to residents of long-term care facilities located in Warren County, Kentucky. Secondary objectives include (1) ascertainment of who is providing dental care to long-term care facility residents and (2) determination of the kind of dental in-service programs which are being offered to the facility's staff. It is believed that information derived from this study will enable administrators to identify gaps and/or duplication in the dental care provided to residents and also to assist in the development of in-service programs.

### Need for the Study

The need for dental care among the elderly population is acute. Periodontal disease increases steadily with age, by 75-79 years of age 93 percent of men and 89 percent of women are afflicted with the disease.<sup>9</sup> A higher frequency of periodontal disease observed in the older patient could be partly attributed to changes that accompany the aging process.



According to results by the Opinion Research Corporation for the American Dental Association, 44 percent of persons 60 years or older have full dentures and 38 percent have partial dentures or missing teeth.<sup>10</sup> Edentulous persons require different types of dental services than dentulous persons. The utilization of dentures allows the edentulous person to engage in normal eating habits, to speak and communicate clearly, and improves appearance.

Previous studies have indicated that the oral hygiene status of the elderly population is low. However, some authorities believe that the dental status of the institutionalized and homebound elderly is even lower. Studies conducted in the United States indicate that between 50 and 90 percent of the homebound and nursing home patients need dental treatment, with a great portion of the treatment being rehabilitative in nature.<sup>11</sup>

To date there has been very little research conducted regarding the oral health of long term care facility residents. Of the studies which have been conducted, the majority have been limited to state and/or county areas. Nursing home regulations regarding the provision of dental services vary from state to state. Variations may result in the quantity and quality of



dental care provided to nursing home residents. This author could find no published material regarding the level of dental care provided to residents of long-term care facilities located in Warren County, Kentucky. It is hoped that this information will be useful in improving the oral health status of the population residing in these long-term care facilities.

#### Delimitations of the Study

This study has the following delimitations:

1. Information will be obtained from long-term care facilities located in Warren County, Kentucky.

#### Limitations of the Study:

This study has the following limitations:

1. Information obtained from administrators may not accurately reflect the level of dental care provided to their residents.
2. This study will ascertain dental care provided to residents of long-term care facilities. Caution should be exercised in extrapolating from these results any statements concerning the dental health of these residents.

3. Caution should be exercised when generalizing results from this study to other geographic regions.

#### Assumptions of the Study

The following assumptions are made in this study:

1. It is assumed that administrators will respond to the questions honestly and to the best of their ability.

#### Definitions

1. Attrition: Gradual wearing away of tooth structure resulting from mastication.
2. Caries: Tooth decay.
3. Dementia: Loss or impairment of mental powers.
4. Dentulous: With teeth.
5. Denture: An artificial substitute for missing natural teeth and adjacent tissues.
6. Edentulous: Without teeth.
7. Gingiva; Gingival: The gums; Having to do with the gums.
8. Mastication: The process of chewing food in preparation for swallowing and digestion.
9. Periodontal disease: A general term used to



designate any entity which is characterized by the injury to the gingival or periodontal tissues.

10. Senescence: Process or condition of growing old .
11. Xerostomia: Dryness of the mouth due to functional or organic disturbance of the salivary glands.

## Chapter II

### Review of the Literature

There are physiological manifestations that seem to be directly related to the aging process. These changes involve gradual tissue dessication, retardation of cell growth and repair, decreased tissue elasticity, and loss of speed and strength of neuromuscular responses.<sup>12</sup> Baum (1981) contends aging may lead to loss of teeth, atrophy of the oral mucosa, alterations in the amount of saliva, wear of hard tissues, and altered sensory functions leading to dietary changes.

In our society, tooth loss is one of the most obvious external signs of aging. However, with the loss of teeth various aspects of one's life are also affected. The speech is impaired, resulting in a negative effect on verbal communication. Dietary habits may change drastically due to tooth loss. Because of the number of missing teeth, mastication of food is often insufficient and ineffective; thus, food may no longer be enjoyed and malnutrition becomes a related problem.<sup>13</sup> Many foods



are pureed or there is a selection of highly refined carbohydrates which require little or no chewing. Consumption of these decay producing foods often lead to dental caries in the remaining teeth. <sup>14</sup>

Another common finding among older persons is xerostomia, frequently referred to as "dry mouth." Xerostomia is a condition characterized by a burning, dry mouth attributed to a decreased flow of saliva. <sup>15</sup> Theories about the cause of xerostomia in the geriatric population have related aging to a negative water balance, which results in dehydration. <sup>16</sup> Lack of saliva may also contribute to atrophy or degenerative changes or loss in taste perception. <sup>17</sup>

Changes in the teeth may also include attrition, in which the enamel is worn down at the incisal edges of the teeth. <sup>18</sup> This attrition is probably due to extended use or grinding over a long period of time. Other pathological changes more common among the aging individual include pale mucosa, burning tongue, irritation of soft tissues from dentures, perioral soft lesions and an increased incidence of malignant lesions in the oral cavity. <sup>19</sup>

#### The Oral Health Of Nursing Home Residents

The provision of dental care to institutionalized elderly patients presents problems in many areas.

Important considerations include the health service aspects concerning prevention, diagnosis and treatment of disease, and also the nutritional, social, psychological, financial and educational components of the delivery system. The elderly individual in many instances has limited mobility and financial resources and greater social and psychological problems.

Just as other body tissues react to the aging process, the oral cavity also manifests changes which have been discussed. With the exception of dental caries, every other index of dental disease indicates increased prevalence of dental needs for the aged population.<sup>20</sup> A 1976 report by the U.S. House of Representatives Select Committee on Aging regarding dental care stated, "Dental problems among the elderly, such as tooth decay and periodontal disease are so widespread that half of all persons over the age of 65 are without any natural teeth."<sup>21</sup>

A Vital Health and Statistics Survey of edentulous persons reported that 6.2 percent of edentulous persons do not have dentures and 30 percent have dentures which are ineffective and require refitting or replacement.<sup>22</sup> Periodontal disease, which is the major cause of tooth loss in persons over the age of 35, increases with age so that by the ages 73-79 at least 93.7 percent of men and 89.1 percent of women are affected by it.<sup>23</sup>



### Previous Studies Regarding Dental Care of Long-Term Care Facilities

Various studies were conducted in the 1960's concerning needs, use and costs of rendering dental services for nursing home residents and/or the homebound chronically ill. A review of the results obtained from these studies will be briefly summarized in the following paragraphs.

In a study conducted by the Washington Dental Service from 1963-65, approximately 67 percent of examined nursing home residents were determined to be in need of dental services.<sup>24</sup> Dentists in private practice were selected to conduct dental examinations of nursing home residents, and to provide the necessary treatment in the nursing homes or in their private dental offices. Results indicated that dental care for nursing home residents by private practitioners was feasible and could usually be provided in the facility with professionally accepted standards.

A similar study was conducted at Highland View Hospital and Western Reserve University School of Dentistry in Cleveland, Ohio from 1964-67.<sup>25</sup> The study in Ohio included both homebound and nursing home patients. Nursing home patients were those confined to the institution and homebound patients were those con-

fined to the home, but not in institutions. Results obtained also indicated a similar need for treatment (66 percent). Private practice dentists and dental students provided the comprehensive dental services to the two groups.

A 1963 survey of 23 nursing homes in Michigan found that 53 percent of the patients were in need of dental treatment.

A study was conducted in 1970 of nursing homes in North Carolina to describe the dental needs of a sample of patients and to determine the types of treatment that should be made available to the residents.<sup>26</sup> The target population consisted of patients from five nursing homes located in two counties in North Carolina. These patients were chosen because of their willingness to participate and because of their close proximity to the School of Dentistry, U.N.C., Chapel Hill. The five nursing homes were described as typical of nursing homes throughout the state. All patients in the nursing homes who would consent and were physically able to undergo examinations were examined with the aid of a mirror, explorer and a penlight. A total of 274 examinations were completed, which represents 85 percent of the target sample. The remaining 15 percent were unable to be examined. Results of the study revealed that of the 274



patients examined, 10 percent had one or more of their natural teeth remaining, 63.4 percent were edentulous, of which 24.6 percent were evaluated as untreatable with dentures due to extreme resorption of their alveolar ridge. The remaining 26.6 percent of the patients had dentures. However, 40.7 percent of these patients did not wear them. Conclusions drawn from the study were that most nursing home patients were in poor dental health and were unable to be removed from the facility for dental treatment. Due to other health conditions, most types of dental treatment could not be tolerated by the patients. Any type of dental program for the patients would be limited. However, the removal of diseased teeth, repair and replacement of prosthetic appliances along with dietary recommendations, and cleansing of each patient's mouth after eating might be attempted for those who could tolerate treatment.

In 1974, Booth and Leverett conducted a study of nursing homes in Monroe County, New York to determine the level of dental care and the current dental health status of these patients.<sup>27</sup> These data were also collected for comparison to a similar study conducted in 1957-58 of the same area. A brief questionnaire was designed for the study to determine the number and age distribution of the patients, the means of delivery of dental care,

and the amount and type of oral hygiene support and education available.

The questionnaire was mailed to 33 institutions which were categorized according to size and predominant type of patient. A subsample consisting of ten of the nursing homes was randomly selected in order to obtain a ten percent random sample of patients, of which would also receive an oral examination. The oral examination was conducted in the patient's room utilizing a tongue blade and a flashlight. Information gathered included oral hygiene status, active oral disease, number of teeth present, and prosthetic replacement needs. In addition to the oral examination, information gathered included ambulatory status, physical and mental diagnosis and age. A total of 81 percent of the nursing homes responded to the questionnaire. In comparing this study to the 1957-58 survey, the most notable difference between the two groups related to the number of edentulous patients. In 1957-58, 43 of the 52 elderly patients examined were edentulous, whereas, in the 1974 study only 50 percent were edentulous. Overall, there was an improvement in oral hygiene noted in the 1974 study.

A study similar to the Monroe County study was conducted in the nursing homes of Memphis and Shelby County, Tennessee. <sup>28</sup> The study utilized a similar methodology as in the Monroe County survey. The only



difference was that no oral examinations of the nursing home residents in Memphis and Shelby County were conducted. The results indicated that the level of dental dental care provided in nursing homes varies, but the overall level of dental care could still be described as limited. No attempt was made to validate the accuracy of the responses to the questionnaire. The author suggested that a follow-up to the questionnaire should include a random sample of the residents to determine the extent of dental disease.

In a study by Bragramian and Heller, a dental health survey of a convalescent center was conducted in order to assess the dental health of the patients and document the need for dental care.<sup>29</sup> This sample included the entire population, however, 80 percent of the participants were over the age of 60. The participants were interviewed and an oral examination was conducted in each patient's room. The questionnaire was designed to determine age, sex, frequency of dental care, and questions pertaining to the use of prosthetic appliances, age of such appliances and the patient's attitudes and opinions toward dental care and treatment. Results of the survey indicated that the primary needs of the patients were in the following areas: oral surgery

(extractions), periodontal treatment, oral hygiene instruction, and prosthetic devices. Although specific treatment for dental needs was indicated, the author pointed out that other factors had to be considered such as lack of equipment, time, supervision, finances, patient attitudes and most important, medical contraindications. In Szwezda's study of nursing homes in Michigan, the number of patients in need of dental care and who were considered treatable decreased by 30 percent when medical and psychological factors were considered.

In October of 1974, the Council on Hospital Dental Services of the Dental Society of the state of New York developed and circulated a questionnaire related to dental care in nursing homes in New York.<sup>30</sup> The survey was intended to obtain data on the kind and amount of dental care rendered in New York nursing homes. The questionnaire was mailed to 400 nursing homes, of which 280 (70 percent) were completed and returned. Results of the survey revealed that ten institutions reported that no dental care was made available to patients. Most nursing homes reported that they did offer some type of dental care. Of the nursing homes surveyed, 85 percent reported having a dental facility or equipment on the premises. Questions pertaining to the number of edentulous patients were most problematic in this study, sug-



gesting that nursing homes are not aware of the dental the dental status of their patients. The authors identified several weaknesses of the study: 1) many of the nursing homes did not respond to the questionnaire; 2) there was no contact made with the residents of the nursing homes; 3) of those nursing homes that did respond, not every question was answered.

In 1983 Empey conducted a study concerning oral health of the institutionalized elderly in the state of Washington. He hypothesized that size and location of nursing homes and the availability of periodic dental examinations are associated with the resident's oral health. <sup>31</sup> A sample of 12 nursing homes ranging in size from 46 to 231 beds was selected to participate in a statewide survey. Results of the survey indicated that individual oral health measures were not significantly related to the facility's population size. The author did point out the fact that federal and state regulations fail to specify the duties of the dental consultant, who is often viewed only as an administrative requirement for licensure and accreditation.

This review of the literature concerning studies conducted regarding oral health in nursing homes has demonstrated the need for dental care among the geriatric

population. The research results have indicated that the dental health of these persons is poor.



## Chapter III

### Methodology

#### Purpose of the Study

The purpose of this study was to assess the level of dental care provided to residents of the long-term care facilities located in Warren County, Kentucky. Secondary objectives include (1) ascertainment of who provides dental care to the residents and (2) who is providing in-service dental training to the facility's staff.

#### Population

The population surveyed consisted of the eight long-term care facilities located in Warren County, Kentucky. The facilities included in the survey were primarily long-term care facilities providing care to the elderly with the exception of one, which provided care to mentally retarded and developmentally disabled individuals. See Appendix A.

## Procedures

Initial contact was made with each facility via a cover letter addressed to the administrator. In the letter I introduced myself and explained the nature of the study. I indicated a desire to meet personally with the administrator in order to obtain information concerning the level of dental care provided to the residents of the facility by having the administrator complete a brief 21 item questionnaire. Once the letters had been mailed, the administrator was contacted by phone, at which time an appointment was scheduled for the interview. At the time of the scheduled appointment, the interview was conducted with the administrator, covering all items included in the questionnaire, recording the responses appropriately. See Appendix B for a sample copy of the letter mailed.

## Instrumentation

The questionnaire utilized for this study had been previously used in a similar project conducted by Mary Alice Gaston, R.D.H., B.S., M.S., entitled "Dental Care in Nursing Homes of Memphis and Shelby County." Ms. Gaston was contacted by phone at the University of Tennessee, Center for Health Sciences, where she is



Assistant Professor and Educational Director of Dental Hygiene, at which time permission was granted to utilize the questionnaire for this study. See Appendix C for a copy of the original questionnaire and correspondence.

The original questionnaire is a brief check list containing 22 items pertaining to the type of facility, number of occupants and types of dental services provided within the facility. There are also several questions pertaining to in-service training provisions for the staff. Numbers 20 and 21 of the original questionnaire were omitted because it was felt that they were not necessary to serve the purposes of the study. Appendix D contains the revised questionnaire that was utilized for this study. The items included in the questionnaire were designed to measure the level of dental care provided to nursing home residents. The questionnaire was reviewed for face validity by myself, and Yvonne Bishop, R.D.H., M.S., Dr. Haywood Finkbiner, D.D.S., Glenn Lohr, H.S.D., Thomas Nicholson, Ph.D., and Richard Wilson, D.H.Sc.

#### Analysis of the Data

Once the data had been compiled for the study, the responses to the questionnaire were tabulated and displayed in frequency tables. Distribution tables are

provided to indicate age range percentages; number of occupants per facility; and number and percentage of edentulous occupants per facility. In addition, chi square analysis of the data was computed to determine the relationship among the age distribution of residents per facility and the facility and also to determine the relationship among the number of edentulous residents per facility. The chi square analysis regarding the number of edentulous residents per facility was then converted to Cramer's phi to determine the strength of the relationship.

The tabulated responses to the questionnaire provide a descriptive profile of the seven facilities surveyed indicating what types of dental services were provided regarding dental emergencies, routine oral hygiene care, who was responsible for providing dental care, and types of in-service training programs implemented. In addition the data provides information concerning the utilization of dental professionals and onsite dental equipment.



## Chapter IV

### Results

#### Population

The study sample consisted of seven of the eight long-term care facilities located in Warren County, Kentucky. The response rate was 86 percent. The facilities included in the survey are primarily long-term care institutions providing care to the elderly, with the exception of one, which provides care to mentally retarded and developmentally disabled individuals. Refer to Appendix E for tabulated responses of the six facilities providing care primarily to the geriatric population. Refer to Appendix F for tabulated responses of the facility providing care to MRDD residents, of which all were under the age of 45.

#### Results of the Questionnaire/Interview

The current number of occupants within the six nursing home facilities ranged from 25 to 182, with the

total number of occupants in all six facilities being 531. The mean number of occupants in the nursing homes was 88. See Table I. Facility F (MRDD) has been excluded from this table.

TABLE I

Current Number of Occupants per Facility

<u>Facility</u>	<u>Current Number Occupants</u>
A	165
B	182
C	48
D	47
E	64
G	25
TOTAL	589

The age distribution was found to be 77 percent over the age of 70. Thirty-nine percent of these were 80 years or older. Refer to Table II for age distribution of the six nursing home facility residents. All the residents of the MRDD facility were under 45 years of age and therefore was excluded from this table.

TABLE II

Age Distribution of Nursing Home Residents

	<u>Under 45</u>	<u>46-60</u>	<u>61-70</u>	<u>71-80</u>	<u>80+</u>
Number:	18	40	60	204	209
Percent:	3%	8%	11%	38%	39%



Chi square analysis results indicated a significant difference among the age distributions of the residents per facility. ( $\chi^2 = 226.65 / df = 20 / p = .000$ ) The chi square analysis results were then converted to Cramer's phi coefficient to determine the strength of association. The value was computed to be .32 which indicates a slight degree of association. Refer to Table III. Facility F was excluded from this table since all the residents were under the age of 45.

TABLE III

CHI SQUARE ANALYSIS DATA  
FACILITY/AGE DISTRIBUTION

AGE	<u>FACILITY</u>					
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>G</u>
< 45	4	10	1	0	0	3
46-60	6	10	19	0	0	5
61-70	14	30	1	0	5	10
71-80	53	60	19	47	20	15
80 +	88	72	8	0	39	2
TOTAL	165	182	48	47	64	25

Two of the seven facilities reported that residents received entrance dental examinations, which were conducted by a dentist in one facility and a nurse in the second facility. Only one facility reported the provision of periodic dental examinations, and these were

conducted on an annual basis.

Six facilities reported having a dentist on staff serving as a consultant. The facility which did not have a dentist on staff did state that a dentist was available for emergency treatment if needed. None of the facilities reported having a dental operatory or dental radiographic equipment on the premises.

The methods of choice in handling dental emergencies were to transport the patient to outside dental offices or clinics (86%) and to call the dentist to the patient's bedside (71%). All the facilities provided similar routine oral hygiene care to the residents, with the exception of the MRDD facility which also provided orthodontic treatment to the residents. Aides were primarily responsible for oral hygiene care of the residents (86%).

All the facilities provided in-service training to the personnel relating to dental needs/problems, which focused mainly on denture care and oral hygiene care. In-service training was provided equally to nurses and aides; however, only one facility provided in-service training for residents. Dentists, dental hygienists and nurses conducted the in-service training to personnel. Three out of seven administrators reported having a budget item for oral hygiene materials.



The number of residents reported as edentulous was 215 out of the total number of 531 nursing home residents, which represents 40 percent of the target population, excluding the MRDD facility, which reported having one edentulous resident (2%). Refer to Table IV for distribution and percentage of edentulous residents per facility. Chi square analysis of the data indicated a significant difference among the number of edentulous residents per facility. ( $\chi^2 = 97.86/df=5/p = .001$ ) The chi square analysis results were then converted to Cramer's phi coefficient to determine the strength of association. The value was computed to be .42 which indicates a moderate association.

TABLE IV

Distribution Edentulous Residents per Facility

<u>Facility</u>	<u># Occupants</u>	<u># Edentulous</u>	<u>% Edentulous</u>
A	165	63	38%
B	182	36	20%
C	48	40	83%
D	47	24	51%
E	64	32	50%
F	58	1	2%
G	25	20	80%
Total	589	216	37%

## Chapter Five

### Conclusion

A study was conducted of long-term care facilities located in Warren County, Kentucky to determine the following:

1. The level of dental care which was being provided to residents.
2. The level of in-service dental training, who provides the training, and to whom the training is directed.

The study methodology included a questionnaire from which data was obtained in a personal interview with each administrator.

### Discussion of Findings

Long-term care facilities located in Warren County are providing a variety of services regarding dental care to residents. However, the level of care varies somewhat between facilities. For instance, only two administrators interviewed indicated that residents received en-



trance dental examinations. Ideally, in order to determine the type of services appropriate for a group, some type of base line data should be available to assure that the services offered meet the needs. There was no information obtained which suggested the utilization of previous dental records of residents. Only one facility reported that the residents received periodic dental examinations. According to Lotzkar, "every index of dental diseases, with the exception of dental decay, indicates an increased prevalence of dental diseases among this population."

Two major methods relating to the treatment of dental emergencies reported were transportation of the patient to outside dental facilities and call dentist to the patient's bedside. As previously noted, factors contributing to the low level of oral health in the elderly population can be related to chronic conditions suffered by the aged, which may also inhibit their being transported outside of the facility. In addition, the lack of transportation mechanisms to outside facilities was also a contributing factor. None of the facilities interviewed contained dental operatories or dental radiographic equipment on the premises. This evidence raises questions concerning the types of services a dentist could render at the patient's bedside.

Administrators reported that aides were primarily responsible for the patient's oral hygiene care (86%), and the data indicated that in-service training was provided to both aides and nurses. Topics for in-service training included relevant material and appeared to be presented by qualified persons in the field of dentistry.

Three of seven administrators interviewed reported they did have a budget item for oral hygiene materials, an indication that funds are available toward dental care for the residents.

The overall percentage of edentulous residents in the seven facilities surveyed was found to be 37 percent. The percentage of edentulous residents in the nursing home facilities, excluding the MRDD facility, was found to be 40 percent. However, percentage comparisons of edentulous residents per facility indicated a great amount of variation. It was interesting that the data obtained concerning the number of edentulous residents were similar to those of previous studies that were referred to earlier in the review of the literature.

#### Limitations

The following limitations were included in this study:

1. Information obtained from administrators may not



accurately reflect the level of dental care provided to their residents.

2. This study will ascertain dental care provided to residents of long-term care facilities. Caution should be exercised in extrapolating from these results any statements concerning the dental health among these residents.
3. Caution should be exercised when generalizing results from this study to other geographic regions.

#### Conclusions

1. It was found that long-term care facilities included in the study provide basic types of dental services to residents.
2. The level of care is limited in some aspects, probably due to variation in size, type, and number of occupants in each facility which could not be tested in this study.
3. Significant differences in the dental status of MRDD residents and nursing home residents were noted.
4. None of the long-term care facilities have dental operatories or dental radiographic equipment on the premises.
5. In-service dental training is provided to employees

and offered by qualified persons on an annual basis.

#### Recommendations

1. Additional research is required in order to address uncertainties discovered in the study. A follow-up to the questionnaire interview might include an interview with the consulting dentists to determine to what capacity and to what extent they are utilized by the facilities.
2. In addition, a dental examination should be conducted on the residents to ascertain their oral hygiene status so that the level of dental care that is presently being provided does in fact, meet their needs.
3. Periodic dental examinations of residents may aid in detection of dental diseases, therefore, decreasing the prevalence of dental diseases among the institutionalized elderly population.
4. Utilization of mobile dental equipment and radiographic equipment will aid consultant dentists to periodically screen and treat residents who require dental treatment without transporting them to other outside facilities.
5. Continuation of in-service dental training to employ-



ees; however, in-service training sessions should be modified so that they could be offered to residents.

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APPENDIX A

LONG-TERM CARE FACILITIES LOCATED IN WARREN COUNTY

Bowling Green Health Care  
4079 Scottsville Road  
Bowling Green, Kentucky 42101  
Administrator: Nedra Divine  
Phone: 502-782-1125  
176 beds

Colonial Manor Nursing Home  
2365 Nashville Road  
Bowling Green, Kentucky 42101  
Administrator: Mary Williams  
Phone: 502-842-1641  
48 beds

Cardinal Villa  
550 High Street  
Bowling Green, Kentucky 42101  
Administrator: Carmen Downing  
Phone: 502-843-3296  
186 beds

Fern Terrace Lodge  
1030 Shive Lane  
Bowling Green, Kentucky 42101  
Administrator: Dorothy Stinnett  
Phone: 502-781-6784  
124 beds

Hopkins Nursing Home  
College Street  
Woodburn, Kentucky 42170  
Administrator: Scarlotte Freeman  
Phone: 502-529-2853  
50 beds

Medco Center of Bowling Green  
1561 Newton Avenue  
Bowling Green, Kentucky 42101  
Administrator: Rose Moss  
Phone: 502-842-1161  
66 beds

Panarama  
Morgantown Road  
Bowling Green, Kentucky 42101  
Administrator: Ken Lovan  
Phone: 502-782-9888  
58 beds

Woodford Personal Care Home  
Clark Street  
Woodburn, Kentucky 42170  
Administrator: Jack Woodford  
Phone: 502-529-2962  
25 beds



APPENDIX B

COVER LETTER TO ADMINISTRATOR

1319 Kenton Street  
Bowling Green, KY 42101  
Date:

Administrator's Name  
Address  
City, State Zip Code

Dear Administrator:

I am a graduate student at Western Kentucky University in the Department of Health and Safety and also a registered dental hygienist in Kentucky. I am currently in the process of completing my thesis in order to obtain my master of science degree. For my proposal, I have chosen to determine the level of dental care being provided to residents of long-term care facilities located in Warren County.

Your assistance will be a great help to me in obtaining vital information for my research. In the next day or so, I shall be contacting you by phone so that we may schedule an appointment to meet, at your convenience. During this meeting I will be asking you questions from a brief questionnaire concerning the facility and types of dental services offered to residents. This meeting will not take any more than thirty minutes of your time. Any information obtained will be strictly confidential and utilized solely for the purposes of my thesis.

I would appreciate any help that you could provide me and will be contacting you soon. I look forward to meeting with you. Thank you.

Sincerely,

Lesia Kim Dean, R.D.H.

APPENDIX C

ORIGINAL QUESTIONNAIRE/CORRESPONDENCE



DEPARTMENT OF DENTAL HYGIENE

519 Goodman House

Date 1-8-85

TO: Kim Dean

FROM: Nancy Alice Gaston

<input checked="" type="checkbox"/> For your information	<input type="checkbox"/> Please handle
<input type="checkbox"/> For your concern	<input type="checkbox"/> Please return

*I hope this is helpful.  
It was the only copy  
I could turn up.*



16. If training is provided, for whom is it provided?

- 40  nurses  
 aides  
 other (please explain)  
 \_\_\_\_\_

17. If training is provided, by whom is it given?

- a dentist  a nurse  
 a physician  a dental hygienist  
 other (please explain)  
 \_\_\_\_\_

18. Do you have a budget item for oral hygiene materials?

- Yes  no

19. How many of the current residents are edentulous (without teeth)? \_\_\_\_\_

20. Would you consider having a dental hygienist on your staff?

- yes  no

21. If yes, in what capacity?

- full time for patient care  
 part time for patient care  
 for in-service training classes  
 as a consultant  
 as a volunteer

22. I wish to receive a report of the results of this survey.

- yes  no

PLEASE ANSWER THE FOLLOWING QUESTIONS AS COMPLETELY AS POSSIBLE

1. What is the current average number of occupants of this facility? \_\_\_\_\_

2. The current number of residents who are:

- under 45 years old \_\_\_\_\_  
 46-60 years old \_\_\_\_\_  
 61-70 years old \_\_\_\_\_  
 71-80 years old \_\_\_\_\_  
 80+ years old \_\_\_\_\_

3. This facility is:

- a long-term care facility.  
 a skilled nursing care facility.  
 other (please describe).  
 \_\_\_\_\_

4. Do patients receive entrance dental examinations?

- Yes  
 No

5. If yes, by whom?

- a dentist  
 a physician  
 other (please identify)  
 \_\_\_\_\_

6. Do patients receive periodic dental examinations?

- Yes  
 No

If yes, how often?

- annually  
 semi-annually

7. Is there a dentist on your staff?  
 Yes  
 No
8. If yes, in what capacity?  
 full time in house  
 part time in house  
 as a consultant  
 available for emergency treatment  
 other (please explain)  
 \_\_\_\_\_
9. Is there an equipped dental operatory on the premises?  
 Yes  
 No
10. Is dental radiographic equipment included in this operatory?  
 Yes  
 No
11. What is your method for handling dental emergencies?  
 You may check more than one.  
 on call dentist to the bedside  
 symptomatic treatment by a nurse  
 patient seen in on site facility  
 patient transported to outside dental office or clinic
12. What types of dental treatment are available?  
 You may check more than one.  
 cleaning  
 periodontal (gum) treatment  
 extractions  
 fillings  
 new dentures made  
 denture repairs  
 other (describe)  
 \_\_\_\_\_
13. What measures are taken relative to routine oral hygiene care? You may check more than one.  
 provide toothbrushes and toothpaste  
 formal instruction to the patient  
 supervision of oral hygiene procedures carried out by the patient  
 oral swabs to clean oral soft tissues  
 oral hygiene care provided for dentally dependent patients  
 other (please explain)  
 \_\_\_\_\_
14. Oral hygiene care is the direct responsibility of which personnel?  
 nurse  
 LPN  
 aide  
 patient  
 patient's family  
 dentist  
 other (please explain)  
 \_\_\_\_\_
15. What sort of in-service training do you provide for personnel relating to dental needs and problems?  
 detecting soft tissue lesions in the oral cavity  
 detecting dental diseases  
 providing oral hygiene care  
 caring for full and partial dentures



APPENDIX D

REVISED QUESTIONNAIRE

1. What is the current number of occupants of this facility?
  
2. The current number of occupants who are:  
under 45 years old  
46-60 years old  
61-70 years old  
71-80 years old  
80 + years old
  
3. This facility is:  
a long-term care facility  
a skilled nursing care facility  
other (please describe)
  
4. Do patients receive entrance dental examinations?  
yes  
no
  
5. If yes, by whom?  
a dentist  
a physician  
other (please specify)
  
6. Do patients receive periodic dental examinations?  
yes  
no
  
7. If yes, how often?  
annually

semi-annually

8. Is there a dentist on your staff?
- yes  
no
9. If yes, in what capacity?
- full time in house  
part time in house  
as a consultant  
available for emergency treatment  
other (please explain)
10. Is there an equipped dental operatory on the premises?
- yes  
no
11. Is dental radiographic equipment included in this operatory?
- yes  
no
12. What is your method of handling dental emergencies?  
You may check more than one.
- on call dentist to the bedside  
symptomatic treatment by a nurse  
patient seen in on-site facility  
patient transported to outside dental office or clinic
13. What types of dental treatment are available?  
You may check more than one.
- cleaning  
periodontal (gum) treatment  
extractions  
fillings  
new dentures made  
denture repairs  
other (please explain)
14. What measures are taken relative to routine oral hygiene care? You may check more than one.



provide toothbrushes and toothpaste  
formal instruction to the patient  
supervision of oral hygiene procedures  
carried out by the patient  
oral swabs to clean oral soft tissues  
oral hygiene care provided to dentally dependent  
patients  
other (please explain)

15. Oral hygiene care is the direct responsibility of which personnel? You may check more than one.

nurse  
patient  
LPN  
patient's family  
aide  
dentist  
other (please explain)

16. What sort of in-service training do you provide for personnel relating to dental needs and problems? You may check more than one.

detecting soft tissue lesions in the oral cavity  
detecting dental diseases  
caring for full and partial dentures  
providing oral hygiene care

17. If training is provided, for whom is it provided?

nurses  
aides  
other (please explain)

18. If training is provided, by whom is it given?

a dentist  
a physician  
a nurse  
a dental hygienist  
other (please explain)

19. Do you have a budget item for oral hygiene materials?

yes  
no

20. How many current residents are edentulous (without teeth)?

21. Do you wish to receive a report of the results of this survey?

yes

no



APPENDIX E

Tabulated Responses To Questionnaire  
Obtained From Nursing Home Administrators

1. What is the current number of occupants of this facility?

There were a total of 531 occupants in the six nursing home facilities interviewed.

- 2 The current number of residents who are:

under 45 years old	- 18
46-60 years old	- 40
61-70 years old	- 60
71-80 years old	-204
80 + years old	-209

3. This facility is :

Intermediate care facility - 5  
Other - 1 (personal care home)

4. Do patients receive entrance dental examinations?

yes - 1  
no - 5

5. If yes, by whom?

dentist - 0  
physician - 0  
nurse - 1

6. Do patients receive periodic dental examinations?

yes - 0  
no - 6

7. If yes, how often?

not applicable

8. Is there a dentist on your staff?  
yes - 6  
no - 0
9. If yes, in what capacity?  
full time in house - 0  
part time in house - 0  
as a consultant - 6
10. Is there an equipped dental operatory on the premises?  
no - 6
11. Is dental radiographic equipment included in this operatory?  
no - 6
12. What is your method of handling dental emergencies?  
You may check more than one.  
on call dentist to the bedside - 5  
symptomatic treatment by a nurse - 2  
patient seen in on site facility - 1  
patient transported to outside dental office/clinic - 5
13. What types of dental treatment are available?  
You may check more than one.  
cleaning - 3  
periodontal treatment - 3  
extractions - 2  
fillings - 2  
new dentures made - 2  
denture repairs - 4
14. What measures are taken relative to routine oral hygiene care? You may check more than one.  
provide toothbrushes and toothpaste - 6  
formal instruction to the patient - 3  
supervision of oral hygiene procedures carried out by the patient - 4  
oral swabs to clean oral soft tissues - 5  
oral hygiene care provided for dentally dependent patients - 6  
other - 0



15. Oral hygiene care is the direct responsibility of which personnel?

nurse - 2  
patient - 2  
L.P.N. - 0  
patient's family - 0  
aide - 5  
dentist - 0  
other - 0

16. What sort of in-service training do you provide for personnel relating to dental needs and problems?

detecting soft tissue lesions in the oral cavity - 4  
detecting dental diseases - 3  
caring for full and partial dentures - 5  
providing oral hygiene care - 5

17. If training is provided, for whom is it provided?

nurses - 6  
aides - 6  
other - 0

18. If training is provided, by whom is it given?

dentist - 5  
physician - 0  
nurse - 3  
dental hygienist - 3  
other - 0

19. Do you have a budget item for oral hygiene materials?

yes - 3  
no - 3

20. How many current residents are edentulous (without teeth)?

215 out of the 531 residents were reported to be edentulous.

21. Do you wish to receive report of the results of this survey?

yes - 6

APPENDIX F

Tabulated Responses To Questionnaire  
Obtained From Other Long-term Care Facility Administrator

1. What is the current number of occupants of this facility?  
The current number of occupants is 58
2. The current number of occupants who are:  
under 45 years old: 58  
46-60: 0  
61-70: 0  
71-80: 0  
80 + years old: 0
3. This facility is:  
a long-term care facility - no  
a skilled nursing care facility - no  
other (please describe) - This is a training  
facility for mentally retarded and developmentally  
disabled patients
4. Do patients receive entrance dental examinations?  
yes
5. If yes, by whom?  
dentist
6. Do patients receive periodic dental examinations?  
yes
7. If yes, how often?  
annually
8. Is there a dentist on your staff?



yes

9. If yes, in what capacity?

as consultant and available for emergency treatment

10. Is there an equipped dental operatory on the premises?

no

11. Is dental radiographic equipment included in this operatory?

no

12. What is your method of handling dental emergencies?

patient transported to outside dental office or clinic

13. What types of dental treatment are available?  
You may check more than one.

cleaning - yes

periodontal (gum) treatment - yes

extractions - yes

fillings - yes

new dentures made - yes

denture repairs - yes

other (please explain) - yes, orthodontic treatment

14. What measures are taken relative to routine oral hygiene care? You may check more than one.

provide toothbrushes and toothpaste - yes

formal instruction to the patient - yes

supervision of oral hygiene care procedures

carried out by the resident - yes

oral swabs to clean oral soft tissues - no

oral hygiene care provided for dentally dependent residents - yes

15. Oral hygiene care is the direct responsibility of which personnel?

nurse - yes

patient - yes  
LPN - no  
patient's family - no  
aide - yes  
dentist - yes  
other (please explain) Dental hygiene students

16. What sort of in-service training do you provide for personnel relating to dental needs and problems?

detecting soft tissue lesions in the oral cavity -  
yes  
detecting dental diseases - yes  
caring for full and partial dentures - yes  
providing oral hygiene care - yes

17. If training is provided, for whom is it provided?

nurses - yes  
aides - yes

18. If training is provided, by whom is it given?

dentist - no  
physician - no  
nurse - yes  
dental hygienist - yes

19. Do you have a budget item for oral hygiene materials?

no, materials are purchased as needed, but not from  
a specific budget item.

20. How many current residents are edentulous (without teeth)?

one

21. Do you wish to receive a report of the results of this survey?

yes