

The oral health status of migrant and seasonal farmworkers and their families in Florida

KEVIN T. AVERY

Department of Community Dentistry, University of Florida College of Dentistry,
Gainesville, Florida, U.S.A.

ABSTRACT - The oral health status of 454 children and 115 adults from a population of migrant and seasonal farmworkers in Florida was assessed. The prevalence of disease among the children was consistent with that reported for other black children of this age. The migrants had received more dental treatment than the children of seasonal farmworkers; however, the level of care for both groups was strikingly low. The results of this neglect were clearly reflected in the mouths of the adults, most of which were found to be in a very deteriorated state of dental health. A program to cope with these long unmet needs is unrealistic. Efforts should be made to eliminate pain and infection until the cycle of poverty can be broken.

(Received for publication 9 May, accepted 27 July 1975)

Each year the harvest season in the St. Johns River Basin of northeast Florida creates a need for additional agricultural manpower. Many of those who work in the potato and cabbage fields are migrants following the crops along the Eastern Seaboard; others are seasonal workers for whom this part of Florida is home. Both groups face unique problems with regard to the delivery of medical and dental care. During the 1972-1973 harvest the Department of Community Health and Family Medicine of the University of Florida studied the health status of migrant and seasonal farmworkers and their families located in the area. This paper presents the findings of a dental survey conducted as part of the comprehensive health evaluation.

The efforts of dental schools^{6,7,11}, religious organizations^{2,12}, and health departments^{1,3,4,5} to provide migrants with dental services have been described. The staggering need for care has been alluded to; however, the extent of the problem has not been documented, especially among adult migrants, and the plight of seasonal farmworkers and their families has not been investigated.

MATERIAL AND METHODS

Arrangements were made for dental examinations to be conducted at the public schools in the three county areas (St. Johns, Flagler and Putnam). Teachers identified 454 children of agricultural workers as either seasonal or migrant from official school records. Such classifications often influence the scope of services available. The students were subsequently examined by residents and faculty of the Department of Community Dentistry, using portable equipment. The following were observed: the number of decayed, missing, and filled teeth; the amount of debris and calculus present; and the degree of gingival inflammation.

In addition, 115 randomly selected adults with a mean age of 44.3 years were examined at the College of Dentistry in Gainesville. The members of this group had residence histories varying from truly migrant to never having left the area for employment purposes. However, the life-style of the resident migrant is such that clear distinctions are not always possible and often seem unfair. Faculty from the Department of Oral Medicine examined each person under clinical conditions with the aid of panoramic radiographs. Proposed treatment plans were analyzed to determine the types and amounts of services required in order to eliminate all oral pathology and restore function in the most economic manner consistent with good dental practice. Epidemiologic data similar to that recorded for the children were also noted for the adults.

Table 1. Mean scores of dental indices for the children aged 6 to 11 of migrant and seasonal agricultural workers: Migrant Health Study 1972-73

Index of measurement	Migrant (n=141)	Seasonal (n=313)
$\bar{x}d$ (Decayed primary teeth)	1.81 (0.19)*	2.34 (0.15)
$\bar{x}f$ (Filled primary teeth)	0.49 (0.11)	0.08 (0.02)
$\bar{x}df$ (Decayed and filled primary teeth)	2.29 (0.20)	2.42 (0.15)
$\bar{x}DT$ (Decayed permanent teeth)	0.75 (0.11)	1.06 (0.09)
$\bar{x}MT$ (Missing permanent teeth)	0.04 (0.02)	0.04 (0.01)
$\bar{x}FT$ (Filled permanent teeth)	0.28 (0.07)	0.05 (0.02)
$\bar{x}DMFT$ (Decayed, missing and filled permanent teeth)	1.07 (0.12)	1.16 (0.10)
$\bar{x}OHI-S$ (Oral Hygiene Index)	1.25 (0.03)	1.36 (0.03)
$\bar{x}GI$ (Gingival Index)	0.85 (0.04)	0.96 (0.03)

* Standard error of the mean.

RESULTS

Table 1 illustrates the oral health status of the children. Race-specific information was not compiled after determining that more than 90% of the migrant and seasonal agricultural population is black. The levels of caries activity and gingival inflammation are consistent with those reported for black children of this age by the National Center for Health Statistics^{8,9}. Relevant findings are the slightly superior dental health status of the migrant workers relative to those classified as seasonal workers and the low level of professional care for both groups. Only 9% of the primary teeth and 11% of the permanent teeth affected by caries had been restored.

The lack of treatment together with poor oral hygiene has created a situation among the adults wherein missing teeth are most often not replaced, severe periodontal disease is of epidemic proportions, and advanced dental caries is frequently left un-

Table 2. Major types of treatment needed by adults: Migrant Health Study 1972-73

Type of treatment	Percent in need
Removable prosthetics	77%
Oral surgery (extractions)	76%
Periodontal therapy	71%
Operative dentistry	60%
Oral surgery (impactions, biopsies, alveolectomies, etc.)	36%
Fixed prosthetics	19%
Endodontics	1%

Table 3. Number of each type of service needed per 100 adults: Migrant Health Study 1972-73

788	Extractions
358	Fillings
137	Quadrants of periodontal therapy
74	Minor surgical procedures
73	Units of crown and bridge
69	Full dentures
64	Partial dentures
2	Root canals

checked, serving as a focus of infection and a cause of recurring pain.

Tables 2 and 3 indicate that removable prosthetics and extractions are the services most needed. This can be expressed in more striking terms if some other statistics are presented. The 115 adults examined were missing some 216 anterior teeth which had not been replaced. Furthermore, the panographs revealed 95 periapical lesions. Most of the teeth involved and also many others require extraction to eliminate pain and infection. The overwhelming amount of periodontal disease is reflected in the mean score of 4.89, which according to the criteria of the Periodontal Index may be translated as corresponding to a clinical status somewhere between established destruction and terminal stages of disease¹⁰. Other epidemiologic data also closely parallel clinical observations.

DISCUSSION

The children in the study population have experienced dental disease at a rate consistent with comparable groups. Nevertheless, the level of care is clearly inadequate to prevent future dental problems of the type observed among the adults. The children of seasonal farmworkers had more decay and had received less treatment than the migrants.

The adults who were examined were found to be in a very distressing state of oral health. Unrealistic resources would be necessary to meet all of their dental requirements, but some provisions must be made to eliminate the rampant pain and infection.

Existing programs to provide dental care should be utilized to their fullest extent, especially emphasizing preventive measures. However, the most realistic approach to health care and the myriad of other problems facing this segment of society seems to be the creation of opportunities which will allow

the children to escape the cycle of poverty characterizing the life-style of their parents.

Acknowledgment - Supported by the Migrant Health Program, U.S. Department of Health, Education, and Welfare. Contract No. HSM 110-72-168.

REFERENCES

1. ABRAMS, W. Z.: Dentistry in a migrant farm labor program. *N. J. State Dent. Soc. J.* 1965: 37: 121-124.
2. ARRA, M. C.: A report of the dental program for migrants, *Endeavor. Wis. State Dent. Soc. J.* 1966: 42: 61-64.
3. CHAPMAN, A. L. & LONGWORTH, R. M.: Dental services for migrants in Pennsylvania. *Penn. Dent. J.* 1969: 36: 241-243.
4. DOWNS, R. A. & BENNET, L. J.: Colorado dental migrant project. *Colo. State Dent. J.* 1965: 43: 17-19.
5. GANGAROSA, L. P.: Oral health care for migrant agricultural workers in Monroe County, N.Y. *N.Y. J. Dent.* 1968: 34: 481-484.
6. HAAS, C. D.: Migrant summer dental health project. *Dent. Students' Mag.* 1965: 44: 128-129.
7. LIND, K.: Abre la boca. *Am. Dent. Assoc. J.* 1969: 79: 1083-1084.
8. NATIONAL CENTER FOR HEALTH STATISTICS: Decayed, missing, and filled teeth among children. *Vital and Health Statistics. Series 11, No. 106.* U.S. Government Printing Office 1971, p. 13-17.
9. NATIONAL CENTER FOR HEALTH STATISTICS: Periodontal disease and oral hygiene among children. *Vital and Health Statistics. Series 11, No. 117.* U.S. Government Printing Office 1972, p. 13-15.
10. RUSSELL, A. L.: A system of classification and scoring for prevalence surveys of periodontal disease. *J. Dent. Res.* 1956: 35: 350-359.
11. SIERK, D.: Iowa students care for migrant farmworkers. *Dent. Students' Mag.* 1971: 50: 60-61.
12. ZWEMER, T. J.: Quo vadis. *S. D. Assoc. Dent. J.* 1970: 4: 9.

Address:

Division of Community Dentistry
 University of Oklahoma Health Sciences Center
 P.O. Box 26901
 Oklahoma City, Oklahoma 73190
 U.S.A.