Research

Oral Health Knowledge Attitudes and Behaviors of Migrant Preschooler Parents

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Abstract

Purpose: The purpose of the study was to establish baseline data about oral health knowledge, attitudes and behaviors of migrant and seasonal farm workers (MSFW). The study focused on MSFWs that are parents of preschool–aged children, and who utilized services at 3 migrant dental clinics.

Methods: An oral health knowledge attitudes and behaviors survey was developed and pilot tested in 2006. The resulting 34 item survey was administered by trained promotores de salud (community health workers) to 45 parents of preschoolers (15 at each clinic site) served by 3 migrant dental clinics. Parents answered questions as they pertained to their oldest preschooler (up to age 5).

Results: Dental visits in the last 12 months were reported for 26 (58%) of the children. Fifteen parents (33%) had a dental visit in the last year. Thirty–five parents (77/8%) reported their child's oral health to be good, and 21 (46.7%) reported their own to be good. Half of the children were enrolled in Head Start (HS). Of those, 18 (79%) had a dental visit in the last year, whereas 8 (36%) of those not enrolled in HS had a visit. Discrepancies existed for the age parents believed children should stop using a bottle and the age they actually did stop using a bottle. There were discrepancies in knowledge about decay causing drinks and consumption of drinks by preschool–aged children.

Conclusions: MSFWs remain an underserved population with poor access to oral health care and multiple factors affecting oral health knowledge, attitudes and behaviors. A better understanding of influences on oral health knowledge, attitudes and behaviors within the population can assist in implementing appropriate interventions for the maintenance of good oral health in MSFW families. HS can have a positive impact on oral health for MSFW children.

Key Words: migrant and seasonal farm workers, oral health, knowledge attitudes and behaviors

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Introduction

As dentistry increasingly faces access to care issues for a significant portion of the United States population, all oral health care providers should be informed about the various underserved populations in order to develop a unified plan for addressing oral health disparities. Unless employed in public health settings, dental hygienists likely know little about underserved populations in general, nor their oral health conditions and difficulties accessing oral health services. Migrant and seasonal farm workers (MSFWs) are one such group with multiple issues affecting their oral health status as well as their knowledge, attitudes and behaviors concerning oral health. Increased awareness and knowledge of this underserved population is warranted for the dental hygienist.

Review of the Literature

Nearly all migrant farm workers who provide labor for the beautiful fruits and vegetables we find in our supermarkets are Hispanic, primarily from Mexico. The National Agricultural Workers Survey indicated 79% of all farm workers were born in Mexico, 23% in the United States, 2% in Central America and 1% in other countries.[1,2] Though migration status is difficult to estimate, only 19% are currently considered truly migratory, actually following the crops. Many simply shuttle between their residence (either inside or outside the United States) and one primary location to work and are considered "seasonal" farm workers.[1,3] There are 3 main south–to–north streams that MSFWs usually follow – the western, midwest and eastern streams. Depending on where they originate from, there can be a great deal of ethnic and cultural variation among the 3 streams.[4,5] Regardless, MSFW families' lives are very difficult. Sixty–one percent of the population lives in poverty, earning an average of only $7,500 per year.[1] Their low socioeconomic status is compounded by a myriad

of health problems, such as pesticide exposure, malnutrition and loneliness.

The federal Migrant Health Program was instituted in 1962 to address the poor health conditions of migrant farm workers.[1] Migrant health centers evolved into community health centers from which most MSFW families obtain medical and dental care, as most have no health insurance. However, nearly 50 years later, general and oral health status remains poor, as the migrant health care system reaches only 12 to 15% of the population annually.[4] MSFWs suffer disproportionately more than the general population from a number of diseases and conditions,[1–8] and oral health problems are often listed among the top health concerns of the population.[2,4,8] Dr. David Satcher included them as one of the populations affected by the "silent epidemic" of oral disease in his 2000 Surgeon General's Report on Oral Health in America.[9] He called for more research about these vulnerable populations to develop strategies for meeting their oral health needs.

Studies stretching over more than 30 years in different areas of the country with differing methodologies and limitations have attempted to describe oral health status of MSFWs, and though few in number, all reveal disproportionate rates of oral disease when compared to the general population.[2,10,11,12] MSFWs tend to seek episodic or acute medical and dental care as a result of multiple access barriers.[1–5,7,8,10] A study of migrant clinics across the country showed that more than half of clinics offered no evening hours which means missing work, reduced pay and possibly loss of job as a result of seeking care.[2,3,5,8,13] Numerous other access to care barriers are documented in the literature including mobility, cost, language, transportation and cultural issues and beliefs about health.[13–25]

Though MSFW parents typically report their children's oral health as being superior to their own, and seek care for their children more than for themselves,[2] oral health needs among the children are great as well. Studies conducted in Washington, Michigan, Colorado, Alabama, Illinois and California have revealed that children of MSFWs have higher rates of dental decay than the general population.[11,12,17,21,24,26,27] A few recent studies have concentrated on early childhood caries (ECC) in MSFW populations, both prevalence of and knowledge and behaviors of parents with children affected by the condition. As with regular dental caries, disparity in the prevalence of ECC is experienced by the children of MSFWs.[17,21,23,27]

There is little research concerning oral health knowledge, attitudes and behaviors of MSFWs and how findings from such assessments could be used to better serve the population and improve their oral health status. There can be much variation of knowledge, attitudes and behaviors among underserved groups requiring careful design of questionnaires. A study of Latin American immigrants in the Washington, D.C. inner–city area utilized focus groups to assist in the development of an oral health knowledge, attitudes and behaviors survey.[28] Surveys of knowledge, attitudes and behaviors of MSFWs have documented a weak knowledge of a sweet diet and caries in this population.[8,25,27] Ramos–Gomez et al studied ECC and dietary habits in a MSFW population in California and found that 45% of children went to bed with a bottle containing carcinogenic liquids.[27] Multiple issues influence oral health–related dietary and weaning behaviors in disadvantaged populations.[17,29] Cultural norms and the difficult lives of MSFWs play major roles in oral health behaviors and are not always a direct result of a lack of knowledge.[6,17,23] As changes occur over time in both the field of dentistry and in the MSFW population, relevant studies are merited for assessing their current oral health knowledge attitudes and behaviors in order to plan appropriate interventions for serving this difficult to reach population.

This article reports findings from a study conducted with a convenience sample of MSFW parents/caregivers of preschoolers served by 3 of an agency's dental clinics located in the Chicago, Ill area. The purpose of the study was to elucidate oral health knowledge, attitudes and behaviors of the parents/caregivers to better serve the population and ultimately improve oral health status of MSFW children.

Methodology

Focus groups were conducted during the summer of 2006 with members from the target population within the clinics' service areas. The purpose of the focus groups was to identify oral health issues and concerns of MSFW preschooler parents and caregivers. An evaluator with experience in migrant oral health research outlined basic oral health areas for focus group discussions. Coordinators of the sites' promotores de salud programs were trained to conduct focus groups, and in turn facilitated the sessions and reported results to the evaluator. This process was followed in order to develop an appropriate survey for addressing what the MSFW families perceive as significant issues, as opposed to what oral health professionals' may perceive as significant. The evaluator then designed a survey instrument that was informed by issues and concerns of the target population identified from the focus group sessions and an examination of the literature's oral health knowledge, attitudes and behaviors surveys from similar groups. The survey was translated into Spanish and pilot tested in 2006. Following the pilot, the survey was revised to eliminate ambiguous questions. In 2007, a public health graduate student translated the final 34 item survey into Spanish and trained and calibrated the same promotores coordinators at the 3 clinics in administration of the surveys. During

the summer of 2007, the survey was administered at the clinics to a convenience sample of 15 preschooler parents from each of the 3 migrant health clinic service areas for a total of 45 surveys. Not all parents surveyed were current patients of the dental clinics. The coordinators read the surveys to the parents/caregivers at the clinics in private, each answering orally from a list of possible responses. Preschooler parents answered questions as they pertained to the oldest preschooler in the home aged 1 to 5 years, assuming comparable practices would be followed for all preschoolers and answering questions for more than 1 preschooler in the home could be confusing and difficult. Verbal consent was secured from each participant before survey administration and the survey was approved by the agency's internal review board. Each interviewee received a gift card in recognition of their time and participation. Results from the first 3 surveys of each site's sample were sent to the graduate student trainer for feedback and quality assurance check before proceeding with the remaining surveys. All surveys were completed during the summer months and results sent to the evaluator for analysis.

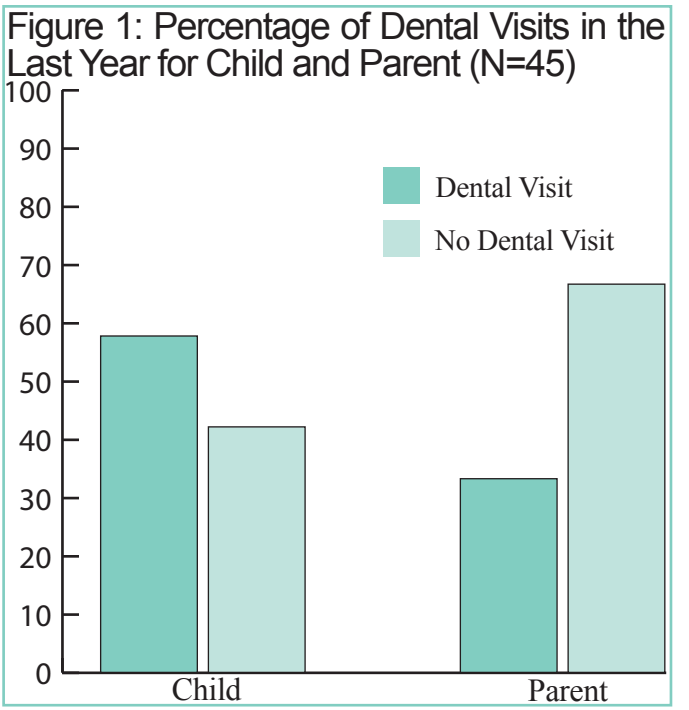
Results

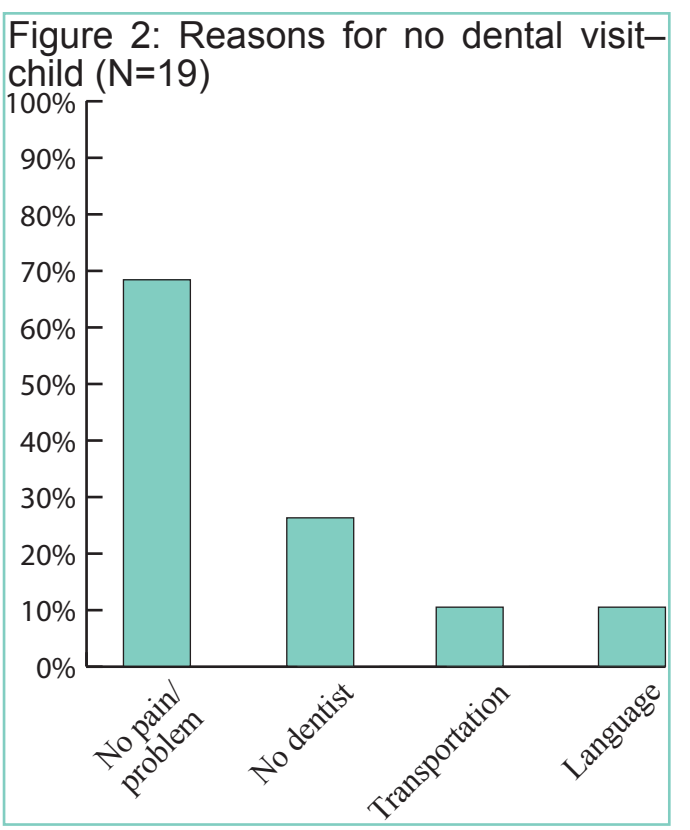
The majority of the parents (40, 89%) were born in Mexico, while only 6 of the children were, with the remaining 39 (87%) born in the United States. Most of the children (39, 87%) were born in the United States. Thirty–four of the parents/caregivers (76%) had lived in the United States more than 5 years. The language parents were comfortable speaking was Spanish (40, 89%). Only 3 (7%) were comfortable speaking English and 2 (4%) were comfortable speaking both Spanish and English. The same results were reported for a question about comfort level in reading Spanish and English. Parent's education level ranged from less than sixth grade completed (7, 16%) to having completed some college or university study (3, 7%).

Most parents (35, 78%) reported their child's teeth were cleaned daily. Twenty–six children (58%) had seen a dentist in the last 12 months (Figure 1). The reasons cited most for not seeing a dentist (n=19) were that the child had no pain or problem (13, 68%), the child did not have a dentist (5, 26%), no transportation (2, 10%) and language problems (2, 10%) (Figure 2). The answer cited most for the reason the child did go to the dentist (n=26) was for an exam (21, 81%). Four (15%) of the children went because of pain.

Only 15 (33%) of the parents surveyed had been to the dentist in the last 12 months (Figure 1). The most common reason for not going (n=30) was no pain or problem (15, 53%), but the second most common reason for the parents not going was cost (12, 40%).

Thirty–five parents (78%) reported believed their child's oral health to be good, 10 (22%) believed it was fair and no one reported believing their child's oral health to be poor. When reporting about their own oral health, 21 (47%) parents believed their own oral health was good, 18 (40%) believed it was fair and 6 (13%) believed their own to be poor.





For the question about when children stopped using a bottle and transferred to a cup, most parents (32, 71%) listed the age a child should stop using a bottle to drink from 1 year of age or 18 months (8, 18%). For the question about when children actually did stop/transfer, 6 children still used a bottle (age range of 13 months to 4 years, 11 months). Nineteen (42%) stopped at 1 year, 8 (18%) at 1.5 years, 7 (16%) at 2 years and 1 stopped at 2.5 and 3 years, respectively (Table I). Eight parents (18%) reported their child takes a bottle to bed, and most commonly in the bottle was cow's milk. Most parents knew that high sugar items (candy, regular soda pop, cookies, etc.) can cause decay, but more than half (25, 56%) also marked diet soda pop as causing decay. And though most parents responded that fruit juice can cause decay (33, 73.3%), it was listed as the drink most commonly given to their children between meals (22, 49%).

When the parents' were asked their general feelings regarding dentists, 31 (69%) believed dentists are good health care providers, 29 (64%) said their fees are too high and 8 (18%) said they try to keep patients coming back for additional appointments so they could get more money from them. Twenty said they prefer seeing a dentist in Mexico and 20 said they prefer seeing one in the United States. Cost was the most commonly cited factor for preferring to go to the dentist in Mexico.

Head Start/Non Head Start

Twenty–three (51%) of the 45 children were enrolled in Head Start (HS). The remaining 22 (49%) were not enrolled. Selected questions were analyzed for HS enrolled and non–HS enrolled children. Daily cleaning of the child's teeth was reported for 19 HS children and 16 non–HS children. Chi–square analysis of these results indicate no statistically significant difference between the HS and non–HS groups (χ^2=0.066, $p>0.05$) for this variable.

Table I

Bottle weaning/ transfer to cup (n=45)	Age parent believed child should stop bottle use/transfer to cup	Age child did stop bottle use/transfer to cup*
Child still uses bottle		13.3% (6)
1 year	71.1% (32)	42.2% (19)
1.5 years	17.8% (8)	17.8% (8)
2 years	4.4% (2)	15.7% (7)
2.5 years	0	2.2% (1)
3 years	4.4% (2)	2.2% (1)
Other	2.2% (1)	2.2% (1)

*One parent did not answer

For the question about a dental visit for the child in the last 12 months, 18 (79%) of the 23 HS children had seen a dentist in the last 12 months, but only 8 (36%) of 22 non–HS children had seen a dentist in the last 12 months (Figure 3). Again, the 2 groups were compared using a chi–square analysis. Children in the HS group were more likely than non–HS children to have seen a dentist in the last 12 months (χ^2=8.09, $p<0.05$). Of several reasons suggested for not seeing a dentist, no pain or problem and having no dentist were selected most. Four HS parents selected no pain or problem as a reason for their child not seeing a dentist. Nine (39%) non–HS parents selected no pain or problem and 4 marked no dentist as reasons the children did not see a dentist.

Discussion

Consistent with the literature, almost all of the parents surveyed (40, 88.9%) were born in Mexico. However, most of the parents (34, 76%) had lived in the United States more than 5 years. In spite of the parents' longevity in the United States, only 5 were comfortable speaking English and only 2 of the 5 were comfortable speaking both languages. The same results were reported about reading both English and Spanish materials. While a reduced comfort level reading English is understandable, one would be inclined to believe that, after living in the United States for over 5 years, there would be a higher comfort level with speaking the language, especially since most of their children were born in the United States, thus English proficient. Language is cited in numerous other studies as an access to care barrier and should alert oral care providers that MSFW parents and other Hispanics may have difficulties with English regardless of length of time in this country, and may hinder them in seeking care for themselves or their children.[1–5,7,8,10]

A higher number of children than parents had seen a dentist within the last year. Only 15 parents had been to the dentist during the same time frame. The reasons for not having a dental visit were different as well. Of the 19 children who did not see a dentist, the primary reason reported by 13 of the parents was no pain or problems and 5 indicated the child had no dentist. Of the 30 parents who had not seen the dentist, half stated it was because they had no pain or problems, but the second most common reason was cost. This is consistent with the literature in that MSFWs primarily seek acute dental care.[3,14,16] Lukes and Miller reported similar results among 119 farm workers utilizing dental services at a Southern Illinois migrant health center in 2000. Half had sought care in the last year and of those who had not, the absence of pain was the most common reason for not seeking care. Specific barriers to care were reported as lim-

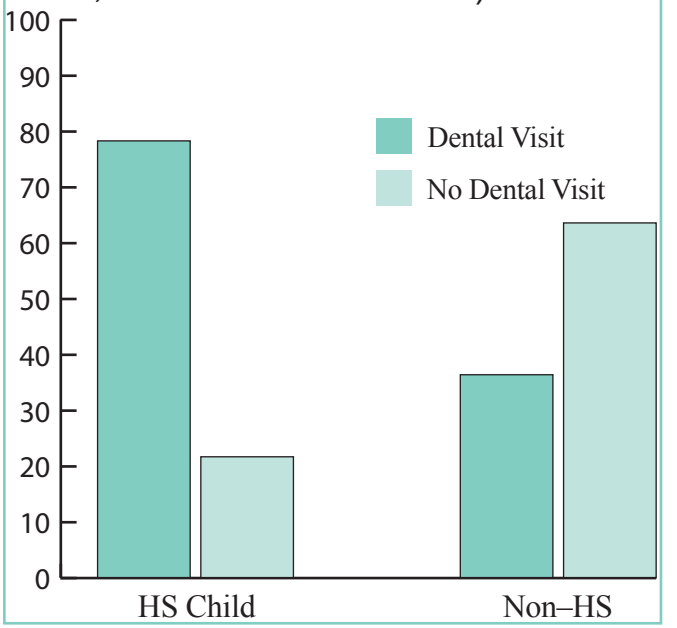
ited clinic hours and fees.[10] A North Carolina/West Virginia study found that children received dental care on a regular basis while the parents usually received no care or emergency care.[16] Cost was a primary barrier for the parents, but not listed as a common reason for no dental visits among the children. Cost becomes a reason for the MSFWs themselves to not seek dental care, but possibly does not enter into the care seeking behavior as greatly when it comes to the oral health of the children. Quandt et al had similar results.[2] Though dental health services use was greater for children than the parents in this study, dental health services usage among MSFW's children is low overall, as documented in other studies.[7,18]

The parents believed their children's oral health to be better overall than their own with 78% of parents reporting their child's oral health to be good. This assumption could be based upon knowing that children receive care more often than they themselves receive. In Quandt's study in North Carolina and Virginia, MSFW mothers also ranked the condition of their children's' teeth as better than their own.[2] They ranked their own as fair or poor, but their children's' as good or very good. Most of the children in both studies were born in the United States and have likely had more access to oral health care than their parents, who in both studies were born primarily in Mexico. Domoto et al, however, found that 60% of MSFWs who were parents and suffered with dental decay themselves indicated they were unaware of the child's dental problem.[17] Parents' perceptions of their children's oral health as being better than their own should not be mistaken for the children's oral health status as being good. MSFW children's overall oral health status remains poor compared to the general population, which points to a need for interventions to enhance parental awareness and education of dental issues in both themselves and their children.

There appears to be a discrepancy between parents' knowledge of appropriate time to wean from bottle to cup and when the weaning process actually occurred among the children.

Eight parents also reported their child takes a bottle to bed with them, though only 6 reported that the child still used a bottle. Perhaps the transfer had occurred but the child was allowed a bottle only at bedtime. Health behaviors of MSFW families are often dictated by their difficult lifestyle rather than knowledge of appropriate practices. They are often unlikely to follow recommendations that cause familial disruptions. In an early childhood caries (ECC) study by Weinstein et al, less help with caring for the child was found to be associated with ECC in the children and ECC parents were less likely to endure the stress of early weaning and sleeping without the bottle.[17,23] When a husband requires a good night's rest to work long hours in the field the next day, it may not be practical to allow the baby to cry for want of a bottle. This is also an area where cultural patterns may vary among the population as documented by Domoto et al and Bechtel et al.[6,17]

Figure 3: Dental Visit in Last 12 Months (by Head Start Enrollment) (HS enrolled N=23, Non–HS enrolled N=22)



Consumption of various types of drinks showed inconsistencies between parents' knowledge and behavior as well. Thirty–three (73%) noted fruit juice as carcinogenic; however, fruit juice was the drink most commonly given to their children between meals. Because children tend to enjoy sweet drinks more than just water, a study of disadvantaged parents in the UK revealed that the parents thought it "cruel" to offer water instead of something sweet to drink and saw it as a sign of poverty.[29] The percentage of Illinoisans served by community water systems with optimally fluoridated water is 99%,[30] so certainly water is the drink of choice for MSFW's children. However, fluoride use is only one variable in a multi–factorial disease. Studies from all areas of the country show disproportionate rates of decay, regardless of fluoride status in the different areas where MSFWs live. Their mobility also makes it difficult to assess the benefits their children would receive from fluoridated water systems. Educating the parents about positive effects of fluoride in the water could serve to decrease feelings of guilt about only offering water to drink. As stated previously, knowledge alone can be insufficient to produce behavior change and has been demonstrated in other studies among similar populations.[21,25,29,31] Oral health education for underserved populations may require something other than simply a cognitive approach as

internal and external forces within MSFW's environments are beyond their control and likely affect health behaviors. Employment of a variety of health education models is indicated when designing education for such populations. Services to assist with social and environmental issues as well as the other access to care barriers are also necessary to help this population achieve good oral health.

Negative comments from the focus groups led the evaluator to include questions in the survey about MSFW's feelings concerning dentists. Surprisingly, most thought United States dentists were good health care providers and the same number of parents preferred seeing a dentist in the United States as did those who preferred to see a dentist in Mexico. This could be the result of conscious efforts of the agency's 3 clinics to serve the population, as the agency has been serving migrant and seasonal farm workers for many years. Dental providers should consistently be working on cultural competency skills to serve the growing Hispanic populations as well as other diverse populations.

It appears the most significant finding from the survey concerns utilization of dental services according to HS enrollment. HS is a federal program for underserved populations such as MSFW children, and requires dental exams upon enrollment. When separating the children into groups of HS enrolled and non–HS enrolled, those enrolled were significantly more likely to have seen a dentist in the last year. Programs such as HS can have a significant impact on oral health status of underserved populations. A study by Lukes, Wadhawan and Lampiris in 2004 conducted basic screening surveys on MSFW children enrolled in summer migrant education programs throughout Illinois.[26] This program has provided dental services for enrolled children since 1983. The basic screening services revealed dental sealant prevalence to be 51% for children 8 to 10 years of age, far exceeding the national average of 23% and even exceeding the Healthy People 2010 national goal of 50%.[32] These results demonstrate how enrollment in such programs can have a significant effect on oral health of disparate groups and could be used to justify continuation of programs during fiscally challenging times.

Limitations of the study include the small sample size and limited geographic distribution of the participants, as all of the participants lived in the Chicago area. The sample of health center patients could be more dentally aware, with differing knowledge, attitudes and behaviors, than those who do not access services. Midwestern MSFWs may also be very different from those in other parts of the country with different issues affecting oral health knowledge, attitudes and behaviors. Farm workers from the eastern or western streams may be from different areas of Mexico with different cultural beliefs and practices. Another limitation is that all data was self reported, which can have recall issues associated with reporting. Information about all preschoolers under the age of 5 in the home could have yielded different results. Studying MSFWs is especially difficult due to mobility and multiple issues affecting the population. Therefore, data gathered even in small increments can be significant contributions to the literature.

Conclusion

Migrant and seasonal farm workers remain an underserved population with poor oral health status, poor access to oral health care and multiple factors affecting oral health knowledge, attitudes and behaviors. More research is warranted on this difficult to reach population. A better understanding of influences on oral health knowledge, attitudes and behaviors can assist in implementing appropriate interventions for the maintenance of good oral health in MSFW families. Programs such as HS can have a positive impact on oral health status of MSFW children and other underserved groups eligible for the program. Dental hygienists should be community advocates for programs such as HS that promote oral health for underserved populations.

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