

Role of Dental Public Health Professionals in Community Alliances

Michael Garrett, DDS

Through a community-based health assessment and planning process, oral health was noted to be a significant concern in many communities in East Tennessee. Using previously established county health councils and their identified priorities as a platform to initiate discussion, presentations were given by a dental public health professional reviewing the county's oral health status. By reinforcing the community's awareness by the dental services, the program, given by the dental health professionals opened the door for dialogue and community involvement in addressing this need.

The results of these collaborative efforts can be described by two specific examples. One county, through the dedicated efforts of health council members and local government officials, gained approval to fluoridate one of the public water systems as a preventive measure to reduce dental caries. Another county, which ranked worst in the region when oral health status was evaluated, had an insufficient number of dental providers to meet the needs of the low-income, publicly insured citizens. Because of community support, county officials allocated funding to provide for clinical dental services in the local health department.

These two examples provide clear evidence that attaining the improvement of a community's oral health is possible through the diligent, committed labor of team of local community members and a dental public health professional. The role of a dental public health professional in facilitating this process can be pivotal.

Water Fluoridation and the Oral Health of Children A Critical Appraisal of Recent Evidence

D. Locker and A. Jokovic

For the past fifty years, water fluoridation has made a significant contribution to the oral health of children in terms of a reduction in the prevalence of dental decay. Based on the original work of Dean from the 1930's, a fluoride level of 1 ppm has been considered to be optimal in terms of maximizing reductions in decay while keeping dental fluorosis at levels considered to be acceptable. However, reviews of the literature conducted up to 1994 indicated that, under conditions of multiple exposures to fluoride the prevalence and severity of fluorosis has increased. Moreover, research on the visibility and impact of fluorosis indicated that it may no longer be acceptable to the children affected. This paper reports on the results of a critical appraisal of research on the effectiveness of water fluoridation published between 1994 and 1999. This appraisal indicates that the research is weak in terms of its overall design and subject to numerous methodological flaws. While fluoridation appears to be of benefit to the deciduous dentition, the additional benefits to the permanent dentition among those who brush daily with fluoride toothpaste is of questionable clinical significance. Consequently, in order to enhance the oral health of children, the balance between decay and fluorosis needs to be revisited. The dose-response data from the 1930's is no longer adequate for assessing this balance and more contemporary research is required on which to base policy and guidelines.

Successful Fluoridation by Ballot

The Yakima County Children's Oral Health Coalition began as a collaborative community partnership in January 1995. In May 1997, a subcommittee of the Coalition started work on fluoridation of the municipal water system.

Yakima County leads the state in decay rates, has a disproportionate share of Medicaid children (10% of the state's total, compared with 4% of the state's population), and suffers a chronic shortage of dental providers. We live in a poor, rural area and worked first to raise funds. Since our coalition does not have 501(c)3 status, we partnered with a local hospital foundation. We applied for and received \$180,000 from a private foundation to pay for fluoridation equipment, installation, and first year-operations. We then embarked on a community education campaign. Next we approached our City Council. While Council tried to table the issue, we succeeded in placing a referendum on the ballot. In more liberal parts of the state, two other fluoridation campaigns had failed. Because our aggravated rate of decay, disparity of access, and the recent dismal history of other referenda, our campaign drew statewide interest. It enjoyed broad-based support, including local medical and dental professionals; Washington State Dental Association; and Washington Dental Service, an insurance company.

We ran a campaign that focused not on education, but on marketing fluoride as safe, cheap, and effective. In a year when the electorate voted to cut taxes, fluoride won in Yakima with 72% of the vote!

The Wichita Safe and Healthy Water Coalition

G.D. Hill

The Wichita Safe and Healthy Water Coalition is composed of public health professionals in the Wichita, Kansas area who are working to bring community water fluoridation to one of the country's largest unfluoridated communities.

While the weight of accepted scientific evidence clearly supports community water fluoridation as a preventive measure, conflicting, biased studies raise concerns among public policy leaders. That, coupled with a boisterous opposition, has made the city council reluctant to even bring the issue up for debate.

As a result of this anti-fluoridation impact on the public health message, the Wichita fluoridation effort has gone from a health care education effort of the city council to a grassroots political campaign designed to create public activism. Through local neighborhood associations and public health organizations throughout the community, our coalition is reaching the grassroots of Wichita to convince them that fluoridation will bring a better quality of life to all children. Through this effort, we are, creating widespread positive support coming from people of all walks of life.

It is this widespread community support, we contend, that will force the city council to vote in favor of fluoridation and head down the path of public health advocacy. Alternatively, this grassroots campaign will be essential if this issue is forced to a public referendum vote. By establishing grassroots support early on, the voters will be aware of the health benefits and will not subscribe to the anti-fluoridation scare tactics that have prolonged this decision when they cast their votes.

Health Promotion and Disease Prevention Strategies: Challenges for the Future

Jayanth Kumar, DDS, MPH

New York State has been a pioneer in promoting oral health and implementing prevention programs. Studies conducted in the 40's and 50's in Newburgh and Kingston formed the basis for community water fluoridation. Alternatives to fluoridation have been promoted in areas where fluoridation is not feasible. School-based programs have been implemented for providing both preventive and treatment services. The purpose of this presentation is to assess the impact of these policies on children's oral health by comparing the studies conducted on Newburgh and Kingston over the last fifty years.

A recent study of 1,493, seven to fourteen year-old children in Newburgh and Kingston showed that the mean number of decayed, missing, and filled permanent teeth (DMFT) has declined from approximately 9 in 1945 to 2 in 1995 in 14-year-old children. During the same period, the percent of 14-year-old children free of caries increased from 2 to 30. Even though sealants have been promoted for the 20 years, only 20% had sealants. Although 58% had dental insurance, only 34% had a family dentist and approximately 45% had untreated caries. While the disparity between poor and non-poor was evident with respect to having a dentist and untreated disease, fluoridation reduced the difference in caries experience. These results show that our policy of promoting fluoride has contributed to a dramatic improvement in oral health. However, the challenge is to increase the appropriate utilization of preventive services in all segments of society.

The Dental Health Foundation California Fluoridation Project

Miguel Martinez

The Dental Health Foundation is the lead agency responsible for generating local support for fluoridation in selected California communities. The Dental Health Foundation's Fluoridation Project activities are the cornerstone for creating the necessary environment to encourage the funding of fluoridation capital, operation, and maintenance expenses.

The California Fluoridation Act became law in 1995. It is unfunded legislation directing water districts with 10,000 or more connections to fluoridate once they receive funds from an outside source.

To encourage California water districts to fluoridate, The California Endowment allocated \$10 million for targeted communities. These funds are primarily for fluoridation capital and start up costs. To make their application for funds attractive, local government must agree to fund fluoridation operations and maintenance. Therefore, it is critical to create a local community collaborative to obtain local government support for community fluoridation. The success in delivering this message is evident in the fluoridation of three cities: Los Angeles, Sacramento, and Mountain View.

Fluoridation activity at the local level is a result of community coalition building. While the strategy is the same from community to community, the application of the strategy is dependent on the local environment. The Dental Health Foundation's presentation at the *Surgeon General's Conference on Children and Oral Health* provides a minimum of three examples to illustrate the diverse nature of the local political process, composition of community-based coalitions, and nature of advocacy to address the local climate.

The collaboratives support the shared value of developing local public health policy that promotes preventive measures in the maintenance of oral health. The collaboratives broaden the base of support by seeking involvement from community-based organizations promoting children's health issues.

The umbrella leadership structure for the local collaboratives is the Fluoridation 2000 Work Group and the California Fluoridation Task Force. These two groups approve funds to support local efforts, and direction for fluoridation notification. They keep abreast of the activities and achievements of the local collaboratives. The Task Force invites collaborative representatives to participate actively in Task Force committees. Through this mechanism, collaborative representatives learn of activities to further local goals. In turn, local coalitions learn of achievements and activities across the state.

One of the anticipated consequences of generating additional support is the creation of a statewide network of organizations supporting fluoridation. With this support of fluoridation, this statewide network is now promoting the importance of overall oral health.

Sustainability is built into the funding support for fluoridation. To receive funding for fluoridation capital costs, local water departments and city councils must make the commitment to fund fluoridation operations and maintenance for the life of the equipment. Also, the local collaborative ensures there is continuing community and public sector support for fluoridation.

The success of The Dental Health Foundation's Fluoridation Project is evident in three cities. Los Angeles began providing fluoridated water this August. Sacramento's city council and Mountain View's electorate voted for fluoridation. The inclusion of these three cities means 41% of California's population will receive fluoridation by 2001.

The 150% increase in the population receiving fluoridation demonstrates the success of The Dental Health Foundation's Fluoridation Project and strategy. Local community support is vital to the success of the project. Local leaders and community organizations know best those who should be part of the collaborative. The strength of the local collaborative attracts media and local officials to support fluoridation. The Dental Health Foundation is eager to share its expertise in assisting all communities in promoting oral health through community-based education.

The geographic focus of the Fluoridation Project is California. Currently, only 17% of the California population receives fluoridated water. The benefiting target populations are infants to seniors who have teeth. This project works with the diverse communities of Daly City, Los Angeles, Sacramento, San Diego, eastern San Diego County, and Modesto. The characteristics of these communities range from agricultural, small bedroom community, large suburban, to large metropolitan. These communities are multi-cultural, multi-lingual, and multi-generational. The total population reached by this project is 7,319,800 – 2.1 million more than is currently receiving fluoridated water.

The funding mechanisms for the Fluoridation Project include The California Endowment, Federal-SPRANS, and local water departments and city councils voting to commit support for ongoing fluoridation operations and maintenance.

Susan Griffin

Objective: Although the effectiveness of preventive strategies in reducing dental decay is established, few state-based surveillance systems exist which can measure the prevalence and costs of treating and preventing dental caries, especially in preschoolers. This research demonstrates how analysis of Medicaid claims data can help state programs document: 1) oral health status of at-risk preschoolers, 2) trends in receipt of preventive and treatment services, and 3) association between treatment expenditures and delivery of preventive care.

Methods: We analyzed Louisiana Medicaid dental claims and eligibility data from 7/95-6/96 in each parish (county) to determine the proportion of eligible preschoolers receiving preventive services, restorative care, care in a hospital operating room, and average treatment cost. We compared these measures in fluoridated and nonfluoridated parishes.

Findings: The mean percentage of eligible preschoolers receiving restorative care and such care in a hospital operating room were 18.2% (range: 6.6%-32.7%) and 2.7% (range: 0.3%-8.7%), respectively. Children in nonfluoridated parishes were three times as likely to be hospitalized and their average treatment cost was twice as high.

Conclusions: This type of analysis provides a source of timely oral health data for children and can assist states in appropriate targeting of scarce resources and to increase support for primary prevention. The Louisiana Department of Health and Hospitals (LDHH) used these results to direct educational campaigns for parents, physicians, and dentists in "at-risk" parishes. Recent legislation created a fluoridation program within the LDHH and an Advisory Board to locate funding to initiate fluoridation.

Water Fluoridation with a Smile

*D. Miniard, J.A. White

Staff of the Office on Oral Health, DACH has served as a catalysts for the implementation on Fluoridation working with leaders in the Commonwealth, County Judge Executives, Mayors, School Officials, State Legislators, Community Groups, etc. Kentucky has put in place a nationally recognized Fluoridation System that meets the needs of all Kentuckians through School and Community Fluoridation. In 1979, the American Dental Association (ADA) honored the state's effort by awarding the ADA Community Prevention Dentistry Award to the Dental Program. Fluoridation continues to improve through diligent monitoring and surveillance and has improved from 33% (23 years ago) to 98% in Community Fluoridation and 100% in School Fluoridation in 1998. Over 90% of the state's population receive fluoridated drinking water at optimum levels. Thanks to the joint efforts from all these dedicated groups, Kentucky children are smiling.

Using Medicaid Data to Improve the Public's Oral Health

by Susan O. Griffin, Barbara F Gooch, and Eugenio D. Beltran

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