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Targeting poor health: Improving oral health for the poor and the underserved

Abhinav Singh* Bharathi Purohit

Peoples College of Dental Sciences, Department of Public Health Dentistry, Peoples University, Bhopal, India

* E-mail of the corresponding author: drabhinav.singh@gmail.com

Abstract

Huge differences exist in health status including oral health between urban and rural population in developing countries. Differences also exist in health status between the urban rich and the urban poor. Poor and marginalized population form majority of the population in developing countries. This undeserved population typically defined by their low incomes has poor oral health status and most of the times are unable to afford basic and emergency health care services. Significant disparities remain in both the rates of dental disease and access to dental care among subgroups of the population, especially for children and adults who live below the poverty threshold.

Keywords: oral health disparities, dental safety net, developing countries, marginalized population

1. Introduction

Oral health is a critical but overlooked component of overall health and well-being among children and adults. Dental caries (tooth decay) is the most common preventable chronic childhood disease. Dental disease restricts activities in school, work, and home and often significantly diminishes the quality of life for many children and adults, especially those who are low-income or uninsured. There is increasing evidence of associations between oral infections and other diseases, such as pre-term, low birthweight babies, heart disease, lung disease, diabetes and stroke among adults (National Institute of Dental and Craniofacial Research, 2000)

Huge differences exist in health status including oral health between urban and rural population in developing countries. Differences also exist in health status between the urban rich and the urban poor. The finding has been mainly attributed to differences in socio economic status and limited paying capacity across populations, specifically in developing countries. Although there have been impressive advances in both dental technology and in the scientific understanding of oral diseases, significant disparities remain in both the rates of dental disease and access to dental care among subgroups of the population, especially for children and adults who live below the poverty threshold.

2. State of Affairs: India

Private fee for service is the only mechanism of payment for dental care in most of the developing countries including India. The major disadvantage of fee for service is that many patients are unable to receive any care. Developing countries have a high unequal income distribution and in a market based delivery system socio economic factors play a major role in use of health care services.

India has 289 dental colleges with around 25,000 graduates each year (Sivapathasundharam, 2007).

Dental manpower though available yet the utilization of oral health care services is low. The reason for the low utilization of health care services being the high cost involved thereby widening the oral health differences across the social economic classes.

Poor and marginalized population form majority of the population in developing countries. This undeserved population typically defined by their low incomes has poor oral health status and most of the times are unable to afford basic and emergency health care services. Many developing countries including India have neither an oral health policy nor a planned oral health care delivery system. Oral health policy was drafted by Dental Council of India (DCI) way back in 1985. National oral health policy (1985) recommends dentists to be appointed at primary and community health centres. Till date the policy has not be implemented. (National oral health policy, 1985)

3. Dental Safety Net

Dental safety net providers are public and private non-profit organizations that provide comprehensive oral health care to children, adults and the elderly. The dental "safety net" is variously defined as the facilities, providers, and payment programs that support dental care specifically for "underserved populations." (Kwon, 2009) These various definitions distinguish the "safety net" from the delivery of dental care by dentists in private practice. The safety net portion of care delivery in India that exclusively focuses on caring for the underserved has very limited capacity compared to the cumulative capacity of private dentistry. As a result, most care received by the underserved is today provided by private dentists.

Although a variety of social and demographic characteristics correlate with use of dental services, underserved populations are typically defined by their low incomes (Guay, 2004). Bailit *et al*. (2006) in America characterized the dentally underserved as individuals with incomes less than twice the federal poverty level (82 million Americans or 27 percent of the US population) because these individuals utilize dental services at about half the rate of higher-income groups and are described as "unable to purchase private sector care".

"Effective demand" for dental care by the underserved, defined as having both motive and financial means to obtain care, has been considered to be modest. (Guay, 2004) In addition to those disadvantaged by income, the underserved also includes those whose age, physical, health, behavioral, social, language, or geographical conditions render them vulnerable and limit their access to, or acceptance by majority of the dentists in private practice (Edelstein, 2005). In short, the dental safety net is the composite of all places, providers, and programs that deliver dental services to people disenfranchised from the predominant private dental delivery system.

4. **Composition Of Safety Nets—Whom Do They Serve and How Are They Organized?**

Health care safety nets serve a diverse patient population, including inner city and rural poor, the homeless, low-income migrant workers, the uninsured and underinsured. Many of these patients are also chronically ill and require coordinated disease management. Safety nets usually are community-based and are influenced in large part by economic and other characteristics of their local communities. Some safety net providers are run by hospitals or community groups, others by physicians or local governments. Some rely on donations of time and effort by physicians, nurses and other providers, while others rely on discounted

payment for caregivers. Some are a mixture of both. In sum, they are organized according to their particular patient population and financing. The local variations in financing, patient mix and workforce may result in a poorly coordinated and fragmented system of safety nets.

Thus, while safety nets provide essential health services to individuals who otherwise would lack access to care, this patchwork system also results in common problems such as restricted access to specialty services, disruption in care, and long waiting periods for patients. Despite these strains, the same fragmented local forces that create a patchwork system also open up opportunities for innovation that are highly attuned to a specific community's need. A closer look at different safety nets across nations reveals some examples that provide adequate and coordinated care. In this case, adequacy means that the provider actively screens and enrolls eligible patients, assigns them to a primary care medical home, and provides a reasonably comprehensive range of services, including essential medications, specialist referrals, chronic disease management and hospitalizations. Through such coordination of care, these adequate safety nets can also rein in health care costs.

Hospital emergency departments have a number of sites in underserved areas to potentially meet demand for health services, yet they rarely are responsive to dental needs, are not designed to provide comprehensive dental care, and have none or insufficiently trained personnel to deal with even acute dental problems. Policies therefore could be developed to establish at least a minimum standard of emergency dental care in these sites. Safety net providers could also benefit from health information technology, enhanced cultural appropriateness, expanded dental workforce size, and increased delegation through allied dental professionals (Byck et al, 2002; Okunseri et al, 2008)

A study was conducted to shed more light on the effectiveness of waivers and exemptions as safety nets in the public health sector in Kenya. Findings indicate that, for the selected facilities, waivers and exemptions have not been fully effective in protecting the poor against the negative effects of fees on their demand for health services, due to: (i) limited volume of waivers granted and waivers provided; (ii) limited awareness among the targeted; (iii) varied assessment procedures, with some procedures unable to accurately identify the targeted; (iv) lack of support from facility staff due to revenue loss, given that user fee revenues have become an important source of finance for non-wage recurrent expenditure; and (v) lack of enforcement of guidelines on waivers and exemptions by Ministry of Health, resulting in health facility managers exercising discretion on the implementation. In an effort to increase effectiveness of the system, the study recommends the following: (i) publicising the waivers and exemptions programme; (ii) enforcing issued guidelines on waivers and exemptions; (iii) increasing targeting efficiency through improved assessment and approval mechanisms; (iv) providing incentives to facility staff to support the safety nets; (v) use of needs criteria by the Ministry of Health when allocating resources to facilities. There was no mention of inclusion of oral health care services in the safety nets. (Eberhardt et al, 2001)

5. Rural Safety Nets

Rural and urban areas differ in many ways, including demography, environment, economy, social structure, and availability of resources The differences in these characteristics significantly affect the structure, capacity, and functioning of the rural health care safety net. Rural populations, on average, tend to be older than those in urban areas and suffer from greater levels of poverty and unemployment and lower levels of

income. Rural residents are more likely to engage in risky health behaviors than urban residents. Rates of smoking, alcohol consumption, and obesity are higher in rural areas. Chronic illnesses and associated limitations in activity are more prevalent, and mortality rates for chronic conditions such as chronic obstructive pulmonary disease are higher in rural areas. (Safety Nets in Kenya's Public Health Sector, 2003) Rural residents are more likely than urban residents to describe their overall health as fair to poor. Urban and rural hospitals differ considerably in regard to the safety net and their financial vulnerability. The ability of rural hospitals to cost shift indigent care to their paying customers is significantly reduced by the nature of their revenue mix. While urban hospitals also face a large proportion of publicly funded patients, they typically have the availability of clinicians-in-training to deliver care. Although 70% of Indian population resides in rural areas yet there is no provision of dental care through primary health centers. What is worse is that oral health has not been included in public health policies noticeably there is no space for dental safety net in public health policies.

6. The Informal Safety Net

Because rural communities have few or none formal dental safety net providers such as public hospital outpatient departments, primary health centers (PHCs), and local health department's vulnerable populations in rural areas are often dependent on an informal safety net of providers who are not explicitly dedicated to providing care to low-income population. These providers often include clinics, private physicians, traditional healers and other providers who do not receive funding to serve vulnerable populations, but do provide some access to care for these groups. Monitoring or even identifying the components of this "informal" safety net is quite difficult and depends on providers' self-reports of the level of care provided. (Taylor et al, 2003)

7. Dental safety Nets in Developed Countries

Before discussing the formation of dental safety nets in developing countries what is required is the knowledge of how these programs have been running in developed countries. A Massachusetts analysis of its community health center dentists reports that 132 (approximately 2 percent of state-licensed dentists) are employed in health centers and that 40 percent of them hold limited licenses granted to graduates of foreign dental schools. Most health center dental directors (87 percent) chose health center practice because they "felt a mission to the dentally underserved population". Compared to other Massachusetts dentists, they were disproportionately minority (36 percent African- American or Hispanic) and older (49 percent over 50), and earned less (83 percent earn less than $120,000). Among tomorrow's dentists, the influence of "care to underserved" in choosing a dental career varies considerably by race and ethnicity. Many more black and Latino students who graduated in 2008 ranked care to the underserved as influential or very influential in their career choice as did white students (80.9, 70.1, and 47.2 percent, respectively). These minority students also expected to treat more underserved individuals in their future practices (36.8 percent of black, 26.7 percent of Latino, and 6.5 percent of white students expect that 50 percent or more of their future patients will be from underserved populations), but they comprise only 11 percent of the 2008 graduating classes. Underrepresented minority students' anticipation of treating more underserved individuals reflects existing practices of black and Latino dentists. (Brown et al, 2003)

Regarding dental school preparation to care for the underserved, one in six 2008 graduates (16.5 percent) reported being less than prepared to "care for a diverse society," one in five (22.0 percent) to "adapt treatment planning for low income individuals," one in four (23.0 percent) to provide "oral health care for rural areas," and one in three (37.7 percent) to "care for the disabled." The majority (70.5 percent) agree that "access to care is a major problem in the United States," and nearly the same numbers (69.5 percent) agree that "providing care to all segments of society is an ethical and professional obligation," but fewer students agree that "everyone is entitled to receive basic oral health care regardless of ability to pay" (59.7 percent). Only one in 50 (1.7 percent) graduating students report a long-term plan to practice in a "community clinic."Among 2007 graduates, 1 year after graduation, 2.2 percent were employed by dental safety net organizations. (Okwuje et al, 2009)

Bailit et al (2006) conducted a study to determine the size and characteristics of the dentally underserved U.S. population, describe the capacity of the safety net system to treat the underserved, explore policy options for expanding the system and discuss the policy implications of these findings. The underserved population was consisting of 82 million people from low-income families. Only 27.8 percent of this population visits a dentist each year. The primary components of the safety net are dental clinics in community health centers, hospitals, public schools and dental schools. This system has the capacity to care for about 7 to 8 million people annually. The politically feasible options for expanding the system include increasing the number of community clinics and their efficiency, requiring dental school graduates to receive one year of residency training, and requiring senior dental students and residents to work 60 days in community clinics and practices. They concluded that the safety net system has limited capacity but could be improved to care for another 2.5 million people. Even if it is expanded, however, the majority of low-income patients would need to obtain care in private practices to reduce access disparities. The biggest challenge is convincing the American people to provide the funds needed to care for the poor in safety net clinics and private practices. (Balit et al, 2006)

Byck et al (2005) conducted a study to examine the role of community dental safety-net clinics in providing dental care for these underserved populations. They administered a cross-sectional survey of all identified safety-net dental clinics in Illinois. Seventy-one of 94 clinics responded (response rate, 76 percent), describing their history, operations, patients, staffing and dentist relationships. An in-depth analysis of 57 clinics presents comparisons of three categories of clinics, sponsored by community health 8centers (23), local health departments (21) and private service agencies (13). Clinics were distributed across the state; 80 percent were located in facilities with other health care providers, and all provided dental care to low-income and other underserved groups. Clinics provided more than 3,100 annual dental visits, operated with limited staffing and budgets, and had referral relationships with local dentists. Clinics with full-time dentists or any dental hygienists had higher annual numbers of dental visits. These clinics provide dental care to groups with traditional access barriers. Although they represent a small portion of all dental care, their mission and role make them a key component of strategies to address the dental access problem. Local and state dental practitioners seeking to expand dental access should consider these community dental safety-net clinics as partners. Efforts to expand these clinics should include considering optimizing staffing for better dental productivity. (Edelstein, 2009)

8. Policy alternatives

Addressing consequential oral health inequities and safety net inadequacies will require multifactorial approaches and will therefore require the concerted and cooperative efforts of policymakers from across domains of government, the health professions, education, research, social service, and the dental industry. Without question, the single best approach is to dramatically reduce need and demand for conventional dental treatment by preventing and managing disease, thereby attaining better health at lower costs. To accomplish this, effective biological and behavioral interventions need to be further developed by scientists, behaviorists, health educators, social workers, and health professionals; promoted by governmental payment, workforce, and reporting policies; and institutionalized for the next generation of caregivers through changes in curricula and experiential education.

The nation's long-established and new dental schools need to view themselves as having a primary responsibility to care of the underserved while balancing their educational and research missions. The new dental schools need to explicitly reference responsibility to care for the underserved in their mission statements and incorporate community-based learning as core elements of their curricular design. For example, Western University of Health Sciences College of Dental Medicine, America describes its mission as training dentists "who will fulfill their professional obligation to improve the oral health of all members of society, especially those most in need".

Because private practice dentists constitute the overwhelming majority of care delivery capacity in the India, any attempt to reduce disparities must find ways to significantly increase private dentists' participation. Short term, this can be accomplished through efforts ranging from providing outreach to private practitioners, organizing care facilitation at the community level, contracting between health centers and private dentists, instituting continuing education of dentists in care of special populations, and developing local and state level care programs. Longer term, safety net improvements will require active engagement of tomorrow's dental professionals. This can result from changes in how students are selected, trained, licensed, and recognized and rewarded.

We suggest that developing countries like India with sufficient dental manpower resources urgently need to include dental safety net in public health services. This safety net should target population from low socio economic status, children and other dependant groups. Dentists have to be employed by the state or central governments from the available manpower resources. Allied dental health professionals also may contribute meaningfully to the dental safety net. Basic and emergency oral health care services need to be provided at these public health centers with provision of preventive care at the core. The next step will be setting up of health centers where such care could be provided. These centers should be located preferably within the reach of such population, specifically in rural areas.

9. Conclusion

Ultimate responsibility of the health of its citizen lies with the government. Oral health has not been included in public health policies in India, a change that could have led to improvement in the differences in health status of urban and rural population. The government specifically in developing countries needs to focus on the health of its population irrespective of their ability to pay. Local efforts may also be needed to engage more private practitioners in care of underserved. The formation and inclusion of dental safety

net in public health services may significantly reduce the oral health differences between the low and high socio economic classes and thereby improve the oral health status of developing countries.

References

Bailit H, Beazoglou T, Demby N,McFarland J, Robinson P, Waver R. The dental safety net: current capacity and potential for expansion. *J Am Dent Assoc.* 2006;**137**:807-15.

Beazoglou T,Heffley D, Lepowsky S,Douglass J, Lopez M, Bailit H. The dental safety net in Connecticut.*J AmDent Assoc.* 2005;**136**: 1457-62.

Brown LJ,Wagner KS, Johns B. Racial/ethnic variations of practicing dentists. *J Am Dent Assoc.* 2000; **131**:1750-4.

Byck GR, Cooksey JA, Russinof H. Safety-net dental clinics: a viable model for access to dental care. *J Am Dent Assoc.* 2005; **136**: 1013-21.

Byck G, Cooksey JA, Russinof HJ.Wisconsin dentists and Medicaid: who participates? Abstr Acad Health Serv Res Health PolicyMeet. 2002;**19**:13.

Edelstein BL.*Dental and interdisciplinary workforce approaches to oral health care for vulnerable and special needs populations*. Rockville: Advisory Committee on Training in Primary CareMedicine and Dentistry,Health Resources and Services Administration,US Department of Health and Human Services; 2005.

Edelstein BL, Frosh M. *Policy options to improve children's oral health: a report to the Florida Public Health Institute*. Washington: Children's Dental Health Project; 2009.

Eberhardt M, Ingram D, Makuc D. *Urban and rural health chartbook. Health, United States, 2001*. Hyattsville, Maryland: National Center for Health Statistics, 2001.

Guay AH. Access to dental care: the triad of essential factors in access-to-care programs. *J Am Dent Assoc.* 2004; **135**: 779-85.

Kwon S. Medicaid: A dental safety net in tough times. *J Indiana Dent Assoc.* 2009; **88**:6. National oral health policy: Prepared by core committee, appointed by Ministry of Health and Family Welfare, 1985.

National Institute of Dental and Craniofacial Research. (2000). Oral health in America: A report of the Surgeon General. Rockville, MD: U.S. Department of Health and Human Services, National Institutes of Health.

Okunseri C, Bajorunaite R, Abena A, Self K, Iacopino AM, Flores G. Racial/ethnic disparities in acceptance of Medicaid patients in dental practices. J Public Health Dent. 2008; **68**:149-53.

Safety Nets in Kenya's Public Health Sector: More Insights into Waivers and Exemptions. (2003) Available from: http://www.kenyagranary.or.ke

Sivapathasundharam B. Dental education in India. Indian J Dent Res 2007; **18**:93.

Taylor P, Blewett L, Brasure M, et al. Small town health care safety nets: report on a pilot study. *J Rural Health* 2003 Spring; 19(2):125-34.