Developing and Deploying a New Member of the Dental Team: A Pediatric Oral Health Therapist

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Abstract

There are inadequate numbers of dentists able and willing to treat America's children, specifically children from low income and minority populations. This has led to the well-publicized disparities in oral health among children. In the early part of the 20th century New Zealand faced a significant problem with oral disease among its children and introduced a School Dental Service, staffed by allied dental professionals with two years' training in caring for the teeth of children, "school dental nurses." A significant number of countries have adopted the model. This article reviews the history of attempts to develop such an approach in the United States. It advocates for the development and deployment of pediatric oral health therapists as a means of addressing the disparities problem that exists in America with such individuals being trained in children's dentistry in a two-year academic program. The article asserts that adding a pediatric oral health therapist to the dental team is one way in which the profession of dentistry can fulfill its moral obligation to care for the oral health of America's children and ensure that all children are treated justly. Recently, the American Association of Public Health Dentistry promulgated a strategic plan that endorsed such an approach.

Key Words: oral health disparities, access, pediatric oral health therapist, dental therapist, dental team

"Children may be the victims of fate—they must never be the victims of neglect."
John F. Kennedy

Introduction

In the January 2004 issue of the *Journal of Dental Education*, I published an article entitled, "Developing a Pediatric Oral Health Therapist to Help Address Oral Health Disparities Among Children" (1). The article called for the development of a new member of the dental team, a pediatric oral health therapist, as a means of helping address the significant disparities in oral health that exist among children in the United States. It is not necessarily the "*bold, new* solution" to the access problem for low income and minority children called for in a 2002 National Council of State Legislatures' (NCSL) report entitled: "Access to Oral Health Services for Low Income People" (2). Rather, it is an *old* solution that was *boldly* undertaken by the New Zealand Dental Association when, in 1921, they led in the development of the now internationally famous New Zealand school dental nurse, the progenitor of the pediatric oral health therapist for which I continue to advocate in this article (3,4,5).

Disparities and Access. The disparities that exist in oral health among America's children, and the lack of access to oral health care, have been played out in the theatre of *Oral Health in America: A Report of the Surgeon General* (6), and the *National Call to Action to Promote Oral Health* (7), under the leadership of the Office of the Surgeon General. The details are so well known and acknowledged they require no rehearsing.

While numerous barriers to access have been identified (2,6,8,9), the most significant one, in my judgment, are the numbers, distribution, education, and attitudes of dentists.

We face a real decline in the actual number of dentists practicing in the United States, in the face of an expanding population (6,10,11). Compounding the problem is the mal-distribution and the ethnicity of dentists. The number of federally designated shortage areas has increased from 792 in 1993 to 1,895 in 2002 (8). While approximately 12% of the population is African-American, only 2.2% of dentists are; and individuals of Hispanic ethnicity make up another 10.7% of the population, yet only 2.8% of dentists are Hispanic (12).

There is a general lack of instruction and experience that graduating dentists have had in treating children that "affect competency achievement, and adversely affect training and practice" (13). Furthermore, the number of pediatric dentists is not helpful in addressing the issue of access for children. While there has been a significant increase in the number of specialists in pediatric dentistry over the past thirty years, there are only 4,357 such specialists practicing in the United States (14) compared with the 57,000 pediatricians who care for the general health of the nation's children (15).

The attitude of dentists is an additional access problem for low-income children. Dentists generally do not want to treat publicly insured children when they are covered by Medicaid or the State Children's Insurance Program (S-CHIP). A 1996 study indicated that only 10% of America's dentists participated the Medicaid program (16). A more recent study indi-

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cates that in the year 2000, approximately 25% of dentists received some payment from public insurance; however, only 9.5% received more than $10,000 (17). Additionally, most dentists are as busy as they care to be, as they manage the increasing numbers of baby-boomers and others who require implants, esthetic dentistry, and other complex services in high demand.

The New Zealand School Dental Nurse-Now Therapist. In 1921, a group of 30 young women entered a two-year training program at Wellington, New Zealand to study to become "school dental nurses," and in so doing transformed the oral health of the children of a country and laid the basis for what was to become an international movement (3). New Zealand's School Dental Service continues to this day, and has developed an enviable record in caring for the oral health of all children in New Zealand. There have been changes in the School Dental Service through the years, as well as in the training program for school nurses. However, the basic education and service strategies of over 80 years ago remain intact, having stood the test of time.

In 1998, there were 569 school dental therapists in the School Dental Service (18). (The name change occurred in 1988 by a vote of the dental nurses.) They care for 497,000 school children in over 2,000 schools (19). Two training programs currently exist, one at the national dental school at the University of Otago, in Dunedin, on the South Island, and one at the Auckland University of Technology on the North Island. The two educational programs each enroll approximately 20 new students/year (20).

New Zealand's record of oral health for children is enviable. All children, from age six months through age 13, are eligible to participate in the School Dental Service and receive comprehensive preventive and restorative care, without fee, at their local school clinic, by the school dental therapist. Children, 14-18, and those requiring root canal therapy, management of dental trauma, or extraction of permanent teeth, are referred to private practitioners who serve under contract to the government. While enrollment is not compulsory, 97% of all school-aged children participate in the School Dental Service (21). The School Dental Service is revered as a New Zealand "icon" (22). As one colleague expressed it, "the School Dental Service has become an integral component of the New Zealand culture. To Kiwis it is like motherhood and apple pie" (23). And, it is highly valued, not only by the public, but by dentists as well (19).

While the number of decayed, missing, and filled primary and permanent teeth (deft and DMFT) of the children of New Zealand and the United States is roughly comparable, of particular interest are the differences in the components of these epidemiological indices. A May, 2003, report indicates that 53% of New Zealand's five year olds are caries-free, with a mean eft of 1.8 (24). At age 12-13, 42% of children are caries-free with a mean MFT of 1.6. What is surprising and fascinating about these data is that the decayed (d/D) components are not included. The University of Otago School of Dentistry's epidemiologist indicated that these data represent children enrolled in the School Dental Service and are collected at the end of each school year (23). At that time all decayed teeth have either been restored, extracted, or have exfoliated. This means that (essentially) all of the school children in New Zealand are caries free at the end of an academic year.

In 1968, at the Centennial Conference on Oral Health held at the Harvard School of Dental Medicine, Dean John Walsh, of the University of Otago School of Dentistry, presented a paper entitled, *"International Patterns of Oral Health Care—The Example of New Zealand"* (25,26). He suggested the utilization of a *Care Index*, with such an index being calculated by developing a ratio of the filled teeth component (the f/F) of the deft or the DMFT to the overall deft or DMFT. In 1968, the *Care Index* in New Zealand was 72%; meaning 72% of all teeth of children affected by caries had been restored. In the United States, the figure was 23%. Dean Walsh made the claim that the *Care Index* provides a convenient measure of the effectiveness of a country in treating dental caries. Today, the *Care Index* for New Zealand children is (essentially) 100% (24). In the United States, while significantly improved from 1968, it is 63.3% for primary teeth and 74.0% for permanent teeth through age 14 (27). Of note is that the *Care Index* drops significantly for U.S. children when adjusted for family income. For primary teeth it is 72.3% for children at 300% of the federal poverty level (FPL), but only 48.7% for children at 100% of the FPL. For permanent teeth it is 93.2% for children at 300% of the FPL, and only 72.3% for children at the 100% of the FPL (27). Such disparities help underscore the access to care issue for poor children.

Training Dental Therapists in New Zealand. Admission to one of the two dental therapy training programs in New Zealand is based on graduation from high school. The curriculum is offered over two academic years, each of approximately 32 weeks' duration; total curriculum clock hours are 2,400. Approximately 760 hours of the curriculum is spent in the clinic treating children. Upon graduation, individuals entering the School Dental Service must serve for one year with another school dental therapist.

The New Zealand school dental nurse/therapist has served as a prototype for adding such a member to the dental team in many countries throughout the world, although the specific approach, including practice environments and restrictions, vary from country to country. The World Health Organization documents 42 countries with some variant of a dental therapist including: Australia, China (Hong Kong), Singapore, Thailand, Malaysia, Great Britain, and Canada (28). The typical justification for developing and deploying dental therapists in these countries has been an inadequacy of the dental workforce which adversely affects access to oral health care (29).

The Canadian Experience. The Canadian experience is relevant as it is apparently the only country in the Western Hemisphere to have a train-

ing program for dental therapists. The National School of Dental Therapy for Canada exists as a component of the First Nations University of Canada, in Prince Albert, Saskatchewan. The School began in 1972 at Fort Smith, in the Northwest Territories, and was modeled after New Zealand's program (30). The mission was to train dental nurses, in a two-year program, to provide care to the remote First Nation (aboriginal Indians) and Inuit (Eskimo) villagers of the Canadian North, where dental care was virtually inaccessible. In 1984, the School was moved to Prince Albert, Saskatchewan, due to an inadequate supply of patients in the Fort Smith area. The School continues to prepare dental therapists today, with an emphasis on training aboriginal people to care for aboriginal people, specifically those on First Nation reserves and in the North (31). The curriculum is similar to the one in New Zealand.

Dental therapists are able to work for Health Canada (Canada's ministry of health) on federal First Nation reserves throughout Canada, with the exception of the provinces of Ontario and Quebec. There are 88 dental therapists so employed today (32). Recent legislation (2001) enables therapists to also work in private dental offices in the Province of Saskatchewan, under the indirect supervision of a dentist (33). Currently, there are 208 registered dental therapists in Saskatchewan, with 184 holding active registrations to practice (34).

Double blind studies of the work of the Canadian dental therapists, in comparison to federal dentists, have been conducted (31,35). The results indicated that the quality of restorations placed by dental therapists were equal to those placed by dentists. Trueblood has documented the cost-benefit effectiveness of the federal dental therapists in a doctoral dissertation published in 1992 (36).

The United States Experience. In 1949, the Massachusetts legislature passed legislation authorizing the acceptance of funding by Forsyth Dental Infirmary for Children from the Children's Bureau to institute a research project to train individuals, in a two year program, to prepare and restore cavities in children's teeth (37,38). The program was to be conducted under the supervision of the Department of Health and the Board of Dental Examiners. The passage of this legislation provided for the establishment of an experimental dental care program for children similar to the school dental nurse of New Zealand.

The reaction and response of organized dentistry was swift and strong. The ADA House of Delegates passed resolutions "deploring" the program; expressing the view that any such program concerning the development of "sub-level" personnel, whether for experimental purposes or otherwise, be planned and developed only with the knowledge, consent, and cooperation of organized dentistry; and stating that a teaching program designed to equip and train personnel to treat children's teeth cannot be given in a less rigorous course, or in a shorter time, than that approved for the education of dentists (37). Faced with increasing pressure from organized dentistry, the Massachusetts governor signed a bill in July, 1950, rescinding the enabling legislation (39).

In 1970, under the leadership of Dr. John Hein and Dr. Ralph Lobene, the Forsyth Dental Center initiated what was subsequently designated, and described in a book by the same title, *The Forsyth Experiment* (40). The House of Delegates of the Massachusetts Dental Association had recently passed a resolution favoring research on expanded function dental auxiliaries. Forsyth communicated to both the Massachusetts Board of Dental Examiners and to the Massachusetts Dental Society its plans to initiate a research project to train dental hygienists in anesthesia and restorative therapy for children. In October of 1973, the Board of Dental Examiners notified Forsyth that a hearing would be held to review their project. Subsequently, the State Board voted unanimously that the drilling of teeth by hygienists was a direct violation of the dental practice act of Massachusetts. Forsyth was forced to close its "experiment" in June of 1974, but not before it was able to objectively document that hygienists could be taught to provide quality restorative dental care effectively, and in an efficient and cost-benefit effective manner. Whereas the projected curriculum time to achieve the competencies was 47 thirty-hour weeks, the project was able to achieve its desired training outcomes in 25 weeks.

In February, 1972, Dr. John Ingle, Dean of the University of Southern California School of Dentistry (USC) proposed the use of school dental nurses, as employed in New Zealand, to address the problem of dental caries in school children (41). USC subsequently applied for a training grant of $3.9 million from the Public Health Service to train dental nurses, with Dr. Jay Friedman as the program director. At the same time, then-Governor of California, Ronald Reagan established a committee to study the functions of all dental auxiliaries in order to make recommendations to the California legislature and the State Board of Dental Examiners (42). As a result of these two significant developments, the two existing California Dental Associations established a committee to: study the New Zealand dental care system; the relationship of the school dental nurse to private practice; assess the work of the school dental nurse; and compare the New Zealand and California systems (42). The Committee's report was published in April of 1973 in the *Journal of the Southern California Dental Association* (42), and subsequently summarized in the *Journal of the American Dental Association (JADA)* (43). The report stated that "there is little doubt that dental treatment needs related to caries for most of the New Zealand children age 2 ½ to 15 have been met." However, the report concluded that the public of California would "probably not" accept the New Zealand type of school dental service, as it would be perceived as a "second class system." Drs. Ingle and Friedman wrote sharp rebukes of the Committee's report, pointing out the inconsistencies of the objective findings of the investigation in relation to the subjective conclusions of the re-

port, which they judged to be drawn to placate the practicing profession in California (44,45). Dunning also criticized the report's conclusions in a letter to the *JADA* editor (46); and Goldhaber, in a *Journal of Dental Education* article, called the committee's conclusion, "absurd" (47). The grant application of Drs. Ingle and Friedman was not funded. Dean Ingle subsequently resigned his position as dean of the School of Dentistry to join the staff of the Institute of Medicine.

Between 1972 and 1974, at the University of Kentucky, another expanded functions project, supported by the Robert Wood Johnson Foundation, took place (48). This also involved the training of dental hygienists in restorative dentistry. Thirty-six students, who were completing a four-year baccalaureate program in dental hygiene, participated in a compressed curriculum that provided 200 hours of didactic instruction in children's dentistry, as well as 150 hours of clinical practice. The program was specifically addressed to providing primary care for children, including administration of local anesthesia, restoration of teeth with amalgams and stainless steel crowns, and pulp therapy. Toward the conclusion of the curriculum, the hygienists participated in a double blind study comparing their restorative skills with fourth year students. No significant differences were found between the quality of their work and that of the graduating dentists.

At the College of Dentistry at the University of Iowa a five year project, conducted between 1971-76, and supported by the W.K. Kellogg Foundation, trained dental hygienists to perform expanded functions in restorative dentistry and periodontal therapy for both children and adults. The results were the same as the studies at Forsyth and Kentucky. Hygienists could be effectively trained, in a relatively brief time period to perform, at a comparable quality level, procedures traditionally reserved for dentists (49).

Developing Pediatric Oral Health Therapists. A curriculum for developing pediatric oral health therapists exists, and has been documented to be effective in multiple countries throughout the world. It is the traditional curriculum of the school dental nurse/therapist. The curriculum for a pediatric oral health therapist could be considered comparable to the two-year academic (associate degree) curriculum for preparing dental hygienists. The primary difference would be the focus of the training, with that of the hygienist being on periodontal disease, particularly in the adult; and the therapist on dental caries, specifically as related to the child. The curricula would share many areas of commonality, such as the basic biomedical sciences, oral biology, preventive dentistry, infection control, the diagnostic sciences, and radiography. Evidence suggests that the perceptual motor skills required to restore children's teeth are no more complex than those required to perform root planning and curettage and can readily be taught to individuals with a high school degree, outside the context of earning a baccalaureate degree, and participating in a four-year professional degree course in dentistry.

While it may be possible to shorten the two-year academic training period, were the matriculates in such a program dental hygienists, there is reason to encourage hygienists to continue to be the expanded function allied dental professional for managing adult periodontal health and disease. Hygienists are too valuable in their current role, particularly in the context of their relative shortage and the aging of the population, with concomitant needs for periodontal therapy. Rather, it appears more reasonable to create a new allied professional for the dental team who focuses on the unique oral health needs of children, specifically as these relate to the problem of dental caries.

It is tempting to want to designate these proposed pediatric oral health therapists "midlevel practitioners." However, they do not fit this descriptor as such a designation is typically applied to nurse practitioners and physician's assistants. The entry-level education for nurse practitioners is the master's degree (50), and by 2006, all physician's assistants training programs will be at the master's degree level as well (51). It is more appropriate to relate a pediatric oral health therapist to a registered nurse with an associate's degree. There are approximately 750 two-year registered nursing programs operational in the United States (52). Or, as has been suggested, the pediatric oral health therapist could be related to a registered dental hygienist with similar such associate degree credentials. Of the 260 dental hygiene programs in the U.S., 230 are two-year associate degree programs. Only 30 programs offer a baccalaureate degree (53). The average curriculum clock hours for a two-year dental hygiene program is 1,948,(54) a period of instruction comparable to international training programs in dental therapy.

Deploying Pediatric Oral Health Therapists. To effectively address the access problem, it appears clinicians must go to where children are located. As in New Zealand, the most logical place to capture this audience is in the school system. As Dunning stated over 30 years ago, "any large-scale incremental care plan for children, if it is to succeed, must be brought to them in their schools" (55). It is reasonable to deploy pediatric oral therapists in mobile vans to provide care on a financial needs-tested basis, for example, to all Medicaid and S-CHIP eligible children in a school, moving through the year from one school to another. Such a program, begun in an incremental manner with the youngest children (with the least carious experience and the greatest potential for implementation of preventive care), would seem to be a cost-effective way of managing the oral health needs of our poorest and neediest children. In New Zealand, a dental therapist with an assistant is responsible for 1,450 children (19). The Commonwealth of Kentucky has essentially the same population as New Zealand. Kentucky has 384,832 children ages 5-11 (K-6). Of these, approximately 43% (or 172,418 children) live at a level of 200% of poverty or below, and are eligible for Medic-

aid/S-CHIP benefits (56). To manage this number of children would require 212 dental therapists based on the New Zealand model. While no direct economic comparisons can be made, due to the significantly different circumstances, it is interesting to note that New Zealand spends approximately $34 million (US) caring for all enrolled children, ages 6 months through 17 years; (57) and Kentucky's dental expenditures for children Medicaid/S-CHIP alone in 2002-03 were approximately $40 million (58).

Possibly a more realistic environment for *initially* introducing the pediatric oral health therapist in the U.S. is the Indian Health Service (IHS). Dental caries is rampant among the American Indian/Alaskan Native population. These children have the highest decay rate of any population cohort in the U.S., five times the U.S. average for children 2-4 years of age (6). The IHS continues to experience great difficulty in attracting dentists; approximately one-fourth of the dentist positions at 269 IHS and tribal facilities were vacant in April of 2000 (9). The dentist/population ratio in the IHS is 33/100,000, or one dentist for every 2,800 individuals (59). Because dentistry in the Indian Health Service is practiced on federal reservations, state dental practice acts are not applicable. Such a circumstance eliminates a significant barrier to deploying pediatric oral health therapists.

In 2001, the Forsyth Institute approached the Robert Wood Johnson Foundation for funding to develop a training program at Forsyth for pediatric oral health therapists. When funding was not forthcoming, the leadership of the Alaska Native Tribal Health Consortium proceeded, in 2003, to send six Alaskan students to the University of Otago in New Zealand to train as therapists. Six additional Alaskan students enrolled in the training program in January of 2004. The Alaska Tribal Health Consortium is financing the training of these individuals, the first of whom will return in December of 2004 to sovereign tribal lands and provide oral health care for children. They will practice in the context of the Community Health Aide Program (CHAP), a program authorized by federal statute in which Tribes provide primary health care throughout Alaska. The program has been in existence for 36 years. There are over 500 CHAs in Alaska, working in 180 villages, providing culturally sensitive health care to fellow villagers. A component of the CHA program is the Dental Health Aide (DHA). There are three levels of functioning for a DHA; the returning therapists constitute the highest level, a DHA III. CHAs, including DHAs, must meet specific training requirements, undergo a protracted preceptorship, and have their skills re-evaluated every two years. Continuing education is required for continued certification. CHAs and DHAs are recruited from villages they will return to serve. This helps ensure culturally competent care, as well as sustainable jobs in areas that need them most.

The American Dental Association learned of the Alaskan students studying dental therapy in New Zealand and the intention for them to return to the tribal areas to practice. At the October, 2003, annual session in San Francisco, the House of Delegates passed Resolution 50H-2003, calling for a task force to "explore options for delivering high quality oral health care to Alaska Natives," and to submit a report to the Board of Trustees in time for recommendations to be brought to the 2004 House of Delegates (60).

The Alaska Native Oral Health Access Task Force submitted its report to the ADA Board of Trustees in August of 2004. Based on the Task Force's recommendations, the Board advanced to the House of Delegates at the ADA's October 2004 Annual Session Resolution 24, subsequently amended and passed by the House of Delegates as Resolution 24S-2. Among the 14 elements of the resolution to address access to oral health care for Alaska Natives were two dealing specifically with the advanced level Dental Health Aide III (pediatric oral health therapist): (1) "the ADA work with the ADS [Alaska Dental Society] and tribal leaders to seek federal funding with the goal of placing a dental health aide (i.e., a Dental Health Aide I or II) trained to provide oral health education, preventive services and palliative services (except irreversible procedures such as tooth extractions, cavity and stainless steel crown preparations and pulpotomies) in every Alaska Native village that requests an aide;" and (2) "The ADA is opposed to non-dentists making diagnoses or performing irreversible procedures." The resolution passed the House of Delegates overwhelmingly on a voice vote (61).

Subsequently, the ADA initiated an effort to amend the Indian Health Care Improvement Act which was in the process of being reauthorized by the Congress in the closing days of the 108th Congress. This Act authorizes development and operation of the Community Health Aide Pogram, which includes Dental Health Aides. House Bill HR 2440 was amended at mark-up (House Report 108791, Section 121, #7) to read "ensure that no dental health aide is certified under the program to perform treatment of dental caries, pulpotomies, or extractions of teeth." The Senate version of the HR 2440 was S 556. The ADA's amendment was not successful as reauthorization of the Indian Health Care Improvement Act was not able to be accomplished by the 108th Congress; reauthorizing legislation will have to be re-introduced in the 109th Congress (61).

It seems clear that organized dentistry's opposition to developing a member of the dental team to provide primary care for underserved children has not changed since the first attempt to do so in 1949 at Forsyth. It is important to note that this current opposition is in the context of having individuals trained as therapists provide care to native Alaskan children in remote areas who essentially have no access to oral health care.

A third potential environment for pediatric oral health therapists is in private dental offices, as exists in Saskatchewan. In such, therapists could work under the supervision of

a dentist, serving as a dentist-extender for children's primary care, in much the same manner a dental hygienist serves in such a role for adult periodontal care. Saskatchewan dentists testify to the significant economic return on their investment in employing dental therapists apart from the opportunity it provides to care for more patients than could be cared for without such personnel. That is improved access. It would be in dentistry's economic self-interest to develop and deploy pediatric oral health therapists in private dental offices.

A final potential environment for pediatric oral health therapists is the least desirable one, from the perspective of dentistry—the offices of America's pediatricians. The majority of children are seen regularly by the nation's 57,000 pediatricians. In fact, the typical infant/child has had 12 visits to the pediatrician by age three, providing multiple opportunities for early intervention to effect preventive and therapeutic oral health care (62). Recently, the Public Health Practice Office of the Centers for Disease Control funded a study of the dental practice acts of all 50 states and the District of Columbia to determine the limitations the individual state practice acts place on individuals, other than licensed dentists, to provide oral health care (63). The results of the study indicate there would be no restrictions on physicians, such as pediatricians, providing dental care in 23 states; and no restrictions in an additional 11 states as long as dentistry is not practiced "as a specialty." In nine states, physicians would only be allowed to provide emergency care. Three additional state practice acts seemed to suggest physicians would be restricted from providing any oral health services. It is interesting to speculate what might happen if a pediatrician were to hire a dental therapist trained in Canada, New Zealand, or another country, and began to offer primary oral health care for children in his or her office. In 2001, the average pediatrician earned $150,000/year,(64) whereas that same year the average pediatric dentist earned $293,320 (65). It has been expressed in the past that the revolution we are experiencing in health care, both in therapeutic approaches and the environment of practice, is such as to encourage physicians to become more adventuresome in expanding their services to include dentistry (66). Pediatricians are now receiving training in oral health care in a number of settings around the country and are conducting oral exams and applying fluoride varnish to children's teeth, for which they are being remunerated (67). Competition in the marketplace of health care could lead to undesirable economic consequences for dentistry, absent the profession aggressively addressing the oral health disparities among the nation's children.

Social Justice. Kopleman and Palumbo have published a thoughtful and compelling article in the American Journal of Law and Medicine entitled: "The U.S. Health Delivery System: Inefficient and Unfair to Children" (68). The paper explores the four major ethical theories of social (distributive) justice: utilitarianism; egalitarianism, libertarianism, and contractarianism. They conclude that no matter which theoretical stance you take, children should receive *priority* consideration in receiving health care. Yet, our children do not even receive *equal*, much less priority, consideration.

One of the most important and influential books of political philosophy written in the 20th century was *A Theory of Justice* by the late Professor John Rawls of Harvard University (69). In it Professor Rawls carefully explicates the nature of justice. In his model of justice, social and economic arrangements would be such as to *maximally benefit the worst off.* Given a Rawlsian view of social justice, our nation's oral health care system, if is it to be just, must be such as to be committed to maximally benefiting the *"worst off."* Our disparities and access problems are visited disproportionately on socio-economic groups that are the least well off. Norman Daniels, professor of bioethics and population health at the Harvard School of Public Health, agrees with Rawls, and argues that a just society should provide basic health care to all, but redistribute health care more favorably to children (70). He justifies this conclusion based on the affect health care has on equality of opportunity for children; with equality of opportunity being a fundamental requirement of justice. As noted, poor and minority children, the most vulnerable individuals in our nation, and the *"worst off,"* have the highest prevalence of oral disease, the poorest access to oral health care, and the poorest overall oral health. Justice demands they be maximally benefited, in order that they ultimately have *"equal opportunity"* to do well.

Conclusion

The time has come for the profession of dentistry to seriously and courageously provide access to oral health care for all of America's children in such a manner that major barriers are destroyed and so that parents, regardless of their economic status, ethnicity, or cultural circumstance, can be assured their children will be treated justly by society, in that they have an equal opportunity, with other children, for good oral health. A method that can be effective in achieving such is the development and deployment of pediatric oral health therapists, allied professionals uniquely trained to care for the oral health of children. To its credit, the American Association of Public Health Dentistry has endorsed the concept of a pediatric oral health therapist in its strategic plan, released in April of 2004 (71).

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