

American Academy of Pediatrics

Mapping Health Care Delivery for America's Children

A Collaborative Advocacy and Research Project of
the AAP and Dartmouth Medical School, Center for the Evaluative Clinical Sciences

Table of Contents

1. Executive Summary
2. Introduction
3. Project Goals
4. Primary Care Service Areas (PCSAs)
5. Products
6. Database Functionality
7. Promotion and Dissemination Plan
8. Significant Contributions to Improving Child Health
9. AAP and Dartmouth Collaboration
10. Project Staff
11. Request for Funding
12. Conclusion

1. Executive Summary

The American Academy of Pediatrics is partnering with Dartmouth Medical School to develop an interactive, Web-based database on the demographics, socioeconomic status, and geographic distribution of US children and providers of pediatric care. The *Mapping Health Care Delivery for America's Children* Project will address practical, “real-world” health issues at all levels by providing accurate information on the delivery of health care to children. Such a data-driven approach to health care has great potential to substantively improve the quality of pediatric health care in the United States.

Leading health services researchers at the Dartmouth Medical School Center for the Evaluative Clinical Sciences have developed an innovative measurement tool known as the Primary Care Service Area (PCSA). PCSAs are the newest and best units of primary health care utilization. They can provide an accurate picture of where children and their families go for health care and, consequently, zoom in on local health care markets. The Academy will work with Dartmouth to make the PCSA database pediatric specific.

The Project will develop a series of innovative products to improve child health, including:

- National maps and summaries that show geographic distribution of providers of health care to children
- State-level maps illustrating Primary Care Service Areas
- State-level data tables
- Local-area information
- Scenarios on “real-world” health issues
- Journal articles and scholarly publications
- Link to AAP electronic pediatric job network (www.pedjobs.org)
- Promotional Web page for the mapping project (www.aap.org/mapping)
- An electronic supplement to *Pediatrics* on physician workforce issues

The database and other Project products will be a great asset to a wide range of audiences. These include researchers, public health officials, physicians, health care payers, the public, and other stakeholders in improving child health.

The American Academy of Pediatrics is seeking financial support for the 3 years needed to implement the *Mapping Health Care Delivery for America's Children* Project. We are requesting \$193,402 for year 1, \$154,122 for year 2, \$157,936 for year 3, and \$14,600 for an electronic supplement to *Pediatrics* on physician workforce issues. This is a three-year total of \$520,060. A detailed budget is available upon request.

The Project is designed to achieve and measure multiple outcomes. The Project's mapping capabilities will be developed to illustrate the incidence of risk factors that could have a significant impact on public health. The mapping of these risk factors and potential implications for patient health could then be used to inform decisions about how to anticipate and prevent a public health threat through the appropriate mobilization of financial, human, scientific, and other resources. Recent epidemiological and bioterrorist threats, such as West Nile virus, smallpox, and anthrax, have underscored the need for reliable data on physician supply and access to care, vulnerable patient populations, and adequate stores of vaccines to avert a public health disaster.

2. Introduction

The mission of the American Academy of Pediatrics is to attain optimal physical, mental, and social health and well-being for all infants, children, adolescents, and young adults. To accomplish this, the Academy is committed to disseminating accurate physician and patient data and information to policymakers, industry, the public, and other stakeholders.

The Academy is implementing this workforce and advocacy goal through a new partnership with reknowned health services researchers at the Dartmouth Medical School Center for the Evaluative Clinical Sciences. At the heart of this collaboration is the development of an interactive Web-based database that will be the underpinning of the *Mapping Health Care Delivery for America's Children Project*. The Project database will be used to improve the provision of pediatric care by supplying accurate information on the demographics, socioeconomic status, and geographic distribution of US children and providers of pediatric care. The key features of the *Mapping Health Care Delivery for America's Children Project* are described below.

Until now, the Academy, like most health care organizations, used county-level physician supply data from the American Medical Association Master File. Patients, however, ignore county boundaries when seeking care. Consequently, county-based measures of physician supply and patterns of patient utilization of health care resources are often inaccurate. Using Primary Care Service Areas (described in more detail below), the *Mapping Health Care Delivery for America's Children Project* can identify patterns in patient demographics (eg, median household income, single mothers, linguistic isolation), physician supply, the geographic distribution of primary care pediatricians and pediatric subspecialists, and the location of federally funded health clinics.

The data and products available through the *Mapping Health Care Delivery for America's Children Project* have the potential to impact dramatically the provision of pediatric health care. The Project will support the efforts of child advocates and others to address the practical problems of the health care delivery system. On issues ranging from children's health insurance to government-funded programs to improve care to underserved communities, the Project will provide the necessary support for making and implementing intelligent policy decisions. The Project will ensure that the government, health care organizations and payers, employers, physicians, patients and families, the public, and others will be able to make better data-driven choices about the use of health care resources. The ability of these individuals to make better choices will translate over time into a better health care system and better health for America's children.

3. Project Goals

The Academy is partnering with the Center for the Evaluative Clinical Sciences at Dartmouth Medical School to create a Web-based database that will revolutionize the way health care data are utilized and applied to improve the health of America's children. The development of this database will achieve the following 5 goals:

1. to develop a credible and respected database of pediatric workforce information. This unique database will reflect actual travel patterns for health care rather than arbitrary political jurisdictions (ie, counties);
2. to identify important national trends concerning the pediatric health care delivery system and the pediatric patient population;
3. to shape public health policy by identifying local health care market areas where children may be underserved;
4. to enable a wide audience of health care stakeholders and consumers to access this information; and
5. to apply this information to key public health issues to improve the health care delivery system and the health status of infants, children, adolescents, and young adults. This will be accomplished through public policy development, research, scholarly publications, advocacy tools, and other activities.

4. Primary Care Service Areas (PCSAs)

Leading health services researchers at the Dartmouth Medical School have developed an innovative measurement tool known as the Primary Care Service Area (PCSA). PCSAs are the newest and best units of primary health care utilization. They can provide an accurate picture of where children and their families go for health care and, consequently, zoom in on local health care markets. Identifying these markets will be of immense value to both the health care community and industry. PCSAs will show the location and characteristics of physicians and children across the country. This information will highlight geographic areas where local health care needs outstrip existing resources, such as physicians, hospitals and clinics, and finances. PCSAs contain a number of unique and cutting-edge features, including:

- Health care service areas based on actual patterns of local primary health care use.
- Detailed information for each PCSA on the local health care system and patient population. Examples include patient risk, availability of jobs for physicians, patient insured and poverty rates, and number of hospitals and health clinics.
- Easy and immediate accessibility to information for a wide range of users, from the novice to the master user.
- An interactive database that allows users to create customized maps and tables on their local health care system.
- Accurate and data-driven information of health care use to support the Academy's mission as an advocate for children.

Great progress in implementing the pediatric database has already been made. The federal government, through the Bureau of Health Professions and the Bureau of Primary Health Care, committed the initial funding to Dartmouth Medical School to develop the PCSA database infrastructure. With this infrastructure now in place, the modification of the PCSA database for pediatrics will be easily achieved.

For more detailed information on the PCSAs, please see the article, "Primary Care Service Areas: A New Tool for the Evaluation of Primary Care Services" (Appendix).

5. Products

The *Mapping Health Care Delivery for America's Children* Project will develop a wide range of innovative products for use by

- Government agencies
- Health care policymakers
- Public health officials
- Health care organizations
- Health care payers
- Industry
- Employers
- Job-seekers
- Pediatricians
- Medical and specialty organizations
- Researchers
- Patients and the public
- Child advocates

These products include:

- ◆ National maps and summaries that show the geographic distribution of providers of health care to children. This information will be indispensable to policymakers in improving the access of American children to health care resources. Government agencies, child advocates, and the health care industry will be able to identify where resources are needed to meet patient needs and counter public health threats. The Project funder can promote its fundamental contribution to the public good by identifying medically underserved areas and vulnerable patient populations.
- ◆ State-level maps illustrating Primary Care Service Areas (PCSAs). State-level maps will provide a snapshot of state-level health care market information. These state maps will also highlight at-risk communities and display PCSAs where children commute across state borders for health care.
- ◆ State-level data tables. Data tables will summarize key information from the state maps in an accessible, easy-to-read format. Statistics on important health care issues, such as availability of pediatricians and health care facilities, poverty and uninsured rates, and incidence of disease, will be an invaluable planning resource to public health officials and health care employers.
- ◆ Local-area information. Detailed information on individual PCSAs is projected to drive local decision-making about the use of health care resources. It will tell pediatricians, government agencies, employers, and health care organizations where patient needs are unmet. It will also guide the public in making decisions about where to go for health care by documenting the availability and accessibility of health care resources in every community in the country.

Of particular importance to Project funders, this local-area information will guarantee wide marketing exposure to pediatricians by displaying the Project funder's logo on all Project products on the AAP public Web site. The AAP Web site is the most accessed pediatric information resource on the Internet, with nearly 6 million visits in 2002.

- ◆ Scenarios on “real-world” health issues. A series of scenarios that apply the maps and data to address practical health issues will be developed as a practical tool for users of the Project's products.
- ◆ Journal articles and scholarly publications. The data and information from the Project will be disseminated through the publication of peer-reviewed journal articles and news articles in the medical press. These articles will be targeted toward the medical, scientific, and public policy communities, and will acknowledge the funder's financial support of the Project.
- ◆ Link to AAP electronic pediatric job network (www.pedjobs.org) The bi-directional link between the Project's Web page and pedjobs.org serves as the ideal portal to the best information for pediatricians on employment opportunities across the country. Pedjobs.org has established itself as the gold standard in pediatrician employment services. Employers seeking to advertise employment positions for pediatricians and reach the Academy membership have unlimited access to the nation's premier cadre of general pediatricians and pediatric subspecialists. The combination of the Project's outstanding resources on health care delivery with the largest listing of pediatric job postings will be a powerful tool in reaching a vast audience of health care providers, including pediatric residents and young physicians.

The link between the mapping database and pedjobs.org will also allow job seekers to make informed career decisions by greatly expanding their knowledge of the area or market in which a potential job exists. It will likewise enable clinics, multispecialty groups, hospitals, and other health care facilities to use the Project's targeted data to determine their future staffing needs. These data will demonstrate where particular types of physicians are in short supply or high demand, where there are barriers to access to health care, and where health care resources are insufficient to meet public health needs or to support an adequate physician workforce.

- ◆ Promotional Web page for the mapping project (<http://www.aap.org/mapping>) Potential funders of the *Mapping Health Care Delivery for America's Children* Project are invited to visit the Project's promotional Web page. This Web page includes an electronic version of the full funding proposal, as well as samples of the Project's products, such as national and state-level maps, easy-to-read data tables, and summaries of key points. The Web page also provides case study scenarios that show how the data can be applied to address real-world health issues to produce improved outcomes in child health.

Once full funding of the Project is secured, Phase II of development will begin. This funding will allow the Project to transition from the creation of static maps and data tables in .pdf format to interactive Internet-based mapping, as described in Chapter 6. Current plans call for the data to be updated internally by Project staff every 3 years. Although it is anticipated

that the current budget will defray the cost of updating the data, external funding will be sought for any enhancements that exceed the budgeted amount for this activity.

- ◆ Electronic supplement to *Pediatrics* on physician workforce issues. In order to better promote both the mapping Project and public understanding of physician workforce issues, an electronic supplement to *Pediatrics* will be developed. This supplement will feature scholarly articles that describe the *Mapping Health Care Delivery for America's Children* Project and/or use the data and maps from the Project to discuss key workforce and health care delivery issues. This supplement would be available to the over 60,000 subscribers to *Pediatrics*.

6. Database Functionality

The *Mapping Health Care Delivery for America's Children* database will be publicly available to all who wish to use its data via a Web page on the AAP public Web site. This is in keeping with the original intent of the PCSA project to make the workforce and patient care data available to the widest possible audience in the interest of promoting optimal patient care.

The functionality of the Web page and database will be built in two phases. In Phase I, the Web page will contain static national and state maps and data tables for a defined number of variables, such as

- children under 18 per clinically active pediatrician
- percent of clinically active pediatricians who are female
- median household income

The content of the Mapping Web page will be housed on an AAP server. Maps and data tables will be provided as printable 8½" x 11" .pdf files.

In Phase II, the content of the Web page will transition from static maps and data tables to interactive Internet-based mapping. Users will continue to use the AAP mapping Web page as the point of entry for accessing the maps and data tables as in Phase I. However, instead of static maps, users will be able to query the mapping database housed remotely on a Dartmouth server, which will be linked invisibly to the AAP mapping Web page. Users will be able to select from an expanded list of variables to produce colored maps at national, state, and local levels. Scenarios that demonstrate the practical application of the information displayed in the maps and data tables to real-world health issues will also be included on the Web page in Phase II.

A select number of tools will afford the user considerable flexibility in navigating in all directions and in zooming in and out. As users zoom in, greater geographical details, such as counties, cities, and major highways will appear. At the PCSA level, users will be able to click on a specific PCSA to display as a colored map and a data table key information about that area's health care resources and other characteristics. In Phase II, user-generated maps and data tables could also be printed in an 8½" x 11" format.

7. Promotion and Dissemination Plan

As the parent organization for the pediatric community, the AAP is ideally positioned to promote and disseminate the Project's products. Its longstanding relationships with other pediatric organizations, medical and specialty societies, governmental agencies, regulatory bodies, and industry will ensure a wide distribution to stakeholders in pediatric health care. The Academy's track record of success, moreover, in utilizing original research to support public policy initiatives will be especially valuable in this endeavour.

In particular, it will be vital to demonstrate how the Project's products can be applied to improve child health outcomes. The Academy's promotion and dissemination plan focuses on real health care issues that can be addressed through the Project's products. With the Project data as a reliable foundation, the Academy will suggest strategies for implementing policy action to improve the health status of children.

In practical terms, the promotion and dissemination plan consists of a multimedia and multi-layered campaign that will be rolled out in successive stages for maximal impact. Key audiences will be targeted through individualized promotion and dissemination plans that highlight the specific features of the Project's products and services that will be of greatest interest and utility to each audience. Reaching these audiences will be achieved through a variety of electronic and print media:

- Press releases
- Newsletters of other organizations
- Postings on related AAP Web pages
- Hyperlinks to relevant external Web sites
- On-line and print peer-reviewed journals and news magazines
- Blast e-mail bulletins
- Promotional mailings
- Testimony and official comments to governmental and regulatory bodies

Publicity for the Project will also be sought through presentations at scientific and organizational meetings. These meetings will serve as important forums for demonstrating the utility of the products for specific audiences. In select cases, the applicability of the products to particular issues will be achieved through the posting of topic-specific educational profiles on relevant Web sites. Examples of potential topic-specific resources include usability profiles on physician gender and median household income. There will also be ongoing opportunities to enhance the functionality of the Project through partnerships with complementary products and services and emerging technologies.

8. Significant Contributions to Improving Child Health

Sound workforce information and planning constitutes a public good by ensuring that there is an adequate supply, distribution, and mix of physicians and other health care providers to meet the nation's health care needs. This principle is the foundation for *Mapping Health Care Delivery for America's Children*. More specifically, the Project proposes to develop products that will translate into improved health care outcomes for children.

To this end, the Project will advocate for physician workforce policy that is in the best interests of children. It will also educate stakeholders in child health about the public good provided by data-driven workforce planning. As a result, it will serve as a springboard for much needed research on a variety of child health issues. These issues include research on the provision of care to underserved populations in rural and urban areas, immunization rates, and enrollment of children in health insurance programs.

In addition, the Project's mapping capabilities will be developed to illustrate the incidence of risk factors that could have a significant impact on public health. The mapping of these risk factors and potential implications for patient health could then be used to inform decisions about how to anticipate and prevent a public health threat through the appropriate mobilization of financial, human, scientific, and other resources.

Of particular importance, however, is the potential for the Project to make substantial contributions to public health efforts. Recent epidemiological and bioterrorist threats, such as West Nile virus, smallpox, and anthrax, have underscored the need for reliable data on physician supply and access to care, vulnerable patient populations, and adequate stores of vaccines to avert a public health disaster.

9. AAP and Dartmouth Collaboration

In order to obtain important, detailed, and credible information about the pediatric population in the US, the Academy has formed a valuable collaborative relationship with the Dartmouth Medical School, Center for the Evaluative Clinical Sciences.

The Academy and Dartmouth seek to develop and disseminate pediatric-specific data that will allow the health care community to make data-driven decisions to improve child health. Through the recent work of Dr. David Goodman, FAAP, the Center has extended its work on the Dartmouth Atlas of Health Care to address primary care specifically.

The Academy brings to this collaborative project its long-standing role as a leading advocate for infants, children, adolescents and young adults. It also contributes its established reputation as the premier organization of the pediatric community and the expertise of its staff in health services research and health policy development.

The Project will also receive substantial support from the AAP national Committee on Pediatric Workforce (COPW), of which Dr. Goodman is a member. The COPW will act as an advisory body, contributing its vast content knowledge of physician workforce issues to the child advocacy and public policy aspects of the Project. The policy statements and scholarly publications developed by the Committee are listed below:

American Academy of Pediatrics, Committee on Pediatric Workforce. "Culturally effective pediatric care: education and training issues." *Pediatrics*. 1999 Jan;103(1):167-169.

American Academy of Pediatrics, Committee on Pediatric Workforce. "Enhancing the racial and ethnic diversity of the pediatric workforce." *Pediatrics*. 2000 Jan;105(1):129-131.

American Academy of Pediatrics, Committee on Pediatric Workforce. "Financing graduate medical education to meet pediatric workforce needs." *Pediatrics*. 2001 Apr;107(4):785-789.

American Academy of Pediatrics, Committee on Pediatric Workforce. "Nondiscrimination in pediatric health care." *Pediatrics*. 2001 Nov;108(5):1215.

American Academy of Pediatrics, Committee on Pediatric Workforce. "Pediatric workforce statement," *Pediatrics*. 1998 Aug;102(2):418-427.

American Academy of Pediatrics, Committee on Pediatric Workforce. "Prevention of sexual harassment in the workplace and educational settings." *Pediatrics*. 2000 Dec;106(6):1498-1499.

American Academy of Pediatrics, Committee on Pediatric Workforce. "Scope of practice issues in the delivery of pediatric health care." *Pediatrics*. 2003 Feb;111(2):426-435.

Anderson MR, Jewett EA, Cull WL, Jardine DS, Outwater KM, Mulvey HJ. "The practice of pediatric critical care medicine: results of the FOPE II Survey of Sections Project." *Pediatr Crit Care Med*. [in press].

Brotherton SE, Habal MB. "Analysis of workforce, distribution of care, and practice preference in pediatric plastic surgery." *J Craniofac Surg*. 1999 Jan;10(1):3-9.

Cull WL, Mulvey HJ, O'Connor KG, Sowell DR, Berkowitz CD, Britton CV. "Pediatricians working part-time: past, present, and future." *Pediatrics*. 2002 Jun;109(6):1015-1020.

Kelly DP, Cull WL, Jewett EA, Brotherton SE, Roizen NJ, Berkowitz CD, Coleman WL, Mulvey HJ. "Developmental and behavioral pediatric practice patterns and implications for the workforce: results of the FOPE II Survey of Sections Project." *J Dev Behav Pediatr*. [in press].

Pan RJ, Cull WL, Brotherton SE. "Pediatric residents' career intentions: data from the leading edge of the pediatrician workforce." *Pediatrics*. 2002 Feb;109(2):182-188.

Pletcher BA, Jewett EAB, Cull WL, Brotherton SE, Hoyme HE, Pan RJD, Mulvey HJ. "The practice of clinical genetics: a survey of practitioners." *Genet Med*. 2002 May/Jun;4(3):142-149.

Redding GJ, Cloutier MM, Dorkin HL, Brotherton SE, Mulvey HJ. "Practice of pediatric pulmonology: results of the Future of Pediatric Education Project (FOPE)." *Pediatr Pulmonol*. 2000 Sep;30(3):190-197.

Stoddard JJ, Cull WL, Jewett EAB, Brotherton SE, Mulvey HJ, Alden ER. "Providing pediatric subspecialty care: a workforce analysis." 2000 Dec;106(6):1325-1333.

Stoddard JJ, Back MR, Brotherton SE. "The respective racial and ethnic diversity of US pediatricians and American children." *Pediatrics*. 2000 Jan;105(1):27-31.

Tunkel DE, Cull WL, Jewett EAB, Brotherton SE, Britton CV, Mulvey HJ. "Practice of pediatric otolaryngology: results of the Future of Pediatric Education II Project." *Arch Otolaryngol Head Neck Surg*. 2002 Jul;128(7):759-764.

Wiley JF, Fuchs S, Brotherton SE, Cull WL, Friday J, Burke G, Simon H, Jewett EA, Mulvey HJ. "A comparison of pediatric emergency medicine and general emergency medicine physicians' practice patterns: results from the Future of Pediatric Education II (FOPE II) Survey of Sections Project." *Pediatr Emerg Care*. 2002 Jun;18(3):153-158.

10. Project Staff

Errol R. Alden, MD, FAAP, Co-Principal Investigator

Dr. Alden is Deputy Executive Director of the American Academy of Pediatrics. He brings to this project a distinguished career as an innovator on numerous issues, including physician workforce, medical education, and international medicine. Most recently, Dr. Alden was Principal Investigator of the highly regarded Future of Pediatric Education II (FOPE II) Project, which delineated a plan for pediatric education that would meet the biopsychosocial needs of children in the 21st century. His work on child advocacy issues has fostered important relationships with a wide range of organizations from the governmental and regulatory arena, educational bodies, and industry, including the National Institutes of Health, the Accreditation Council for Continuing Medical Education (ACCME), and the Johnson & Johnson Pediatric Institute. Dr. Alden will be Co-Principal Investigator for the Academy.

David C. Goodman, MD, MS, FAAP, Co-Principal Investigator

Dr. Goodman is Associate Professor of Pediatrics and Community and Family Medicine, Dartmouth Medical School, and the Center for the Evaluative Clinical Sciences. He also sits on the AAP Committee on Pediatric Workforce, where he is the principal author of the AAP's technical report on the physician workforce. Dr. Goodman's groundbreaking work on Primary Care Service Areas (PCSA), funded by the Health Resources and Services Administration (HRSA) serves as the foundation for the current project. His PCSA research has been presented to important stakeholders, such as the federal Council on Graduate Medical Education (COGME) to inform their policy recommendations to Congress and the US Department of Health and Human Services. He is also a respected author of peer-reviewed journal articles and a seasoned presenter at scientific meetings on workforce issues, both in this country and in international venues. Dr. Goodman will be Co-Principal Investigator for Dartmouth.

Holly J. Mulvey, MA

Ms. Mulvey is Director of the AAP Division of Graduate Medical Education & Pediatric Workforce, and formerly, Director of the FOPE II Project. During her more than 20-year career at the AAP and the American Medical Association, she has earned a national reputation as an authority on public policy issues related to the physician workforce. Ms. Mulvey has published numerous articles on the physician workforce and has served as a reviewer of workforce research grants for HRSA and article manuscripts for *Pediatrics*, the premier peer-reviewed journal in the specialty. She also staffs the AAP Committee on Pediatric Workforce and is a frequent presenter on workforce topics at meetings of national medical and specialty societies, regulatory bodies, and educational groups. Ms. Mulvey will provide overall staff coordination of the mapping Project.

William L. Cull, PhD

Dr. Cull is Senior Research Associate, AAP Division of Health Policy Research. His responsibilities include administration of the Academy's Institutional Review Board (IRB) and direction of its annual survey of 3rd year pediatric residents. He has supplied the statistical and data analysis expertise for numerous peer-reviewed workforce articles, including a series of subspecialty-specific pediatric workforce articles based on data generated by the FOPE II Project. Dr. Cull will contribute his substantial research and statistical skills to refine the Project

and to serve as a resource for advanced users who wish to generate customized or more sophisticated workforce analyses. He will also work with other Project staff to develop presentations for scientific meetings and scholarly publications for peer-reviewed journals.

Ethan Alexander Jewett, MA

Mr. Jewett is Health Policy Analyst, AAP Division of Graduate Medical Education & Pediatric Workforce. He manages the Academy's activities on public policy issues, such as the financing of graduate medical education, international medical graduates and J-1 visas, requirements for residency education, nonphysician scope of practice, and the supply and distribution of the physician workforce. As principal staff of the AAP Subcommittee on Subspecialty Workforce, he oversees the development and publication of pediatric subspecialty workforce articles in peer-reviewed scientific journals. Building on his ongoing work with federal agencies, educational bodies, and policymakers on GME and workforce issues, Mr. Jewett will plan and implement the public policy and advocacy activities of the mapping Project and serve as a liaison between the Project and internal AAP groups and external stakeholders.

Dr. Alden's and Dr. Goodman's *curricula vitae* are available upon request.

11. Request for Funding

The American Academy of Pediatrics is seeking financial support for the 3 years needed to implement the *Mapping Health Care Delivery for America's Children Project*. We are requesting \$193,402 for year 1, \$154,122 for year 2, \$157,936 for year 3, and \$14,600 for an electronic supplement to *Pediatrics* on physician workforce issues. This is a three-year total of \$520,060.

It should be noted, that all of the components of this project from implementation of the technological infrastructure through development of the products are interrelated. The schedule of product development will be determined by the availability of funding, although completion in one development phase through a single funder is preferred. The scope and potential of this activity are so vast, however, that it may be necessary to assemble a team of funders to expedite development of the Project. We are able to keep the costs of developing the pediatric mapping database to a minimum, because of the initial work already completed by Dartmouth through HRSA funding.

As a demonstration of its financial commitment to this project, the Academy is contributing in-kind services that will cover a substantial percentage of staff salaries and time for all senior AAP staff. Also, unlike a “start-up venture,” the established infrastructure of the AAP-Dartmouth collaboration would minimize the funder's risk and expedite the implementation and progress of this project. A detailed budget is available upon request.

12. Conclusion

The opportunities presented by the *Mapping Health Care Delivery for America's Children* Project are especially critical in today's rapidly changing health care delivery system. Policymakers, child advocates, and others are deeply concerned that important health care issues are being addressed in the absence of reliable workforce, socioeconomic, and demographic data. The debate covers a vast array of issues, including the geographic (mal)distribution of physicians, the growing diversity of the pediatric population, the changing demographics of the pediatrician workforce, and the increasing clinical demands placed on pediatric subspecialists.

The *Mapping Health Care Delivery for America's Children* Project will develop a Web-based database of information on the delivery of health care services to pediatric patients. The database and other Project products will be a great asset to a wide range of audiences. These include researchers, public health officials, physicians, health care payers, the public, and other stakeholders in improving child health. The Project will address practical, "real-world" health issues at all levels by providing accurate information on the delivery of health care to children. Such a data-driven approach to health care has great potential to substantively improve the quality of pediatric health care in the United States.

The optimal provision of health care to infants, children, adolescents and young adults hangs in the balance. Prevention of disease, poverty, and mortality among pediatric patients requires more than cutting-edge technology at the bedside. It also requires that this technology be applied to every facet of the health care system. Ensuring the health of tomorrow's children requires an investment today in innovative approaches to workforce planning and health care delivery. The American Academy of Pediatrics and Dartmouth Medical School have developed such an approach through the *Mapping Health Care Delivery for America's Children* Project.

