



BUILDING BRIDGES FOR CHILD HEALTH RESEARCH, POLICY AND PRACTICE: NEW CONCEPTS AND PARADIGMS

The knowledge base specific to child health is expanding rapidly concurrent with an increased emphasis on evidence-based practice in both clinical and population health. Meanwhile, the social and political context for child health in the U.S. remains fluid. The devolution of accountability for health policy, systems, and services presents challenges and opportunities for the application of research findings for state- and community-level child health policies and programs. National data, while plentiful, are not strategically designed to answer questions applicable to community populations. Data routinely collected at the national level are difficult to combine in meaningful ways to provide the multidisciplinary perspective necessary to answer contemporary questions important to child health. Translating new knowledge into practical solutions to problems of individuals and society appears to take on new meaning as we continue to witness the intended and unintended consequences of social experiments such as managed care and welfare reforms.

Several examples of applied child health research can indeed be found. Haggerty and colleagues conducted a series of community child health studies in the early 1970s that assessed the impact of the organization of health care on health outcomes. Robert Guthrie's work on phenylketonuria led to population-based

screening of newborn infants nationwide. Studies conducted by the Manpower Demonstration Research Corporation informed the design of changes to the welfare system, and continue to be an important source of policy information as outcomes of the 1996 legislation are monitored to inform ongoing reauthorization debates. There has been a rebirth of this type of research of late, as seen in the Child Health Insurance Research Initiative (CHIRI) grants, research on outcomes related to Medicaid program enhancements and expansions, and in recent studies of the impact of regionalization and market forces on neonatal death. In fiscal year 1999, AHRQ launched the TRIP (Translating Research into Practice) initiative to generate and implement new approaches that promote use of rigorously derived evidence to improve patient care. These initiatives can be examined to generate models applicable to contemporary child health concerns.

Relevant research studies are necessary but insufficient to move findings forward. This brief highlights conversations that took place among the seventy researchers, practitioners and policymakers attending the "Building Bridges for Child Health Services Research, Policy and Practice" meeting convened in October 2000. The ideas generated identify an array of strategies that stakeholders can pursue to move towards a more efficient, collaborative, child health research system.

MAPPING UNCONNECTED TERRITORIES

Researchers face numerous obstacles in developing studies that are relevant to current practice or policy. Many such barriers derive from the traditions of the scientific method. The scientific paradigm often limits the pace of knowledge acquisition, with findings becoming available long after policies have been voted on or programs have been implemented. In addition, institutional and cultural incentives for professionals in academic careers emphasize basic theory and knowledge building, as opposed to application.

The field of child health, like many others, is complex, involving a broad range of ideas, activities and individuals. This complexity makes it very difficult to define the specific questions that need to be answered. Within the community of child health, there is lack of consensus on the key research questions, indicators and outcomes. Moreover, the academic paradigm encourages a very narrow focus for research work and "many socially relevant policy focused questions may bode poorly as subjects for study for publication in the best academic journals" (Stoddard 1997). Further, the simultaneous involvement of

multiple agencies or implementation of multiple interventions presents methodological challenges in systems level research.

In his conference presentation, Dr. Edward Schor outlined a paradigm contrasting public health practice with public health research in academia with regard to work activities, training, and relevance to public health (see table below).

Public health practitioners also are constrained in using research by the nature of their employment. Clearly, the timeliness of research-generated information and the need for broader orientation of research studies are key. Professionals working in public agencies face the added challenge of access to academic publications that often are not readily available. Elected and appointed policy leaders additionally face information overload; the expansive number of issues and volume of materials received require that research findings be synthesized succinctly, emphasizing results and implications rather than detailed methods and study limitations. Further, the language of policy leaders generally avoids discipline specific foci and scientific jargon (Zervigon-Hakes 1995).

Domains	Public Health Practice	Public Health Academia
Work Activities	<ul style="list-style-type: none"> - Apply knowledge - Work directed by legislature - Work is <i>applied</i>, needs to be <i>effective</i> - Programs may need to start quickly in absence of information - Depend on others to implement 	<ul style="list-style-type: none"> - Create new knowledge - Work guided by scientific inquiry and funding - Work is <i>investigative</i>, needs to be <i>efficacious</i> - Work builds directly on prior information
Training of Individuals	<ul style="list-style-type: none"> - Great variability in training and education 	<ul style="list-style-type: none"> - Highly educated and trained in scientific method
Use of Data	<ul style="list-style-type: none"> - Change or evaluate programs 	<ul style="list-style-type: none"> - Explain observed phenomena
Relevance to Public Health	<ul style="list-style-type: none"> - Opportunity to make a difference - Education of the public 	<ul style="list-style-type: none"> - Sometimes makes a difference in public health - Education of future health professionals
Accountability	<ul style="list-style-type: none"> - Via public scrutiny 	<ul style="list-style-type: none"> - Via peers and academic promotion committees

STRATEGIES FOR BRIDGING THE DISTANCES

From the state public MCH program perspective, timely application of research requires that:¹

- 1) practitioners receive updates of the latest scientific evidence in usable and digestible formats; and that
- 2) research be designed, in part, to address local needs.

Various methods have been tried to better integrate research with child health practice and policy. Child health professionals working in academia, government, and the private sector have convened at times to bring the fields together to explore national concerns and create shared agendas for mutually relevant child health issues (DeFriese, Hersh et al. 1985). The Association of Maternal and Child Health Programs (AMCHP) and the Association of Teachers of MCH (ATMCH) have met concurrently annually for the past 15 years. The federal Maternal and Child Health Bureau (MCHB) also has sponsored several National Title V Maternal and Child Health Research Priorities Conferences (Lamberty, Papai et al. 1996). In addition, the Agency for Healthcare Research and Quality (AHRQ) sponsored four meetings specific to children in as many years for such purposes. Through its User Liaison Program public health research concerns and current needs for public health programming are identified, although these needs and concerns are not limited to child-health-specific issues. In recent years, MCHB has implemented several initiatives for sharing sponsored research findings with the state health departments. MCH Research Roundtable Seminars that inform professionals about findings from completed applied Title V-supported research projects are broadcast nationally. Both MCHB and AHRQ also publish newsletters dedicated to the application of findings from research sponsored by their respective agencies.

A number of approaches to achieve improved translation of research into practice and policy were proposed or cited during the Building Bridges conference. Mr. Gordon Berlin² drew on examples of Manpower Demonstration Research Corporation's (MDRC) research projects to highlight how "timely findings based on convincing research methods, employed by an organization regarded as impartial, and lucid, presentation" can be used to make a difference in the realms of policy and practice. Elements of success for such efforts include a clear research question, for example, "What effect do mandates and incentives have on work, welfare, income, and children?" Mr. Berlin noted that research findings are successfully adopted into policy for several reasons, including: a strong study design is present; results are reproducible across studies; results are policy relevant; results receive community, agency, and political buy-in; and, information is persistently disseminated.

Drawing from the models employed in the commercial research industry, Dr. Gontran Lamberty³ shared his vision for MCHB's role bridging gaps between research and practice and policy through enhanced infrastructure development as well as a focus on product development and dissemination of timely research results. In so doing, he proposed an "ideal MCHB research enterprise." It would have as a minimum three components: (1) an extramural research program; (2) a "knowledge synthesizing unit;" and (3) one or more MCH research and development laboratories. The extramural research program, using the investigator-initiated approach, would focus on applied and basic MCH science research. The program would study such topics as: cost-effective approaches for delivering integrated MCH services; factors influencing patient care-seeking; caregiver-patient interactions; best practices for bringing vulnerable children into

¹As presented by Edward Schor, MD, Medical Director, Family and Community Health, Iowa Department of Public Health.

²Gordon L. Berlin, Senior Vice President for Work, Community, and Economic Security at the Manpower Demonstration Research Corporation (MDRC), New York, NY.

³Gontran Lamberty, DrPH, Former Branch Chief, MCH Research Branch, Division of Research, Training and Education, Maternal and Child Health Bureau, HRSA.

care; and, determinants of preventive health behaviors. The "knowledge synthesizing unit" would be engaged in conducting state-of-the-art assessments of the scientific knowledge base in areas relevant to MCH programmatic concerns, and would also act as the evaluator and synthesizer of the published findings derived from the extramural research component. MCH research and development laboratories would

undertake long-term, carefully integrated programs of health service delivery and research in preconceptional, prenatal, infant, child, and adolescent populations, including services for children with special health care needs. Prototypes would be tested in a "MCH laboratory health care delivery setting." Those shown to be effective and generalizable would be promoted for use in state, county and city MCH programs.

BRIDGE CONSTRUCTION: KNOWLEDGE, TOOLS, AND SKILLS

DEVELOPMENT OF KNOWLEDGE BASE AND TOOLS

There was general concurrence among conference participants that, in addition to clinical interventions, health problems and interventions that are social, economic or educational in nature need to be pursued by researchers. Many such issues and strategies, which involve systems not limited to health care, present particularly thorny ideological challenges. In addition, participants agreed that knowledge needs to reflect the demographic composition of the country and its local communities. To that end, the pediatric section of the National Medical Association has conducted immunization studies (Taylor, Darden et al. 2001) in partnership with the Pediatric Research in Office Settings network, supported by the Maternal and Child Health Bureau, HRSA, and operated by the American Academy of Pediatrics, to enhance inclusion of traditionally underserved populations in office based research.

Meeting participants identified multiple issues that are a priority for both researchers and practitioners due to both gaps in current knowledge and to identified unmet needs of children. These substantive areas were broad and included children's oral health; mental/behavioral health; issues specific to the population of children with special health care needs; school

health; EPSDT; care coordination services; and new methods for studying the particularly complex research challenges specific to child health service delivery systems. Participants noted that the increasing diversity of our population and the devolution of accountability for social remedies further require that these contemporary child health concerns be examined not only at the national level, but within a community context as well.

MODIFICATION OF STRUCTURES AND PROCESSES

Making all of the above research recommendations a reality requires modifying the structures and processes of practice and the academic paradigm. Faculty incentives in schools of public health and other graduate training programs need to value the application of research to practice. As students enter doctoral and other programs of advanced study, their curricula and competencies must emphasize these priorities as well. It will be especially important that academic deans embrace the goal of enhanced links between science and practice in children's health. In addition, agencies funding doctoral training can contribute by creating incentives and programs to foster development of a new type of academic researcher. Matching students with professionals in public health practice as research mentors and

targeting dissertation grants to practice-related research topics were proposals in this regard.

Workshop participants emphasized the need to develop collaborative research agendas among those in academia and public health practice. Effective agenda setting requires that discussion among the players occur at the time relevant scientific questions are identified, study designs are selected, and potential benefits from knowledge-based research are ensured. In addition, research review panels for competitive proposals need to include all relevant stakeholders and reflect the diversity of population studied and of the users of the research. As articulated by Dr. Penny Hauser-Cram,⁴ collaboration, although difficult, is

necessary to ensure that meaningful questions are studied, a range of perspectives is included, and a deeper understanding of the research is achieved.

While emphasizing the need for collaboration across disciplines, enhanced working relationships across agencies and academic institutions also were viewed as a means to address issues involving small populations. Efforts were called for to circumvent research study designs constraints by small sample sizes or limited capacity of stakeholder organizations. For example, for effectively addressing research questions related to program development for transition to adulthood programs for children with special needs, cross state research collaboratives might be needed.

TRAVERSING THE BRIDGE: ENSURING TWO-WAY TRAFFIC

In her concluding remarks, Dr. Modena Wilson⁵ challenged the group to recognize that many of the "bridges" linking child health research, policy and practice were, in fact, already present though underutilized. To that end, throughout the meeting proceedings, we've noted where participants identified the need to modify existing structures and processes to insure that knowledge is effectively used.

Among identified suggestions for enhancing utility and use of research were: funders' establishing requirements to enhance translation of research into practice and policy; including and budgeting for translation and dissemination plans in research proposals; identifying key persons in state health agencies and MCH for research information; and including translation skills in pre-professional training of research scholars. Another means to enhance communication of research findings among relevant audiences is continuing sponsorship of joint meetings of professional organizations

representing researchers, practitioners, policy makers. With the growing availability of press offices within research and academic organizations as well as increasing dialogue between journalists and researchers, results of scientific studies also may be more frequently presented in the media.

In addition to these strategies, participatory research models may contribute to the effective use of knowledge. Collaboration is beneficial for acquiring both a range of perspectives about the study results as well as a broad base for dissemination of study findings. Because collaborators are often good consumers of research, it is important for stakeholders to develop a sense of ownership early in the collaborative process. In fact, collaboration around dissemination often results in a national approach as participants share results with their own professional and lay organizations and constituencies. Equally important to national meetings (though often overlooked), regional and local meetings also may serve as important vehicles for disseminating information.

⁴Penny Hauser Cram, EdD, is a Professor at Boston College.

⁵Modena Wilson, MD, MPH, is Director of the Department of Committees and Sections at the American Academy of Pediatrics.

CONCLUDING COMMENTS

Throughout the meeting, recommendations were put forth to effectively bridge gaps among researchers, practitioners, and policy makers. Some strategies required few additional resources or infrastructure changes and could reasonably be addressed in the short term. Among these strategies were increasing access to research findings for practitioners and policy makers, through enhanced translation of research findings in non traditional settings and using new routes of communication. Other strategies, however, which demanded new resources were expected to require sustained, longer-term efforts

such as those that would be needed to re-orient the research field to encourage more practice and policy-relevant studies.

Meeting participants readily identified salient child health concerns. The active participation of funders of child health research demonstrated their commitment to addressing these issues and presented an excellent opportunity to implement the strategies noted herein to increase the traffic across existing bridges, and build new ones to enhance the field's ability to expediently translate research findings into policy and practice.

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The ideas presented herein were generated at an invitational meeting to explore venues for strengthening science-based practice and policy through greater integration of efforts, convened by the Agency for Healthcare Research and Quality (AHRQ), the Maternal and Child Health Bureau (MCHB), and the Women's and Children's Health Policy Center at Johns Hopkins University (WCHPC). Partners in convening the conference included the Association of Maternal and Child Health Programs (AMCHP), the Academy for Health Services Research and Health Policy (AHSRHP), and the Association of Teachers of Maternal and Child Health (ATMCH). Seventy individuals participated in the one-day forum held October 16, 2000 in Baltimore, MD. The participants who reflected a balanced representation of 1) state MCH program directors and state agency collaborators, 2) child health researchers, 3) relevant federal agencies, 4) national professional and trade organizations, and 5) foundations with a tradition of interest in child health concerns. The meeting was solution-oriented, and drew on participant expertise to work towards the goal of enhanced child health research and practice collaboration and integration.

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Photograph of Maryland's well-known I-695 Francis Scott Key Bridge accessed August, 2000 from Scott M. Kozel's "Baltimore Outer Harbor Crossing (Key Bridge)," <http://www.richmond.infi.net/~kozelsm/SparrowsPoint.html>.

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