Building a Research Agenda: Responding to the Needs of Community and Migrant Health Centers

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ABSTRACT: *This article summarizes the results of an invitational conference designed to establish a research agenda for collaborative projects involving university-based health services researchers and staff (administrative and clinical) from Community and Migrant Health Centers (C/MHCs). More research related to C/MHCs needs to be developed, preferably by collaborative teams of researchers and C/MHC personnel. Specific research ideas are summarized, and five more detailed research proposals are presented. This is an especially important area that needs work, given the changes taking place in health care finance and the impacts of those changes on C/MHCs.*

Research based on empirical analyses can help shape specific program strategies by separating independent effects of various interventions and by providing theoretically justified reasons for favoring one approach over another. When focusing on particular programs such as Community and Migrant Health Centers (C/MHCs), health services research can yield information useful to advocates seeking to sustain and even expand those programs (Brown, 1991). After determining that there are currently insufficient efforts in health services research related to C/MHCs, the National Rural Health Association (NRHA) and the National Association of Community Health Centers (NACHC), working with the Bureau of Primary Health Care (BPHC), Health Resources and Services Administration, organized and hosted a special conference—Advancing Research for Rural Community and Migrant Health Centers. This article presents the results of the conference, held July 17-18, 1997, in Kansas City, Mo.

Participants at the conference were influenced by changes in health care finance that affect the future of C/MHCs. Shifts to managed care in state Medicaid programs were a particular concern. In addition, the number of uninsured continues to increase, challenging the abilities of C/MHCs to provide the safety net in their communities (Cunningham, et al., 1997). The perception was that C/MHCs need to prove the value

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of their services (Lipson, 1997) to position themselves to contract with Medicaid programs for managed care business (Schauffler, et al., 1996).

Setting an Agenda: Multiple Ideas

Three general categories were used to classify research ideas: outcomes research, managed care applications and finance issues, and service delivery. More than 25 ideas in each category were generated. This paper contains a summary of the general research topics of highest priority determined by practitioners and university-based researchers who attended the conference. The full listing of topics is available on request from the first author or from the web site of the Nebraska Center for Rural Health Research (www.unmc.edu/rural). The following lists the top 15 research priorities by category.

Outcomes Research.

1. Patient satisfaction with community health center services, including satisfaction among different populations, such as elderly, children, and culturally distinct groups.
2. Effectiveness of special, targeted programs to address health improvement, especially those that rely on patient compliance. Research would recognize differences in the culture and socioeconomic status of people served, as well as differences in geographic access across programs.
3. The impact of the health center on the health status of people served, as well as the health status of all community residents (recognizing the potential for spillover effects). Health status could be measured and assessed in a comparative manner: over time within centers, centers compared with other centers, centers compared with other providers.
4. The impact of enabling services on health outcomes, e.g., the contribution of outreach, transportation, translation and other services.
5. Outcomes differences as related to differences in access to specialists. This may be a function of distance from specialists, consultant willingness to see C/MHC patients, and cultural differences between patients and consultants.

The longer list of ideas included outcomes studies related to specific health conditions such as diabetes, hypertension, obesity and mental health. There were extensive discussions of outcomes studies related to special populations, including the uninsured.

Managed Care Applications and Finance Issues.

6. Effects of managed care (including C/MHCs contracting directly for managed care business with Medicaid or others or C/MHCs participating in networks receiving managed care contracts) on C/MHCs. This would include effects on center finances, clinical services, and on the ability to network with other providers. Financial impacts include the effects on the sliding fee scale used by centers; clinical effects include impacts on different subpopulations served by the centers; and networking effects include impacts on small centers that become part of larger networks.
7. Effects of changes in finance on access to care, including differentiation based on frontier county location, counties with or without a C/MHC, after a C/MHC opens, and after a C/MHC closes.
8. Outcomes for patients enrolled in managed care plans—C/MHCs as compared with other managed care providers.
9. Economic impact of C/MHCs on their communities.
10. Effectiveness of leadership, including boards of directors, on the success of C/MHCs.
11. Comparisons of different models of managed care, such as primary care case management and capitation.
12. Measurement and impact of adverse selection of high risk patients in C/MHCs.

In general, discussions of research topics related to managed care and finance were conducted in the context of understanding how changes in finance, especially tighter controls on the dollars spent for specific services or populations, would affect total center operations. Research on this subject needs to focus on operations and on how populations, such as the uninsured and migrants, access services when providers have narrower margins.

Service Delivery.

13. The role of medical schools in enhancing service delivery in C/MHCs.
14. The role of grant support in sustaining C/MHC activities, compared with revenues from charges based on sliding fee scales. This could focus on funding for infrastructure needs and may vary across C/MHCs based on size, patient mix and service mix.
15. The role of clinicians in decision making within the C/MHC.

Issues raised in earlier discussions included the role of the boards of directors in making changes in C/MHC operations, the role of clinicians in decision making, and the relationship of enabling services to outcomes for patients and clients.

Research Designs for Specific Projects

More detailed research designs were developed for five projects, each of which addressed a topic rated by the group as a high priority. The designs developed during the conference included problem statements, research objectives and research design. Research objectives represent a blending of the desires of researchers to state hypotheses and practitioners to state reasons they need research results to support their program or to make management and policy decisions. Each project description concludes with a summary of how the needs of both researchers and practitioners are met, which includes implications for future research and for policy development.

Management and Finance Project. *Problem Statement.* C/MHCs often are unable to specify the per unit costs of unique services delivered to patients, given the difference in scope and intensity (frequency) of the service provided. Hence, C/MHCs may not be able to accurately price segmented services for the purpose of negotiating contracts. This would include pricing all services, including enabling services, related to treating an episode of illness or injury. Due to what appears to be underpayment from managed care organizations (MCOs), some C/MHCs are scaling back their scope of services, raising concerns about quality of care and mission. The very existence of C/MHCs could be in jeopardy because of lower revenues and sacrifices made in the mission that has secured other support (grants).

Research Objectives.

1. What is the scope and intensity (frequency) of services provided in C/MHCs, and how do they differ from those provided in traditional health care settings?
2. What is the current annual cost per covered life and cost per encounter in C/MHCs and in traditional health care settings?
3. What are the ranges in average payment levels by MCOs for primary health care services across various markets?
4. What are the current and possible cost-saving strategies C/MHCs use. Do they include curtailing ancillary services, including nutrition, education and outreach?
5. What alternative strategies are available to C/MHCs in their collaborations with MCOs, and what promising public policy approaches are available to legislators, funding sources and program officials?

Research Design. Data would be collected through:

- a survey of C/MHCs (administrative staff) to learn about specific strategies to cut costs, payment for primary care, and collaborations with MCOs;
- analysis of data reported to the BPHC to discern costs of providing care and the scope and intensity (frequency) of services being provided;
- site visits to selected C/MHCs, during which time local staff (administrative and clinical) could be interviewed and records could be studied in more detail than is available in formal reports; and
- collecting data from state commissioners of health insurance about MCOs operating in the area.

Analytical techniques would include descriptive reports that summarize typical services, their scope and intensity among a number of C/MHCs. Interviews and reports can be used to develop certain themes, including which services are most profitable to offer, which services are likely to yield results from efforts to improve cost effectiveness, and what types of strategies are employed by C/MHCs that have negotiated favorable contracts with MCOs. Some basic analytical techniques could be used to associate likelihood of certain strategies with variables such as size and location of the C/MHC. Cost analysis could be used to verify the revenue needs of C/MHCs as related to specific services.

Data collection would require up to one year to complete. Logically, data collection through surveys and from secondary sources should precede site visits and case studies. The latter are used to fill in detail not discernable from the summary data. The analytical tasks should take fewer than six months. Therefore, the time line for this project is approximately 18 months, although some useful knowledge would be available more quickly.

Benefits of the Study. This study is an illustration of the contribution researchers can make in analyzing the consequences of policy actions, in this case, decisions made by MCOs that could include Medicare and Medicaid. Researchers would contribute an analytical approach to the issue of economic survival of C/MHCs. Future research will benefit from learning how to use the reports C/MHCs make to the BPHC in analysis. The next step would be to use the same data in more rigorous hypothesis testing.

An Outcomes Research Project. *Problem Statement.* Some pregnant women enrolled in the Medicaid program are at high risk for poor birth outcomes, resulting in high costs for C/MHCs. The costs are increasingly a problem because of conversion to managed care

financing, so C/MHCs need to do whatever is possible to reduce the risk of poor birth outcomes, including delivering prenatal care. This problem can be understood through two hypotheses. First, comprehensive prenatal care for Medicaid populations reduces infant and mother morbidity and mortality. Second, prenatal care services delivered for Medicaid populations at C/MHCs are more cost-effective than those delivered at alternative settings.

Research Objectives.

1. What comprehensive prenatal services are offered?
2. What is the cost associated with these services?
3. How do C/MHC costs compare with costs in non-C/MHC settings?
4. What are the outcomes related to C/MHC prenatal services?
5. What are the outcomes related to non-C/MHC services?

Research Design.

The basic analytical approach would be to use case control designs over time. The variables to be measured include: prenatal services; outcomes for children, mothers and families; costs for prenatal services and hospitalization; quality of life; settings (C/MHC and non-C/MHC); infant mortality rates; low birth weight; and congenital syphilis (presence or absence). An example of a specific outcome measure would be the percentage of women obtaining adequate care based on the Kessner index, which incorporates the trimester in which care was first sought, the number of visits, and gestational age (Kessner, et al., 1973).

The following sources would be used in data collection: administrative records, medical records, hospital records, surveys and focus groups. Data processing would include merging data from different sources, coding primary data, and verifying the accuracy of data retained in the system. Analysis would include testing the specific hypotheses developed in the problem statement. Analytical techniques would include use of time series models.

This study could be completed retrospectively using data available from the records of C/MHCs and comparison groups. However, it may require prospective data collection if those organizations are not routinely collecting all the data required for cost-effectiveness studies. If retrospective, the time line for data collection may be only a few weeks to obtain the data, verify its completeness and merge data sets as needed. If prospective, the study would require an additional 18 months to collect sufficient outcomes data. Once the data are collected, the analysis would require an additional three to five months.

Benefits of the Study. This research project combines general descriptive analysis of how C/MHCs operate and deliver services with hypothesis testing related to outcomes of a particular service. The needs of C/MHC staff to either confirm the value of their current practices or to improve them are met, which could help argue for continued funding. The desire of researchers to contribute to a specific literature, testing the value of prenatal services among different populations, also is met.

A Service Delivery Research Project. *Problem Statement.* How do decision makers respond to changes in health finance and delivery? The changes may pose challenges to continuing the existing mix of services provided through C/MHCs. The process used in making decisions may be under considerable pressure due in part to the financial fragility of some of the C/MHCs. The research question is, what is the relationship of the decision-making process, including actors and procedures, to the services offered by C/MHCs, revenues and clients served?

Research Objectives.

1. Track C/MHC responsiveness to finance changes.
2. Assess decision-making processes, including satisfaction by participants.
3. Connect service mix to client needs, including when services are available elsewhere.

Research Design. The design of this project is to use comparative case studies, comparing dimensions of involvement in managed care and boards of directors composition; collecting data through surveys and case studies; and analyzing the information using a predetermined criteria. The criteria are used to answer the following questions:

1. Are requirements for governing boards effective in today's environment?
2. Are decision-making rules effective?
3. How can community-based services be continued?

This project combines qualitative research (case studies) with ongoing organizational analysis (questions about decision-making and board composition). Because case studies generally require considerable time to complete, the partnership between C/MHC staff and university researchers may lead to a work plan that includes completing some case studies, sharing findings, and then completing the project. The findings would be time sensitive, that is, they would be needed by C/MHCs as they determine effective responses to environmental pressures.

This design accommodates both a short time line—to produce results needed by C/MHCs in today's environment of rapid changes in payment and the organiza-

tion of health care delivery systems—and a longer time line for more conclusive research. The total project would require at least 24 months, allowing for scheduling, completing and analyzing a number of case studies.

Benefits of the Study. The policy implications for C/MHCs will be answers to the following questions.

- Are requirements for governing boards effective in today's environment?
- Are decision-making rules effective?
- How can community-based services be continued?

For researchers, hypotheses from social and organizational theory can be tested.

A Study of the Effectiveness of C/MHCs. *Problem Statement.* Compare C/MHC effectiveness with other providers on these dimensions: health status outcomes, cost effectiveness, improved access, and appropriateness of services to the conditions presented and the needs of patients. The growth of managed care systems is creating pressures on health care providers to prove their cost effectiveness. As C/MHC revenues are increasingly dependent on payment through managed care organizations, there will be implications for the populations they serve, based on their abilities to retain a share of the market, particularly in Medicaid programs. The general fragility of many rural health care delivery systems compounds this issue because in those systems, C/MHCs may be even more important to the access afforded community residents.

Research Objectives.

1. Describe the area, services provided, population served and cost of C/MHCs.
2. Describe organization characteristics for alternative types of providers, including C/MHCs, Rural Heath Clinics and types of health plans.
3. Compare access for C/MHC clients with others.
4. Compare services utilization for C/MHC clients with others.
5. Compare costs of various service providers.
6. Compare health outcomes achieved by various service providers.

Research Design. The basic approach would be a cross-sectional design with descriptive components. A sample of C/MHCs and other providers would be developed, stratified on criteria that include length of time in managed care contracts, percentage of business dependent on managed care payment, and the specific populations served. Sources of data would include: Medicaid claims, patient surveys, state insurance commissioner databases, accreditation data from the National Committee for Quality Assurance (NCQA), and county data from the U.S. Bureau of Health Professions Area Resource File. There would need to be controls in the analytical model for confounding variables, including the case mix of centers and the history of managed care in the area.

An element of the design is to include reliance on an advisory group that includes C/MHC staff. The group would help specify the relevant variables, select sites and understand potential relationships among the variables being measured. There would be interaction with C/MHC staff throughout the project, but with critical times, including finalizing the design and communicating the findings.

Because C/MHCs currently are at various stages of developing data systems that include the measures suggested by the NCQA and patient satisfaction data, this project would require some lead time to identify C/MHCs that have operational systems. Further time may be needed to wait until a sufficient number of C/MHCs are collecting the data needed to complete the study. Once the C/MHCs are identified and are collecting the data, the study will require up to 12 months for enough data to have been collected to complete the analysis.

Benefits of the Study. The C/MHC staff that participate in this project would be anxious to see results that help them confirm the effectiveness of service delivery and improve cost effectiveness where possible. Researchers would be able to explore questions of what explains improvements in cost effectiveness and patient satisfaction.

A Study of the Impact of Enabling Services on Health Outcomes. *Problem Statement.* Enabling services are increasingly difficult to finance, but they may be necessary to provide adequate health care services to the populations served by C/MHCs. In times of limited resources, the need to allocate funds effectively increases, which includes being sure that health outcomes can be improved. In that atmosphere, enabling services may be challenged, yet they also could be essential. The research question is, are better health outcomes a function of providing enabling services?

Research Objectives.

1. Identify the services to be studied and the populations and problems targeted.
2. Identify the extent to which C/MHCs and other providers offer these services.
3. Identify the cost of enabling services.
4. Compare entry into care and appropriate use of services for C/MHC populations with enabling services and without.
5. Identify support for enabling services by insurers and health plans.

Research Design. The approach would be to com-

plete a cross-sectional study of C/MHCs in rural areas with and without a "critical mass" of enabling services. If possible, sites without enabling services would be randomized for adding enabling services and comparing results afterward with those still without. The specific elements to be compared include decisions to provide enabling services, the use of those services and total cost of care. The sources of data would include the uniform discharge services, reports of prenatal care and immunization, Medicaid databases, hospital admissions and interviews on site. The analytical model would need to control for confounding variables, including population served, and self selection into receiving enabling services.

This is a prospective study, so to collect sufficient data for analysis, 12 months will be needed for that purpose alone. Adding a setup time of two months to recruit the C/MHCs, and time for preparing the data for analysis and then analysis, this study is at least a two-year project.

Benefits of the Study. This study is an example of a project designed to assess the efficacy of the approach to service delivery that differentiates C/MHCs from other providers—inclusion of enabling services. As written, the research design first tests the hypothesis that such services improve health outcomes. Assuming the hypothesis is confirmed, the research results would become persuasive evidence for C/MHCs to use when negotiating managed care rates. The rates would need to be sufficient to include the costs of enabling services. Health services researchers can use this study to refine models of health services utilization.

Charting a Future Course

The annotated bibliography prepared for the conference confirmed the need for the conference; the research literature concerning C/MHCs does not include the findings necessary to propel C/MHCs into a new era of managed care and competition with other providers. Specific research topics were developed, as well as selected designs with more detail. The remaining task is for the researchers to work with C/MHC administrators and clinicians to develop and complete research projects.

The organizations that sponsored the conference share a responsibility to encourage subsequent actions. One way of doing so is to work for additional funding to support research related to C/MHCs. Private foundations concerned with maintaining services for underserved populations should be approached, with the argument that for C/MHCs to continue as financially viable entities, they will need to learn from the research findings suggested by the topics discussed at the conference and in this paper. The same argument can be used with federal agencies, combined with statements of the theoretical importance of research that addresses such issues as the role of enabling services in assuring quality outcomes, the relationship of availability of C/MHCs to community health, and the nature of administrative changes necessary to keep C/MHCs competitive for Medicaid business.

Both researchers and C/MHC personnel need to commit to research projects. An incentive needed to complete this research is to be sure the parties involved are rewarded by their organizations for the work. For C/MHC personnel, the reward includes allocation of time to complete the projects. For university-based researchers, the incentives include recognition for applied research and extensions of the applied work to use the data for theory building.

The bad news and good news are the same—there is a great deal of work to do in building a research literature about the work of C/MHCs. The time to do so is now—both to assist C/MHCs in arguing on behalf of their effectiveness and to help in developing strategies to deliver services more cost effectively. This paper has proposed a research agenda; work to execute it should begin.

References

Brown, LD. (1991). Knowledge and power: Health services research as a political resource. In E Ginzberg (Ed.), *Health services research: Key to policy* (pp. 20-45). Cambridge, MA: Harvard University Press.

Cunningham, PJ, & Tu, HT. (1997). A changing picture of uncompensated care. *Health Affairs*, 16(4) July-August, 167-175.

Kessner, DM, Singer, J, Kalk, CE, & Schlesinger, ER. (1973). *Infant death: An analysis by maternal risk and health care. Contrasts in health status.* Washington, DC: Institute of Medicine, National Academy of Sciences.

Lipson, DJ. (1997). Medicaid, managed care and community providers: New partnerships. *Health Affairs*, 16(4) July-August, 91-107.

Schauffler, HH, & Wolin, J. (1996). Community health clinics under managed competition: Navigating uncharted waters. *Journal of Health Politics, Policy and Law*, 21(3), 461-488.