

ACCOUNTABILITY AND QUALITY IMPROVEMENT FOR PERINATAL HEALTH

Attention to health system reforms of the past decade has focused on cost containment through efficiency, choice, and “medical necessity” controls. More recently, this focus has broadened to include greater attention to health care quality and effectiveness. A series of reports released by the Institute of Medicine, including IOM’s recent publication, *Crossing the Quality Chasm: A New Health System for the 21st Century* (2001), reflect a national awareness that greater and sustained accountability related to health services and systems performance is warranted.¹

In 1994, the IOM articulated a definition of “quality of care” as “...the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.”² At both the population level and the level of clinical care for individuals, public MCH programs have longstanding roles in domains of activity to assure that criteria for quality specific to health care for women and children are met. This public leadership involves generating the participation of others in the community in response to health needs and providing a population-based, system-wide focus for health services delivery and oversight. Their objective, third party perspective places public MCH programs – armed with scientific tools and expertise and with functional governmental accountability – in key positions to protect, promote, and preserve the health of women and children.

The purpose of this report is to describe accountability and quality improvement functions undertaken by local health departments (LHDs) with regard to perinatal health. This publication offers a limited, but unique snapshot in time, with data

based on LHD representatives’ responses reflecting the time period from 1996 to 1999.

The information presented here is based on data obtained as part of a larger effort examining fetal and infant mortality review (FIMR) programs in the context of other perinatal systems efforts nationwide. Additional detail about study methodology is provided on the page that follows. The findings relate to four essential public health functions for pregnant women and infants: *assessing and monitoring health status to identify and address problems; ensuring public accountability for their well-being; ensuring the capacity and competency of the perinatal health workforce; and assuring access to comprehensive, quality systems of care.* Information regarding LHD activities related to other public health functions, including *promoting access to or provision of services to clients, promoting collaborations and partnerships, policy formation, and informing and educating the public* are included in a separate publication.³

All local health departments surveyed were engaged in activities related to the assessment and assurance of quality perinatal health care in their region. For this publication, we present our analyses related to quality improvement activities into two categories: population-oriented activities and client-focused activities. It is important to note, however, that we only are able to describe here LHD reports. While important in their governmental roles, local public health agencies share in the responsibility for assuring the quality of health care for infants and pregnant women in their communities with the state health department, individual providers, provider networks and plans, and community-based programs.

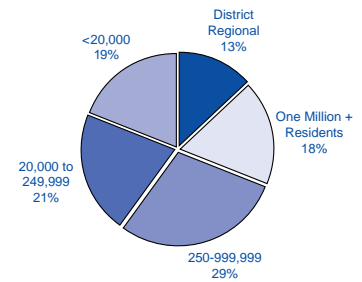
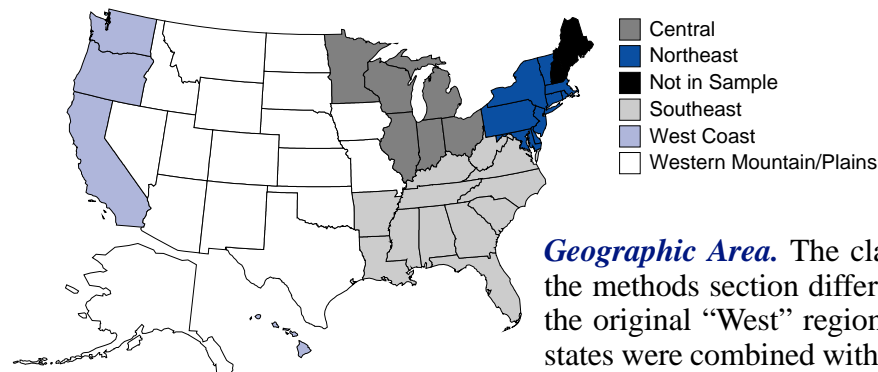
The Roles Local Health Departments Undertake in Serving Non-Pregnant Women of Reproductive Age

Under Title V of the Social Security Act, Maternal and Child Health populations traditionally included pregnant women and their infants. However, in recent years the definition of MCH has been expanding in recognition of the importance of the health of women in their own right, as well as the importance of women’s preconceptional and interconceptional health with regard to the health of any children they might bear.

To this end, many LHDs throughout the United States are continuing, expanding, and/or initiating including non-pregnant women of reproductive age as part of the MCH population they serve. Data that illustrate what LHDs were doing for non-pregnant women of reproductive age can be found in a companion publication.

Characteristics of Participating Communities

Population Density. Communities in this study were defined as the smallest geographic unit at which the local health department operated. For 87 percent of the LHDs, this geographic area was the county or metropolitan area; for the remaining 13 percent, it was a district or region composed of multiple counties for which population size was not identified. Almost 50 percent of the communities had a population of 250,000 or more.



Geographic Area. The classification of geographic areas listed in the methods section differs from the one used to draw the sample; the original “West” region was redistributed so that several Plains states were combined with the Western Mountain states to form one region, and the states on the coast another. The five groupings were

believed to be more reflective of the differences in orientation of health departments and health services systems than the original four regions used to draw the sample.

Communities in the Southeast were the most heavily represented in our sample, constituting close to one third of the sample. Twenty percent of the communities were located in the Northeast, and another 20% in the Western Mountain/Plains states. Less than 20% were located in either the Central or West Coast areas of the country.

Hospital Environment. Ninety-four percent of the sample communities had a least one hospital providing maternity or newborn care. Thirty-seven percent had 4 or more hospitals in the community. Sixty-three percent of LHD respondents reported that there were state guidelines for designation of levels of perinatal health care in hospitals.

Methods

The FIMR evaluation was designed as a cross-sectional observational study. Geographic units were sampled based on the presence or absence of a FIMR or other perinatal systems initiative (PI), geographic area of the country, and population density. To draw the sample of about 200 communities, 254 U.S. counties and metropolitan areas were divided into four types of communities using data collected from a survey of state and metropolitan MCH program directors, and information from the National FIMR program on active FIMRs. They were: 1) communities with a FIMR and another PI; 2) communities with a FIMR only; 3) communities with a PI only; and 4) communities with neither a FIMR nor a PI. In addition to the four types of communities, other factors considered in sample selection were: geographic region (East, Midwest, South, West); state representation (at least one community was eligible from each state in the U.S.);

metropolitan areas versus counties; and population density (for counties only).

For each community, a representative of the LHD was contacted to participate in a telephone interview; interviews were completed with LHD personnel in 76 percent (N=193) of eligible communities. The LHD interview included questions about MCH functions, community interaction, structure and organization of the LHD, and the structure and organization of perinatal services in the community. The timeframe for these questions was 1996-1999. Most questions were asked about 3 populations: pregnant women, infants and non-pregnant women of reproductive age. Many of the questions posed for this specific project were included in the survey as background to measure the context of communities in which FIMR programs were implemented.

Population-Oriented Accountability for Quality in Perinatal Care

A number of population level assessment and quality improvement activities were addressed in our survey. They involved data collection and analyses, needs assessments, and promoting changes in local and state regulations.

Local health departments use data for many purposes, such as tracking health problems or hazards, assessing health needs, developing appropriate health policies, designing health programs, educating providers and consumers, and providing or assuring health services. **To that end, 87% of local health departments reported collecting data about pregnant women, 86% about infants in their communities, and, to a slightly lesser extent, analyzing data about pregnant women (80%) or infants (76%).** Overall, about three quarters of LHDs reported both collecting and analyzing data about pregnant women (77%) or infants (74%). Ten percent of LHDs did not collect or analyze data for pregnant women and 12% did not do so for infants.

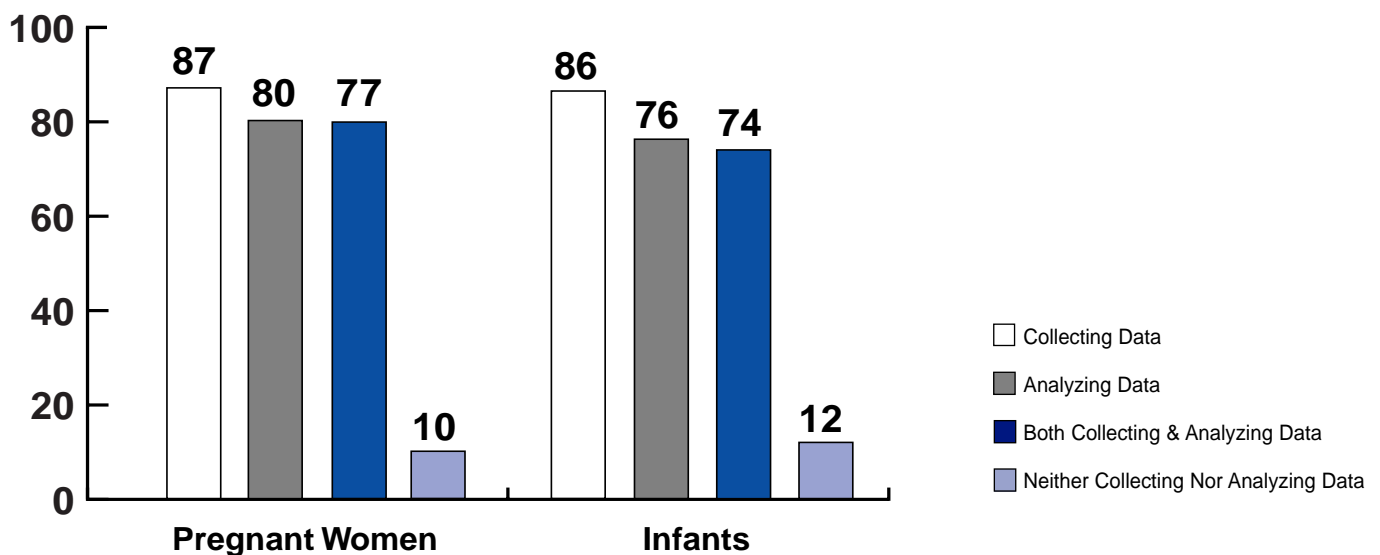
LHDs located in the West Coast states were the most likely to report both collecting and analyzing

data about infants and pregnant women, followed by Northeast states. For specific characteristics of these populations, LHDs in West Coast states reported the highest percentages that both collected and analyzed the data. They also were more likely to report conducting focus groups related to the health needs of pregnant women and infants.

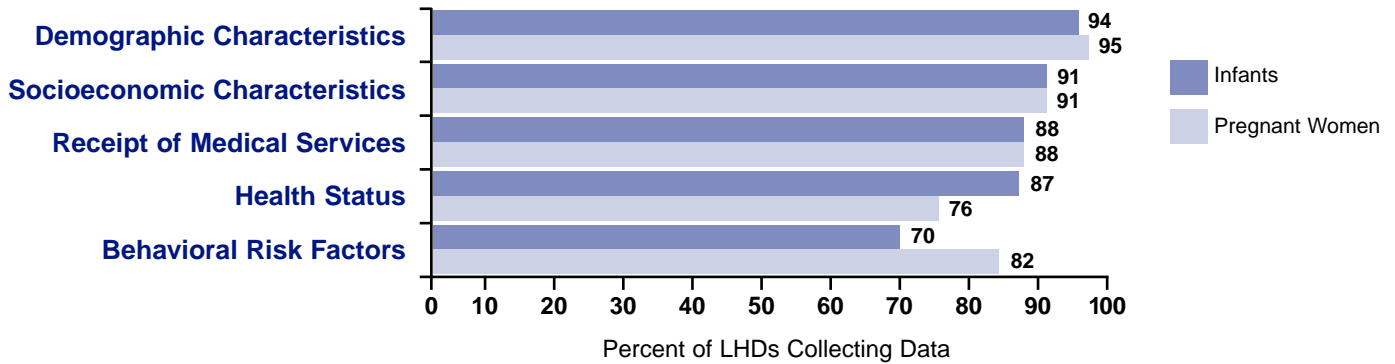
Population density also was related to collection and analysis of data; here respondents in the less densely populated areas, those with populations under 20,000, and those in regions or districts reported the lowest percentages both collecting and analyzing data. These LHDs were also less likely to conduct needs assessment specific to infants' health than those in more densely populated areas.

Of the LHDs that reported collecting or analyzing data about pregnant women or infants, the types of data collected most frequently were demographic characteristics, socioeconomic characteristics, and receipt of medical services. More LHD respondents reported collecting health status data about infants (87%) than about pregnant women (76%).

Percent of LHDs Collecting and/or Analyzing Data



Types of Data Collected by Local Health Departments



LHDs reported having access to multiple sources of data on pregnant women and infants. These sources included the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) data (91%), death certificates (85%), birth certificates (82%), and Medicaid data (76%). Of the LHDs that reported access to key data sources, 90 percent or more made use of the data. LHDs also reported conducting focus groups, community forums or key informant surveys – 70% did so for pregnant women, and 63% for infants. About seventy percent compiled data to produce a needs assessment document specific to pregnant women or infants.

Over sixty percent of LHDs produced a plan to systematically address priority health problems and needs for pregnant women (69%) and infants (63%), including a process to determine the most appropriate strategies for improving the health of pregnant women and infants. LHDs reported that strategies were identified based on:

- Population needs (75%)
- Local priorities (76%)
- Feasibility (73%) (i.e., agency funding and staff capacity)
- Effectiveness (74%) (i.e., strategy has demonstrated impact on outcomes)
- Social and political acceptability to the community (65%)

Nearly seventy percent of LHD respondents reported producing or disseminating reports that provided updates on progress in meeting local

health goals and objectives for pregnant women (69%) and infants (66%).

LHD respondents also reported initiating or promoting changes in existing local and state perinatal-health-related regulations or policies. In our study, 44% of LHDs reported doing so at the state level for pregnant women, while 49% did so for infants. At the local level, 25% of respondents reported working on such regulatory or policy changes related to pregnant women, and 31% did so related to infants. Half of the LHDs reported providing state and local legislative or regulatory bodies with specific expertise or consultation for the development of policy or programs related to the health of pregnant women and/or infants.

About three quarters of all LHD respondents reported that their agency participated in or collaborated with initiatives or programs undertaken by other public or private groups in their community, or provided them with expertise specific to the health or health needs of pregnant women (73%) or infants (79%). Examples include perinatal councils, the March of Dimes folic acid campaign, and tobacco-use prevention collaboratives. LHDs in counties with less than 20,000 population were much less likely than those in larger counties to report such activity. Three-fourths of LHD respondents noted that elected officials, consumers, providers or agency heads in their communities were involved in developing plans related to perinatal health. Elected officials and consumers, however, were infrequently (<15%) involved.

Quality Improvement Specific to Perinatal Health Care, Providers and Facilities

Our assessment of quality improvement activities related to clinical care provided to individuals focused on standards of care development, improving the capacity and competency of the workforce, monitoring care provision, development of protocols, and use of risk assessment, tracking, and common records. A special focus on managed care was included in the LHD survey as well.

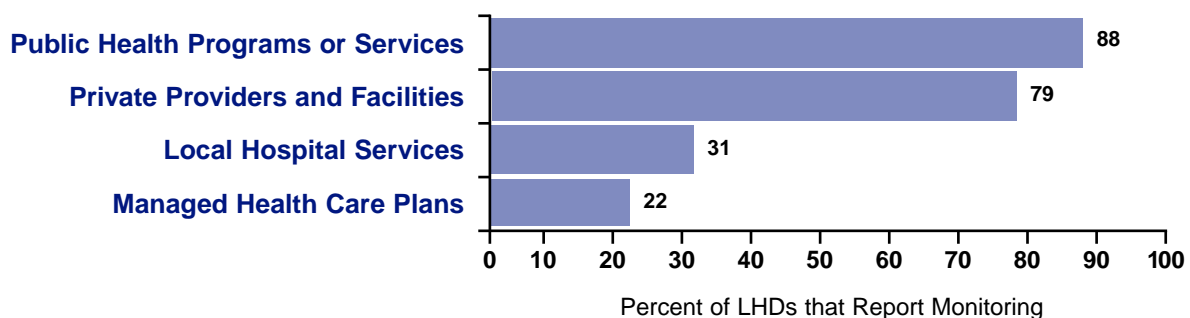
About half of LHDs led or participated in the development of population-based standards of care for pregnant women (47%) or infants (44%) (e.g., standards for pregnancy weight gain, infant transport, high-risk pregnancy care, and breastfeeding), and in quality improvement activities related to facilities or providers of care to women and children (53%). A majority of respondents reported that the LHD undertook or participated in activities to advance the education of providers about health care for pregnant women (57%) and for infants (64%). Forty-six percent indicated that their agencies had convened meetings

developing population-based standards of care for pregnant women. Not surprisingly, those in LHDs in the least dense areas also reported lower percentages developing population-based standards.

Again, about half of LHDs reported monitoring facilities or providers of care to women and children (47%). The focus of monitoring among the LHDs that did monitor facilities or providers is displayed in the figure below. The aspects of care or facilities that were monitored, however, were not assessed. LHD respondents in West Coast states reported much higher percentages that certified providers than those in other areas. LHDs in the least dense areas reported the lowest percentages of participation in quality improvement specific to providers of clinical care.

Among local health departments surveyed, 55% reported involvement in developing protocols for identification of high-risk pregnant women, and 27% in developing protocols for high-risk consultation services for pregnant women.

Types of Facilities and Providers that LHDs Report Monitoring



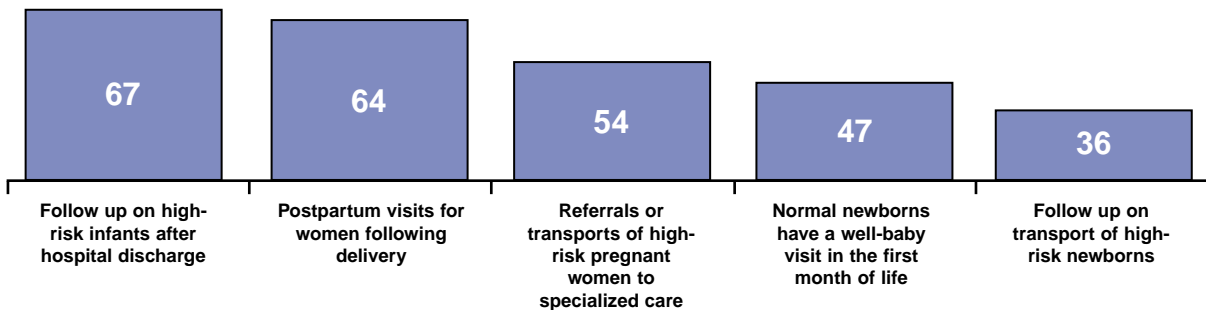
of local medical and family service providers to enhance the identification of high-risk pregnant women and infants. Fewer LHDs (27%) participated in certification of facilities or care providers. Respondents from LHDs in the Western Mountain/Plains region were the least likely to report

Twenty-seven percent also reported developing protocols for linkages among hospitals. Fewer LHDs reported working on protocols for maternal and newborn transports to specialty care (12%) or protocols for back transport of newborns (7%).

Local health department respondents reported some activity with regard to tracking referrals or transports of high-risk pregnant women to specialized care (54%) and of high-risk infants after hospital discharge. Almost two thirds reported following up to ensure a postpartum visit for women (64%), but less than half tracked well child visits of normal newborns in the first month of life (47%). Over two thirds of LHDs reported maintaining client information in a computerized database – 69% for pregnant women and 75% for infants.

guidelines or requirements for health plans related to care for Medicaid-enrolled pregnant women and 23 percent for all pregnant women. The respective percentages for infants were 52 and 21. Development of such guidelines for pregnant women enrolled in Medicaid was most frequently reported in West Coast (77%) and Central (71%) states; the respective percentages for infants were 69 and 71%. For all pregnant women and infants alike, LHD respondents in Western Mountain/Plains states reported little activity related to guidelines (4% for

Percent of Local Health Departments Using Selected Tracking Systems



Nearly seventy percent of LHDs reported participating with other agencies in using a common risk assessment instrument for pregnant women, and about fifty percent did so for infants. Fewer than half of LHDs reported using a common prenatal record, and less than twenty percent used a common newborn record. Over seventy-five percent of these common prenatal and newborn records were in paper (as opposed to computerized) form. Approximately twenty percent of LHDs electronically transferred patient records for consultations or referrals.

As reported previously, of the LHDs surveyed that have MCOs operating in their jurisdiction (133),⁴ 54% reported that the local health department or another agency in the community developed

pregnant women and none for infants). Consistent with the more rural nature of these states, LHDs in the least populated communities reported the lowest percentage of guideline development for all pregnant women (0%) and infants (14%).

Twenty-six percent of LHD respondents within communities with MCO activity reported that the LHD or another community agency developed guidelines for health plans concerning contracts with tertiary or subspecialty centers for high-risk maternal and newborn care. Development of guidelines for contracts with public health agencies for psychosocial services for pregnant or parenting women was reported by 35 percent of LHD respondents. Development of guidelines that included mechanisms for maintaining a stable

network of perinatal providers were reported by 30 percent. Approximately 54 percent of LHDs in Central states and 50 percent in West Coast states reported the development of guidelines for contracts for psychosocial services. While there was no geographic variation in developing guidelines for

contracts with subspecialty centers, LHDs in West Coast states were more likely to report using mechanisms for maintaining a stable perinatal network, and Western Mountain/Plains states were the least likely to do so.

Observations

All communities that we studied showed some level of activity involving assessment or quality improvement for perinatal health and health care services, providers and facilities. While the vast majority collected or analyzed data about pregnant women and infants, there was a drop in activity in the use of these data by local health departments to develop plans or address community solutions. Almost all LHDs that collected data obtained information about the demographic and socio-economic characteristics of pregnant women and newborns, but they less frequently collected information about behavioral risk factors and health status. These topics need increased attention across agencies, as does use of the data for needs assessment.

There was considerable variability in the breadth and depth of LHD involvement in assessment and quality improvement activities across geographic areas. These differences may be due in part to the political strategies or health system organization across various states, but they may also be due to variations in capacity. For example, there was less data use by LHDs in the least populated areas. This may be due to a greater state role in this activity as well as less capacity to obtain or analyze data in these areas (with assumed resource deficits). It is difficult from our findings, however, to sort out state and local

responsibilities with regard to data as well as for standards and protocols related to perinatal health care.

The figures we report for activities in local health agencies need to be viewed with caution in inferring the scope or level of activities in these agencies. These figures are likely inflated based on the characteristics of the communities we studied. The frame of reference for selecting the sample was based on the presence or absence of a FIMR program, with the goal of selecting equal numbers in each group. As a result, the sample includes more populated areas than in the U.S. in general, and also over-represents communities in which there were specific activities surrounding perinatal health.

Public health agencies have very broad mandates with regard to assessment and quality improvement for populations, clients, and health care services, but they also have limited resources to carry out these mandates. The data on assessment and quality improvement for health services reported here can be used to provide ideas to local agencies about activities undertaken in other areas. The description of these activities may assist LHDs in decisions on priorities in pursuing enhancements in MCH-related or public health-related activities that are most relevant to their communities.

Notes

1. Institute of Medicine. (2001). *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington DC: National Academy Press.
2. Institute of Medicine. (1994). *America's Health in Transition: Protecting and Improving the Quality of Health and Health Care*. Washington DC: National Academy Press.
3. Strobino DM, Koontz A, Silver GB, Allston AA, Grason HA, 2002. *The Roles Local Health Departments Play in the Organization and Provision of Perinatal Health Services*. Baltimore, MD: Women's and Children's Health Policy Center. Johns Hopkins Bloomberg School of Public Health.
4. Sixty-one percent (114 of the 188 reporting information about MCOs) of the local health department respondents indicated that there were MCOs in their community that they organized perinatal health services with, or with which they contracted for these services. When asked about MCO guidelines and obtaining data to monitor MCOs, 19 LHD respondents reported some activity in addition to the 114 described above. Thus, the denominator for development of guidelines for MCOs and use of data was 133 LHDs.



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