5-18-2017

Summary of Maine CDC Public Health Nursing-related Initiatives: Prepared for the Joint Standing Committee on Joint Standing Committee on Health and Human Services

Maine Center for Disease Control and Prevention

Christopher Pezzullo
_Maine Center for Disease Control and Prevention, Christopher.Pezzullo@maine.gov_

Sheryl Peavey
_Maine Center for Disease Control and Prevention, Sheryl.Peavey@maine.gov_

Follow this and additional works at: http://digitalmaine.com/mecd docs

Recommended Citation
Maine Center for Disease Control and Prevention; Pezzullo, Christopher; and Peavey, Sheryl, "Summary of Maine CDC Public Health Nursing-related Initiatives: Prepared for the Joint Standing Committee on Joint Standing Committee on Health and Human Services" (2017). _Center for Disease Control Documents_. 175.
http://digitalmaine.com/mecd_docs/175
May 18, 2017

Senator Eric Brakey, Co-Chair
Representative Patricia Hymanson, Co-Chair
Joint Standing Committee on Health and Human Services
100 State House Station
Augusta, Maine 04330-0100

Dear Senator Brakey, Representative Hymanson, and members of the Joint Standing Committee on Health and Human Services,

The Maine Department of Health and Human Services, Maine CDC, would like to provide information that may be useful in the Committee’s deliberations regarding LD 1108.

**PHN Stakeholder Meetings**
Immediately following the recent worksession on LD 1108, we set up two stakeholder meetings to include those who had provided testimony at the public hearing. One meeting was located in Portland and one in Augusta. We also took advantage of the State Innovation Model Steering Committee meeting focused on health care transformation and expanded the PHN dialogue and conversation to other community partners, including representatives of health care systems, payers, and providers.

Among the “take home” messages:

- There is a statewide nursing shortage.
- There is a lack of clarity in understanding roles and responsibilities of key MCH partners.
- Community partners have received mixed messages from PHN for several years.
- Community partners would like a more open dialogue approach to public health either in the form of updates or meetings.
- There is relief among many partners that we are centralizing our referral process statewide.
- There are multiple possible strategies for solving issues like the reduction of the infant mortality rate.
- Stakeholders expressed an interest in contributing to the MCH Network development. There was hesitation to embrace the CradleME program because of the failed launches previously, however, after an open discussion it was more accepted and stakeholders looked forward to the statewide implementation.
- Too often communities are counting on public health nurses to perform duties they have not performed in years—prior to this administration i.e. inspection/removal of bedbugs.
There is a lack of a stakeholder consensus on how and what to prioritize and defining the roles and goals of PHN.

There is a consensus on strengthening all aspects of the public health workforce.

There were some stakeholders who would like to assist us understanding best management practices for travel nurses.

**PHN Program Staffing**
No one can determine the “magic number of nurses” without first addressing productivity, role clarification, and maximizing existing workforce. Positions have been posted and reposted; acknowledging the statewide nursing shortage.

The Department is focusing on expanding use of Community Health Nurses and Community Health Workers and ensuring nurses are working to their highest licensure.

We are addressing issues with the CareFacts data system to streamline documentation time and improve reporting functionality. We are exploring use of a national electronic health record system designed for public/community health nurses.

Productivity Target has been established: 3-5 daily visits/FTE (Maine Health Care at Home recognizes 5/day as industry standard). During the past year, 0-2 visits/day was the average norm. Current trends are as follows:

<table>
<thead>
<tr>
<th>Weekly Data</th>
<th>2/6</th>
<th>2/1</th>
<th>2/2</th>
<th>2/2</th>
<th>3/6</th>
<th>3/1</th>
<th>3/2</th>
<th>3/2</th>
<th>4/3</th>
<th>4/1</th>
<th>4/1</th>
<th>4/2</th>
<th>4/2</th>
<th>5/1</th>
<th>5/8</th>
</tr>
</thead>
<tbody>
<tr>
<td>#Visits This Week</td>
<td>81</td>
<td>68</td>
<td>78</td>
<td>92</td>
<td>10</td>
<td>8</td>
<td>106</td>
<td>181</td>
<td>139</td>
<td>11</td>
<td>0</td>
<td>101</td>
<td>94</td>
<td>110</td>
<td>10</td>
</tr>
<tr>
<td>Statewide Average # Visits</td>
<td>5.6</td>
<td>5.3</td>
<td>5.9</td>
<td>7.2</td>
<td>5.6</td>
<td>5.1</td>
<td>8.6</td>
<td>6.6</td>
<td>5.8</td>
<td>5.9</td>
<td>4.9</td>
<td>5.3</td>
<td>6.3</td>
<td>4.1</td>
<td></td>
</tr>
<tr>
<td>by PHN This Week</td>
<td>6</td>
<td>5.3</td>
<td>5.9</td>
<td>7.2</td>
<td>5.6</td>
<td>5.1</td>
<td>8.6</td>
<td>6.6</td>
<td>5.8</td>
<td>5.9</td>
<td>4.9</td>
<td>5.3</td>
<td>6.3</td>
<td>4.1</td>
<td></td>
</tr>
<tr>
<td>LTBI Relief Clinic Client</td>
<td>79</td>
<td>13</td>
<td>8</td>
<td>133</td>
<td>106</td>
<td>181</td>
<td>139</td>
<td>110</td>
<td>110</td>
<td>101</td>
<td>94</td>
<td>110</td>
<td>10</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Visits/Week</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Priority Populations and Nursing Workflow**
In August 2016, the Maine CDC asked Hart Consulting to conduct a qualitative review and service line mapping of its Public Health Nursing Program. This work included staff interviews, program meetings, and a review of program documents. Among the key findings:

- Nurses follow the individual program and OMAHA protocols for client assessment, planning, and care. The focus is on meeting clinical guidelines and helping the client improve knowledge, behaviors, and status (KBS) related to their medical needs.

- The intake and referral process seems to work for the most part, but it is fraught with potential for human error. The system rests on the shoulders of a few people with personal knowledge of the system.
• Referrals were only accepted if they met the criteria on “the triage grid” that was developed in the summer of 2016. The grid was based on the updated public health nursing focus on the most fragile or “at risk” clients, first announced in May 2015.

• Serving the medically fragile represents the fundamental workflow of the public health nursing services.

• Clients are increasingly complex and require a host of support services. Not all services provided are directly nursing related.

• Along with the need for services, safety is a concern for nurses going into situations where illegal drugs may be present or being actively used/sold by people in the house.

• Many noted that the KBS system of assessing a client is subjective and may not be the best way to determine if a client is ready for discharge. The KBS assessment was noted by PHNs to be a barrier, keeping clients on the caseload far longer than may be reasonable.

• There is a concern that not all “at-risk” babies and mothers are being referred to public health nursing. MaineMed is referring to its own home nursing services, clients oftentimes prefer to work with those nurses. Moreover, moms are worried about the OCFS relationship to PHN and fear their children will be taken from them.

• A supervisor stopped assigning clients for several months, needlessly creating a backlog of people needing to be seen.

• There is a lot of case management such as finding transportation, scheduling appointments and other non-nursing work.

• The nurse role is clearer for TB/Latent TB infection because it is focused on clinical outcomes.

In calendar year 2016:

• PHNs received 699 MCH nursing referrals and conducted 4,665 visits.

• CHNs received 622 MCH nursing referrals. Of those, 519 were admitted to a nurse’s caseload, 86 were not and no further outreach was done, and 17 are unknown.

• Maine Families received 2447 referrals from multiple sources (including from PHN) and enrolled (visited) 1037 of those families (42.4%). Typical referral disposition: about 15% decline and about 20-25% never answer the calls or respond to letters and texts (outreach lasts for 3 months trying different methods). Caseloads included another 1100 families continued from previous year. Program enrolls about 9-10% of all new babies annually.

**The Real Infant Mortality Rate**

Maine’s infant mortality rate is not rising. The 2015 rate was 6.5 per 1,000 live births and the 2016 rate is 5.4 per 1,000 live births (see Appendix: Chart 1). However, addressing infant mortality has been and remains a significant priority for the CDC.

Our focus has been on identifying and implementing strategies to address the primary causes of maternal and infant mortality (see Appendix: Chart 2). We actively engaged with community partners to evaluate and mitigate the contributing factors to infant mortality.
The primary contributing factors for infant mortality are low birth-weight babies (primarily due to prematurity), birth defects (congenital anomalies) and Sudden Infant Death/Sudden Unexplained Infant Death Syndrome (SIDS/SUIDS). Maine has participated in the national Health Resources and Services Administration (HRSA) Collaborative for Information and Innovation Network (CoIIN) project on Infant Mortality since 2013. Our workgroup focused on two key drivers of infant mortality by strengthening and standardizing the safe sleep messages used by MCH professionals throughout DHHS and by utilizing evidence-based strategies to reduce smoking in pregnancy.

The US Preventive Services Task Force found convincing evidence that behavioral interventions substantially improve achievement of tobacco abstinence in pregnant women who smoke, improve infant birthweight and reduce risk for preterm birth (see Appendix: Chart 3). The largest contributing factor to pre-term births/low birthweight babies is smoking during pregnancy. In Maine, about 1 in 6 women smoke during pregnancy (see Appendix: Chart 4). Our goal is to decrease the percentage of women who report smoking during pregnancy from 16.3% (2014 baseline data) to 15.5% in 2020—we are currently at 15.6% for 2016. Our strategies have focused on:

- Increase training opportunities for evidence-based tobacco assessment, treatment and referral for women of childbearing age (under our new prevention structure, nearly two dozen pregnant women have reached out to the Maine Tobacco QuitLine since last summer).
- Increase referrals from the Maine Families Home Visiting Program to the Tobacco helpline and improve rates of women accessing prenatal care (91.6% of women who were pregnant when they enrolled accessed the nationally recommended frequency of prenatal care visits with their primary care provider).

Use of safe sleep policies, continued education of parent/guardians, expanded training efforts for child care professionals, statewide regulations and mandates and increased monitoring and observation are critical to reduce the risk of SIDS and other infant deaths. According to the Medical Examiner’s Office, an average of a dozen babies die each year in Maine in unsafe sleep settings and situations. The Pregnancy Risk Assessment Monitoring System (PRAMS) data reveals that only 84.2% of parents put their infants to sleep on their backs. Our goal is to increase that percentage from 84.2% to 88.5% (a five percent increase from baseline) by 2020. To address this, we are working to:

- Expand distribution of the Cribs for Kids program in Maine
- Increase the hospitals implementing safe sleep protocols that meet national standards for safe sleep

Breastfeeding is one of the most highly effective preventive measures a mother can take to protect the health of her infant and herself. In 2012 in Maine, 81.6 percent of babies were ever breastfed, and 16.6 percent were exclusively breastfed through 6 months. This MCH effort will refine and implement a birthing hospital breastfeeding recognition program using 6 of the “Ten Steps to Successful Breastfeeding” standards. It will collaborate with maternal-perinatal focused agencies to promote breastfeeding exclusively through baby’s first six months.
Studies show that breastfeeding reduces the risk of sudden infant death syndrome by about 50% at all ages throughout infancy. Our goal is to increase the proportion of breastfed infants by five percent by 2020 (from 81.6% to 85.7%). To do this, we’ve recruited two hospitals to achieve national breastfeeding standards (“10 Steps to Successful Breastfeeding”). We’ve provided training to MCH professionals to become certified lactation consultants. We are supporting Women, Infant, and Children (WIC) Nutrition program efforts to encourage less use of formulas and increased use of breastfeeding as a nutritional staple for infants.

The Maternal Child Health (MCH) Network
The MCH Network was formulated early in 2017. The MCH Network Development Steering Committee identified infant mortality as the main focus for the next 12-18 months. In particular, Safe Sleep and Substance Exposed Infants were the priority cross-disciplinary topics for Maine CDC and OCFS staff to address collaboratively. The delivery methods for the education and services include Public Health Nurses, Community Health Nurses, Home Visitors, Children with Special Health Needs, and Women, Infants, and Children (WIC) staff. The types of community partners/stakeholders who have been named as being part of the first phase of the MCH Network are Public Health District Coordinating Councils, staff from the OCFS District Offices, Child Abuse and Neglect Councils, the Safe Sleep Council and the Perinatal Leadership Council. As the MCH Network evolves in addressing infant mortality, more community partners will be looped into the network.

Members of the MCH Network are connected to the renewed Maternal, Fetal, Infant Mortality Review Panel (MFIMR) as well as the Child Death and Severe Injury Review Panel. These two panels play a critical role monitoring the rates of child deaths in Maine, as well as providing insight into state activities of the MCH Network partners working to the common goal of improving child outcomes.

A key activity of the MCH Network plan is the release of a Request for Proposal following the Statewide Community Prevention model developed last year that maximized statewide impact through district-level engagement and innovation. The Department hopes to release the MCH Network RFP this summer for contract award no later than Spring 2018.

CradleME
A concrete example of action that the CDC has taken through the MCH Network initiative to expand maternal and child health services is the centralization of the CradleME referral process. As of May 1, 2017, Maine CDC internalized the Maternal Child Health (MCH) services referral process to ensure that all birthing families have the opportunity to participate in a support system made up of MCH professionals such as family visitors, maternal child health nurses, and WIC. CradleME was designed to take away the burden of figuring out where to send family referrals. Instead, providers fill out a one-page referral form sent to Maine CDC, where the CradleME staff then guide the referral to the
appropriate service provider. CradleME received its first self-referral in its third week of being live and

has its first referral from a Corrections facility for an incarcerated pregnant mom.

In summary, we will continue to reconstruct a public health nursing team that emphasizes accountability and productivity by:

1. Focusing the work of nurses on populations that truly need our help: substance affected infants and mothers, medically fragile individuals with special health needs, and those affected by infectious disease.

2. Building strong program leadership and encouraging champions of change within our workforce.

3. Putting nurses back in district offices instead of dispatching them from home.

4. Implementing an electronic health record system that links to the Health Information Exchange and other Maine CDC data systems and streamlines documentation.

5. Using the new EHR to generate management reports on productivity, caseloads and response times.

<table>
<thead>
<tr>
<th>Sources of Referrals</th>
<th>Hospital Services (OCFS)</th>
<th>54 (21%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hospitals</td>
<td>46 (21%)</td>
</tr>
</tbody>
</table>

| Referrals by County | Cumberland | 32 | Penobscot | 24 | Oxford | 18 | Aroostook | 15 | York | 13 | Androscoggin | 12 | Kennebec | 9 | Hancock | 7 | Somerset | 4 | Knox | 3 | Waldo | 3 | Sagadahoc | 2 | Franklin | 1 | Washington | 1 |

CradleME Data
5/1 - 5/16
Total Referrals Received: 147

<table>
<thead>
<tr>
<th>Referral Types</th>
<th>MCH Nurses</th>
<th>72 (49%)</th>
<th>Maine Families Home Visiting</th>
<th>56 (38%)</th>
<th>Grantee Partners</th>
<th>5 (3%)</th>
<th>WIC</th>
<th>1 (0.7%)</th>
</tr>
</thead>
</table>

Social Data

| OCFS overlap     | 51 (41%) |
| Drug Affected Babies | 52 (38%) |

Nursing Referral Process and Outcome 5/09 - 5/17*

| First Call       | 11 |
| Second Call      | 12 |
| Third Call       | 1  |
| Decline          | 4  |
| Accept           | 3  |

Daily Referrals

| 5/1 | 11 |
| 5/2 | 2  |
| 5/3 | 9  |
| 5/4 | 16 |
| 5/8 | 12 |
| 5/8 | 20 |
| 5/9 | 9  |
| 5/10| 10 |
| 5/11| 7  |
| 5/12| 20 |
| 5/15| 14 |
| 5/16| 9  |

Daily Average 10.36

*Data limited to referrals received after the Patient Navigator assumed outreach duties on 06/08/17.
6. Leveraging Technology for direct observation of latent tuberculosis clients through remote medication adherence monitoring.

7. Training and exercising the PHN Emergency Preparedness Team.

8. Creating the Maternal and Child Health Network to include state and community health nurses, community health workers, social workers, home visitors, dieticians, and other community based providers.

Sincerely,

Christopher Pezzullo, DO
State Health Officer, Chief Medical Officer

Sheryl Peavey
Chief Operating Officer, Maine CDC

Appendix Attached
Appendix

Chart 1: Maine’s Infant Mortality Rate

Maine’s infant mortality rate peaked in 2013 and has been declining since. The U.S. infant mortality rate has been steadily declining.

![Graph showing infant mortality rates over time.]

Chart 2: Leading Causes of Infant Mortality

Preterm-related conditions continue to be the leading cause of infant mortality in Maine, followed by birth defects.

![Graph showing leading causes of infant mortality over time.]

[Note: All data sources are from CDC Wonder, provisional death certificate data for 1999-2015.]
Chart 3: Maternal smoking during pregnancy

Maternal smoking during pregnancy is associated with worse birth outcomes.

Of low birth weight infants, 31% of their mothers smoked during pregnancy, compared to 15% of non-low birth weight infant.

Chart 4: Smoking During Pregnancy is a Leading Cause of Infant Mortality

About 1 in 6 Maine women smoke during pregnancy.