Information Systems, Data Interoperability, and the Requirements for Exchange: Report and Recommendations

SCHSAC: Building Health Information Exchange Capacity Workgroup

December 2011
Information Systems, Data Interoperability, and the Requirements for Exchange: Report and Recommendations

SCHSAC: Building Health Information Exchange Capacity Workgroup

December 2011

For more information, contact:
Office of Performance Improvement
Minnesota Department of Health
PO Box 64975
St. Paul, MN 55164-0975

Phone: 651-201-3880
Fax: 651-201-5099
TTY: 651-201-5797
Email: health.ophp@state.mn.us

This report was supported by funds made available from the Centers for Disease Control and Prevention, Office for State, Tribal, Local and Territorial Support, under the National Public Health Improvement Initiative (NPHII). The content of this report is that of the authors and does not necessarily represent the official position of or endorsement by the Centers for Disease Control and Prevention.
Contents

Commissioner’s Letter ...........................................................................................................4
SCHSAC Chair Letter ...........................................................................................................5
Executive Summary...............................................................................................................6
Full Report and Recommendations ......................................................................................8
  Motivation for Improved Interoperability ...........................................................................9
  SCHSAC Charge ..............................................................................................................10
  Vision Statement and Objective .......................................................................................11
  Method ..............................................................................................................................11
  Lessons Learned ..............................................................................................................13
  Recommendations and Strategies for Implementation ....................................................13
  Conclusion .......................................................................................................................16
Appendix A ..........................................................................................................................17
Appendix B ..........................................................................................................................24
Appendix C ..........................................................................................................................30
Appendix D ..........................................................................................................................33
Appendix E ..........................................................................................................................37
Appendix H ..........................................................................................................................67
Appendix I ...........................................................................................................................68
Appendix J ...........................................................................................................................70
Appendix K ...........................................................................................................................97
December 16, 2011

Dave Perkins,
SCHSAC Chair
Olmsted County Commissioner
151 Fourth Street SE
Rochester, Minnesota 55904-3710

Dear Commissioner Perkins:

Thank you for sending me the report and recommendations from the Building Health Information Exchange Capacity Workgroup of the State Community Health Services Advisory Committee (SCHSAC). The recommendations and report provide a good foundation and pathway for the changes needed to meet the state and federal mandates for interoperability as well as achieving Minnesota’s goals of improving patient health, improving the quality of care, increasing efficiency, reducing health care costs, and improving population health. I accept this report and its recommendations.

I thank the workgroup for its thorough analyses and recommendations and look forward to the next phase of their work. I believe that the recommendations in this report will help both local public health and the Department of Health set the stage for interoperability. Public health is dependent on efficient information exchange to provide effective service delivery and accountability which is essential to achieving our goal of protecting, promoting, and improving the health of all Minnesotans.

I look forward to working with you and the SCHSAC as we jointly implement the recommendations in this report. Again, thank you for the excellent work.

Sincerely,

[Signature]

Ed Ehlinger, MD, MSPH
Commissioner
P.O. Box 64975
St. Paul, MN 55164-0975
Dear Commissioner Ehlinger:

I am pleased to present to you a report and recommendations from the Building Health Information Exchange Capacity Workgroup of the State Community Health Services Advisory Committee (SCHSAC). The SCHSAC approved this report at its meeting on December 16, 2011.

In 2010, the SCHSAC established the workgroup, charging it to recommend standardized methods for exchanging local public health data as required by state laws that mandated local health departments to have interoperable electronic health records (EHR) systems by January 2015. Ensuring that local public health (LPH) agencies meet the 2015 requirement in step with the broader health care community will be critical in achieving Minnesota’s goals of improving patient health, improving the quality of care, increasing efficiency, reducing health care costs, and improving population health.

During the past 18 months the workgroup has learned about the current level of interoperability and the vast amount of work that has already taken place for the 2015 mandate. The workgroup has started to identify exchange requirements and partners. But there is considerably more that needs to be done, and the workgroup is ready to move on to its next phase. The following are recommendations adopted by SCHSAC:

1. Develop a framework for collaboration between state and local public health, Minnesota based public health software vendors, private partners, and academia to a) capture data requirements, b) analyze data for evaluation, c) identify and recommend practices which yield the most effective outcomes.
2. Utilize evidence based practices and methodologies for reporting for population outcomes using data standards.
3. Establish business requirements for bi-directional exchange of health information.
4. Provide an on-going financial commitment to electronic public health systems.
5. Extend the workgroup so it may continue to identify issues and make recommendations for complying with the 2015 electronic health record mandate and improve public health outcomes.

We are committed to continue to move our technical infrastructure closer to mandates and best practices in order to improve the lives of Minnesota citizens. On behalf of SCHSAC I request the adoption and approval of this report and these recommendations.

Sincerely,

Dave Perkins, SCHSAC Chair
In 2010, the State Community Health Services Advisory Committee (SCHSAC) established the Building Health Information Exchange Capacity Workgroup. SCHSAC charged the workgroup to recommend standardized methods for exchanging local public health (LPH) data as required by state laws that mandated local health departments (LHDs) to have interoperable electronic health records (EHR) systems by January, 2015. Ensuring that LPH agencies meet the 2015 requirement in step with the broader health care community will be critical in achieving Minnesota’s goals of improving patient health, improving the quality of care, increasing efficiency, reducing health care costs, and improving population health.

Health care costs comprise an ever increasing proportion of public dollars, and reducing these costs through the health promotion efforts of the public health system is critical. Knowing whether we are having an impact is possible only through robust information exchange systems. Not achieving this objective will inhibit the ability of LPH to demonstrate efficiency and effectiveness in achieving better health for the citizens of Minnesota, and jeopardize the ability to garner both state and federal funding wherein demonstration of impact is required. The key to effective exchange of public health information is a set of agreed upon data standards to provide a common and consistent way to record information to more easily allow data to be exchanged.

One of the workgroup’s first tasks was to develop the following vision and objective:

**Vision:** Maternal and Child Health outcomes are enhanced through secure, standardized exchange of data between the Minnesota Department of Health, Local Public Health, and community partners.

**Objective:** By September 2015, 100 percent of Local Health Departments will have Health Information Exchange (HIE) capability.

In the past 18 months, the workgroup has learned about other states’ interoperability efforts, received education on business process analysis, examined LPH’s maternal and child health (MCH) business services, and began the task of determining data standards for electronic public health records and data exchange. The task of building a data dictionary for person-centric services started with data collected through Family/Targeted Home visiting. By conducting on-site business analysis sessions with LPH staff, workflow processes and data exchange elements were identified and documented for those individual agencies. Common exchanges and processes were then derived and vetted to provide the base for data and process standards.

The workgroup has accomplished much. It has learned about the current level of interoperability and the vast amount of work that has already taken place for the 2015 mandate. But there is considerably more that needs to be done, and the workgroup is ready to move on to its next phase.

Following are recommendations for SCHSAC’s review and adoption:

- Develop a framework for collaboration between state and local public health, Minnesota based public health software vendors, private partners, and academia to a) capture data requirements, b) analyze data for evaluation, c) identify and recommend practices which yield the most effective outcomes.
- Utilize evidence based practices and methodologies for reporting for population outcomes using data standards.
• Establish business requirements for bi-directional exchange of health information.
• Provide an on-going financial commitment to electronic public health systems.
• Extend the workgroup so it may continue to identify issues and make recommendations for complying with the 2015 electronic health record mandate and improve public health outcomes.

The workgroup respectfully requests the SCHSAC to review and adopt these recommendations. Thank you for allowing us to work on this important issue. We are committed to continue to move our technical infrastructure closer to mandates and best practices in order to improve the lives of Minnesota citizens.

**Workgroup Members**

Diane Thorson, Co-chair, Otter Tail County CHB
Maggie Diebel, Co-chair, Community and Family Health, MDH

Wendy Bauman, Dakota County CHB
Jill Bruns, Redwood-Renville Counties CHB
Margene Gunderson, Mower County CHB
Diane Holmgren and Barb Lescensi, St. Paul-Ramsey County CHB
Dan Jensen, Olmsted County CHB
Betsy Kremser, Anoka County CHB
Cheryl Stephens, Community Health Information Collaborative (CHIC)
Pat Stewart and Connie Hanson-Hullstrom, Cottonwood-Jackson Counties CHB
Maureen Alms, Office of Performance Improvement, MDH
Debra Burns, Office of Performance Improvement, MDH
Amy Camp, Health Policy, MDH
Mark Doerr, Information Systems Technology Management, MDH
Kathy Grantham, Information Systems Technology Management, MDH
Kari Guida, Office of Information Technology, MDH
Marty LaVenture, Office of Information Technology, MDH
Wendy Nelson, Office of the Commissioner, MDH
Steve Ring, Information Systems Technology Management, MDH
The need for effective public health services has never been greater. As the cost of health care continues to consume a larger share of budgets, there is a significant impact on our ability to both maintain the current level of health care service and maintain other public services. Spending on such things as roads and bridges, law enforcement, corrections, as well as public health is competing with counties’ needs to provide expensive health care.

Ensuring our public health services are able to continue to deliver proven health interventions is a key factor in cost containment. Immunizations reduce the need for health services. Early hearing screening improves a child’s ability to develop language and reduces the life-long economic consequences. Testing for lead and providing intervention services can reduce physical, neurological, and learning disorders. Home visiting reduces the need for other county and educational services. Maintaining current public health services is vital.

In addition, reducing health care costs through the health promotion efforts of the public health system is critical. Knowing whether we are having an impact is possible only through robust information exchange systems. Not achieving this objective will inhibit the ability of LPH to demonstrate efficiency and effectiveness in achieving better health for the citizens of Minnesota, and jeopardize the ability to garner both state and federal funding wherein demonstration of impact is required.

While Minnesota’s public health community has made a significant commitment to advancing the effective use of information technology (upgrades to immunization, laboratory, and disease surveillance systems), federal and state health reform funding and incentive programs are specifically designated for the private healthcare sector (hospitals and clinics) not public health. The public health information collection and exchange system in Minnesota is falling seriously behind in the state’s efforts to establish statewide Health Information Exchange capability and create an ingrained and functional decision support system. The diagram to the right depicts how
local public health is at the center of health data exchange. Improving public health exchange improves the health system overall. In fact, without public health’s participation, health data exchange is severely hampered.

In addition to new mandates for exchanging health data, there are also more requirements for greater accountability to maintain existing federal and state funding for public health. While there is general recognition that public health is cost effective, there is a new emphasis on proving it. What are the client and community health outcomes? What is the success of interventions? Is the funding making a positive difference? These are legitimate questions but valid and reliable answers require access to more data than public health has had in the past.

The key to effective exchange of public health information is a set of agreed upon data standards to provide a common and consistent way to record information to more easily allow data to be exchanged, and initial and ongoing funding to support the required data collection and exchange systems is necessary.

Motivation for Improved Interoperability

By January 2, 2015, all local public health departments (LHDs) must have in place an interoperable electronic health records (EHR) system within their practice setting (See Appendix A: Minn. Stat. § 65J.495). Extensive work has been done and financial investments made by LHDs over the past several years to implement EHRs. The focus of this work has been on the use of EHRs to organize clients’ health information (including immunizations), track public health services and bill for services. The majority of LHDs in Minnesota use one of three EHR systems: PH-DOC, CHAMP, and CareFacts.

While these systems have served LHDs very well for their intended purpose, the emerging national and statewide Health Information Technology (HIT) emphasis is now on the bi-directional exchange of health information across LHDs, with health care providers, and with the Minnesota Department of Health’s (MDH) information systems. The goals of Health Information Exchange (HIE) are to improve patient health, improve the quality of care, increase efficiency, reduce health care costs, and improve population health.

One key to effective exchange of public health information is having a set of agreed upon data standards. Data standards provide a common and consistent way to record information which allows data to be exchanged among different information systems. (For a more in-depth description of this issue, please see Appendix B: Public Health Data Standards: Improving How Public Health Collects, Exchanges, and Uses Data.)

LHDs utilize electronic health records in a variety of service settings including home health care, family home visiting, clinics, long-term care case management, correctional health care, environmental health inspections, community/system projects, and infectious disease prevention and control. There will soon be greater need to be able to exchange the information in a client’s EHR in public health with health care providers, with other LHDs, and with MDH for population health data purposes. One of the first steps down the road of exchanging data is to agree upon a set of data standards for electronic health records used in the LPH setting. The standards that are relevant to public health can be sorted into four categories:

- Terminology (classification systems like ICD-9 CM disease codes, CVX for vaccine products, Omaha system for key practice, documentation, and information management);
- Messaging (Health Level 7 or HL7 code for sending information between computer systems);
- Transactions or claims (uniform method for sending bills and getting reimbursed); and
• Data content (Planning Performance Measurement Reporting System (PPMRS) and Environmental Health Knowledge Management Projects are examples).

**SCHSAC Charge**

With severe resource shortages at the state and local level, the only viable way to move all LPH toward HIE capability is to work together. LPH and MDH, through this project, will create standardized methods for the exchange of data in a more cost effective manner than if each entity developed their own methods. To collaboratively build this capacity, SCHSAC created the Health Information Exchange (HIE) Workgroup with objectives of allowing all LHDs to meet the 2015 EHR mandate and improving public health business service delivery.

Building a strong HIE infrastructure is foundational in improving the quality, effectiveness and efficiency of health care and public health services, consumer safety, and ultimately, individual and population health outcomes. By facilitating ready access to the necessary information, individuals and communities are able to make the best possible health-related decisions. Just as information must “follow the patient” and be used meaningfully to support the provision of appropriate, consumer-centered care, so must aggregated information about individuals and the environments in which they live be available to inform decisions that will impact the health of Minnesota’s whole population, as well as disparate groups within our population.

To focus its work, the SCHSAC created the following charge to the HIE workgroup:

- Affirm a vision and principles for the exchange of public health data.
- Collect information on the data standards currently in place in the electronic health records systems being used by LHDs and other states such as North Carolina.
- Determine initial business processes focus.
  - Review of business process activities.
  - Determining common processes and different processes.
  - Define foundational business processes.
- Develop and recommend a set of data standards for LHD electronic health record systems that will include standards related to terminology, messaging, and transactions. Due to the diverse type of services provided at LHDs and scope of content, the work group will develop data content standards for one selected service area (see above).
- Assure communication with stakeholders including the Local Public Health Association (LPHA), e-Health Advisory Committee, and primary vendors of electronic health records for LHDs.
- Work with the SE Minnesota Beacon grantees to ensure coordination with their efforts.
- Align efforts with the HIT Meaningful Use requirements for exchanging data relating to immunizations, lab reporting, and coordination of care.
- Utilize the important lessons learned from other data standards projects, such as PPMRS and the Environmental Health Knowledge Project, to guide the process.
- Utilize resources available from the Public Health Informatics Institute and the MDH Office of Health Information Technology related to data standards and information systems development.

This workgroup has utilized this charge as a framework for its objectives and communication strategies. (Charge included in Appendix C: Workgroup Charge and Membership.)
Vision Statement and Objective

One of the workgroup’s first tasks was to develop the following as its vision:

Vision: Maternal and Child Health outcomes are enhanced through secure, standardized exchange of data between the Minnesota Department of Health, Local Public Health, and community partners.

In addition, the workgroup developed the following as its objective:

Objective: By September 2015, 100 percent of Local Health Departments will have Health Information Exchange (HIE) capability.

Method

The HIE workgroup developed a work plan that had nine components:

1. Communication Plan
2. Workgroup Education
3. Legal/Policy/Security
4. Process
5. Readiness Assessment
6. Services Assessment
7. Determine MCH Foundational/Core Service
8. Detailed Business Process Analysis for the Core Service
9. Standards Development

Work began with the workgroup education tasks so that all members would have a good understanding of the issues around interoperability. This included presentations and workshops on national and other states’ efforts around interoperability, federal and state legal requirements for interoperability, and business process analysis. Building upon and learning from the work in Cabarrus County, North Carolina, the workgroup began the task of identifying the MCH services, data collected, and standards in place for exchanging that data. (For more information on Cabarrus County, visit: http://www.cabarrushealth.org/CommonGround/BPA-BPR/.)

A communication plan was also developed based on the work of the Environmental Health Knowledge Management System workgroup and MDH’s project management templates. (See Appendix D: LPH-HIE Communications Plan.)

Some components were deferred. Legal/Policy/Security was delayed until more was known about the needs, and the Readiness Assessment was included as part of the LPHA questions in the PPMRS.

Work began immediately on the process of identifying standards for the exchange of public health data. Building on the work from Cabarrus County, North Carolina, the workgroup identified 45 MCH public health services and processes. (See Appendix E: Local Public Health Services.) The workgroup chose Targeted/Family Home Visiting (FHV) client referral and intake, client registration, and initial home visit as the first process to fully analyze. The workgroup felt that the data collected in this initial contact with a family provided a foundation of data elements upon which other MCH data could be built. In addition, every LPH agency in Minnesota performs...
this service which means the data elements can be vetted and reviewed with a high level of expertise by multiple agencies in Minnesota.

To better capture and understand the similarities and variations of targeted home visiting data collection across Minnesota’s LPH agencies, a small team of MDH staff conducted site visits to eight local public agencies. Agencies visited were Anoka, Carlton, Cottonwood, Dakota, Lake, Mower, Renville, and St. Paul Ramsey as well as the Minnesota Visiting Nurses Association which is contracted to perform FHV services for Minneapolis and Hennepin County. Care was taken to select agencies from urban, suburban and rural Minnesota; large, medium and small agencies; and users of the three public health software systems. At each agency, meetings were held to fully understand and diagram the initial steps in delivering services through FHV. At some agencies, many staff were involved, and at other agencies one or two staff were involved. The results of these visits were compiled by MDH staff and returned for local agency review and correction. The outcomes are good documentation in the form of context diagrams which gives workgroup members and agency staff a better understanding of the initial FHV processes, exchange partners, and the data elements exchanged. (The context diagrams for each of these agencies showing the exchanges or transactions between participants in a process are available in Appendix F: Common Data Exchange Partners for Local Public Health Maternal and Child Health Targeted/Family Home Visiting Services.)

A side value these agencies have recognized is that their context diagrams are a valuable tool in learning about their processes for quality improvement efforts. Seeing their FHV processes outlined, agencies have an opportunity to look for process improvements. How many steps are redundant? How much data is collected that’s not used? Is there only one person who understands how to do a critical task? These are some of the questions agencies are asking themselves as they go through this process. This side benefit may help agencies in their service delivery and is a cornerstone of the public health accreditation efforts.

The workgroup began to look at the similarities between the processes identified in the eight agencies and began to see a convergence of data exchange partners and the types of data exchanged that formed common workflow processes. This is a critical piece of information as it allows the identification of common data elements and the development of data standards. At this point, a standard diagram for the common workflow processes was evaluated to determine if it would fit into the format being developed by the Public Health Informatics Institute for all individual services involving referral, intake, and initial visit. The evaluation proved that the national format would align, which is another big step toward identifying national standards for Minnesota data exchange. (This documentation is in Appendix G: Commonalities of Targeted/Family Home Visiting Data Exchange.)

The workgroup has also begun to develop a data dictionary for the FHV data that has been identified. This dictionary is a work in progress. As more MCH services are analyzed and additional data elements are identified, they will be added to the dictionary. In addition, national and MDH data standards are included. The goal of the workgroup is to select standards for all MCH data elements that meet the needs of local agencies and meet national requirements. This is a huge task, and even when complete will require on-going efforts to maintain. (See Appendix H: Person-Centered Services Dictionary of Data Elements.)

As the workgroup reviewed its efforts over the past year, there was a decision made to redefine the current FHV data standardization effort to be labeled person-centered services data to better reflect its utilization across a variety of public health services provided to individuals, such as family home visiting, car seat education, case management, tuberculosis, immunizations, disease reporting, and home health. This is a broader and more representative definition of the work being done.
Lessons Learned

Innovative and exciting data projects are happening at the local level.

LPH agencies are doing great work and are very innovative. Also, there is a desire to collect and exchange more and better data. Efforts like the PHDOCs consortium that has created a standardized public health tracking system, the BEACON project that is building on that effort to create a true EHR system for public health, and the Cottonwood-Jackson data system-sharing are good examples. We need to build on these and other great models.

Business analysis is a great tool to evaluate public health processes and for quality improvement.

Agencies that participated in the business analysis process can see their home visiting processes as a diagram. This objective view has led them to question some of the processes and make changes to improve service delivery.

Data is exchanged with an extraordinary number of entities; more is desired and will be required.

The expansion of data exchange to other entities makes standardization even more important. Exchange with law enforcement, schools, jails, courts and more are coming and local public health needs to be ready.

There ARE many commonalities in the FHV processes.

While there are many differences in the delivery of service, there are many more commonalities. The development of standard processes for referral, intake and initial visit was completed. In addition, it was successfully compared to national standards for these three processes.

While local software systems have the capacity for data collection, funding is needed to create the functionality for data exchange mandates.

There is data exchange taking place today that can serve as a model. Public health needs to build on this capacity and find opportunities for agencies that need improved electronic exchange capacity or need to build missing capacity. The state immunization registry and Follow Along program have demonstrated the ability to exchange data with at least one local public health EHR. This needs to be expanded.

Data standards are the tip of the iceberg.

Financing, collaboration, changing visions and requirements, and reporting have all been identified as related issues.

Work is in process at the federal level to specify the data standards for electronic health records to be used for practice, reporting, and research.

Recommendations and Strategies for Implementation

The workgroup has accomplished much in the last 18 months and has learned about the current level of interoperability and the vast amount of work that has taken place for the 2015 mandate. (A list of accomplishments and previous reports to SCHSAC can be found in Appendices I and J.)
But there is much more that needs to be done, and the workgroup is ready to move on to its next phase. The workgroup respectfully asks that SCHSAC approve the following recommendations for workgroup activities:

1. **Collaboration Framework**

   Develop a framework for collaboration between state and LPH, Minnesota based public health software vendors, private partners, and academia to a) capture data requirements, b) analyze data for evaluation, c) identify and recommend practices which yield the most effective outcomes.

   Rationale: LPH cannot operate in silos; instead, they must work together to collect, share and use data in a collaborative and secure model with other local agencies, MDH and the health care community.

   Possible Strategies:

   - Contact vendors to learn about their efforts to meet the mandates and their plans for improved data exchange and analysis capacity.
   - Collaborate with the MDH Strategic Initiative Project sub-group. Their purpose is to:
     - assemble information necessary to analyze current systems to collect information from local and tribal health department grantees;
     - identify opportunities for streamlining and improvement;
     - make recommendations that will improve the quality, utility and efficiency of grant reporting.
   - Connect with the Regional Extension Assistance Center for HIT (REACH) at Stratis Health to determine if there are opportunities to collaborate on the development of toolkits to assist local public health’s adoption of electronic health records.
   - Continue to work with the MDH Office of Health Information Technology, the e-Health Initiative, and the Public Health Informatics Institute to track and provide input on state and federal data exchange development efforts, changing requirements and funding opportunities.
   - Continue to work with the Beacon grant project in southeast Minnesota to ensure our activities and the Beacon activities are coordinated.

2. **Data Standards**

   Utilize evidence based practices and methodologies for population outcomes reporting using data standards.

   Rationale: Using standardized data for reporting is important in making sure all segments of the public health system are compared equally. Currently annual reporting would benefit from exploring and comparing data sources, and procedures and methods for responding to data requests.

   Possible Strategies:

   - Establishing Omaha as a client care documentation standard and using the standardized data for annual reporting where possible. (See: www.omahasystem.org for more information.)
   - Create ongoing, program specific, LPH-MDH workgroups to collaborate on the development of standardized pathways for documentation and data collection that support state and federal annual reporting requirements. An example is the Early Detection of Hearing Impairment workgroup.
   - Collaborate with the MDH Strategic Initiative Project sub-group as outlined in Recommendation 1.
3. Business Requirements

Establish business requirements for bi-directional exchange of health information.

Rationale: Defining business requirements for the exchange of health information will provide the foundation for exchange standards. What are the data elements exchanged? How are they defined by the various local agencies, MDH, private health care providers, and the federal government? How is data used for service delivery, accountability and research? A standardized taxonomy can be chosen or developed to be incorporated into electronic data collection and exchange systems.

Possible Strategies:

- Define business requirement for exchange of health information.
- Explore currently available documentation systems such as Omaha.

4. Ongoing Commitment

Provide an ongoing commitment to electronic public health systems.

Rationale: The biggest impediment to interoperability is the cost of implementation and on-going maintenance. Even with standards for exchange, the cost of implementation is high. Agencies with no electronic systems have limited resources to purchase or maintain an EHR system. Agencies with electronic systems will need to upgrade systems to meet requirements. All agencies will need to maintain staff with expertise in electronic data exchange, and annual reporting to MDH shows that only 26 percent of LHDs have staff with this expertise.

While LPH’s EHR systems are included in the Meaningful Use requirements under the ARRA, LPH agencies are not eligible for the incentives. However, our partners in the health care community are eligible and are making great progress to implement EHR systems. This means there is an increasing demand that LPH and MDH accept electronic reporting or exchange data electronically. Public health must be ready or we run the risk of losing this critical data.

Possible Strategies:

- Explore options for financing upgrades, replacements, and new public health documentation/tracking systems, as well as staff training in information management.
  - Options used have included payment plans, use of county reserves, and/or development in collaboration with other local public health agencies.
- Explore training opportunities for cost effective and relevant education for transitions from paper to digital records.

5. Workgroup Continuation

Extend the workgroup so it may continue to identify issues and make recommendations for complying with the 2015 electronic health record mandate and improve public health outcomes.

Rationale: The work of the past 18 months has revealed more and more issues, but it has also revealed more identifiable pathways with specific and attainable goals. The workgroup has created a 2012 work plan (See Appendix K) and is enthusiastic about what it can accomplish in the next two years.
Possible Strategy: Re-establish the workgroup so they may continue to analyze additional MCH services, expand the data dictionary for MCH, MDH and relevant national standards, explore the legal and policy issues and identify possible solutions, and educate local public health on interoperability issues and solutions.

Conclusion

Much more work remains to be done. The efforts of the Local Public Health Workgroup for Health Information Exchange has resulted in five recommendations that they believe will move local public health closer to achieving the 2015 mandates. But more importantly, the standardized exchange of electronic health data between LHDs, other local agencies, the health care community, MDH, and others, will improve service delivery to clients. Improved delivery of services is essential to achieving our goal of protecting, promoting, and improving the health of all Minnesotans.
Appendix A

Minn. Stat. § 62J.495 (2011)

62J.495 ELECTRONIC HEALTH RECORD TECHNOLOGY.

Subdivision 1. Implementation. By January 1, 2015, all hospitals and health care providers must have in place an interoperable electronic health records system within their hospital system or clinical practice setting. The commissioner of health, in consultation with the e-Health Advisory Committee, shall develop a statewide plan to meet this goal, including uniform standards to be used for the interoperable system for sharing and synchronizing patient data across systems. The standards must be compatible with federal efforts. The uniform standards must be developed by January 1, 2009, and updated on an ongoing basis. The commissioner shall include an update on standards development as part of an annual report to the legislature.

Subd. 1a. Definitions. (a) "Certified electronic health record technology" means an electronic health record that is certified pursuant to section 3001(c)(5) of the HITECH Act to meet the standards and implementation specifications adopted under section 3004 as applicable.

(b) "Commissioner" means the commissioner of health.

(c) "Pharmaceutical electronic data intermediary" means any entity that provides the infrastructure to connect computer systems or other electronic devices utilized by prescribing practitioners with those used by pharmacies, health plans, third-party administrators, and pharmacy benefit managers in order to facilitate the secure transmission of electronic prescriptions, refill authorization requests, communications, and other prescription-related information between such entities.

(d) "HITECH Act" means the Health Information Technology for Economic and Clinical Health Act in division A, title XIII and division B, title IV of the American Recovery and Reinvestment Act of 2009, including federal regulations adopted under that act.

(e) "Interoperable electronic health record" means an electronic health record that securely exchanges health information with another electronic health record system that meets requirements specified in subdivision 3, and national requirements for certification under the HITECH Act.

(f) "Qualified electronic health record" means an electronic record of health-related information on an individual that includes patient demographic and clinical health information and has the capacity to:

(1) provide clinical decision support;

(2) support physician order entry;

(3) capture and query information relevant to health care quality; and

(4) exchange electronic health information with, and integrate such information from, other sources.

Subd. 2. E-Health Advisory Committee. (a) The commissioner shall establish an e-Health Advisory Committee governed by section 15.059 to advise the commissioner on the following matters:

(1) assessment of the adoption and effective use of health information technology by the state, licensed health care providers and facilities, and local public health agencies;

(2) recommendations for implementing a statewide interoperable health information infrastructure, to include estimates of necessary resources, and for determining standards for clinical data exchange, clinical support programs, patient privacy requirements, and maintenance of the security and confidentiality of individual patient data;

(3) recommendations for encouraging use of innovative health care applications using information technology and systems to improve patient care and reduce the cost of care, including applications relating to disease management and personal health management that enable remote monitoring of patients' conditions, especially those with chronic conditions; and

(4) other related issues as requested by the commissioner.

(b) The members of the e-Health Advisory Committee shall include the commissioners, or commissioners' designees, of health, human services, administration, and commerce and additional members to be appointed by the commissioner to include persons representing Minnesota's local public health agencies, licensed hospitals and other licensed facilities and providers, private purchasers, the medical and nursing professions, health insurers and health plans, the state quality improvement organization, academic and research institutions, consumer advisory organizations with an interest and expertise in health information technology, and other stakeholders as identified by the commissioner to fulfill the requirements of section 3013, paragraph (g), of the HITECH Act.

(c) The commissioner shall prepare and issue an annual report not later than January 30 of each year outlining progress to date in implementing a statewide health information infrastructure and recommending action on policy and necessary resources to continue the promotion of adoption and effective use of health information technology.

(d) Notwithstanding section 15.059, this subdivision expires June 30, 2015.

Subd. 3. **Interoperable electronic health record requirements.** To meet the requirements of subdivision 1, hospitals and health care providers must meet the following criteria when implementing an interoperable electronic health records system within their hospital system or clinical practice setting.

(a) The electronic health record must be a qualified electronic health record.

(b) The electronic health record must be certified by the Office of the National Coordinator pursuant to the HITECH Act. This criterion only applies to hospitals and health care providers if a certified electronic health record product for the provider's particular practice setting is available. This criterion shall be considered met if a hospital or health care provider is using an electronic health records system that has been certified within the last three years, even if a more current version of the system has been certified within the three-year period.

(c) The electronic health record must meet the standards established according to section 3004 of the HITECH Act as applicable.

(d) The electronic health record must have the ability to generate information on clinical quality measures and other measures reported under sections 4101, 4102, and 4201 of the HITECH Act.
(e) The electronic health record system must be connected to a state-certified health information organization either directly or through a connection facilitated by a state-certified health data intermediary as defined in section 62J.498.

(f) A health care provider who is a prescriber or dispenser of legend drugs must have an electronic health record system that meets the requirements of section 62J.497.

Subd. 4. Coordination with national HIT activities. (a) The commissioner, in consultation with the e-Health Advisory Committee, shall update the statewide implementation plan required under subdivision 2 and released June 2008, to be consistent with the updated Federal HIT Strategic Plan released by the Office of the National Coordinator in accordance with section 3001 of the HITECH Act. The statewide plan shall meet the requirements for a plan required under section 3013 of the HITECH Act.

(b) The commissioner, in consultation with the e-Health Advisory Committee, shall work to ensure coordination between state, regional, and national efforts to support and accelerate efforts to effectively use health information technology to improve the quality and coordination of health care and the continuity of patient care among health care providers, to reduce medical errors, to improve population health, to reduce health disparities, and to reduce chronic disease. The commissioner's coordination efforts shall include but not be limited to:

(1) assisting in the development and support of health information technology regional extension centers established under section 3012(c) of the HITECH Act to provide technical assistance and disseminate best practices; and

(2) providing supplemental information to the best practices gathered by regional centers to ensure that the information is relayed in a meaningful way to the Minnesota health care community.

(c) The commissioner, in consultation with the e-Health Advisory Committee, shall monitor national activity related to health information technology and shall coordinate statewide input on policy development. The commissioner shall coordinate statewide responses to proposed federal health information technology regulations in order to ensure that the needs of the Minnesota health care community are adequately and efficiently addressed in the proposed regulations. The commissioner's responses may include, but are not limited to:

(1) reviewing and evaluating any standard, implementation specification, or certification criteria proposed by the national HIT standards committee;

(2) reviewing and evaluating policy proposed by the national HIT policy committee relating to the implementation of a nationwide health information technology infrastructure;

(3) monitoring and responding to activity related to the development of quality measures and other measures as required by section 4101 of the HITECH Act. Any response related to quality measures shall consider and address the quality efforts required under chapter 62U; and

(4) monitoring and responding to national activity related to privacy, security, and data stewardship of electronic health information and individually identifiable health information.

(d) To the extent that the state is either required or allowed to apply, or designate an entity to apply for or carry out activities and programs under section 3013 of the HITECH Act, the commissioner of health, in consultation with the e-Health Advisory Committee and the commissioner of human services, shall be the lead
applicant or sole designating authority. The commissioner shall make such designations consistent with the goals and objectives of sections 62J.495 to 62J.497 and 62J.50 to 62J.61.

(e) The commissioner of human services shall apply for funding necessary to administer the incentive payments to providers authorized under title IV of the American Recovery and Reinvestment Act.

(f) The commissioner shall include in the report to the legislature information on the activities of this subdivision and provide recommendations on any relevant policy changes that should be considered in Minnesota.

Subd. 5. Collection of data for assessment and eligibility determination. (a) The commissioner of health, in consultation with the commissioner of human services, may require providers, dispensers, group purchasers, and pharmaceutical electronic data intermediaries to submit data in a form and manner specified by the commissioner to assess the status of adoption, effective use, and interoperability of electronic health records for the purpose of:

(1) demonstrating Minnesota's progress on goals established by the Office of the National Coordinator to accelerate the adoption and effective use of health information technology established under the HITECH Act;

(2) assisting the Center for Medicare and Medicaid Services and the Department of Human Services in determining eligibility of health care professionals and hospitals to receive federal incentives for the adoption and effective use of health information technology under the HITECH Act or other federal incentive programs;

(3) assisting the Office of the National Coordinator in completing required assessments of the impact of the implementation and effective use of health information technology in achieving goals identified in the national strategic plan, and completing studies required by the HITECH Act;

(4) providing the data necessary to assist the Office of the National Coordinator in conducting evaluations of regional extension centers as required by the HITECH Act; and

(5) other purposes as necessary to support the implementation of the HITECH Act.

(b) The commissioner shall coordinate with the commissioner of human services and other state agencies in the collection of data required under this section to:

(1) avoid duplicative reporting requirements;

(2) maximize efficiencies in the development of reports on state activities as required by HITECH; and

(3) determine health professional and hospital eligibility for incentives available under the HITECH Act.

(c) The commissioner must not collect data or publish analyses that identify, or could potentially identify, individual patients. The commissioner must not collect individual patient data in identified or de-identified form.

Subd. 6. State agency information system. Development of state agency information systems necessary to implement this section is subject to the authority of the Office of Enterprise Technology in chapter 16E, including, but not limited to:

(1) evaluation and approval of the system as specified in section 16E.03, subdivisions 3 and 4;
(2) review of the system to ensure compliance with security policies, guidelines, and standards as specified in section 16E.03, subdivision 7; and

(3) assurance that the system complies with accessibility standards developed under section 16E.03, subdivision 9.


Subd. 8. Definitions. For purposes of subdivisions 7 to 11, the following terms have the meanings given.

(a) "Certified electronic health record technology" has the same meaning as defined in Code of Federal Regulations, title 42, part 495.4.

(b) "Commissioner" means the commissioner of the Department of Human Services.

(c) "National Level Repository" or "NLR" has the same meaning as defined in Code of Federal Regulations, title 42, part 495.

(d) "SMHP" means the state Medicaid health information technology plan.

(e) "MEIP" means the Minnesota electronic health record incentive program in this section.

(f) "Pediatrician" means a physician who is certified by either the American Board of Pediatrics or the American Osteopathic Board of Pediatrics.

Subd. 9. Registration, application, and payment processing. (a) Eligible providers and eligible hospitals must successfully complete the NLR registration process defined by the Centers for Medicare and Medicaid Services before applying for the Minnesota electronic health record incentives program.

(b) The commissioner shall collect any improper payments made under the Minnesota electronic health record incentives program.

(c) Eligible providers and eligible hospitals enrolled in the Minnesota electronic health record incentives program must retain all records supporting eligibility for a minimum of six years.

(d) The commissioner shall determine the allowable methodology options to be used by eligible providers and eligible hospitals for purposes of attesting to and calculating their Medicaid patient volume per Code of Federal Regulations, title 42, part 495.306.

(e) Minnesota electronic health record incentives program payments must be processed and paid to the tax identification number designated by the eligible provider or eligible hospital.

(f) The payment mechanism for Minnesota electronic health record incentives program payments must be determined by the commissioner.
(g) The commissioner shall determine the 12-month period selected by the state as referenced in Code of Federal Regulation, title 42, part 495.310 (g)(1)(i)(B).

Subd. 10. Audits. The commissioner is authorized to audit an eligible provider or eligible hospital that applies for an incentive payment through the Minnesota electronic health record incentives program, both before and after payment determination. The commissioner is authorized to use state and federal laws, regulations, and circulars to develop the department's audit criteria.

Subd. 11. Provider appeals. An eligible provider or eligible hospital who has received notification of an adverse action related to the Minnesota electronic health record incentives program may appeal the action pursuant to subdivision 8.

Subd. 12. MEIP appeals. An eligible provider or eligible hospital who has received notice of an appealable issue related to the Minnesota electronic health record incentives program may appeal the action in accordance with procedures in this section.

Subd. 13. Definitions. For purposes of subdivisions 12 to 15, the following terms have the meanings given.

(a) "Provider" means an eligible provider or eligible hospital for purposes of the Minnesota electronic health record incentives program.

(b) "Appealable issue" means one or more of the following issues related to the Minnesota electronic health record incentives program:

(1) incentive payments;

(2) incentive payment amounts;

(3) provider eligibility determination; or

(4) demonstration of adopting, implementing, and upgrading, and meaningful use eligibility for incentives.

Subd. 14. Filing an appeal. To appeal, the provider shall file with the commissioner a written notice of appeal. The appeal must be postmarked or received by the commissioner within 30 days of the date of issuance specified in the notice of action regarding the appealable issue. The notice of appeal must specify:

(1) the appealable issues;

(2) each disputed item;

(3) the reason for the dispute;

(4) the total dollar amount in dispute;

(5) the computation that the provider believes is correct;

(6) the authority relied upon for each disputed item;

(7) the name and address of the person or firm with whom contacts may be made regarding the appeal; and
(8) other information required by the commissioner.

Subd. 15. **Appeals review process.** (a) Upon receipt of an appeal notice satisfying subdivision 14, the commissioner shall review the appeal and issue a written appeal determination on each appealed item with 90 days. Upon mutual agreement, the commissioner and the provider may extend the time for issuing a determination for a specified period. The commissioner shall notify the provider by first class mail of the appeal determination. The appeal determination takes effect upon the date of issuance specified in the determination.

(b) In reviewing the appeal, the commissioner may request additional written or oral information from the provider.

(c) The provider has the right to present information by telephone, in writing, or in person concerning the appeal to the commissioner prior to the issuance of the appeal determination within 30 days of the date the appeal was received by the commissioner. The provider must request an in-person conference in writing, separate from the appeal letter. Statements made during the review process are not admissible in a contested case hearing absent an express stipulation by the parties to the contested case.

(d) For an appeal item on which the provider disagrees with the appeal determination, the provider may file with the commissioner a written demand for a contested case hearing to determine the proper resolution of specified appeal items. The demand must be postmarked or received by the commissioner within 30 days of the date of issuance specified in the determination. A contested case demand for an appeal item nullifies the written appeal determination issued by the commissioner for that appeal item. The commissioner shall refer any contested case demand to the Office of the Attorney General.

(e) A contested case hearing must be heard by an administrative law judge according to sections 14.48 to 14.56. In any proceeding under this section, the appealing party must demonstrate by a preponderance of the evidence that the Minnesota electronic health record incentives program eligibility determination is incorrect.

(f) Regardless of any appeal, the Minnesota electronic health record incentives program eligibility determination must remain in effect until final resolution of the appeal.

(g) The commissioner has discretion to issue to the provider a proposed resolution for specified appeal items upon a request from the provider filed separately from the notice of appeal. The proposed resolution is final upon written acceptance by the provider within 30 days of the date the proposed resolution was mailed to or personally received by the provider, whichever is earlier.

History: 1Sp2005 c 4 art 6 s 1; 2007 c 147 art 15 s 2; 2008 c 358 art 4 s 2; 2009 c 79 art 4 s 1; 2009 c 102 s 1; 2010 c 336 s 1-3; 1Sp2011 c 9 art 6 s 4-12
Appendix B

Public Health Data Standards: Improving How Public Health Collects, Exchanges, and Uses Data

Introduction

The health care and public health communities are transforming how they manage and use health information. Rapid advances in information technology, coupled with national calls to improve the efficiency, quality and safety of health care, have contributed to a bold and historic initiative to create a national health information infrastructure.

Public health agencies are necessarily a part of this monumental transformation. Much of public health data comes from hospitals, laboratories and private providers. And public health has considerable data that has health policy, research and clinical value.

A key component necessary for the success of this nationwide transformation is the widespread adoption of data standards.

What Are Data Standards?

Data standards are an agreed-upon, common and consistent way to record information. They allow data to be exchanged among different information systems, and for that data to have consistent meaning from system to system, program to program, and agency to agency.

Data standards are important in almost every aspect of our lives. They are what make it possible for us to consistently measure distances and time, get the same results from a recipe as our next door neighbor, place phone calls across the globe, and withdraw money from almost any ATM in the world. Without standards, the electronic exchange of information that occurs every second of every day across countless businesses and organizations would grind to a near halt. Without a consistent way to denote a piece of data, the communication, interpretation and translation of that data would become time-consuming at best, and totally erroneous at worst.

With public health data, standards make it possible for us to, for example, collect client names in the same way (for example, one field for first name, a second for middle initial, another for last name, and a final field for suffixes). When information systems collect and store client names in the same way, it is much more efficient and accurate for one system to send that data to another, or to compare and match names from two different systems so the data can be exchanged or merged.

Another example is how we agree to denote vaccine products. Td, DT, DTaP and TdaP are all different vaccine formulations. Without agreement on how to standardize the abbreviations, a public health nurse couldn’t be sure what vaccine product to give today or whether a dose has to be repeated or not.

There are different types of standards, each serving a particular purpose. For instance, there are standard ways to code nursing functions (the Omaha system used in PH-DOC, CHAMPS, and CareFacts), for diagnostic codes (ICD-9), to bill for medical services (CMS 1500), to send health data between different information systems.

Source: Minnesota Public Health Information Network (MN-PHN). (2006). The original version of this issue brief can be found online: http://www.health.state.mn.us/e-health/standards/pubhstandards08.pdf
(HL7), and to code lab results (LOINC). In every case, standards enable computers to send data back and forth, usually in the same format and meaning the same thing. Being able to exchange data from information system to information system, without having to translate it into a new format and being able to retain the same meaning, is what is meant by the term interoperability.

So standards are basically universally agreed upon ways to handle data in ways that ensure interoperability.

**What standards are most important to public health?**

There are 2,100 different standards being used in health care today—an unwieldy number that highlights how standards have historically arisen to meet very specific needs in specific types of settings. Reducing these to a manageable number that health care organizations, public health agencies, and vendors can reasonably work with is the focus of considerable work nationally. For our purposes, we can group relevant standards for public health into four categories:

- Terminology
- Messaging
- Transactions/claims
- Data content

Terminology standards are ways to define and classify individual health and other terms so that they are easily and consistently understood for one organization to another. Table 1 highlights the most important content standards for public health.

**Table 1. Examples of Terminology Standards**

<table>
<thead>
<tr>
<th>Type of Content Standard</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code Sets</td>
<td>A list of codes, each code being associated with a particular result, product or term.</td>
<td>LOINC (Logical Observations, Identifiers, Names, and Codes): Widely used by public health and clinical laboratories for electronic reporting of lab results. CVX: Code set developed by CDC to uniquely identify each vaccine product.</td>
</tr>
<tr>
<td>Classification Systems</td>
<td>A method for classifying data into terms that can be easily and consistently reported, understood, retrieved and analyzed.</td>
<td>ICD-9-CM: The International Statistical Classification of Diseases and Health Related Problems – Clinical Modification is widely used by hospitals for both billing and statistical analyses, such as studies using hospital discharge data. ICD-9 is the classification used to code and classify mortality data from death certificates.</td>
</tr>
</tbody>
</table>

---

3 Adapted from the Public Health Data Standards Consortium’s tutorial module on data standards, 2006.
<table>
<thead>
<tr>
<th>Type of Content</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nomenclature</td>
<td>Specialized terms that are given standardized, precise and unambiguous definitions, which makes meaningful exchange of data between providers possible.</td>
<td>SNOMED: The Systemized Nomenclature of Medicine is a robust classification system used in human and veterinary medicine. Omaha System: A system for standardizing terminology used in nursing. Used in PH-Doc, CHAMPS and other integrated public health information systems.</td>
</tr>
</tbody>
</table>

Creating consistent ways to classify data is critical but you also have to have a consistent way to send data back and forth between organizations. That is the role of **messaging standards**. The most widely used messaging standard in public health and health care is HL7 (Health Level 7).\(^4\)

Health Level 7 is a way to package data so that the receiving computer knows precisely what data is coming in, and where each data element occurs in the electronic file. For instance, HL7 will tell the receiving computer, “The next data you read will be Patient Identification Information.” It does this by using a specific HL7 code (in this case, `PID`) and putting it immediately in front of the string of relevant data, like so:

```
PID||0493575^^2^ID1||DOE^JOHN^M^^|DOE^JOHN^M^^|19480203|M||B|254E38ST^^
DULUTH^MN^55802^US|||(218)625-4359|||
```

While this may look confusing at first, one of the advantages of an HL7 message is that it is, without too much effort, fairly readable by humans.

The HL7 coding scheme is used for a very wide range of clinical and demographic data, any of which may need to be exchanged between health care organizations. The beauty of HL7 is that the two organizations do not need to be using the same information systems—HL7 makes it possible for the computer in the receiving organization to make sense of the incoming data without staff having to manually sort the data into the appropriate fields.

Transaction or claims standards provide a uniform method for sending bills and getting reimbursed, as well as for exchanging other types of administrative data. Prior to these standards, processing claims was a very expensive task for both providers and insurance companies. Every insurance company had their own forms and requirements that providers had to learn. For years, the standard paper claims form was the Uniform Bill-92 or UB92. With the enactment of the Health Insurance Portability and Accountability Act (HIPAA), the paper UB-92 form was replaced by the electronic standard ASC X12N 837. Any provider that bills electronically must produce the claim using this format. By adopting this standard, the HIPAA requirements seek to improve administrative efficiency by reducing administrative costs across all health and health care settings.

Data content standards is a broad term that covers a wide range of data standards, mostly around establishing a consistent, uniform way to capture, record and exchange data. For instance, when immunization registries first emerged in the early-1990’s, CDC created a standard known as the Core Data Set that every registry could use not

---

\(^4\) For the curious, Health Level 7 refers to the top layer (Level 7) of the Open Systems Interconnection (OSI) layer protocol for the health environment.
only as the basis for building or buying their application, but also for establishing what data needed to be reported by providers.

A well-known example of a data content standard is how we collect race and ethnicity data. If we did not have a standard way to collect this information (established by the National Committee on Vital and Health Statistics), we could not readily merge, compare, exchange or analyze different reports/data sets that included race and ethnicity data. (When the Census Bureau changed their taxonomy for collecting race and ethnicity data, it created monumental problems for comparability of data, both across time and across different information systems, since the old and new data content standard did not match, the new being much more complicated and nuanced (although arguably more accurate.).)

The definition of terms used in the CHS Performance and Practice Measurement System (PPMRS) and for the Environmental Health Knowledge Management project are two more recent examples. As a state, we cannot have comparable—and so meaningful—statewide data if every agency defines “visit” or “inspection” differently.

Though not listed above, HIPAA has established a national floor for privacy and security standards which are of vital importance to health care and public health but which are beyond the scope of this paper. More information can be found at http://www.hhs.gov/ocr/hipaa/.

**Why do we need data standards in public health?**

The critical need for data standards rises from factors both internal and external to public health. Chief among them are:

- The demand for a more efficient and responsive public health system that uses its data as a resource to improve community health and public health practice.
- The increasing need to exchange data across public health information systems in order to create more complete and integrated profiles of clients, families, and communities.\(^5\)
- The increasing need to exchange data with hospitals and private providers, as well as with jails, state agencies, other local health departments, long term care facilities, and others.
- The frustration of working with silo information systems that cannot readily exchange data, often don’t support quality care/services or improvements in public health practice, are inefficient, and make comprehensive community assessments difficult.
- The fact that the health care industry is moving rapidly, through both mandates and market forces, toward an increased adoption of standards. Since they are the source of much of public health’s data, we need to ensure out information systems can readily accept and exchange that data.

**What do data standards mean to me as a public health professional?**

As we increasingly move toward broader use of data standards, public health agencies will benefit in a number of ways:

\(^5\) It should be noted here that integrating data from several sources does not imply integrating those data into a single database. But an integrated view of data is possible when data standards are used to merge data from different sources into a single report or profile.
- Greater continuity of care because you will be able to exchange clinical data with private providers on clients you are both serving. This also means that public health can participate in the regional health information exchanges that are beginning to emerge around the state.
- The ability to receive data from others without having to manually translate the data into a form and format that works for your information systems.
- More meaningful reports, because there will be more consistency in how data gets entered, merged and shared.
- More complete profiles of clients, families and communities because data from different information systems can be consolidated and integrated view.
- Less need for double data entry, because data can be exchanged between information systems that include records on the same client. Because the information systems can ‘interoperate,’ the data from one system can be used to populate the other, saving data entry time (and reducing the chances of data entry errors).

**How do I know if the applications I rely on use data standards?**

It is an unfortunate reality that public health information systems do not historically rely on data standards to any great extent. Partly this is because many standards arose out of the need to process claims, and many public health services and their associated data are not reimbursable in the traditional sense. The result is that we do not have codes for data such as client risk factors and symptoms, community coalition building activities, and many health promotion and prevention services.

**How can I begin?**

There are places you can start within your program or agency to move toward standardizing your information systems.

- Verify that the demographic fields in your applications match standards set by the National Committee on Vital and Health Statistics. You may decide to begin changing any systems that do not meet this standard; for instance, by moving from a single name field to having separate fields for first, middle and last names. This is not a trivial task, and involves either writing a script (a short program written in computer language to perform a defined task) to move the last word in the single name field into Last Name, and any single letters into Middle Initial, or manually moving/reentering the data. Using an automated script requires careful review to ensure accuracy. You will want to ensure any new applications you develop or purchase match these demographic standards.
- Make sure your staff are entering data in a standardized way. It’s not uncommon for different staff to use the same fields in different ways or to enter the same data in different ways. Exporting select data fields into a spreadsheet enables you to easily scan down each column to identify unacceptable variations in data entry, either by how data is entered or by inconsistent uses of a field. (Sometimes this is done intentionally because an application doesn’t have a field for data the agency wants to collect, so they use an otherwise unused field. These are good ones to check for consistent use across all users.)
- Whether developing or purchasing an information system, seek to minimize the number of free text fields. Because there are few controls and ways to standardize what data gets entered how, the data is unlikely to ever be useful for exchange or reports. For instance, if you allow the hematocrit test to be entered as free text, you may get ‘Hematocrit,’ ‘Crit,’ or ‘PCV’—data that is not easily used in creating a report on, say,
the number of hematocrits run in the last month. Use picklists wherever possible to standardize data entry and minimize data entry errors.

- Ensure that any content standards used in your purchased applications are maintained and routinely updated by the vendor. Standards are generally driven by the user community, so changes are not uncommon. Verify that your vendor is using, or shortly plans to release, the latest version of a standard such as the Omaha System.
- Ensure your lab and clinical data match the appropriate content standards. For instance, your immunization screen should include the core data set established by CDC and adopted by the Minnesota Immunization Information Connection. Lab results should match LOINC codes.

**Who needs to care most about standards?**

While in truth, adherence to data standards is the business of every public health staff person that uses information systems, some staff clearly have more responsibility around standards than others. These are:

- Anyone who enters data, to make sure the same data from different people is entered in a consistent way, so that any reports using that data—and exchanges of that data with others—are consistently meaningful.
- Anyone developing an application or information system of any size. Since you can never be sure what sort of life even a small and seemingly short-lived application is going to have, make sure to develop it using whatever standards are most appropriate.
- IT managers responsible for the operations, interoperability and security of agency information systems.

**Where can I find out more?**

2. The Center for Disease Control and Prevention’s site on the Public Health Information Network ([www.cdc.gov/phin](http://www.cdc.gov/phin))
4. MDH Center for Health Informatics ([www.health.state.mn.us/e-health](http://www.health.state.mn.us/e-health))
Appendix C

Workgroup Charge and Membership: Building Health Information Exchange Capacity

Background

By January 2, 2015, all local health departments (LHDs) must have in place an interoperable electronic health records (EHRs) system within their practice setting (Minnesota Statutes, section 62J.495). Extensive work has been done and financial investments made by LHDs over the past several years to implement EHRs. The focus of this work has been on the use of EHRs in order to organize clients’ health information (including immunizations), track public health nursing services, and bill for services. The majority of LHDs in Minnesota use one of these three systems: PH-DOC, CHAMPS, and CareFacts.

While these systems have served LHDs very well for their intended purpose, the emerging national and statewide Health Information Technology (HIT) emphasis is now on the exchange of health information with LHDs, health care providers, and the Minnesota Department of Health (MDH). The goals of Health Information Exchange (HIE) are to improve patient health, improve the quality of care, increase efficiency, reduce health care costs, and improve population health.

The key to effective exchange of public health information is having a set of agreed upon data standards. Data standards provide a common and consistent way to record information that allows data to be exchanged between different information systems. For a more in-depth description of Public Health Data Standards, please see the following document created by the Minnesota Public Health Information Network (MN-PHIN) Steering Committee at http://www.health.state.mn.us/e-health/standards/pubhstandards08.pdf

Local health departments utilize electronic health records in a variety of service settings, e.g. home health care, family home visiting, public health clinics, long-term case management, correctional health care, and infectious disease prevention and control. There will soon be greater need to be able to exchange the information in a client’s EHR in public health with health care providers, other LHDs, and state agencies including MDH. The first step down the road of exchanging data is to agree upon a set of data standards for electronic health records used in the local public health setting. The standards that are relevant to public health can be sorted into four categories:

- terminology (classification systems like ICD-9 CM disease codes, CVX for vaccine products, OMAHA system for nursing interventions);
- messaging (Health Level 7 or HL7 code for sending information between computer systems);
- transactions or claims (uniform method for sending bills and getting reimbursed (i.e. Healthcare Common Procedure Coding System (HCPCS)); and
- data content (Planning and Performance Measurement Reporting System (PPMRS), Minnesota Immunization Information Connection (MIIC), and Environmental Health Knowledge Management Projects (EHKMP) are examples)
Charge

The charge to this work group is as follows:

1. Affirm a vision and principles for the exchange of public health data.
2. Collect information on the data standards currently in place in the electronic health records systems used by LHDs and other states such as North Carolina.
3. Determine initial business processes focus
   a. Review of business process activities.
   b. Determine common processes and different processes.
   c. Define foundational business processes.
4. Develop and recommend a set of data standards and resource needs for LHD electronic health record systems that will include standards related to terminology, messaging, and transactions. Due to the diverse type of services provided at LHDs and scope of content, the work group will develop data content standards for services affecting the maternal and child health population group.
5. Assure communication with stakeholders including the Local Public Health Association (LPHA), e-Health Advisory Committee, and primary vendors of electronic health records for LHDs.
6. Work with the SE Minnesota Beacon grantees to ensure coordination of efforts.
7. Align efforts with the HIT Meaningful Use requirements for exchanging data relating to immunizations, lab reporting, and coordination of care.
8. Utilize the important lessons learned from other data standards projects, such as PPMRS and EHKMP, to guide the process.
9. Utilize resources available from the Public Health Informatics Institute and the MDH Office of Health Information Technology related to data standards and information systems development.

Scope: What’s In and What’s Out

The activities surrounding the work of developing data standards can easily lead to expanding the scope of the project and losing focus on the priority decisions. The following outlines what is inside and outside of the scope.

INSIDE

Data standards for electronic health records used in LHDs when providing maternal and child health services to individuals and families.

OUTSIDE

- Information systems based at the Minnesota Department of Health, such as WIC HuBERT, MIIC, Child Health Information System, vital statistics, health data statistics, etc.
- Electronic health record systems not used by LHDs.

Methods

This work group will be comprised of SCHSAC members, LHD staff, MDH staff, and community representatives. The members should represent a diverse array of skills and experience in the areas of electronic health records, data standards development, health information exchange technology, development and use of the...
PPMRS, and current local information systems (e.g. PH-DOC, CHAMPS, CareFacts). When the workgroup is working on content standards for a selected service area, additional representatives who are content experts in that area will be asked to assist in that work. Since developing standards can be very specific and detailed work, there may be a need to have small task groups established to keep the work moving forward at a steady pace.

**Membership**

**Local Health Department Membership**

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diane Thorson, co-chair</td>
<td>Otter Tail County CHB, SCHSAC member</td>
</tr>
<tr>
<td>Wendy Bauman</td>
<td>Dakota County CHB, LPHA Informatics subcommittee representative</td>
</tr>
<tr>
<td>Diane Holmgren</td>
<td>St. Paul-Ramsey CHB</td>
</tr>
<tr>
<td>Dan Jensen</td>
<td>Olmsted County CHB</td>
</tr>
<tr>
<td>Margene Gunderson</td>
<td>Mower County CHB</td>
</tr>
<tr>
<td>Betsy Kremser</td>
<td>Anoka County CHB</td>
</tr>
<tr>
<td>Donna Lappe/Pat Stewart</td>
<td>Cottonwood-Jackson CHB</td>
</tr>
<tr>
<td>Jill Bruns</td>
<td>Redwood-Renville CHB</td>
</tr>
<tr>
<td>Cheryl M. Stephens</td>
<td>Community Health Information Collaborative</td>
</tr>
</tbody>
</table>

**Minnesota Department of Health Membership**

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maggie Diebel, co-chair</td>
<td></td>
</tr>
<tr>
<td>Deb Burns</td>
<td></td>
</tr>
<tr>
<td>Marty LaVenture/Jennifer Fritz</td>
<td></td>
</tr>
</tbody>
</table>

**Resources**

MDH Project Staff: Wendy Nelson, Steve Ring, and Kari Guida plus other staff as needed
Appendix D

2012 LPH-HIE Communications Plan

Project Name: Local Public Health – Health Information Exchange
Prepared by Wendy Nelson (04/04/2011)

Revision History

Version 1.0: Initial Draft Version
Prepared by Wendy Nelson (03/04/2011)

<table>
<thead>
<tr>
<th>Stakeholder Organization (Audience)</th>
<th>Name of Key Individual(s)</th>
<th>Potential Project Role/s</th>
<th>What to Communicate</th>
<th>Method(s) to Communicate</th>
<th>When to Communicate</th>
<th>Person(s) Responsible for Communicating Information</th>
</tr>
</thead>
</table>
| LPH HIE Workgroup                   | All workgroup members and MDH staff who provided support to the workgroup | • Provide orientation about the LPH HIE WG and the Work Plan to interested partners and stakeholders.  
• Promote the use of the use of the LPH HIE Data Dictionaries whenever practicable so that future data sharing efforts are streamlined. | • Keep informed of project status  
• Request active involvement in rollout / implementation of the LPH HIE Family Home Visiting Initial Contact Recommendations | • E-mail  
• Steering Committee meetings  
• LPH HIE web site | • Quarterly updates to SCHSAC  
• LPH HIE Steering Committee Meetings-Monthly  
• Regular - LPH HIE web site updates | Wendy Nelson |

A checkmark (✓) in the “When to Communicate” column indicates that the communication task has been completed. Note that Wendy Nelson and Kathy Grantham will be responsible for posting updates to LPH HIE website.
<table>
<thead>
<tr>
<th>Stakeholder Organization (Audience)</th>
<th>Name of Key Individual(s)</th>
<th>Potential Project Role/s</th>
<th>What to Communicate</th>
<th>Method(s) to Communicate</th>
<th>When to Communicate</th>
<th>Person(s) Responsible for Communicating Information</th>
</tr>
</thead>
</table>
| MDH (CFH) | CFH staff | • Provide orientation about the LPH HIE and the Work Plan to interested partners and stakeholders.  
• Promote the use of the LPH HIE Family Home Visiting Data Dictionaries whenever practicable so that future data sharing efforts are streamlined. | • Keep informed of project status  
• Request active involvement in rollout / implementation of the LPH HIE Work Plan: Family Home Visiting | • PWDU Quarterly Update  
• CHS staff meetings  
• E-mail  
• LPH HIE web site | • Newsletters  
• Update at selected CHS staff meetings  
• Regular e-mail updates  
• Regular LPH HIE web site updates | Wendy Nelson |
| MDH (CHS – Family Home Visiting Section) | Candy Kragthorpe and MDH Visiting Consultants | • Advocate for LPH HIE  
• Share status information with CFH-FHV program staff. | • Keep informed of project’s status and impact on other EH projects  
• Invite to become an LPH HIE web site subscriber | • E-mail  
• LPH HIE web site  
• Face-to-face at CHF managers’ meetings | • Regular LPH HIE web site updates  
• Update at selected weekly managers’ meetings | Candy Kragthorpe |
| MDH (EO) | MDH Commissioner, Ed Ehlinger | • Advocate for LPH HIE | • Keep informed of project status  
• Invite to become an LPH HIE web site subscriber | • E-mail  
• LPH HIE web site | • Regular LPH HIE web site updates | Maggie Diebel |
| MDH (Communications) | | • Assist with potential media releases | • Keep informed of project status  
• Invite to become an LPH HIE web site subscriber  
• Request assistance with rollout as may be needed. | • E-mail  
• LPH HIE web site | • Quarterly – LPH HIE web site updates | Maggie Diebel |
| MDH (IS&TM) | John Paulson | • Advocate for LPH HIE | • Keep informed of project’s status and impact on other EH projects  
• Request assistance with rollout as may be needed. | • E-mail  
• LPH HIE web site  
• Meetings with ISTM | • Quarterly – LPH HIE web site updates  
• Update at selected meetings with ISTM | Steve Ring, Wendy Nelson |

A checkmark (✓) in the “When to Communicate” column indicates that the communication task has been completed.  
Note that Wendy Nelson and Kathy Grantham will be responsible for posting updates to LPH HIE website.
<table>
<thead>
<tr>
<th>Stakeholder Organization (Audience)</th>
<th>Name of Key Individual(s)</th>
<th>Potential Project Role/s</th>
<th>What to Communicate</th>
<th>Method(s) to Communicate</th>
<th>When to Communicate</th>
<th>Person(s) Responsible for Communicating Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDH (OHIT)</td>
<td>Marty LaVenture, Jennifer Fritz, Kari Guida</td>
<td>• Provide orientation about the LPH HIE and the Action Plan to interested partners and stakeholders. • Promote the use of the use of the LPH Family Home Visiting Data Dictionaries whenever practicable so that future data sharing efforts are streamlined.</td>
<td>• Keep informed of project status • Invite to become an LPH HIE web site subscriber • Request assistance with rollout as may be needed.</td>
<td>• OHIT eHealth meetings and events • E-mail • LPH HIE web site</td>
<td>Update at selected OHIT/eHealth meetings • Regular LPH HIE web site updates</td>
<td>Wendy Nelson, Jennifer Fritz, Kari Guida</td>
</tr>
<tr>
<td>Local Health Departments (LHDs)</td>
<td>Directors of LHDs and CHBs</td>
<td>• Keep informed of project status • Invite to become an LPH HIE web site subscriber • Final Recommendations</td>
<td>• CHS Conference • CHS Mailbag • LPH HIE web site •</td>
<td></td>
<td>Possible: Sept. ‘11 CHS Conference • Regular LPH HIE web site updates</td>
<td>Steering Committee members, Wendy Nelson</td>
</tr>
<tr>
<td>Local Public Health Association of Minnesota (LPHA); Informatics Workgroup</td>
<td>Julie Ring, Wendy Bauman</td>
<td>• Keep informed of project status • Invite to become an LPH HIE web site subscriber • Request endorsement of MOU</td>
<td>• LPHA meeting(s) and events • LPHA web site • E-mail • LPH HIE web site</td>
<td></td>
<td>Oct. ’07 General Membership Videoconference • Jan. ’07 General Membership Meeting • Regular LPH HIE web site updates</td>
<td>Wendy Bauman, Wendy Nelson</td>
</tr>
<tr>
<td>DHS</td>
<td></td>
<td>• Keep informed of project status • Invite to become an LPH HIE web site subscriber • Request assistance with rollout as may be needed.</td>
<td>• Email • LPH HIE web site</td>
<td></td>
<td>Update at selected meetings • Regular LPH HIE web site updates</td>
<td>Wendy Nelson, Maggie Diebel</td>
</tr>
</tbody>
</table>

A checkmark (✓) in the “When to Communicate” column indicates that the communication task has been completed. Note that Wendy Nelson and Kathy Grantham will be responsible for posting updates to LPH HIE website.
A checkmark (✓) in the “When to Communicate” column indicates that the communication task has been completed. Note that Wendy Nelson and Kathy Grantham will be responsible for posting updates to LPH HIE website.
# Appendix E

## Local Public Health Services

<table>
<thead>
<tr>
<th>Minne-sota Doesn't Do</th>
<th>Mark 5 you absolute-ly would not pick</th>
<th>Workgroup</th>
<th>Business Process Name</th>
<th>Goal</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>All Clinics</td>
<td>Lab test result review (except for maternal health clinic)</td>
<td>* Provide appropriate and timely health services</td>
<td>* Determine if lab results are normal or abnormal * Respond appropriately to abnormal results</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Billing</td>
<td>Billing for Medicaid program services for batch (non HSIS) health departments</td>
<td>Receive maximum reimbursement for Medicaid program services provided</td>
<td>* Send out clean claim * Receive timely reimbursement</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Billing</td>
<td>Billing for Medicaid primary care for batch (non HIS/HSIS) health departments (Used when primary care is sent separate from program visits by using EDS.)</td>
<td>Receive maximum reimbursement for Medicaid primary care services provided</td>
<td>* Send out clean claims * Receive timely reimbursement</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Billing</td>
<td>Billing for Medicare for batch (non HIS/HSIS) health departments</td>
<td>Receive maximum reimbursement for Medicare services provided</td>
<td>* Send out clean claims * Receive timely reimbursement</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Billing</td>
<td>Billing for third-party insurance (electronic &amp; paper) for batch (non HIS/HSIS) health departments</td>
<td>Get maximum reimbursement</td>
<td>* Send out clean claim. * Receive timely reimbursement</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Billing</td>
<td>Billing for Medicaid (program services and primary care), Medicare, and third-party insurance for batch (non HIS) health departments (This process is using HIS for billing to guarantors.)</td>
<td>Receive maximum reimbursement for Medicaid program services provided</td>
<td>* Send out clean claim * Receive timely reimbursement</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Billing</td>
<td>Self-pay debt write-off for batch (non HSIS) health departments</td>
<td>Reduce outstanding AR (remove uncollectable)</td>
<td>* Remove uncollectable self-pay balances according to your bad debt write-off policy</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Billing</td>
<td>Collections</td>
<td>Maximize revenue</td>
<td>* Collect maximum amount</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minnesota Doesn't Do</td>
<td>Mark 5 you absolutely would not pick</td>
<td>Workgroup</td>
<td>Business Process Name</td>
<td>Goal</td>
</tr>
<tr>
<td>---</td>
<td>----------------------</td>
<td>--------------------------------------</td>
<td>-----------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>9</td>
<td>Billing</td>
<td>Billing</td>
<td>Billing</td>
<td>Billing for Medicaid (program services and primary care), Medicare, and third-party insurance for online HIS health departments (electronic)</td>
<td>* Provide service to prevent vaccine preventable disease</td>
</tr>
<tr>
<td>10</td>
<td>Billing</td>
<td>Paper billing for third-party insurance for online HIS health departments</td>
<td>Billing</td>
<td>Paper billing for third-party insurance for online HIS health departments</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Communicable Disease (CD)</td>
<td>Immunization visit</td>
<td>Immunization visit</td>
<td>Immunization visit * Provide service to prevent vaccine preventable disease</td>
<td>* Vaccinate clients based on ACIP (Advisory Committee on Immunization Practices) guidelines</td>
</tr>
<tr>
<td>13</td>
<td>Communicable Disease (CD)</td>
<td>STD visit</td>
<td>STD visit</td>
<td>STD visit * Provide service to prevent vaccine preventable disease</td>
<td>* Vaccinate clients based on ACIP (Advisory Committee on Immunization Practices) guidelines</td>
</tr>
<tr>
<td>14</td>
<td>Communicable Disease (CD)</td>
<td>Tuberculosis initial active visit</td>
<td>Tuberculosis initial active visit</td>
<td>Tuberculosis initial active visit * Provide service to prevent vaccine preventable disease</td>
<td>* Vaccinate clients based on ACIP (Advisory Committee on Immunization Practices) guidelines</td>
</tr>
<tr>
<td>15</td>
<td>Communicable Disease (CD)</td>
<td>Tuberculosis initial latent/contact visit</td>
<td>Tuberculosis initial latent/contact visit</td>
<td>Tuberculosis initial latent/contact visit * Provide service to prevent vaccine preventable disease</td>
<td>* Vaccinate clients based on ACIP (Advisory Committee on Immunization Practices) guidelines</td>
</tr>
<tr>
<td>16</td>
<td>Communicable Disease (CD)</td>
<td>Tuberculosis return active visit</td>
<td>Tuberculosis return active visit</td>
<td>Tuberculosis return active visit * Provide service to prevent vaccine preventable disease</td>
<td>* Vaccinate clients based on ACIP (Advisory Committee on Immunization Practices) guidelines</td>
</tr>
<tr>
<td>17</td>
<td>Communicable Disease (CD)</td>
<td>Tuberculosis return latent/contact visit</td>
<td>Tuberculosis return latent/contact visit</td>
<td>Tuberculosis return latent/contact visit * Provide service to prevent vaccine preventable disease</td>
<td>* Vaccinate clients based on ACIP (Advisory Committee on Immunization Practices) guidelines</td>
</tr>
<tr>
<td>18</td>
<td>Communicable Disease (CD)</td>
<td>International travel visit</td>
<td>International travel visit</td>
<td>International travel visit * Prevent diseases for clients traveling abroad</td>
<td>* Provide education and services for clients traveling abroad to their specific destinations</td>
</tr>
<tr>
<td>19</td>
<td>Communicable Disease (CD)</td>
<td>CD investigation of reportable diseases</td>
<td>CD investigation of reportable diseases</td>
<td>CD investigation of reportable diseases * Prevent the spread of a communicable disease</td>
<td>* Provide education and services for clients traveling abroad to their specific destinations</td>
</tr>
<tr>
<td>Minne-sota Doesn't Do</td>
<td>Mark 5 you absolute ly would not pick</td>
<td>Workgroup</td>
<td>Business Process Name</td>
<td>Goal</td>
<td>Objective</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------------------------</td>
<td>-----------</td>
<td>-----------------------</td>
<td>------</td>
<td>-----------</td>
</tr>
<tr>
<td>20</td>
<td>Child Health</td>
<td>Well child clinical assessment (new and returning patient, check-up and/or immunization)</td>
<td>* Provide the appropriate child health service to meet the individual client needs in a timely manner</td>
<td>* Physical and developmental age-appropriate screening and immunizations according to the periodicity schedule * Provide age-appropriate education guidance to parents and/or child</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Child Health</td>
<td>Sick child/re-check clinical assessment</td>
<td>* Provide the appropriate child health service to meet the individual client needs in a timely manner</td>
<td>* Child to receive the appropriate evaluation, treatment, and/or referral in a timely manner * Provide age-appropriate education guidance to parents and/or child</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Child Health</td>
<td>Newborn home assessment</td>
<td>* Optimal health for newborn</td>
<td>* Within two weeks identify issues: -physical health -developmental health -social -nutrition -safety * Make appropriate referral(s) * Establish a medical home</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>CSC-MCC</td>
<td>CSC referral intake</td>
<td>* Identify and refer at-risk children in the community to allow them to reach their maximum developmental potential</td>
<td>* Offer CSC services to at-risk children</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>CSC-MCC</td>
<td>CSC initial or subsequent visit</td>
<td>* Identify and refer at-risk children in the community to allow them to reach their maximum developmental potential</td>
<td>* Validate the child's eligibility for CSC services * Monitor development * Monitor care plan progress * Provide education</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>CSC-MCC</td>
<td>MCC referral intake</td>
<td>Decrease infant morbidity and mortality</td>
<td>* Offer MCC services to the client</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>CSC-MCC</td>
<td>MCC initial or subsequent visit</td>
<td>Decrease infant morbidity and mortality</td>
<td>* Enroll client in the MCC program * Provide pregnancy and parenting education * Assess needs * Monitor care plan progress</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>CSC-MCC</td>
<td>MCC closure visit</td>
<td>Decrease infant morbidity and mortality</td>
<td>*Assess needs * Provide pregnancy and parenting education</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>CSC-MCC</td>
<td>MOW initial or subsequent visit</td>
<td>Decrease infant morbidity and mortality</td>
<td>* Enroll into MOW services * Reinforce MCC education</td>
<td></td>
</tr>
<tr>
<td>Mark 5 you absolute ly would not pick</td>
<td>Workgroup</td>
<td>Business Process Name</td>
<td>Goal</td>
<td>Objective</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-----------</td>
<td>-----------------------</td>
<td>------</td>
<td>-----------</td>
<td></td>
</tr>
<tr>
<td>29 Family Planning</td>
<td>Client visit (new, annual, problem -male or female)</td>
<td>* Provide appropriate family planning services which meet the client's needs</td>
<td>* Complete medical history * Medical exam * Provide education * Provide a method of birth control, other reproductive information, and/or referral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 Family Planning</td>
<td>Nurse only visit (supply visit)</td>
<td>* Provide appropriate Family Planning services which meet the client's needs</td>
<td>* Resupply prescription/medicine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31 Intensive Home Visiting (IHV)</td>
<td>IHV referral intake for Mecklenburg Health Department</td>
<td>* Delay a second pregnancy * Further education * Improve maternal and infant health care * Avoid abuse and neglect of self and child * Improve parenting skills * Improve life management skills * Plan for future employment</td>
<td>* Determine if a client meets the initial IHV screening criteria</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32 Intensive Home Visiting (IHV)</td>
<td>IHV initial visit for Mecklenburg Health Department</td>
<td>* Delay a second pregnancy * Further education * Improve maternal and infant health care * Avoid abuse and neglect of self and child * Improve parenting skills * Improve life management skills * Plan for future employment</td>
<td>* Determine if a client meets the full IHV screening criteria</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33 Intensive Home Visiting (IHV)</td>
<td>IHV second visit for Mecklenburg Health Department</td>
<td>* Delay a second pregnancy * Further education * Improve maternal and infant health care * Avoid abuse and neglect of self and child * Improve parenting skills * Improve life management skills * Plan for future employment</td>
<td>* Enroll client in the Intensive Home Visiting (and MCC) program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34 Intensive Home Visiting (IHV)</td>
<td>IHV subsequent visit Mecklenburg</td>
<td>* Delay a second pregnancy * Further education * Improve maternal and infant health care * Avoid abuse and neglect of self and child * Improve parenting skills * Improve life management skills * Plan for future employment</td>
<td>* Provide pregnancy and parenting education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workgroup</td>
<td>Business Process Name</td>
<td>Goal</td>
<td>Objective</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Intensive Home Visiting (IHV) | IHV referral-intake for Cabarrus Health Alliance           | * Delay a second pregnancy  
* Further education  
* Improve maternal and infant health care  
* Avoid abuse and neglect of self and child  
* Improve parenting skills  
* Improve life management skills  
* Plan for future employment | * Determine if a client meets the IHV criteria  
* Offer IHV services                                                                                        |
| Intensive Home Visiting (IHV) | IHV initial visit for Cabarrus Health Alliance             | * Delay a second pregnancy  
* Further education  
* Improve maternal and infant health care  
* Avoid abuse and neglect of self and child  
* Improve parenting skills  
* Improve life management skills  
* Plan for future employment | * Enroll client in the IHV program                                                                 |
| Intensive Home Visiting (IHV) | IHV subsequent visit for Cabarrus Health Alliance          | * Delay a second pregnancy  
* Further education  
* Improve maternal and infant health care  
* Avoid abuse and neglect of self and child  
* Improve parenting skills  
* Improve life management skills  
* Plan for future employment | * Provide pregnancy and parenting education                                                                 |
| Intensive Home Visiting (IHV) | IHV closure visit for Cabarrus Health Alliance             | * Delay a second pregnancy  
* Further education  
* Improve maternal and infant health care  
* Avoid abuse and neglect of self and child  
* Improve parenting skills  
* Improve life management skills  
* Plan for future employment | * Remove client from the program                                                                 |
| Intensive Home Visiting (IHV) | Initial health behavioral intervention visit (with a LCSW) | * Decrease child abuse and neglect  
* Reduce suicide attempts  
* Reduce inpatient hospitalizations                                                                 | * Complete psychosocial needs assessment  
* Determination of services needed                                                                 |
| IHV (and CSC-MCC)             | Subsequent health behavioral intervention visit (with a LCSW) | * Decrease child abuse and neglect  
* Reduce suicide attempts  
* Reduce inpatient hospitalizations                                                                 | * Establish treatment plan  
* Provide services as needed                                                                          |
<table>
<thead>
<tr>
<th>Minne-sota Doesn’t Do</th>
<th>Mark 5 you absolutely would not pick</th>
<th>Workgroup</th>
<th>Business Process Name</th>
<th>Goal</th>
<th>Objective</th>
</tr>
</thead>
</table>
| 41 | Lab | Lab order requisition and results | * Provide timely service and correct lab results | * Accurate lab orders and results  
* Proper identification of client  
* Collect correct specimen types  
* Timely delivery of lab requisition and results to proper destination  
* Destination of sample |
| 42 | Maternal Health | Client visit (new, return or problem visit) | * Provide appropriate maternal health services to promote a healthy mother and baby | * Complete medical history  
* Thorough medical exam and lab analysis  
* Provide education  
* Appropriate referrals |
| 43 | Maternal Health | Lab test result review | * Provide appropriate and timely health services | * Determine if lab results are normal or abnormal  
* Respond appropriately to abnormal results |
| 44 | Maternal Health | Post-partum home assessment | * Stable post-partum period | * Within two weeks of delivery identify issues:  
- physical health  
- mental health  
- social  
- nutrition  
- safety  
- family planning  
* Make appropriate referral(s) |
| 45 | Registration/Check Out | Client registration process | * Complete and accurate registration records for all clients | * Complete and accurate client registration record (demographic info, payor info, income info, appointment history) to maximize reimbursements and collections |
| 46 | Registration/Check Out | Check out process including billing process for self-pay | * Accurate billing for maximum reimbursement and collection while maintaining continuity of care | * Schedule required follow-up appointments within timeframe necessary to ensure continuity of care  
* Enter accurate encounter/charges to ensure maximum reimbursement within desired timeframe  
* Collect payments at point-of-service and reduce outstanding balances |
<table>
<thead>
<tr>
<th>Minnesota Doesn't Do</th>
<th>Mark 5 you absolutey would not pick</th>
<th>Workgroup</th>
<th>Business Process Name</th>
<th>Goal</th>
<th>Objective</th>
</tr>
</thead>
</table>
| 47                  | Registration/Check Out             | Appointment scheduling | * Schedule an appointment for timely and appropriate service | * Appointment calls taken within x minutes  
* Calls returned within x minutes  
* Calls waiting for appointment scheduler are answered within x minutes  
* Appointments available within x days  
* Reminder calls/letters are made within x days before appointment  
* Reminder calls/letters are made within x days after missed appointment |
Common Data Exchange Partners for
Local Public Health Maternal and Child Health
Targeted/Family Home Visiting Services

The State Community Health Advisory Committee (SCHSAC)
Building Health Information Exchange Capacity Workgroup

Kathy Grantham, Business Analyst
Kathy.Grantham@state.mn.us
Wendy Nelson, Project Manager
Wendy.Nelson@state.mn.us
We visited several local public health agencies, both rural and urban (green):

- Anoka
- Carlton
- Cottonwood-Jackson
- Dakota
- Lake
- Mower
- Renville
- St. Paul-Ramsey

We also met with (yellow):

- The Minnesota Visiting Nurses Association to discuss their work for Hennepin County and Minneapolis
- Olmsted County to discuss their involvement with the SE Minnesota BEACON Program.
Anoka County General Intake

Triggers:
- Referral
- Outcome
- Transaction
- Output
- Input
- Out of Scope
- Of Process

Chart may include:
- CIF form
- Client Information Print out
- FHV Infant and Children Form
- FHV Primary Caregivers and Prenatal Form

Service providers clients may be referred to include but are not limited to:
- Child-Teen Checkup (phone call to nurse)
- ECFE (form)
- Epiphany Church (crib form)
- WIC (also have client contact them)
- Early Head Start
- Child protection
- Follow-Along
- Insurance company incentive programs

Attempts to contact the client are recorded on the paper referral form. Three phone calls are attempted, then a letter is sent. If services are declined, it is noted on the paper form and referral goes to the File Box (same for referrals where you can’t contact the client?)
Intake process for Antepartum is depicted as the same as for general, through Supervisor hand-off the referral to the nurse. Is this accurate?
Nor sure if this is correct, or if intake goes through Intake specialist as for other processes
I *thought* referrals came straight to Postpartum nurse. Or is there a supervisor assignment in this process as well?

21. Create CIF entry (from info provided by nurse)
22. CIF Printout
23. Printed CIF for chart
24. Printed CIF
25a. Follow-up with referral source (usually letter)
25b. Time tracking and billing
11. Request existing chart
12. Receive Existing chart
13. Offer services
14. Client accepts/declines Service. Schedule visit
15a. Record visit date
15b. Referral Client declined service
16. Initial visit: Assessment questions
17. Assessment answers. PMAP form, completed forms & authorizations Postpartum Flow Sheet?
18a. Referral to services
18b. Referral to Provide services
9. Lookup Client data
10. Client data if found
25c. Mail Postpartum report to pediatrician and mother’s physician. Hep-B data if necessary.
19. Assessment, forms, PMAP form, Postpartum Flow Sheet? Track referrals to agencies?
20. New CIF information
26. Client data found/not found
1b. Lookup Client
1c. Lookup Client
2b. Client data found/not found
2c. Client data found/not found
1a. Lookup Client: Open/closed?
3. Enter new client

Anoka County Postpartum Intake

Anoka County
Postpartum
Initial Home Visit

Chart may include:
CIF form
Client Information Print out
PMAP form
HIPAA form, other authorizations
Postpartum flow sheet?

Input
Output
Transaction
Referral
Trigger

Service providers clients may be referred to include but are not limited to:
- ECEF (form)
- Same service providers as for general (below)?
- Child-Teen Checkup (phone call to nurse)
- Epiphany Church (crib form)
- WIC (also have client contact)
- Early Head Start
- Child protection
- Follow-Along
- Insurance company incentive programs

Attempts to contact the client are recorded on the paper referral form. Three phone calls are attempted, then a letter is sent. If services are declined, it is noted on the paper form and referral goes to the File Box (same for referrals where you can’t contact the client?)
Carlton County Intake (Detailed)

Carlton County Family/Targeted Home Visiting

TRIGGER: Referral
- Interaction/Exchange
- Outcome (desired result of process)

Output (product of process that goes outside process)
- Interaction/Exchange
- Not part of this process

**Intake Specialist**
- Electronic Referrals (Multiple)
- Paper Referrals (Single)

3a. Printout of process that goes outside process
- Tracking Sheet
- Doctor's Order

**Nurse**
- Certified Doctor's Orders (WordPerfect Template)
- AAPI website (scoring tool)

11. Contact Client, offer services, Schedule visit!
12. Accept/Denial services, Schedule visit
15. Assessment services, Observations, consent
14. Assessment questions

**Client**
- Information shared with the Family Resource Team can be detailed, with client consent
- Family Resource Team is a cross-discipline/cross-agency group.
- May be out of scope of initial visit.

**Service Provider(s)**
- Doctor, Medical, or Mental Health Services
- Child Protection
- Doctor/ Clinic
- Post-Partum Depression Screening (PDSS)
- ECFE Coord.
- Healthy Promises
- File Cabinet

**Referral Database**
- Access

?? Request Demographic data
?? Customer Satisfaction Survey (paper)
?? Customer Satisfaction Survey tally (quarterly tally & review)
?? Check for Billing info
?? Check for Billing info

12. Check for Family info
11. Paper copy of Referral to Assigned Nurse
5. Assign Nurse to Referral
4. Review Referral

18a. Follow-Along Enrollment Form (paper)
18b. Prenatal-Healthy Promises Report (paper)
18d. PDSS (paper)
21. Certified Doctor's Orders (paper)
?? Customer Satisfaction Survey (paper)
10. Notify of Healthy Promises eligibility

?? Check for Client info
?? PCH intake/discharge
?? PCH intake and discharge forms

16c. Referral for services
16d. High-risk referrals, phone or email
16a. Referral Answers

**Certified Doctor's Orders**

**Bin**
- Electronic Referrals (Multiple)
- Paper Referrals (Single)

3b. Paper Referral
3a. Printout of Electronic Referral

22. Doctor's Orders (paper or PDF)

24. Signed Doctor's Orders
23/25. Record doctor's orders Sent and received

?? Request Demographic data

?? Request Demographic data

?? Check for Births and eligibility
?? Customer Satisfaction Survey tally (quarterly tally & review)

?? Check for Client info
?? PCH intake/discharge
?? PCH intake and discharge forms

16c. Coordinate service delivery

**CareFacts**

27. Enrollment info (from paper)
28. PDSS info (from paper form)
26. Follow-Up Enrollment (paper form)

9. Eligibility and birth info
8. Check for Births and eligibility
1c. Phone Info
1c. Check for Phone number

**Follow-Up Database**
- (what kind?)

?? Customer Satisfaction Survey (paper)

**File Cabinet**

Yearly report done on Parent & Child Health (PCH) Programs

16b. Report

16a. Referral for services

**Family Resource Team**

Service Providers may include but are not limited to:
- WIC
- HeadStart (for sibling)
- Car seat
- Income Maintenance
- Dental vanish
- Child & Teen Checkup
- Financial Aid Worker
- Domestic abuse counseling
- Chemical abuse counseling
- Legal advice/counseling

---

*Out of scope of visit*

1. If a Nurse has worked with the Client previously, an effort is made to assign that same Nurse
2. Phone, texting, email, postcard if no phone number, letter and packet if no phone contact can be made
3. Nurses may upload/download & enter client data to CareFacts on laptop or directly to system (similar to Dakota Co.)
4. Signed Doctor’s Orders go into Nurse’s chart for the client
5. Referral database reports: Quarterly statistics, Semiannual Teen Parents Class
6. Referral and FHV databases are duplicative in terms of the data that needs to be entered into them.

Carlton does Universal Contact for Family Home Visiting. Contact rate for pre and postnatal is near 100%
Nurses have phone conversations with approx. 70% of clients contacted, home visit with approx. 63%

---

The document contains a detailed flowchart illustrating the intake process for Carlton County's Family/Targeted Home Visiting program. It outlines the steps from referral to contact, including various stakeholders and data points. The flowchart highlights the interaction between different service providers and key documentation processes, emphasizing the importance of tracking and assessing client data for effective follow-up and service delivery.
**Carlton County Intake (High Level)**

**Carlton County Family/Targeted Home Visiting**

High-level view

---

**TRIGGER:**
- Referral
- Interaction
- Exchange
- Outcome (desired result of process)
- Output (product of process that goes outside process)
- Interaction/exchange

---

**Carlton County Public Health**

- Electronic Referrals (Multiple)
- Paper Referrals (Single)
- *Out of scope of initial visit

---

**AAPI website (scoring tool)**

- 29. AAPI Assessment Data (client completed form)
- AAPI score

---

**Client**

- 11. Contact Client, offer services, Schedule visit
- 12. Accept/Decline services
- 14. Assessment questions, Observations, consent
- 16a. Referral for services
- ?? Customer satisfaction Survey (paper)
- ?? Completed Customer Satisfaction survey (paper)
- 16b. Coordinate service delivery
- 16c. Referral for services
- 16d. High-risk referrals, phone or email
- 16e. Report

---

**Family Resource Team**

- Information shared with the Family Resource Team can be detailed, with client consent.
- Family Resource Team is a cross-discipline/cross-agency group.
- **May be out of scope of initial visit.**

---

**Service Provider(s)**

- WIC
- HeadStart (for sibling)
- Car seat
- Income Maintenance
- Dental Varnish
- Child & Teen Checkup
- Financial Aid Worker
- Domestic abuse Counseling
- Chemical abuse Counseling
- Legal advice/counseling

---

**ECEF Coord.**

- ?? Request Demographic data
- ?? Check for Billing info

---

**MN-ITS**

- Receive Demographic data
- Billing info

---

**ECFE Coord.**

- ?? Request Demographic data

---

**Doctor/Clinic**

- 22. Doctor's Orders (paper or PDF)
- 24. Signed Doctor's Orders
- ?? Request Demographic data

---

**PPMRS MDH**

- Eventually PPMRS data*

---

**Carlton County Family/Targeted Home Visiting**

High-level view

---

**Service Providers may include but are not limited to:**
- WIC
- HeadStart (for sibling)
- Car seat
- Income Maintenance
- Dental Varnish
- Child & Teen Checkup
- Financial Aid Worker
- Domestic abuse Counseling
- Chemical abuse Counseling
- Legal advice/counseling

---

**Carlton County does Universal Contact for Family Home Visiting. Contact rate for pre and postnatal is near 100%**

Nurses have phone conversations with approx. 70% of clients contacted, home visit with approx. 63%
Cottonwood-Jackson Family Home Visiting: Client referral/intake, registration, initial visit

**Process is similar for both counties**

1. Chart File (keep forever)
2. Services File (keep forever)
3. Request for Medical Assistance
4. Notify family
5. Follow-Up
6. Contact, offer services (phone or letter)
7. Assess, question, observe
8. Referral to provide services
9. Accept/decline services, schedule visit
10. Referral to provide services
11. CHAMP System (shared by Cottonwood & Jackson)
12. Referral to program (form)
13. Doctor's Orders
14. Signed Doctor's Orders
15. Chart, signed Doctor's Orders
16. Request authorization for car seat visit. Car Seats
17. Client records. When needed (fax)
18. or 7. Schedule prior to call or visit
19. Call for client phone number
20. Phone number if available
21. if available
22. Client info if available
23. Check for client info
24. TRIGGER
25. MN-ITS
26. Follow-Up
27. Private or Payor
28. Admin/Professionals
29. Data & Stats
30. Referrals to other counties
31. County Services
32. WIC
33. UCare
34. Interpreter
35. WIC

Cottonwood-Jackson has universal family home visiting. Nurse attempts to contact family for all births. Both counties deal with out-of-state hospitals, clinics, and health systems (Avera, Sanford). May get referrals from:

- WIC
- Physicians, clinics and service providers, in-state or out-of-state. Not consistent for out-of-state, usually for births with needs & first-time mothers.
- Hospitals, in-state or out-of-state. There is no maternal hospital in Jackson County. Not consistent for out-of-state, usually for births with needs & first-time mothers.
- Minnesota Vital Statistics
- Service Providers (Iowa)
- Elizabeth House
- Family Services
- School nurses

Births out-of-state are recorded in the vital statistics for that state, even if the family resides in Minnesota. Those vital statistics records are not sent to Minnesota counties.

**County Services/Resources:**

- Early Intervention-Healthy Grow
- Elizabeth House (positive outcomes)
- Family Services
- Child Protection
- Financial Assistance
- Day Care
- Western Community Action (finance and housing assistance)
- Food Shelf
- Workforce1

**Referrals to other counties:**

Clients who move to other counties/states will be given information to contact those agencies. Watonwan and Nobles-Rock have targeted rather than universal family home visiting.

1. Physician/Clinic may be in-state or out-of-state.
2. For high-risk referral, contact may involve going to home.
3. Interpreter is through an agency and can bill services to public/private insurer.
Cottonwood-Jackson Intake (High-Level)

Cottonwood-Jackson Family Home Visiting: High-Level

Cottonwood-Jackson has universal family home visiting. Nurse attempts to contact family for all births. Both counties deal with out-of-state hospitals, clinics, and health systems (Avera, Sanford). May get referrals from:

- WIC
- Physicians, clinics and service providers, in-state or out-of-state. Not consistent for out-of-state, usually for births with needs & first-time mothers.
- Hospitals, in-state or out-of-state. There is no maternal hospital in Jackson County. Not consistent for out-of-state, usually for births with needs & first-time mothers.
- Minnesota Vital Statistics
- Service Providers (Iowa)
- Elizabeth House
- Family Services
- School nurses

Births out-of-state are recorded in the vital statistics for that state, even if the family resides in Minnesota. Those vital statistics records are not sent to Minnesota counties.

County Services/Resources:
- Early Intervention Healthy Grow
- Elizabeth House (positive outcomes)
- Family Services
- Child Protection
- Financial Assistance
- Day Care
- Western Community Action (finance and housing assistance)
- Food Shelf
- Workforce1

Referrals to other counties: Clients who move to other counties/states will be given information to contact those agencies. Watonwan and Nobles-Rock have targeted rather than universal family home visiting.

Triggers:
- Referral
- Outcome
- Output
- Input
- Out of Scope
- Of Process

1. Physician/Clinic may be in-state or out-of-state.
2. For high-risk referral, contact may involve going to home.
3. Interpreter is through an agency and can bill services to public/private insurer.
TRIGGER: MCH Home Visiting Referral*
Referrals come in by phone, fax, or email. Any data-based submissions?

Minnesota Dept. of Human Services
MMIS, SSIS, MAXIS systems

1a. Check for Client/Family info

2a. Client/Family info if available

Child Protection

Report

Dakota County Public Health

22. Provide Interventions Per assigned Pathway(s)

Dakota County Targeted Home Visiting Intake & Initial Visit Draft Context Diagram
High-level view

Client

Billing info must be an output from CareFacts somewhere in this process

Identified problems become Pathways Pathways define interventions to address those problems
- Child Pathway – medically fragile children would go under this
- Growth and development
- Abuse & neglect
- Adult – every admission includes this
  - Assess all problems: parenting, income, residence, mental health, abuse, substance abuse, etc.
- Pregnant
- Postpartum
- Parenting
- Health Care Supervision

HV Nurses provide the services or connect families to the resources

20. Assessment answers, observations, Next appointment date
19. Initial Visit assessment questions
17. Accept/Decline services
16a. Offer Home Visiting Services

Other intervention outputs? Any direct reports or other outputs to MDH, WIC, etc.

Does anything from CareFacts ever get transferred or entered into PROD or the reverse? It appears data is manually transferred.

Does Intake Nurse have any contact with Client prior to HV Nurse?

Referrals can come from WIC – are referrals ever made directly to WIC after initial visit, if client not already in WIC system?
Lake County Intake (Detailed)

Lake County Public Health
Targeted/Family Home Visiting
Funded by grant, no billing done
Contact Client, offer services, Schedule visit
Accept/Decline services
Pre-Assessment Survey
Pre-Assessment responses, Visit - Assessment questions
Assessment Answers, observations, consent
Referral for services
Look up client data
Client data
Add client if appropriate

TRIGGER:
Referral

MCH Nurse (also WIC Nurse)
Request client info
Client info if available
Packet of information for client
Request for client info from MMIS
Client Info from MMIS
Forms, observations notes
Track visit date
Track AA chants
Info off charts compiled for annual PPMRS report
PPMRS

Office Support Staff
Request client info
Client info if available
Check for client information

MMIS (DHS)
TRIGGER: Referral
Refer client for services, if needed
Interaction/Exchange
Outcome (desired result of process)
Output (product of process that goes outside process)
Interaction/exchange
Not part of this process

County Services
Follow-up to referring programs
Referral to provide services

MDH (Lead, EHDI)
Data similar to PPMRS (face sheet)
Case by case & annual
Referral to provide services
Follow-up to referring programs

Doctor/Dental/Clinic/Hospital
Referral to client
Follow-up to referring programs
Referral to provide services

School District (School Nurse, ECFE, Solo Program)
Breast Feeding Support Group

Service Providers

TRIGGER:
Referral

Service providers include, but are not limited to:
- Arrowhead Economic Opportunity Agency (AEOA)
- Head Start
- Food stamps
- Child & Teen Checkup, MMIS (DHS)
- Mother and Child Food Program (MAC)
- Personal Care Assistance (PCA)
- Postpartum depression screening
- Mental health services
- Smoking cessation
- Landlord and Tenants Union
- Family planning (number of agencies)

1 After three attempts at contact by phone with no answer, a letter is sent to the client.
2 Client contact resources include checking with:
   - Financial Worker to find out about MMIS services
   - Social Worker to find out if familiar with client
   - Referring Hospital for more information
   - Internet for phone information
3 County services include but are not limited to:
   - Child Protection
   - Family Support
   - Financial Assistance (MA)
   - Personal Care Assistance
   - Car seat program
   - Licensed Child Care Providers

Client Contact Resources

Referral sources include but are not limited to:
- WIC
- State birth list
- Hospitals, doctor’s offices, clinics
- Lead, EDHI, or other MDH programs
- Child Protection or other county services/programs

Approx. 110 births per year, approx. 90 clients per year. Priority are first-time births, approx. 60 per year.

1 The Lake County Public Health Targeted/Family Home Visiting program
2 Client contact resources include checking with: Financial Worker to find out about MMIS services, Social Worker to find out if familiar with client, Referring Hospital for more information, Internet for phone information, and County services include but are not limited to: Child Protection, Family Support, Financial Assistance (MA), Personal Care Assistance, Car seat program, Licensed Child Care Providers.
Lake County Intake (High-Level)

Lake County Public Health Targeted/Family Home Visiting
High-Level

- Contact Client, offer services
- Schedule visit
- Accept/Decline services
- Pre-Assessment Survey
- Pre-Assessment responses
- Visit - Assessment questions
- Assessment Answers, observations, consent
- Referral for services
- Look up client data
- Client data
- Add client if appropriate

TRIGGER: Referral

Lake County Public Health Agency

- Request client info
- Info off charts compiled for annual PPMRS report

- Check for client info
- Client info

- Client info if available

- Refer client for services, if needed

- Data similar to PPMRS (face sheet) Case by case & annual

- Data similar to PPMRS (face sheet)

- Follow-up on referral

- Follow-up to referring programs

- Referral to service providers

- Service providers include, but are not limited to:
  - Arrowhead Economic Opportunity Agency (AEOA)
  - Head Start
  - Food stamps
  - Child & Teen Checkup, MMIS (DHS)
  - Mother and Child Food Program (MAC)
  - Personal Care Assistance (PCA)
  - Postpartum depression screening
  - Mental health services
  - Smoking cessation
  - Landlord and Tenants Union
  - Family planning (number of agencies)

- Follow-up to referring programs

TRIGGER: Referral

Referral sources include but are not limited to:
- WIC
- State birth list
- Hospitals, doctor’s offices, clinics
- Lead, EDHI, or other MDH programs
- Child Protection or other county services/programs

Approx. 110 births per year, approx. 90 clients per year. Priority are first-time births, approx. 60 per year.

Service providers include, but are not limited to:
- Arrowhead Economic Opportunity Agency (AEOA)
- Head Start
- Food stamps
- Child & Teen Checkup, MMIS (DHS)
- Mother and Child Food Program (MAC)
- Personal Care Assistance (PCA)
- Postpartum depression screening
- Mental health services
- Smoking cessation
- Landlord and Tenants Union
- Family planning (number of agencies)
Mower County Local Public Health Agency

Doctor
Family Facilitators (county social workers)
Medical Assistance (MA)
County of residence
Family Facilitators (county social workers)
County Interpreter

WIC (MDH)

Check for Contact Info
Contact Info If available
Pre-assessment Referral if needed
Place alert in WIC if unable to contact
Referral To Services If needed
Pre-assessment Responses/observations
Assessment/Questions/Observe
Pre-assessment via phone
Accept/Decline
Assessment Responses/observations
Referral to services
3c. Mailer if Can’t contact & 18+
HB document contact And referral
Report if needed (paper or phone)
Client update for referring Doctor (paper)
Referral for client if needed
Referral for client if needed
Coordinate Contacts and Visits if necessary
Not sure whether this is a public health position or a county-wide position

Mower County Home Visiting:
Client referral/intake, registration, initial visit
High-level view
Interactions/exchanges with entities outside Mower County LPHA

MCH Pre-Assessment Referral if needed
MCH Referral For client If needed
Non-resident referrals

Letter offering services
Contact/offerservices

Interaction/exchange
Not part of this process

Interaction/exchange
Outcome (desired result of process)
Output (product of process that goes outside process)
Referrals are placed in one of the following categories:

- **NFP.** First-time, low-income pregnant women before 28 weeks of pregnancy. If service declined, they receive regular prenatal referral.
- **Prenatal.** Pregnant mothers on Medical Assistance are automatically referred. Prenatal services may continue after birth as New Baby services. If service declined, they receive regular New Baby or Positive Parenting referral.
- **New Baby.** Universal new baby program. Hospitals send form if mother agrees. MDH or recorders office send birth records of births.
- **Positive Parenting.** Child can be enrolled anytime after birth. Referrals may come from diverse sources such as a doctor, Well Child clinics, pre-school or school screenings, child protection, WIC, etc.

Any of these will be assigned to a nurse who has worked with the client before, or available for that territory (in rotation).

**Referrals are external to the local agency – are referrals ever made directly to WIC by staff after initial visit, if client not already in WIC system?**

Confirm that WIC System should be considered external to local agency – are referrals ever made directly to WIC by staff after initial visit, if client not already in WIC system?

During 17-18:: Further appointment(s) scheduled at first visit. Otherwise nurse will call later to schedule. Recorded in CHAMP either way.

- If client accepts services, the first home visit is scheduled during the initial contact. Contact and date of first appointment recorded in CHAMP.
- If client declines services, contact is recorded in CHAMP and Discharge form is completed to close case. Client may be contacted for other services later (e.g., refused prenatal services – will be offered New Baby or Positive Parenting after birth).

Referrals are placed in one of the following categories:

- **NFP.** First-time, low-income pregnant women before 28 weeks of pregnancy. If service declined, they receive regular prenatal referral.
- **Prenatal.** Pregnant mothers on Medical Assistance are automatically referred. Prenatal services may continue after birth as New Baby services. If service declined, they receive regular New Baby or Positive Parenting referral.
- **New Baby.** Universal new baby program. Hospitals send form if mother agrees. MDH or recorders office send birth records of births.
- **Positive Parenting.** Child can be enrolled anytime after birth. Referrals may come from diverse sources such as a doctor, Well Child clinics, pre-school or school screenings, child protection, WIC, etc.

Any of these will be assigned to a nurse who has worked with the client before, or available for that territory (in rotation).
Renville County Intake (High-Level)

Renville Targeted Home Visiting Intake & Initial Visit – Draft Context Diagram
High-level view

Confirm that WIC system should be considered external to local agency – are referrals ever made directly to WIC by staff after initial visit, if client not already in WIC system?

Billing info must be an output somewhere in this process

Interaction/exchange Not part of this process

TRIGGER:
Referral

---

Interaction/Exchange
Outcome
(desired result of process)

Output
(product of process that goes outside process)

TRIGGER: Referral
St. Paul Ramsey MCH Targeted Family Home Visiting:
Client referral/intake, registration, initial visit
High Level View
Commonalities of Targeted/Family Home Visiting Data Exchange (High-Level)

MCH Targeted/Family Home Visiting
Most common partners with whom Local Public Health Agencies may exchange information for this service

1 Other County/LPH Services
County-delivered/coordinated services may include but are not limited to:
- WIC
- Other food/nutrition services
- Lactation/breast feeding program
- Child Protection
- Coordinated family services
- Family Facilitators
- Family Resource Team
- Car seat
- Dental varnish
- Counseling
- Domestic abuse
- Chemical abuse
- Legal advice
- Income Maintenance/Final Aid
- Housing
- Family Planning
- Mentoring
- Foster Care

2 Other Service Provider
Services provided may include but not be limited to:
- Interagency Early Intervention Committee (IEIC) (changing to regional)
- HeadStart (for sibling)
- Mental Health Services/Depression screening
- Transportation
- Services for handicapped
- Support groups
- Home care/Medical supply company

3 MDH Programs
Programs clients may be referred to may include but not be limited to:
- Lead
- EHDI
- BDIS
- MIO
- MN Children with Special Health Needs/Follow-Along
- WIC – HuBERT
- PPMRS
- Vital Statistics

4 DHS Programs
Programs clients may be referred to may include but not be limited to:
- Medical Assistance (MA)
- Child & Teen Checkup
- Cash Assistance
- Food Support
- MMIS
- MN-ITS
- SSIS
- MAXIS

5 Legal
Legal communications may include but not be limited to:
- Law Enforcement
- Courts
- Lawyers
- Community Corrections
Commonalities of Targeted/Family Home Visiting Data Exchange (Detailed)

Current Generic MCH Targeted Home Visiting Intake & Initial Visit
– Draft Context Diagram

1. Check for Client/Family info
2. Contact info
3. Enter/update Client info
4. Enter new referral
5. Assign Nurse to referral
6. Referral
7. Get Client/Family info
8. Check for Client/Family info
9. Offer Home Visiting services
10. Accept/Decline services
11. Record contacts, Accept/Decline services
12. Initial Visit
13. Assessment answers, observations, consent forms
14. Refer client to services
15a. Enter Assessment results, referrals, next appointment
15b. Track hours/services for billing
15c. Check for Client/Family info
16a. Referral for service(s)
16b. Referral to other county services
16c. Reporting, Referral to programs
16d. Reporting, Referral to programs
16e. Reporting, Referral to programs
16f. Referral for service
16g. Referral to School-based services
16h. Referral to other county services
16i. Referral follow-up

Referral Intake*

View of overlapping roles

*This role is one of the most variable in the agencies interviewed. Subsets of activities within the Referral Intake role may be handled by any of the following staff roles or all may be handled directly by the Home Visiting Nurse:
- Clerical
- Referral Intake Specialist/Nurse
- Nursing Supervisor

TRIGGER: Referral
Interaction/Exchange
Outcome
(desired result of process)
Output
(product of process)
Interaction/exchange
Not part of this process

1 Other County/LPH Services
- County-delivered coordinated services may include but are not limited to:
  - WIC
  - Other food/nutrition services
  - Lactation/breast feeding program
  - CHW Protection
  - Family Intake
  - Family Resource Team
  - Car seat
  - Dental
  - Vouchers
  - Counseling
  - Domestic violence
  - Chemical abuse
  - Legal advice
  - Income Maintenance/Financial Aid
  - Housing
  - Family Planning
  - Mentoring
  - Foster Care

2 Other Service Provider
- Services provided may include but not be limited to:
  - Interagency Early Intervention
  - Committee (IEIC) (changing to regional)
  - HeadStart (for siblings)
  - Mental Health services/Depression screening
  - Transportation
  - Services for handicapped
  - Support groups
  - Home care/Medical supply company

3 MDH Programs
- Programs clients may be referred to may include but not be limited to:
  - Lead
  - DHS
  - WIC
  - MN Children with Special Health Needs/Follow-up
  - Other

4 DHS Programs
- Programs clients may be referred to may include but not be limited to:
  - Medical Assistance (MA)
  - Child & Teen Checkup
  - Cash Assistance
  - Food Support
  - MMIS
  - MN-ITS
  - SSIS
  - MAXIS

5 Legal
- Legal communications may include but not be limited to:
  - Law Enforcement
  - Courts
  - Lawyers
  - Community Corrections

Grants
Billing/Payors

MMIS
- DHS System(s)
- DHSS
- SSIS
- MAXIS

*Data collected from this process may be used in reporting to grantors
Hours recorded for this process may be billed to payors

Referral for services
Referral for service(s)
Referral follow-up
Referral for services
Referral for services
Referral for services
Referral for services
Referral for services
Referral for services
Referral for services
Referral for services
Referral for services
**Commonalities of Targeted/Family Home Visiting Data Exchange (High-Level)**

**Local Public Health Agency**
- Out-of-state Health departments
- Hospitals
- Primary care
- Doctor/Clinic/Hospital/Other Medical/Dental
  - May be a referrer as well as referral
- Schools
  - ECFE Coordinator
  - School Nurse
  - Other
- Legal
  - Requests for client data
  - Referral to program(s)
- DHS Programs
  - Follow-up, signed doctor’s orders, referral for service
  - Data on client moved from county
- MDH Programs
  - Follow-up on referrals
  - Referrals to grant-funded activities
- Other Service Providers
  - Referrals for High-risk and First-time births
- Referrals to program(s)
- Grantees
  - Data on client moved to county
  - Client contact efforts
  - Offer services
- LPHA in Another County
  - Client visit information and nurse observations
  - Consent forms
- Client
  - Referral to services
- Billing/Payers
  - Referral for services
  - Billing for reimbursement for hours/services
- Data on client moved from county
- Other
  - County/LPHA Services
    - Services provided may include but not be limited to:
      - Interagency Early Intervention Committee (IEIC) (changing to regional)
      - HeadStart (for sibling)
      - Mental Health services
      - Depression screening
      - Transportation
      - Services for handicapped
      - Support groups
      - Home care/Medical supply company
- 1 Other County/LPHA Services
  - County-delivered/coordinated services may include but are not limited to:
    - WIC
    - Other food/nutrition services
    - Lactation/breast feeding program
    - Child Protection
    - Coordinated family services
    - Family Facilitators
    - Family Resource Team
    - Car seat
    - Dental vanish
    - Counseling
    - Domestic abuse
    - Chemical abuse
    - Legal advice
    - Income Maintenance/Financial Aid
    - Housing
    - Family Planning
    - Mentoring
    - Foster Care
- 2 Other Service Provider
  - Services provided may include but not be limited to:
    - Interagency Early Intervention Committee (IEIC) (changing to regional)
    - HeadStart (for sibling)
    - Mental Health services
    - Depression screening
    - Transportation
    - Services for handicapped
    - Support groups
    - Home care/Medical supply company
- 3 MDH Programs
  - Programs clients may be referred to may include but not be limited to:
    - Lead
    - EHDI
    - BDIS
    - MIC
    - MN Children with Special Health Needs/Follow-Along
    - WIC – HuBERT
    - PPMRS
    - Vital Statistics
- 4 DHS Programs
  - Programs clients may be referred to may include but not be limited to:
    - Medical Assistance (MA)
    - Child & Teen Checkup
    - Cash Assistance
    - Food Support
    - MMIS
    - MN-ITS
    - SSIS
    - MAXIS
- 5 Legal
  - Legal communications may include but not be limited to:
    - Law Enforcement
    - Courts
    - Lawyers
    - Community Corrections

**MCH Targeted/Family Home Visiting**
Most common partners with whom Local Public Health Agencies may exchange information for this service
<table>
<thead>
<tr>
<th>Cottonwood-Jackson</th>
<th>HL7 - Immunization</th>
<th>MIIC</th>
<th>MEDSS</th>
<th>Vital Stats</th>
</tr>
</thead>
<tbody>
<tr>
<td>field name</td>
<td>field name</td>
<td>field name</td>
<td>field name</td>
<td>field name</td>
</tr>
<tr>
<td>format</td>
<td>format</td>
<td>format</td>
<td>format</td>
<td>format</td>
</tr>
<tr>
<td>Record Identifier</td>
<td>Last Name</td>
<td>First Name</td>
<td>Middle Name</td>
<td>x</td>
</tr>
<tr>
<td>name</td>
<td>x</td>
<td>Last Name</td>
<td>Middle Name</td>
<td>x</td>
</tr>
<tr>
<td>name</td>
<td>x</td>
<td>First Name</td>
<td>Middle Name</td>
<td>x</td>
</tr>
<tr>
<td>family</td>
<td>number</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>client id</td>
<td>char</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>birthdate</td>
<td>date</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>gender</td>
<td>char</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>ethnic</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>race</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>marital status</td>
<td>char</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>guardian</td>
<td>char</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>guardian</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>relation</td>
<td>char</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>address</td>
<td>char</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>address</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>city</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>office</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>state</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>zip</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>phone-home</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>work</td>
<td>char</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>address</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td># house</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>
### Appendix I

**HIE Workgroup Accomplishments**

|------------------|--------------|--------------|--------------|--------------|--------------|-------|

#### Communication Plan

1. Select an effective name to aid in the project communications  
2. Develop and Write a Communication Plan  
   - Identify spokesperson to report diff. Groups (LPHA,….)  
   - Identify key points to be shared at each SCHSAC meeting  
   - Involve stakeholders (SCHSAC, LPHA, MDH, AMC, MCH Advisory Bd, others?)  
   - Identify and articulate concrete improvements that will result. 1) money saved 2) lives improved  
   - Make a picture(s) of what we are doing to aid in communications (context diagrams)  
3. Create "white paper" on chosen process, elements and standards that can be implemented by IT partners  
   - Educate those not in the know current standards  
4. Communicate achievements and value of work  
5. Create and maintain a web site

#### Work Group Education

- Business process analysis training for committee and SME’s as appropriate  
- Pilot business process model to determine appropriateness  
- Educate self and staff on what is happening; Engage staff in training opportunities  
- Identify other similar activities across state and counties and leverage those activities

#### Legal/Policy/Security

(WG decided to postponed; see 2012 workplan)

- Create Legal/Policy/Security Technical Advisory Group (TAG)  
  - Develop HIE agreements  
  - Develop or adopt security protocols to protect health data  
  - Develop policies and procedures for info exchange  
  - Legal issues of sharing data must be addressed  
  - Research examples and legal environment for exchange of information across programs in LHDs (ID SMEs)

#### Process

- Develop clear vision statement, goals and strategy; getting consensus  
- Identify SMEs for TAGs (has not been necessary)  
- Arrange for BPA process  
- Testing, testing, testing  
- Create workplan
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish an executive work team (has not been necessary)</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify TAGs; (has not been necessary)</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensure work plan includes success points; small projects</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connect to UP-HI/Julie Jacko</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Readiness Assessment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work with LPHA to determine LPH readiness for HIE; survey through PPMRS, other</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Services Assessment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collect MCH business services from MN LPH</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Create TAG to work with LPHA Informatic's WG to update LPHA data inventory</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finalize list with WG members confirming and editing as necessary</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Determine MCH Foundational/Core Service</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify foundational core service to analyze</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify MCH business processes</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify criteria for selecting foundational MCH service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Detailed BPA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Member research own agency's MCH data collection;</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify existing PH systems; create crosswalk between those systems</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify data sets that should be shared or exchanged</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop model for foundational MCH business process</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conduct BPA on foundational MCH business process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Define core elements of chosen MCH business process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Define use cases (Part of business analysis)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Identify database connection opportunities</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Standards Development</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research standards that may be applicable to LPH systems' standards development, such as HIPAA, ICD9, EHKMP, WIC, CTC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Identify data exchange requirements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Develop data dictionary for identified foundational service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Map core elements to existing data standards; identify gaps in standards</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Select common data elements as core components</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>
Talking Points for September 29 SCHSAC Meeting

I. The workgroup was created at the request of LPHA and we are working closely with them.

II. Progress to Date:
   a. Committee Established; First meeting August 24, 2010.
      i. Reviewed several projects and initiatives that involve EHR and standards including LPHA Informatics Subcommittee, MDH e-Health activities, SE Minnesota Beacon grant activities, Minnesota public health information systems status, Environmental Health Knowledge Management Project, North Carolina’s Southern Piedmont Partnership for Public Health, and the administrative claims data standards activities of the 1990’s.
      ii. Began work on a vision; expect final approval at the Oct. 7 meeting
      iii. Did an exercise to determine “what success would look like” and identified Strengths, Benefits, Weaknesses & Dangers. Identified group commitment
   b. MDH staff has created a draft work plan that will be reviewed at the next subcommittee meeting.
      The plan includes:
      i. Creating a Communication Plan
      ii. Conducting Work Group Education
      iii. Legal/Policy Security Analysis and Recommendations
      iv. Conduct Process Activities (vision, workplan, TAG creation, etc.)
      v. Conduct a Readiness Assessment with LPHA Informatics Committee
      vi. Conduct a Public Health Services Assessment (What are the services LPH conducts?)
      vii. Determine MCH Foundational/Core Service
      viii. Conduct a detailed business process analysis on the chosen foundational service.
      ix. Develop standards for the foundational service.

III. MDH included some funding for this activity in the CDC Public Health Infrastructure grant awarded.

IV. Next steps: Oct 7 meeting will involve:
   a. Affirming the vision
   b. More discussion on overlap and coordination with e-Health activities
   c. An overview of business process analysis using Public Health Informatics Institute techniques
   d. Review of the work plan and possible creation of Technical Advisory Groups (TAGs)
Talking points for SCHSAC meeting Dec. 17

**LPH Health Information Exchange Workgroup:** This workgroup was created to recommend standardized methods for the secure exchange of data in a more cost effective manner to improve public health business service delivery.

Vision: MCH outcomes are enhanced through secure, standardized exchange of data between MDH, LPH, and community partners.

**Committee Members** (*Co-Chair*)

**Local Public Health:**
- Betsy Kremser, Anoka County
- Cheryl Stephens, CHIC
- Diane Holmgren, Ramsey County
- Donna Lappe/Pat Stewart, Jackson County
- Diane Thorsen, Ottertail County*
- Dan Jensen, Olmsted County
- Jill Bruns, Renville County
- Margene Gunderson, Mower County
- Wendy Bauman, Dakota County

**Minnesota Dept. of Health:**
- Deb Burns, MDH
- Jennifer Fritz, MDH
- Kari Guida, MDH
- Kathy Grantham, MDH
- Maggie Diebel, MDH*
- Marty LaVenture, MDH
- Maureen Alms, MDH
- Steve Ring, MDH
- Wendy Nelson, MDH

**Highlights of Workgroup**

1. Formed workgroup; 3 meetings have been held
2. Developed a vision statement
3. Created a workplan with 9 general objectives
4. Through the CDC Infrastructure Grant, contracted for a full time business analyst (Kathy Grantham, MDH)
5. Received introductory business process analysis training and conducted several exercises, with more to come
6. Received presentations on national standards efforts, national and state HIT requirements, and Meaningful Use.
7. Using the Caberrus County, N.C. local public health standards development work as a base, identified 3 maternal and child health services as foundational. They are as follows:
   
   #1 Targeted Home Visiting referral-intake
   #2 Client registration process
   #3 Targeted Home Visiting initial visit

8. Begun the analysis of LPH readiness for changes; working with LPHA and MDH’s Office of Health Information Technology.
9. Three members from the workgroup have been invited to participate in the Public Health Informatics Academy. They are: Kari Guida, Dan Jensen, and Diane Thorson. In addition Ann Stehn as chair of the PH-Doc User Group will also be participating.
Next Steps

1. Begin to analyze the chosen MCH service; look at processes and data to develop recommendations for process improvement and data standards.
2. Continue to train workgroup on business process analysis.
3. Create a BPA 101 class; use workgroup as pilot with goal of making available to all LPH and MDH
4. Review existing standards to ensure interoperability with health care system (EHRs, MN-HIE, CHIC, etc.), state systems (MIIC, WIC, MEDSS, etc.) and CDC.
5. Create a Communications Special Interest Group
6. Create a Legal, Policy and Security Special Interest Group to ensure data exchanges comply with mandates and the exchange is secure.

Final Outcome

Recommendations to SCHSAC for process improvements and data standards for local public health MCH services.
Talking points for SCHSAC meeting Feb. 18

LPH Health Information Exchange Workgroup: This workgroup was created to recommend standardized methods for the secure exchange of data in a more cost effective manner to improve public health business service delivery.

Vision: MCH outcomes are enhanced through secure, standardized exchange of data between MDH, LPH, and community partners.

Committee Members (*Co-Chair)

Local Public Health:                        Minnesota Dept. of Health:
Betsy Kremser, Anoka County                  Deb Burns, MDH
Cheryl Stephens, CHIC                       Jennifer Fritz, MDH
Diane Holmgren, Ramsey County               Kari Guida, MDH
Donna Lappe/Pat Stewart, Jackson County     Kathy Grantham, MDH
Diane Thorsen, Ottertail County*            Maggie Diebel, MDH*
Dan Jensen, Olmsted County                  Marty LaVenture, MDH
Jill Bruns, Renville County                 Maureen Alms, MDH
Margene Gunderson, Mower County             Steve Ring, MDH
Wendy Bauman, Dakota County                 Wendy Nelson, MDH

Highlights of Workgroup

1. Workgroup continues to meet
2. Better defined “Targeted Home Visiting” as: Visits to families with risk factors that impact their health and well-being, with the goal of improving maternal/child health family outcomes.
3. Created a Business Analysis 101 class
4. Piloted BA 101 class at Feb. 10 meeting
5. Created job description for 3 Technical Advisory Groups (TAG)
   a. Communications
   b. Technology
   c. Legal, Privacy and Security
6. Recruiting members for each TAG
7. Project approved by MDH project management approval committee

Next Steps

1. Choose subject matter experts for full analysis of an aspect of FHV intake/referral, initial visit, and client registration service
2. Begin to analyze the chosen FHV service; look at processes and data to develop recommendations for process improvement and data standards.
3. Arrange for Tracy Lockhard, Cabarrus County, North Carolina to come to Minnesota to explain the similar work done in NC and help with some business analysis activities.
4. Continue to train workgroup on business process analysis.
5. Review existing standards to ensure interoperability with health care system (EHRs, MN-HIE, CHIC, etc.), state systems (MIIC, WIC, MEDSS, etc.) and CDC.

6. Appoint members to the TAGs, initiate first meeting, determine issues, and develop workplan.

**Final Outcome**

Recommendations to SCHSAC for process improvements and data standards for local public health MCH services.
Project Review:
The State Community Health Services Advisory Committee (SCHSAC) established the Building Health Information Exchange Capacity Workgroup to recommend standardized methods for the exchange of local public health data. Federal and state mandates require standardized electronic exchange of health data for most of public health and their data exchange partners. SCHSAC recognizes that working together is more cost effective than each entity developing methods on their own. The workgroup is in the process of examining local public health’s maternal and child health business services and conducting business process analysis in order to determine data standards for electronic public health records and data exchange. The objective of the workgroup is: By September, 2015, 100% of LHDs will have Health Information Exchange (HIE) capability.

Method:
After creating a charter and a workplan, the SCHSAC workgroup identified 45 Maternal and Child Health public health services and processes. The workgroup chose Targeted/Family Home Visiting process as the foundational process to fully analyze and build on, starting with client referral, intake, client registration, and initial home visit.

To date, a team of MDH staff have visited eight local public agencies (Anoka, Carlton, Cottonwood, Dakota, Lake, Mower, Renville, and St. Paul Ramsey) and the Minnesota Visiting Nurses Association. The results of these visits are good documentation and a better understanding of the initial Family Home Visiting processes, exchange partners, and the data elements exchanged.

Context diagrams have been developed for each these agencies showing the exchanges or transactions between participants in a process. Participants (represented by the circles) can be people, groups, agencies, and even computer systems. The following explains the development process and presents a representative sample of diagrams displaying the variety of FHV processes.

HIE Workgroup Members: Diane Thorson, co-chair, Otter Tail County; Maggie Diebel, co-chair, MDH; Wendy Bauman, Dakota County; Diane Holmgren, St. Paul-Ramsey; Dan Jensen, Olmsted County; Margene Gunderson, Mower County, Betsy Kremer, Anoka County; Pat Stewart and Connie Hanson-Hullstrom, Cottonwood-Jackson; Jill Bruns, Redwood-Renville; Cheryl Stephens, Community Health Information Collaborative; MDH Staff: Maureen Alms, Debra Burns, Amy Camp, Jennifer Fritz, Kathy Grantham, Kari Guida, Marty LaVenture, Wendy Nelson, Steve Ring.
Building Health Information Exchange Capacity

**Step One:**
Interviewing a team of Family Home Visiting staff, including nurses, clerical staff, and management, was the basis for all information. These are the experts on FHV within the county. Conversations with the team allowed MDH staff to document Family Home Visiting in that LPH agency.

**Step Two:**
During the conversation, a draft context diagram was developed using a white board. This allows participants to see the connections, prompting even more connections and information. Learning about how records are created, what data systems are used, who does the data entry, with whom the agency has a “data” relationship and if and how data is exchanged, how much is paper based versus electronic, and how many visits are done each year are just some of the specific pieces of information noted in the context diagram.
Building Health Information Exchange Capacity

Step Three:
The MDH business analyst takes the draft context diagram and creates a clearer version for the local public health agency to review and edit. This more clearly depicts the specific processes and data exchanges for a family home visiting program. This allows the local public health agency to better see work flows and data exchanges as well as identify possible opportunities for process improvement.
Step Four:
MDH staff is beginning to see a convergence of data exchange partners and the types of data exchanged, which forms a standard diagram. This is a critical piece of information, as this allows data standards development. At this point, the following draft diagram identifies the partners representing that commonality.

**MCH Targeted/Family Home Visiting**

Common partners with whom Local Public Health Agencies may exchange information for this service

1. **Other County Services**
   - County-delivered/Coordinated services may include but are not limited to:
     - WIC
     - Other food/nutrition services
     - Lactation/breast feeding program
     - Child Protection
     - Coordinated family services
     - Family Facilitation
     - Family Resource Team
     - Car seat
     - Dental care
     - Counseling
     - Domestic abuse
     - Chemical abuse
     - Legal advice
     - Income Maintenance/Financial Aid
     - Housing
     - Family Planning
     - Mentoring

2. **Other Service Providers**
   - Services provided may include but not be limited to:
     - Interagency Early Intervention Committee (IEIC)
     - Head Start (for siblings)
     - Mental Health services
     - Depression screening
     - Transportation
     - Services for handicapped
     - Support groups

3. **MDH Programs**
   - Programs clients may be referred to may include but not be limited to:
     - Follow-Up
     - Lead
     - ENH
     - MA
     - MAC
     - MN Children with Special Health Needs

4. **DHS Programs**
   - Programs clients may be referred to may include but not be limited to:
     - Medical Assistance (MA)
     - Child & Teen Checkup
Building Health Information Exchange Capacity

Next Steps:
Two activities will be taking place concurrently.

First, the exchange partners
MDH staff will be working with the SCHSAC workgroup to define all of the data elements exchanged with these partners as well as all of the existing national data standards for those data elements. The workgroup will then select a set of standards for Family Home Visiting data exchange. Those standards will come to SCHSAC with a recommendation for adoption for all Minnesota local public health.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Last Name</td>
<td>Yes</td>
<td>24 Char</td>
<td>Yes</td>
<td>30 Char</td>
<td>Yes</td>
<td>24 Char</td>
<td></td>
</tr>
<tr>
<td>First Name</td>
<td>Yes</td>
<td>15 Char</td>
<td>Yes</td>
<td>25 Char</td>
<td>Yes</td>
<td>15 Char</td>
<td></td>
</tr>
<tr>
<td>Family ID</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>Yes</td>
<td>3 Numeral</td>
<td>Yes</td>
<td>3 Numeral</td>
<td>Yes</td>
<td>3 Numeral</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Yes</td>
<td>M/F/UK</td>
<td>Yes</td>
<td>M/F/?</td>
<td>Yes</td>
<td>M/F/UK</td>
<td></td>
</tr>
</tbody>
</table>

For Illustrative Purpose Only-Simulated Data

Quality Assurance Insights
While outside the scope of this project, local public health agencies involved so far also recognize that their context diagrams are a valuable tool to learn about their processes for quality improvement efforts. By seeing their Family Home Visiting processes outlined, they have an opportunity to look for process improvements. How many steps are redundant? How much data is collected that’s not used? Is there only one person who understands how to do a critical task? These are some of the questions that they are asking themselves as they go through this process. This side benefit may help agencies in their service delivery.

Timeline
The workgroup has been meeting since June, 2010 and has a target of September 30, 2011 for recommendations on the standards for Family Home Visiting data. Future recommendations for additional maternal and child health services data standards would be based on the family home visiting data standards.
Common Data Exchange Partners for Local Public Health Maternal and Child Health Home Visiting Services
The State Community Health Advisory Committee (SCHSAC) Building Health Information Exchange Capacity Workgroup

WHAT WE LEARNED

- Workflow for the local public health agency processes are usually very different, even within a community health board.
- There is significant similarity in data exchange partners and data transactions from agency to agency.
- The differences between LPH agencies in available resources for systems support and modifications are significant.

Background

SCHSAC established the Building Health Information Exchange Capacity Workgroup to create standardized methods for the exchange of local public health data. The workgroup is in the process of examining local public health’s maternal and child health (MCH) business services and conducting business process analysis in order to determine data standards for electronic health records and data exchange.

Objective

The objective of the workgroup is By September, 2015, 100% of LHDs will have Health Information Exchange (HIE) capability.

Method

- The workgroup selected the Targeted/Family Home Visiting process, from client referral through initial visit, as the foundational MCH process to analyze.
- A team of MDH staff visited a number of metro and out-state local public agencies to analyze, document and better understand the initial Family Home Visiting processes, exchange partners, and the data elements exchange.
- Context diagrams have been developed for each of these agencies showing the exchanges or transactions between participants in a process.

Creating a Context Diagram

Step One:
Interviewing a team of Family Home Visiting staff, including nurses, clerical staff, and management, was the basis for all information. These are the experts on FHV within the county. Conversations with the team allowed MDH staff to document Family Home Visiting in that LPH agency.

Step Two:
During the conversation, a draft context diagram was developed, often using a white board. This allows participants to see the connections, prompting more connections and information.

Step Three:
The MDH business analyst takes the draft context diagram and creates a cleaner version for the local public health agency to review and edit. A higher level diagram looking at just transactions outside the local public health agency is also created.

Step Four:
MDH staff is beginning to see a pattern emerge for data exchange partners outside the local public health agency and the types of data exchanged, which forms the following standard diagram. This is a critical piece of information, as this allows data standards development. The following diagram represents that commonality.

Commonalities

Step Four:
MDH staff is beginning to see a pattern emerge for data exchange partners outside the local public health agency and the types of data exchanged, which forms the following standard diagram. This is a critical piece of information, as this allows data standards development. The following diagram represents that commonality.

Quality Improvement Insights

While outside the scope of this project, local public health agencies involved have recognized that the context diagrams are a valuable tool to assess their processes for quality improvement efforts.
- How many steps are redundant?
- How much data is collected that’s not used?
- Is there only one person who understands how to do a critical task?
- Why is the same data stored in two similar databases?
- What happens if our paper-based records are lost due to fire or water damage?

These are some of the questions agency staff are asking themselves as they go through this process. This side benefit may help agencies in their service delivery.
Common Data Exchange Partners for Local Public Health Maternal and Child Health Home Visiting Services

The State Community Health Advisory Committee (SCHSAC)
Building Health Information Exchange Capacity Workgroup

**WHAT WE LEARNED**

- Workflow for the local public health agency processes are usually very different, even within a community health board.
- There is significant similarity in data exchange partners and data transactions from agency to agency.
- The differences between LPH agencies in available resources for systems support and modifications is significant.

**Background**

SCHSAC established the Building Health Information Exchange Capacity Workgroup to create standardized methods for the exchange of local public health data. The workgroup is in the process of examining local public health’s maternal and child health (MCH) business services and conducting business process analysis in order to determine data standards for electronic health records and data exchange.

**Objective**

The objective of the workgroup is:

*By September, 2015, 100% of LHDs will have Health Information Exchange (HIE) capability.*

**Method**

- The workgroup selected the Targeted/Family Home Visiting process, from client referral through initial visit, as the foundational MDH process to analyze.
- A team of MDH staff visited a number of metro and out-state local public agencies to analyze, document, and better understand the initial Family Home Visiting processes, exchange partners, and the data elements exchanged.
- Context diagrams have been developed for each of these agencies showing the exchanges or transactions between participants in a process.

**Creating a Context Diagram**

Step One:
Interviewing a team of Family Home Visiting staff, including nurses, clerical staff, and management, was the basis for all information. These are the experts on FIV within the county. Conversations with the team allowed MDH staff to document Family Home Visiting in that LPH agency.

Step Two:
During the conversation, a draft context diagram was developed, often using a white board. This allows participants to see the connections, prompting more connections and information.

Step Three:
The MDH business analyst takes the draft context diagram and creates a cleaner version for the local public health agency to review and edit. A higher level diagram looking at just data exchanges outside the local public health agency is also created.

**Commonalities**

MDH staff is beginning to see a convergence of data exchange partners outside the local public health agency and the types of data exchanged, which forms a planted diagram. This is a crucial piece of information, as this allows data standards development. The following diagram represents that commonality.

**Quality Improvement Insights**

While outside the scope of this project, local public health agencies involved have identified the following benefits of a standardized approach:

- Standardized process for talking with partners.
- Identification of partners and agreements.
- Identification of data elements and standardized data elements.
- Separation of process elements to include checks and balances.
Building Health Information Exchange Capacity

Report to the
State Community Health Services Advisory Committee
Diane Thorson, Ottertail County, Co-Chair
September 14, 2011

Discussion Points

- **Past:** Why did SCHSAC create this workgroup?

- **Present:** What is the current status? What are the lessons learned?

- **Future:** Where does the workgroup go from here? Where do local health departments go from here?
Past

- Federal push for Health Information Exchange capability
- MN mandates local health departments and partners (private and public) to have interoperable electronic health records by January, 2015.
- SCHSAC workgroup established in spring of 2010 to recommend standardized methods for the exchange of local public health data.

Building Health Information Exchange Capacity

Past

- Interoperable health records provide easier and faster exchange of health data leading to:
  1. improved individual health
  2. improved quality of care
  3. increased efficiencies
  4. reduced health care costs
  5. improved population health.

- But it is difficult and expensive.

- SCHSAC recognized that state and local partners need to work together to achieve the mandates.
**Workgroup’s Accomplishments**

- **Objective:** By September, 2015, 100% of Local Health Departments will have Health Information Exchange capability.

- **Strategy:** *Identify and Agree* on data standards for EHRs used in the public health setting.
  1. Identified all Maternal and Child Health services.
  2. Selected one foundational service to fully analyze: Targeted/Family Home Visiting starting with client referral, intake, registration and initial home visit.

---

**Accomplishments (continued)**

3. **MDH staff visited nine local public health agencies:**
   - Anoka
   - Dakota
   - Renville
   - Carlton
   - Lake
   - St. Paul Ramsey
   - Cottonwood
   - Mower
   - Minnesota Visiting Nurses Association (Hennepin County and City of Minneapolis)

4. Developed a list of all the exchanges or transactions between participants in the process (internal and external) by using business analysis techniques.

5. Created context diagrams for each agency visited.

6. Compared the results to determine whether there are commonalities.
Business Process Analysis—Task Flow

Electronic Health Records for Public Health Agencies

Business Process Matrix

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>BUSINESS RULES</th>
<th>TRIGGER</th>
<th>TASK SET</th>
<th>INPUT</th>
<th>OUTPUTS</th>
<th>MEASURABLE OUTCOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A structured set of criteria that define the process.</td>
<td>A set of rules that define the process.</td>
<td>Analytic activities or actions that are monitored.</td>
<td>The task set is activated by the business process.</td>
<td>Information is received within the process.</td>
<td>Information is transformed and output.</td>
<td>The information has been successfully transformed.</td>
</tr>
</tbody>
</table>

Building Health Information Exchange Capacity

Business Process Mapping
Public Health Business Processes

1. Recruitment/Outreach
2. Screening
3. Intake
4. Assessment
5. Close the Case
6. Refer the Case
7. Provide Education
8. Provide Counseling
9. Provide Treatment
10. Coordinate Care

Recruitment and Outreach
Lessons Learned:

- Great things happening at the local level.
- Business analysis is a great tool to evaluate public health processes and for quality improvement.
- Data is exchanged with an extraordinary number of entities; more is desired and will be required.
- There **ARE** many commonalities in FHV processes.
- Existing local software systems have the EHR capacity for data collection.
- Data standards are the tip of the iceberg.
Present

- What does that iceberg really look like?
  - Agencies with no electronic systems have limited or no resources to purchase or support an EHR system.
  - Local Public Health Agencies in Minnesota are not eligible to draw down Meaningful Use Funding like hospitals and clinics.
  - Most agencies do not have staff with expertise in electronic data exchange.
  - PPMRS reporting shows that only 26% say they have staff with expertise in electronic exchange.

Present

But...there are Opportunities:

- 67% of local agencies are changing their systems
  - 19% planning/assessing for a new system
  - 48% upgrading their systems.

- This is also a great opportunity because MDH, LPH’s principal exchange partner, is also working on standards and Health Information Exchange capability.
Future

- Strategic visions for sharing data
  - **Federal vision**: supporting achievement of meaningful use through grant programs, including information exchange with public health department and laboratories.
  - **State Vision**: all health care providers and hospitals have an interoperable electronic health record (EHR) system by 2015.
    - MDH activities: Interoperability required for internal systems
    - MDH needs to be able to receive reportable data from external EHRs (providers and local public health)
  - Statewide use of compatible LPH systems have the capacity for collecting and exchanging data.
Future

All health systems can communicate with one another

- **Drivers**
  - Care delivery and quality needs
  - Business needs of organizations
  - Increasing evidence relating to improvement in quality and safety
  - Consumer needs and interest
  - Minnesota law for using an interoperable electronic health record by 2015
  - Federal financial incentives and disincentives programs
Future

- The power of collaboration!
  - CHBs and LHD work together and share systems development costs
    - Example: Beacon Community
    - Carefacts, CHAMP, and PH-Doc public health systems are already in place in Minnesota
      - Omaha standardized documentation system is embedded in all three software programs
      - Incorporating immunization registry access (MIIC)
      - Looking at national standards

Future

- The power of collaboration!
  - MDH integration and collaboration
    - MIIC – Minnesota Immunization Information Connection
      - First requirement in federal Meaningful Use
      - Embedded in some existing public health systems
      - Can we expand?
    - MEDSS–Minnesota Electronic Disease Surveillance System
      - Allows direct input of reportable disease information
      - Will allow authorized local access to local data
      - Needs to be embedded in public health systems
    - PHIx–Public Health Index
      - Will allow authorized client matching across systems for correct data input and output
    - WIC – Women, Infants and Children
      - Can we have improved integration with public health systems?
Future

- Can we standardize data collection for FHV across LPH agencies?
  - Allows comparison across data sets (including provider data) to analyze outcomes for local population.
  - Want to use every bit of data available to assess outcomes and improve service delivery.
  - Examples:
    - Can car seat programs collect the same data?
    - Can breast feeding education programs collect the same data?
    - Can we standardize charting of client visits?
      - Example: Omaha System
    - Can we standardize client identifiers?
      - Example: PHIx system at MDH

Future

- Security is important and there are new systems and methods to ensure data is protected.
  - On-going cost to ensure data is protected against new threats
  - Need to educate professional staff on requirements and techniques.
  - Need to continue to do due diligence in building and maintaining systems.
  - Need to educate staff and users of data.
December Report

The HIE workgroup should continue to work on remaining issues and should be included in 2012 SCHSAC workplan.

- Continue to identify the data elements exchanged in FHV.
- Identify existing national data element standards.
- Continue to build a MCH data element list.
- Continue the business analysis/process improvement activities at the local level.
- Explore impact emerging issues as they arrive.

December Report

Can local public health agencies work together to build/improve an EHR system? Options could be:

- Each local public health agency has its own EHR system
- Each CHB has one system for entire CHB
- Other options?

We need to maximize existing dollars and be ready to take advantage of new opportunities as they arise.
To move forward, local agencies must:

• Work with private sector.
  • 49% of Minnesota office-based physicians have a basic EHR system in place (CDC/NCHS, National Ambulatory Medical Care Survey)
  • 86% of Minnesota Hospitals indicate they have deployed an EHR system (AHA Annual Survey: Information Technology Supplement; 2009)
  • Partners and their vendors will expect to send/receive data using ONC standards; we must be ready

• Continue to participate in state and national efforts to ensure the local perspective is included.
  • We need to be at the table to express our needs or local public health will be left out.

Accept that EHRs are part of the budget. That’s just the way it is.
Workgroup Future?

- Lots of work yet to do
- Opportunities for great improvement
- Success depends on us working together

Workgroup:

- Thanks to the following workgroup members who have been extremely hardworking and engaged in this assignment.

Co-Chairs: Diane Thorson, Otter Tail County and Maggie Diebel, MDH.

Members: Wendy Bauman, Dakota County; Jill Bruns, Redwood–Renville; Margene Gunderson, Mower County; Dan Jensen, Olmsted County; Betsy Kremser, Anoka County; Barb Lescenski, St. Paul–Ramsey; Cheryl Stephens, Community Health Information Collaborative (CHIC); and Pat Stewart and Connie Hanson–Hullstrom, Cottonwood–Jackson.

MDH Staff: Maureen Alms, Debra Burns, Amy Camp, Mark Doerr, Kathy Grantham, Kari Guida, Marty LaVenture, Wendy Nelson, and Steve Ring.
Resources

**Minnesota e-Health Web Page**

[www.health.state.mn.us/e-health](http://www.health.state.mn.us/e-health)

Links to information on Electronic Health Records as well as Minnesota and national organizations and activities.

**Public Health & Electronic Health Records Meaningful Use [EHR–MU]**


**Public health Data Standards Consortium**

## Appendix K
### HIE Workgroup 2012 Workplan

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication Plan</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Update a Communication Plan</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>-Identify spokesperson to report diff. Groups (LPHA,…)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>-Identify key points to be shared at each SCHSAC meeting</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>-Involve stakeholders (SCHSAC, LPHA, MDH, AMC, MCH Advisory Bd, tribes, others?)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>-Create presentation materials for workgroup members and others to use</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>-Identify and articulate concrete improvements that will result. 1) money saved 2) lives improved using information from the feds such as diabetes results</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>-Make a picture(s) of what we are doing to aid in communications using context diagrams and other existing diagrams; make available on the web site for everyone's use</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>2. Create documents on chosen process, elements and standards that can be implemented by IT partners-short and specific; 2 pagers; make available on the web site</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>-Educate those not in the know current standards</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>3. Continue to communicate achievements and value of work to SCHSAC</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>4. Build and maintain a web site</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

### Work Group, LPH and MDH Education

Business process analysis training for SME's and other LPH staff as appropriate | x |
Educate self and staff on what is happening; Engage staff in training opportunities | x | x | x | x | x |
Identify other similar activities across state and counties and leverage those activities | x |
Educate MDH staff on project and the use of standards such as Omaha | x |

### Legal/Policy/Security

MDH Staff to follow Legal/Policy/Security-Technical issues and advise WG as appropriate | x | x | x | x | x | x |
- Assess HIE requirements to determine applicability | x |
- Legal issues of sharing data must be addressed | x |
- Research examples and legal environment for exchange of information across programs in LHDs (ID SMEs) | x |

### Process

Update workplan | x |
Ensure workplan includes success points; small projects | x |
Revisit workplan to validate and update | x |
### Appendix K: HIE Workgroup 2012 Workplan

|---------------|-------------|-------------|-------------|-------------|-------------|------|

#### Readiness Assessment
What do we want to know that wasn't in the PPMRS survey responses?
- Approaches for financing
- Omaha System Use
- Approaches for Quality Improvement (working with PHAB process)
Assess readiness to meet state and federal interoperability requirements
- Vendors
- MDH
- REACH toolkit modification for use with local public health

#### Services Assessment
Review MCH business services from MN LPH
MDH staff to work with LPHA Informatics WG to update LPHA data inventory

#### Determine MCH Additional/Core Service
Review MCH business processes
Identify criteria for selecting additional MCH service
Define additional core service to analyze

#### Detailed BPA
Conduct BPA on additional MCH business process
Define core elements of chosen MCH business process
Define use cases
Identify database connection opportunities

#### Standards Development
Research standards that may be applicable to LPH systems' standards development, such as HIPAA, ICD10, EHKMP, WIC, CTC
Identify data exchange requirements for additional service
Incorporate data elements for additional service into data dictionary for F/THV
Map core elements to existing data standards; identify gaps in standards
Select common data elements as core components