Project Team: Minnesota Death Data Delivery Project
Timeline: March 2015 – June 30, 2015

What is the Need (e.g. outcome) or gap that caused this project to be considered in the first place? Who is establishing the need? How is the need being measured and is it possible for this project to make an impact on that measure? What data or analysis was used to establish that this project will make a key impact?

a. What is the need (e.g. outcome) or gap that caused this project to be considered in the first place?
Data is an important part of helping federal, state and local health departments achieve better health outcomes for their constituencies. Currently gaps exist in the timeliness, accuracy, and usability of vital record death data which hampers effectiveness in its use. Additionally, this data and its timely availability on individual certificates are important to the families of the subjects of the records.

State vital records programs often have to provide significant resources to acquire, collate and screen data for accuracy, ready it and making it available to those who need it.

Evidence indicates that real-time, preliminary, and provisional death data is indicative of final data. Unnecessary delay in releasing death data affects multiple beneficiaries negatively. Consumers of death data place value on availability.

b. Who is establishing the need?
The demand for real-time death data is growing. Internal and external customer demand is increasing because of the climbing number of customers and their demand for data sooner.

Because local public health agencies may be compromised in their ability to do surveillance activities by the length of time it takes to receive death data, they have requested death data sooner than what has regularly been available to them. Local public health agencies from multiple jurisdictions want death data in real-time to intervene and take preventative actions sooner so that the health of Minnesotans is better protected, maintained, and improved. Representatives from local public health associations have voiced their frustration with leaders.
Families are sometimes forced to wait for long periods of time before a death record is finalized with both the fact and cause of death. The availability of a complete death record affects access to death certificates that satisfy estate settlement needs and emotional closure.

Within the Minnesota Department of Health, multiple programs rely on accurate and timely reporting of death events. Some programs require data to be shared in real-time so that the program can carry out its duties and obligations. The Office of Vital Records authorizes data users and multiple agreements and must adjust resources to meet the increasing demand for death data.

c. How is the need being measured and is it possible for this project to make an impact on that measure?
The need is being measured by:
1. Requests for real-time death data.
2. Results from local public health surveys conducted in preparation for the North Carolina project and the North Carolina statewide survey of public health offices/epidemiologists—that apply to all vital records and public health agencies.
3. Local public health associations requesting that the MN Dept. of Health make vital record death data available sooner—discussions with between associations and the executive office resulted in a work group and forum to discuss the business need and solutions—this initiative was underway before the project.
4. The elapsed time between death events and real-time death data being made available to customers.
5. Increased verifications fulfilled through the Electronic Verification of Vital Events system.

The MN Death Data Delivery Project can make an impact by providing resources needed to improve processes and the quality of data in order to meet the business needs.

d. What data or analysis was used to establish that this project will make a key impact?
Evidence from other jurisdictions that make death data available sooner and their outcomes data is anecdotally characterized as the following:

e. What scope (e.g. geographic, organization, customer) are you expected to impact?
- Deaths included in the data are for events that occur in Minnesota
- Families of decedents
- Minnesota local public health agencies
- Users of the electronic vital records system (MR&C)
- Tribal entities
- Researchers
- Other jurisdictions directly involved in the Minnesota project which include North Carolina, Arkansas and Mississippi
- Other jurisdictions that replicate elements of the project or benefit from the information shared
- Other entities and customers who need and value real-time death data information

Project Scope
Start: Fact of death for an individual who died in Minnesota is filed in the MR&C System, a death record is created, and the record is assigned a state file number.
End: When ICD10 coded records that contain statewide death data are available in real-time.

f. What conditions are being placed on this project? (Leadership requirements or boundaries)
- Statutory changes not required
- MR&C, the electronic vital records application, will be used
- System changes (if any) are negotiated between the program and technical staff
- System changes have priority among other MN.IT project and maintenance needs
- NCHS ICD10 Coding Process and NCHS turnaround time are outside the scope
- Data quality is uncompromised—process improvements to decrease elapsed time maintain or improve current quality of data.

2. Vision (What do you want to achieve in the long range (i.e. 10 years) and without any restrictions? Generate a picture or description of your ideal condition. How will it look for the customers, our team, and for the taxpayers/funding sources?)
- Immediate improvement (reduction in cycle time) is achieved so that Minnesota death records are
**PROJECT TEAM PROBLEM SOLVING**

Complete and certificates are available to families sooner.

- Immediate improvement (reduction in cycle time) is achieved so that Minnesota death data is available sooner than in its final published form.
- Customers have complete and accurate death data to make informed decisions and take actions.
- Real-time death data will be available for customers regularly through a convenient electronic (automatic) mechanism.

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3. **Current State** (Description of how the process and organization is operating now; Quantitative if possible, always factual and based on observation)

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Description</th>
<th>How do you know?</th>
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</table>
| Customers   | - Families, requestors, and funeral establishments need complete death certificates (fact and cause) and sometimes they must wait a long time before the records are available.  
- Epidemiologists within and outside of the agency are increasingly demanding more timely and accurate death data.  
- Local public health agencies routinely and regularly get death data in its final summarized form—annual data set late in the next calendar year when published by the Minnesota Department of Health Center for Health Statistics.  
- Local public health agencies may not know that they can ask for identifiable real time death data now.  
- Users of our electronic vital records system (MR&C) including funeral establishment staff, physicians, medical examiners, and coroners have expressed frustration at system steps required to complete fact of death on a record and the process to obtain cause of death finalization.  
- Users of our electronic vital records system (MR&C) including funeral establishment staff, physicians, medical examiners, and coroners have provided feedback and provided ideas to enhance the system to be more intuitive and efficient for the user.  
- Previous lack of resources and staffing roles presented a barrier to resourcing MN.IT adequately to program system enhancements and fixes helping to make some processes mistake proof. | Data and reports from the electronic system.  
Complaints from families and funeral directors.  
Requests from public health agencies and researchers for real-time data. |
| Financial   | - OVR devotes multiple resources to collecting cause of death data from physicians who do not use the electronic system—this includes both physicians who have user ID’s but file via paper and those who do not have a user ID and have always field via paper.  
- OVR manually inputs cause of death by physicians who send paper to the state office.  
- Funeral establishments perpetuate the paper filing by continuing to fax requests to complete cause of death to physicians who are users of MR&C—this causes confusion and sometimes duplicative work to complete paper worksheets and to file within MR&C  
- Funeral establishments order death certificates on behalf of families as part of funeral services. Some request certificates before families have time to review—once certificates are printed/issued, amendments with a $40 fee and the cost of new certificates $13 each, are necessary to make corrections. Most often the funeral establishment absorbs this cost.  
- Families may have costs passed on to them when funeral establishments do not pay for corrections or re-issuing and | Complaints from physicians and Medical Examiners.  
Complaints from Funeral Directors.  
Requests to change policy to allow for exchange of certificates without additional fees.  
Delays in filing cause of death increase costs associated with disposition— |
when physicians amend cause of death and new certificates are issued.

- Local vital records offices expend resources to explain errors and the process to amend and correct errors. They may have to provide customer service to a requester who may be unhappy and emotionally burdened.
- Local vital records offices must void certificate paper and reissue certificates—waste of security paper, resources
- Certificates exchanges at no cost (2013 law change) no longer allowed which complicates customer service and expectations
- Physicians/ME’s spend valuable time reviewing death records that were unnecessarily referred to them.
- Physicians/ME’s spend valuable time entering cause of death into MR&C and reviewing a paper/faxed requests from funeral establishments to complete the cause of death on paper and return to them.

<table>
<thead>
<tr>
<th>Your Team</th>
<th>complaints and requests to speed process for individual decedents.</th>
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</thead>
<tbody>
<tr>
<td>• Currently takes MN more than one year after a death is registered to routinely and regularly share the data with local public health</td>
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<tr>
<td>• There has been a culture to routinely release death data only in its final form (generally in September of the following calendar year—about 9-22 months after the death event for an individual).</td>
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<td>• There is a lack of confidence with some existing data and reports from MR&amp;C.</td>
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<td>• Limited real-time death files are prepared and e-mailed to local public health agencies that have requested them (usually associated with a birth file).</td>
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<tr>
<td>• OVR staff use e-mail to send files—current demand is low, but resources may be limited if demand rises.</td>
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<td>• MR&amp;C does not currently have a well-developed reporting system</td>
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<td>• OVR does not have an Internet site in place to post files</td>
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<td>• OVR and the Center for Health Statistics are under different bureaus and management within the department.</td>
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</table>

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<thead>
<tr>
<th>Society</th>
<th>Final death data shared only by request and fulfilled by secure e-mail.</th>
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<tbody>
<tr>
<td>• Loss to public health and improved population outcomes because real-time death data is not available regularly, routinely, or systematically.</td>
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4. **Goal or Target Condition** (What is the objective? Which piece of the gap are you addressing?)

TO: Reduce the time for a death record to have complete death data (fact and cause of death) to be available to families for issuance of a certificate.

TO: (a) Reduce the time for real-time literal cause of death data to be available to consumers of data.

(b) Reduce the time for real-time coded cause of death data to be available to consumers of data.

TO: Create a systematic (automated) process to regularly and routinely share real-time coded cause of death data.

Lack of availability for real-time death data compromises surveillance, prevention and intervention activities for public health goals and purposes.
5. Customers and Beneficiaries (Who benefits from achieving the goal? What populations are targeted?)

FOR:
- Families of decedents
- Federal, State & Local health departments
- EPs
- Program areas
- Vital Records and vital statistics teams
- NCHS
- users of the MR&C system

6. Benefit (What are the benefits from achieving the goal?)

SO THAT:
- Families of decedents can conduct estate activities and have closure sooner
- Users of the MR&C system can complete their activities related to filing accurate and complete death records sooner
- Federal, state and local health departments have data for surveillance, program planning and evaluation, making informed decisions, guiding programs, and ultimately improving health outcomes
- Vital records and vital statistics tasks are more efficient and require less labor
- State and local employee relationships are improved
- Health departments benefit in meeting PHAB standards & accreditation
- OVR achieves its vision of informing Public Health and improving lives; one record at a time
- MDH achieves its mission of improving the health of all Minnesotans.

7. Measures and Targets (STANDARDS How will you measure success; Measure and Target? What quantitatively will be achieved?)

<table>
<thead>
<tr>
<th>Beneficiaries</th>
<th>What Measured</th>
<th>How Measured</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumers of Death Data (LPH and others)</td>
<td># or % of records that require re-work to obtain ICD10 codes</td>
<td>Report from NCHS on death records that failed to be coded on first submission.</td>
<td>Decrease the # or % of records that require re-work for ICD coding on first pass.</td>
</tr>
<tr>
<td>Consumers of Death Data (LPH and others)</td>
<td>Elapsed time from OVR receiving ICD10 coded records to sharing real-time death data via a routine mechanism or method.</td>
<td>Report from MR&amp;C system to pull date/time stamp from coded cause of death records to sharing data (e-mail, posted on server, etc.).</td>
<td>GOAL: Reduce the time it takes to share ICD-10 coded, death data. Share death data within one week of death data coding being complete. 6 mo. From Kaizen event 9-22 months</td>
</tr>
<tr>
<td>Families of decedent</td>
<td>Elapsed time from fact of death registration to issuance of a death certificate including cause of death.</td>
<td>Report from MR&amp;C system that pulls date/time stamp from fact of death registration to cause of death registration to availability of issuance (certificates are printed).</td>
<td>GOAL: Reduce the time it takes from fact of death registration to availability of issuing a complete death certificate. Increase the # or % of records that take less than 10 days from fact of death registration to cause 6 mos. from Kaizen event 81% pre-kaizen</td>
</tr>
</tbody>
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### PROJECT TEAM PROBLEM SOLVING

<table>
<thead>
<tr>
<th>Consumers of Death Data (LPH and others)</th>
<th>Elapsed time from fact of death registration to coded death data being available.</th>
<th>Report from MR&amp;C system to pull date/time stamp from fact of death registration to obtaining coded cause of death on record.</th>
<th>GOAL: Reduce the time it takes from fact of death registration to obtaining ICD-10 coded, death data.</th>
<th>2 mos. From Kaizen event</th>
</tr>
</thead>
</table>

#### 8. Conditions

(What process or team member requirements or limitations exist? What do you need to be successful?)

- Assure customer participation from the Kaizen state.
- Comply with data collection regulations/statutory requirements; data practices, HIPAA
- Comply with state law and not attempt to standardize legal requirements from state to state; **No one goes to jail**
- Synchronicity with other improvement activities (e.g. informatics, data governance)
- No statutory changes
- Negotiate and approve system change priority among other IT project and maintenance needs
- OVR staff have the training, tools, authority and support to take action and implement change
- Project aligns with MDH and OVR mission, vision, values

#### 9. Team Members and Roles

(Who is directly involved and How? Training Needs?)

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Work process related interests / concerns</th>
<th>Project, QI skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melinda Allen</td>
<td>Team Member – National</td>
<td>Represents AR, subject-matter expertise, familiarity with project management and performance improvement</td>
<td>Documentation, forms management, good people skills</td>
</tr>
<tr>
<td>Lynn Pittman</td>
<td>Team Member - National</td>
<td>Represents MS, limited vital records experience (fresh eyes)</td>
<td>Plain language, patience, communication skills, personable</td>
</tr>
<tr>
<td>Andrea Price</td>
<td>Team Member – National/ NAPHSIS</td>
<td>Best practices, standards, trends</td>
<td>National perspective</td>
</tr>
<tr>
<td>Roberta Geiselhart</td>
<td>Team Member/ Hennepin County Medical Examiner’s Office</td>
<td>SME-medical examiner perspective for 3 metro counties, system experience</td>
<td>Good communication skills, ideas, commitment to success</td>
</tr>
<tr>
<td>Rick Carlson</td>
<td>Team Member/ Minneapolis Health Dept.</td>
<td>LPH and MDH experience and perspective, SME. User of death data</td>
<td>Analytical, good listener, good communicator, open to new ideas</td>
</tr>
<tr>
<td>Molly Crawford</td>
<td>QI Team Leader/ Team Member State Registrar</td>
<td>Leadership, authority, SME, project management</td>
<td>Leadership, QI training and knowledge, ask clarifying questions, analytical, good communicator</td>
</tr>
<tr>
<td>Heidi Granlund</td>
<td>Process Owner/ Team member</td>
<td>Deputy Registrar, Supervisor of data staff, historical and system</td>
<td>SME. Making connections and associations. Has visionary approach</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Role</th>
<th>Skills and Experience</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cindy Coleman</td>
<td>Team Member Field Services/ user support</td>
<td>System enhancements and fixes, error-proofing, user experience, automation, business analysis, process mapping</td>
<td>SME. Good listener, can break down examples, works well with others, patient, handles interruptions and information overload well</td>
</tr>
<tr>
<td>Gloria Haluptzok</td>
<td>Team Member/ Data Quality &amp; Records Management</td>
<td>Historical knowledge, experience with COD improvement projects, project management, follow up with physicians</td>
<td>SME. Documentation, can see the big picture, analytical</td>
</tr>
<tr>
<td>Nancy Bollman</td>
<td>Team Member/ Data Quality &amp; Records Management</td>
<td>Experience with data sharing, file preparation, handles data requests, subject-matter expertise</td>
<td>SME. Good listener, prepared, asks good questions</td>
</tr>
<tr>
<td>Kirsti Taipale</td>
<td>Team Member/ Field Services Rep</td>
<td>Training/outreach, system user support, experience with COD improvement projects, knowledge of MR&amp;C, users</td>
<td>SME. Works well with others, creative, good listener, engaged, good follow through</td>
</tr>
<tr>
<td>Usha Valappil</td>
<td>Team Member/ Field Services Rep</td>
<td>Fresh eyes, limited vital records experience</td>
<td>objectivity</td>
</tr>
<tr>
<td>Roxanne Somers</td>
<td>Team Member/ Registration &amp; Amendments</td>
<td>Historical knowledge, death registration experience, customer service</td>
<td>SME. Patience, will follow through, easy to work with</td>
</tr>
<tr>
<td>Maria Schaff</td>
<td>Team Member/ Registration &amp; Amendments</td>
<td>Death registration, funeral establishment experience; customer service</td>
<td>SME. Great communicator, enthusiastic, gets the big picture/vision, asks clarifying questions</td>
</tr>
<tr>
<td>Otto Hiller</td>
<td>Team Member/ MN.IT</td>
<td>Electronic system knowledge &amp; MR&amp;C expertise, subject matter expert, electronic health records/e-filing</td>
<td>SME. Good listener, asks clarifying questions</td>
</tr>
<tr>
<td>Larry Winship</td>
<td>Team Member/ MN.IT</td>
<td>Leadership, system knowledge, programming expertise, fresh eyes</td>
<td>SME. Thoughtful and easy to work with, creative, good follow through, can identify issues and solutions</td>
</tr>
<tr>
<td>Cheri Denardo</td>
<td>Process Owner/ Team Member, Data Quality &amp; Records Management</td>
<td>ICD10 coding, COD clean up, finalization of records-leading team, nosology, project management</td>
<td>SME. Historical knowledge, IJE/ NCHS files, Experience with improving COD</td>
</tr>
<tr>
<td>Matt Rowe</td>
<td>Team Member – National/ NCHS</td>
<td>Contractual info, requirements, coding process</td>
<td></td>
</tr>
<tr>
<td>Carol Hajicek</td>
<td>ON-Call Team Member/ MDHCenter for Health Statistics</td>
<td>Data sharing experience, SME for finalization of data, understanding of LPH needs; mechanism for sharing data on the web, EPI</td>
<td>SME. On-call resource, expertise</td>
</tr>
<tr>
<td>Mageen Caines</td>
<td>On-Call Advisor &amp; Resource Team Member Minneapolis Health Dept.</td>
<td>LPH experience and perspective. SME. User of death data</td>
<td>On-call Resource if needed</td>
</tr>
<tr>
<td>Lia Katz</td>
<td>Fiscal agent, advisor, project manager, ASTHO representative</td>
<td>Continuity among projects, accountability to project and goals.</td>
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</tr>
</tbody>
</table>
Training Needs:
- Background information about Minnesota’s vital records program for Kaizen team members, especially those not employed by the Office of Vital Records.
- OVR staff familiar with their roles & responsibilities who gather information important to the discussion at the event and to inform the project.

### 10. Project Schedule
(How will you achieve the result? What is the basic approach, activities to go about solving the problem?)

**BY:**
- Educating stakeholders
- Onboarding team members
- Convening a Kaizen event (Confirm, Prepare, Perform, Institutionalize)
- Implementing change
- Communicating to customers awareness of change/availability of data
- Documenting results
- Sharing information
- Encouraging replication among other jurisdictions (and within OVR for other data?)
- Serving as a resource to others who replicate
- Practicing continual process/performance/quality improvement

<table>
<thead>
<tr>
<th>DATE</th>
<th>ACTIVITY/TASK/APPROACH</th>
</tr>
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<tbody>
<tr>
<td>Feb-March 2015</td>
<td>Define project, secure commitment for MDH-Office of vital records to participate in the RWJF QI Forum with a demonstration project</td>
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<tr>
<td>Mid-March</td>
<td>MN accept invitation and preliminary work begins on project and organizing Kaizen event</td>
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<tr>
<td>4-7-15 to 10-15</td>
<td>Select team members attend QI Team Leader and QI Seeing the Possible training in Washington D.C. with Continual Impact and ASTHO</td>
</tr>
<tr>
<td>5-18-15</td>
<td>Focus the team. Understand the current process. Complete the current state map.</td>
</tr>
<tr>
<td>5-19-15</td>
<td>Go to the Gemba – observe the process. Prioritize issues by impact and frequency. Complete a root cause analysis.</td>
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<tr>
<td>5-21-15</td>
<td>Review and discuss waste analysis on sub process map. Continue to develop solutions. Begin testing.</td>
</tr>
<tr>
<td>5-31-15</td>
<td>Team leader co-presents with NC information about both projects, data about quality improvements in both programs, replication tips, and other information at the NAPHSIS Conference Innovations Session</td>
</tr>
<tr>
<td>May-June 30, 2015</td>
<td>Implement launch and phase one of project process improvement.</td>
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<tr>
<td>June 8, 2015</td>
<td>Create MDH SharePoint Connect site and set up local public health users to access data files that will be posted weekly.</td>
</tr>
<tr>
<td>June 12, 2015</td>
<td>Post first real-time death data file on SharePoint Connect Site. Continue to post weekly file.</td>
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<tr>
<td>Mid-June-mid-July</td>
<td>Gather stakeholder feedback on new e-mails and alerts—make adjustments (if necessary) based on test results and suggestions for further improvement/refinement.</td>
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<tr>
<td>June 25, 2015</td>
<td>OVR conference call with staff at NCHS who are involved in ICD 10 coding—discuss MN-specific data on records that fail to be auto-coded, gather information and recommendations for improvement, prioritize and inform plan to review records proactively and redirect cleanup to front-end. Create and communicate new process so that it is in place in time for IT build.</td>
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</table>
| June-July        | • Identify IT changes and program system for Phase 1 & 2—including revised and new automated e-mails and white list to improve trigger words that send records to medical examiners when not needed (IT release scheduled for 7-29-15).  
  • Integrate new activities associated with follow up to funeral establishments within OVR office—make assignments, communicate new roles/responsibilities/assign ownership.  |
## 11a. Data and Information Collection  (What will you collect? Who? When?)

<table>
<thead>
<tr>
<th>WHAT</th>
<th>HOW</th>
<th>WHO</th>
<th>WHEN</th>
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</thead>
<tbody>
<tr>
<td>Sharing Real-time death data</td>
<td>Is it being shared? How is being shared? Is there a systematic/automated method to share? Frequency of data being made available or shared? How long between death event and sharing?</td>
<td></td>
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<tr>
<td>Time for complete death data to be available</td>
<td>Elapsed time between death event and COD. Elapsed time between death event and ICD10 coding.</td>
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<tr>
<td>MR&amp;C system-general overview</td>
<td>The MR&amp;C death module—what is the flow for inputting information and how do different users of the system know when they have an action or function to do</td>
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</tr>
<tr>
<td>MR&amp;C and order that a death record is created</td>
<td>Map out flow and information about registration order—most records have Fact of Death registered first—what happens when Cause of Death is registered first? Data, activities?</td>
<td></td>
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<tr>
<td>Most commonly amended or corrected fields for COD and FOD</td>
<td>Identify the most common data fields that get corrected and amended for fact and for cause of death. Data will help identify what fields are problematic so that the team can error-proof the process, provide training and education, change the system etc. What are the problem areas?</td>
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<tr>
<td># of re-issued death certificates</td>
<td>Identify the number of death certificates that get re-issued in 0-10 days from the time of first issuance. Provide data by day for last 12 mos., since MR&amp;C (this is a measure to indicate how many are initially incorrect)</td>
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<tr>
<td># of amendments to records after issuance</td>
<td>Identify the number of records that are amended after first issuance of death certificates—amendments within 0-10 days of first issuance. (this is a measure to indicate how many are initially incorrect)</td>
<td></td>
<td></td>
</tr>
<tr>
<td># of corrections to records before issuance</td>
<td>Identify the number of records that are corrected before a certificate is issued. (this is a measure to indicate how many are initially incorrect)</td>
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<td></td>
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<tr>
<td># of records fully completed</td>
<td>Track number of records that are fully completed after death event—show number of records by each day elapsed</td>
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<td>-------------------------------------------------------------------------------------------------</td>
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<tr>
<td>Data corrected or amended on death certificates</td>
<td>For the records that are corrected before issuance and amended after issuance—what are the data fields where changes are made?? Identify top 5-10 reasons for corrects or data items most frequently changed.</td>
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<td></td>
</tr>
</tbody>
</table>
| # of COD referrals to MEs | How many death records get referred to ME, in last 12 mos., since MR&C  
- How many overall  
- How many triggered  
- How many checked |
| Elapsed time to complete COD when referred to ME | Calculate the elapsed time on records from fact of death filing to cause of death filing when referred to ME  
- Is there a way to measure time in queue?  
- Can we measure process time when ME opens record to COD filing?  
- Can we measure elapsed time on a per record basis? |
| Elapsed time for physician to complete COD | Calculate the elapsed time on records for physician to complete COD after FOD is filed  
- For COD filed on paper  
- For COD filed by physician in MR&C  
- Overall  
- How long record is in queue |
| # or % of physicians who file COD online | Calculate the number/percent of physicians who are filing COD on MR&C  
- How many overall  
- How many file paper and electronically (maybe because FH sends a fax sometimes?)  
- How do we get to this data?  
Or number of records that get COD filed online vs. on paper |
| # or % of physicians who are MR&C users and file on paper | Calculate the number/percent of physicians who are users of MR&C who file on paper.  
OR number of records that get filed on paper by a physician who is an MR&C user |
| Most common changes after ICD10 coding | List the data items or changes done to records after ICD 10 coding. List in order of frequency over the last 12 mos. since MR&C  
Cheri and Carol Cindy? Otto?  
By 5/11 |
| # of records changed after ICD10 coding | Track the number or percent of records that get changed after the ICD 10 codes get assigned in the last 12 mos., since MR&C  
Cheri and Carol Cindy? Otto?  
By 5/11 |
<p>| # of records that NCHS returns that need fixing | How many records (or %) come back from NCHS that need a fix or some kind of clean up? |
| # of records with COD filed &gt;10 days of event | Calculate the number of records that have COD filed greater than 10 days from date of death—what is the number, percent of records, can you list info by day for each additional day? Or can this be calculated by day each day following death event, # &amp; %? |
| # of records with FOD filed each day after event | Calculate the number of records with fact of death filed each day after the death event—how many records each day, percent of records. |</p>
<table>
<thead>
<tr>
<th># of records with COD filed before FOD</th>
<th>Calculate number of records/% of records with COD filed before FOD was filed.</th>
</tr>
</thead>
</table>
| Who files COD 10+ days               | Identify which physicians are filing COD 10+ days and why???
| ICD10 clean up                      | Elapsed time for OVR to clean up records, actual time it takes OVR to do this? |
| Elapsed time between complete ICD10 cleaned records and file being posted on MDH web | Number of days/weeks/months between the complete ICD 10 clean file until being posted by CHS. |
| Actual time to prepare a real-time death file | Time needed to prepare a file of coded death data for sharing with LPH or others. |
| # of records that have fixes to the final file that don't have the record changed | Number or percent of death records that are adjusted/fixed/cleaned up after OVR says an annual file is “final.” OVR staff continue to adjust the file that goes to Center for Health Statistics, but individual records remain unchanged. Gather data on OVR staff made changes and CHS staff made changes and indicate what type of changes are being made (is there anything common?) | Cheri, Carol, Cindy |

**11b. Observe and Document Current Process** (Generate a Process Map)

![Process Map Image]
## 12. Conduct Cause and Effect Analysis

(Priority issues and solutions from Cause and Effect Analysis)

<table>
<thead>
<tr>
<th>Category</th>
<th>Issues/Wastes</th>
<th>Root Causes</th>
<th>Solutions or Additional CI Methods to use</th>
<th>Speed and Cost to Implement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Things Gone Wrong</td>
<td>Wrong Physician/MC</td>
<td>Roles, responsibilities and expectations unclear for process partners particularly funeral homes. Knowledge and guidance for selection incomplete or inconsistently used. Process and system allows wrong information.</td>
<td>Clarify roles, responsibilities and expectations. Provide guidance for selection. Redesign work process to rely on funeral director to provide 1st time correct; enhance system interface.</td>
<td></td>
</tr>
</tbody>
</table>
| Waiting              | Wait for complete record set from NCHS            | - Perceived historical lack of need for real time data  
                        |                                                                  | Reconciliation of statistical data set  
                        |                                                                  | Perception more work required  
                        |                                                                  | Traceability concern  
                        |                                                                  | No requirement to use system exists  
                        |                                                                  | Seen as more work; importance not understood  
                        |                                                                  | Infrequent use makes effective use difficult | Create process to provide real time data on weekly basis using NCHS trp file. Provide location for data and access to local users; communicate availability |                                                   |
| Waiting              | Wait for upload until annual data collected       |                                                                                                                                             | Enhance system access to make easier to use and to provide 1st time correct.                               |                                                   |
| Things Gone Wrong; Waiting | Physician access                        |                                                                                                                                             |                                                                                                             |                                                   |
| Unnecessary Process  | Follow up system                                   | Expectations and accountability for performance unclear in process partners. Process and system do not encourage defect free behavior. | Clarify roles, and expectations; leverage funeral director involvement. Provide system generated email follow up and escalation system; provide performance feedback for improvement. |                                                   |
**Death Data Delivery Process – NEW**

**Step 1: Obtain Cause of Death**

- **Funeral Home**
  - START: Receive body or notification
- **Medical Certifier**
  - Receive MR&C Email
  - Medical record
- **Medical Examiner**
  - Receive record
  - Determine COD
  - If flagged by MR&C: Continue to Step 2 Triggers or Step 3 Cremation
- **Info/ Deliverables/ Job Aids/ Templates**
  - Review COD Email
  - Send notification to Family
  - Send notification to ME
- **Systems**
  - MR&C
  - MR&C
  - MR&C
  - MR&C
  - MR&C
  - Email
  - MR&C

**Work content Time**
- Wait time
- Wait time
- Wait time

**Elapsed Time**
- Total time: 72 hours

---

**Step 2: Triggers**

- **Funeral Home**
  - Receive notification
- **Medical Certifier**
  - Receive notice
- **Medical Examiner**
  - Receive notification
  - Investigate & decide
  - Assume COD & File record
- **Info/ Deliverables/ Job Aids/ Templates**
  - Auto email to ME & FH
  - Auto email to FH
  - Auto email to ME
  - Auto email to FH
  - Auto email to ME
  - Auto email to MC
- **Systems**
  - MR&C
  - MR&C
  - MR&C

**Work content Time**
- Wait time
- Wait time
- Wait time

**Elapsed Time**
- Total time: 72 hours

---

**Step 3: Cremation & Non-Burials**

- **Funeral Home**
  - Receive notification
- **Medical Certifier**
  - Receive COD notice
- **Medical Examiner**
  - Receive notification
  - Investigate & decide
  - Assume COD & File record
  - Identify & update MC, ‘Reassign’ record
- **Info/ Deliverables/ Job Aids/ Templates**
  - Auto email to FH
  - Cremation Authorization Doc.
- **Systems**
  - MR&C
  - MR&C
  - MR&C

**Work content Time**
- Wait time
- Wait time
- Wait time

**Elapsed Time**
- Total time: 72 hours
13. Improvement Hypothesis *(Summary of potential means to achieve goal)*

<table>
<thead>
<tr>
<th>Issue</th>
<th>Improvement</th>
<th>Expected Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inconsistent work processes</td>
<td>IF...we improve the processes of obtaining COD and ICD 10 codes (BY: having MCs start process; COD entered earlier in the process; having the FH more involved in providing accurate &amp; timely data) AND install this process effectively AND communicate to users data is available...</td>
<td>THEN...1st time quality of information will be improved (due to incorrect MC, late or incorrect COD) and wait time will be reduced</td>
</tr>
<tr>
<td>Usable data is not easily available for use</td>
<td>IF... we process the ICD 10 coded data that is auto corrected from NCHS immediately (“80%” TRP file) AND create a process for uploading of data (once/week) AND create a place for users to access the data AND communicate to users data is available...</td>
<td>THEN...wait time for data will be reduced from annual to weekly AND use of data locally will be increased as users understand real time data is available to them</td>
</tr>
<tr>
<td>Expectations &amp; Roles are not clear</td>
<td>IF... we establish clear expectations for roles; tasks and timeframes for completion; clearly communicate expectations AND provide help where appropriate (e.g. how to identify appropriate individual for providing COD)</td>
<td>THEN...the time to provide complete and accurate COD and other death data will decrease</td>
</tr>
<tr>
<td>The system’s usability deters some MCs</td>
<td>IF... we make MR&amp;C system more user friendly (e.g. improved triggers, focused data entry, screen access, work queue improvements)</td>
<td>THEN...users will require less time to complete tasks and more likely to use the system rather than workarounds</td>
</tr>
<tr>
<td>A manual process is used to move along stalled records</td>
<td>If we establish clear instructions and content in emails use plain language and other messages</td>
<td>Then... users will understand what is being asked, required, and why and when they need to act.</td>
</tr>
</tbody>
</table>
14. Test Hypotheses (How will you test the potential solutions?)

<table>
<thead>
<tr>
<th>Tests</th>
<th>How</th>
<th>When</th>
<th>Who</th>
<th>Successful if…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Base: Content usefulness</td>
<td>Survey (“quantitative”; questions judging whether content adequate for hypothetical analysis)</td>
<td>22 May</td>
<td>Metro Analysts (6-7)</td>
<td>100% deem adequate</td>
</tr>
<tr>
<td>Data Base: User Friendliness</td>
<td>Survey (“quantitative”; questions judging whether format adequate for use)</td>
<td>22 May</td>
<td>Metro Analysts (6-7)</td>
<td>100% deem adequate</td>
</tr>
<tr>
<td>Email utility when MC needs to be reassigned</td>
<td>Test email #3</td>
<td>22 May</td>
<td>FH directors</td>
<td>100% will know what to do</td>
</tr>
<tr>
<td>Subject line to MC helps reduce time to obtain COD</td>
<td>Test email 1 - cremation &amp; no cremation</td>
<td>22 May</td>
<td>MC</td>
<td>100% think it will reduce time to obtain complete records to complete COD</td>
</tr>
<tr>
<td>Email when COD completed is helpful</td>
<td>Share email #5</td>
<td>22 May</td>
<td>FH staff</td>
<td>100% feel helpful &amp; necessary</td>
</tr>
<tr>
<td>Email to FH helps them direct help with user issues</td>
<td>Email #1</td>
<td>22 May</td>
<td>FH staff</td>
<td>100% know how to direct email to increase use / compliance</td>
</tr>
</tbody>
</table>

15. Results: paste graph/table of actual trial performance

Data Base:
6 of 14 replies (Including 1 internal department (MCH/FHV) and Metro counties)
3 indicated min. requirements in content & format were met.
0 stated the requirements were NOT met
4 of 6 addressed improvement that could be made to make the file more useful (file or format)
Test performed from 5 PM – 10 AM

Email Testing:
3 Emails tested: Email that says need to reassign the record; Death record referred to ME; COD has been completed.
Reached out to 2 funeral (1 elec, 1 paper)
"As designated staff to a large volume of providers we are thrilled to see this. It reduces the number of times needed to access MR&C by providing us the basic information of the patient as well as the physician requested to be responsible for COD. Please review each of my responses below."

16. Learning (For the trials, what worked and did not, why and what are you doing as a result? Is the result repeatable?)

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Learning: Why?</th>
<th>Direction: Actions to be taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provided feedback over night!</td>
<td>Respondents have feedback and would like to be engaged in the process of determining the most useful content &amp; format of data</td>
<td>Regardless of 1st draft file – continue to elicit user feedback from local (county/city &amp; metro/non-metro) &amp; state users by Rick (local) and Nancy (state)</td>
</tr>
<tr>
<td>Data is useful in its immediate format</td>
<td>The data provided is not perfect but still helpful.</td>
<td>Not prevent sharing; use current content &amp; format</td>
</tr>
</tbody>
</table>
PrISM™

PROJECT TEAM PROBLEM SOLVING

<table>
<thead>
<tr>
<th>Provided feedback over night!</th>
<th>Most improvement suggestions could be easily addressed</th>
<th>Nancy, Otto, &amp; Rick review and revise data based on feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geocoding discussion will require more time. (MDH does not provide geo coding)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Testers liked getting death record referred in the email. not necessary – but helpful.</td>
<td>Using emails will allow users to not have to log into MR&amp;C therefore saving time and moving the process along</td>
<td>Consider adding to the subject line – “Action Needed”</td>
</tr>
<tr>
<td>The MC: need to reassign is their biggest problem</td>
<td>Continue to implement the auto emails as planned</td>
<td>Long term – may be too many emails – direction – consider a system report (table with: decedent, dod, do state filing, date, time filed, status) Recommend to FH – put all emails in the folder.</td>
</tr>
</tbody>
</table>

INSTALL

17. **Installation Plan.** (Steps to operationalize the new process and make it stick. Attach new process map below.)

**PROJECT ROLL OUT**—Staged implementation to continue momentum from Kaizen while allowing time for IT changes and higher-effort deliverables to be accomplished.

**Launch**—NOW through 6/12 (getting the SharePoint site up and first file, communication plan, training plan, stakeholder analysis, measurements, project tracking, Present info about project at NAPHSIS conference innovations session 5/31)

**PHASE 1**—6/15 through 7/3 (communications,)—RWJF project officially ends.

**PHASE 2**—7/6 through 7/31 (new MR&C features and functionality, e-mails, more MR&C features and functionality, e-mails)

**PHASE 3**—8/3 through 9/2 (physician password reset, performance management, stakeholder input, training, outreach, more MR&C features and functionality)

**PHASE 4**—9/6 through 11/1 (performance management, stakeholder input, training, communication, outreach, more features and functionality)

**Continuous Improvement**—ongoing

18. **Measure Success**

- New SharePoint Connect Site to share real-time coded death data (first file posted 6-12-2015)
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**PROJECT TEAM PROBLEM SOLVING**

- Installed performance measures

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**Measures to Success**

- Elapsed time from OVR receiving ICD10 coded records to sharing real-time death data via a routine mechanism or method. **FROM 9-22 months TO 1 week—accomplished June 12, 2015 WEEKLY TRACKING**

- Elapsed time from fact of death registration to issuance of a death certificate including cause of death. **FROM 81% <10 days to 91% <10 days MONTHLY TRACKING**

- Elapsed time from fact of death registration to coded death data being available. **FROM 75% in 1 hour TO 80% in 1 hour. DAILY TRACKING** (*original measure was 80% to be improved by 10%—revised goal based on MN-Specific data from NCHS indicating MN's average was 75%—reset goal to reach national average of 80% within 6 months*)

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Results: What Do We Think Has Been Achieved?

- Elapsed time from fact of death registration to ability to issue death certificate to families
  
  **Improved availability of certifications within 10 days from 81% to >91%**

- Elapsed time from OVR receiving ICD-10 coded records sharing real time death data
  
  **Improved from 18 months down to 1 week**

**Upside:**

- **Quality improvements of in-process data and reductions in labor (e.g., system generated emails)**
- **Incorporated cremation authorization in the new process**
- **Expect to see the MR&C efficiency maximized (decrease in paper processing)**

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**MN Death Data Delivery Project**

Percent of 2015 auto-coded death records

(goal is national average of 80%)

- January: 74%
- February: 72%
- March: 73%
- April: 73%
- May: 77%
- June: 71%
- July: 71%
- August: 71%
- September: 85%