

**Project Team:** Minnesota Death Data Delivery Project

**Timeline:** March 2015 – June 30, 2015

SOLVE			
<b>What is the Gap?</b> <a href="#">1. Starting Point</a> <a href="#">2. Vision</a> <a href="#">3. Current State</a>	<b>What is the Goal for Improvement?</b> <a href="#">4. Goal or Target Condition</a> <a href="#">5. Customers &amp; Beneficiaries</a> <a href="#">6. Benefit</a> <a href="#">7. Measures &amp; Targets</a> <a href="#">8. Conditions</a>	<b>What is the Approach?</b> <a href="#">9. Team Members &amp; Roles</a> <a href="#">10. Project Schedule</a> <a href="#">11a. Data and Information Collection</a>	<b>What are your Conclusions?</b> <a href="#">13. Improvement Hypotheses &amp; Problem Solving Summary</a>
SOLVE		TRY, LEARN, INSTALL	
<b>Understanding the Problems:</b> <a href="#">11b. Current and Future State Process Maps</a> <a href="#">12. Cause and Effect Diagram</a>		<b>Try Solutions; what did you learn?</b> <a href="#">14. Construct &amp; Execute tests</a> <a href="#">15. Document Results</a> <a href="#">16. Analyze Results &amp; Extract Learning</a>	<b>How will you make the new way happen?</b> <a href="#">17. Plan Rollout &amp; Execute</a> <a href="#">18. Measures of Success</a>
SOLVE			

## 1. Starting Point

*(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.

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**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

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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.

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

Stakeholder	Description	How do you know?
Customers	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Epidemiologists within and outside of the agency are increasingly demanding more timely and accurate death data.</li> <li>• 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.</li> <li>• Local public health agencies may not know that they can ask for identifiable real time death data now.</li> <li>• Users of our electronic vital records system (MR&amp;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.</li> <li>• Users of our electronic vital records system (MR&amp;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.</li> <li>• 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.</li> </ul>	<p>Data and reports from the electronic system.</p> <p>Complaints from families and funeral directors.</p> <p>Requests from public health agencies and researchers for real-time data.</p>
Financial	<ul style="list-style-type: none"> <li>• 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 filed via paper.</li> <li>• OVR manually inputs cause of death by physicians who send paper to the state office.</li> <li>• Funeral establishments perpetuate the paper filing by continuing to fax requests to complete cause of death to physicians who are users of MR&amp;C—this causes confusion and sometimes duplicative work to complete paper worksheets and to file within MR&amp;C</li> <li>• 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.</li> <li>• Families may have costs passed on to them when funeral establishments do not pay for corrections or re-issuing and</li> </ul>	<p>Complaints from physicians and Medical Examiners.</p> <p>Complaints from Funeral Directors.</p> <p>Requests to change policy to allow for exchange of certificates without additional fees. Delays in filing cause of death increase costs associated with disposition—</p>

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	<p>when physicians amend cause of death and new certificates are issued.</p> <ul style="list-style-type: none"> <li>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 requestor who may be unhappy and emotionally burdened.</li> <li>Local vital records offices must void certificate paper and re-issue certificates—waste of security paper, resources</li> <li>Certificates exchanges at no cost (2013 law change) no longer allowed which complicates customer service and expectations</li> <li>Physicians/ME's spend valuable time reviewing death records that were unnecessarily referred to them.</li> <li>Physicians/ME's spend valuable time entering cause of death into MR&amp;C and reviewing a paper/faxed requests from funeral establishments to complete the cause of death on paper and return to them.</li> </ul>	complaints and requests to speed process for individual decedents.
Your Team	<ul style="list-style-type: none"> <li>Currently takes MN more than one year after a death is registered to routinely and regularly share the data with local public health</li> <li>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).</li> <li>There is a lack of confidence with some existing data and reports from MR&amp;C.</li> <li>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).</li> <li>OVR staff use e-mail to send files—current demand is low, but resources may be limited if demand rises.</li> <li>MR&amp;C does not currently have a well-developed reporting system</li> <li>OVR does not have an Internet site in place to post files</li> <li>OVR and the Center for Health Statistics are under different bureaus and management within the department.</li> </ul>	<p>Final death data shared only by request and fulfilled by secure e-mail.</p> <p>Division between statistical staff and vital records staff—customer requests handled independently and sometimes duplication of effort or communication.</p>
Society	<ul style="list-style-type: none"> <li>Loss to public health and improved population outcomes because real-time death data is not available regularly, routinely, or systematically.</li> </ul>	Lack of availability for real-time death data compromises surveillance, prevention and intervention activities for public health goals and purposes.

#### 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.

**5. Customers and Beneficiaries** (Who benefits from achieving the goal? What populations are targeted?)

FOR:

- Families of decedents
- Federal, State & Local health departments
- EPIs
- 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?))

Beneficiaries	What Measured	How Measured	Target		
			How Much	By When	Actual
Consumers of Death Data (LPH and others)	# or % of records that require re-work to obtain ICD10 codes	Report from NCHS on death records that failed to be coded on first submission.	Decrease the # or % of records that require re-work for ICD coding on first pass.		
Consumers of Death Data (LPH and others)	Elapsed time from OVR receiving ICD10 coded records to sharing real-time death data via a routine mechanism or method.	Report from MR&C system to pull date/time stamp from coded cause of death records to sharing data (e-mail, posted on server, etc.).	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
Families of decedent	Elapsed time from fact of death registration to issuance of a death certificate including cause of death.	Report from MR&C system that pulls date/time stamp from fact of death registration to cause of death registration to availability of issuance (certificates are printed).	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

			of death issued on a certificate.  Increase by 10 percent the of MN death records filed and available for issuance with COD within 10 days of registering the fact of death.		
Consumers of Death Data (LPH and others)	Elapsed time from fact of death registration to coded death data being available.	Report from MR&C system to pull date/time stamp from fact of death registration to obtaining coded cause of death on record.  END TO END measurement— from the record receiving a state file number at FOD filing to COD filing to ICD10 coding completion to sharing data.	GOAL: Reduce the time it takes from fact of death registration to obtaining ICD-10 coded, death data.  Have XX% of MN death records coded and available with ICD10 codes within XX days of registering the fact of death.	2 mos. From Kaizen event	

#### 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?)

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

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		knowledge and expertise. Business analysis, project mapping, project management	with ability to see and relate details. Good communicator, documenter. Historical knowledge. Subject-matter expertise for laws and MR&C system.
Cindy Coleman	Team Member Field Services/ user support	System enhancements and fixes, error-proofing, user experience, automation, business analysis, process mapping	SME. Good listener, can break down examples, works well with others, patient, handles interruptions and information overload well
Gloria Haluptzok	Team Member/ Data Quality & Records Management	Historical knowledge, experience with COD improvement projects, project management, follow up with physicians	SME. Documentation, can see the big picture, analytical
Nancy Bollman	Team Member/ Data Quality & Records Management	Experience with data sharing, file preparation, handles data requests, subject-matter expertise	SME. Good listener, prepared, asks good questions
Kirsti Taipale	Team Member/ Field Services Rep	Training/outreach, system user support, experience with COD improvement projects, knowledge of MR&C, users	SME. Works well with others, creative, good listener, engaged, good follow through
Usha Valappil	Team Member/ Field Services Rep	Fresh eyes, limited vital records experience	objectivity
Roxanne Somers	Team Member/ Registration & Amendments	Historical knowledge, death registration experience, customer service	SME. Patience, will follow through, easy to work with
Maria Schaff	Team Member/ Registration & Amendments	Death registration, funeral establishment experience; customer service	SME. Great communicator, enthusiastic, gets the big picture/vision, asks clarifying questions
Otto Hiller	Team Member/ MN.IT	Electronic system knowledge & MR&C expertise, subject matter expert, electronic health records/e-filing	SME. Good listener, asks clarifying questions
Larry Winship	Team Member/ MN.IT	Leadership, system knowledge, programming expertise, fresh eyes	SME. Thoughtful and easy to work with, creative, good follow through, can identify issues and solutions
Cheri Denardo	Process Owner/ Team Member, Data Quality & Records Management	ICD10 coding, COD clean up, finalization of records-leading team, nosology, project management	SME. Historical knowledge, IJE/ NCHS files, Experience with improving COD
Matt Rowe	Team Member - National/ NCHS	Contractual info, requirements, coding process	
Carol Hajicek	ON-Call Team Member/ MDHCenter for Health Statistics	Data sharing experience, SME for finalization of data, understanding of LPH needs; mechanism for sharing data on the web, EPI	SME. On-call resource, expertise
Mageen Caines	On-Call Advisor & Resource Team Member Minneapolis Health Dept.	LPH experience and perspective. SME. User of death data	On-call Resource if needed
Lia Katz	Fiscal agent, advisor, project manager, ASTHO representative	Continuity among projects, accountability to project and goals.	

## 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

DATE	ACTIVITY/TASK/APPROACH
Feb-March 2015	Define project, secure commitment for MDH-Office of vital records to participate in the RWJF QI Forum with a demonstration project
Mid-March	MN accept invitation and preliminary work begins on project and organizing Kaizen event
4-7-15 to 4-10-15	Select team members attend QI Team Leader and QI Seeing the Possible training in Washington D.C. with Continual Impact and ASTHO
5-18-15	Focus the team. Understand the current process. Complete the current state map.
5-19-15	Go to the Gemba – observe the process. Prioritize issues by impact and frequency. Complete a root cause analysis.
5-20-15	Continue root cause analysis. Begin brainstorming solutions. Prioritize solutions by impact and speed & cost.
5-21-15	Review and discuss waste analysis on sub process map. Continue to develop solutions. Begin testing.
5-22-15	Create the new process. Develop job aids. Test the new process. Conduct Report Out. Finalize Action Items.
5-31-15	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
May-June 30, 2015	Implement launch and phase one of project process improvement.
June 8, 2015	Create MDH SharePoint Connect site and set up local public health users to access data files that will be posted weekly.
June 12, 2015	Post first real-time death data file on SharePoint Connect Site. Continue to post weekly file.
Mid-June-mid-July	Gather stakeholder feedback on new e-mails and alerts—make adjustments (if necessary) based on test results and suggestions for further improvement/refinement.
June 25, 2015	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 clean-up to front-end. Create and communicate new process so that it is in place in time for IT build.
June-July	<ul style="list-style-type: none"> <li>• Identify IT changes and program system for Phase 1 &amp; 2—includes 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).</li> <li>• Integrate new activities associated with follow up to funeral establishments within OVR office—make assignments, communicate new roles/responsibilities/assign ownership.</li> </ul>



August-September 2015-	Continue action steps for project. Practice continual process/performance/quality improvement. Launch further enhancements to the MR&C system to create new alerts, streamline processes.  Communicate with stakeholders.  Measure results.
October-November, 2015	Clean up physician data/table within MR&C system, provide targeted training, measure results.

### 11a. Data and Information Collection (What will you collect? Who? When?)

WHAT	HOW	WHO	WHEN
	What is the data source? What format is the data? Data separated by categories or groups? How accurate is the data? (seasonality, variation) Who collect data from? How much data needed, by category? How much time is needed to collect? How will data be collected? How can the data be analyzed?		
<b>What data is needed to know the goal was achieved?</b>			
Sharing Real-time death data	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?		
Time for complete death data to be available	Elapsed time between death event and COD. Elapsed time between death event and ICD10 coding.		
<b>What data is needed to get insight into the problem?</b>			
MR&C system-general overview	The MR&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		
MR&C and order that a death record is created	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?		
Most commonly amended or corrected fields for COD and FOD	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?		
# of re-issued death certificates	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&C (this is a measure to indicate how many are initially incorrect)		
# of amend-ments to records after issuance	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)		
# of corrections to records before issuance	Identify the number of records that are corrected before a certificate is issued. (this is a measure to indicate how many are initially incorrect)		

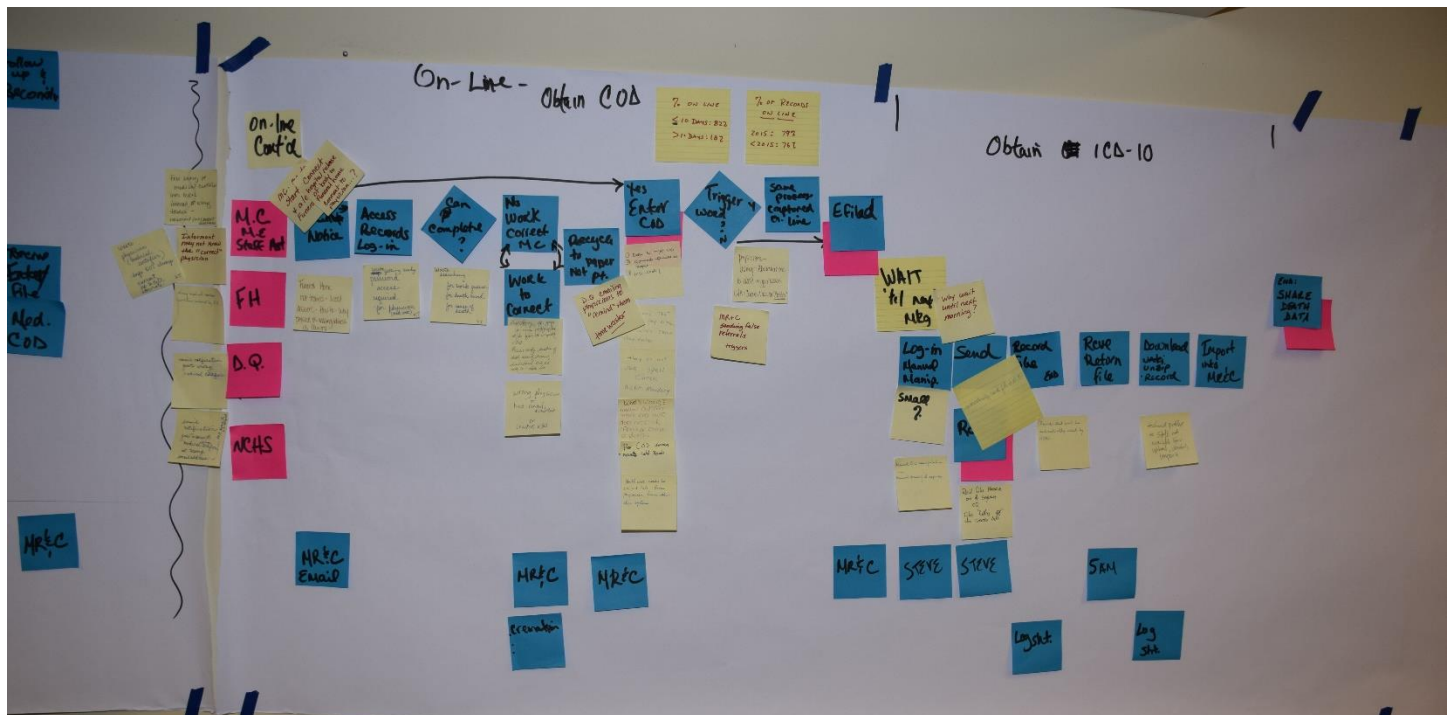
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# of records fully completed	Track number of records that are fully completed after death event—show number of records by each day elapsed		
Data corrected or amended on death certificates	For the records that are corrected before issuance and amended after issuance—what are the data fields where changes are made?? Identify top 5-10 reasons for corrects or data items most frequently changed.		
# of COD referrals to MEs	How many death records get referred to ME, in last 12 mos., since MR&C <ul style="list-style-type: none"> <li>• How many overall</li> <li>• How many triggered</li> <li>• How many checked</li> </ul>		
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 <ul style="list-style-type: none"> <li>• Is there a way to measure time in queue?</li> <li>• Can we measure process time when ME opens record to COD filing?</li> <li>• Can we measure elapsed time on a per record basis?</li> </ul>		
Elapsed time for physician to complete COD	Calculate the elapsed time on records for physician to complete COD after FOD is filed <ul style="list-style-type: none"> <li>• For COD filed on paper</li> <li>• For COD filed by physician in MR&amp;C</li> <li>• Overall</li> <li>• How long record is in queue</li> </ul>		
# or % of physicians who file COD online	Calculate the number/percent of physicians who are filing COD on MR&C <ul style="list-style-type: none"> <li>• How many overall</li> <li>• How many file paper and electronically (maybe because FH sends a fax sometimes?)</li> <li>• How do we get to this data?</li> </ul> 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
# 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 >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, # & %?		
# 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.		

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# of records with COD filed before FOD	Calculate number of records/% of records with COD filed before FOD was filed.		
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)





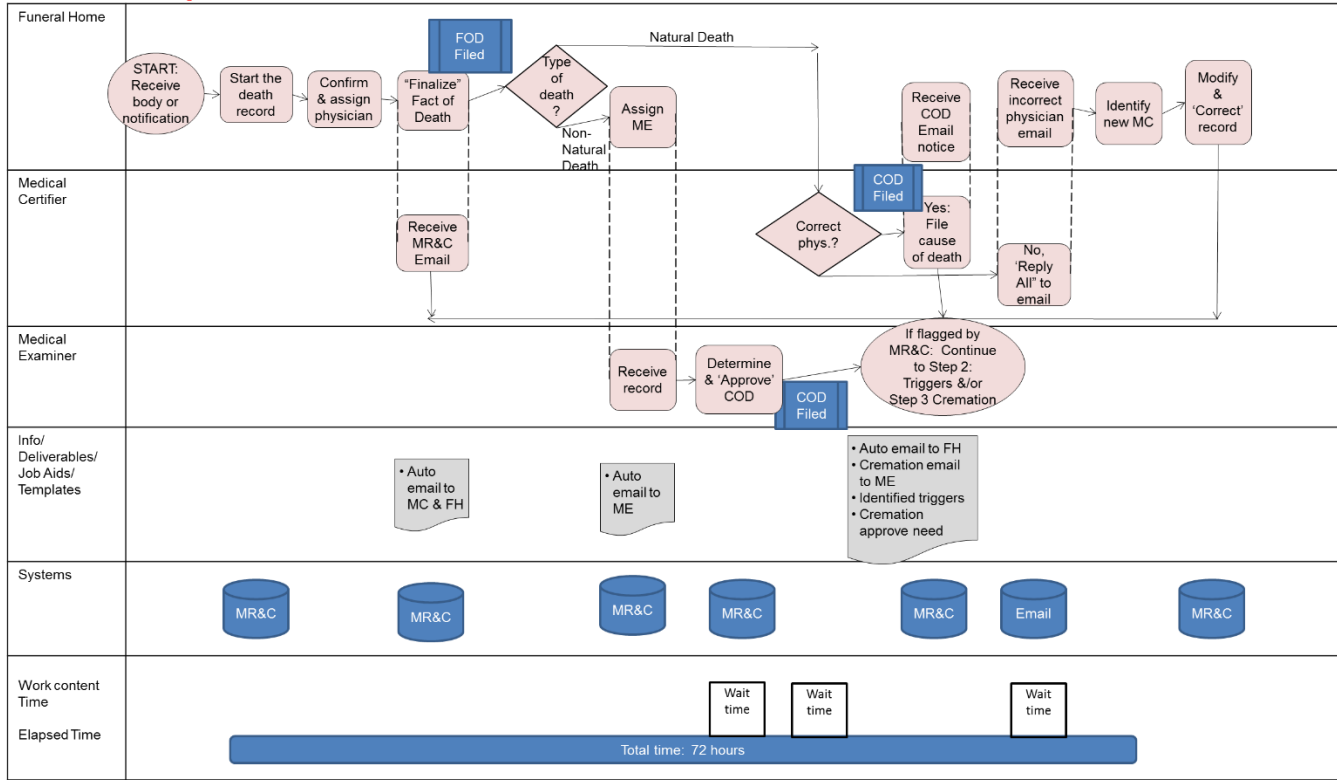
## 12. Conduct Cause and Effect Analysis (Priority issues and solutions from Cause and Effect Analysis)

Category	Issues/Wastes	Root Causes	Solutions or Additional CI Methods to use	Speed and Cost to Implement
Things Gone Wrong	Wrong Physician/ MC	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.	Clarify roles, responsibilities and expectations. Provide guidance for selection. Redesign work process to rely on funeral director to provide 1 <sup>st</sup> time correct; enhance system interface.	
Waiting	Wait for complete record set from NCHS	- Perceived historical lack of need for real time data	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	- Reconciliation of statistical data set - Perception more work required - Traceability concern		
Things Gone Wrong; Waiting	Physician access	- No requirement to use system exists - Seen as more work; importance not understood - Infrequent use makes effective use difficult	Enhance system access to make easier to use and to provide 1st time correct.	
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

Date created: May 21, 2015

Step 1: Obtain Cause of Death

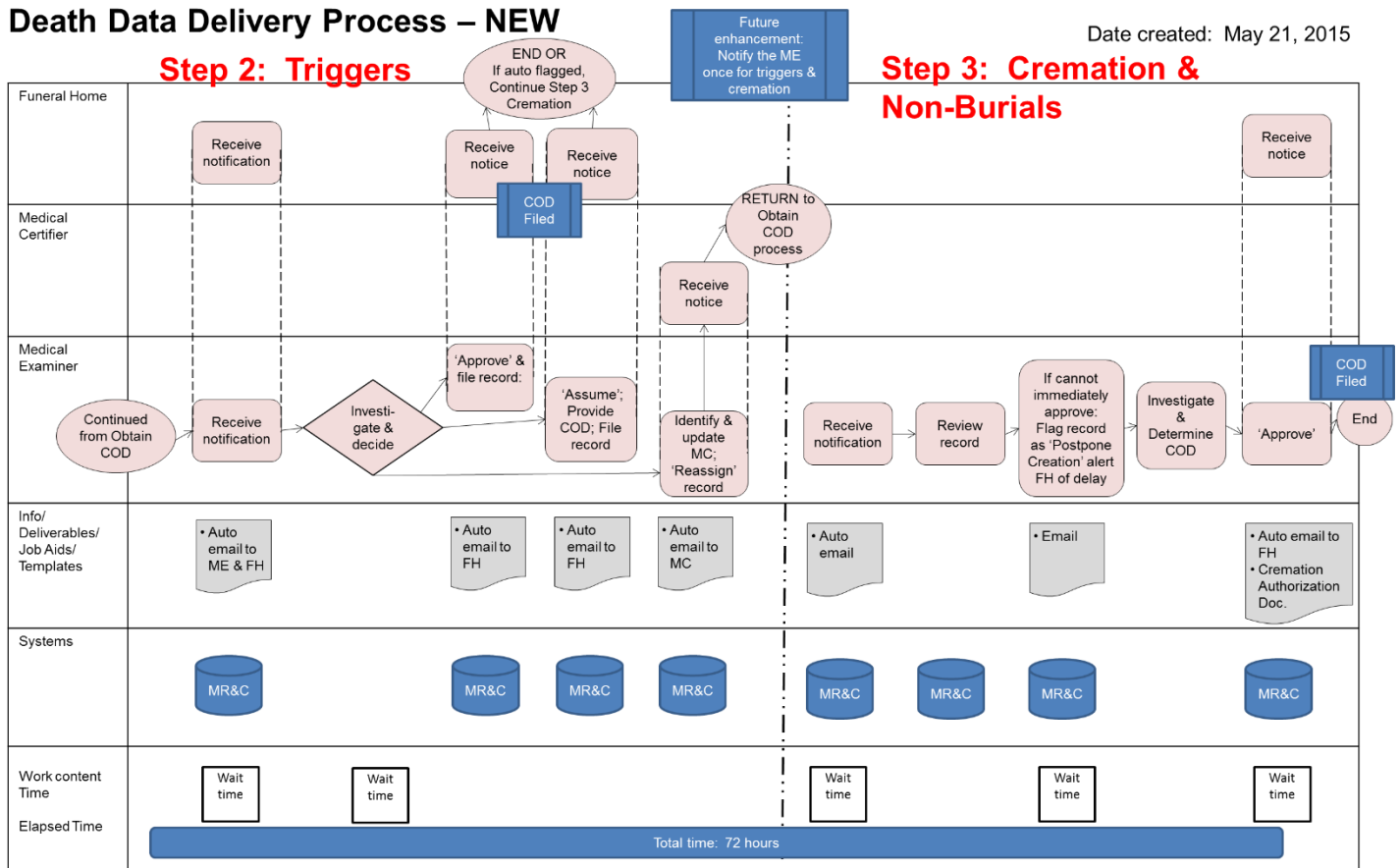


Death Data Delivery Process – NEW

Date created: May 21, 2015

Step 2: Triggers

Step 3: Cremation & Non-Burials

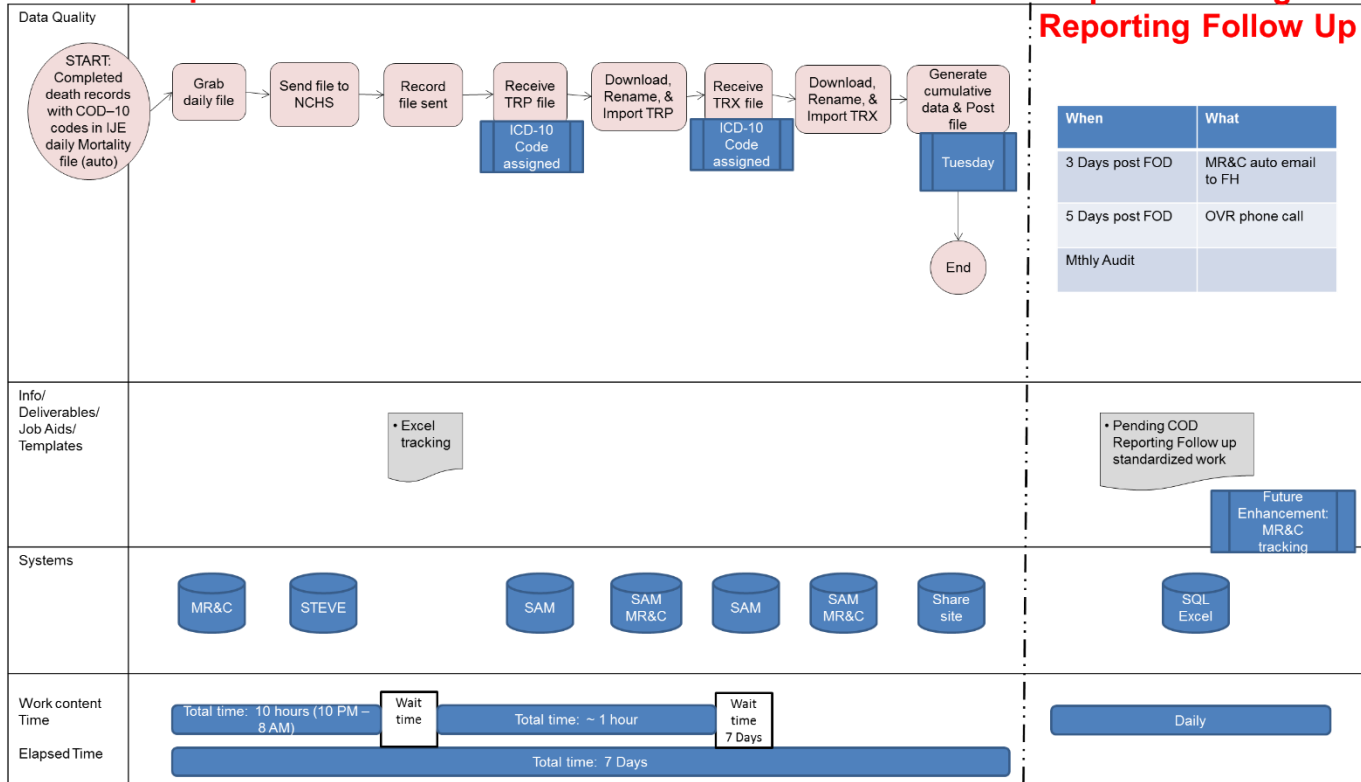


Death Data Delivery Process – NEW

Date created: May 21, 2015

Step 4: Obtain ICD-10 Codes

Step 5: Pending COD Reporting Follow Up



13. Improvement Hypothesis (Summary of potential means to achieve goal)

Issue	Improvement	Expected Results
Inconsistent work processes	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 & timely data) AND install this process effectively AND communicate to users data is available...	THEN...1 <sup>st</sup> time quality of information will be improved (due to incorrect MC, late or incorrect COD) and wait time will be reduced
Usable data is not easily available for use	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...	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
Expectations & Roles are not clear	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)	THEN...the time to provide complete and accurate COD and other death data will decrease
The system's usability deters some MCs	IF... we make MR&C system more user friendly (e.g. improved triggers, focused data entry, screen access, work queue improvements)	THEN...users will require less time to complete tasks and more be likely to use the system rather than workarounds
A manual process is used to move along stalled records	If we establish clear instructions and content in e-mails use plain language and other messages	Then... users will understand what is being asked, required, and why and when they need to act.

**14. Test Hypotheses** (How will you test the potential solutions?)

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

**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.”*

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

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



<p>Provided feedback over night!</p>	<p>Most improvement suggestions could be easily addressed</p> <p>Geocoding discussion will require more time. (MDH does not provide geo coding)</p>	<p>Nancy, Otto, &amp; Rick review and revise data based on feedback</p>
<p>Testers liked getting death record referred in the email. not necessary - but helpful.</p> <p>The MC-need to reassign is their biggest problem</p>	<p>Using emails will allow users to not have to log into MR&amp;C therefore saving time and moving the process along</p> <p>Continue to implement the auto emails as planned</p>	<p>Consider adding to the subject line - "Action Needed"</p> <p>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.</p>

**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 and four phases then continual improvement

**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)

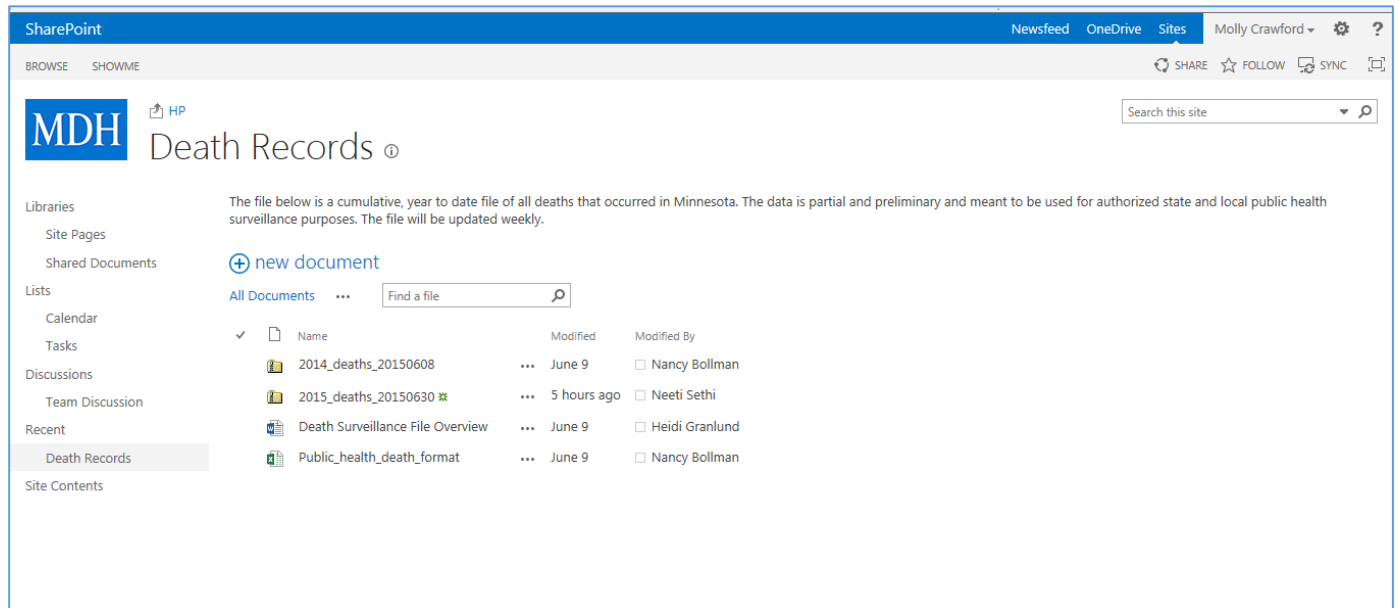
**PHASE 3**—8/3 through 9/2 (physician password reset, performance management, stakeholder input, training, outreach, more MR&C features and functionality)

**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)



- Installed performance measures

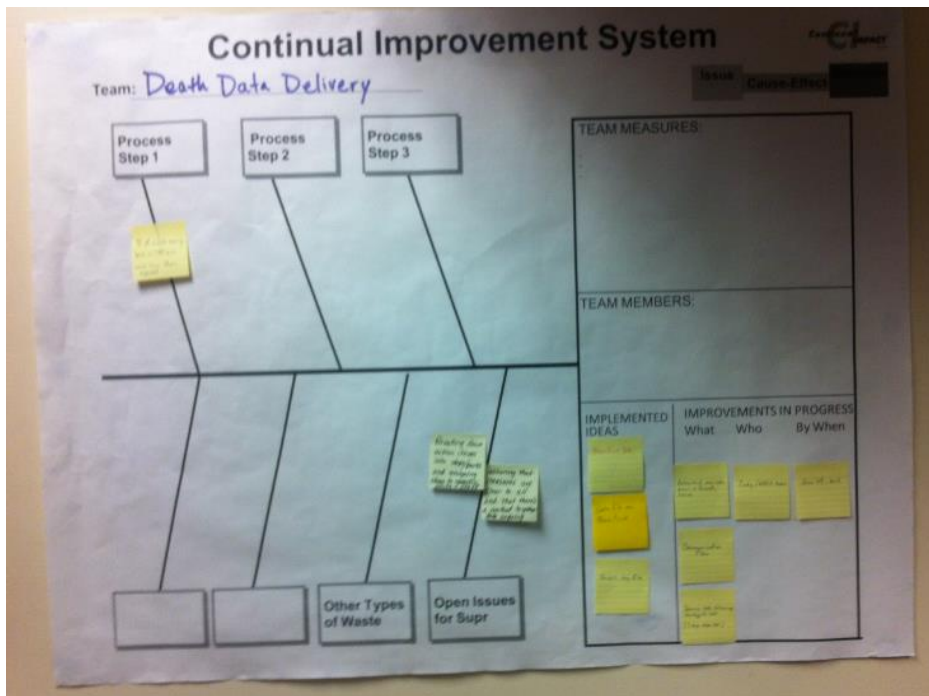


## Measures to Success

- 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)*

10

- Current Continual Improvement System (photo taken 6-30-2015—weekly huddles began on 6-25-2015).



## 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)*

