

# Minnesota Department of Health

## Death Data Delivery

Prioritize Issues: 2x2 Ranking Matrix

Prioritize Solutions: 2x2 Matrix

**Kaizen Event**

**May 18-22, 2015**

## TEAM MEMBERS

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# What Is Our Challenge?

Reduce the elapsed time to provide quality death data...

- for families
- for local health departments and users of death data



# 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)*



Now Some Details...

A Little Background to Start

# Our approach ... Kaizen



A group of methods for making work process improvement. Planned team event conducted in the workplace, systemically uncovering waste in a work process, and eliminating it in rapid fashion...

# The Improvement Cycle & Kaizen

Improvement Cycle: (6-8 months)



Kaizen Event Steps: (6 weeks)

Confirm

Prepare

Perform

Institutionalize

Pre-Event

Work Time:  
30 min  
Elapsed Time:  
1 day

Work Time:  
12 hrs  
Elapsed Time:  
3 wks

Event

Work Time: 40 hours  
Elapsed Time: 5 days

Post-Event

Work Time:  
20 hrs  
Elapsed time:  
2 wks

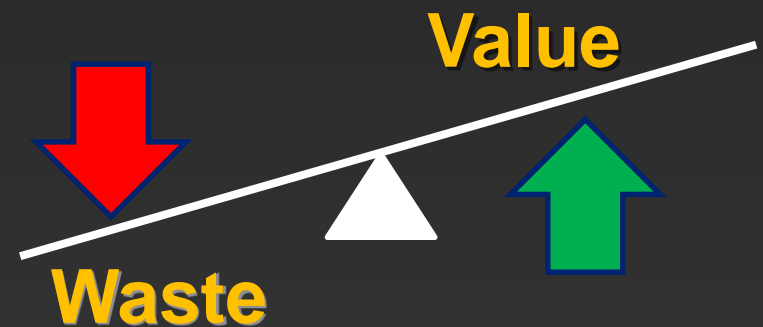
## Value Is

Anything that

- a. the customer recognizes as valuable and is willing to pay for, AND
- b. Changes the product or information, AND
- c. Is done right the first time.

## Waste Is

Anything that consumes resources without adding value





# Waste Presents Itself in Different Forms

1. Moving
2. Stopping
3. Searching
4. Inspecting
5. Getting Ready
6. Things Gone Wrong
7. More Than Needed
8. Not Needed
9. Underutilized Potential

## *Characteristics:*

- *Observable symptoms; categories of issues*
- *Measureable / quantifiable*
- *One waste can cause another waste*

# OUR EVENT

# Our Starting Point

Data is an important part of helping State and Local health departments achieve better health outcomes for their constituencies.

Families are sometimes forced to wait 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.

There appear to be gaps in the timeliness, accuracy, and usability of data provided to local health departments which hampers effectiveness in its use.

State departments also often have to provide significant labor to acquire, collate and screen data for accuracy.

## Vision

Timely and accurate death data to support family needs and to LPH for informed decisions and actions.

# Day 1 Newspaper

## - Focus the team

✓ - Start Up

✓ - ~~our~~ Program & Replication (nc)

✓ - Our gap & goal

## - Understand the current state

✓ - Map the process

✓ - Id. issues

✓ - Walk to process

# Day 1

# Setting Our Goal

10. Reduce time for a certain %  
 3 with complete death data to be available to families  
 Reduce time for real-time data to be available to consumers of data

Create a systematic process  
 2. Results to be shared

FOR: families of decedents, federal, state, LHD, EPIS Programs, NCHS, Vital Records & Vital Stat team, Users of MR & C System

so that: family & data users can complete activities sooner  
 • Fed, state, local surveillance data sooner  
 • VR & VS tasks are more efficient  
 • Improved relationships

Conditions:  
 • Comply w/ Regs & Statutory require.  
 • Synchronicity w/ other activities  
 • Negotiate & approve system change priority among other IT projects  
 • Project aligns w/ MDA & OVR mission vision values

Measures of Success:

WHAT	BASELINE	TARGET
1. # or % of records that require rework to obtain ICD-10 code		
2. Elapsed time from OVR receiving ICD-10 coded records to sharing death data	18 months (9-23 status)	1 wk.
3. Elapsed time from fact of death registration to issuance of death cert. (including cause of death)	81% 74% or ≤ 10 days	> 90% ≤ 10 days
4. End to End - EOE → available data		

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

What Measured	Target How Much
<b>Elapsed time from OVR receiving ICD10 coded records to sharing real-time death data via a routine mechanism or method.</b>	<b>Reduce from 9-22 months to 1 week</b>
<b>Elapsed time from fact of death registration to issuance of a death certificate including cause of death.</b>	<b>Increase the % of records that take less than 10 days from fact of death registration to issuance of death certificate including cause of death from 81% to 91%</b>

# Learning From NC...

## NC State Death Data Registration Process Improvement

### SOLVE

#### What is the Gap?

##### 1. STARTING POINT

Data is an important part of helping State and Local HDs achieve better health outcomes for their constituencies. Currently there appear to be gaps in the timeliness, accuracy, and usability of data provided to local health departments which hampers effectiveness in its use.

**Scope:** Start: Local health department registers the death record  
End: Statewide preliminary data available.

**2. VISION** LPH has timely and accurate death data to make informed decisions and actions.

##### 3. CURRENT STATE

Customers	<ul style="list-style-type: none"> <li>- There is a demand from Epidemiologists for more timely and accurate death data.</li> <li>- There is a lack of trust with existing data.</li> <li>- The data is not fully usable in the current format. It needs to be manipulated.</li> </ul>
Financial & Team	<ul style="list-style-type: none"> <li>- Excessive labor hours to prepare and use the data (both state and LPH).</li> <li>- Currently takes NC &gt; 6 months after a death is registered to share the data with LPH.</li> </ul>

#### What is the Goal for Improvement?

##### 4. GOAL OR TARGET CONDITION

TO: Improve the availability of timely identifiable death data from a state to local HDs

##### 5. CUSTOMERS AND BENEFICIARIES FOR:

State & Local health departments (EP5, Program areas, VR & VI teams), NCHS

##### 6. BENEFIT SO THAT:

- State and local HDs have data for surveillance, program planning and evaluation, making informed decisions, guiding programs, and ultimately improving health outcomes;
- VR & VI tasks are more efficient & require less labor;
- State and local employee relationships are improved;
- HDs benefit in meeting PHSAN standards & accreditation.

##### 7. MEASURES AND TARGETS

Number of days from date of death registration to date it is placed on the SFTP server.	From: 120-150 days To: <40 days
Number of days between date of death registration and the date records are submitted to NCHS.	From: 0% of data <= 25 days To: >= 80% of data <= 25 days
% of death certificates numbered per week.	From: ~1634 per week To: 1750 per week
% of counties receiving correction reports per ranking.	Trend

##### 8. CONDITIONS

- Comply with data collection regulations/statutory
- No new IT systems

#### What is the Approach?

##### 9. TEAM MEMBERS AND ROLES



##### 10. PROJECT SCHEDULE

DATE	KAIZEN
1-5-15	Focus the team. Understand the current process. Complete the current state map.
1-6-15	Go to the Gemba – observe the process. Prioritize issues by impact and frequency. Complete a root cause analysis.
1-7-15	Continue root cause analysis. Begin brainstorming solutions. Prioritize solutions by impact and speed & cost.
1-8-15	Review and discuss waste analysis on sub-process map. Continue to develop solutions. Begin testing.
1-9-15	Test the process. Implement Solutions. Communicate the new process.

##### 11. DATA & INFORMATION

#### What are your Conclusions?

##### 13. IMPROVEMENT HYPOTHESIS

Improvement	Expected Results
If we... <b>reduce the batch sizes</b> going through the process: - increase the <b>frequency of mailings</b> from counties based on anticipated volume - make the movement of the certificate throughout the process more visual - modify the office layout to aid in certificate flow	Then...we will improve the <b>speed of certificate</b> going through the process, reduce the labor time required to process and improve the overall visibility of document location and status.
If we... <b>pull the defective certificates offline</b> and into a correction process, then the flow of the non-defective certificates won't be affected.	Then...we will improve the <b>speed of certificate</b> going through the process, reduce the labor time required to process and improve the overall visibility of documents.
If we... <b>design a more value added process</b> : - <b>Eliminate data entered at step</b> - <b>Only verify fields that are required by NCHS and ISA.</b> - <b>Enter demographic data first - before certificate coding.</b>	Then...we will improve the <b>speed of certificate</b> going through the process and reduce the labor time required to process.
If we... <b>consolidate logs</b>	Then...we have <b>less paper</b> to manage, fewer places to search, a reduction in movement, and fewer opportunities for error.
If we... <b>put the file on the SFTP site</b> when data is sent to NCHS.	Then...data is available for those who want it sooner.



# Capturing our current process





**And starting to  
look for wastes...**









# Getting To The Root Of The Big Issues



Solution

Cause-Effect

Issue

# Why? Why? Why? Why? Why?



# Day 3

## Day 3 - Newspaper

- Solve the Problem
  - Root Cause
  - Prioritize Solutions
  - Validate solutions vs Goal
- Develop solutions
  - Create (begin) - <sup>New Process</sup> Solutions
  - Test (begin)

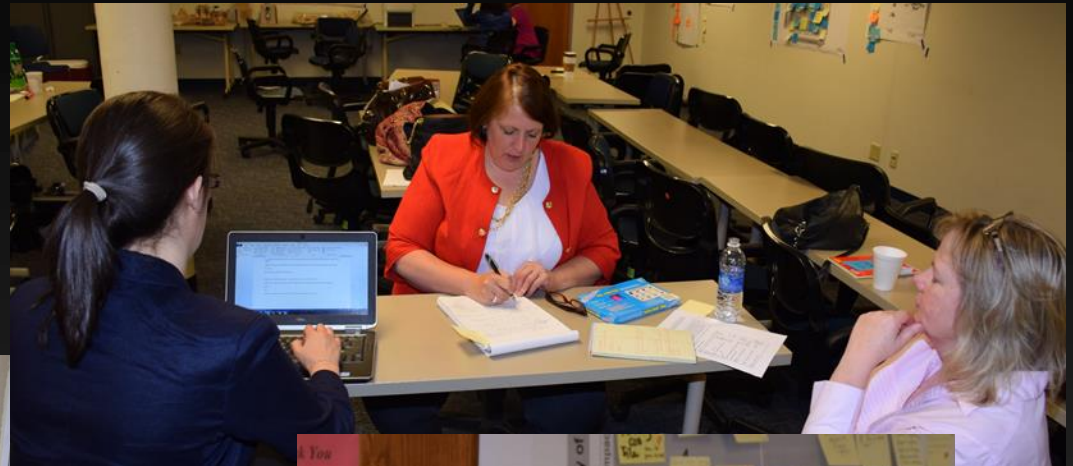




# Improvement Hypothesis

Issue	Improvement	Expected Results
<b>New Process</b>	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
<b>Data Availability</b>	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
<b>Expectations</b>	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
<b>Usability</b>	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
<b>Communications</b>	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.

# Developing Solutions



Statutory require.  
other activities  
system change  
other IT projects  
MDH & OVR mission  
Values  
may not be compromised

3. Elapsed time from fact of death registration to issuance of death cert. (including cause of death)  
4. End to End - Foo -> Bar -> ...

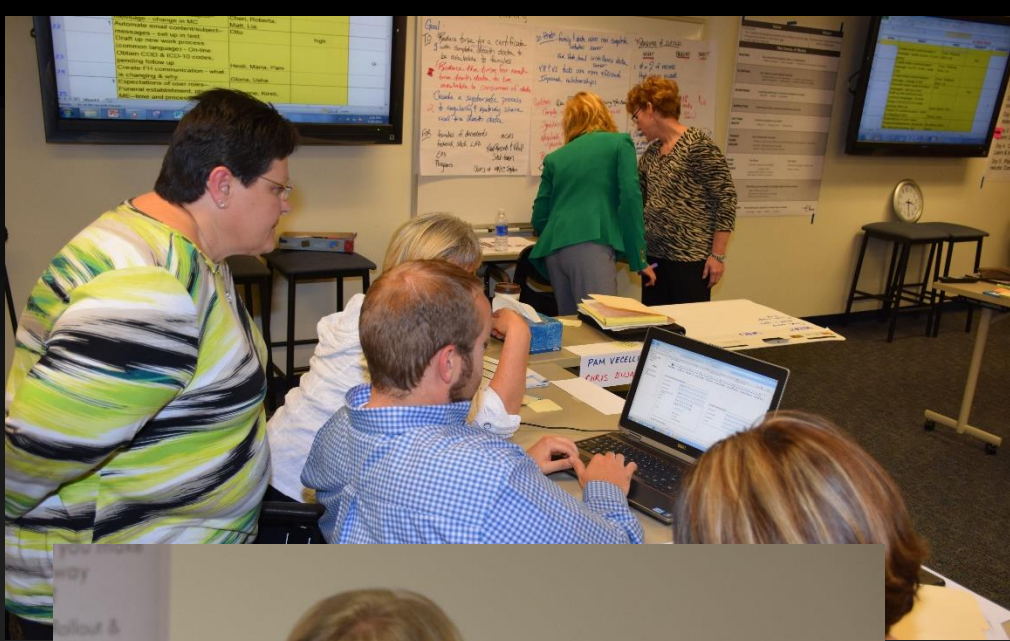
312  
77%  
> 90%  
≤ 10 days

coded records to local time sharing death data (9-22 update)



<b>GONE WRONG</b>	Defects: Output of work that does not meet requirements. Variation: Movement around a target. Rework / Fixing: Effort to correct a defect.
<b>MORE THAN NEEDED</b>	Too Much Inventory - any item not actively involved in work. Overproduction leads to inventory. Extra steps or tasks in a process.
<b>NOT NEEDED</b>	Something not necessary to provide value. Step or Task in a Process (information or information processing). Product or Product Feature.
<b>UNDERUTILIZED</b>	Not utilizing the capability of every team member. Knowledge • Skills • Abilities • Creativity.





# Learning & Sharing between Minnesota, Arkansas and Mississippi





... and having some fun

# Day 4

Lot

#2

WHAT	WHO	STATUS
Create email record in queue	Cheri Roberts Lia	
Create email to FA	Cheri Roberts Lia	
Create email - Δ MC	Cheri Roberts Lia	
Set up auto emails in MR&C	Otto	
Develop new record process w/ solutions	Heidi, Joni	
Communication - what is changing - FH	Heidi, Joni	
Communication - what is changing - MC		
Expectations (to be used in communication)	Bonnie Bisti	
MR&C user friendly enhancements		MR&C Usability

WHAT	WHO	STATUS
NCHS data made (so?) available immediately		
Process to make data available w/ly - who, what, when, where, how	Pamela Lary, Rick, Andrea, Otto	
Business Communication that death data is available	Jessy, Lary, Rick	
Process to <del>cover</del> coverage funeral homes		
Improve triggers		
COB entered 1 <sup>st</sup>	Math, Melinda, Cindy, Lynn Otto, FA	MC Starts Process
Line analysis		
Advertise auto passcard reset (Physicians)		
Post statistics to share site	Cindy Otto	

F03 - Allow FA to change MC. Don't "let down" the system

Why F03 being so-called "let down" by the system

Email contact w/ly

Data Availability

Leverage FH

Triggers

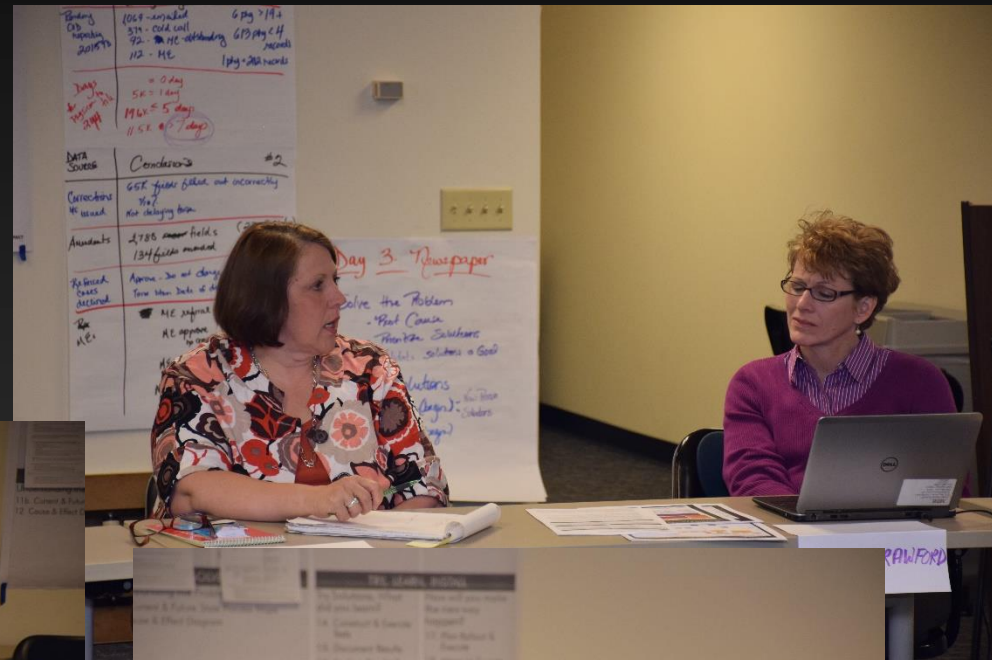
Expectations Emails Commun.

MR&C Usability

MC Starts Process



# Continuing Solution Development





# Starting to Test 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
Emails	Asks Funeral homes	22 May		

# Testing

- **Current**

Cc:  
Subject: Task Added - Cremation Request

- **Proposed**

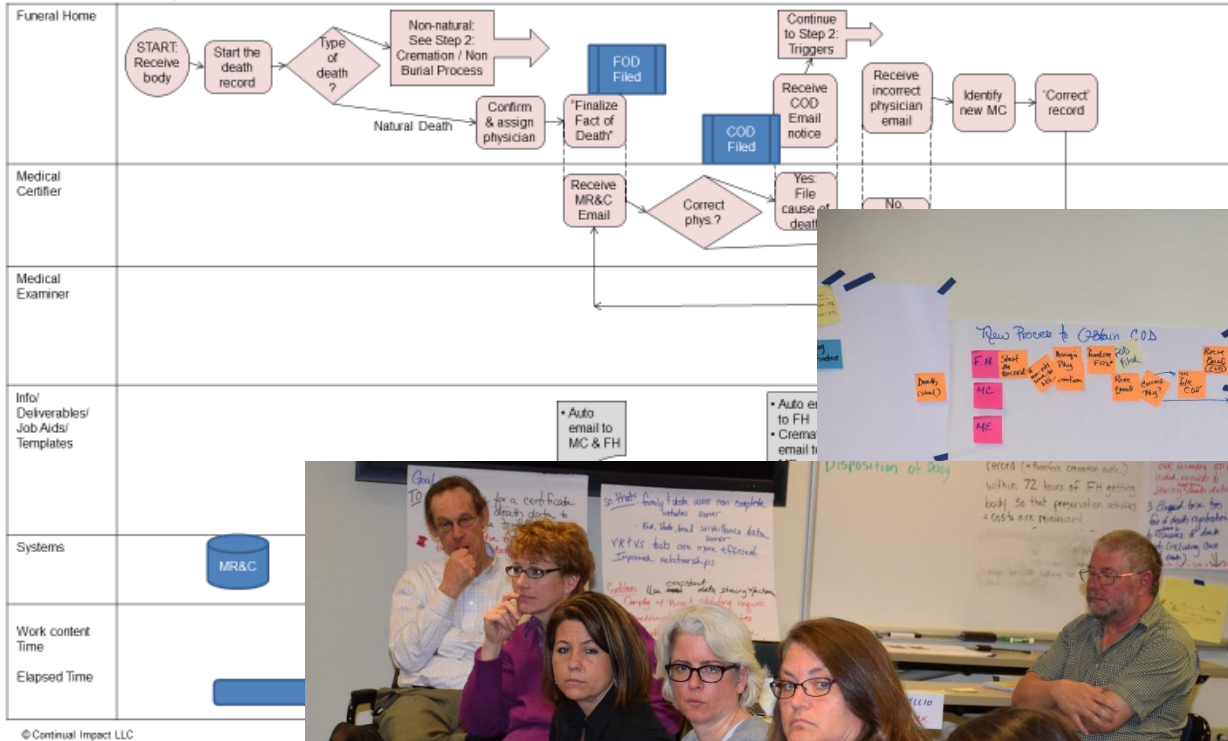
- Subject Line: **Completion of Cause of Death for {Decedent's Name}, DOB {x/x/xxxx}**
- ...as designated staff to a large volume of providers ...we are thrilled to see this. It reduces the number of times needed to access MR&C by providing us the basic information of the patient as well as the physician requested to be responsible for COD. ..

# Developing Our New Process

## Death Data Delivery Process – NEW

Date created: May 21, 2015

### Step 1: Obtain Cause of Death



# Day 5

## Day 5 Newspaper

- Develop the Solutions
  - Continue development
  - Test
  - Learn
- Rollout Plans
- Communicate  
1:30 PM
- Close Out - Next Steps

# Next Steps / What to Expect

**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)

# Next Steps / What to Expect

**PHASE 1**—6/15 through 7/3 (communications, new MR&C features and functionality, e-mails)—RWJF project officially ends.

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

**PHASE 3**—8/3 through 9/2 (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

# Putting Our Continual Improvement System Into Action

