What is the Gap?
1. STARTING POINT
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.

2. VISION
Customers have complete and accurate death data to make informed decisions and take actions & real-time death data is regularly available.

3. CURRENT STATE

<table>
<thead>
<tr>
<th>Customers &amp; Financial</th>
<th>Society &amp; Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 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.</td>
<td>• MN takes 9-22 months after a death is registered to share the data</td>
</tr>
</tbody>
</table>

What is the Goal for Improvement?
4. GOAL OR TARGET CONDITION
TO: Reduce the time for
• A death record to have complete death data to be available to families for issuance of a certificate.
• Real-time cause of death data to be available to consumers of data.

5. CUSTOMERS AND BENEFICIARIES
FOR: Families of decedents, Data Users, VR and VS teams, NCHS

6. BENEFIT
SO THAT:
• Families of decedents can conduct estate activities and have closure sooner
• VR/VS staff & users of the MR&C system can complete their activities related to filing accurate and complete death records sooner
• Data users have data for surveillance, program planning and evaluation, making informed decisions, guiding programs, and ultimately improving health outcomes

7. MEASURES AND TARGETS
% of records that require re-work to obtain ICD10 codes

8. CONDITIONS
• 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.

What is the Approach?
9. TEAM MEMBERS AND ROLES

10. PROJECT SCHEDULE

<table>
<thead>
<tr>
<th>DATE</th>
<th>ACTIVITY</th>
</tr>
</thead>
<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>
</tr>
<tr>
<td>April 2015</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>May 18-22, 15</td>
<td>Kaizen Event</td>
</tr>
<tr>
<td>May-July 2015</td>
<td>Implement new process. Measure success. Practice continual process improvement</td>
</tr>
</tbody>
</table>

11. DATA & INFORMATION

| Elapsed time per each process step |

What are your Conclusions?
13. IMPROVEMENT HYPOTHESIS

<table>
<thead>
<tr>
<th>Issue</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inconsistent work processes</td>
<td>COD entered earlier in the process; Involve the FH more in providing accurate &amp; timely data AND install this process effectively AND communicate to users data is available</td>
</tr>
<tr>
<td>Usable data is not easily available for use</td>
<td>Process the ICD 10 coded data that is auto corrected from NCHS immediately (~80%&quot; 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>
</tr>
<tr>
<td>Expectations &amp; Roles are not clear</td>
<td>Establish clear expectations for roles; tasks and timeframes for completion; clearly communicate expectations AND provide help where appropriate</td>
</tr>
<tr>
<td>The system’s usability deters some MCs</td>
<td>Make MR&amp;C system more user friendly (e.g. improved triggers, focused data entry, screen access, work queue improvements)</td>
</tr>
<tr>
<td>A manual process is used to move along stalled records</td>
<td>Establish clear instructions and content in e-mails use plain language and other messages</td>
</tr>
</tbody>
</table>
NC State Death Data Registration Process Improvement

SOLVE

Understanding the Problems:

Death Data Delivery Process – NEW

Step 1: Obtain Cause of Death

Step 2: Triggers

Step 3: Cremation & Non-Burials

Step 4: Obtain ICD-10 Codes

Step 5: Pending COD Reporting Follow Up

TRY, LEARN, INSTALL

Try Solutions; What did you learn?

14. TEST PLANS

15. TEST RESULTS

Tests | How | Who | Successful if...

Database: Content usefulness & friendliness

Survey ("quantitative "; questions judging whether content adequate for hypothetical analysis)

Metro Analysts (6-7) 100% deem adequate

Auto emails

Send to FHs & MCs Roberta 100% know what to do & think it will reduce time to obtain COD

16. LEARNING

Reasons | Learning: Why? | Direction: Actions to be taken

Data is useful in its immediate format

The data provided is not perfect but still helpful.

Not prevent sharing; use current content & format

Testers liked getting death record referred in the email. not necessary – but helpful.

Using emails will allow users to not have to log into MR&C therefore saving time and moving the process along

Consider adding to the subject line – "Action Needed"

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.

12. ROOT CAUSE ANALYSIS

Category | Issues/Wastes | Root Causes

Things Gone Wrong (TGW) | 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.

Wrong Physician/MC | 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.

Waiting | Complete record set from NCHS & upload of data | Perceived historical lack of need for real time data; Reconciliation of statistical data set; Perception more work required; Traceability concern

TGW: Waiting | Physician access | No requirement to use system exists; Seen as more work; importance not understood; Infrequent use makes effective use difficult

17. INSTALLATION PLAN

PROJECT ROLL OUT

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, new MR&C features and functionality, e-mails)

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

18. MEASURE RESULTS