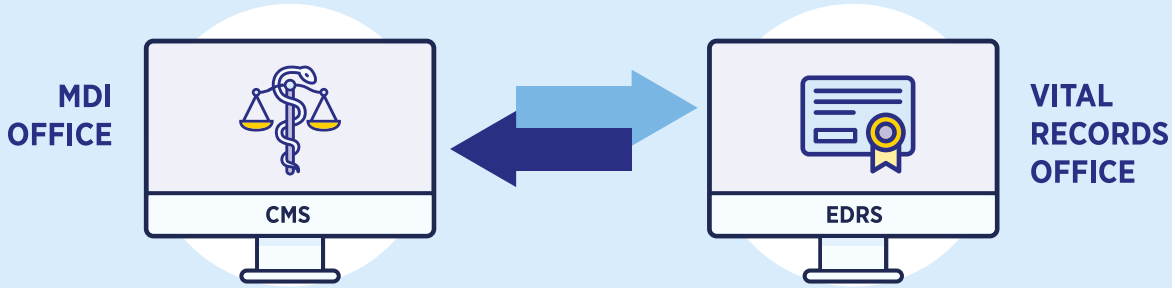
WORKFLOW IMPLEMENTATION TOOL:

SEARCH AND UPDATE ELECTRONIC DEATH REPORTING SYSTEM (EDRS)

Guidance: The purpose of this tool is to assist Medical Examiners and Coroners (MECs) working in Medicolegal Death Investigation (MDI) offices, data sharing partners, case management system (CMS) and IT vendors in mapping a workplan and timeline for workflow implementation. This template aligns with HL7® MDI FHIR® IG (Health Level Seven Medicolegal Death Investigation Fast Healthcare Interoperability Resources Implementation Guide) and contains embedded links to content referenced in the IG for developer use. Use this template to build an action plan with your project team. Plans may evolve over the course of the project, so feel free to revisit this document and update as needed.

WORKFLOW:
DEATH CASE RECORD CREATION AND UPDATE FOR DEATH CERTIFICATE

The MDI office, using their CMS, is working to query and update the Vital Records Office (VRO) EDRS.



Death data for a case record can be exchanged bidirectionally between an MDI case management system (MDI CMS) and an EDRS via a document bundle. This is the base use case for gathering information needed to develop a death certificate.

SCENARIO 1

1. Case record originates in the MDI CMS
2. MDI CMS sends data to EDRS in document bundle
3. EDRS completes death certificate with information from other sources (funeral home, etc.)

SCENARIO 2

1. Case record originates in EDRS
2. EDRS sends data to MDI CMS in document bundle
3. MDI CMS updates case record with MDI information
4. MDI CMS sends updated case record in new document bundle to EDRS
5. EDRS completes death certificate

Objective 1: Data Domain Identification: Death certificate data elements to be exchanged are identified.

TASKS

TASK	RESOURCES NEEDED	TIMELINE	PERSON(S) RESPONSIBLE	NOTE
1.1 Define use case data Create synthetic data or use existing synthetic data available in Raven that includes decendent, death information, death certification review, etc.	Data elements for death certificate MDI profiles for Death Certificate	2 weeks		*MEC/Partners can use this column for their internal tasks (if needed)*
1.2 *Add your own site-specific tasks to get to completion*				

Progress Measure/Evaluation:

- VRO vendor data element document (in Excel) for the use case that includes
  - A set of named fields
  - Category/Subdomain
  - Description of the field
  - Data type/format
- Submit Excel file that includes the data elements to Raven

Objective 2: FHIR mapping of data fields from VRO, including identification of site/jurisdiction specific custom profiles. This is an enhancement of the Excel file created in Objective 1 using the data domain but describing the data elements as FHIR resource and terminology.

- Create FHIR data from vendor's system data (from task 1.1). FHIR data must conform to existing MDI FHIR IG)/ US-Core Profiles
- Create custom profiles or terminologies for data elements when the data elements are not captured in existing profiles.

TASKS

TASK	RESOURCES NEEDED	TIMELINE	PERSON(S) RESPONSIBLE	NOTE
2.1 FHIR profile review Review the MDI FHIR profile and do the data analysis with the data elements obtained from 1.1	MDI FHIR IG Profiles for Death Certificate	1 week	VRO vendor with technical assistance (TA) provider or subject matter expert (SME) assistance	MDI-defined Resource Examples for Death Certificate
2.2 Raw vendor system data mapping to MDI FHIR IG profiles	MDI FHIR IG	2 weeks	VRO vendor	Refer to directory of published versions and use (current) version due to ballot cycle updates
2.3 *Add your own site-specific tasks to get to completion*				

Progress Measure/Evaluation:

- Data Domain Excel sheet with the following additions:
  - FHIR Resource fields
  - FHIR Path
  - Terminology
  - Open discussion points- for further technical assistance
  - Review by TA provider

Objective 3: (OPTIONAL) Implementation Guide (IG) Authorship- The majority of these data elements are fully defined in the existing MDI FHIR IG. This objective is only for data elements that have not been previously identified.

- Develop a local implementation guide using tooling, such as FSH (FHIR Shorthand).
- Write FSH files for each profile.
- Generate a local FHIR IG using bash script from project.

TASKS

TASK	RESOURCES NEEDED	TIMELINE	PERSON(S) RESPONSIBLE	NOTE
3.1 Local IG Authorship Custom FHIR profile development for the data that are not captured in existing profiles	• Data Mapping Template • FSH for IG development	2-3 weeks	• TA provider for the authorship • MDI office and VRO vendor for the data descriptions	GTRI, MITRE, Lantana are suggested providers of technical assistance for MDI FHIR IG authorship questions
3.2 FHIR Data Development Produce the death certificate data that conforms to the death certificate profiles	MDI FHIR IG Local IG for new data (if needed)	2 weeks	VRO vendor	Refer to directory of published versions and use (current) version due to ballot cycle updates
3.3 *Add your own site-specific tasks to get to completion*				

Progress Measure/Evaluation:

- FSH and IG hosted on Github for review

Objective 4: Interoperability Testing- *(Refer to a Test Plan document, if available)* Validation ensures that FHIR resources can be reliably exchanged between FHIR enabled systems, conforming to the MDI FHIR IG standard.

- Create sample test case(s) or use synthetic data provided in Raven
- Load sample data into local system
- Export as FHIR from local system
- Validate using Raven Validator and complete Validation Report

TASKS

TASK	RESOURCES NEEDED	TIMELINE	PERSON(S) RESPONSIBLE	NOTE
4.1 Validation of the produced FHIR data	• MDI FHIR IG • Local IG for data mapping	2-3 weeks	GTRI, CMS Vendor and/or System Implementor	• Collaborative process where GTRI can provide assistance on common errors and resolutions • Correction(s) and re-test of Step 4, as needed • Documentation of errors that are non-resolvable for future iteration; issues that are out-of-scope
4.2 *Add your own site-specific tasks to get to completion*				

Progress Measure/Evaluation:

- Completed Validation Report from Raven
- Review of results and feedback from Technical Assistance provider

The Association of State and Territorial Health Officials support for MDI Connect is funded by the Centers for Disease Control and Prevention of the U.S. Department of Health and Human Services (CDC/HHS), under Cooperative Agreement OT18-1802 Strengthening Public Health Systems and Services through National Partnerships to Improve and Protect the Nation's Health. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by CDC/HHS, or the U.S. Government. (HL7®, and FHIR® are the registered trademarks of Health Level Seven International and their use of these trademarks does not constitute an endorsement by HL7®.)