Appendix E: Ideal State Required for Successful Medicolegal Death Investigation Data Exchange Across Data Exchange Entities

This graphic shows the ideal state of medicolegal death investigation data exchange among data entities (i.e., data users and data producers). Data users and data producers are all data entities located in the outermost ring. Each data entity segment indicates specifically named data types or data exchanged systems within it. Arrows in the background indicate the primary (larger arrow), secondary (smaller arrow) or equivalent (equal arrow size) direction of data workflow either coming from the medicolegal death investigation system (i.e., medical examiner and coroner offices within the United States) or being provided to the medicolegal death investigation system indicated by the innermost ring. A middle ring indicates the "System of data programmers and technology developers" that play a professional role by assisting with modernization and digitization of data for the medicolegal death investigation system.

This graphic provides explanations, definitions, and acronyms in a footnote to assist readers' understanding. For example, MDI data exchange may not occur for all agencies or in some locations, or it may be incomplete. Thus, this graphic portrays an ideal state to document all potential data exchange pathways that can occur during and after an MDI to further educate MDI collaborators for public health and safety. This graphic does not provide the current state of data exchange for the medicolegal death investigation system within the United States.

IDEAL STATE REQUIRED FOR SUCCESSFUL MEDICOLEGAL DEATH INVESTIGATION DATA EXCHANGE ACROSS DATA EXCHANGE ENTITIES

MEDICOLEGAL DEATH INVESTIGATION SYSTEM

System of Data Programmers and Technology Developers

PUBLIC HEALTH

CDC* (EDRS*, ESOOS*, NDI*, NVDRS*, NVSS*, SUDORS*), User Protection, Death Review Panels (Child, Fetal/Infant, SUID*/SDY*, Maternal, Homeless, Overdose), Epidemiology, HHS* (PDMP, SPF RX*, DOL* OSHA*), VAERS*

MEDICAL EXAMINER/CORONER (MEC)

Autopsy Reports, Bio Specimens (Molecular Diagnostics), Death Certificates, Death Scene Investigations, Interagency MDI Information Exchange, In-House Laboratory Reports (Forensic, Clinical)

FORENSIC SCIENCE SERVICE PROVIDERS

Anthropology, Digital Evidence, DNA, DUID*, Fingerprints, Firearms, Fire Debris, Odontology, Scene Response & Investigations, Seized Drugs, Toxicology

OTHER HEALTH CARE

Inpatient/Outpatient (Dialysis, Drug Treatment, Mental Health, Physical Rehabilitation), Nursing Homes, Hospice, Organ and Tissue Procurement Organizations, Subacute and Long-Term Care

HOSPITALS/CLINICAL SERVICES

SBOP*, Commercial Pharmacies, EHR*, ED*, Laboratory Services (Electrolytes, Histology, Metabolic Screening, Molecular Diagnostics), Medical Devices; Medical Imaging

LEGAL SYSTEMS

Court Records, Defense, District Attorney/County Prosecutor, Inquiry Panels, State Courts, US Attorney, Civil Attorneys

FAMILY/SOCIAL/PUBLIC

User Information Provider, Genealogy, Media, Next of Kin, Reference Samples, Witness Statements

FIRST RESPONDERS

Ambulance, CBP*, Criminal Intelligence Centers, DEA* (NFLIS*), DHS*, Digital Evidence (Phones, Social Media), EMS*, FBI*, FEMA/DMORT* (Mass Disaster), Fire, HIDTA* (ODMAP*), Law Enforcement, NHTSA*, Scene Investigations, Search and Rescue, USPS*

OTHER CONTRIBUTORS

CPSC*, Funeral Homes, Medical Professional Boards, Military, Private Entities, Insurance Organizations, Databases (ABIS*, CODIS*, IAFIS/NGI*, NamUs*)

RESEARCH

Private, Non-profit, Public, Foundation, Academic

POLICY MAKERS

BOP*, DOD*, DOT*, DPC*, FDA*, Governors, HHS*, Legislatures, NASADAD*, NIST, NTSB*, ODP*, OJP* (BJA*, BJS*, NIJ*), OMB*, ONDCP*, OSTP*, SSA*

A "data producer" is an interface, system, or device that provides data that are relevant to an organization (i.e., Medical Examiner and Coroner Systems are "data producers" for information surrounding a death investigation). A "data user" is a interface, system, or tool within an organization that consumes data (i.e., The National Vital Statistics System is a "data user" within the Centers for Disease Control and Prevention that collect data surrounding U.S. deaths as reported through death certificates). While all MDI data exchange relationships are represented, data exchange may not occur for all agencies, or in some locations, or may be incomplete in others. Arrowhead sizes indicate the amount of data being received by each data entity. Larger arrowhead sizes indicate a larger amount of data flow, while smaller arrowhead sizes indicate a smaller amount of data flow.

Note: This graphic portrays an ideal state required to document all potential data exchange pathways that can occur during and after a medicolegal death investigation (MDI) to further educate MDI collaborators for public health and public safety, policymakers, and legal proceedings. From Ropero-Miller, Jeri, Nichole Bynum, Kelly Keyes, Erica Fornaro, and Micaela Ascolese. *Data Exchange Practices of Medicolegal Death Investigation*. Research Triangle Park, NC: RTI International, December 2022.