



5 **IHE Quality, Research and Public Health
Technical Framework Supplement**

10 **Vital Records Death Reporting
(VRDR)**

15 **Rev. 5.1 – Trial Implementation**

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Implementation and Final Text versions and [here](#) for Public Comment versions.**

Foreword

30 This is a supplement to the IHE Quality, Research and Public Health (QRPH) Technical Framework. Each supplement undergoes a process of public comment and trial implementation before being incorporated into the volumes of the Technical Frameworks.

This supplement is published on February 24, 2021 for trial implementation and may be available for testing at subsequent IHE Connectathons. The supplement may be amended based on the results of testing. Following successful testing it will be incorporated into the Quality,
35 Research and Public Health Technical Framework. Comments are invited and can be submitted at http://www.ihe.net/QRPH_Public_Comments.

“Boxed” instructions like the sample below indicate to the Volume Editor how to integrate the relevant section(s) into the relevant Technical Framework volume.

<i>Amend Section X.X by the following:</i>
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40 Where the amendment adds text, make the added text **bold underline**. Where the amendment removes text, make the removed text **~~bold strikethrough~~**. When entire new sections are added, introduce with editor’s instructions to “add new text” or similar, which for readability are not bolded or underlined.

45 General information about IHE can be found at www.ihe.net.

Information about the IHE QRPH domain can be found at http://www.ihe.net/IHE_Domains.

Information about the organization of IHE Technical Frameworks and Supplements and the process used to create them can be found at http://www.ihe.net/IHE_Process and <http://www.ihe.net/Profiles>.

50 The current version of the IHE QRPH Technical Framework can be found at http://www.ihe.net/Technical_Frameworks.

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300 Introduction to this Supplement

Vital statistics data are the basis for national and state information relevant for promoting public health and for aiding decision makers in setting policies, directing resources, managing problems, and identifying emerging health trends. Vital Records Death Reporting is part of the process of creating the legal record of a person's death. The provider caring for the patient at the time of death is responsible for reporting medical details on death. Some of the information that is to be reported in the death record exists within the EHR. This profile defines multiple approaches to capturing death reporting information from provider systems, including messaging, document exchange, and an RFD-based approach that specifies derivation of source content from a medical summary document along with requirements for form filler content and form manager handling of content. The profile additionally defines the transactions and documents that may be exchanged between jurisdictions and national statistics agencies.

This supplement references the following documents¹. The reader should review these documents as needed:

1. PCC Technical Framework, Volume 1
- 315 2. PCC Technical Framework, Volume 2
3. PCC Technical Framework Supplement: CDA Content Modules
4. IT Infrastructure Technical Framework Volume 1
5. IT Infrastructure Technical Framework Volume 2
6. IT Infrastructure Technical Framework Volume 3
- 320 7. Health Level Seven International (HL7) Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2 which on the following HL7 work:
8. [HL7 IG for Clinical Document Architecture \(CDA\) Release 2: Reporting Death Info from the EHR to Vital Records, Release 1 \(STU\) US Realm](#)
- 325 9. [Edit Specifications for the 2003 Revision of the U.S. Standard Certificate of Death](#)
10. [U.S. Standard Certificate of Death](#)
11. [International Classification of Diseases, Tenth Revision \(ICD-10\)](#)
12. [History of the Statistical Classification of Diseases and Causes of Death](#)
13. [The 2014 WHO verbal autopsy instrument](#)
- 330 14. [WHO Nomenclature Regulations](#)

¹ The first seven documents can be located on the IHE Website at http://ihe.net/Technical_Frameworks. The remaining documents can be obtained from their respective publishers.

15. [International statistical classification of diseases and related health problems 10th Revision, Volume 2 Instruction Manual](#)

a. Section 4.1.2 The international death certificate

b. Section 7.1 form 7.1.1 International form of medical certificate of cause of death

335 16. HL7 Informative documents not directly referenced in this supplement are also available as additional reference material for implementers: [HL7 EHR-System Public Health Functional Profile \(PHFP\) Release 2](#)

17. [HL7 Version 3 Domain Analysis Model: Vital Records \(VR DAM\)](#)

340 **Open Issues and Questions**

1. Is the attribute for NAMECOD (Name of person completing cause of death) the same as CERTIFBY (name of person certifying death)? The HL7 (V2.6) has only one of these concepts, but the CDA document has these as separate concepts with distinct mapping.
- 345 2. Given that this specification is using a different version of HL7 (V2.6) than PIX/PDQ, does it still make sense to align in the PID segment with PIX/PDQ demographic attributes or other IHE HL7 Messaging Guidance?
3. MS-VRDR includes coded results. Further review of associated XPATH statements needed.
4. FORMSRC (Form Source Flag) – this is in the message but not the document – need a comment on HL7STU to further assess whether this attribute has value in this specification.
- 350 5. The sequence of the cause of death is no longer supported in the HL7 CDA.
6. Cause of Death Document, Void Certificate document, and Coded Race and Ethnicity document have not been included in this profile. There are no constraints anticipated to these documents.
- 355 7. There may be future consideration for an additional push transaction (HTTPS Post) of a FHIR resource bundle from provider to jurisdiction, but this specification currently includes only HL7 message and HL7 CDA document approaches.
8. Edit flags for jurisdiction, pregnancy, and coded cause of death may need to be added to all aspects of the profile.
- 360 9. Title of certifier is now in Suffix. A comment to the v2.6 should be made against the STU as it indicates ‘prefix’.
10. Gaps in FHIR mapping exist:
 - a. Birth certificate {birth} year
 - b. Source flag (FORMSRC)

- 365 11. The WHO ICD-10 Volume 2 Instruction Manual (Section 7.1) includes a form that contains
a subset of the WHO Verbal Autopsy Instrument. This profile includes considerations for the
more extensive content of the WHO Verbal Autopsy Instrument.
12. Value sets for WHO vs IG required value sets is not specified.
- 370 a. Not supported concept code for race and ethnicity need to be added to the HL7
VRDR defined value set for those jurisdictions that do not support collection of
the(se) attribute(s).
- b. Where did the deceased die? (Place of Death) – for WHO the value set is slightly
different:
- 375 i. Hospital
ii. Other health facility
iii. Home
iv. On route to facility or hospital
v. Other
vi. DK
vii. Ref.
- 380 c. What was her/his marital status? (Marital Status) which is under review for
harmonization:
- 385 i. Single
ii. Married
iii. Life partner
iv. Divorced
v. Widowed
vi. Too young to be married
vii. DK
viii. Ref.
- 390 d. What was her/his highest level of schooling? (Decedent's Education):
- 395 i. No formal education
ii. Primary school
iii. Secondary school
iv. Higher than secondary school
v. DK

- vi. Ref.
- e. What was her/his economic activity status in year prior to death? (Employment Status)
 - i. Mainly unemployed
 - 400 ii. Mainly employed
 - iii. Home-maker
 - iv. Pensioner
 - v. Student
 - vi. Other
 - 405 vii. DK
 - viii. Ref
- f. The following risk factors have not yet been included, but should be added for WHO form support:
 - i. Did (s)he drink alcohol?
 - 410 1. LOINC code available: 11331-6 History of alcohol use
 - ii. What kind of tobacco did (s)he use?
 - 1. LOINC code available 64004-5 Type of tobacco usage
 - a. Cigarettes ☐
 - b. Pipe ☐
 - 415 c. Chewing tobacco ☐
 - d. Local form of tobacco ☐
 - e. Other
 - iii. How many cigarettes did (s)he smoke daily?
 - 420 1. LOINC code available 8663-7 Cigarettes smoked current (pack per day) - Reported
- g. Diagnosis/Problem value sets have not been specifically generated for the following, though general support for mapping from problems is identified:
 - i. Was there any diagnosis by a physician or health worker of tuberculosis?
 - ii. Was there any diagnosis by a physician or health worker of HIV/AIDS
 - 425 iii. Was there any diagnosis by a physician or health worker of dengue fever?
 - iv. Was there any diagnosis by a physician or health worker of measles?

- v. Was there any diagnosis by a physician or health worker of high blood pressure?
 - vi. Was there any diagnosis by a physician or health worker of heart disease?
 - 430 vii. Was there any diagnosis by a physician or health worker of diabetes?
 - viii. Was there any diagnosis by a physician or health worker of asthma?
 - ix. Was there any diagnosis by a physician or health worker of epilepsy?
 - x. Was there any diagnosis by a physician or health worker of cancer?
 - 435 xi. Was there any diagnosis by a physician or health worker of Chronic Obstructive Pulmonary Disease (COPD)?
 - xii. Was there any diagnosis by a physician or health worker of dementia?
 - xiii. Was there any diagnosis by a physician or health worker of depression?
 - xiv. Was there any diagnosis by a physician or health worker of stroke?
 - 440 xv. Was there any diagnosis by a physician or health worker of sickle cell disease?
 - xvi. Was there any diagnosis by a physician or health worker of kidney disease?
 - xvii. Was there any diagnosis by a physician or health worker of liver disease?
- h. General Signs and Symptoms Associated with the Final Illness value sets have not been specifically generated for the following, though general support for mapping from problems is identified
 - 445 i. Did (s)he have a fever? (including severity and duration)
 - ii. Did (s)he have night sweats?
 - iii. Did (s)he have a cough? (including severity, duration, productivity)
 - iv. Did (s)he cough up blood?
 - 450 v. Did (s)he have any breathing problem?
 - vi. During the illness that led to death, did (s)he have fast breathing? (including duration)
 - vii. Did (s)he have breathlessness?
 - viii. Was (s)he unable to carry out daily routines due to breathlessness?
 - 455 ix. Was (s)he breathlessness while lying flat?
 - x. During the illness that led to death, did (s)he have difficulty breathing? (including On/Off)

- 460 xi. During the illness that led to death, did his/her breathing sound like any of the following: stridor, grunting, wheezing
- xii. Was (s)he have severe chest pain? (including duration of pain in minutes and days lasted)
- xiii. Did (s)he have diarrhea?
- xiv. At any time during the final illness, was there blood in the stools? (including whether until death)
- 465 xv. Did (s)he vomit? (including days before death, blood in vomit, and black vomit)
- xvi. Did (s)he have any abdominal problem?
- xvii. Did (s)he have severe abdominal pain? (including days before death)
- xviii. Was the pain in the upper or lower abdomen?
- 470 xix. Did (s)he have a more than usually protruding abdomen? (including how rapid it developed)
- xx. For how many days before death did (s)he have a mass in the abdomen?
- xxi. For how many days before death did (s)he have severe abdominal pain?
- xxii. Did (s)he have a severe headache?
- 475 xxiii. Did (s)he have a stiff neck during illness that led to death? (including days before death)
- xxiv. Did (s)he have a painful neck during illness that led to death? (including days before death)
- xxv. Did (s)he have a mental confusion? (including months before death)
- 480 xxvi. Was (s)he unconscious for more than 24 hours before death? (including sudden onset, and continuation thru death)
- xxvii. Did (s)he have a convulsions? (including duration, and leading to death)
- xxviii. Did (s)he become unconscious immediately after the convulsion?
- xxix. Did (s)he have urine problems? (including absence of urine, increased frequency, and blood in urine)
- 485 xxx. Did (s)he have any skin problems?
- xxxi. Did (s)he have sores? (including whether pus filled)
- xxxii. Did (s)he have any ulcers, abscess, or sores anywhere except on the feet?
- xxxiii. Did (s)he have an ulcer (pit) on the foot? (including pus ooze)

- 490 xxxiv. Did (s)he have any ulcers, abscess, or sores that were not also on other parts
 of the body?
- xxxv. During the illness that led to death, did (s)he have any skin rash? (including
 duration, location, and characteristic of measles)
- xxxvi. Did (s)he ever have shingles or herpes zoster?
- 495 xxxvii. During the illness that led to death, did (s)he bleed from anywhere? (including
 location)
- xxxviii. Was (s)he severely thin or wasted?
- xxxix. During the illness that led to death, did (s)he have a whitish rash inside the
 mouth or tongue?
- 500 xl. Did (s)he have stiffness of the whole body or was unable to open the mouth?
- xli. Did (s)he have puffiness of the face? (including duration)
- xlii. During the illness that led to death, did (s)he have swelling in the armpits?
- xlili. During the illness that led to death, did (s)he have swollen legs or feet?
 (including duration, bilateral/unilateral)
- 505 xliv. Did (s)he have puffiness of the all over his/her body?
- xlv. Did (s)he have any lumps? (including location)
- xlvi. Did (s)he have any ulcers (pits) in the breast?
- xlvii. Was (s)he in any way paralyzed? (including location)
- xlviii. Did (s)he have difficulty swallowing? (including duration, liquid/solid/both)
- 510 xlix. Did (s)he have yellow discoloration of the eyes? (including duration)
- l. Did her/his hair change in color to reddish or yellowish color?
- li. Did (s)he look pale (thinning/lack of blood) or have pale palms, eyes, or nail
 beds?
- lii. Did (s)he have sunken eyes?
- 515 liiii. Did (s)he drink a lot more water than usual?
- i. Test Result value sets have not been specifically generated for the following, though
 general support for mapping from test results is identified:
- i. Did (s)he have a recent positive test by a physician or health worker for
 malaria?
- 520 ii. Did (s)he have a recent negative test by a physician or health worker for
 malaria?

- j. Accident value sets have not been specifically generated, though general support for mapping from test results is identified:
- i. Did (s)he suffer from any injury or accident that led to her/his death?
 - 525 ii. Was the injury intentionally inflicted by someone else?
 - iii. Was (s)he injured by a firearm?
 - iv. Was (s)he stabbed, cut or pierced?
 - v. Was (s)he strangled?
 - vi. Was (s)he injured by a blunt force?
 - 530 vii. Was (s)he injured by burns?
 - viii. Do you think (s)he committed suicide?
 - ix. Was it a road traffic accident?
 - x. What was her/his role in the road traffic accident?
 - xi. What was the counterpart that was hit during the road traffic accident?
 - 535 xii. Was (s)he injured in a fall?
 - xiii. Did (s)he die of drowning?
 - xiv. Was (s)he suffering from burns?
 - xv. Was (s)he injured by a blunt force?
 - xvi. Was (s)he injured by a plant/ animal/insect that led to her/his death?
 - 540 xvii. What was the plant/animal/insect?
 - xviii. Was (s)he injured by a force of nature?
 - xix. Was there any poisoning?
 - xx. Was (s)he subject to violence/assault?
 - xxi. Was it electrocution?
- k. Problem and Procedure value sets related to a pregnancy, labor, and delivery have not been specifically generated for the following, though general support for mapping from problems and procedures is identified:
- i. Did she ever have a period or menstruate?
 - ii. Did she have excessive vaginal bleeding in between menstrual periods?
 - 550 iii. Did her menstrual period stop naturally because of menopause?
 - iv. Did she have vaginal bleeding after cessation of menstruation?
 - v. Was there excessive vaginal bleeding in the week prior to death?

- 555 vi. At the time of death, was her period overdue?
vii. For how many weeks had her period been overdue?
viii. Did she have a sharp pain in her abdomen shortly before death?
ix. Did she die within 6 weeks of delivery, abortion or miscarriage?
x. For how many months was she pregnant?
xi. Please confirm: you said she was NOT pregnant and had NOT recently been pregnant or delivered when she died is that right?
- 560 xii. Did she die within 24 hours after delivery?
xiii. Did she die during labor, and before delivery?
xiv. Did she die after delivering a baby?
xv. Did she give birth to a live baby within 6 weeks of death?
xvi. Did she die during or after a multiple pregnancy?
- 565 xvii. Was she breastfeeding the child in the days before death?
xviii. How many births, including stillbirths, did she/the mother have before this baby?
xix. Had she had any previous Caesarean section?
xx. During pregnancy, did she suffer from high blood pressure?
- 570 xxi. Did she have foul smelling vaginal discharge during pregnancy or after delivery?
xxii. During the last 3 months of pregnancy, did she suffer from convulsions?
xxiii. During the last 3 months of pregnancy, did she suffer from blurred vision?
xxiv. Did she have excessive bleeding during pregnancy before labor started?
- 575 xxv. Was there vaginal bleeding during the first 6 months of pregnancy?
xxvi. Was there vaginal bleeding during the last 3 months of pregnancy but before labor started?
xxvii. Did she have excessive bleeding during labor or delivery?
xxviii. Did she have excessive bleeding after delivery or abortion?
- 580 xxix. Was the placenta completely delivered?
xxx. Did she deliver or try to deliver an abnormally positioned baby?
xxxi. For how many hours was she in labor?
xxxii. Did she attempt to terminate the pregnancy?

- 585 xxxiii. Did she recently have a pregnancy that ended in an abortion (spontaneous or induced)?
- xxxiv. Did she die during an abortion?
- xxxv. Did she die within 6 weeks of having an abortion?
- xxxvi. Where did she give birth?
- xxxvii. Did she receive professional assistance during the delivery?
- 590 xxxviii. Did she have an operation to remove her uterus shortly before death?
- xxxix. Was the delivery normal vaginal, without forceps or vacuum?
- xl. Was the delivery vaginal, with forceps or vacuum?
- xli. Was the delivery a Caesarean section?
- xlii. Was the baby born more than one month early?
- 595 1. Health Service Utilization value sets related to a pregnancy, labor, and delivery have not been specifically generated for the following, though general support for mapping from procedures is identified:
- i. Did (s)he receive any treatment for the illness that led to death?
- ii. Did (s)he receive oral rehydration salts?
- 600 iii. Did (s)he receive (or need) intravenous fluids (drip) treatment?
- iv. Did (s)he receive (or need) a blood transfusion?
- v. Did s/he receive (or need) treatment/food through a tube passed through the nose?
- vi. Did (s)he receive (or need) injectable antibiotics?
- 605 vii. Did (s)he receive (or need) antiretroviral therapy (ART)?
- viii. Did (s)he have (or need) an operation for the illness?
- ix. Did (s)he have the operation within 1 month before death?
- x. Was (s)he discharged from hospital very ill?
- xi. Was care sought outside the home while (s)he had this illness?
- 610 xii. Where or from whom did you seek care?
- xiii. Record the name and address of any hospital, health center or clinic where care was sought
- xiv. Did a health care worker tell you the cause of death?
- xv. What did the health care worker say? (narrative, no value set)

- 615 xvi. Do you have any health records that belonged to the deceased? (not in health record – no prepop)
- xvii. Can I see the health records? (not in health record – no prepop)
- xviii. Record the date of the most recent (last) visit
- xix. Record the date of the last but one (second last) visit
- 620 xx. Record the date of the last note on the health records
- xxi. Record the weight (in kilograms) written at the most recent (last) visit
- xxii. Record the weight (in kilograms) written at the last but one (second last) visit
- xxiii. Transcribe the last note on the health records. (narrative, no value set)
- xxiv. In the final days before death, did s/he travel to a hospital or health facility?
- 625 xxv. Did (s)he use motorized transport to get to the hospital or health facility?
- xxvi. Were there any problems during admission to the hospital or health facility?
- xxvii. Were there any problems with the way (s)he was treated (medical treatment, procedures, interpersonal attitudes, respect, dignity) in the hospital or health facility?
- 630 xxviii. Were there any problems getting medications, or diagnostic tests in the hospital or health facility?
- xxix. Does it take more than 2 hours to get to the nearest hospital or health facility from the deceased's household?
- xxx. In the final days before death, were there any doubts about whether medical
- 635 care was needed?
- xxxi. In the final days before death, was traditional medicine used?
- xxxii. In the final days before death, did anyone use a telephone or cell phone to call for help?
- xxxiii. Over the course of illness, did the total costs of care and treatment prohibit
- 640 other household payments?
- m. Some of the attributes from the WHO Verbal Autopsy Report are not yet in VRDR:
- i. Is this a region of high HIV/AIDS prevalence?
- ii. Is this a region of high malaria prevalence?
- iii. Marriage Date – This would need a new LOINC code for an OBX
- 645 observation.
- n. Ability to read/write – currently included support for ‘Language’, but for more precision, this would need a new LOINC code for an OBX observation.

- o. Added Employment Status with LOINC of 11295-3. Need to review whether a different code would be more appropriate.
 - 650 p. Place of Registration – this would need a new LOINC code for an OBX observation. Could profile to be included in the MSH segment.
 - q. Attributes relating to the informer would need either additional message profiling (potentially leveraging the PRT segment] and/or new LOINC codes:
 - i. Name of VA Respondent
 - 655 ii. Respondent’s relationship to deceased
 - iii. Name of VA Interviewer
 - iv. Time at start of interview
 - v. Time at end of interview
 - vi. Date of interview
 - 660 vii. Did respondent give consent
 - r. During which season did (s)he die? (Wet/Dry)
 - s. For how many days was (s)he ill before (s)he died?
 - t. Did (s)he die suddenly?
 - u. Optional Open Narrative
 - 665 v. Was a death certificate issued?
 - w. Can I see the death certificate?
13. IHE ITI is considering developing mSVS. Once this is available, this should be called out in Cross-profile considerations (X.6).
14. The HL7 FHIR IG draft referenced is
- 670 <https://trifolia.lantanagroup.com/IGManagement/View/4393>. The profile final publication from HL7 is pending process and approvals. This IHE profile is aligned with the final comment resolutions as implemented in this tool. The referenced link will be updated once HL7 has finally published this IG.
15. PDA-8 is used to indicate who performed the autopsy, but this is not in the list of attributes specified by NCHS.
- 675
16. Decedent Mother: Not in v2.6 PID spec or OBX
17. Decedent Spouse - Not in v2.6 PID or OBX
18. Death Location is not in v2.6 IDN, but might this not be relevant in IDN? (Review with Jeff and Mead)

- 680 19. CCOD Death Date is listed as required, but not included in NCHS samples – Verify (Jeff,
Mead, Veronique)
20. Death Pronouncement is not in IDN based on V2.6, but if this is the initial report from the
hospital, why not include this? (Review with Jeff and Mead)
- 685 21. CERTID for FHIR is indicated at Death Certificate: entry.resource; Composition/identifier;
Verify with Abdulmalik
22. BCYR re: BirthRecordIdentifier Why not use the LOINC for Birth Year (LOINC 80904-6)
in BirthRecordIdentifier instead of 2112-8? (Awaiting response to question to Abdulmalik)
23. DREG - no observation for date of death registration 80907-9 in FHIR? (Review with
Abdulmalik)
- 690 24. INTERVAL: FHIR: CauseOfDeathCondition/onset[x]/onsetAge, but that value would
typically be e.g., 15 hours, 3 days, etc. prior to the death, and not expressed in patient age.
Am I looking in the right place for this concept? (pending response from Abdulmalik)
- 695 25. CERT: Resource is pointing to the wrong value set: value set associated with the certifier in
[https://trifolia-fhir.lantanagroup.com/igs/lantana_hapi_r4/vrdr/StructureDefinition-VRDR-
Certifier.html](https://trifolia-fhir.lantanagroup.com/igs/lantana_hapi_r4/vrdr/StructureDefinition-VRDR-Certifier.html) practitioner.qualification.code is pointing to a different REQUIRED value set
(<http://hl7.org/fhir/R4/valueset-identifier-type.html>) Instead of the value set specified by
NCHS: 2.16.840.1.114222.4.11.6001 Certifier Types (NCHS)
(<https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.6001>
(pending response from Abdulmalik)
- 700 26. BPLACE: I don't see support for BPLACE in the FHIR IG – this should reflect city, state,
province – BirthRecordIdentifier supports state, but not the city and country. Is this reflected
elsewhere? There is an extension to the patient resource, but I don't see this called out in
Decedent. (pending response from Abdulmalik)
- 705 27. CERTDATE: verify that DeathCertificate: composition/date is correct location (pending
response from Abdulmalik)
28. WORKINJ: Observation.component.workInjuryIndicator/value[x] which SHALL be selected
from HL7 Version 2 Table 0532
<https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7486> (Y/N/U) – is
there a FHIR VS? (pending response from Abdulmalik)
- 710 29. INJPL location does not seem to support the value set: Place of Injury appears to be in Injury
Location which is a Location Resource. However, the coded value for this is not supported
by the construct: value should be from CodeSystem: 2.16.840.1.114222.4.11.7374 Place of
Injury (NCHS)); observation code should be "11374-6" Injury incident, (CodeSystem:
LOINC urn:oid:2.16.840.1.113883.6.1). (Pending response from Abdulmalik)
- 715 30. TRANSP: Place of Injury appears to be in Injury Location which is a Location Resource.
However, the coded value for this is not supported by the construct: value should be from
CodeSystem: 2.16.840.1.114222.4.11.7374 Place of Injury (NCHS)); observation code

should be "11374-6" Injury incident, - location does not support the value set? (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (Pending response from Abdulmalik)

- 720 31. REF: HL7 VRDR FHIR Examiner Contacted Observation code "69438-0", Forensic medicine Referral note is used in v2.6, but FHIR specifies observation coded as "74497-9" Medical examiner or coroner was contacted. (Pending response from Mead and Abdulmalik)

Closed Issues

- 725 1. Where should the list of data elements be specified in this new template? In the past, they were included in X.6 Content Module in some profiles. Resolved - We have included a new Section X.7 Data Requirements.
- 730 2. We will need to review whether both XPHR and MS are both appropriate for this profile or whether we need to limit to MS to capture the required attributes for the U.S. death certificate. Also the HL7 Continuity of Care Document (CCD). Resolved - Profile includes support for all summary document types to prepop and constrains only MS for the VRDR Pre-pop Option.
- 735 3. How to reference the HL7 Message IG for VRDR in full that can be tested. Resolved - Profile directly references with no constraints and successfully tested at Connectathon 2015.
- 740 4. How to reference the HL7 Document IG for VRDR in full that can be tested. Resolved - Profile directly references with no constraints and successfully tested at Connectathon 2015.
- 745 5. Should we establish a common actor pair for HL7 information source and recipient (currently specific to Information source and Information Recipient), Resolved - Information source and Information recipient have been added. Payload will never be common.
- 750 6. HL7 Issue – OBX is optional in HL7 – we want it required. Resolved - OBX has been changed to Required in the HL7 V2.6 IG
- 745 a. This was brought through the formalization process in HL7
- b. HL7 formalized the OBX R, so statements leading in to the section requirements in Volume 2 should be updated to indicate NO FURTHER constraints
- 750 7. The ‘Save Form For Continued Editing’ Option on the Form Manager has no specific strategies identified. Resolved through QRPH and vendor discussions. VRDR was modified to state, "In order to support the need to save a form for editing at a later time, the Form Filler SHALL be able to submit a form for the same patient multiple times." Vendors encouraged allowing vendor specific solutions to address this issue, when needed rather than a defined profile approach.

- 755 8. TEMPLATE OPEN ISSUE: Template does not include optionality column. Resolved – referred to template committee. No change to document.
9. Pre-population using currently C-CDA will remain out of scope pending IHE harmonization efforts. C-CDA Refactoring impact on XPHR, MS, CCD references. Resolved as stated.
- 760 10. Cause of Death (Immediate) - This is mapped to one LOINC in V2.6 for COD in the existing specification; however, we plan to submit a comment to STU to separate Immediate COD from the Intermediate Causes. LOINC code has already been requested. It was decided by HL7 and NCHS/DVS to model the death causes ordered sequentially with the immediate cause of death given the sequence number "1", and the underlying cause of death being given the highest sequence number among the set of cited causes.
- 765 11. Volume 2 Messaging mapping table - Were autopsy findings available to complete the COD - This is a DR whereas the question is BL – Were autopsy results available to complete the COD? Only correlation available in the V2.6 IG. Resolved - Autopsy results have been identified at BL in V2.6 IG.
- 770 12. Volume 3 6.3.1.D.4 Data Element Requirement Mappings to CDA Cause of Death code/@code="69453-9" Cause Of Death (CodeSystem: 2.16.840.1.113883.6.1 LOINC): Pending LOINC updates for cause of death and interval. Resolved - LOINC codes for COD and interval have been added to the profile.
- 775 13. Volume One Actors and Options – Archive Form: Need to sort out how this handles VRDR pre-pop or Pre-pop - Pending CP details. Resolved. Archive Form Option included with direct reference to ITI approaches. No impact to VRDR.
14. Volume One Actors and Options – Doesn't have an archive option - Beware of Archive Form updates to RFD. Resolved. No ITI updates to Archive Form. Archive Form Option included with direct reference to ITI approaches. No impact to VRDR.
- 780 15. Volume 1 Actors and Transactions – Form Receiver CDA Exporter - How do we reference the additional XD* transactions required of the Form Receive CDA Exporter? (ITI-41, ITI-1, ITI-19, ITI-20?). Resolved – reference only by XD*.
- 785 16. TEMPLATE OPEN ISSUE: We should add HL7 Templates for clinical statements referenced in the profile – where would these go? Resolved – as already implemented, reference only clinical statements that have constraints. Updated the Metadata constraints and remove multiple inheritance and directly constrain the metadata as was done with BFDR.
- 790 17. TEMPLATE OPEN ISSUE: The template does not really support the need to specify the mappings for the form receiver message exporter, form receiver CDA exporter, and the Pre-population requirements for the Form Manager. These have been reflected together as subsections to 6.3.1.D.4 Data Element Requirement Mappings. Resolved.

Implemented as subsections to Data Element Requirement Mappings in Volume 3.
Referred recommendation to template committee.

- 795 18. Death Location Type needs to stay aligned with requested HL7 corrections. Updates from HL7 will be applied to this profile once corrections made. Resolved – updated to reflect revisions from HL7, including modelling, OIDs, LOINC, and clarification statements.
19. Autopsy Value set is pending clinical review. Resolved. Updated to reference modified value sets.
20. The Pronouncement Entry may require a new LOINC code. Resolved, Updated to reflect modified modelling and vocabularies used by HL7 IG.
- 800 21. May need to replace LOINC for VRDR Death Report Section currently listed as 64297- 'Death certificate'. Resolved. Updated to "69409-1" U.S. standard certificate of death - 2003 revision.
- 805 22. Vital Records Death Reporting VRDR Conformance and Example is pending sample generation through MDHT. Resolved. Updated reference location for implementation example.
23. Sample documents to be loaded on the FTP site are pending. Resolved. Updated reference location for implementation example.
- 810 24. The requirement that a form manager be able to supply the partially filled and saved form if the same request is submitted for the same patient is listed for the Form Manager, but there is no specification for how this is done. May need future ITI transactions. Resolved through QRPH and vendor discussions. VRDR was modified to state, "In order to support the need to save a form for editing at a later time, the Form Filler SHALL be able to submit a form for the same patient multiple times." Vendors encouraged allowing vendor specific solutions to address this issue, when needed rather than a defined profile approach.
- 815 25. There is no representation for date of death qualifier (e.g., approximate); needs to be aligned with HL7. Resolved. Updated to specify location for specifying date of death qualifier with clarification language corresponding to modelling and guidance from the HL7 IG.
- 820 26. ID (e.g., SSN) may need to be on patient in the future – under discussion in HL7. Resolved. Updated to internationalize the Jurisdiction Patient ID reference beyond U.S. specific SSN.
27. Specify the update message and any form manager form filler associated with update needs. Resolved. No change needed.
- 825 28. CDA IG does not have this concept (45) only 47. Resolved. HL7 IG has been updated to include this in the modelling. VRDR is updated to reflect modified modelling and value sets.

- 830 29. CDA does not include representation for the role of the certifier, but the message does.
Only the Certifier Role is represented in the CDA, but not the CDA IG does not have this
concept (45) only (47). Alignment with HL7 is pending, Resolved. HL7 IG has been
updated to include this in the modelling. VRDR is updated to reflect modified modelling
and value sets.
- 835 30. Title of Certifier modeling for CDA mapping will need harmonization with HL7 –
concept not modeled in the HL7 CDA IG. Updated VRDR to align with revised HL7 IG
modelling for this concept.
31. Do we continue to offer grouping guidance? No required grouping
- 840 32. If MU requires Race / Ethnicity then we may require this. Resolved: The CMS
Meaningful Use Objectives support recording race and ethnicity information in the EHR
as stated in: §170.304 (c) Record demographics updated 8/13/2010
http://healthcare.nist.gov/docs/170.304.c_RecordDemographicsAmb_v1.0.pdf Also
Requires use of OMB Race / Ethnicity Codes available at:
http://www.whitehouse.gov/omb/inforeg_statpolicy/#dr. We will modify the description
to indicate that race and ethnicity information will be reported by the funeral director or
next of kin as the primary source of information. However, the EHR may also serve as a
845 resource for documenting race and ethnicity information. - modifying from pre-populated
to direct data entry. Added note: Pre-populateData Entry Required.
- 850 33. Included NOTE: data elements would be reported by the funeral director or next of kin,
and the EHR would not be the primary source. However, the EHR may also serve as a
resource for documenting race and ethnicity information to inform the content of this
attribute.
34. Is there a new attribute needed to indicate the date the certificate was signed vs the date
the certificate is certified? Do we need one for the date the certificate is signed by the
pronouncer? No new attribute identified.
- 855 35. HL7 has updated the VRDR CDA document specifications with any considerations of
reporting from the jurisdiction to the national statistics agency. The Form Receiver CDA
Exporter mapping has been updated with the additional attributes identified in this
updated specification.
- 860 36. HL7 has updated the HL7 VRDR CDA document. Some of the mapping, particularly
mapping of data initiated by the jurisdiction was added as part of this update.
37. Case Assigned Information message may not be applicable to forms.
38. VRDR FHIR Death Location does not support coded concept responses for place of
death
39. The HL7 model specification for Decedent Disposition Method did not render specified
content

- 865 40. HL7 VRDR FHIR Injury Location does not support coded concept responses for place of death
41. HL7 VRDR FHIR does not seem to specify a Date of Death Registration concept
- 870 42. HL7 VRDR FHIR COD mapping indicates that the cause of death should be modelled in the condition/code, but the coded value is not assigned until provided to the National for coding cause of death. Should the narrative instead be an observation with value (@xsi:type="ST") where /code=69453-9, Cause of Death, LOINC as done in the CDA?
- 875 43. HL7 VRDR FHIR OTHCOD FHIR mapping indicates that the cause of death should be modelled in the condition/code, but the coded value is not assigned until provided to the National for coding cause of death. Should the narrative instead be an observation with value (@xsi:type="ST") where /code=69453-9, Cause of Death, LOINC as done in the CDA?
44. HL7 VRDR FHIR CERT - HL7 considerations needed for Certifier model: For Certifier Type, the values are constrained to v2table0360,Version2.7.html, but should be only the values for CodeSystem: 2.16.840.1.114222.4.11.6001 Certifier Types (NCHS)
- 880 45. HL7 VRDR FHIR PD - Death Pronouncement Date – does not appear to be called out as potentially different than Death Date – is this a problem?
46. HL7 VRDR FHIR INJLOCNAR - Injury Incident Description is an observation in the V2.6 rather than a location. This seems inconsistent.
- 885 47. HL7 VRDR FHIR Interval model, it appears to be using ‘onsetString’ within ‘condition’, however, if this is correct, it seems more specific description should indicate that this is the interval and describe what to put in the onsetString
48. HL7 VRDR FHIR Time Pronounced Dead appears to be the same as the Date/Time of death
- 890 49. HL7 VRDR FHIR Certifier Inconsistent with modelling for CDA – should be part of name
50. HL7 VRDR FHIR Injury Incident model seems like it intended component3 to be the Transportation Injury, but the coded observation is .component not part of component3
51. HL7 VRDR FHIR Injury Incident model does not seem to account for 69451-3 Transportation Role of Decedent
- 895 52. HL7 VRDR FHIR Autopsy Performed Indicator concept code for "85699-7" Autopsy was performed from FHIR is not used for either v2 or v3 – seems inconsistent
53. HL7 VRDR FHIR Examiner Contacted Observation code "69438-0", Forensic medicine Referral note is used in v2.6, but FHIR specifies observation coded as "74497-9" Medical examiner or coroner was contacted

- 900 54. HL7 VRDR v2.6 Patient Death Date and Time this is now listed as an observation in V2.6: 31211-6
55. HL7 v2.6 Age at Death Age edit flag is included in DI, but is this assigned by the jurisdiction or by the provider?
- 905 56. HL7 v2.6 Marital Status edit flag is included in DI, but is this assigned by the jurisdiction or by the provider?
57. HL7 v2.6 Education level edit flag is included in DI, but is this assigned by the jurisdiction or by the provider?
58. HL7 v2.6 Father's surname is now in DI message which is a new requirement to be verified.
- 910 59. HL7 v2.6 both occupation and industry should be in CDI
60. HL7 v2.6 employment status should be conveyed potentially from at least one of EMR, coroner, and/or Funeral Director
61. HL7 v2.6 Pregnancy Status DI and CDI both include an edit flag, but aren't these both assigned by jurisdiction?
- 915 62. HL7 v2.6 Injury Location - has the LOINC code been updated from 71481-6 to 11376-1 Injury location?
63. HL7 v2.6 Sex Edit Flag: DI, FDDI, and CDI both include an edit flag, but aren't these both assigned by jurisdiction?
- 920 64. The FHIR IG is based on STU3, and is referencing a ballot version. Once the Final version is published this content will be updated. This profile will further modify to specify this content for international use.
65. Date of Death Registration is not clearly identified in the HL7 VRDR FHIR IG
66. Source Flag is not clearly identified in the HL7 VRDR FHIR IG
- 925 67. Value sets for HL7 VRDR FHIR IG are not accessible to further define vocabulary standards used.
68. Structured definition locations for the FHIR Bundle specification are pending HL7 FHIR IG posted locations.
- 930 69. HL7 VRDR FHIR Bundle cardinality constraints need further review and may need additional constraints by type (e.g., to convey to National, for Researchers, to return to jurisdiction, to submit to jurisdiction)

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9.1.3 LOINC (Logical Observation Identifiers Names and Codes)

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965 **9.1.4 SNOMED CT (Systematized Nomenclature of Medicine -- Clinical Terms)**

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970 **10 Trademark**

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975

IHE Technical Frameworks General Introduction Appendices

The [IHE Technical Framework General Introduction Appendices](#) are components shared by all of the IHE domain technical frameworks. Each technical framework volume contains links to these documents where appropriate.

Update the following appendices to the General Introduction as indicated below. Note that these are not appendices to this domain's Technical Framework (TF-1, TF-2, TF-3 or TF-4) but rather, they are appendices the IHE Technical Frameworks General Introduction located here.

Appendix A – Actor Summary Definitions

Add the following new or modified actors to the IHE Technical Frameworks General Introduction Appendix A:

New (or modified) Actor Name	Definition
Form Receiver CDA Document Exporter	This Form Receiver CDA Document Exporter receives data submitted through the Submit Form Transaction (ITI-35), transforms that data to create a CDA document, and shares that newly created CDA document with a Content Consumer.
Form Processor CDA Document Exporter	This Form Processor CDA Document Exporter receives data submitted through the Submit Form Transaction (ITI-35), transforms that data to create a CDA document, and shares that newly created CDA document with a Content Consumer.

The table below lists *existing* actors that are utilized in this profile.

Complete List of Existing Actors Utilized in this Profile

Existing Actor Name	Definition
Information Source (HL7)	The Information Source is responsible for creating and transmitting an HL7 V2.6 message to an Information Recipient.
Information Recipient (HL7)	The Information Recipient is responsible for receiving the HL7 V2.6 message from an Information Source or from a Form Receiver Message Exporter.
Form Processor Message Exporter	This Form Processor Message Exporter receives data submitted through the Submit Form Transaction (ITI-35), transforms that data to an HL7 message and sends that message to an Information Recipient.
Form Receiver Message Exporter	This Form Receiver Message Exporter receives data submitted through the Submit Form Transaction (ITI-35), transforms that data to an HL7 message and sends that message to an Information Recipient.
Data Consumer	The Data Consumer is responsible for initiating a query to a Data Responder for resource information, and receiving the result of the query.
Data Responder	The Data Responder is responsible for receiving a query and supplying the corresponding resource information.

Appendix B – Transaction Summary Definitions

Add the following new or modified transactions to the IHE Technical Frameworks General Introduction Appendix B:

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New (or modified) Transaction Name and Number	Definition
VRDRFeed [QRPH-38]	This transaction transmits the HL7 V2.6 formatted message containing the Vital Records Death Reporting information
VRDRQuery [QRPH-47]	This transaction supports queries for Death Reporting information.

Appendix D – Glossary

Add the following new or updated glossary terms to the IHE Technical Frameworks General Introduction Appendix D.

1000

New (or modified) Glossary Term	Definition	Acronym
Causes of death	All those diseases, morbid conditions or injuries which either resulted in or contributed to death and the circumstances of the accident or violence which produced such injuries. (ref ICD-10 vol 2, Section 4.1.1)	
Certifier	Person authorized by law (e.g., the physician who attended the deceased in his/her last illness; or the medical examiner/coroner for deaths of persons who were not attended during the last illness by a physician or for unnatural deaths due to violence or accident) who reports, on the prescribed form, stating to the best of his/her knowledge and belief, the cause of death and other facts related to the event for submission to the registrar (ref UN, Handbook of Vital Statistics Systems and Methods, Volume 1, Glossary)	
Certifies	Process of reporting in the jurisdiction's prescribed format on the prescribed form, to the best of his/her knowledge and belief, the cause of death and other facts related to the event for submission to a registrar	
Electronic Death Registration System	A jurisdiction-based system used to create and register the legal death certificate.	EDRS
Immediate cause of death	Final disease or condition resulting in death, that is, one that is most proximate to time of death.	
Interval from onset to death	Minutes, hours, days, weeks, months, or years between the onset of each condition and the date of death (ref ICD-10 vol 2, section 4.1.3)	
Manner of death	Way the conditions reported as causes of death resulted in death, or for injuries, intent.	

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New (or modified) Glossary Term	Definition	Acronym
Other contributing causes of death	Conditions that unfavorably influence the course of the morbid process and thus contributes to the fatal outcome, but which is not related to the disease or condition directly causing death (ref ICD-10, vol 2, section 4.1.3 and UN, Handbook of Vital Statistics Systems and Methods, Volume 1, Glossary)	
Pronouncer	When physician responsible for completing the medical certification of cause of death is not available at the time of death and the jurisdiction has a law providing for a pronouncer, person who determines that the decedent is legally dead but who was not in charge of the patient's care for the illness or condition that resulted in death.(ref Medical Examiners' and Coroners' Handbook on Death Registration and Fetal Death Reporting)	
Pronouncing	Process of determining and reporting, in the prescribed format, that the decedent is legally dead	
Sequence	Term refers to two or more conditions entered on successive lines of Part I of the cause-of-death statement, each condition being an acceptable cause of the one entered on the line above it (ref ICD-10, vol 2, section 4.1.5)	
Underlying cause of death	The disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury (ref ICD-10, vol 2, section 4.1.2)	

Volume 1 – Profiles

<i>Add Section X</i>

1005

X Vital Records Death Reporting (VRDR) Profile

The Vital Records Death Reporting (VRDR) Profile provides a means to capture and communicate information needed to report a death.

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VRDR is a content profile that defines the content of Vital Records Death Reporting information that is transmitted by clinical systems to public health systems for vital registration purposes. This profile uses several different mechanisms for capturing and communicating that information:

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- Defined content in CDA documents,
- Defined content in HL7 V2.6 messaging,
- FHIR Document Composition Bundle

Electronic data capture and form submission is performed using transactions from the ITI Retrieve Form for Data Capture (RFD) or QRPH Mobile Profile with transformation capabilities provided by three actors:

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1. Form Receiver Document Exporter which transforms the form data to a VRDR Document defined in this profile in Volume 3
2. Form Processor Document Exporter which transforms the form data to a VRDR Document defined in this profile in Volume 3
3. Form Receiver Message Exporter which transforms the form data to a VRDRFeed [QRPH-38] HL7 message defined in this profile in Volume 2

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X.1 VRDR Actors, Transactions, and Content Modules

This section defines the actors, transactions, and/or content modules in this profile. General definitions of actors are given in the Technical Frameworks General Introduction Appendix A at http://www.ihe.net/Technical_Frameworks.

1030

Figure X.1-1 shows the actors directly involved in the VRDR Profile and the relevant transactions between them. If needed for context, other actors that may be indirectly involved due to their participation in other related profiles are shown in dotted lines. Systems implementing this profile for reporting of deaths to Vital Records may leverage RFD transactions to collect the information through pre-population of forms supplemented by data entry, through messaging, using a CDA R2 document, or using a FHIR Document. There is also

1035

the possibility of using the RFD transactions to support the data collection such that the

submitted form is exported into specified HL7 Message, a VRDR CDA, or VRDR FHIR Document. There are eight HL7-defined message profile use cases specified by the HL7 2.6 Messaging standard for VRDR:

- Immediate Death Notification Information
- 1040 • Certifier Death Information
- Funeral Director Death Information
- Case Assigned Information
- Jurisdiction Death Information Messaging
- Void Certificate Reporting Messaging
- 1045 • Coded Cause of Death Messaging
- Coded Race / Ethnicity Messaging

Figure X.1-1 references these as options in the context of the IHE VRDR actors as appropriate to align with these use cases.

1050 Systems initiating communications of Vital Records Death Reporting information implement either Content Creator (VRDR CDA or FHIR Document) or Information Source, or Form Filler

Systems receiving/consuming communications of Vital Records Death Reporting information implement either Content Consumer (VRDR Document), Information Recipient, or one of the four Form Receiver Actors (Form Receiver, Form Receiver Document Exporter, Form Processor Document Exporter, Form Receiver Message Exporter, or Form Processor).

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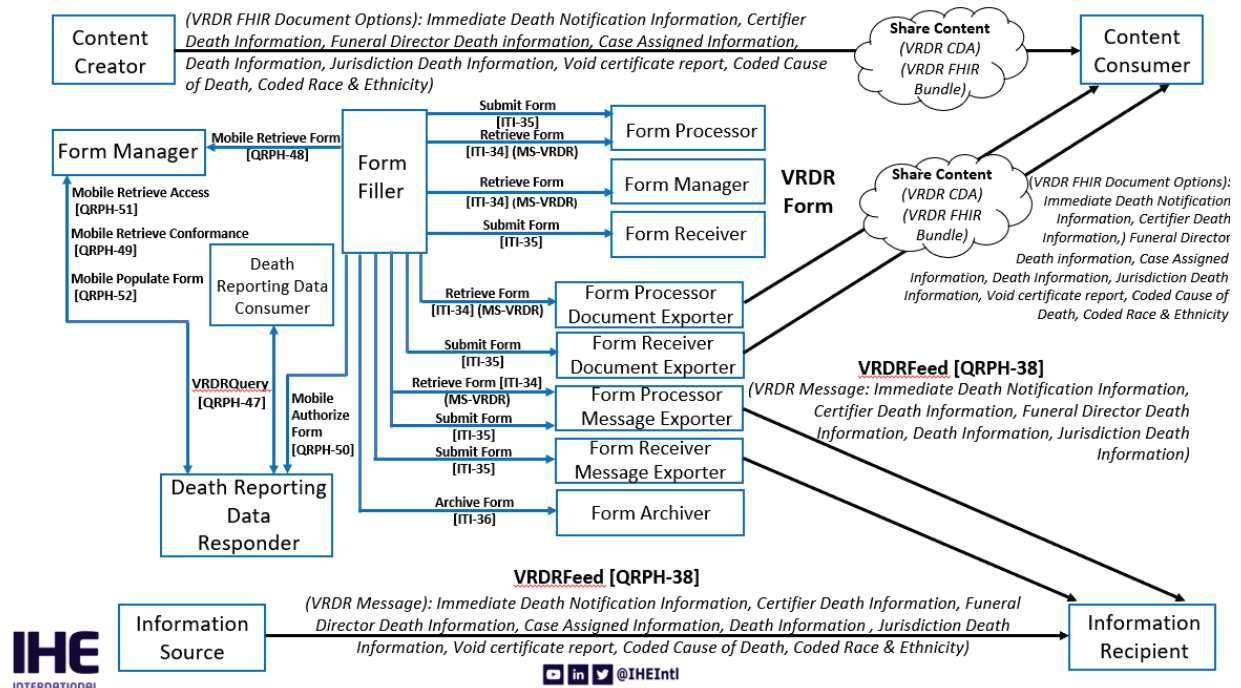


Figure X.1-1: VRDR Actor Diagram

Table X.1-1 lists the transactions for each actor directly involved in the VRDR Profile. To claim compliance with this profile, an actor shall support all required transactions (labeled “R”) and may support the optional transactions (labeled “O”).

Table X.1-1: VRDR Profile - Actors and Transactions

Actors	Transactions	Optionality	Reference
Form Filler	Retrieve Form [ITI-34]	C ^{Note1}	ITI TF-2b: 3.34
	Submit Form [ITI-35]	C ^{Note1}	ITI TF-2b: 3.35
	Archive Form [ITI-36]	O	ITI TF-2b: 3.36
	Mobile Retrieve form (Request) [QRPH-48]	C ^{Note1}	QRPH TF-2: 3.48.4.1
	Mobile Authorize Form [QRPH-50]	C ^{Note1}	QRPH TF-2: 3.50.4.1
Form Manager	Retrieve Form [ITI-34]	C ^{Note2}	ITI TF-2b: 3.34
	Mobile Populate Form (Request) [QRPH-52]	C ^{Note2}	QRPH TF-2: 3.52.4.1
	Mobile Retrieve Access Token (Request) [QRPH-51]	C ^{Note2}	QRPH TF-2: 3.51.4.1
	Mobile Retrieve Form (Response) [QRPH-48]	C ^{Note2}	QRPH TF-2: 3.48.4.1
	Mobile Retrieve Capability (Request) [QRPH-49]	C ^{Note2}	QRPH TF-2: 3.49.4.1

Actors	Transactions	Optionality	Reference
Form Processor	Retrieve Form [ITI-34]	R	ITI TF-2b: 3.34
	Submit Form [ITI-35]	R	ITI TF-2b: 3.35
Form Receiver	Submit Form [ITI-35]	R	ITI TF-2b: 3.35
Form Receiver Document Exporter	Submit Form [ITI-35]	R	ITI TF-2b: 3.35
Form Processor Document Exporter	Submit Form [ITI-35]	R	ITI TF-2b: 3.35
	Retrieve Form [ITI-34]	R	ITI TF-2b: 3.34
Form Receiver Message Exporter	Submit Form [ITI-35]	R	ITI TF-2b: 3.35
	VRDRFeed [QRPH-38]	R	QRPH TF: 3.38
Form Processor Message Exporter	Submit Form [ITI-35]	R	ITI TF-2b: 3.35
	Retrieve Form [ITI-34]	R	ITI TF-2b: 3.34
	VRDRFeed [QRPH-38]	R	QRPH TF: 3.38
Form Archiver	Archive Form [ITI-36]	R	ITI TF-2b: 3.36
Information Source	VRDRFeed [QRPH-38]	R	QRPH TF-2: 3.38
Information Recipient	VRDRFeed [QRPH-38]	R	QRPH TF-2: 3.38
Data Consumer	VRDRQuery [QRPH-47]	R	QRPH TF 2: 3.47
Data Responder	VRDRQuery [QRPH-47]	R	QRPH TF 2: 3.47
	Mobile Populate Form (Response) [QRPH-52]	R	QRPH TF-2: 3.52.4.2
	Mobile Authorize Form (Response) [QRPH-50]	O	
	Mobile Retrieve Access Token (Response) [QRPH-51]	O	
	Mobile Retrieve Capability (Response)[QRPH-49]	O	
Content Creator	N/A	N/A	N/A
Content Consumer	N/A	N/A	N/A

Note 1: The Form Filler must support at least one of RFD or mRFD. If the Form Filler supports RFD, it SHALL support Retrieve Form [ITI-34] and Submit Form [ITI-35]. If the Form Filler supports mRFD, it SHALL support Mobile Retrieve form (Request) [QRPH-48] and Mobile Authorize Form [QRPH-50]

Note 2: The Form Manager must support at least one of RFD or mRFD. If the Form Filler supports RFD, it SHALL support Retrieve Form [ITI-34]. If the Form Filler supports mRFD, it SHALL support Mobile Populate Form (Request) [QRPH-52], Mobile Retrieve Access Token (Request) [QRPH51], Mobile Retrieve Form (Response) [QRPH-48], and Mobile Retrieve Capability (Request)[QRPH-49]

Table X.1-2: VRDR Profile - Actors and Content Modules

Actors	Content Modules	Optionality	Reference
Content Creator	Vital Records Death Reporting Document (1.3.6.1.4.1.19376.1.7.3.1.1.23.1)	C Note 1	QRPH TF-3: 6.3.1.D1.5

Actors	Content Modules	Optionality	Reference
	VRDR FHIR Document Composition Bundle	C Note 1	QRPH TF-3: 6.6.x.2
Form Receiver Document Exporter	Vital Records Death Reporting Document (1.3.6.1.4.1.19376.1.7.3.1.1.23.1)	C Note 1	QRPH TF-3: 6.3.1.D1.5
	VRDR FHIR Document Composition Bundle	C Note 1	QRPH TF-3: 6.6.x.2
Form Processor Document Exporter	Vital Records Death Reporting Document (1.3.6.1.4.1.19376.1.7.3.1.1.23.1)	C Note 1	QRPH TF-3: 6.3.1.D1.5
	VRDR FHIR Document Composition Bundle	C Note 1	QRPH TF-3: 6.6.x.2
Content Consumer	Vital Records Death Reporting Document (1.3.6.1.4.1.19376.1.7.3.1.1.23.1)	R	QRPH TF-3: 6.3.1.D1.5
	VRDR FHIR Document Composition Bundle	C Note 1	QRPH TF-3: 6.6.x.2

1070 Note 1: Actor SHALL support at least one of these content modules.

X.1.1 Actor Descriptions and Actor Profile Requirements

Most requirements are documented in Transactions (Volume 2) and Content Modules (Volume 3). This section documents any additional requirements on this profile's actors.

1075 Registration practices differ somewhat across jurisdictions. Official mortality statistics are generally derived from the death record filed in compliance with the registration laws. This profile includes data elements collected by multiple jurisdictions.

X.1.1.1 Form Filler

1080 The Form Filler is defined in the ITI Retrieve Form for Data Capture (RFD) Profile and in the QRPH Retrieve Form for Data Capture (mRFD). In the VRDR Profile, the Form Filler implementing RFD SHALL support XHTML (see ITI TF-2b: 3.34.4.1). The form is presented when the certifier is ready to enter death information for the purpose of completing the decedent's death certificate.

1085 In order to support the need to save a form for editing at a later time, the Form Filler SHALL be able to submit a form for the same patient multiple times.

X.1.1.2 Form Manager

The Form Manager is defined in the ITI RFD Profile and in the QRPH Retrieve Form for Data Capture (mRFD).. In the VRDR Profile, the Form Manger implementing RFD SHALL support XHTML and (see ITI TF-2b: 3.34.4.1).

1090 The Form Manager shall document which jurisdiction they support.

The system fulfilling this role in the VRDR Profile implementing RFD SHALL accept pre-pop data in the form of content defined by any of the following summary documents:

- IHE PCC MS (Referral Summary 1.3.6.1.4.1.19376.1.5.3.1.1.3,
- Discharge Summary 1.3.6.1.4.1.19376.1.5.3.1.1.4),
- 1095 • IHE PCC XPHR (1.3.6.1.4.1.19376.1.5.3.1.1.5),
- HL7 Continuity of Care Document (CCD) (2.16.840.1.113883.10.20.1.22), or
- IHE QRPH (MS-VRDR) (1.3.6.1.4.1.19376.1.7.3.1.1.23.2)

and return a form that has been appropriately pre-populated based on the mapping rules specified in QRPH TF-3: 6.3.1.D1.4.3 Data Element Requirement Mappings for Form Pre-Population. The
1100 Form Manager shall support ALL of these pre-pop documents. The Form Manager must also support data capture in the absence of a pre-pop document.

The system fulfilling this role in the VRDR Profile implementing mRFD SHALL gather the Querypopulation data using the Query for Death Reporting Data (VRDRQuery) [QRPH-47] message to the Data Responder to retrieve the Death Reporting data to populate the form.

1105 If the Form Filler retrieves a previously populated form, the Form Manager shall supply the previously populated content. How the Form Manager maintains the previously populated form between submissions is not specified by IHE.

X.1.1.3 Form Receiver

The Form Receiver is defined in the ITI RFD Profile. In the VRDR Profile, the Form Receiver
1110 SHALL receive the populated form from the Form Filler when the form is submitted. No further requirements are placed on the Form Receiver within the scope of this profile.

X.1.1.4 Form Receiver Document Exporter

The Form Receiver Document Exporter receives data submitted through the Submit Form Transaction [ITI-35], transforms that data to create a CDA or FHIR document, and shares that
1115 newly created document with a Content Consumer. For VRDR, this actor transforms that data to create the VRDR CDA Document Content (1.3.6.1.4.1.19376.1.7.3.1.1.23.1) defined in QRPH TF-3: 6.3.1.D1.5 or, where the FHIR Option is used, containing the FHIR Document Composition Bundle defined in QRPH TF-3: 6.6.x.2. The Form Receiver Document Exporter shares that newly created VRDR content document with a Content Consumer. Detailed rules for
1120 the VRDR CDA Document Content are fully defined in QRPH TF-3: 6.3.1.D1.5, and detailed rules for the VRDR FHIR Document Composition Bundle are fully defined in QRPH TF-3: 6.6.x.2.. Specification of the transformation rules from the Form to the document content is fully specified in QRPH TF-3: Table 6.3.1.D1.4.1 Data Element Requirement Mappings to CDA and FHIR.

1125 **X.1.1.5 Form Processor Document Exporter**

The Form Processor Document Exporter receives data submitted through the Submit Form Transaction [ITI-35], transforms that data to create a CDA or FHIR document, and shares that newly created document with a Content Consumer. For VRDR, this actor transforms that data to create the VRDR CDA Document Content (1.3.6.1.4.1.19376.1.7.3.1.1.23.1) defined in QRPH TF-3: 6.3.1.D1.5, or, where the FHIR Option is used, containing the FHIR Document Composition Bundle defined in QRPH TF-3: 6.6.x.2. The Content Creator shares that newly created VRDR content document with a Content Consumer. Detailed rules for the VRDR CDA Document Content are fully defined in QRPH TF-3: 6.3.1.D1.5, and detailed rules for the VRDR FHIR Document Composition Bundle are fully defined in QRPH TF-3: 6.6.x.2. . Specification of the transformation rules from the Form to the document content is fully specified in QRPH TF-3: Table 6.3.1.D1.4.1 Data Element Requirement Mappings to CDA and FHIR.

X.1.1.6 Form Receiver Message Exporter

The Form Receiver Message Exporter receives data submitted through the Submit Form [ITI-35] transaction, transforms that data to an HL7 V2 message and sends that message to an Information Recipient. For VRDR, this actor transforms that data to be in compliance with the requirements of the HL7 V.2.6 VRDRFeed [QRPH-38] transaction using the Jurisdiction Death Information Option, and sends that data to an Information Recipient using [QRPH-38]. Specification of the transformation rules from the Form to the message content is fully specified in QRPH TF-3: Table 6.3.1.D1.4.2 Data Element Requirement Mappings to Message.

1145 **X.1.1.7 Form Processor Message Exporter**

This Form Processor Message Exporter receives data submitted through the Submit Form [ITI-35] transaction, transforms that data to an HL7 V2 message and sends that message to an Information Recipient. For VRDR, this actor transforms that data to be in compliance with the requirements of the HL7 V.2.6 VRDRFeed [QRPH-38] transaction using the Jurisdiction Death Information Option, and sends that data to an Information Recipient using [QRPH-38]. Specification of the transformation rules from the Form to the message content is fully specified in QRPH TF-3: Table 6.3.1.D1.4.2 Data Element Requirement Mappings to Message.

X.1.1.8 Form Processor

The Form Processor is defined in the ITI RFD Profile.

1155 The Form Processor SHALL support XHTML.

The system fulfilling this role in the VRDR Profile SHALL accept pre-pop data in the form of content defined by any of the following summary documents:

- IHE PCC XDS-MS (Referral Summary 1.3.6.1.4.1.19376.1.5.3.1.1.3,
- Discharge Summary 1.3.6.1.4.1.19376.1.5.3.1.1.4),
- 1160 • IHE PCC XPHR (1.3.6.1.4.1.19376.1.5.3.1.1.5),

- HL7 Continuity of Care Document (CCD) (2.16.840.1.113883.10.20.1.22), or
- IHE QRPH (MS-VRDR) (1.3.6.1.4.1.19376.1.7.3.1.1.23.2)

1165 and return a form that has been appropriately pre-populated based on the mapping rules specified in QRPH TF-3: 6.3.1.D1.4.3 Data Element Requirement Mappings for Form Pre-Population. The Form Processor shall support ALL of these pre-pop documents. The Form Processor must also support data capture in the absence of a pre-pop document.

If the Form Filler retrieves a previously populated form, the Form Processor shall supply the previously populated content. How the Form Processor maintains the previously populated form between submissions is not specified by IHE.

1170 The Form Processor SHALL receive the populated form from the Form Filler when the form is submitted. No further requirements are placed on the Form Processor within the scope of this profile.

Note: This actor is not used for mRFD (see Form Manager).

X.1.1.9 Form Archiver

1175 The actions of the Form Archiver are defined in the ITI RFD Profile. In the VRDR Profile, the Form Archiver MAY be leveraged to support traceability of the submitted documents. No further refinements of that document are stated by this profile.

X.1.1.10 Information Source

No additional requirements.

1180 **X.1.1.11 Information Recipient**

No additional requirements.

X.1.1.12 Content Creator

1185 Detailed rules for the VRDR CDA Document Content are fully defined in QRPH TF-3: 6.3.1.D1.5, and detailed rules for the VRDR FHIR Document Composition Bundle are fully defined in QRPH TF-3: 6.6.x.2.

X.1.1.13 Content Consumer

Detailed rules for the VRDR CDA Document Content are fully defined in QRPH TF-3: 6.3.1.D1.5, and detailed rules for the VRDR FHIR Document Composition Bundle are fully defined in QRPH TF-3: 6.6.x.2.

1190 X.1.1.14 Data Consumer

The Data Consumer is responsible for initiating a query using the Query for Death Reporting Data (VRDRQuery) [QRPH-47] message to the Data Responder to retrieve the Death Reporting data.

X.1.1.15 Data Responder

1195 The Data Responder is responsible for responding to a Query for Death Reporting Data (VRDRQuery) [QRPH-47] message to the Data Consumer to provide the Death Reporting data.

X.2 VRDR Actor Options

Options that may be selected for each actor in this profile, if any, are listed in the Table X.2-1. Dependencies between options when applicable are specified in notes.

1200

Table X.2-1: VRDR - Actors and Options

Actor	Option Name	Reference
Content Creator	CDA Option ^{Note1}	Section X.2.1
	FHIR IDN Option ^{Note1}	Section X.2.2.2
	FHIR FDDI Option ^{Note1}	QRPH TF-1: Section X.2.2.2
	FHIR CDI Option ^{Note1}	QRPH TF-1: Section X.2.2.2
	FHIR JDI Option ^{Note1}	QRPH TF-1: Section X.2.2.2
	FHIR CCOD Option ^{Note1}	QRPH TF-1: Section X.2.2.2
	FHIR CRE Option ^{Note1}	QRPH TF-1: Section X.2.2.2
	FHIR Research Option ^{Note1}	QRPH TF-1: Section X.2.2.2
Content Consumer	View ^{Note2}	PCC TF-1: 3.4.1.1
	Document Import ^{Note2}	PCC TF-1: 3.4.1.2
	Discrete Data Import ^{Note2}	PCC TF-1: 3.4.1.4
	FHIR IDN Option ^{Note2}	QRPH TF-1: Section X.2.2.2
	FHIR FDDI Option ^{Note2}	QRPH TF-1: Section X.2.2.2
	FHIR CDI Option ^{Note2}	QRPH TF-1: Section X.2.2.2
	FHIR JDI Option ^{Note2}	QRPH TF-1: Section X.2.2.2
	FHIR VOID Option ^{Note2}	QRPH TF-1: Section X.2.2.2
	FHIR CCOD Option ^{Note2}	QRPH TF-1: Section X.2.2.2
	FHIR CRE Option ^{Note2}	QRPH TF-1: Section X.2.2.2
	FHIR Research Option ^{Note2}	QRPH TF-1: Section X.2.2.2
Form Filler	Summary Document Pre-Pop ^{Note3}	QRPH TF-1: X.2.3
	VRDR Pre-Pop ^{Note3}	QRPH TF-1: X.2.4
	Archive Form ^{Note3}	QRPH TF-1: X.2.5
Form Manager	None	--

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Actor	Option Name	Reference
Form Processor	None	--
Form Receiver	None	--
Form Receiver Document Exporter	None	--
Form Processor Document Exporter	None	--
Form Receiver Message Exporter	Immediate Death Notification Information Option ^{Note4}	QRPH TF-1: X.2.6
	Certifier Death Information Option ^{Note4}	QRPH TF-1: X.2.7
	Funeral Director Death Information Option ^{Note4}	QRPH TF-1: X.2.8
	Jurisdiction Death Information Option ^{Note4}	QRPH TF-1: X.2.10
Form Processor Message Exporter	Immediate Death Notification Information Option ^{Note4}	QRPH TF-1: X.2.6
	Certifier Death Information Option ^{Note4}	QRPH TF-1: X.2.7
	Funeral Director Death Information Option ^{Note4}	QRPH TF-1: X.2.8
	Jurisdiction Death Information Option ^{Note4}	QRPH TF-1: X.2.10
Form Archiver	No options defined	--
Information Source	Immediate Death Notification Information Option ^{Note5}	QRPH TF-1: X.2.6
	Certifier Death Information Option ^{Note5}	QRPH TF-1: X.2.7
	Funeral Director Death Information Option ^{Note5}	QRPH TF-1: X.2.8
	Case Assigned Information Option	QRPH TF-1: X.2.9
	Jurisdiction Death Information Option ^{Note5}	QRPH TF-1: X.2.10
	Void Certificate Reporting Option ^{Note5}	QRPH TF-1: X.2.11
	Coded Cause of Death Option ^{Note5}	QRPH TF-1: X.2.12
	Coded Race / Ethnicity Option ^{Note5}	QRPH TF-1: X.2.13
Information Recipient	Immediate Death Notification Information Option ^{Note5}	QRPH TF-1: X.2.6
	Certifier Death Information Option ^{Note5}	QRPH TF-1: X.2.7
	Funeral Director Death Information Option ^{Note5}	QRPH TF-1: X.2.8
	Case Assigned Information Option	QRPH TF-1: X.2.9

Actor	Option Name	Reference
	Jurisdiction Death Information Option ^{Note6}	QRPH TF-1: X.2.10
	Void Certificate Reporting Option ^{Note6}	QRPH TF-1: X.2.11
	Coded Cause of Death Option ^{Note6}	QRPH TF-1: X.2.12
	Coded Race / Ethnicity Option ^{Note6}	QRPH TF-1: X.2.13
Data Consumer	Clinical Query Option	QRPH TF-1: X.2.14
	Death Record Query Option	QRPH TF-1: X.2.15
Data Responder	Clinical Query Option	QRPH TF-1: X.2.14
	Death Record Query Option	QRPH TF-1: X.2.15

Note 1: The Content Creator must be able to support at least one of these options

Note 2: The Content Consumer SHALL support at least one of these options

Note 3: The Form Filler SHALL support at least one of these options

1205 Note 4: The Form Receiver Message Exporter and the Form Processor Message Exporter SHALL support at least one of the Immediate Death Notification Option, the Certifier Death Information Option, the Funeral Director Death Information Option, or the Jurisdiction Death Information Option

Note 5: The Information Source SHALL support at least one of these options

Note 6: The Information Recipient SHALL support at least one of these options

Note 7: The Data Consumer Recipient SHALL support at least one of these options

1210 Note 8: The Data Consumer Recipient SHALL support at least one of these options

X.2.1 CDA Option

1215 This option defines the processing requirements placed on the Content Creators for producing a CDA structured document version of the Vital Records Death Reporting document (1.3.6.1.4.1.19376.1.7.3.1.1.23.1). The CDA details are in Volume 3, Section 6.3.1.D1.5.

X.2.2 FHIR Document Options

1220 FHIR VRDR Document Composition Bundle content optionality is defined in this section, constraining the required content for each of the information flows that support conveying death information between the multiple stakeholders involved in death reporting. These stakeholders include the system that communicates the initial death notification (typically the facility where the patient died, the Medical Examiner, the Funeral Director, the Jurisdiction Vital Records Office supported by the EDRS, and the National Vital Statistics Organization.

1225 These options define the processing requirements placed on the Content Creators for producing a VRDR FHIR Document Composition Bundle version of the Vital Records Death Reporting documents using Share Content for transport. These options define the processing requirements placed on the Content Consumers for parsing and importing discrete data for at least one of the resources specified by the VRDR FHIR Document Composition Bundle version of the Vital

Records Death Reporting documents using Share Content for transport. The FHIR details with optionality defined for each option are in Volume 3, Section 6.6.x.2.

1230 **X.2.2.1 FHIR Document Immediate Death Notification (IDN) Option**

1235 The FHIR Document Immediate Death Notification Option includes individual identification content and death information sufficient to convey to the jurisdictional Vital Records Office EDRS the fact of a death event so that a unique case identifier may be assigned and used to assure the proper collation of information regarding the decedent. This notification may be sent by the provider/medical certifier, the medical examiner/coroner, or by the funeral director. It is possible that multiple parties may independently send such a notification. This is relevant because there is more than one party collecting information for the death certificate, and it is necessary that all the medical and demographic information for a particular decedent be collected into the same record.

1240 **X.2.2.2 FHIR Document Case Identifier Assigned (CIA) Option**

1245 The FHIR Document Case Identifier Assigned Option includes decedent identification information along with the case Identifier assigned by the jurisdictional Vital Records Office EDRS sufficient to convey the assigned case identifier to the submitter of the immediate death notification. If this is the first death notification, the EDRS will assign a new case identifier. If notification of the death event has already been received, the previously assigned case identifier will be sent.

X.2.2.3 FHIR Document Certifier Death Information (CDI) Option

1250 The FHIR Document Certifier Death Information Option includes decedent identification information along with the clinical information associated with the death record that is collected by the provider most knowledgeable with the relevant information and conveyed to the jurisdictional Vital Records Office EDRS. If the case is not transferred to a medical examiner, the provider/medical certifier is the initiator.

X.2.2.4 FHIR Document Funeral Director Death Information (FDDI) Option

1255 The FHIR Document Funeral Director Death Information Option includes decedent demographic and non-medical information for the patient that is collected and conveyed from the funeral director to the jurisdiction Vital Records Office EDRS.

X.2.2.5 FHIR Document Jurisdiction Death Information (JDI) Option

1260 The FHIR Document Jurisdiction Death Information Option includes relevant death information conveyed from the jurisdiction Vital Records Office EDRS to the national statistics agency where the information is used to determine a nationally consistent coded cause of death, and to assess death statistics for the nation.

X.2.2.6 FHIR Document Jurisdiction Death Information (JDI) Option

1265 The FHIR Document Jurisdiction Death Information Option includes relevant death information conveyed from the jurisdiction Vital Records Office EDRS to the national statistics agency where the information is used to determine a nationally consistent coded cause of death, and to assess death statistics for the nation.

X.2.2.7 FHIR Document Coded Cause of Death (CCOD) Option

1270 The FHIR Document Coded Cause of Death Option includes the coded cause of death as established by the national statistics agency, along with the jurisdiction-assigned decedent identifier information conveyed by the national statistics agency to the jurisdiction Vital Records Office EDRS from where the death was reported.

X.2.2.8 FHIR Document Coded Race and Ethnicity (CRE) Option

1275 The FHIR Document Coded Race and Ethnicity Option includes the coded race and ethnicity of the decedent as established by the national statistics agency, along with the jurisdiction-assigned decedent identifier information conveyed by the national statistics agency to the jurisdiction Vital Records Office EDRS from where the death was reported. Use of this option and information flow may be restricted by some jurisdictions. Such constraints may be specified by national extension.

X.2.2.9 FHIR Document Research Deaths (RD) Option

1280 The FHIR Research Deaths Option includes the coded cause of death as extension established by the national statistics agency, along with sufficient demographic information for the research organization to link the decedent to the research record.

X.2.3 Summary Document Pre-Pop Option

1285 This option enables Form Fillers to provide medical summary pre-pop data to the Form Manager. A Form Filler that supports the Summary Document Pre-Pop Option SHALL populate the value of the pre-popData parameter in the Retrieve Form Request (see ITI TF-2b: 3.34.4.1) with a well-formed xml document. The document SHALL be one of:

- IHE PCC XDS-MS Referral Summary (1.3.6.1.4.1.19376.1.5.3.1.1.3)
- IHE PCC XDS-MS Discharge Summary (1.3.6.1.4.1.19376.1.5.3.1.1.4)
- 1290 • IHE PCC XPHR (1.3.6.1.4.1.19376.1.5.3.1.1.5)
- HL7 Continuity of Care Document (CCD) (2.16.840.1.113883.10.20.1.22)

X.2.4 VRDR Pre-Pop Option

This option enables Form Fillers to optimize the ability to process the clinical content to fill in the VRDR Form. A Form Filler that supports the VRDR Pre-Pop Option SHALL populate the

- 1295 value of the pre-popData parameter in the Retrieve Form Request (see ITI TF-2b: 3.34.4.1) with a well-formed xml document as defined in QRPH TF-3: 6.3.1.D2 Medical Summary for VRDR Pre-pop (MS-VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.2).

X.2.5 Archive Form Option

- 1300 If the Form Filler supports the Archive Form Option, it shall support the Archive Form [ITI-36] transaction.

X.2.6 Immediate Death Notification Information Option

- 1305 This option is intended to support need to have the fact of a death event communicated to the jurisdictional vital records office so that a unique case identifier may be assigned and used to assure the proper collation of information regarding the decedent. This may be collected from the provider, the coroner, or the funeral home, and may be sent by multiple parties. The Form Receiver Message Exporter, the Form Processor Message Exporter, the Information Source, and the Information Recipients supporting this option shall support the content defined for the Immediate Death Notification Information (IDNI) Option in the VRDRFeed [QRPH-38] transaction: see QRPH TF-2: 3.38.4.1.

X.2.7 Certifier Death Information Option

- 1310 This option is intended to support communications of that portion of the death record that is collected by the provider most knowledgeable with the relevant information. If the case is not transferred to a medical examiner, the provider medical certifier is the initiator. The goal of the option is to provide safe, reliable delivery of relevant clinical information to the state vital records office. The Form Receiver Message Exporter, the Form Processor Message Exporter, the Information Source, and the Information Recipients supporting this option shall support the content defined for the Certifier Death Information (CDI) Option in the VRDRFeed [QRPH-38] transaction: see QRPH TF-2: 3.38.4.1.

X.2.8 Funeral Director Death Information Option

- 1320 This option is intended to support communications of that portion of the death record that includes demographic and other non-medical information for the patient. The Form Receiver Message Exporter, the Form Processor Message Exporter, the Information Source, and the Information Recipients that support this option shall support the content defined for the Funeral Director Death Information (FDDI) Option in the VRDRFeed [QRPH-38] transaction, see QRPH
1325 TF-2: 3.38.4.1

X.2.9 Case Assigned Information Option

- 1330 This option returns a VRDRFeed [QRPH-38] message with the jurisdiction-assigned unique identifier to the sender of the immediate death notification. If this is the first death notification, the Electronic Death Registration System (EDRS) will assign a new case identifier. If notification of the death event has already been received, Information Source at the jurisdictional

vital records office returns the previously assigned case identifier in the VRDRFeed[QRPH-38] message to the Information Recipient. from the. The Information Source, and the Information Recipients supporting this option shall support the content defined for the Case Assigned Information (CAI) Option in the VRDRFeed [QRPH-38] transaction: see QRPH TF-2: 3.38.4.1.

1335 **X.2.10 Jurisdiction Death Information Option**

This option is intended to support communications from the jurisdictional vital records office to a national statistics agency. The Form Receiver Message Exporter, the Form Processor Message Exporter, the Information Source, and the Information Recipients shall support the content defined for the Jurisdiction Death Information (JDI) Option in the VRDRFeed [QRPH-38] transaction: see QRPH TF-2: 3.38.4.1.

X.2.11 Void Certificate Reporting Option

This option is intended to support communications from the jurisdictional vital records office to a national statistics agency. The Information Source, and the Information Recipients shall support the content defined for the Void Certificate Reporting (JDI-VOID) Option in the VRDRFeed [QRPH-38] transaction: see QRPH TF-2: 3.38.4.1.

X.2.12 Coded Cause of Death Option

This option is intended to support communications from a national statistics agency to the jurisdictional vital records office. The Information Source and the Information Recipients shall support the content defined for the Coded Cause of Death (CCOD) Option in the VRDRFeed [QRPH-38] transaction: see QRPH TF-2: 3.38.4.1.

Actors that support this option are able to send or receive coded cause of death information.

X.2.13 Coded Race / Ethnicity Option

This option is intended to support communications from the national statistics agency to a jurisdictional vital records office. The Information Source and the Information Recipients shall support the content defined for the Coded Race / Ethnicity (CREI) Option in the VRDRFeed [QRPH-38] transaction: see QRPH TF-2: 3.38.4.1.

Actors that support this option are able to send or receive race and ethnicity information.

In some jurisdictions, it is prohibited to send race and/or ethnicity. Use of this option may be constrained by national extension.

1360 **X.2.14 Clinical Query Option**

A Data Consumer implementing the Clinical Query Option is responsible for initiating a patient-level query to the Data Responder system for resources that support the Vital Records Death Reporting requirement using VRDRQuery [QRPH-47], and can retrieve selected resources supplied by the Data Responder for the specified patient.

- 1365 A Data Responder implementing the Clinical Query Option is responsible for responding to a query for patient-specific resources that support the Vital Records Death Reporting requirements using VRDRQuery [QRPH-47].

X.2.15 Death Record Query Option

- 1370 A Data Consumer implementing the Death Record Query Option is responsible for initiating a VRDRQuery [QRPH-47] to the Data Responder system for mortality data that support the Vital Records Death Reporting mortality data requirement using VRDRQuery [QRPH-47], and can retrieve selected resources supplied by the Data Responder for the specified list of patients.

- 1375 A Data Responder implementing the Clinical Query Option is responsible for responding to a query for multiple patients that support the Vital Records Death Reporting requirements using VRDRQuery [QRPH-47].

X.3 VRDR Required Actor Groupings

There are no required groupings with actors.

X.4 VRDR Overview

- 1380 Death reporting is a process for creating the legal record of a person's death and the process is subject to state or jurisdictional and international laws and regulations. Other uses of the information (e.g., statistical and public health) are byproducts of this process. Because a legal document is being created, concerns about capture in the native EHR are about verifying information, obtaining legally recognized signatures, making corrections, and how to handle transfers of responsibility when necessary.
- 1385 The major intersection between the Electronic Health Record (EHR) and the Electronic Death Registration System (EDRS) is the physician who serves as a common source of information. The EDRS is interested in a medical practitioner's narrative opinion only about medical events that had a role in death and how these different conditions were related to each other. The EHR captures related items that inform the opinion about cause of death. As a WHO member country,
- 1390 the US is obligated by the WHO Nomenclature Regulations to collect and process cause-of-death information as specified in the relevant International Classification of Diseases (ICD). The rules, regulations, and guidelines in the ICD specify the format to capture the medical practitioner's clinical judgment of cause of death and specify that the information should be reported as text to ensure full flexibility in the range of diagnoses. Free-text data entry allows capture of new or yet
- 1395 to be discovered diseases, studies on terminology shifts, and centralizes responsibility for transitioning to and eases implementation of new ICD revisions. Additional items that the medical practitioner is responsible for providing give additional details on the causes of death that require direct data entry and information identifying the source of the information. There are more shared items in the larger death reporting process but those are items that funeral directors
- 1400 are required to report.

X.4.1 Concepts

1405 In the current use case, a physician, normally the attending physician is responsible for completing the medical certification portion of the death record in the Electronic Death Reporting System (EDRS), typically operated by the Jurisdiction Vital Records Office. The physician will get an email from the funeral director notifying him that he has a death record to complete. After logging into the EDRS, the physician selects and views the appropriate record from his queue of pending death records. He opens the electronic record and begins the process of completing it. The physician consults medical records and those in recent contact with the decedent to formulate an opinion of the sequence of causes and any other significant contributing
1410 causes that resulted in death. He completes all other medical items on the record and electronically signs the record in the EDRS. The record is saved and filed electronically with the state vital statistics office.

1415 In the following use cases, Vital Registration Systems or third party services facilitate the death reporting process by supplying interoperable forms that use data captured natively by EHR systems. This approach further minimizes the workload on the provider by pre-populating that form from information already available in the EHR as provided to the form through standard CDA content (IHE PCC XDS-MS, XPHR and HL7 CCD documents).

X.4.2 Use Cases

1420 The attending physician logs into the EHR and accesses the record of a recently deceased patient to begin the process of completing information required for death certification. The EHR presents a form to the physician that contains some data that has been pre-populated. She reviews the form, completes the remaining items, and indicates that the record is complete and accurate before data may be transmitted electronically into the EDRS Form Processor or Form Receiver operated by the Jurisdiction Vital Records Office. More information may be readily accessible in
1425 the EHR to formulate an opinion about causes of death. Jurisdictional legal restrictions may still require the physician to log into the EDRS and sign the record in the EDRS rather than being able to transfer the fact of the signature across the systems. The EDRS record is saved and filed electronically with the state vital statistics office. The use cases below describe approaches where the Jurisdiction's EDRS is collects this information as a Form Manager, and uses FHIR to
1430 send the Jurisdiction Death Information to the National Statistics Agency, where the Coded Cause of Death and the Coded Race and Ethnicity are determined and returned back to the Jurisdiction EDRS.

X.4.2.1 Use Case #1: Forms Data Capture with FHIR

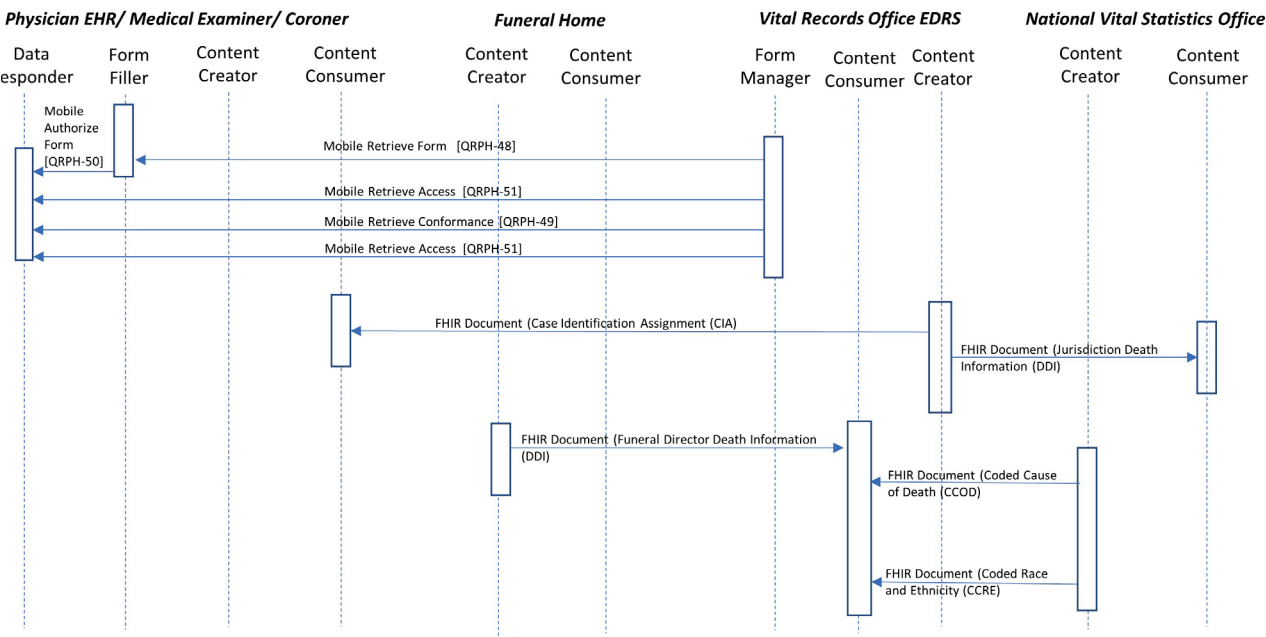
1435 The Forms Data Capture with FHIR use case leverages Mobile Retrieve Form for Data Capture (mRFD) transactions to present EDRS form for Querypopulation with FHIR. The data collected by the Jurisdiction EDRS is sent to the National Statistics Agency where the Coded Cause of Death and the Coded Race and Ethnicity are determined so as to establish consistent coding across the nation. The National Statistics Agency returns this coded content to the Jurisdiction EDRS.

1440 **X.4.2.1.1 Forms Data Capture with FHIR Use Case Description**

When the decedent's death has been documented in the EHR, FHIR resources supporting death reporting are available for query. These resources are queried for Querypopulation by the Jurisdiction Vital Records Office EDRS that has implemented the IHE QRPH Mobile Retrieve Form for Data Capture (mRFD) Form Manager. The Form is presented to the death registration user, populated by the information available in the clinical system. The death registration user completes the remaining form items, and submits the form information. The funeral director collects the decedent demographic information from the family, and submits this information to the Jurisdiction Vital Records Office EDRS. The Jurisdiction Vital Records Office EDRS auto-generates a FHIR document to send the decedent information to the National Statistics Agency. The National Statistics Agency receives the decedent information, including the narrative cause of death, from the Jurisdiction Vital Records Office EDRS. The coded cause of death information is generated by the National Statistics Agency, and returned to the Jurisdiction Vital Records Office EDRS, along with coded race and ethnicity. This coded information is incorporated into the EDRS where it is available for jurisdiction statistics.

1455 **X.4.2.1.2 Forms Data Capture with FHIR Process Flow**

The provider EHR presents the EDRS form as a Form Filler, providing access to the FHIR resources specified by this profile for Querypopulation by the Form Manager. The provider completes the form, verifies the accuracy of all information, and submits the form. The case identifier is assigned by the Jurisdiction EDRS, and the Jurisdiction EDRS Content Creator generates a FHIR Document with the CIA Option, and returns this to the Content Consumer from the system reporting the death. The Funeral Home Content Creator sends decedent demographic and social history information to the Jurisdiction EDRS Content Consumer using the FHIR Document with the FDDI Option to the Jurisdiction EDRS. The Jurisdiction EDRS Content Creator sends the Jurisdiction death information using the FHIR Document with the JDI Option to the National Statistics Agency Content Consumer. The National Statistics Agency Content Creator generates a FHIR Document with the CCOD Option and a FHIR Document with the CREI Option, and sends these documents to the Jurisdiction EDRS Content Consumer.



1470 **Figure X.4.2.1.2-1: Use Case 1-Forms Data Capture with FHIR**

X.4.2.2 Use Case #2: Forms Data Capture with Messaging

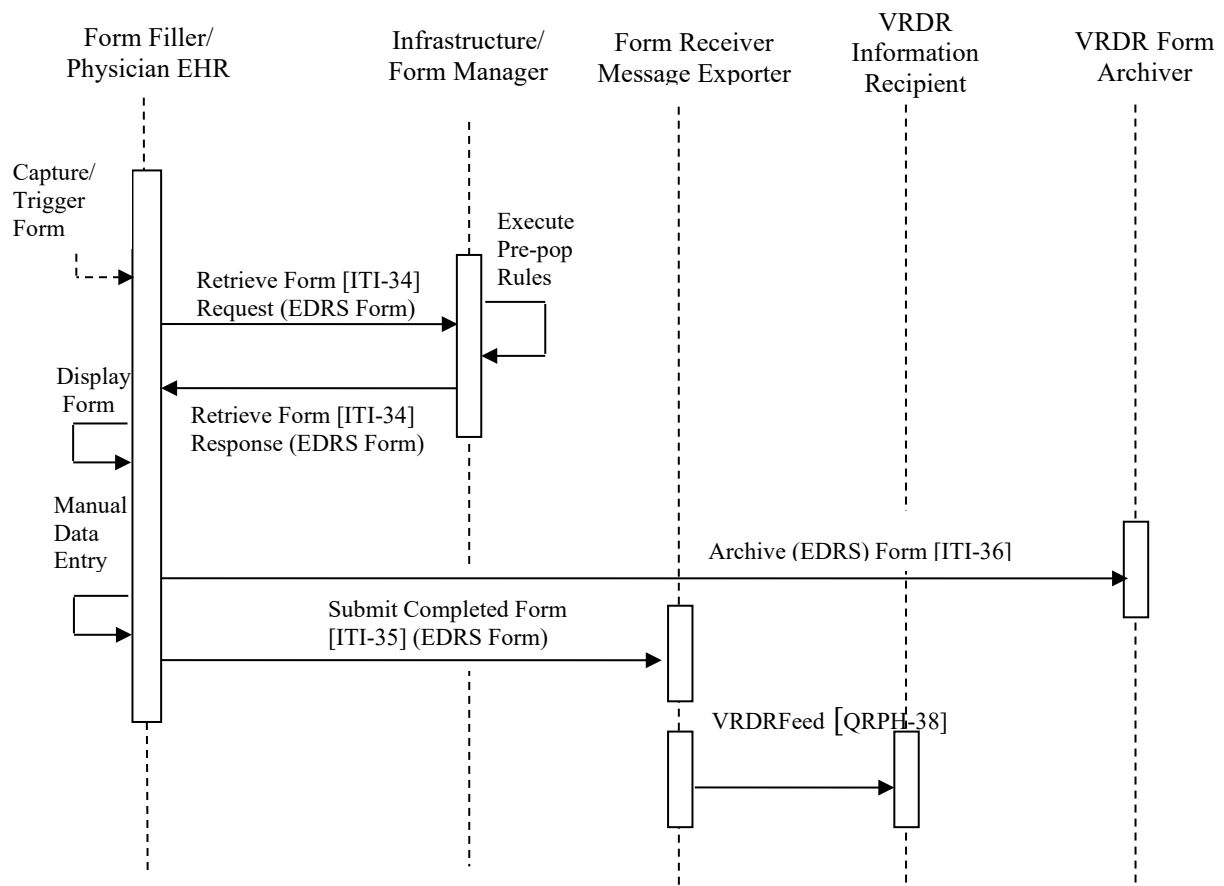
1475 The Forms Data Capture with Messaging use case leverages Retrieve Form for Data Capture (RFD) transactions to present EDRS form for pre-population, and the Form Receiver system transforms the information into an HL7 VRDR message to transmit the information to Public Health.

X.4.2.2.1 Forms Data Capture with Messaging Use Case Description

1480 When the decedent’s death has been documented in the EHR, a Summary document (e.g., IHE PCC Medical Summary, IHE PCC XPHR, CCD, MS-VRDR) is created. This Summary document is provided as pre-population data to a public health IHE ITI Retrieve Form for Data Capture (RFD) Forms Manager. The RFD Form Receiver provides the content to the EDRS by way of a transform to the corresponding HL7 VRDR message.

X.4.2.2.2 Forms Data Capture with Messaging Process Flow

1485 The provider EHR presents the EDRS form providing a PCC XDS-MS, XPHR or CCD document for Pre-population by the Form Manager. The provider completes the form, verifies the accuracy of all information, and submits the form. The Form Receiver transforms the information from the form into an HL7 VRDR message and transmits that message to the EDRS system using the VRDRFeed [QRPH-38] transaction.



1490

Figure X.4.2.2.2-1: Use Case 1-Forms Data Capture with Messaging

X.4.2.3 Use Case #3: Forms Data Capture with Document Submission

The Forms Data Capture with Document Submission use case leverages Retrieve Form for Data Capture (RFD) transactions to present EDRS form for pre-population, and the Form Receiver system transforms the information into an HL7 VRDR CDA R2 document to transmit the information to Public Health.

1495

X.4.2.3.1 Forms Data Capture with Document Submission Use Case Description

When the decedent's death has been documented in the EHR, a Summary document (e.g., IHE PCC Medical Summary, IHE PCC XPHR, CCD, MS-VRDR) is created. This Summary document is provided as pre-population data to a public health IHE ITI Retrieve Form for Data Capture (RFD) Forms Manager. The RFD Form Receiver provides the content to the EDRS by way of a transform to the corresponding HL7 VRDR CDA R2 document.

1500

X.4.2.3.2 Forms Data Capture with Document Submission Process Flow

1505 The provider EHR presents the EDRS form providing a PCC XDS-MS/XPHR or CCD document for Pre-population by the Form Manager. The provider completes the form, verifies the accuracy of all information, and submits the form. The Form Receiver transforms the information from the form into an HL7 VRDR CDA R2 document and sends it to the EDRS system.

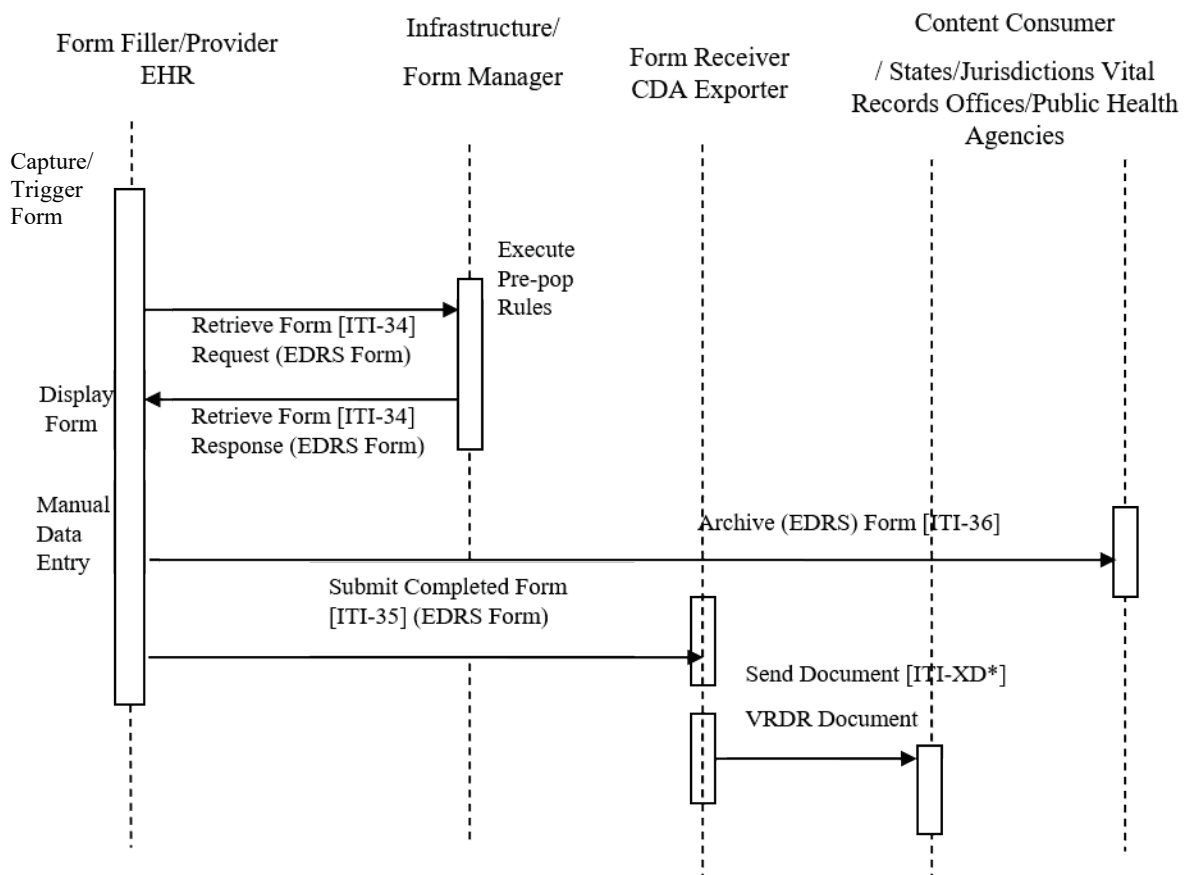


Figure X.4.2.3.2-1: Use Case 2-Forms Data Capture with Document Submission

1510 X.4.2.4 Use Case #4: Native Forms Data Capture

The Forms Data Capture with Document Submission use case leverages Retrieve Form for Data Capture (RFD) transactions to present EDRS form for pre-population. The Form Receiver system is natively integrated into the EDRS.

X.4.2.4.1 Native Forms Data Capture Use Case Description

1515 When the decedent's death has been documented in the EHR, a Summary document (e.g., IHE PCC Medical Summary, IHE PCC XPHR, CCD, MS-VRDR) is created. This Summary document is provided as pre-population data to a public health IHE ITI Retrieve Form for Data Capture (RFD) Forms Manager. The RFD Form Receiver information is consumed directly by the EDRS.

X.4.2.4.2 Native Forms Data Capture Process Flow

The provider EHR presents the EDRS form providing a PCC XDS-MS/XPHR or CCD document for Pre-population by the Form Manager. The provider completes the form, verifies the accuracy of all information, and submits the form. The RFD Form Receiver information is consumed directly by the EDRS.

1525

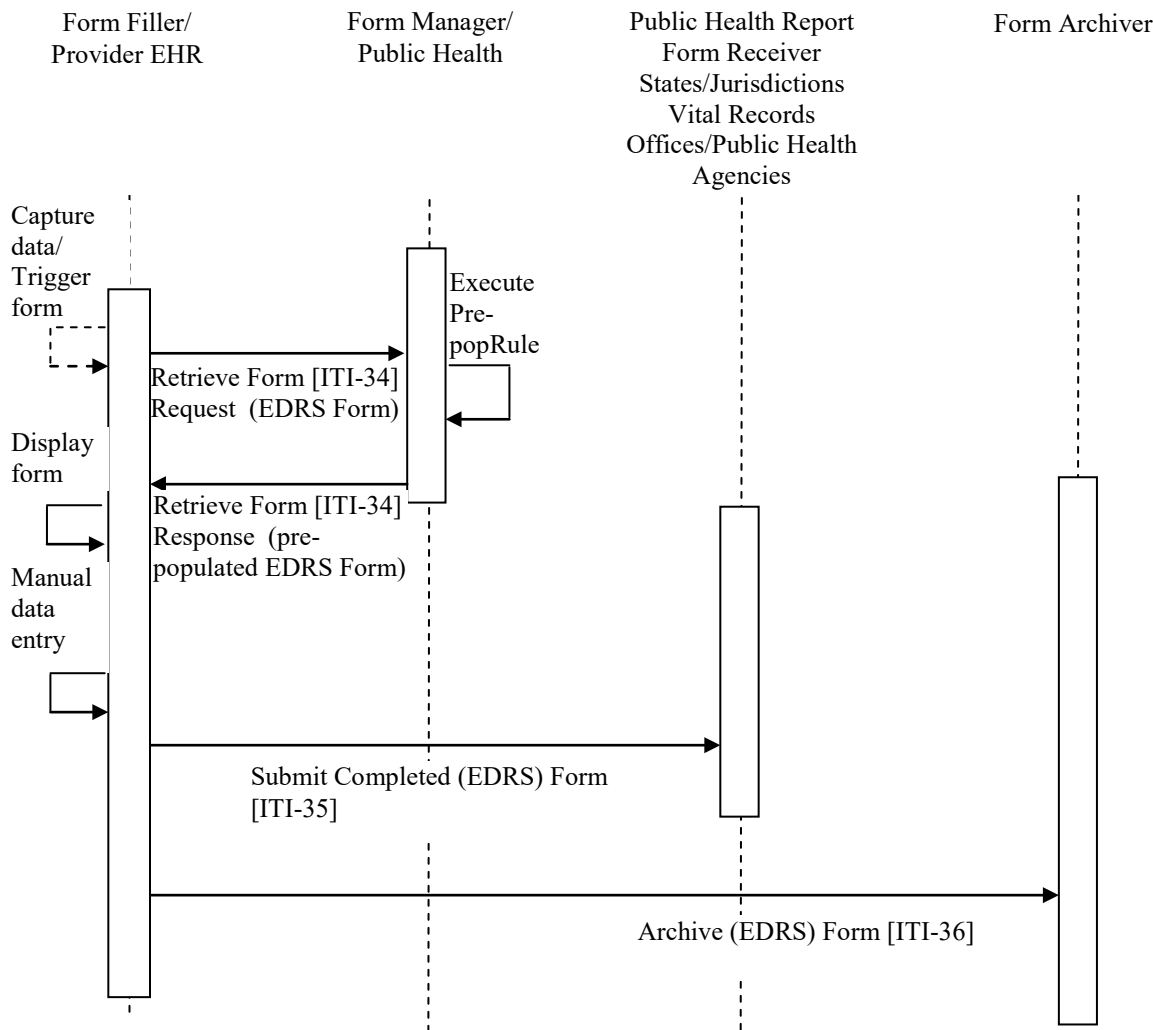


Figure X.4.2.4.2-1: Use Case 4-Native Forms Data Capture

X.4.2.5 Use Case #5: EHR VRDR Messaging

In the EHR VRDR Messaging use case, the EHR creates the HL7 VRDR message directly and transmits the information to the EDRS.

X.4.2.5.1 VRDR Messaging Use Case Description

When the decedent’s death has been documented in the EHR, the provider system (e.g., EHR, HIE) creates an HL7 VRDR message and sends the message to the EDRS directly. The EDRS communicates jurisdiction information to the national statistics agency where the standard coded cause of death is determined and returned to the jurisdiction vital records office.

X.4.2.5.2 VRDR Messaging Process Flow

The provider, along with the funeral director, sends the HL7 VRDRFeed message to the jurisdiction EDRS. The jurisdiction EDRS sends jurisdiction information with narrative cause of death to the national statistics agency system where the narrative cause of death is coded according to standard guidance from the World Health Organization (WHO) provided in the International statistical classification of diseases and related health problems 10th Revision, Volume 2 Instruction Manual. The coded cause of death is returned to the jurisdiction vital records office EDRS. In accordance with jurisdictional requirements, Race and/or Ethnicity are also returned from the National Statistics Agency to the originating jurisdictional vital records office using the Coded Race / Ethnicity Option. Due to paper jam damage of the printed official certificate that bears the death certificate number, a Void Certificate Reporting message is sent by the jurisdictional vital records office to the national statistics agency to void the submission. The death registration will subsequently be transmitted with a new death certificate number using the same transaction series between the originating jurisdictional vital records office and the National Statistics Agency.

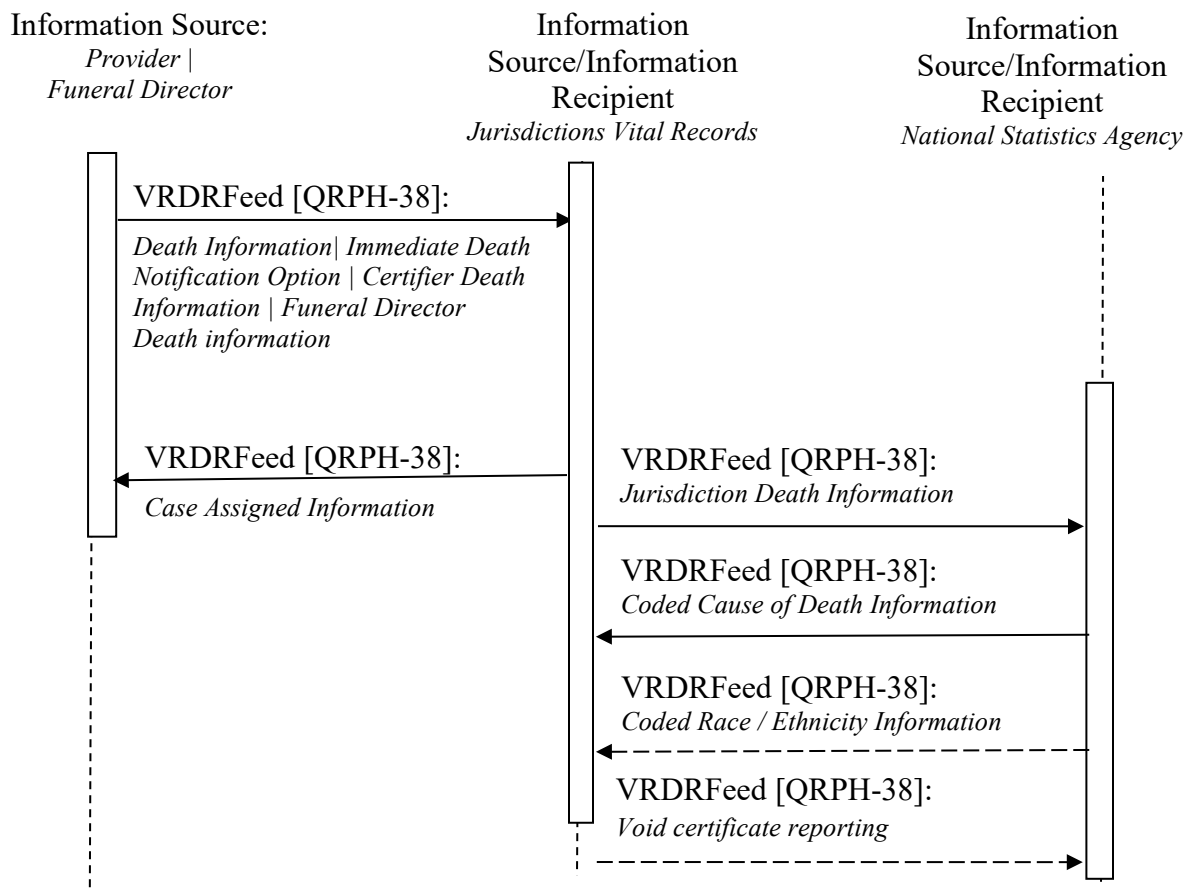


Figure X.4.2.5.2-1: Use Case 5- VRDR Messaging

X.4.2.6 Use Case #6: Provider VRDR Document Submission

1555 The Provider VRDR Document Submission use case creates the VRDR Document directly and transmits the information to Public Health.

X.4.2.6.1 Provider VRDR Document Submission Use Case Description

When the decedent's death has been documented in the EHR, the provider system creates a VRDR Document and sends the document to the EDRS directly.

X.4.2.6.2 Provider VRDR Document Submission Process Flow

1560 The provider system sends the VRDR Document to the EDRS.

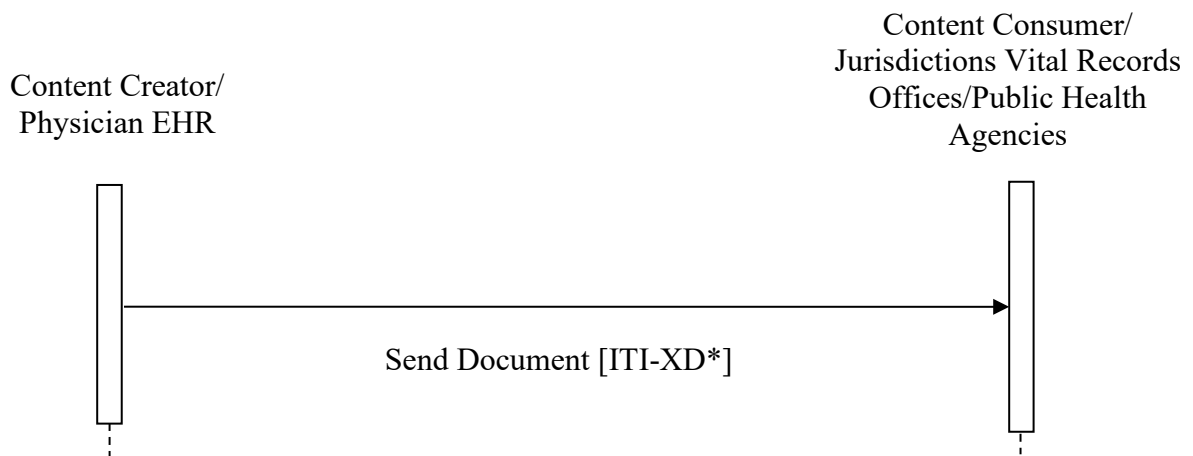


Figure X.4.2.6.2-1: Use Case 6-Provider VRDR Document Submission

1565 X.4.2.7 Use Case #7: Death Certificate COD Guidance

1570 In the Death Certificate COD Guidance use case, a SMART-on-FHIR app is available to the provider that uses EHR death reporting related information as input to an analytical engine that recommends probable sequences of events leading to the death based on the decedent's health history and allows the physician to complete the relevant portions of the death certificate. The completed death reporting information is sent to the EDRS where the jurisdiction completes the processing of the information with the national statistics agency.

X.4.2.7.1 Death Certificate COD Guidance Use Case Description

When the provider is ready to document the decedent's death, the Death Certificate COD Guidance SMART-on-FHIR app queries the EHR using VRDRQuery (QRPH-47) to retrieve

- 1575 death reporting related information. This information is used by an analytical engine that recommends probable sequences of events leading to the death based on the decedent's health history and allows the physician to complete the relevant portions of the death certificate.
- Once the decedent's death reporting information is documented using the app, the system creates an HL7 VRDR FHIR Document Composition Bundle and sends the message to the EDRS
- 1580 directly. The EDRS communicates the jurisdiction information to the national statistics agency using the HL7 VRDR FHIR Document Composition Bundle where the standard coded cause of death is determined and returned to the jurisdiction using the HL7 VRDR FHIR document.

X.4.2.7.2 Death Certificate COD Guidance Process Flow

- The SMART-on-FHIR app Death Report Data Consumer sends the VRDRQuery [QRPH-47]
- 1585 message to the EMR Death Report Data Responder to assist the provider in completing death reporting details. The death reporting information is sent to the jurisdiction vital records office EDRS. The jurisdiction vital records office EDRS sends jurisdiction information with narrative cause of death to the national statistics agency system where the narrative cause of death is coded according to standard guidance from the World Health Organization (WHO) provided in the
- 1590 International statistical classification of diseases and related health problems 10th Revision, Volume 2 Instruction Manual. The coded cause of death is returned to the jurisdiction vital records office EDRS. In accordance with jurisdictional requirements, Race and/or Ethnicity are also returned from the National Statistics Agency to the originating Jurisdictional vital records office using the Coded Race / Ethnicity message Option. A Void Certificate Reporting message
- 1595 may be optionally sent by the jurisdictional vital records office to the national statistics agency to manage erroneous submissions.

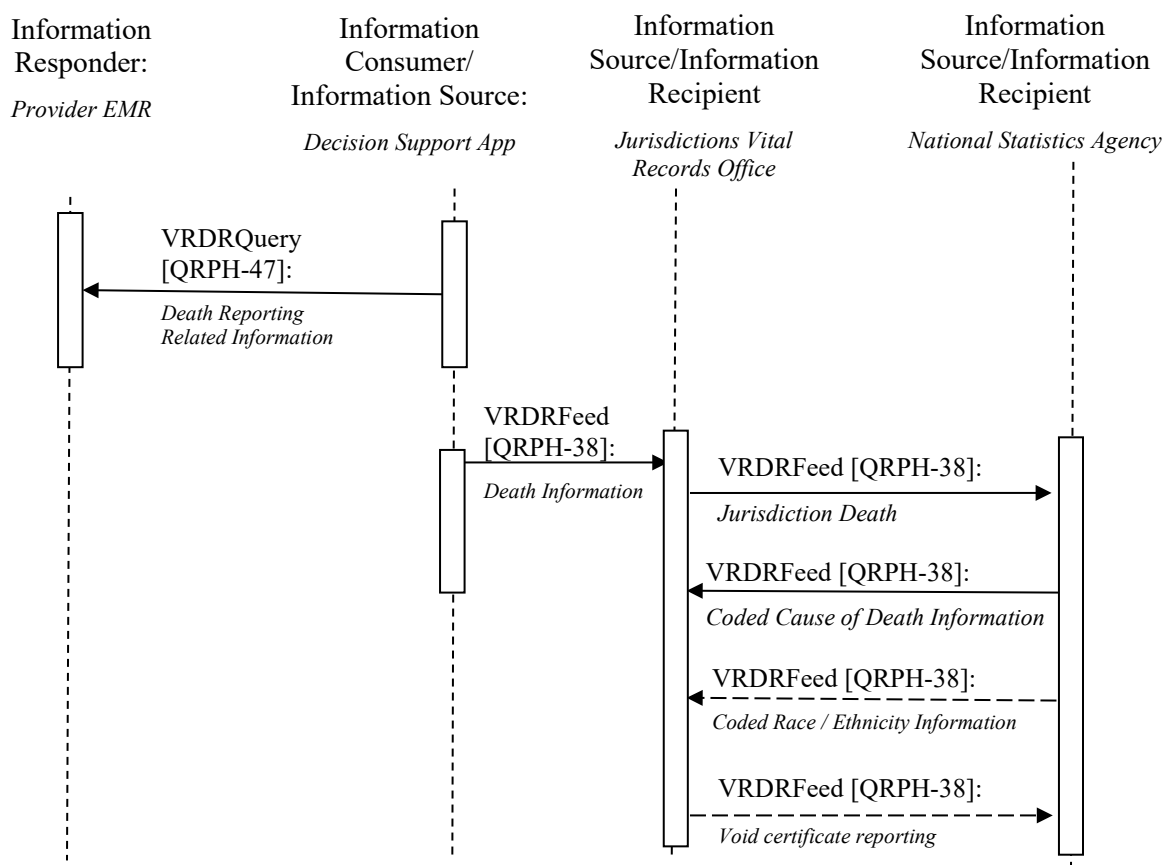


Figure X.4.2.7.2-1: Use Case 6- Death Certificate COD Guidance

X.4.2.8 Use Case #8: Mortality Outcomes

1600 Mortality data is a key data point in quality and outcome analysis, and since many may die without presenting to a healthcare facility, such data may be provided by jurisdictions to providers and researchers. This use case describes transmission of a set of mortality data from the jurisdiction to the research organization.

X.4.2.8.1 Mortality Outcomes Use Case Description

1605 A clinical research organization conducting cardiology outcomes analysis research establishes an agreement to receive routine data feeds for the mortality data in their jurisdiction. The jurisdiction transmits a set of VRDR FHIR Document Composition Bundles of death information on a scheduled weekly basis to the research organization, where data is linked as appropriate to the research cohort to determine whether any cohort subject has died, and whether the coded cause of death indicates that the death was related to the research question.

1610

X.4.2.8.2 Mortality Outcomes Process Flow

The research organization establishes authorization to receive routine mortality data from the jurisdiction, and signs associated data sharing agreements. The jurisdiction configures a routine feed for the research organization, applying any masking filters or data redactions defined by jurisdiction disclosure policy and data sharing agreement. The Jurisdiction Content Creator sends the VRDR FHIR Document Composition Bundle to the Research organization Content Consumer, where the data is linked to applicable research subjects to assess whether or not death was an outcome of the cardiac condition and/or intervention.

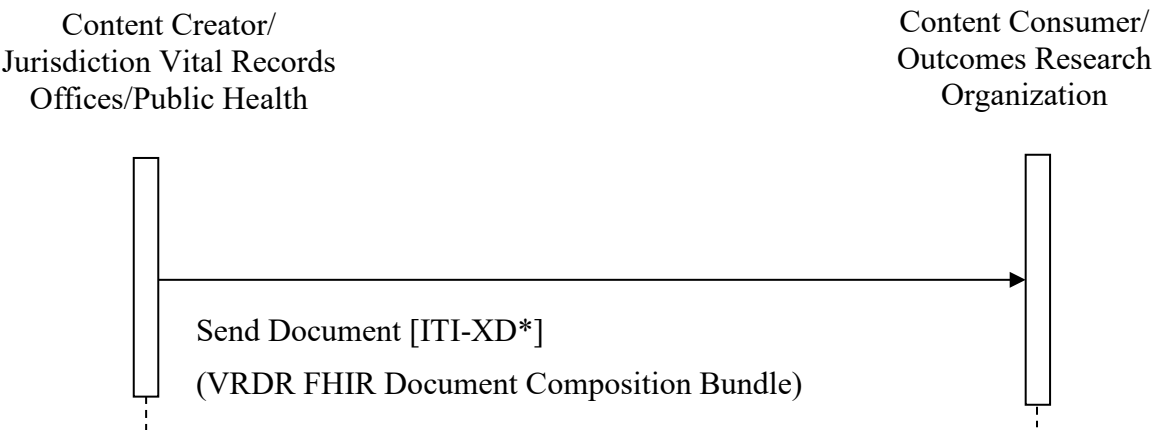


Figure X.4.2.8.2-1: Use Case 7-Mortality Outcomes Data Sharing

X.5 VRDR Security Considerations

VRDR includes clinical content related to the information subject. As such, it is anticipated that the transfers of Personal Health Information (PHI) will be protected. The IHE ITI Audit Trail and Node Authentication (ATNA) Profile SHOULD be implemented by all of the actors involved in the IHE transactions specified in this profile to protect node-to-node communication and to produce an audit trail of the PHI related actions when they exchange messages, though other private security mechanisms MAY be used to secure content within enterprise managed systems. Details regarding ATNA logging will be further described in QRPH TF-2: 3.38.5.1. RESTful Query to ATNA should also be considered (ITI TF-2:3.81, ITI TF-2:3.82).

The content of the form also results in a legal document, and the Form Manager MAY include a digital signature using the IHE ITI Digital Signature (DSG) Profile to assure that the form content submitted is the same content attested to by the submitter of the filled form.

1635 The VRDR form includes signatures of the certifier and the pronouncer of death. ITI Document Digital Signature (DSG) Profile may be used to support these signatures.

1640 Similarly, the Vital Records Death Reporting (VRDR) Document (1.3.6.1.4.1.19376.1.7.3.1.1.23.1) MAY be sent with a digital signature using the IHE ITI Digital Signature (DSG) Profile. When using DSG, the following specifications apply: The eventCodeList in the Metadata for the DSG document SHOULD reflect that these certifier and pronouncer are co-authors as the signature purpose as reflected by Co-Author ID (code is 1.2.840.10065.1.12.1.2, codingScheme 1.2.840.10065.1.12). Where these two roles are the same person, the one author SHOULD be reflected by Author ID (code is 1.2.840.10065.1.12.1.1, codingScheme 1.2.840.10065.1.12).

1645 For security purposes, when sending information specifically to vital records Electronic Death Registration Systems, systems will also need to know the identity of the user and the location to identify the data source. In this case, the IHE ITI Cross-Enterprise User Assertion (XUA) Profile MAY be utilized to support this implementation.

1650 This profile supports communication of mortality information for outcomes research. Information that may be disclosed for such purposes may vary by jurisdiction, and information content of standard transactions may be further constrained as a result.

X.6 VRDR Cross Profile Considerations

The following informative narrative is offered as implementation guidance.

X.6.1 mRFD – Mobile Retrieve Form for Data Capture

1655 The VRDRQuery[47] transaction may be used with Mobile Retrieve form for Data Capture as an alternative for form pre-population. To accomplish this, the Data Consumer should be grouped with the Form Manager of mRFD, and the Data Responder should be grouped with the Data Responder of mRFD using Mobile Populate Form (Response) [QRPH-52].

X.6.2 XD* – Cross Enterprise Document Sharing.b, Cross Enterprise Document Media Interchange, or Cross Enterprise Document Reliable Interchange

1660 The use of the IHE XD* family of transactions is encouraged to support standards-based interoperability between systems acting as the VRDR Content Creator and VRDR Content Consumer. However, this profile does not require any groupings with ITI XD* actors to facilitate transport of the content document it defines. Below is a summary of recommended IHE transport transactions that MAY be utilized by systems playing the roles of VRDR Content Creator or
1665 VRDR Content Consumer to support the standard use case defined in this profile:

- A Document Source in XDS.b, a Portable Media Creator in XDM, or a Document Source in XDR might be grouped with the VRDR Content Creator. A Document Consumer in XDS.b, a Portable Media Importer in XDM, or a Document Recipient in XDR might be grouped with the VRDR Content Consumer. A registry/repository-based infrastructure is defined by the IHE Cross Enterprise Document Sharing (XDS.b) that includes profile
1670

support that can be leveraged to facilitate retrieval of public health related information from a document sharing infrastructure: Multi-Patient Query (MPQ), and Document Metadata Subscription (DSUB),

- 1675
- A reliable messaging-based infrastructure is defined by the IHE Cross Enterprise Document Reliable Interchange (XDR) Profile. Document Source in XDR might be grouped with the VRDR Content Creator. A Document Recipient in XDR might be grouped with the VRDR Content Consumer,

Detailed description of these transactions can be found in the IHE IT Infrastructure Technical Framework.

1680 **X.6.3 Sharing Value Set (SVS)**

A VRDR Form Manager and Form Processor may support the Sharing Value Set (SVS) Profile in order to use a common uniform managed vocabulary for dynamic management of form mapping rules.

X.7 VRDR Data Elements

- 1685 This profile defines specific data elements commonly used in death reporting. Those data elements are described in Appendix B. Jurisdictions may implement all of these or a subset of these based on their jurisdictional requirements. The current list represents the WHO and US National Extension requirements. This list will expand over time to encompass requirements from additional jurisdictions.

1690

Volume 1 Appendices

Appendix A – Sample US Death Certificate form

The sample death reporting form included in this content profile reflects much of the data captured for the [U.S. Standard Certificate of Death](#). However, the VRDR Content Profile also includes support for international death reporting requirements, including the World Health Organization (WHO) verbal autopsy instrument (<http://www.who.int/healthinfo/statistics/verbalautopsystandards/en/>).

DEATH REPORTING FOR VITAL RECORDS

LOCAL FILE NO.		U.S. STANDARD CERTIFICATE OF DEATH				STATE FILE NO.	
1. DECEDENT'S LEGAL NAME (Include AKA's if any) (First, Middle, Last)				2. SEX		3. SOCIAL SECURITY NUMBER	
4a. AGE-Last Birthday (Years)		4b. UNDER 1 YEAR Months Days		4c. UNDER 1 DAY Hours Minutes		5. DATE OF BIRTH (Mo/Day/Yr)	
5. BIRTHPLACE (City and State or Foreign Country)							
7a. RESIDENCE-STATE				7b. COUNTY		7c. CITY OR TOWN	
7d. STREET AND NUMBER				7e. APT. NO.		7f. ZIP CODE	
7g. INSIDE CITY LIMITS? ☐ Yes ☐ No							
8. EVER IN US ARMED FORCES? ☐ Yes ☐ No		9. MARITAL STATUS AT TIME OF DEATH ☐ Married ☐ Married, but separated ☐ Widowed ☐ Divorced ☐ Never Married ☐ Unknown		10. SURVIVING SPOUSE'S NAME (If wife, give name prior to first marriage)			
11. FATHER'S NAME (First, Middle, Last)				12. MOTHER'S NAME PRIOR TO FIRST MARRIAGE (First, Middle, Last)			
13a. INFORMANT'S NAME		13b. RELATIONSHIP TO DECEDENT		13c. MAILING ADDRESS (Street and Number, City, State, Zip Code)			
14. PLACE OF DEATH (Check only one: see instructions)							
IF DEATH OCCURRED IN A HOSPITAL: ☐ Inpatient ☐ Emergency Room/Outpatient ☐ Dead on Arrival				IF DEATH OCCURRED SOMEWHERE OTHER THAN A HOSPITAL: ☐ Hospice facility ☐ Nursing home/Long term care facility ☐ Decedent's home ☐ Other (Specify):			
15. FACILITY NAME (If not institution, give street & number)				16. CITY OR TOWN, STATE, AND ZIP CODE		17. COUNTY OF DEATH	
18. METHOD OF DISPOSITION: ☐ Burial ☐ Cremation ☐ Donation ☐ Entombment ☐ Removal from State ☐ Other (Specify):				19. PLACE OF DISPOSITION (Name of cemetery, crematory, other place)			
20. LOCATION-CITY, TOWN, AND STATE				21. NAME AND COMPLETE ADDRESS OF FUNERAL FACILITY			
22. SIGNATURE OF FUNERAL SERVICE LICENSEE OR OTHER AGENT						23. LICENSE NUMBER (Of Licensee)	

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To Be Completed By: MEDICAL CERTIFIER	ITEMS 24-28 MUST BE COMPLETED BY PERSON WHO PRONOUNCES OR CERTIFIES DEATH		24. DATE PRONOUNCED DEAD (Mo/Day/Yr)		25. TIME PRONOUNCED DEAD		
	26. SIGNATURE OF PERSON PRONOUNCING DEATH (Only when applicable)		27. LICENSE NUMBER		28. DATE SIGNED (Mo/Day/Yr)		
	29. ACTUAL OR PRESUMED DATE OF DEATH (Mo/Day/Yr) (Spell Month)		30. ACTUAL OR PRESUMED TIME OF DEATH		31. WAS MEDICAL EXAMINER OR CORONER CONTACTED? ☐ Yes ☐ No		
	CAUSE OF DEATH (See instructions and examples) 32. PART I. Enter the <u>chain of events</u> —diseases, injuries, or complications—that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary. IMMEDIATE CAUSE (Final disease or condition -----> resulting in death) a. _____ Due to (or as a consequence of): _____ Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST b. _____ Due to (or as a consequence of): _____ c. _____ Due to (or as a consequence of): _____ d. _____					Approximate interval: Onset to death	
	PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I					33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No	
	35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ☐ Probably ☐ No ☐ Unknown					36. IF FEMALE: ☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	
	37. MANNER OF DEATH ☐ Natural ☐ Homicide ☐ Accident ☐ Pending Investigation ☐ Suicide ☐ Could not be determined					38. DATE OF INJURY (Mo/Day/Yr) (Spell Month)	
	39. TIME OF INJURY					40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area)	
	41. INJURY AT WORK? ☐ Yes ☐ No					42. LOCATION OF INJURY: State: _____ City or Town: _____	
	43. DESCRIBE HOW INJURY OCCURRED:					44. IF TRANSPORTATION INJURY, SPECIFY: ☐ Driver/Operator ☐ Passenger ☐ Pedestrian ☐ Other (Specify)	
45. CERTIFIER (Check only one): ☐ Certifying physician-To the best of my knowledge, death occurred due to the cause(s) and manner stated. ☐ Pronouncing & Certifying physician-To the best of my knowledge, death occurred at the time, date, and place, and due to the cause(s) and manner stated. ☐ Medical Examiner/Coroner-On the basis of examination, and/or investigation, in my opinion, death occurred at the time, date, and place, and due to the cause(s) and manner stated. Signature of certifier: _____							
46. NAME, ADDRESS, AND ZIP CODE OF PERSON COMPLETING CAUSE OF DEATH (Item 32)							
47. TITLE OF CERTIFIER		48. LICENSE NUMBER		49. DATE CERTIFIED (Mo/Day/Yr)		50. FOR REGISTRAR ONLY- DATE FILED (Mo/Day/Yr)	

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LOCAL FILE NO.		U.S. STANDARD CERTIFICATE OF DEATH				STATE FILE NO.	
1. DECEDENT'S LEGAL NAME (Include AKA's if any) (First, Middle, Last)				2. SEX		3. SOCIAL SECURITY NUMBER	
4a. AGE-Last Birthday (Years)		4b. UNDER 1 YEAR Months Days		4c. UNDER 1 DAY Hours Minutes		5. DATE OF BIRTH (Mo/Day/Yr)	
6. BIRTHPLACE (City and State or Foreign Country)							
7a. RESIDENCE-STATE				7b. COUNTY		7c. CITY OR TOWN	
7d. STREET AND NUMBER				7e. APT. NO.		7f. ZIP CODE	
7g. INSIDE CITY LIMITS? ☐ Yes ☐ No							
8. EVER IN US ARMED FORCES? ☐ Yes ☐ No		9. MARITAL STATUS AT TIME OF DEATH ☐ Married ☐ Married, but separated ☐ Widowed ☐ Divorced ☐ Never Married ☐ Unknown		10. SURVIVING SPOUSE'S NAME (If wife, give name prior to first marriage)			
11. FATHER'S NAME (First, Middle, Last)				12. MOTHER'S NAME PRIOR TO FIRST MARRIAGE (First, Middle, Last)			
13a. INFORMANT'S NAME		13b. RELATIONSHIP TO DECEDENT		13c. MAILING ADDRESS (Street and Number, City, State, Zip Code)			
14. PLACE OF DEATH (Check only one: see instructions)							
IF DEATH OCCURRED IN A HOSPITAL: ☐ Inpatient ☐ Emergency Room/Outpatient ☐ Dead on Arrival				IF DEATH OCCURRED SOMEWHERE OTHER THAN A HOSPITAL: ☐ Hospice facility ☐ Nursing home/Long term care facility ☐ Decedent's home ☐ Other (Specify):			
15. FACILITY NAME (If not institution, give street & number)				16. CITY OR TOWN, STATE, AND ZIP CODE		17. COUNTY OF DEATH	
18. METHOD OF DISPOSITION: ☐ Burial ☐ Cremation ☐ Donation ☐ Entombment ☐ Removal from State ☐ Other (Specify):				19. PLACE OF DISPOSITION (Name of cemetery, crematory, other place)			
20. LOCATION-CITY, TOWN, AND STATE				21. NAME AND COMPLETE ADDRESS OF FUNERAL FACILITY			
22. SIGNATURE OF FUNERAL SERVICE LICENSEE OR OTHER AGENT						23. LICENSE NUMBER (Of Licensee)	

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ITEMS 24-28 MUST BE COMPLETED BY PERSON WHO PRONOUNCES OR CERTIFIES DEATH		24. DATE PRONOUNCED DEAD (Mo/Day/Yr)		25. TIME PRONOUNCED DEAD	
26. SIGNATURE OF PERSON PRONOUNCING DEATH (Only when applicable)		27. LICENSE NUMBER		28. DATE SIGNED (Mo/Day/Yr)	
29. ACTUAL OR PRESUMED DATE OF DEATH (Mo/Day/Yr) (Spell Month)		30. ACTUAL OR PRESUMED TIME OF DEATH		31. WAS MEDICAL EXAMINER OR CORONER CONTACTED? ☐ Yes ☐ No	
CAUSE OF DEATH (See instructions and examples) 32. PART I. Enter the <u>chain of events</u> —diseases, injuries, or complications—that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary. IMMEDIATE CAUSE (Final disease or condition -----> resulting in death) a. _____ Due to (or as a consequence of): _____ Sequentially list conditions, if any, leading to the cause listed on line a. Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST b. _____ Due to (or as a consequence of): _____ c. _____ Due to (or as a consequence of): _____ d. _____					Approximate interval: Onset to death _____ _____ _____
PART II. Enter other <u>significant conditions contributing to death</u> but not resulting in the underlying cause given in PART I				33. WAS AN AUTOPSY PERFORMED? ☐ Yes ☐ No	
35. DID TOBACCO USE CONTRIBUTE TO DEATH? ☐ Yes ☐ Probably ☐ No ☐ Unknown				36. IF FEMALE: ☐ Not pregnant within past year ☐ Pregnant at time of death ☐ Not pregnant, but pregnant within 42 days of death ☐ Not pregnant, but pregnant 43 days to 1 year before death ☐ Unknown if pregnant within the past year	
38. DATE OF INJURY (Mo/Day/Yr) (Spell Month)		39. TIME OF INJURY		40. PLACE OF INJURY (e.g., Decedent's home; construction site; restaurant; wooded area)	
42. LOCATION OF INJURY: State: _____ City or Town: _____		41. INJURY AT WORK? ☐ Yes ☐ No			
43. DESCRIBE HOW INJURY OCCURRED:		44. IF TRANSPORTATION INJURY, SPECIFY: ☐ Driver/Operator ☐ Passenger ☐ Pedestrian ☐ Other (Specify)			
45. CERTIFIER (Check only one): ☐ Certifying physician-To the best of my knowledge, death occurred due to the cause(s) and manner stated. ☐ Pronouncing & Certifying physician-To the best of my knowledge, death occurred at the time, date, and place, and due to the cause(s) and manner stated. ☐ Medical Examiner/Coroner-On the basis of examination, and/or investigation, in my opinion, death occurred at the time, date, and place, and due to the cause(s) and manner stated. Signature of certifier: _____					
46. NAME, ADDRESS, AND ZIP CODE OF PERSON COMPLETING CAUSE OF DEATH (Item 32)					
47. TITLE OF CERTIFIER		48. LICENSE NUMBER		49. DATE CERTIFIED (Mo/Day/Yr)	
				50. FOR REGISTRAR ONLY- DATE FILED (Mo/Day/Yr)	

Appendix B – Vital Records Death Reporting (VRDR) Data Elements

The following data elements are used in Vital Records Death Reporting. The data collected will vary by jurisdictional requirements, and consequently none of these attributes are explicitly required by this profile (see discussion in QRPH TF-1: X.1.1 Actor Descriptions and Actor Profile Requirements.)

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Table B-1: Vital Records Death Reporting Data Elements

Attribute Name	Death Report Data Element	Description
Decedent Demographics		
DOB	Date of Birth	Calendar date when decedent was born
DETHNIC	Ethnicity of the decedent	Ethnic origin of the decedent. The primary source for this data element is the funeral director and/or next of kin. Any information for these data elements that comes from the EHR may be changed by the funeral director or next of kin. However, the EHR may also serve as a resource for documenting race and ethnicity information to inform the content of this attribute.
DECNAME	Decedent's Name Known by Certifier	Current legal name of the decedent including first name, middle name, last name, suffixes, and AKAs would be useful; however, name as known for decedent is sufficient.
FSNAME	Father's Surname	The surname of the decedent's father.
MMAIDEN	Mother's Maiden Name	The maiden name of the decedent's mother.
DRACE	Decedent's Race	Race(s) that best describes what the decedent considered himself/herself to be. The primary source for this data element is the funeral director and/or next of kin. Any information for these data elements that comes from the EHR may be changed by the funeral director or next of kin. However, the EHR may also serve as a resource for documenting race and ethnicity information to inform the content of this attribute.
DOCC	Occupation	The primary occupation of the decedent
DIND	Industry	The industry which served as the primary employer for the decedent
DEMPSTAT	Employment Status	The employment status of the decedent (e.g., employed, unemployed, student, pensioner, homemaker, etc.)
DADDR	Decedent's Residence (including city, county, state, country, inside city limits)	The address of the decedent.
SEX	Sex	The sex of the deceased.

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Attribute Name	Death Report Data Element	Description
JURISID	Jurisdiction Person Identifier (e.g., Social Security Number (SSN))	The Jurisdiction Person Identifier (e.g., social security number) of the deceased.
MARITAL	Marital Status	Marital (civil) status of the decedent.
MARRIAGEDATE	Date of Marriage	Date of the Decedent's marriage to current spouse.
DEDUC	Decedent's Education	The highest education level reached by the decedent.
OCCUP	Occupation	The primary occupation of the decedent
INDUST	Industry	The industry which served as the primary employer for the decedent.
BCID	Birth certificate ID	A record of the jurisdiction identifier assigned to the birth certificate of the decedent.
BCYR	Birth certificate {birth} year	A record of the decedent's birth year as recorded on the birth certificate for the decedent. This is an item that is used for matching birth and death information.
BPLACEST	State or Province of Birth	The jurisdiction (state or province) in which the decedents was born as recorded on the decedent's birth certificate. This value is used for matching birth and death information, and is only available if the relevant birth record has been located by the jurisdictional vital records office.
BPLACE	Birth Place	Information on the place of the decedent's birth as recorded on the death certificate.
Death Event Information		
FORMSRC	Source flag	To reflect the form in which data has been received (e.g., paper, electronic, mixed).
TOD	Patient Death Date and Time	Calendar date and time when decedent died. The Death Edit Specifications for the 2003 Revision of the U.S. Standard Certificate of Death indicates that the Time of Death (hour and minute) should be stated using a 24-hour clock.
AGED	Age at Death	A record of the decedent's age at the time of death.
CERTID	Certificate number	A record of the jurisdiction identifier assigned to the death certificate of the decedent.
DREG	Date of Death Registration	The date on which death was registered with the jurisdictional vital records office.
PD	Date and Time pronounced Dead	Month, day, year, and time decedent was pronounced dead.
COD	Cause of Death	Immediate and underlying causes of death including significant conditions or diseases, abnormalities, injuries, or poisonings that contributed directly or indirectly to death.

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Attribute Name	Death Report Data Element	Description
INTERVAL	Onset to death interval for cause of death reported	Each cause of death is associated with a numeric observation – Death Cause Interval – which captures the approximate interval between the onset of the death cause (condition) and death. This linkage is implemented through the use of observation sub-id. Coded death cause information may be provided if permitted by the jurisdiction.
OTHCOD	Cause of Death - Other Significant Conditions	Descriptive text that provides information on a significant condition or conditions that contributed to death, but did not result in the underlying cause that is elsewhere described.
MANNER	Manner of Death	An item where the certifying physician, medical examiner or coroner identifies the manner or how the deceased died
AUTOP	Was an autopsy performed?	Information on whether or not an autopsy was performed
AUTOPTF	Were autopsy findings available to complete the COD	Information on whether or not the findings of the autopsy were available for completing the medical portion of the death certificate
TOBAC	Did tobacco use contribute to death?	A clinical opinion on whether tobacco use contributed to the decedent's death.
DINSTI	Facility Name (Geographic location where the death occurred)	The facility name at the geographic location where the death occurred.
DSTREETADDR	Street address where death occurred if not facility	The facility name is provided when the death occurs in an institution. If not in an institution, the geographic location where the death occurred is provided including the street & number.
DISP	Method of Disposition	The method by which the decedent's body was disposed.
PREG	Female pregnancy status at time of death	Item for females that requests information on the pregnancy status of the deceased woman within the last year of her life
Injury Information		
INJLOCNAR	Injury location Narrative	The street address for the place where the injury occurred
INJDESC	Describe how the injury occurred	Information on how the injury occurred is requested in narrative form
DOI	Date of Injury	Actual or presumed date when decedent sustained injury
WORKINJ	Injury at Work	Information on whether or not an injury to the deceased indicated on the death certificate occurred at work.
TRANSPINJ	Injury leading to death associated with transportation event	A Boolean indicator (Yes/No) that tells whether the injury leading to death was associated with a transportation event.
DPLACE	Place of Death	The physical location where the decedent died (from which the Place of Death Registration can be established)
INJPL	Place of Injury	Requests information on the type of place where an injury occurred
INJLOCNAR	Injury Location Narrative	The street address for the place where the injury occurred

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Attribute Name	Death Report Data Element	Description
TOI	Time of Injury	Actual or presumed time of injury. The Death Edit Specifications for the 2003 Revision of the U.S. Standard Certificate of Death indicates that the Time of Injury (hour and minute) should be stated using a 24-hour clock.
TRANSP	Transportation Injury	Information on the role of the decedent involved in a transportation accident.
COD Information		
CERTIFBY	Death Certified By	This field is valued with the person who signed the death certificate.
CERT	Death Certifier	Type of certifier
CERTADDR	Certifier Address	Address of the person completing the cause of death (item 32 on the U.S. Standard Certificate of Death)
CERTSIG	Certifier signature	Certifier's signature. Depending on jurisdictional law, the signature may be electronic approval, an approval button, or other method for indicating acceptance in place of a physical signature.
CERTDATE	Date certified	Calendar date when the death record is certified
PRONOUNCERSIGDT	Date Signed	Date the death record is signed by the person that pronounces death
CLICNUM	License Number of Person Certifying Death	License number of person certifying the cause of death.
PLICNUM	License Number of Person Pronouncing Death	License number of person pronouncing death (includes whether licensed and state determined)
NAMECOD	Name of person completing COD	Name of the person completing the cause of death
PRONOUNCERSIG	Signature of Person Pronouncing Death	The signature of the person who pronounced death and signed the death record. Depending on jurisdictional law, the signature may be electronic approval, an approval button, or other method for indicating acceptance in place of a physical signature.
CERTL	Title of Certifier	Medical professional label used to signify a professional role or membership in a professional society
REF	Was Medical Examiner or Coroner contacted?	Item records whether [or not] the medical examiner or coroner was contacted in reference to this case
DOR	Date of Registration--Year Date of Registration--Month Date of Registration--Day	The date on which death was registered with the jurisdictional vital records office.
MEDDX	Medical Diagnoses Associated with Final Illness	Support for jurisdictions that capture Medical Diagnoses associated with the final illness leading to death (e.g., WHO verbal autopsy report: tuberculosis, Dengue Fever, HIV/AIDS, etc.)
MEDRESULT	Medical Results Associated with Final Illness	Support for jurisdictions that capture Medical Results associated with the final illness leading (e.g., WHO verbal autopsy report: positive Malaria Results, etc.)

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Attribute Name	Death Report Data Element	Description
MEDPROC	Medical Procedure Associated with Final Illness	Support for jurisdictions that capture Medical Procedures associated with the final illness leading (e.g., WHO verbal autopsy report: Hysterectomy, Cesarean, etc.)
PLANG	Primary Language	Support for WHO that collects the Language of the deceased.

Volume 2 – Transactions

Add Section 3.38

3.38 VRDRFeed [QRPH-38]

3.38.1 Scope

This transaction is used to communicate clinician-sourced death information from the Information Source to the Information Recipient. This transaction may alternatively be initiated by a Form Receiver Message Exporter or a Form Processor Message Exporter and communicated to the Information Recipient. This transaction uses the *Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2*.

3.38.2 Actor Roles



Figure 3.38.2-1: Use Case Diagram between Information Source and Information Recipient

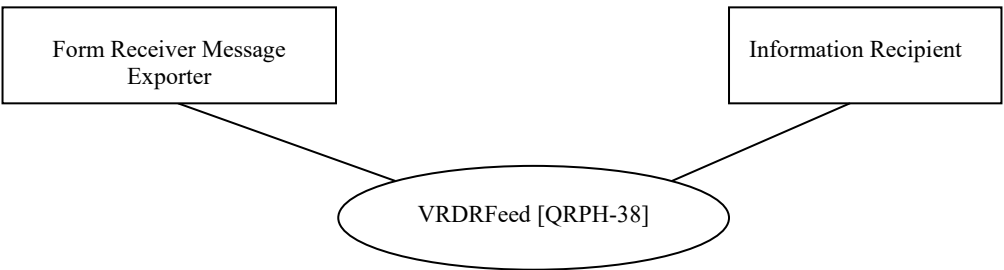


Figure 3.38.2-2: Use Case Diagram between Form Receiver Message Exporter and Information Recipient

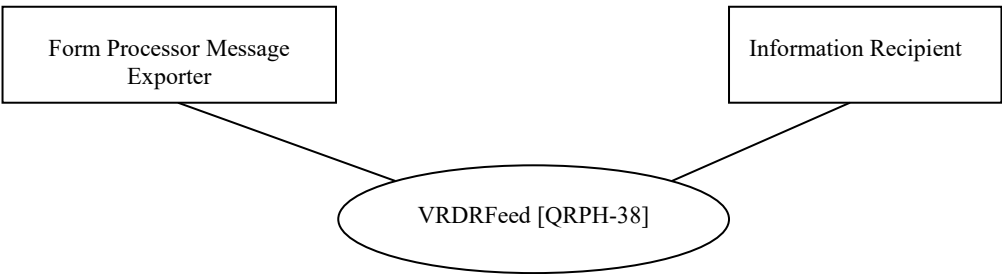


Figure 3.38.2-3: Use Case Diagram between Form Processor Message Exporter and Information Recipient

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Table 3.38.2-1: Actor Roles

Actor:	Information Source
Role:	The Information Source is responsible for creating and transmitting an HL7 V2.6 message to an Information Recipient.
Actor:	Information Recipient
Role:	The Information Recipient is responsible for receiving the HL7 V2.6 message from an Information Source, from a Form Receiver Message Exporter, or from a Form Processor Message Exporter.
Actor:	Form Receiver Message Exporter
Role:	This Form Receiver Message Exporter receives data submitted through the Submit Form Transaction [ITI-35], transforms that data to be in compliance with the requirements of the HL7 V.2.6 VRDR transaction [QRPH-38] and sends that data to an Information Recipient.
Actor:	Form Processor Message Exporter
Role:	This Form Processor Message Exporter receives data submitted through the Submit Form Transaction [ITI-35], transforms that data to be in compliance with the requirements of the HL7 V.2.6 VRDR transaction [QRPH-38] and sends that data to an Information Recipient.

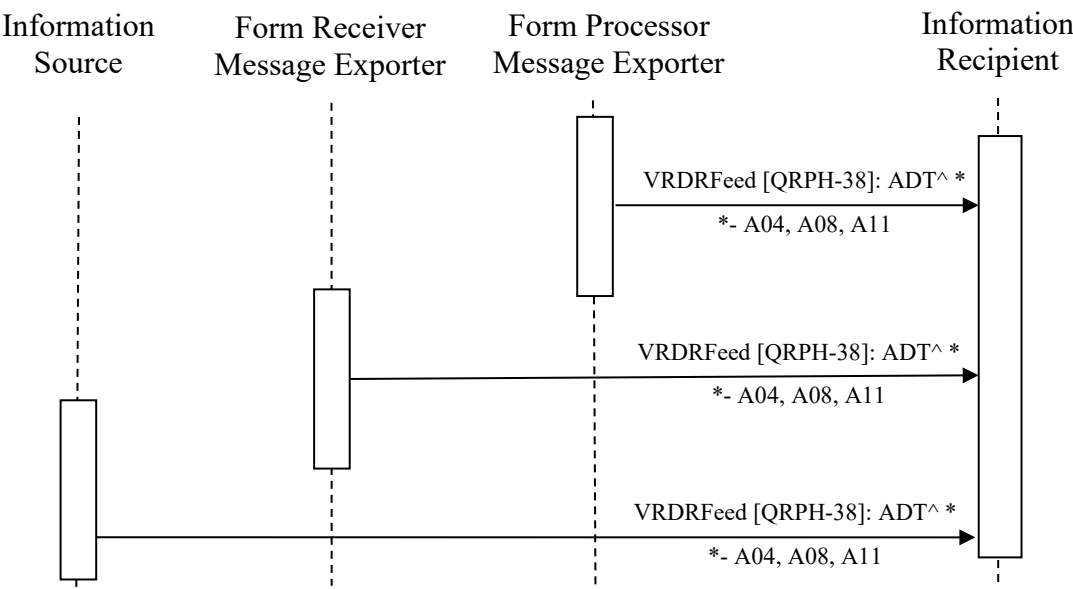
3.38.3 Referenced Standards

1. HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2 (Further referred to in this profile as ‘HL7 VRDR V2.6 IG’), focused on the following use cases:
 - Immediate Death Notification Information Messaging

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- Certifier Death Information Messaging
- Funeral Director Death Information Messaging
- Case Assigned Information Messaging
- 1745 ○ Death Information Messaging
- Jurisdiction Death Information Messaging
- Void Certificate Reporting Messaging
- Coded Cause of Death Messaging
- Coded Race / Ethnicity Messaging
- 1750 2. [Edit Specifications for the 2003 Revision of the U.S. Standard Certificate of Death](#)
- 3. [U.S. Standard Certificate of Death](#)
- 4. [International Classification of Diseases, Tenth Revision \(ICD-10\)](#)
- 5. [The 2014 WHO verbal autopsy instrument](#)
- 6. [WHO Nomenclature Regulations](#)
- 1755 7. [International statistical classification of diseases and related health problems 10th Revision, Volume 2 Instruction Manual](#)
 - a. Section 4.1.2 The international death certificate
 - b. Section 7.1 form 7.1.1 International form of medical certificate of cause of death

3.38.4 Messages



1760

Figure 3.38.4-1: Interaction Diagram

3.38.4.1 VRDRFeed message

1765 This transaction transmits the HL7 V2.6 ADT messages containing the clinician-sourced death information from Information Source, the Form Receiver Message Exporter, or the Form Processor Message Exporter to the Information Recipient. An Information Recipient SHALL be able to receive this transaction from multiple sources.

3.38.4.1.1 Trigger Events

1770 An Information Source, a Form Receiver Message Exporter, or a Form Processor Message Exporter shall trigger an **ADT^A04** – Report Death Information Record message after the decedent’s death has been documented in the system

- transmitting the Coded Cause of Death or the Coded Race / Ethnicity from the national statistics agency to the Jurisdictional vital records office.

1775 An Information Source, a Form Receiver Message Exporter, or a Form Processor Message Exporter shall trigger an **ADT^A08**– Revise Death Information Record message after changes are made to:

- patient demographics (e.g., change in patient name, patient address, etc.)

- death information (e.g., cause of death, autopsy, injury)
- the Coded Cause of Death
- the Coded Race and Ethnicity

1780 An Information Source, a Form Receiver Message Exporter, or a Form Processor Message Exporter shall trigger an **ADT^A011**– Cancel Admit/Visit Notification after that actor cancels:

- Immediate Death Notification Information
- Certifier Death Information
- Funeral Director Death Information

1785

- Case Assigned Information
- Death Information
- Jurisdiction Death Information
- Void Certificate
- Coded Cause of Death Report

1790

- Coded Race
- Jurisdiction Death Information

3.38.4.1.2 Message Semantics

1795 The VRDRfeed are ADT messages that conform to the HL7 VRDR v2.6 IG message profile use cases. The semantics of the ADT messages sent by the Information Source, a Form Receiver Message Exporter, or a Form Processor Message Exporter may vary depending on the option(s) supported by those actors; see Table 3.38.4.1.2-1.

1800 Information Source, Form Receiver Message Exporter, and Form Processor Message Exporter Actors supporting one or more option shall send ADT messages that conform to the message profile identified in Table 3.38.4.1.2-1 AND as further constrained in Table 3.38.4.1.2-2. In column 2 below, the value in parentheses identifies the abbreviations used in the optionality column in Table 3.38.4.1.2-2.

1805 The ADT^A04 (Register a Patient) message is constrained for the first transmission of information about a person's death within the context of a particular use case. The ADT^A08 (Update Patient Information) message is constrained for updating previously transmitted information. Since the segment pattern of the message does not change even though it responds to a different trigger event, the message semantics in the table are the same for both message types. The ADT^A11 has no further constraints to the underlying standard.

Table 3.38.4.1.2-1: Actor Options Mapped to HL7 message Profile Use Cases

IHE VRDR Actors	IHE VRDR Profile Option	HL7 VRDR V2.6 IG Message Profile Use Case
Information Source Form Receiver Message Exporter Form Processor Message Exporter Information Recipient	Immediate Death Notification Information Option (IDNI)	Immediate Death Notification Information Messaging
Information Source Form Receiver Message Exporter Form Processor Message Exporter Information Recipient	Certifier Death Information Option (CDI)	Certifier Death Information Messaging
Information Source Form Receiver Message Exporter Form Processor Message Exporter Information Recipient	Funeral Director Death Information Option (FDDI)	Funeral Director Death Information Messaging
Information Source Information Recipient	Case Assigned Information Option (CAI)	Case Assigned Information Messaging
Information Source Form Receiver Message Exporter Form Processor Message Exporter Information Recipient	Jurisdiction Death Information Option (JDI)	Jurisdiction Death Information Messaging
Information Source Information Recipient	Void Certificate Reporting (JDI-VOID)	VOID Certificate Reporting Messaging
Information Source Information Recipient	Coded Cause of Death Option (CCOD)	Coded Cause of Death Messaging
Information Source Information Recipient	Coded Race/ Ethnicity Option (CREI)	Coded Race/Ethnicity Messaging

1810 Optionality for segments in the ADT message is defined in Table 3.38.4.1.2-2. Note that this table and the sub-sections for each segment contain some IHE constraints on the underlying HL7 VRDR V2.6 IG.

RE+ and O+ indicate that there is an IHE extension to the HL7 VRDR V2.6 IG Message Profile Use Cases.

1815

Table 3.38.4.1.2-2: VRDRFeed Constraints on the HL7 VRDR V2.6 IG Message Profile Use Cases

Segment	Name	Segment repeatable (Y/N)	Optionality									See Section
			IDNI	CDI	FDDI	CAI	DI	JDI	JDI-VOID	CCOD	CREI	
MSH	Message Header	N	R	R	R	R	R	R	R	R	R	3.38.4.1.2.1
SFT	Software Segment	Y	O	O	O	O	O	O	O	O	O	3.38.4.1.2.2
UAC	User Authentication Credential	Y	O	O	O	O	O	O	O	O	O	3.38.4.1.2.3
EVN	Event Type	N	R	R	R	R	R	R	R	R	R	3.38.4.1.2.4
PID	Patient Identification	N	R	R	R	R	R	R	R	R	R	3.38.4.1.2.5
PD1	Additional Demographics	N	O	O	O	O	O	O	O	O	O	3.38.4.1.2.6
ROL	Role	Y	O	O	O	O	O	O	O	O	O	3.38.4.1.2.24
NK1	Next of Kin/Associated Parties	Y	O	O	O	O	O	O	O	O	O	3.38.4.1.2.7
PV1	Patient Visit Information	N	R	R	R	R	R	R	R	R	R	3.38.4.1.2.8
PV2	Patient Visit – Additional Information	N	O	O	O	O	O	O	O	O	O	3.38.4.1.2.9
ROL	Role	Y	O	O	O	O	O	O	O	O	O	3.38.4.1.2.24
DB1	Disability Information	Y	O	O	O	O	O	O	O	O	O	3.38.4.1.2.10
OBX	Observation/Result	Y	O	R	R	O	R	R	O	R	R	3.38.4.1.2.11
AL1	Allergy Information	Y	O	O	O	O	O	O	O	O	O	3.38.4.1.2.12
DG1	Diagnosis Information	Y	O	O	O	O	RE+	RE+	O	O	O	3.38.4.1.2.13
DRG	Diagnosis Related Group	N	O	O	O	O	O	O	O	O	O	3.38.4.1.2.14
[{	<i>Procedure Begin</i>	Y										

Segment	Name	Segment repeatable (Y/N)	Optionality									See Section
			I D N I	C D I	F D D I	C A I	D I	J D I	JDI- VOID	C C O D	CR EI	
PR1	Procedure	N	O	O	O	O	R E +	R E +	O	O	O	3.38.4.1.2.15
ROL	Role	Y	O	O	O	O	O	O	O	O	O	3.38.4.1.2.24
}	<i>Procedure End</i>	N/A										
GT1	Guarantor	Y	O	O	O	O	O	O	O	O	O	3.38.4.1.2.16
{	<i>Insurance Begin</i>	Y										
IN1	Insurance	N	O	O	O	O	O	O	O	O	O	3.38.4.1.2.17
IN2	Insurance Additional Info.	N	O	O	O	O	O	O	O	O	O	3.38.4.1.2.18
IN3	Insurance Additional Info – Cert.	Y	O	O	O	O	O	O	O	O	O	3.38.4.1.2.19
ROL	Role	Y	O	O	O	O	O	O	O	O	O	3.38.4.1.2.24
}	<i>Insurance End</i>	N/A										
ACC	Accident Information	N	O	R E +	O	O	R E +	R E +	O	O	O	3.38.4.1.2.20
UB1	Universal Bill Information	N	O	O	O	O	O	O	O	O	O	3.38.4.1.2.21
UB2	Universal Bill 92 Information	N	O	O	O	O	O	O	O	O	O	3.38.4.1.2.22
PDA	Patient Death and Autopsy	N	O	R	O	O	R	R	O	O	O	3.38.4.1.2.23

3.38.4.1.2.1 MSH Segment

The MSH segment shall be constructed as defined in Chapter 6.1 of the HL7 VRDR V2.6 IG.

1820 3.38.4.1.2.2 SFT Segment

No further constraints are required of the SFT segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2).

3.38.4.1.2.3 UAC Segment

- 1825 No further constraints are required of the UAC segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2).

3.38.4.1.2.4 EVN Segment

- 1830 The EVN segment shall be constructed as defined in Chapter 6.4 of the HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2).

3.38.4.1.2.5 PID Segment

- 1835 Note: The attributes constrained may be used for patient matching in environments that leverage patient identity linking services such as the IHE ITI Patient Identifier Cross-Referencing (PIX) Profile.

Bolded text highlights areas that are different from the underlying HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2).

Table 3.38.4.1.2.5-1: IHE Profile - PID segment

SEQ	LEN	DT	OPT								TBL #	ITEM#	ELEMENT NAME	Description/ Comments
			IDNI	CDI	FDDI	CAI	JDI	JDI – VOID	CCOD	CREI				
1	4	SI	R	R	R	R	R	R	R	R		00104	Set ID - Patient ID	A number which identifies the occurrence of the PID segment within the transaction. PID.1 (Set ID - PID) SHALL be valued with the constant value '1'.
2	20	CX	X	X	X	X	X	X	X	X		00105	Patient ID	Deprecated as of HL7 Version 2.3.1. See PID-3 Patient Identifier List.
3	250	CX	R	R	R	R	R	R	R	R		00106	Patient Identifier List	Field used to convey all types of patient/person identifiers. It is expected that the National ID (e.g., Social Security Number) will be provided if it is available. This field is also used to support identifiers for the death certificate.

SEQ	LEN	DT	OPT								TBL #	ITEM#	ELEMENT NAME	Description/ Comments
			IDNI	CDI	FDDI	CAI	JDI	JDI – VOID	CCOD	CREI				
														If the National ID cannot be included, one of the following null flavor values should be used: “NA” should be used when there is no National ID, as in non- citizens, and newborns. “”UNK” should be used when the National ID is unknown and the informant cannot provide it, as in reporting the death of an unidentified person. “OTH” should be used when a National ID was provided and later determined to be not valid Constrained for WHO support PID.3.5 (Identifier Type Code) shall be valued with one of the following values:

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SEQ	LEN	DT	OPT								TBL #	ITEM#	ELEMENT NAME	Description/ Comments
			IDNI	CDI	FDDI	CAI	JDI	JDI – VOID	CCOD	CREI				
														‘SS’ for Social Security Number, ‘DC’ for Death Certificate ID, ‘DCFN’ for Death Certificate File Number or ‘NI’ for National Unique Individual Identifier, unless otherwise constrained by national extension.
4	20	CX	X	X	X	X	X	X	X	X		00107	Alternate Patient ID	Deprecated as of HL7 Version 2.3.1. See PID-3.
5	250	XPN	R	R	R	R	R	R	R	R		00108	Patient Name	Patient name. When the name of the patient is not known, a value must still be placed in this field since the field is required. In that case, HL7 recommends the following: ~~~~~U]. The "U" for the name type code in the second name indicates that it is unspecified. Since there may be no name components

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SEQ	LEN	DT	OPT								TBL #	ITEM#	ELEMENT NAME	Description/ Comments
			IDNI	CDI	FDDI	CAI	JDI	JDI – VOID	CCOD	CREI				
														populated, this means there is no legal name, nor is there an alias. This guide will interpret this sequence to mean there is no patient name.
6	250	XPN	RE+	RE+	RE+	RE+	RE+	O	O	O		00109	Mother's Maiden Name	Not supported in IG, and Optional in PIX. Needed for the WHO form, but may be further constrained by national extension. When the attribute is populated, the VRDR Information Recipient shall either accept this information or ignore the attribute, but SHALL NOT raise an application error
7	24	DTM_D	RE	RE	RE	RE	RE	O	O	O		00110	Date/Time of Birth	If the birth information is not known, leave the field empty.
8	1	IS	R	R	R	R	RE	RE	RE	RE	0001	00111	Administrative Sex	Patient's sex.

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SEQ	LEN	DT	OPT								TBL #	ITEM#	ELEMENT NAME	Description/ Comments
			IDNI	CDI	FDDI	CAI	JDI	JDI – VOID	CCOD	CREI				
9	250	XPB	X	X	X	X	X	X	X	X		00112	Patient Alias	Deprecated as of HL7 Version 2.4. See PID-5 Patient Name.
10	705	CWE	O	O	O	O	R	O	O	R	0005	00113	Race	Race information for the decedent. For CREI, Detailed Race SHALL be selected from Concept Domain CD_DetailedRace. NOTE: In some jurisdictions, it is prohibited to send race and/or ethnicity, and may be further constrained by national extension.
11	250	XAD_D	R	R	R	R	R	O	O	O		00114	Patient Address	Street address, city, state and zip code elements of Patient Address SHOULD be included.
12	4	IS	X	X	X	X	X	X	X	X	0289	00115	County Code	Deprecated as of HL7 Version 2.3. See PID-11 - Patient Address, component 9 County/Parish Code.

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SEQ	LEN	DT	OPT								TBL #	ITEM#	ELEMENT NAME	Description/ Comments
			IDNI	CDI	FDDI	CAI	JDI	JDI – VOID	CCOD	CREI				
13	250	XTN	O	O	O	O	O	O	O	O		00116	Phone Number – Home	
14	250	XTN	O	O	O	O	O	O	O	O		00117	Phone Number - Business	
15	705	CWE	RE+	RE+	RE+	RE+	RE+	O	O	O	0296	00118	Primary Language	Needed for the WHO form to express the ability to read and write, but may be further constrained by national extension. When the attribute is populated, the VRDR Information receiver shall either accept this information or ignore the attribute, but SHALL NOT raise an application error
16	705	CWE	O	O	O	O	RE	O	O	O	0002	00119	Marital Status	Marital (civil) status of the decedent.
17	705	CWE	O	O	O	O	O	O	O	O	0006	00120	Religion	
18	250	CX	O+	O+	O+	O+	O+	O+	O+	O+		00121	Patient Account Number	Not supported in IG, but Optional in PIX When the attribute is populated, the

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SEQ	LEN	DT	OPT								TBL #	ITEM#	ELEMENT NAME	Description/ Comments
			IDNI	CDI	FDDI	CAI	JDI	JDI – VOID	CCOD	CREI				
														VRDR Information receiver shall either accept this information or ignore the attribute, but SHALL NOT raise an application error
19	16	ST	X	X	X	X	X	X	X	X		00122	SSN Number – Patient	Deprecated as of HL7 Version 2.3.1. See PID-3 Patient Identifier List.
20	25	DLN	X	X	X	X	X	X	X	X		00123	Driver's License Number - Patient	Deprecated as of HL7 Version 2.5. See PID-3 Patient Identifier List.
21	250	CX	O	O	O	O	O	O	O	O		00124	Mother's Identifier	
22	705	CWE	O	O	O	O	R	O	O	R	0189	00125	Ethnic Group	Information regarding the Ethnic origin of the decedent. For CREI, Detailed Ethnicity SHALL be selected from Concept Domain CD_DetailedEthnicity. NOTE: In some jurisdictions, it is

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SEQ	LEN	DT	OPT								TBL #	ITEM#	ELEMENT NAME	Description/ Comments
			IDNI	CDI	FDDI	CAI	JDI	JDI – VOID	CCOD	CREI				
														prohibited to send race and/or ethnicity, and may be further constrained by national extension.
23	250	ST	RE+	RE+	RE+	RE+	RE+	O	O	O		00126	Birth Place	Needed for the WHO form, but may be further constrained by national extension.
24	1	ID	O	O	O	O	O	O	O	O	0136	00127	Multiple Birth Indicator	
25	2	NM	O	O	O	O	O	O	O	O		00128	Birth Order	
26	705	CWE	RE+	RE+	RE+	RE+	RE+	O	O	O	0171	00129	Citizenship	Needed for the WHO form to reflect nationality, but may be further constrained by national extension
27	705	CWE	O	O	O	O	O	O	O	O	0172	00130	Veterans Military Status	
28	705	CWE	X	X	X	X	X	X	X	X	0212	00739	Nationality	Deprecated as of HL7 Version 2.4. See PID-10 Race, PID-22 Ethnic Group, and PID-26 Citizenship.

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SEQ	LEN	DT	OPT								TBL #	ITEM#	ELEMENT NAME	Description/ Comments
			IDNI	CDI	FDDI	CAI	JDI	JDI – VOID	CCOD	CREI				
29	24	DTM _YD R	R	R	R	R	R	O	R	R		00740	Patient Death Date and Time	At least a year must be provided, even if the date is not known with certainty.
30	1	ID	R	R	R	R	R	O	R	R	0136	00741	Patient Death Indicator	The patient is known to be dead. PID.30 (Patient Death Indicator) SHALL BE valued 'Y'
31			O	O	O	O	O	O	O	O			Identity Unknown Indicator	
32			O	O	O	O	O	O	O	O			Identity Reliability Code	
33			O	O	O	O	O	O	O	O			Last Update Date/Time	
34			O	O	O	O	O	O	O	O			Last Update Facility	
35			O	O	O	O	O	O	O	O			Species Code	
36			O	O	O	O	O	O	O	O			Breed Code	
37			O	O	O	O	O	O	O	O			Strain	
38			O	O	O	O	O	O	O	O			Production Class Code	
39			O	O	O	O	O	O	O	O			Tribal Citizenship	

3.38.4.1.2.6 PD1 Segment

No further constraints are required of the PD1 segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2).

1845 **3.38.4.1.2.7 NK1 Segment**

No further constraints are required of the NK1 segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2).

3.38.4.1.2.8 PV1 Segment

1850 The PV1 segment shall be constructed as defined in Chapter 6.6 of the HL7 message (HL7 Version 2.6 Implementation Guide: Vital Records Death Reporting, STU Release 2 - US Realm).

3.38.4.1.2.9 PV2 Segment

1855 No further constraints are required of the PV2 segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2).

3.38.4.1.2.10 DB1 Segment

No further constraints are required of the DB1 segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2).

1860 **3.38.4.1.2.11 OBX Segment**

The OBX segment shall be constructed as defined in Chapter 6.7 of the HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2).

The OBX segment SHOULD additionally include:

- 1865
- Coded Results and associated result date/times for test results leading up to the death (e.g., Malaria test results)
 - Additional test results of interest and timeframes may be further specified by National Extension.

1870 The Information Source, the Form Receiver Message Exporter, or the Form Processor Message Exporter may populate the following attributes using value sets other than those defined by the HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2):

- Marital Status
- Education
- 1875 • Race
- Ethnicity

3.38.4.1.2.12 AL1 Segment

No further constraints are required of the AL1 segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting
1880 Death Information from the EHR to Vital Records, R1.2).

3.38.4.1.2.13 DG1 Segment

The Information Source, the Form Receiver Message Exporter, and the Form Processor Message
1885 Exporter SHOULD populate the DG1 segment with the diagnoses and problems leading up to the death. Additional problems of interest and timeframes may be further specified by National Extension.

No further constraints are required of the DG1 segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting
Death Information from the EHR to Vital Records, R1.2).

3.38.4.1.2.14 DRG Segment

No further constraints are required of the DRG segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting
1890 Death Information from the EHR to Vital Records, R1.2).

3.38.4.1.2.15 PR1 Segment

The Information Source, the Form Receiver Message Exporter, and the Form Processor Message
1895 Exporter SHOULD populate PR1 segment with additional procedures performed leading up to the death. Additional procedures of interest and timeframes may be further specified by National Extension.

No further constraints are required of the PR1 segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting
1900 Death Information from the EHR to Vital Records, R1.2).

3.38.4.1.2.16 GT1 Segment

No further constraints are required of the GT1 segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting
Death Information from the EHR to Vital Records, R1.2).

1905 **3.38.4.1.2.17 IN1 Segment**

No further constraints are required of the IN1 segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2).

3.38.4.1.2.18 IN2 Segment

1910 No further constraints are required of the IN2 segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2).

3.38.4.1.2.19 IN3 Segment

1915 No further constraints are required of the IN3 segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2).

3.38.4.1.2.20 ACC Segment

1920 The Information Source, the Form Receiver Message Exporter, and the Form Processor Message Exporter SHOULD populate the ACC segment with accident information related to the death. Additional accident information of interest and timeframes may be further specified by National Extension.

No further constraints are required of the ACC segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2).

1925 **3.38.4.1.2.21 UB1 Segment**

No further constraints are required of the UB1 segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2).

3.38.4.1.2.22 UB2 Segment

1930 No further constraints are required of the UB2 segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2).

3.38.4.1.2.23 PDA Segment

1935 The PDA segment shall be constructed as defined in Chapter 6.8 of the HL7 message (HL7 Version 2.6 Implementation Guide: Vital Records Death Reporting, STU Release 2 - US Realm).

3.38.4.1.2.24 ROL Segment

No further constraints are required of the ROL segment from the corresponding HL7 message (Health Level Seven International (HL7) HL7 Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2).

1940 3.38.4.1.3 Expected Actions

An Information Recipient SHALL accept all message segments defined in Section 3.38.4.1.2 Message Semantics and shall respond with an ACK message as defined in Section 3.38.4.1.4.

3.38.4.1.3.1 Jurisdiction Death Information Option

1945 An Information Recipient supporting the Jurisdiction Death Information Option SHALL receive and record the content of the VRDRFeed message sent by an Information Source, a Form Receiver Message Exporter, or a Form Processor Message Exporter implementing this Option.

3.38.4.1.3.2 Void Certificate Reporting Option

1950 An Information Recipient supporting the Void Certificate Reporting Option SHALL receive and void the record identified by the content of the VRDRFeed message sent by an Information Source implementing this Option.

3.38.4.1.3.3 Coded Cause of Death Option

An Information Recipient supporting the Coded Cause of Death Option SHALL receive and record the coded cause of death identified by the content of the VRDRFeed message sent by an Information Source implementing this Option.

1955 3.38.4.1.3.4 Coded Race / Ethnicity Option

An Information Recipient supporting the Coded Race and Ethnicity Option SHALL receive and record the race and/or ethnicity identified by the content of the VRDRFeed message sent by an Information Source implementing this Option.

1960 Note: some jurisdictions prohibit the transmission of race and/or ethnicity. These constraints may be further specified by national extension.

3.38.4.1.4 ACK

1965 The Information Recipient SHALL send an acknowledgement according to the requirements of the (HL7) Version 2.6 Implementation Guide: Reporting Death Information from the EHR to Vital Records, R1.2, as indicated by the header attributes of the Information Sender, a Form Receiver Message Exporter, or a Form Processor Message Exporter in MSH-15, MSH-16, and MSH-21 (see the HL7 VRDR V2.6 IG, section 3.4 Acknowledgement profiles)

3.38.5 Security Considerations

3.38.5.1 Security Audit Considerations – VRDRFeed [QRPH-38] (ADT)

1970 The [QRPH-38] ADT messages are audited as “PHI Export” events, as defined in ITI TF-2a: Table 3.20.4.1.1.1-1. The following tables show items that are required to be part of the audit record for these specific VRDRFeed transactions.

3.38.5.1.1 Information Source Actor audit message:

	Field Name	Opt	Value Constraints
Event AuditMessage/ EventIdentification	EventID	M	EV(110106, DCM, “Export”)
	EventActionCode	M	“C” (create) for QRPH-38 (A04) “U” (update) for QRPH-38 (A08, A11)
	EventDateTime	M	not specialized
	EventOutcomeIndicator	M	not specialized
	EventTypeCode	M	EV(“QRPH-38”, “IHE Transactions”, “VRDRFeed”)
Source (Information Source Actor) (1)			
Human Requestor (0..n)			
Destination (Information Recipient Actor) (1)			
Audit Source (Information Source Actor) (1)			
Patient (1)			

Where:

Source AuditMessage/ ActiveParticipant	UserID	M	The identity of the Information Source facility and sending application from the HL7 message; concatenated together, separated by the character.
	AlternativeUserID	M	The process ID as used within the local operating system in the local system logs.
	UserName	U	not specialized
	UserIsRequestor	M	not specialized
	RoleIDCode	M	EV(110153, DCM, “Source”)
	NetworkAccessPointTypeCode	M	“1” for machine (DNS) name, “2” for IP address
	NetworkAccessPointID	M	The machine name or IP address

Human Requestor (if known) AuditMessage/ ActiveParticipant	UserID	M	Identity of the human that initiated the transaction.
	AlternativeUserID	U	not specialized
	UserName	U	not specialized
	UserIsRequestor	M	not specialized
	RoleIDCode	U	Access Control role(s) the user holds that allows this transaction.
	NetworkAccessPointTypeCode	NA	

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	NetworkAccessPointID	NA	
--	----------------------	----	--

Destination (AuditMessage/ ActiveParticipant)	UserID	M	The identity of the Information Recipient Public Health Organization and receiving application from the HL7 message; concatenated together, separated by the character.
	AlternativeUserID	M	not specialized
	UserName	U	not specialized
	UserIsRequestor	M	not specialized
	RoleIDCode	M	EV(110152, DCM, “Destination”)
	NetworkAccessPointTypeCode	M	“1” for machine (DNS) name, “2” for IP address
	NetworkAccessPointID	M	The machine name or IP address, as specified in RFC3881.

Audit Source (AuditMessage/ AuditSourceIdentification)	AuditSourceID	U	not specialized
	AuditEnterpriseSiteID	U	not specialized
	AuditSourceTypeCode	U	not specialized

Patient (AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCode	M	“1” (person)
	ParticipantObjectTypeCodeRole	M	“1” (patient)
	ParticipantObjectDataLifeCycle	U	not specialized
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, “Patient Number”)
	ParticipantObjectSensitivity	U	not specialized
	ParticipantObjectID	M	The patient ID in HL7 CX format.
	ParticipantObjectName	U	not specialized
	ParticipantObjectQuery	U	not specialized
	ParticipantObjectDetail	M	Type=MSH-10 (the literal string), Value=the value of MSH-10 (from the message content, base64 encoded)

1980

3.38.5.1.2 Information Recipient Actor audit message:

	Field Name	Opt	Value Constraints
Event AuditMessage/ EventIdentification	EventID	M	EV(110107, DCM, "Import")
	EventActionCode	M	"C" (create) for QRPH-38 (A04) "U" (update) for QRPH-38 (A08, A11)
	EventDateTime	M	not specialized
	EventOutcomeIndicator	M	not specialized
	EventTypeCode	M	EV("QRPH-38", "IHE Transactions", "VRDRFeed")
Source (Information Source Actor) (1)			
Destination (Information Recipient Actor) (1)			
Audit Source (Information Recipient Actor) (1)			
Patient(1)			

1985

Where:

Source AuditMessage/ ActiveParticipant	UserID	M	The identity of the Information Source facility and sending application from the HL7 message; concatenated together, separated by the character.
	AlternativeUserID	U	not specialized
	UserName	U	not specialized
	UserIsRequestor	M	not specialized
	RoleIDCode	M	EV(110153, DCM, "Source")
	NetworkAccessPointTypeCode	M	"1" for machine (DNS) name, "2" for IP address
	NetworkAccessPointID	M	The machine name or IP address

Destination AuditMessage/ ActiveParticipant	UserID	M	The identity of the Information Recipient Public Health Organization and receiving application from the HL7 message; concatenated together, separated by the character.
	AlternativeUserID	M	The process ID as used within the local operating system in the local system logs.
	UserName	U	not specialized
	UserIsRequestor	M	not specialized
	RoleIDCode	M	EV(110152, DCM, "Destination")
	NetworkAccessPointTypeCode	M	"1" for machine (DNS) name, "2" for IP address
	NetworkAccessPointID	M	The machine name or IP address

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Audit Source AuditMessage/ AuditSourceIdentification	<i>AuditSourceID</i>	<i>U</i>	<i>not specialized</i>
	<i>AuditEnterpriseSiteID</i>	<i>U</i>	<i>not specialized</i>
	<i>AuditSourceTypeCode</i>	<i>U</i>	<i>not specialized</i>

Patient (AuditMessage/ ParticipantObjectIdentification)	<i>ParticipantObjectTypeCode</i>	<i>M</i>	“1” (person)
	<i>ParticipantObjectTypeCodeRole</i>	<i>M</i>	“1” (patient)
	<i>ParticipantObjectDataLifeCycle</i>	<i>U</i>	<i>not specialized</i>
	<i>ParticipantObjectIDTypeCode</i>	<i>M</i>	EV(2, RFC-3881, “Patient Number”)
	<i>ParticipantObjectSensitivity</i>	<i>U</i>	<i>not specialized</i>
	<i>ParticipantObjectID</i>	<i>M</i>	The patient ID in HL7 CX format.
	<i>ParticipantObjectName</i>	<i>U</i>	<i>not specialized</i>
	<i>ParticipantObjectQuery</i>	<i>U</i>	<i>not specialized</i>
	<i>ParticipantObjectDetail</i>	<i>M</i>	Type=MSH-10 (the literal string), Value=the value of MSH-10 (from the message content, base64 encoded)

3.38.5.1.3 Form Receiver CDA Exporter Actor audit message:

	Field Name	Opt	Value Constraints
Event AuditMessage/ EventIdentification	<i>EventID</i>	<i>M</i>	EV(110106, DCM, “Export”)
	<i>EventActionCode</i>	<i>M</i>	“C” (create) for QRPH-38 (A04) “U” (update) for QRPH-38 (A08, A11)
	<i>EventDateTime</i>	<i>M</i>	<i>not specialized</i>
	<i>EventOutcomeIndicator</i>	<i>M</i>	<i>not specialized</i>
	<i>EventTypeCode</i>	<i>M</i>	EV(“QRPH-38”, “IHE Transactions”, “VRDRFeed”)
Source (Form Receiver CDA Exporter) (1)			
Human Requestor (0..n)			
Destination (Information Recipient Actor) (1)			
Audit Source (Form Receiver CDA Exporter) (1)			
Patient (1)			

Where:

Source AuditMessage/ ActiveParticipant	<i>UserID</i>	<i>M</i>	The identity of the Form Receiver CDA Exporter facility and sending application from the HL7 message; concatenated together, separated by the character.
	<i>AlternativeUserID</i>	<i>M</i>	The process ID as used within the local operating system in the local system logs.
	<i>UserName</i>	<i>U</i>	<i>not specialized</i>
	<i>UserIsRequestor</i>	<i>M</i>	<i>not specialized</i>

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	RoleIDCode	M	EV(110153, DCM, “Source”)
	NetworkAccessPointTypeCode	M	“1” for machine (DNS) name, “2” for IP address
	NetworkAccessPointID	M	The machine name or IP address

Human Requestor (if known) AuditMessage/ ActiveParticipant	UserID	M	Identity of the human that initiated the transaction.
	AlternativeUserID	U	<i>not specialized</i>
	UserName	U	<i>not specialized</i>
	UserIsRequestor	M	<i>not specialized</i>
	RoleIDCode	U	Access Control role(s) the user holds that allows this transaction.
	NetworkAccessPointTypeCode	NA	
	NetworkAccessPointID	NA	

Destination AuditMessage/ ActiveParticipant	UserID	M	The identity of the Information Recipient Public Health Organization and receiving application from the HL7 message; concatenated together, separated by the character.
	AlternativeUserID	M	<i>not specialized</i>
	UserName	U	<i>not specialized</i>
	UserIsRequestor	M	<i>not specialized</i>
	RoleIDCode	M	EV(110152, DCM, “Destination”)
	NetworkAccessPointTypeCode	M	“1” for machine (DNS) name, “2” for IP address
	NetworkAccessPointID	M	The machine name or IP address

Audit Source AuditMessage/ AuditSourceIdentification	AuditSourceID	U	<i>not specialized</i>
	AuditEnterpriseSiteID	U	<i>not specialized</i>
	AuditSourceTypeCode	U	<i>not specialized</i>

3.38.5.1.4 Form Processor CDA Exporter Actor audit message:

	Field Name	Opt	Value Constraints
Event AuditMessage/ EventIdentification	EventID	M	EV(110106, DCM, “Export”)
	EventActionCode	M	“C” (create) for QRPH-38 (A04) “U” (update) for QRPH-38 (A08, A11)
	EventDateTime	M	<i>not specialized</i>
	EventOutcomeIndicator	M	<i>not specialized</i>
	EventTypeCode	M	EV(“QRPH-38”, “IHE Transactions”, “VRDRFeed”)
Source (Form Processor CDA Exporter) (1)			
Human Requestor (0..n)			

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Destination (Information Recipient Actor) (1)
Audit Source (Form Processor CDA Exporter) (1)
Patient (1)

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Where:

Source AuditMessage/ ActiveParticipant	UserID	M	The identity of the Form Processor CDA Exporter facility and sending application from the HL7 message; concatenated together, separated by the character.
	AlternativeUserID	M	The process ID as used within the local operating system in the local system logs.
	UserName	U	<i>not specialized</i>
	UserIsRequestor	M	<i>not specialized</i>
	RoleIDCode	M	EV(110153, DCM, “Source”)
	NetworkAccessPointTypeCode	M	“1” for machine (DNS) name, “2” for IP address
	NetworkAccessPointID	M	The machine name or IP address

Human Requestor (if known) AuditMessage/ ActiveParticipant	UserID	M	Identity of the human that initiated the transaction.
	AlternativeUserID	U	<i>not specialized</i>
	UserName	U	<i>not specialized</i>
	UserIsRequestor	M	<i>not specialized</i>
	RoleIDCode	U	Access Control role(s) the user holds that allows this transaction.
	NetworkAccessPointTypeCode	NA	
	NetworkAccessPointID	NA	

Destination AuditMessage/ ActiveParticipant	UserID	M	The identity of the Information Recipient Public Health Organization and receiving application from the HL7 message; concatenated together, separated by the character.
	AlternativeUserID	M	<i>not specialized</i>
	UserName	U	<i>not specialized</i>
	UserIsRequestor	M	<i>not specialized</i>
	RoleIDCode	M	EV(110152, DCM, “Destination”)
	NetworkAccessPointTypeCode	M	“1” for machine (DNS) name, “2” for IP address
	NetworkAccessPointID	M	The machine name or IP address

2005

Audit Source AuditMessage/ AuditSourceIdentification	<i>AuditSourceID</i>	<i>U</i>	<i>not specialized</i>
	<i>AuditEnterpriseSiteID</i>	<i>U</i>	<i>not specialized</i>
	<i>AuditSourceTypeCode</i>	<i>U</i>	<i>not specialized</i>

3.47 VRDRQuery [QRPH-47]

The Data Consumer retrieves death reporting related health information from the Data responder.

3.47.1 Scope

2010 This transaction connects a Data Consumer to a Data Responder to allow query/retrieve of death reporting related health information.

3.47.2 Actor Roles

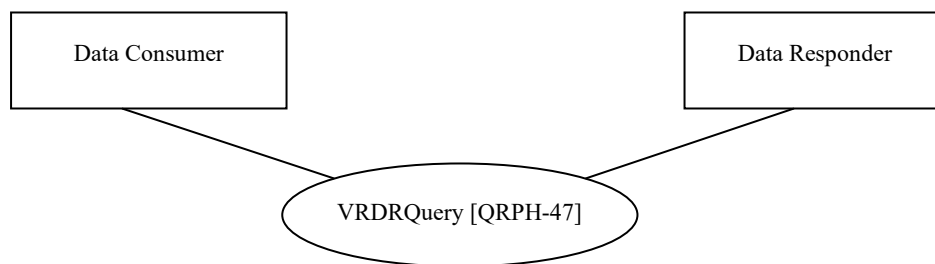


Figure 3.47.2-1: Use Case Diagram between Data Consumer and Data Responder

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Table 3.47.2-1: Actor Roles

Actor:	Data Consumer
Role:	The Data Consumer is responsible for creating a FHIR-based request for death reporting related health information and retrieving this information from the Data responder.
Actor:	Data Responder
Role:	The Data Responder responds to the request for death reporting related health information or provides the appropriate response if the information does not exist.

3.47.3 Referenced Standards

- HL7 FHIR standard STU3
http://www.hl7.org/implement/standards/product_brief.cfm?product_id=449

2020 **3.47.4 Messages**

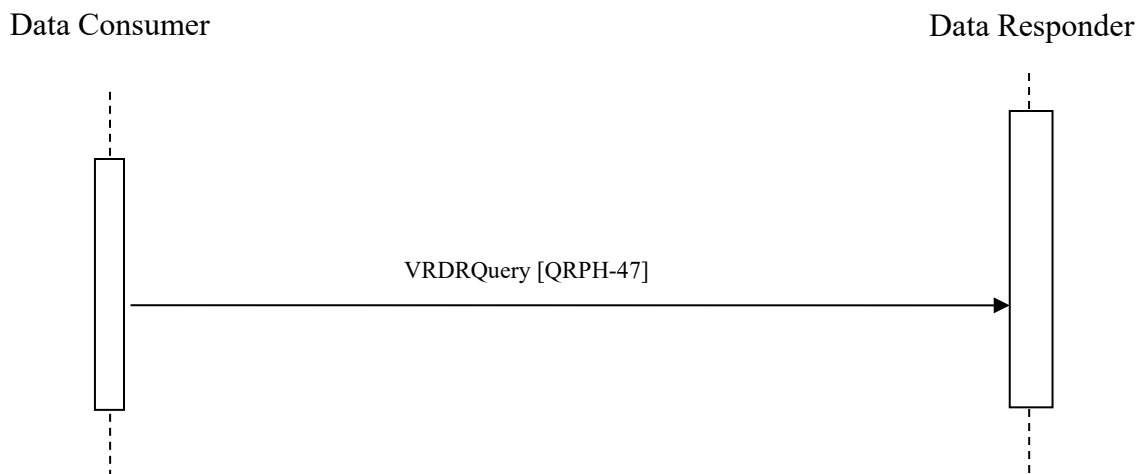


Figure 3.47.4-1: Interaction Diagram

3.47.4.1 VRDRQuery message

Data Consumer retrieves the death reporting related health information from the Data Responder.

2025 **3.47.4.1.1 Trigger Events**

Data Consumer shall trigger a FHIR-based query [QRPH-47] to the Data Responder when:

The clinician is preparing to complete the death reporting details for jurisdictional vital records reporting

3.47.4.1.2 Message Semantics

2030 The message is a FHIR HTTP or HTTPS GET of Death Reporting Data where the parameter provided is the PatientID. While both HTTP and HTTPS are permitted, the implementation SHOULD consider HTTPS.

As the information is retrieved from multiple resources, the URL resources for this operation are

- [base]/Patient/[id]
- 2035 • [base]/Condition/[id]
- [base]/Composition/[id]
- [base]/Location/[id]
- [base]/Observation/[id]

- [base]/Location/[id]
- [base]/Practitioner/[id]
- [base]/Procedure/[id]
- [base]/RelatedPerson/[id]

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3.47.4.1.3 Expected Actions

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The Data Consumer initiates the retrieve request for the resources specified in QRPH TF-3: 6.6.1 using HTTP or HTTPS GET, and the Data Responder responds using the resources specified in QRPH TF-3: 6.6.1 according to the FHIR GET specification with the requested death reporting related health information Death Reporting information or an error message. See <http://hl7.org/fhir/http.html#read>.

3.47.5 Security Considerations

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This transaction includes identifiable health information, and depending upon the implementation and application, may constitute a disclosure of health information that require audit, encryption, and authentication of the Data Consumer and Data responder. For further guidance, see ITI TF Supplement: Appendix Z.

3.47.5.1 Security Audit Considerations – VRDRQuery [QRPH-47] (ADT)

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The VRDRQuery [QRPH-47] (FHIR GET) messages are audited as “PHI Export” events, as defined in ITI TF-2a: Table 3.20.4.1.1.1-1. The following tables show items that are required to be part of the audit record for these specific VRDRQuery transactions.

3.47.5.1.1 Data Responder Actor audit message:

	Field Name	Opt	Value Constraints
Event AuditMessage/ EventIdentification	EventID	M	EV(110106, DCM, “Export”)
	EventActionCode	M	“C” (create) for QRPH-47 (VRDRQuery)
	EventDateTime	M	<i>not specialized</i>
	EventOutcomeIndicator	M	<i>not specialized</i>
	EventTypeCode	M	EV(“QRPH-47”, “IHE Transactions”, “VRDRQuery”)
Source (Death Reporting Data Responder Actor) (1)			
Human Requestor (0..n)			
Destination (Death Reporting Data Consumer Actor) (1)			
Audit Source (Death Reporting Data Responder Actor) (1)			
Patient (1)			

2060

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Where:

Source AuditMessage/ ActiveParticipant	UserID	M	The identity of the Death Reporting Data Responder facility and responder application; concatenated together, separated by the character.
	AlternativeUserID	M	The process ID as used within the local operating system in the local system logs.
	UserName	U	<i>not specialized</i>
	UserIsRequestor	M	<i>not specialized</i>
	RoleIDCode	M	EV(110153, DCM, “Source”)
	NetworkAccessPointTypeCode	M	“1” for machine (DNS) name, “2” for IP address
	NetworkAccessPointID	M	The machine name or IP address

Human Requestor (if known) AuditMessage/ ActiveParticipant	UserID	M	Identity of the human that initiated the transaction.
	AlternativeUserID	U	<i>not specialized</i>
	UserName	U	<i>not specialized</i>
	UserIsRequestor	M	<i>not specialized</i>
	RoleIDCode	U	Access Control role(s) the user holds that allows this transaction.
	NetworkAccessPointTypeCode	NA	
	NetworkAccessPointID	NA	

Destination AuditMessage/ ActiveParticipant	UserID	M	The identity of the Death Reporting Data Consumer facility and responder application; concatenated together, separated by the character.
	AlternativeUserID	M	<i>not specialized</i>
	UserName	U	<i>not specialized</i>
	UserIsRequestor	M	<i>not specialized</i>
	RoleIDCode	M	EV(110152, DCM, “Destination”)
	NetworkAccessPointTypeCode	M	“1” for machine (DNS) name, “2” for IP address
	NetworkAccessPointID	M	The machine name or IP address, as specified in RFC3881.

2065

Audit Source AuditMessage/ AuditSourceIdentification	AuditSourceID	U	<i>not specialized</i>
	AuditEnterpriseSiteID	U	<i>not specialized</i>
	AuditSourceTypeCode	U	<i>not specialized</i>

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Patient (AuditMessage/ ParticipantObjectIdentification)	ParticipantObjectTypeCode	M	“1” (person)
	ParticipantObjectTypeCodeRole	M	“1” (patient)
	ParticipantObjectDataLifeCycle	U	<i>not specialized</i>
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, “Patient Number”)
	ParticipantObjectSensitivity	U	<i>not specialized</i>
	ParticipantObjectID	M	The patient ID in HL7 CX format.
	ParticipantObjectName	U	<i>not specialized</i>
	ParticipantObjectQuery	U	<i>not specialized</i>
	ParticipantObjectDetail	M	Type=MSH-10 (the literal string), Value=the value of MSH-10 (from the message content, base64 encoded)

3.47.5.1.2 Death Reporting Data Consumer Actor audit message:

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	Field Name	Opt	Value Constraints
Event AuditMessage/ EventIdentification	EventID	M	EV(110107, DCM, “Import”)
	EventActionCode	M	“C” (create) for QRPH-47 (VRDRQuery)
	EventDateTime	M	<i>not specialized</i>
	EventOutcomeIndicator	M	<i>not specialized</i>
	EventTypeCode	M	EV(“QRPH-47”, “IHE Transactions”, “VRDRQuery”)
Source (Death Reporting Data Consumer Actor) (1)			
Destination (Death Reporting Data Responder Actor) (1)			
Audit Source (Death Reporting Data Consumer Actor) (1)			
Patient(1)			

Where:

Source AuditMessage/ ActiveParticipant	UserID	M	The identity of the Death Reporting Data Responder facility and responder application; concatenated together, separated by the character
	AlternativeUserID	U	<i>not specialized</i>
	UserName	U	<i>not specialized</i>
	UserIsRequestor	M	<i>not specialized</i>
	RoleIDCode	M	EV(110153, DCM, “Source”)
	NetworkAccessPointTypeCode	M	“1” for machine (DNS) name, “2” for IP address
	NetworkAccessPointID	M	The machine name or IP address

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Destination <i>AuditMessage/ ActiveParticipant</i>	UserID	M	The identity of the Death Reporting Data Consumer facility and responder application; concatenated together, separated by the character
	AlternativeUserID	M	The process ID as used within the local operating system in the local system logs.
	<i>UserName</i>	<i>U</i>	<i>not specialized</i>
	<i>UserIsRequestor</i>	<i>M</i>	<i>not specialized</i>
	RoleIDCode	M	EV(110152, DCM, “Destination”)
	NetworkAccessPointTypeCode	M	“1” for machine (DNS) name, “2” for IP address
	NetworkAccessPointID	M	The machine name or IP address

Audit Source <i>AuditMessage/ AuditSourceIdentification</i>	<i>AuditSourceID</i>	<i>U</i>	<i>not specialized</i>
	<i>AuditEnterpriseSiteID</i>	<i>U</i>	<i>not specialized</i>
	<i>AuditSourceTypeCode</i>	<i>U</i>	<i>not specialized</i>

2075

Patient <i>(AuditMessage/ ParticipantObjectIdentification)</i>	ParticipantObjectTypeCode	M	“1” (person)
	ParticipantObjectTypeCodeRole	M	“1” (patient)
	<i>ParticipantObjectDataLifeCycle</i>	<i>U</i>	<i>not specialized</i>
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, “Patient Number”)
	<i>ParticipantObjectSensitivity</i>	<i>U</i>	<i>not specialized</i>
	ParticipantObjectID	M	The patient ID in HL7 CX format.
	<i>ParticipantObjectName</i>	<i>U</i>	<i>not specialized</i>
	<i>ParticipantObjectQuery</i>	<i>U</i>	<i>not specialized</i>
	ParticipantObjectDetail	M	Type=MSH-10 (the literal string), Value=the value of MSH-10 (from the message content, base64 encoded)

Volume 2 Appendices

None

Volume 2 Namespace Additions

No new Volume 2 Namespace additions.

2080

Volume 3 – Content Modules

5 Namespaces and Vocabularies

Add to Section 5 Namespaces and Vocabularies

2085

codeSystem	codeSystemName	Description
2.16.840.1.113883.6.1	LOINC	Logical Observation Identifier Names and Codes
2.16.840.1.113883.6.96	SNOMED CT	Systematized Nomenclature Of Medicine Clinical Terms

Add to Section 5.1.1 IHE Format Codes

Profile	Format Code	Media Type	Template ID
Vital Records Death Reporting	urn:ihe:qrph:vrdr:2013	text/xml	Vital Records Death Reporting Document (1.3.6.1.4.1.19376.1.7.3.1.1.23.1)
Medical Summary for VRDR Pre-pop	urn:ihe:qrph:ms-vrdr:2013	text/xml	Medical Summary for VRDR Pre-pop (1.3.6.1.4.1.19376.1.7.3.1.1.23.2)

2090

Add to Section 5.1.2 IHE ActCode Vocabulary

No new ActCode Vocabulary

Add to Section 5.1.3 IHE RoleCode Vocabulary

No new RoleCode Vocabulary

Add to Section 6 as follows

2095

5.2 IHE Concept Domains

Add to Section 5.2 IHE Concept Domains

UV Concept Domain	Concept Domain Description
CD_OccupationCode	The Occupation Code Concept Domain contains a set of codes that describe a set of activities or tasks that individuals are paid to perform or, if unpaid, define a person's contribution to a household/family business/community.

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UV Concept Domain	Concept Domain Description
CD_IndustryCode	The Industry Code Concept Domain contains a set of codes that describe an economic/business sector comprised of businesses/ enterprises concerned with the output of a specified category of products or services (e.g., the construction industry or the agriculture industry).
CD_EmploymentStatus	The employment status concept domain defines a person's employment as defined by compensation and sector (e.g., paid vs. unpaid, self-employed vs. not self-employed, government vs. private, etc.). Generally, employment status refers to whether or not a person is currently employed for wages or doing some other unpaid activity, such as volunteering, homemaking, or participating in educational instruction as a student. In a healthcare setting, employment status may be used to determine appropriate probing questions for occupational hazards and occupational history. For example, a person who is currently not employed for wages may be prompted to provide
CD_DetailedRace	Specific race codes reported on a limited basis.
CD_DetailedEthnicity	List of detailed ethnicity codes reported on a limited basis

6 Content Modules

2100 6.3.1 CDA Document Content Modules

6.3.1.D1 Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3)

6.3.1.D1.1 Format Code

The XSDDocumentEntry format code for this content is **urn:ihe:qrph:vrdr:2013**

2105 6.3.1.D1.2 Parent Template

This document is a specialization of the HL7 Reporting Death Information from a clinical setting to Vital Records (ClinicalDocument: templateId 2.16.840.1.113883.10.20.26.1.1.6).

6.3.1.D1.3 Referenced Standards

2110 All standards which are referenced in this document are listed below with their common abbreviation, full title, and link to the standard.

Table 6.3.1.D1.3-1: Vital Records Death Reporting (VRDR) Document - Referenced Standards

Abbreviation	Title	URL
CDAR2	HL7 CDA Release 2.0	http://www.hl7.org/Library/General/HL7_CD_A_R2_final.zip
HL7 VRDR CDA	HL7 IG for Clinical Document Architecture (CDA) Release 2: Reporting Death Info from the EHR to Vital Records, Release 1 (STU) US Realm	http://www.hl7.org/implement/standards/product_brief.cfm?product_id=386
HL7 VRDR FHIR	Vital Records Death Reporting FHIR Implementation Guide based on FHIR R3	https://trifolia-fhir.lantanagroup.com/igs/lantana_hapi_r4/vrdr/index.html
LOINC	Logical Observation Identifiers, Names and Codes	https://loinc.org/
SNOMED	Systematized Nomenclature for Medicine	http://www.snomed.org/

6.3.1.D1.4 Data Element Requirement Mappings

2115 6.3.1.D1.4.1 Data Element Requirement Mappings to CDA and FHIR

2120 Table 6.3.1.D1.4.1-1 specifies the mapping of data from the Vital Records Death Reporting Data Elements (see QRPH TF-1: Appendix B). Column 1 and 2 contain attributes available on the form. Column 3 contains the mapping of these data elements to the VRDR CDA Document. A Form Receiver CDA Exporter or Form Processor CDA Exporter SHALL be able to map values from the specified form data elements for this profile to generate the CDA document content according to the required mappings in Table 6.3.1.D1.4.1-1.

Form Receiver CDA Exporter or Form Processor CDA Exporter SHALL map the value in the form element in column 1 into the section/machine readable entry of the VRDR CDA document (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) specified in Column 4. Based upon the jurisdiction data requirements, some of the data mappings below may be optional. The HL7 VRDR CDA identifies a separate template for the flow from the provider to the jurisdiction (Provider Death Registration Document (2.16.840.1.113883.10.20.26.1.1.1) and from the Jurisdiction to the National Statistics Agency (Jurisdiction Death Information Document 2.16.840.1.113883.10.20.26.1.1.2). The QRPH profile extends the full content below for both information flows to allow for optimal implementation flexibility. This may be further constrained by national extension.

Table 6.3.1.D1.4.1-1: Required Mappings - Form VRDR Data Elements to VRDR CDA and VRDR FHIR

Attribute Name	Death Report Data Element	VRDR CDA	VRDR FHIR
DOD (for date) TOD (For Time)	Patient Death Date and Time	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) /recordTarget/patientRole/patient sdct:deceasedTime At least a year must be provided, even if the date is not known with certainty. Use the Death Date Comment template to record supplemental information relevant to the date of death .Death Event Section [Section: templateId 2.16.840.1.113883.10.20.26.1.2.6] Death Date Comment [Observation: templateId - 2.16.840.1.113883.10.20.26.1.3.20] observation/value@probability This attribute represents the probability assigned to the value, a decimal number between 0 (very uncertain) and 1 (certain). If the date of death is the actual date of death, set @probability=1. If the date of death is a presumed date of death, set @probability=0	Death Date observation/effectiveDateTime Where /observation/code where code="81956-5" Date and time of death (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)
AGED	Age at Death	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Decedent Demographics Section (Section: templateID - 2.16.840.1.113883.10.20.26.1.2.1) Age at Death Observation (Observation: templateID: 2.16.840.1.113883.10.20.26.1.3.36) observation/value	Decedent Age observation/value Where /observation/code where code="30525-0" AGE (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) Where valueQuantity/unit shall be bound to AgeUnitOfMeasure (required)
NLTLY	Nationality of Deceased	NOTE: Extended for WHO support recordTarget/patientRole/patient/citizenship	Decedent Patient.extension:nationality
CERTID	Certificate number	NOTE: Extended for WHO support recordTarget/ patientRole /id	Death Certificate Entry.resource: VRDR Death Certificate/identifier

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Attribute Name	Death Report Data Element	VRDR CDA	VRDR FHIR
BCID	Birth certificate ID	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Decedent Demographics Section 2.16.840.1.113883.10.20.26.1.2.1 Birth Certificate 2.16.840.1.113883.10.20.26.1.3.45 /id Where code = '444561001', Birth Certificate (record artifact), SNOMED-CT	Decedent Patient.identifier Where identifier.type = 'BCFN'
BCYR	Birth certificate {birth} year	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Decedent Demographics Section 2.16.840.1.113883.10.20.26.1.2.1 Birth Certificate 2.16.840.1.113883.10.20.26.1.3.45 /effectiveTime/@value Where code = '444561001', Birth Certificate (record artifact), SNOMED-CT	Decedent Patient.birthdate Where year is the birth year of the birth certificate
DREG	Date of Death Registration	Death Administration Section 2.16.840.1.113883.10.20.26.1.2.3 Death Registration 2.16.840.1.113883.10.20.26.1.3.46 effectiveTime where code= '307928008', Death administrative procedure, SNOMED-CT	See Open Issues observation/effectiveDateTime Where /observation/code where code="80907-9" Death registration date (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)
FORMSRC	Source flag	Death Administration Section 2.16.840.1.113883.10.20.26.1.2.3 Death Certification (Act: templateId 2.16.840.1.113883.10.20.26.1.3.50) //observation[templateId/@root="2.16.840.1.113883.10.20.26.1.3.50"][templateId/@extension="2016-12-01"]/value	See Open Issues observation/effectiveDateTime Where /observation/code where code="PHC1433" SourceFlag (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)
BPLACEST	State or Province of Birth	recordTarget/patientRole/patient/birthplace/place/addr	Decedent Patient.extension:birthPlace

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Attribute Name	Death Report Data Element	VRDR CDA	VRDR FHIR
COD	Cause of Death	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Cause of Death Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.4] Death Causal Information Organizer[Organizer: templateId 2.16.840.1.113883.10.20.26.1.6] Cause of Death (descriptive text) [Observation: templateId 2.16.840.1.113883.10.20.26.1.3.16] /value (@xsi:type="ST") where /code=69453-9, Cause of Death, LOINC <i>Clinician entry is descriptive text.</i> Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Cause of Death Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.4] Death Causal Information Organizer[Organizer: templateId 2.16.840.1.113883.10.20.26.1.6] /component/sequenceNumber/@value <i>A clinician may enter multiple diseases, injuries, or complications in order to record the cause of death. The immediate cause of death and the underlying cause of death must be reported. Additional causes of death may be recorded. These are entered in a defined sequence, and the order of each is recorded using component/sequenceNumber.</i> <i>The clinician provided information is used by the National Center for Health Statistics to provide ICD codes for the cause or causes of death. A single clinician provided entry may lead to multiple codes being assigned.</i>	Cause of Death Condition Condition/code/display

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Attribute Name	Death Report Data Element	VRDR CDA	VRDR FHIR
INTERVAL	Onset to death interval for cause of death	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Cause of Death Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.4 Death Causal Information Organizer[Organizer: templateId 2.16.840.1.113883.10.20.26.1.6] Cause of Death (descriptive text) [Observation: templateId 2.16.840.1.113883.10.20.26.1.3.16] Disease Onset to Death Interval [Observation: templateId - 2.16.840.1.113883.10.20.26.1.3.18] /value @xsi:type="ST" where code/@code="69440-6" Disease onset to death interval (CodeSystem: 2.16.840.1.113883.6.1 LOINC) The data to be included will vary from statements of time intervals to text statements such as “many months”, “days”, “unknown”. Each disease onset to death interval value is contained in a Cause of Death observation that identifies the condition associated with the time interval. <i>This linkage is implemented through the use of entryRelationship.</i>	Cause of Death Condition Condition.onsetString
OTHCOD	Cause of Death - Other Significant Conditions	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Cause of Death Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.4 Death Causal Information Organizer[Organizer: templateId 2.16.840.1.113883.10.20.26.1.6] Cause of Death Other Significant Conditions (descriptive text) [Observation: templateId - 2.16.840.1.113883.10.20.26.1.3.17] Component/observation/value Where code/@code="69441-4" Other Significant Condition (CodeSystem: 2.16.840.1.113883.6.1 LOINC) AND Component/observation/value ([1..1] with @xsi:type="ED" <i>Descriptive text that provides information on a significant condition or conditions that contributed to death, but did not result in the underlying cause that is elsewhere described. Multiple conditions may be entered, separated by commas. The maximum length is 240 characters.</i>	Condition Contributing to Death Profile Condition/code/display

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Attribute Name	Death Report Data Element	VRDR CDA	VRDR FHIR
CERT	Certifier Type	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Death Administration Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.3] Death Certification (Act: templateId 2.16.840.1.113883.10.20.26.1.3.50) performer/assignedEntity/code Where code is data type CD and uses values from value set: (CodeSystem: 2.16.840.1.114222.4.11.6001 Certifier Types (NCHS)) <i>The type of certifier is:</i> • <i>"Certifying Physician" when the person who is completing the medical certification of cause of death is not the person who pronounced death</i> • <i>"Pronouncing & Certifying Physician" when the same physician has both pronounced death and certified to the cause of death</i> • <i>"Medical Examiner/Coroner" when investigation is required by the Post-Mortem Examination Act and the cause of death is completed by a medical examiner or coroner</i>	Certifier Practitioner.qualification Where qualification SHALL be selected from ValueSet CodeSystem: 2.16.840.1.114222.4.11.6001 Certifier Types (NCHS)
CERTIFBY	Death Certified By	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Death Administration Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.3] Death Certification [Act: templateId 2.16.840.1.113883.10.20.26.1.3.50] performer/assignedEntity/assignedPerson/name [1..1] • <i>This field contains the name of the person who signed the death certificate. The full name of the certifier is required. A value is required if the case has not been assigned to a coroner/medical examiner.</i>	Certifier Practitioner.name
CERTADDR	Certifier Address	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Death Administration Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.3] Death Certification [Act: templateId 2.16.840.1.113883.10.20.26.1.3.50] performer/assignedEntity/addr [1..1] • <i>The postal address used to locate the clinician or coroner at the time of death certification. The element is required if the death has been certified.</i>	Certifier Practitioner.address
CERTSIG	Certifier signature	Document Digital Signature may be used to reflect the signature. See QRPH TF-1: X.5 VRDR Security Considerations	Document Digital Signature may be used to reflect the signature. See QRPH TF-1: X.5 VRDR Security Considerations

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Attribute Name	Death Report Data Element	VRDR CDA	VRDR FHIR
BPLACE	Birth Place	recordTarget/patientRole/patient/birthplace/place/addr	Decedent Patient.extension: birthPlace
MARITAL	Marital Status	recordTarget/patientRole/patient/maritalStatusCode	Decedent Patient.maritalStatus
DEDUC	Education level	Decedent Demographics Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.1] Decedent Education Level [Observation: templateId - 2.16.840.1.113883.10.20.26.1.3.35] observation/code @code="80913-7" Decedent education level (CodeSystem: 2.16.840.1.113883.6.1 LOINC) AND /observation/value ([1..1] with @xsi:type="CD" using Decedent Education Level (NCHS) 2.16.840.1.114222.4.11.7385 unless otherwise constrained by Jurisdiction.	Decedent Education Level observation/valueCodableConcept Where /observation/code where code="80913-7" Decedent education level (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) And where observation/valueCodableConcept is bound to Decedent Education Level (NCHS) 2.16.840.1.114222.4.11.7385 unless otherwise constrained by Jurisdiction.
DOI	Date of Injury	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Cause of Death Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.4] Injury Organizer (Organizer: templateId: 2.16.840.1.113883.10.20.26.1.3.52) Injury Details (Act: templateId: 2.16.840.1.113883.10.20.26.1.3.33) act/effectiveTime	Injury Incident Observation/effectiveDateTime Where /observation/code where code="11374-6" Injury incident description (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)
PD	Date pronounced Dead	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Death Administration Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.3] Death Pronouncement (Observation: templateId 2.16.840.1.113883.10.20.26.1.3.51) effectiveTime	Death Date (see Open Issues)
CERTDATE	Death Certificate Signed	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Death Administration Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.3] Death Certification [Observation: templateId 2.16.840.1.113883.10.20.26.1.3.50] effectiveTime [1..1]	Death Certificate Composition/date
DETHNIC	Ethnicity	recordTarget/patientRole/patient/ethnicGroupCode sdte:ethnicGroupCode	Decedent Patient.extension: ethnicity
DECNAME	Decedent's Name Known by Certifier	recordTarget/patientRole/patient/name	Decedent Patient.name

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Attribute Name	Death Report Data Element	VRDR CDA	VRDR FHIR
DADDR	Decedent's Residence	recordTarget/patientRole/addr	Decedent Patient.address
DRACE	Decedent's Race	recordTarget/patientRole/patient/raceCode sdct:raceCode	Decedent Patient.extension: race
INJDESC	Describe how the injury occurred	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Cause of Death Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.4] Injury Organizer (Organizer templateId: 2.16.840.1.113883.10.20.26.1.3.52) Injury Details (Act: templateId: 2.16.840.1.113883.10.20.26.1.3.33) act/text [1..1] text statements Describe how injury occurred	Injury Incident Observation.valueString Where /observation/code where code= "11374-6" Injury incident description (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)
TOBAC	Did tobacco use contribute to death?	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Cause of Death Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.4] Contributory Tobacco Use (NCHS) [Observation: templateId 2.16.840.1.114222.4.11.6004] value [1..1] Where value data type is CD and uses values from value set: (CodeSystem: 2.16.840.1.114222.4.11.6004 Contributory Tobacco Use (NCHS)), Where code = '69443-0', 'Did tobacco use contribute to death', LOINC	Tobacco Use Contributed To Death Observation.valueCodableConcept which SHALL be selected from Contributory Tobacco Use (NCHS) [Observation: templateId 2.16.840.1.114222.4.11.6004] Where /observation/code where code= "69443-0" Did tobacco use contribute to death, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)
DINSTI	Facility Name (Geographic location where the death occurred)	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Death Event Section [Section: templateId 2.16.840.1.113883.10.20.26.1.2.6] Location of Death (Observation: templateId 2.16.840.1.113883.10.20.26.1.10) text [0..1] text statements Information about the place where death occurred. It is provided if no address can be.	Death Location Location.name

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Attribute Name	Death Report Data Element	VRDR CDA	VRDR FHIR
DSTREETADDR	Street address where death occurred if not facility	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Death Event Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.6] Location of Death (Observation: templateId - 2.16.840.1.113883.10.20.26.1.10) text [0..1] text statements - Information about the place where death occurred. It is provided if no address can be. /value where value data type is AD if the mailing address is known - The mailing address for the place where the person died. This attribute is collected if the person died at a home, a health facility, or other location with a postal address.	Death Location Location.address
PREG	Female pregnancy status at time of death	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Cause of Death Section (Section: templateId - 2.16.840.1.113883.10.20.26.1.2.4) Pregnancy Status V2 (Observation: templateId - 2.16.840.1.113883.10.20.26.1.12) value [1..1] Where value data type is CD and uses values from value set: (CodeSystem: 2.16.840.1.114222.4.11.6003 Pregnancy Status (NCHS)) A code that provides information regarding whether or not the person was pregnant at the time of her death, or whether she was pregnant around the time of death. Required if the person is female and in the age range 5 to 75 years.	Decedent Pregnancy Observation.valueCodableConcept which SHALL be selected from (CodeSystem: 2.16.840.1.114222.4.11.6003 Pregnancy Status (NCHS)) Where /observation/code where code="69442-2" Timing of Recent Pregnancy Related to Death, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)
WORKINJ	Injury at Work	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Cause of Death Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.4] Injury Organizer (V2) (Organizer: templateId - 2.16.840.1.113883.10.20.26.1.9) Injury Association with Work [Observation: templateId - 2.16.840.1.113883.10.20.26.1.3.41] / with @xsi:type="CD" [1..1] Where value data type is BL A Boolean using value set Yes No Unknown (YNU) urn:oid:2.16.840.1.114222.4.11.888 that tells whether or not the injury occurred while the person was at work. And Where Component/observation/code/@code="69444-8" Did death result from injury at work (CodeSystem: 2.16.840.1.113883.6.1 LOINC)	Injury Incident Observation.component2/valueCodableConcept which SHALL be selected from HL7 Version 2 Table 0532 Where /observation.component2/code where code="69444-8" Did death result from injury at work, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)

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Attribute Name	Death Report Data Element	VRDR CDA	VRDR FHIR
CLICNUM	License Number of Person Certifying Death	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Death Administration Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.3] Death Certification [Act: templateId 2.16.840.1.113883.10.20.26.1.3.50] performer/assignedEntity/ id [1..*]	Certifier Practitioner.qualification.identifier
PLICNUM	License Number of Person Pronouncing Death	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Death Administration Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.3] Death Pronouncement (Act: templateId 2.16.840.1.113883.10.20.26.1.3.51) performer/assignedEntity/ id [1..1]	Death Pronouncement Performer Practitioner.qualification.identifier
INJLOCNAR	Injury location Narrative	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Cause of Death Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.4] Injury Organizer (Organizer: templateId 2.16.840.1.113883.10.20.26.1.3.52) Injury Details (Act: templateId: 2.16.840.1.113883.10.20.26.1.3.33) act/participant/participantRole/addr [0..1] if available The street address for the place where the injury occurred. Required if the decedent suffered an injury leading to death. where code/@code="11374-6" Injury incident description (CodeSystem: 2.16.840.1.113883.6.1 LOINC)	Injury Location Location.address Location.description if the place where the injury occurred is not known. (see Open Issues)
MANNER	Manner of Death	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Death Event Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.6] Manner of Death (Observation: templateId 2.16.840.1.113883.10.20.26.1.11) value [1..1] Where value data type is CD and uses values from value set: (CodeSystem: 2.16.840.1.114222.4.11.6002 Manner Of Death (NCHS)) where code/@code="69449-7" Manner of Death (CodeSystem: 2.16.840.1.113883.6.1 LOINC)	Manner of Death Observation.valueCodableConcept which SHALL be selected from (CodeSystem: 2.16.840.1.114222.4.11.6002 Manner Of Death (NCHS)) Where observation.code="69449-7" Manner of Death, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)

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Attribute Name	Death Report Data Element	VRDR CDA	VRDR FHIR
NAMECOD	Name of person completing COD	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Cause of Death Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.4] Death Causal Information Organizer [Organizer: templateId 2.16.840.1.113883.10.20.26.1.6] Author Participation (identifier: templateId - 2.16.840.1.113883.10.20.22.4.119) author/assignedAuthor/name	Death Certification Procedure.performer VRDR Certifier Practitioner.name
DPLACE	Place of Death	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Death Event Section (Section: templateId - 2.16.840.1.113883.10.20.26.1.2.6) Death Location Type (Observation templateId 2.16.840.1.113883.10.20.26.1.8) value [1..1] where its data type is CD and uses values from value set: (CodeSystem: 2.16.840.1.114222.4.11.7216 Place of Death (NCHS)) where code/@code=" 58332-8" Location of Death (CodeSystem: 2.16.840.1.113883.6.1 LOINC)	Death Location (see Open Issues) Observation.valueCodableConcept which SHALL be selected from (CodeSystem: 2.16.840.1.114222.4.11.7216 Place of Death (NCHS)) Where observation.code="58332-8" Location of Death, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)
DISP	Method of Disposition	Death Administration Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.3] Method of Disposition [Observation: templateId - 2.16.840.1.113883.10.20.26.1.3.42] value [1..1] where its data type is CD and uses values from value set: (CodeSystem: 2.16.840.1.114222.4.11.7379 Methods of Disposition (NCHS)) where code/@code="80905-3" Method of disposition (CodeSystem: 2.16.840.1.113883.6.1 LOINC)	Decedent Disposition Method Observation.valueCodableConcept which SHALL be selected from (CodeSystem: 2.16.840.1.114222.4.11.7379 Methods of Disposition (NCHS)) Where observation.code="80905-3" Method of disposition, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)

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Attribute Name	Death Report Data Element	VRDR CDA	VRDR FHIR
INJPL	Place of Injury	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Injury Organizer (Organizer templateId 2.16.840.1.113883.10.20.26.1.3.52) Injury Details [Act: templateId 2.16.840.1.113883.10.20.26.1.3.33] act/participant/participantRole/playingEntity/code [1..1] which uses values from value set: (CodeSystem: 2.16.840.1.114222.4.11.7374 Place of Injury (NCHS)) <i>A description of the type of place where the injury occurred. Possible entries are "at home", "farm", "factory", "office building", "restaurant". Required if the decedent suffered an injury leading to death.</i> where act/code/@code="11374-6" Injury incident (CodeSystem: 2.16.840.1.113883.6.1 LOINC)	Injury Location (see Open Issues) Observation.valueCodableConcept which SHALL be selected from (CodeSystem: 2.16.840.1.114222.4.11.7374 Place of Injury (NCHS)) Where observation.code="11374-6" Injury incident, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)
SEX	Sex	recordTarget/patientRole/Patient/administrativeGenderCode NOTE: while the modeled location references the term 'gender', the attribute in this VRDR CDA location SHALL contain the Administrative Sex of the deceased	Decedent Patient.gender
PRONOUNCE RSIG	Signature of Person Pronouncing Death	Document Digital Signature may be used to reflect the signature. See Security Considerations Section QRPH TF-1: X.5 VRDR Security Considerations	Document Digital Signature may be used to reflect the signature. See Security Considerations Section QRPH TF-1: X.5 VRDR Security Considerations

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Attribute Name	Death Report Data Element	VRDR CDA	VRDR FHIR										
JURISID	Jurisdiction Person Identifier (e.g., Social Security Number (SSN))	recordTarget/id Where Root is the 2.16.840.1.113883.4.1 (for Social Security Administration) or the Root of the Jurisdiction Person Identifier assigning authority The Extension is the person’s Jurisdiction Person Identifier If there is no Jurisdiction Person Identifier, use one of the following flavors of NULL in place of the extension attribute: <table><tr><td>HL7 Concept Code Head Code-defined Value Set</td><td>NCHS SSN Companion Missing Values Variable</td></tr><tr><td>NI v:NoInformation</td><td>None (decedent has no Jurisdiction Person Identifier)</td></tr><tr><td>. UNK . v:Unknown</td><td>Unknown (informant does not know the Jurisdiction Person Identifier)</td></tr><tr><td>. . . NAV</td><td>Pending (informant does not know at this time)</td></tr><tr><td>. . NASK</td><td>Not Obtainable (no informant, unknown body)</td></tr></table>	HL7 Concept Code Head Code-defined Value Set	NCHS SSN Companion Missing Values Variable	NI v:NoInformation	None (decedent has no Jurisdiction Person Identifier)	. UNK . v:Unknown	Unknown (informant does not know the Jurisdiction Person Identifier)	. . . NAV	Pending (informant does not know at this time)	. . NASK	Not Obtainable (no informant, unknown body)	Decedent Patient.id
HL7 Concept Code Head Code-defined Value Set	NCHS SSN Companion Missing Values Variable												
NI v:NoInformation	None (decedent has no Jurisdiction Person Identifier)												
. UNK . v:Unknown	Unknown (informant does not know the Jurisdiction Person Identifier)												
. . . NAV	Pending (informant does not know at this time)												
. . NASK	Not Obtainable (no informant, unknown body)												
TOI	Time of Injury	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Cause of Death Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.4] Injury Organizer (Organizer templateId 2.16.840.1.113883.10.20.26.1.3.52) Injury Details (Act: templateId: 2.16.840.1.113883.10.20.26.1.3.33) act/effectiveTime Where code/@code="11374-6" Injury incident description (CodeSystem: 2.16.840.1.113883.6.1 LOINC)	Injury Incident Observation.effectiveDateTime										
PD	Time pronounced Dead	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Death Administration Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.3] Death Pronouncement (Act: templateId 2.16.840.1.113883.10.20.26.1.3.51) effectiveTime where code/@code=" 80616-6 " Date/time pronounced dead	Death Date Observation.effectiveDateTime Where /observation/code where code="80616-6 " Date/time pronounced dead, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)										

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Attribute Name	Death Report Data Element	VRDR CDA	VRDR FHIR
CERTL	Title of Certifier	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Death Administration Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.3] Death Certification (V2) [Observation: templateId 2.16.840.1.113883.10.20.26.1.7] performer/assignedEntity/assignedPerson/name/suffix [1..1] <i>This element is to be used for entering the title of the certifier as free text</i>	Certifier Practitioner.name
TRANSPINJ	Transportation Injury	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Cause of Death Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.4] Injury Organizer) [Organizer: templateId 2.16.840.1.113883.10.20.26.1.3.52] Injury Association with Transportation Event [Observation: templateId - 2.16.840.1.113883.10.20.26.1.3.34] WHERE (observation/value [1..1] Where value with @xsi:type="CD", where the code SHALL be selected from ValueSet Yes No Unknown (YNU) (2.16.840.1.114222.4.11.888) AND where code/@code="69448-9" Injury leading to death associated with transportation event (CodeSystem: 2.16.840.1.113883.6.1 LOINC))	Injury Incident Observation.component3/valueCodableConcept
TRANSP	Transportation Role of Decedent	Cause of Death Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.4] Injury Organizer [Organizer: templateId 2.16.840.1.113883.10.20.26.1.3.52] Injury Association with Transportation Event [Observation: templateId - 2.16.840.1.113883.10.20.26.1.3.34] observation/participant/participantRole/code [0..1] which uses values from value set: (CodeSystem: 2.16.840.1.114222.4.11.6005 Transportation Relationships (NCHS) Value Set) A coded value that states, if the injury was related to transportation, the specific role played by the decedent, e.g., driver, passenger. Required if the decedent suffered an injury leading to death.	Injury Incident See Open Issues Observation.valueCodableConcept Where /observation/code where code= "69451-3" Transportation Role of Decedent, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)

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Attribute Name	Death Report Data Element	VRDR CDA	VRDR FHIR
AUTOP	Was an autopsy performed?	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Death Administration Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.3] Autopsy Details (Observation: templateId 2.16.840.1.113883.10.20.26.1.3.53) @negationInd [1..1] <i>To indicate that an autopsy has been performed, set @negationInd="false" and to indicate that an autopsy has not been performed, set @negationInd="true".</i>	Autopsy Performed Indicator Observation.valueCodableConcept Observation.valueCodableConcept Where /observation/code where code="85699-7" Autopsy was performed, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)
REF	Was Medical Examiner or Coroner contacted?	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Coroner Case Transfer (V2)[Act: templateId 2.16.840.1.113883.10.20.26.1.4] @negationInd [0..1] <i>If the medical examiner or coroner was contacted, set @negationInd="false", if the medical examiner or coroner was not contacted, set @negationInd="true"; if it is unknown whether or not the medical examiner or coroner was contacted, set @nullFlavor="UNK".</i> Where code/@code="74497-9" Medical examiner or coroner was contacted (CodeSystem: 2.16.840.1.113883.6.1 LOINC) Entry: Coroner Referral (Observation: templateId 2.16.840.1.113883.10.20.26.1.5) Where code/@code='69438-0', 'Forensic medicine Referral note', LOINC A note that is intended to record the reason the case was forwarded to a coroner or medical examiner.	Examiner Contacted Observation.valueBoolean Where /observation/code where code="69438-0", Forensic medicine Referral note, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)
AUTOPF	Were autopsy findings available to complete the COD	Vital Records Death Reporting (VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.3) Death Administration Section [Section: templateId - 2.16.840.1.113883.10.20.26.1.2.3] Autopsy Details (V2) [Procedure: templateId - 2.16.840.1.113883.10.20.26.1.2] Availability of Autopsy Results (V2) [Observation: templateId 2.16.840.1.113883.10.20.26.1.3] value [1..1] <i>Were autopsy findings available to complete the cause of death?</i> Where value data type is BL Where code/@code="69436-4" Were autopsy findings available to complete the cause of death? (CodeSystem: 2.16.840.1.113883.6.1 LOINC)	Autopsy Performed Indicator Observation.component.valueCodableConcept Where /observation/code where code="69436-4" Were autopsy findings available to complete the cause of death?, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)

6.3.1.D1.4.2 Data Element Requirement Mappings to Message

2135 Table 6.3.11.D1.4.2-1 specifies the mapping of data from the Vital Records Death Reporting Data Elements (see QRPH TF-1: Appendix B). Column 1 and 2 contain attributes available on the form. Column 3 contains the mapping of these data elements to the VRDRFeed [QRPH-38]. The mapping differs depending on whether the Form Receiver Message Exporter or the Form Processor Message Exporter supports the Death Information (DI) Option or the Jurisdiction

2140 Death Information (JDI) Option. A Form Receiver Message Exporter or a Form Processor Message Exporter SHALL be able to map values from the specified form data elements for this profile to generate the [QRPH-38] content according to the required mappings in Table 6.3.11.D1.4.2-1.

2145 The Form Receiver Message Exporter or Form Processor Message Exporter SHALL map the value in the form element in column 1 and 2 into the VRDRFeed message specified in QRPH TF-2: 3.38.4.1.2. Column 3 specifies the mapping for the DI Option, and Column 4 specifies the mapping for the JDI Option. Based upon the jurisdiction data requirements, some of the data mappings below may be optional.

Table 6.3.1.D1.4.2-1: Required Mappings - Form VRDR Data Elements to VRDR Feed [QRPH-38]

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Attribute Name	Death Report Data Element	CDI	FDDI	Message Location (JDI)
DOD (for date) TOD (For Time)	Patient Death Date and Time	Same as JDI	N/A	PID-29 SHALL contain Patient Death Date and Time (see Open Issues) At least a year must be provided, even if the date is not known with certainty. PID-30 (Patient Death Indicator) SHALL BE valued 'Y'
AGED	Age at Death	Same as JDI	Same as JDI	OBX-2 SHALL contain NM OBX-3 SHALL contain 39016-1^ Age at Death^LN OBX-6.1 SHALL contain UCUM Time Units (see unit conversion for UCUM values) Age Edit Flag: OBX-2 SHALL contain CWE OBX-3 SHALL contain PHC1421^Age Edit Flag^ CDCPHINVS
NLTLY	Nationality of Deceased	N/A	Same as JDI	PID-26
CERTID	Certificate number	N/A	N/A	PID-3.1 SHALL contain CERTID
BCID	Birth certificate ID	N/A	N/A	OBX-2 SHALL contain ST OBX-3 SHALL contain 80903-8 ^ birth certificate ID^LN

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Attribute Name	Death Report Data Element	CDI	FDDI	Message Location (JDI)
BCYR	Birth certificate {birth} year	N/A	N/A	OBX-2 SHALL contain ST OBX-3 SHALL contain 80904-6^ Birth certificate data year^LN
DREG	Date of Death Registration	N/A	N/A	OBX-2 SHALL contain TS OBX-3 SHALL contain 80907-9 ^ Death registration date^LN Month: Characters 5,6 of time stamp Day: Characters 7,8 of time stamp Year: Initial 4 characters of time stamp
FORMSRC	Source flag	N/A	N/A	OBX-2 SHALL contain CWE OBX-3 SHALL contain PHC1433^ SourceFlag^ CDCPHINVS
BPLACEST	State or Province of Birth	N/A	Same as JDI	OBX-2 SHALL contain CWE OBX-3 SHALL contain 80910-3^ state/province of birth ^LN
COD	Cause of Death	Same as JDI	N/A	Cause of Death Part 1 Line a: OBX-2 SHALL contain ST OBX-3 SHALL contain 69453-9^ Cause of death^LN OBX.4 SHALL contain "1" Line b: OBX-2 SHALL contain ST OBX-3 SHALL contain Cause of Death" (69453-9 LOINC), OBX.4 SHALL contain "2" Line c: OBX-2 SHALL contain ST OBX-3="Cause of Death" (69453-9 LOINC), OBX.4 SHALL contain "3" Line d: OBX-2 SHALL contain ST OBX-3="Cause of Death" (69453-9 LOINC), OBX.4 SHALL contain "4"

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Attribute Name	Death Report Data Element	CDI	FDDI	Message Location (JDI)
INTERVAL	Onset to death interval for cause of death reported	Same as JDI	N/A	Line a: OBX-2 SHALL contain ST OBX-3 SHALL contain 69440-6 ^Disease Onset to Death Interval^LN OBX.4 SHALL contain "1" Line b: OBX-2 SHALL contain ST OBX-3 SHALL contain 69440-6 ^Disease Onset to Death Interval^LN OBX.4 SHALL contain "2" Line c: OBX-2 SHALL contain ST OBX-3 SHALL contain 69440-6 ^Disease Onset to Death Interval^LN OBX.4 SHALL contain "3" Line d: OBX-2 SHALL contain ST OBX-3 SHALL contain 69440-6 ^Disease Onset to Death Interval^LN OBX.4 SHALL contain "4"
OTHCOD	Cause of Death - Other Significant Conditions	Same as JDI	N/A	OBX-2 SHALL contain ST OBX-3 SHALL contain 69441-4 ^Death Cause Other Significant Conditions^LN
CERTADDR	Certifier Address	Same as JDI	N/A	OBX-2 SHALL contain CWE OBX-3 SHALL contain 69439-8 ^Death certifier (address)^ LN
CERT	Certifier Type	Same as JDI	N/A	OBX-2 SHALL contain CWE OBX-3 SHALL contain 69437-2 ^Death certifier (type)^ LN
CERTIFBY	Death Certified By	Same as DI	N/A	N/A
DOB	Date of Birth (Mo/Day/Yr)	Same as JDI	Same as JDI	PID-7 If the birth information is not known, leave the field empty.
BPLACE	Birth Place	N/A	Same as JDI	OBX-2 SHALL contain XAD OBX-3 SHALL contain 21842-0 ^Birth Place^LN
MARITAL	Marital Status	N/A	Same as JDI	PID.16.1 Marital Status Edit Flag OBX-2 SHALL contain CWE OBX-3.1 SHALL contain PHC1426 ^Marital Status Edit Flag^LN

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Attribute Name	Death Report Data Element	CDI	FDDI	Message Location (JDI)
DEDUC	Education level	N/A	Same as JDI	OBX-2 SHALL contain CWE OBX-3 SHALL contain 80913-7 ^ Highest level of education Edit Flag: OBX-2 SHALL contain CWE OBX-3 SHALL contain PHC1424^Education Edit Flag^ CDCPHINVS
DOI	Date of Injury	Same as JDI	N/A	OBX-2 SHALL contain TS OBX-3 SHALL contain 69445-5 ^Injury Date^LN Month: Characters 5,6 of time stamp Day: Characters 7,8 of time stamp Year: Initial 4 characters of time stamp
PD	Date pronounced Dead	Same as JDI	N/A	OBX-2 SHALL contain TS OBX-3 SHALL contain 80616-6 ^Date and time pronounced dead^LN Month: Characters 5,6 of time stamp Day: Characters 7,8 of time stamp Year: Initial 4 characters of time stamp
CERTDATE	Death Certificate Signed	Same as DI	N/A	N/A
DETHNIC	Ethnicity	N/A	Same as JDI	PID-22 Information regarding the Ethnic origin of the decedent. NOTE: In some jurisdictions, it is prohibited to send race and/or ethnicity, and may be further constrained by national extension.
DECNAME	Decedent's Name Known by Certifier	Same as JDI	Same as JDI	PID-5 Patient Name Patient name. When the name of the patient is not known, a value must still be placed in this field since the field is required. In that case, HL7 recommends the following: ~^U . The "U" for the name type code in the second name indicates that it is unspecified. Since there may be no name components populated, this means there is no legal name, nor is there an alias. This guide will interpret this sequence to mean there is no patient name.
FSNAME	Father's Surname	N/A	Same as JDI	OBX-2 SHALL contain XPN OBX-3 SHALL contain 80909-5^ Father's Surname^LN
MMAIDEN	Mother's Maiden Name	N/A	Same as JDI	PID-26
DRACE	Decedent's Race	N/A	Same as JDI	PID-10
DOCC	Occupation	Same as JDI	Same as JDI	OBX-2 SHALL contain CWE OBX-3 SHALL contain =21843-8^ Occupation ^LN OBX-5 is selected from Concept Domain CD_OccupationCode

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Attribute Name	Death Report Data Element	CDI	FDDI	Message Location (JDI)
DIND	Industry	Same as JDI	Same as JDI	OBX-2 SHALL contain CWE OBX-3 SHALL contain 21844-6^industry^LN" OBX-5 is selected from Concept Domain CD_IndustryCode
DEMPSTAT	Employment Status	N/A	N/A	OBX-2 SHALL contain CWE OBX-3 SHALL contain 11295-3^current employment^LN" OBX-5 is selected from Concept Domain CD_EmploymentStatus
DADDR	Decedent's Residence	Same as JDI	Same as JDI	PID-11 Patient Address Street address, city, state and zip code elements of Patient Address SHOULD be included.
INJDESC	Describe how the injury occurred	Same as JDI	N/A	OBX-2 SHALL contain ST OBX-3 SHALL contain 11374-6 ^ Injury incident description ^LN
TOBAC	Did tobacco use contribute to death?	Same as JDI	N/A	OBX-2 SHALL contain ST OBX-3 SHALL contain 69443-0^Did Tobacco Use Contribute to Death^LN
DINSTI	Facility Name (Geographic location where the death occurred)	Same as JDI	N/A	PDA-2.9 Can be used to either provide the name of the facility where the patient died or if the location type is "Other", to provide more detail.
DSTREETADDR	Street address where death occurred if not facility	Same as JDI	N/A	OBX-2 SHALL contain XAD OBX-3 SHALL contain 69435-6 ^Street address where death occurred if not facility^LN
PREG	Female pregnancy status at time of death	Same as JDI	N/A	OBX-2 SHALL contain CWE OBX-3 SHALL contain 69442-2 ^Timing of Recent Pregnancy Related to Death^LN Pregnancy Edit Flag: OBX-2 SHALL contain CWE OBX-3 SHALL contain PHC1429^ Pregnancy Edit Flag^ CDCPHINVS
WORKINJ	Injury at Work	Same as JDI	N/A	OBX-2 SHALL contain CWE OBX-3 SHALL contain 69444-8^Did Death Result from Injury at Work^LN
CLICNUM	License Number of Person Certifying Death	Same as DI	N/A	N/A
PLICNUM	License Number of Person Pronouncing Death	Same as JDI	N/A	OBX-2 SHALL contain XCN OBX-3 SHALL contain 74499-5^Death pronouncer details^LN)

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Attribute Name	Death Report Data Element	CDI	FDDI	Message Location (JDI)
INJLOCNAR	Injury location Narrative	Same as JDI	N/A	OBX-2 SHALL contain ST OBX-3 SHALL contain 69447-1^The street address for the place where the injury occurred^LN
MANNER	Manner of Death	Same as JDI	N/A	OBX-2 SHALL contain CWE OBX-3 SHALL contain 69449-7^manner of death^LN
NAMECOD	Name of person completing COD	Same as DI	N/A	N/A
DPLACE	Place of Death	Same as JDI	N/A	PDA-2.6 Death Location A code to indicate the type of place where the person died.
DISP	Method of Disposition	N/A	Same as JDI	OBX-2 SHALL contain CWE OBX-3 SHALL contain 80905-3^Method of disposition^LN
INJPL	Injury location	Same as JDI	N/A	OBX-2 SHALL contain CWE OBX-3 SHALL contain 11376-1 ^Place of Injury (NCHS)^LN (see Open Issues)
SEX	Sex	Same as JDI	Same as JDI	PID-8 Administrative Sex Sex Edit Flag: OBX-2 SHALL contain CWE OBX-3 SHALL contain PHC1432^Sex edit flag^CDCPHINVS "
PRONOUNCERSIG	Signature of Person Pronouncing Death	N/A	N/A	N/A
JURISID	Jurisdiction Person Identifier (e.g., Social Security Number (SSN))	Same as JDI	Same as JDI	PID-3 Patient Identifier List Unless otherwise constrained by national extension: Where This is Social Security Number, the ID Type Code = "SS" Where this is Death Certificate Number, the ID Type Code = "DC" Where this is Death Certificate File Number, the ID Type Code = "DCFN" Where this is National Unique Individual Identifier, the ID Type Code = "NI"
TOI	Time of Injury	Same as JDI	N/A	OBX-2 SHALL contain TS OBX-3 SHALL contain 69445-5^Injury Date^LN

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Attribute Name	Death Report Data Element	CDI	FDDI	Message Location (JDI)
PD	Time pronounced Dead	Same as JDI	N/A	OBX-2 SHALL contain TS OBX-3 SHALL contain 80616-6^Date and time pronounced dead^LN
CERTL	Title of Certifier	Same as DI	N/A	N/A
TRANSPINJ	Injury leading to death associated with transportation event	Same as JDI	N/A	OBX-2 SHALL contain CWE OBX-3 SHALL contain 69448-9^Injury leading to death associated with transportation event^LN
TRANSP	Transportation Role of Decedent	Same as JDI	N/A	OBX-2 SHALL contain CWE OBX-3 SHALL contain 69451-3^Transportation Role of Decedent^LN
AUTOP	Was an autopsy performed?	Same as JDI	N/A	PDA-6 Autopsy Performed This field indicates whether an autopsy was performed.
REF	Was Medical Examiner or Coroner contacted?	Same as DI	N/A	N/A
AUTOPF	Were autopsy findings available to complete the COD	Same as JDI	N/A	OBX-2 SHALL contain CWE OBX-3 SHALL contain 69436-4^autopsy results available^LN
PLANG	Primary Language	N/A	Same as JDI	PID-15 Needed for the WHO form to express the ability to read and write, but may be further constrained by national extension. When the attribute is populated, the VRDR Information receiver shall either accept this information or ignore the attribute, but SHALL NOT raise an application error
BPLACE	Birth Place	N/A	Same as JDI	PID-23 Needed for the WHO form, but may be further constrained by national extension.
NLTLY	Nationality of Deceased	N/A	Same as JDI	PID-26 Needed for the WHO form to reflect nationality, but may be further constrained by national extension
MECASENO	Coroner medical examiner case number	Same as JDI	N/A	69452-1
DDATECMT	Death date comment	Same as JDI	N/A	69454-7

Attribute Name	Death Report Data Element	CDI	FDDI	Message Location (JDI)
<i>DPRONOUNCER</i>	Death pronouncer Provider [Extended Identifier]	Same as JDI	N/A	80911-1
<i>DDATECMT</i>	Forensic medicine Referral note	Same as JDI	N/A	69438-0
<i>PRONOUNCEREXTID</i>	Part\line number	Same as JDI	N/A	PHC1428
<i>PLINENUM</i>	Reporting state Event	N/A	N/A	77966-0

6.3.1.D1.4.3 Data Element Requirement Mappings to Form Pre-population

2155 The ‘Summary Document Source’ column in Table 6.3.1.D1.4.3-2 Data Element Requirement Mappings to Form Pre-population specifies the mapping from multiple summary documents listed in Table 6.3.1.D1.4.3-1 XPATH Root Source. Use the XPATH Root for the Document type submitted for pre-pop to determine the pre-pop mapping rule specified in Table 6.3.1.D1.4.3-2 Data Element Requirement Mappings to Form Pre-population.

The specific data elements required for the form vary by jurisdictional requirements. Minimally, the following data elements SHOULD be collected:

- 2160
- a Last Name (even if it is “Doe” – still need something in the Last Name field)
 - Date of Death (the month and day can be unknown coded as “99” but the year must be given – in the case of a discovered body, the CME makes his best “guess”)
 - Something needs to be in the cause of death field – it can be unknown or pending, but can’t be blank
- 2165
- And a place of death – meaning, the Town of Death. The Town of Death must be included even if the actual site of death is not known, and may be populated by the CME's best guess.

Table 6.3.1.D1.4.3-1: XPATH Root Source

Document Type	XPATH Root
Summary Documents for Medical Summary for VRDR Pre-pop(MS-VRDR)	ClinicalDocument/component/structuredBody/component/section[templaid[@root=1.3.6.1.4.1.19376.1.7.3.1.1.23.2]]
PCC MS Referral Summary	ClinicalDocument/component/structuredBody/component/section[templaid[@root=1.3.6.1.4.1.19376.1.5.3.1.1.3]]

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Document Type	XPATH Root
PCC MS Discharge Summary	ClinicalDocument/component/structuredBody/component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.4]]
PCC XPHR PHR Extract	ClinicalDocument/component/structuredBody/component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.5]]
PCC XPHR PHR Update	ClinicalDocument/component/structuredBody/component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.5]]
HL7/ASTM CCD	ClinicalDocument/component/structuredBody/component/section[templateId[@root=2.16.840.1.113883.10.20.1.22]]

Table 6.3.1.D1.4.3-2: Data Element Requirement Mappings to Form Pre-population

Attribute Name	Death Report Data Element	Derivation Rule	Summary Document Source	Value sets
DOD	Patient Death Date and Time	DOD_YR SHALL = The Year part of deceasedTime	recordTarget/patientRole/patient/deceasedTime	
		DOD_MO SHALL = The Month part of deceasedTime	recordTarget/patientRole/patient/deceasedTime	
		DOD_DY SHALL = The Day part of deceasedTime	recordTarget/patientRole/patient/deceasedTime	
TOD	Patient Death Date and Time	TOD SHALL = The Time part of deceasedTime	recordTarget/patientRole/patient/deceasedTime	
COD	Cause of Death	NA	NA	69453-9
COD	Cause of Death	NA	NA	NA
INTERVAL	Onset to death interval for cause of death reported	NA	NA	NA
OTHCOD	Cause of Death - Other Significant Conditions	NA	NA	NA
CERT	Death Certifier	NA	NA	69437-2

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Attribute Name	Death Report Data Element	Derivation Rule	Summary Document Source	Value sets
CERTIFBY	Certifier Name	IF (Procedure CONTAINS (Death Certification (NCHS))) then Certifier Name SHALL = Provider Name	Procedure .../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure/code	Death Certification (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.23.8.6
			Provider Name .../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure//performer/assignedEntity/assignedPerson/name	
CERTADDR	Certifier Address	IF (Procedure CONTAINS (Death Certification (NCHS))) then Certifier Name SHALL = Provider Address	Procedure .../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure/code	Death Certification (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.23.8.6
			Provider Address .../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure//performer/assignedEntity/assignedPerson/addr	
CERTSIG	Certifier signature	NA	NA	
CERTDATE	Date certified	IF (Procedure CONTAINS (Death Certification (NCHS))) then Date Certified SHALL = Procedure Date	Procedure .../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure/code	Death Certification (NCHS)1.3.6.1.4.1.19376.1.7.3.1.1.23.8.6
			Procedure Date .../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure/effectiveTime	
DOB	Date of Birth (Mo/Day/Yr)		recordTarget/birthTime	
DOI	Date of Injury	NA	NA	
PD	Date pronounced Dead	IF Procedure CONTAINS (Death Pronouncement Procedure (NCHS)) then Date Pronounced Dead SHALL = Procedure Date ELSEIF Pronouncement of Death Finding CONTAINS	Procedure .../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure/code	Death Pronouncement Procedure (NCHS)2.16.840.1.114222.4.11.7274
			Procedure Date .../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure/effectiveTime	

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Attribute Name	Death Report Data Element	Derivation Rule	Summary Document Source	Value sets
		(Death Pronouncement Finding (NCHS))) then Date Pronounced Dead SHALL = Pronouncement of Death Finding Date	Pronouncement of Death Finding .../component/structuredBody/component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.3.6]]/entry/act/entryRelationship/observation/value Pronouncement of Death Finding Date .../component/structuredBody/component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.3.6]]/entry/act/entryRelationship/observation/effectiveTime	Death Pronouncement Finding (NCHS) 2.16.840.1.114222.4.11.7273
PRONOUNCE RSIGDT	Date Signed	NA	NA	
DETHNIC	Ethnicity		recordTarget ethnicity NOTE: The primary source for this data element is the funeral director and/or next of kin. Any information for these data elements that comes from the EHR may be changed by the funeral director or next of kin. However, the EHR may also serve as a resource for documenting race and ethnicity information to inform the content of this attribute.	HL7 0189
DECNAME	Decedent's Name Known by Certifier		recordTarget name	
DRACE	Decedent's Race		recordTarget race (multiple races should all be captured) NOTE: The primary source for this data element is the funeral director and/or next of kin. Any information for these data elements that comes from the EHR may be changed by the funeral director or next of kin. However, the EHR may also serve as a resource for documenting race and ethnicity information to inform the content of this attribute.	HL7 0005
DADDR	Decedent's Residence	STNUM PREDIR STNAME STDESIG POSTDIR UNUM CITY ZIP COUNTY COUNTRY	recordTarget addr	

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Attribute Name	Death Report Data Element	Derivation Rule	Summary Document Source	Value sets
INJDESC	Describe how the injury occurred	NA	NA	
TOBAC	Did tobacco use contribute to death?	NA	NA	
DINSTI	Facility Name (Geographic location where the death occurred)	IF Discharge Disposition CONTAINS(Discharge Death (NCHS)) THEN “DINSTI” SHALL be populated using the Facility Name	Facility Name: encompassingEncounter/ location/healthCareFacility/location/name IF the Death occurred within the hospital	
			Discharge Disposition encompassingEncounter/ sdctc:dischargeDispositionCode	Discharge Death (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.23.8.4
DSTREETADDR	Street address where death occurred if not facility	NA	NA	
PREG	Female pregnancy status at time of death	IF Findings CONTAINS (Pregnant (NCHS)) then Female pregnancy status at time of death SHALL ‘Y’ ELSE Data Entry SHALL be required to capture Female pregnancy status at time of death	Findings .../component/structuredBody/component/section[templateId[(@root=1.3.6.1.4.1.19376.1.5.3.1.3.6)]]/entry/act/entryRelationship/observation/value	Pregnant (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.95
WORKINJ	Injury at Work	NA	NA	
CLICNUM	License Number of Person Certifying Death	NA	NA	
PLICNUM	License Number of Person	IF Procedure CONTAINS (Pregnant (NCHS)) then License Number of Person	Procedure .../component/section[templateId[(@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11)]]/entry/procedure/code	Pregnant (NCHS)) Value Set 2.16.840.1.114222.4.11.7274

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Attribute Name	Death Report Data Element	Derivation Rule	Summary Document Source	Value sets
	Pronouncing Death	Pronouncing Death SHALL = Pronouncer License where the Pronouncer License is expressed as the License Number	Pronouncer License .../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure/performer/assignedEntity/id/@extension	
INJLOCNAR	Injury location Narrative	NA	NA	
MANNER	Manner of Death	NA	NA	
NAMECOD	Name of person completing COD	NA	NA	
DPLACE	Place of Death	NA	NA	
INJPL	Place of Injury	NA	NA	
SEX	Sex	IF Sex CONTAINS ValueSet (Male Gender (NCHS)) THEN “SEX” SHALL = ‘M’ ELSE IF Sex CONTAINS ValueSet(Female Gender (NCHS)) THEN “SEX” SHALL = ‘F’ ELSE THEN “SEX” SHALL = ‘U’	Sex: recordTarget/patientRole/patient/administrativeGenderCode NOTE: while the modeled location references the term ‘gender’, the attribute in this CDA location is expected to contain the HL7 Administrative Sex value set (M, F, U) of the deceased. Also, the Male Gender and Female Gender value sets in fact are reflecting the concept of ‘Sex’	Male Gender (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.42
				Female Gender (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.43
PRONOUNCESIG	Signature of Person Pronouncing Death	NA	NA	
JURISID	Jurisdiction Person Identifier (e.g., Social Security Number (SSN))	NA	recordTarget/patientRole/id/@extension where @root=(2.16.840.1.113883.4.1)	
TOI	Time of Injury	NA	NA	

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Attribute Name	Death Report Data Element	Derivation Rule	Summary Document Source	Value sets
PD	Time pronounced Dead	IF Procedure CONTAINS (Death Pronouncement Procedure (NCHS)) then Date Pronounced Dead SHALL = time component of Procedure Date ELSE IF Pronouncement of Death Finding CONTAINS (Death Pronouncement Finding (NCHS))) then Date Pronounced Dead SHALL = time component of Pronouncement of Death Finding Date	Procedure .../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure/code	Death Pronouncement Procedure (NCHS) 2.16.840.1.114222.4.1.1.7274
			Procedure Date .../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure/effectiveTime	
			Pronouncement of Death Finding .../component/structuredBody/component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.3.6]]/entry/act/entryRelationship/observation/value	Death Pronouncement Finding (NCHS) 2.16.840.1.114222.4.1.1.7273
			Pronouncement of Death Finding Date .../component/structuredBody/component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.3.6]]/entry/act/entryRelationship/observation/effectiveTime	
CERTL	Title of Certifier	IF (Procedure CONTAINS (Death Certification (NCHS)) then Title of Certifier SHALL = Provider Type	Procedure .../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure/code	Death Certification (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.23.8.6
			Provider Type .../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure/performer/assignedEntity/assignedPerson/code	Certifier Titles (NCHS) 2.16.840.1.114222.4.1.1.7212
TRANSP	Transportation Injury	NA	NA	
AUTOP	Was an autopsy performed?	IF (Autopsy Procedure CONTAINS (Autopsy Performed (NCHS))) then AUTOP SHALL = 'Y' ELSE IF (Autopsy Findings CONTAINS (Autopsy Not Performed (NCHS))) then AUTOP SHALL = 'N'	Autopsy Procedure .../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure/code	Autopsy Performed (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.23.8.1
			Autopsy Findings .../component/structuredBody/component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.3.6]]/entry/act/entryRelationship/observation/value	Autopsy Not Performed (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.23.8.2
REF	Was Medical Examiner or Coroner contacted?	NA	NA	

Attribute Name	Death Report Data Element	Derivation Rule	Summary Document Source	Value sets
AUTOPF	Were autopsy findings available to complete the COD	NA	NA	69436-4
MEDDX	Medical Diagnoses Associated with Final Illness	For any DIAGNOSIS question: IF (Active Problems CONTAINS (Locally Defined Diagnosis Value Set)) then DIAGNOSIS SHALL = 'Y' ELSE DIAGNOSIS SHALL = 'N'	Active Problems: .../component/structuredBody/component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.3.6]]/entry/act/entryRelationship/observation/value	Locally Defined Diagnosis Value Set
MEDRESULT	Medical Results Associated with Final Illness	For any RESULT question: IF (Laboratory Results CONTAINS (Locally Defined Results Value Set)) then RESULT SHALL = 'Y' ELSE RESULT SHALL = 'N'	Laboratory Results ClinicalDocument/component/structuredBody /component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.28']] /entry[templateID[@root='1.3.6.1.4.1.19376.1.5.3.1.4.13']] / observation/code	Locally Defined Results Value Set
MEDPROC	Medical Procedure Associated with Final Illness	For any PROCEDURE question: IF (Procedures CONTAINS (Locally Defined Procedure Value Set)) then PROCEDURE SHALL = 'Y' ELSE PROCEDURE SHALL = 'N'	Procedures: .../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure/code	Locally Defined Procedure Value Set
PLANG	Primary Language		recordTargetLanguageCode	HL7 Table 0296

2170

6.3.1.D1.5 VRDR Document Content Module Specification

This specifies the header, section, and entry content modules which comprise the VRDR Document Content Module. This template further constrains the HL7 Vital Records Death Reporting template.

2175 Sections that are used according to the definitions in other specifications are identified with the
relevant specification document. Additional constraints on vocabulary value sets, not specifically
constrained within the section template, are also identified. Header constraints to the parent HL7
CDA document for Reporting Birth Information from a Clinical Setting to Vital Records are
identified. Only the constrained sections and clinical statements are listed here, but there are
2180 additional requirements in the HL7 CDA Implementation Guide.

6.3.1.D1.5.1 Document Constraints

Table 6.3.1.D1.5-1 specifies the VRDR Document Content Module. Those **rows highlighted in bold** differ from the underlying HL7 CDA specification for VRDR, Reporting Death Information from a clinical setting to Vital Records (2.16.840.1.113883.10.20.26.1.1.6).

2185 **Table 6.3.1.D1.5-1: Vital Records Death Reporting (VRDR) Document Content Module Specification**

Template Name		Vital Records Death Reporting			
Template ID		1.3.6.1.4.1.19376.1.7.3.1.1.23.3			
Parent Template		Reporting Death Information from a clinical setting to Vital Records 2.16.840.1.113883.10.20.26.1.1.6. Provider Death Registration Document 2.16.840.1.113883.10.20.26.1.1.1 OR Jurisdiction Death Information Document 2.16.840.1.113883.10.20.26.1.1.2 based on information flow. NOTE: Constraints to the Header Section Apply			
General Description		Document specification covers the provision of death reporting data to the applicable jurisdictional vital records office			
Document Code		SHALL be 64297-5 (CodeSystem: 2.16.840.1.113883.6.1 LOINC), “Death certificate “			
Opt and Card	Condition	Header Element or Section Name	Template ID	Specification Document	Vocabulary Constraint
Header Elements					
R[1..1]	QRPH TF-3: 6.3.1.D1.5.2.7	Personal Information: name	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.5.6	
R2[0..1]	QRPH TF-3: 6.3.1.D1.5.2.1	Personal Information: birthtime	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.5.6	
R2[0..1]	QRPH TF-3: 6.3.1.D1.5.2.8	Personal Information: addr	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.5.6	
R2[0..1]	QRPH TF-3: 6.3.1.D1.5.2.1 1	Language Communication	1.3.6.1.4.1.19376.1.5.3.1.2.1	PCC TF-3: 6.3.2.1	
R2[0..1]	QRPH TF-3: 6.3.1.D1.5.2.2	Personal Information: ethnicity	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.5.6	PHVS_EthnicGroup_HL7 _2x 2.16.840.1.11 4222.4.11.606 6

R2[1..*]	QRPH TF-3: 6.3.1.D1.5.2.3	Personal Information: race	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.5.6	PHVS_Race_ HL7_2x. 2.16.840.1.11 3883.1.11.149 14
R[1..1]	QRPH TF-3: 6.3.1.D1.5.2.4	Personal Information: gender	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.5.6	HVS_Adminis trativeGender _HL7_V3 2.16.840.1.11 3883.1.11.1
R2[0..1]	QRPH TF-3: 6.3.1.D1.5.2.6	Personal Information: id	1.3.6.1.4.1.19376.1.5.3.1.1.1	PCC TF-2: 6.3.1.5.6	
R[1..1]	QRPH TF-3: 6.3.1.D1.5.2.5	realmCode		QRPH TF-3: 6.3.1.D1.5.2.5	
R[1..1]	QRPH TF-3: 6.3.1.D1.5.2.9	deceasedInd		QRPH TF-3: 6.3.1.D1.5.2.9	
R[1..1]	QRPH TF-3: 6.3.1.D1.5.2.1 0	deceasedTime		QRPH TF-3: 6.3.1.D1.5.2.10	
O[0..1]	QRPH TF-3: 6.3.1.D1.5.2.1 2	maritalStatusCode		QRPH TF-3: 6.3.1.D1.5.2.12	
Sections					
R[1..1]		Cause of Death Section	2.16.840.1.113883.10.20.26.1. 2.4	HL7 VRDR CDA CH3	
R[1..1]		Death Administration Section	2.16.840.1.113883.10.20.26.1. 2.3	HL7 VRDR CDA CH3	
R[1..1]		Death Event Section	2.16.840.1.113883.10.20.26.1. 2.6	HL7 VRDR CDA CH3	
R[1..1]		Decedent Demographics Section (entries optional)	2.16.840.1.113883.10.20.26.1. 2.1	HL7 VRDR CDA CH3	

6.3.1.D1.5.2 Header Constraints - Further Vocabulary or Conditional Constraints

6.3.1.D1.5.2.1 Personal Information: birthtime

2190 The recordTarget/birthTime SHOULD contain the birth date/time of the decedent in the document header if known.

6.3.1.D1.5.2.2 Personal Information: ethnicity

2195 The ethnicity MAY be included in the document header if known. The value for ethnicity/ code SHALL be drawn from value set 2.16.840.1.114222.4.11.6066 PHVS_EthnicGroup_HL7_2x unless further extended by national extension.

6.3.1.D1.5.2.3 Personal Information: race

The race MAY be included in the document header if known. The value for race/ code SHALL be drawn from value set

2200 PHVS_Race_HL7_2x. 2.16.840.1.113883.1.11.14914 unless further extended by national extension.

6.3.1.D1.5.2.4 Personal Information: gender

As indicated in the underlying HL7 Death Reporting Document, the value for gender/ code SHALL be drawn from value set 2.16.840.1.113883.1.11.1
HVS_AdministrativeGender_HL7_V3.

2205 6.3.1.D1.5.2.5 realmCode

The realmCode SHALL be included and SHALL indicate the country for the jurisdiction of the implementation. The value for realmCode SHALL be drawn from CodeSystem: 1.0.3166.1

Country (ISO 3166-1). NOTE: this is an extension of the underlying HL7 Vital Records Death Reporting V2.

2210 6.3.1.D1.5.2.6 Personal Information: id

The recordTarget/patientRole/id SHOULD contain the Jurisdiction Person Identifier of the decedent. For persons who do not have a jurisdiction identifier, or if the identifier is not available, a null flavor must be provided:

- NI - None (decedent has no Jurisdiction Person Identifier)
- 2215 • UNK - Unknown (informant does not know the Jurisdiction Person Identifier)
- NAV - Pending (informant does not know at this time)
- NASK - Not Obtainable (no informant, unknown body).

6.3.1.D1.5.2.7 Personal Information: name

The recordTarget/name SHALL contain the legal name of the decedent.

2220 6.3.1.D1.5.2.8 Personal Information: addr Constraint

The recordTarget/addr SHOULD contain the address of the decedent.

6.3.1.D1.5.2.9 sdctc:deceasedInd Constraint

The recordTarget/sdctc:deceasedInd SHALL indicate that the decedent is dead by setting value='true'.

2225 **6.3.1.D1.5.2.10 sdtc:deceasedTime Constraint**

The recordTarget/sdtc:deceasedTime SHALL contain precisely 1 value indicate the actual or presumed date and time of the decedent's death. Sdtc:deceasedTime SHALL minimally be precise to the year.

6.3.1.D1.5.2.11 Language Communication

- 2230 The recordTarget SHOULD contain precisely 1 header content module for Language Communication to reflect the primary language of the decedent, and MAY additionally include language ability of the primary language of the decedent supporting WHO reporting requirements of the decedent ability to read or write.

6.3.1.D1.5.2.12 maritalStatusCode

- 2235 The recordTarget/patientRole/patient/maritalStatusCode SHOULD contain the marital status of the decedent.

6.3.1.D1.5.3 Body Constraints – Further Vocabulary or Conditional Constraints

There are no body constraints to the underlying HL7 Vital Records Death Reporting.

6.3.1.D1.6 Vital Records Death Reporting VRDR Conformance and Example

- 2240 CDA Release 2.0 documents that conform to the requirements of this document content module shall indicate their conformance by the inclusion of the 1.3.6.1.4.1.19376.1.7.3.1.1.23.3 XML elements in the header of the document.

A complete example of the Vital Records Death Reporting (VRDR) Document Content Module is available on the IHE ftp server at:

- 2245 ftp://ftp.ihe.net/TF_Implementation_Material/QRPH/VRDR/SampleDeathReporting%20v2.6.zip. Note that this is an example and is meant to be informative and not normative. This example shows the 1.3.6.1.4.1.19376.1.7.3.1.1.23.3 elements for all of the specified templates.

6.3.1.D2 Medical Summary for VRDR Pre-pop (MS-VRDR) Document Content Module (1.3.6.1.4.1.19376.1.7.3.1.1.23.2)

- 2250 The Medical Summary for VRDR Pre-pop (MS-VRDR) constrains and extends the PCC Medical Document (MD) Document to maximize the pre-population ability for Vital Records Death Reporting feeds to the Vital Records System using this profile.

6.3.1.D2.1 Format Code

The XDSDocumentEntry format code for this content is **urn:ihe:qrph:vrdr:2013**

2255 **6.3.1.D2.2 Parent Template**

This document is a specialization of the IHE PCC Medical Document (1.3.6.1.4.1.19376.1.5.3.1.1.1).

6.3.1.D2.3 Referenced Standards

2260 All standards which are referenced in this document are listed below with their common abbreviation, full title, and link to the standard.

Table 6.3.1.D2.3-1: Vital Records Death Reporting (VRDR) Document - Referenced Standards

Abbreviation	Title	URL
CDAR2	HL7 CDA Release 2.0	http://www.hl7.org/Library/General/HL7_CDA_R2_final.zip
CDTHP	CDA for Common Document Types History and Physical Notes (DSTU)	http://www.hl7.org/documentcenter/ballots/2007SEP/support/CDAR2_HPRPT_DSTU_2008AUG.zip
	Edit Specifications for the 2003 Revision of the U.S. Standard Certificate of Death	http://www.cdc.gov/nchs/data/dvs/death_edit_specifications.pdf

6.3.1.D2.4 Data Element Requirement Mappings to CDA

2265 This section identifies the mapping of data between referenced standards into the CDA implementation guide. The following table indicates those attributes that will be pre-populated from the EHR where available. Details regarding how to configure this information in the summary document are provided in Section 6.3.1.D2.5.

Table 6.3.1.D2.4-1: Data Element Requirement Mappings to CDA

Standard Death Report Data Element	CDA-DIR
Patient Death Date and Time	Header: Personal Information
Date of Birth (Mo/Day/Yr)	Header: Personal Information
Ethnicity	Header: Personal Information
Decedent's Name Known by Certifier	Header: Personal Information
Decedent's Residence	Header: Personal Information
Decedent's Race	Header: Personal Information
Facility Name (Geographic location where the death occurred)	Encompassing Encounter
Street address where death occurred if not facility	Data Entry Required
Sex	Header: Personal Information

Standard Death Report Data Element	CDA-DIR
Signature of Person Pronouncing Death	See Document Digital Signature
Jurisdiction Person Identifier (e.g., Social Security Number (SSN))	Header: Personal Information
Was an autopsy performed?	Procedures and Interventions

2270

6.3.1.D2.5 Medical Summary for VRDR Pre-pop (MS-VRDR) Content Module Specification

This section specifies the header, section, and entry content modules which comprise the Medical Summary for VRDR Pre-pop (MS-VRDR) Content Module, using the Template ID as the key identifier.

2275

Sections that are used according to the definitions in other specifications are identified with the relevant specification document. Additional constraints on vocabulary value sets, not specifically constrained within the section template, are also identified.

These are the only sections that are to be constrained. Other sections in the summary document have no further constraints. There are additional summary document sections that are not further specified that SHALL be constructed according to the summary specification.

2280

Table 6.3.1.D2.5-1: Medical Summary for VRDR (MS-VRDR) Document Content Module Specification

Template Name		Medical Summary for VRDR (MS-VRDR) Document			
Template ID		1.3.6.1.4.1.19376.1.7.3.1.1.23.2			
Parent Template		IHE PCC Medical Document (MD) Document (MD: 1.3.6.1.4.1.19376.1.5.3.1.1.1).			
General Description		This document specifies a constrained version of the IHE PCC Medical Summary that will optimize pre-population of a death report			
Document Code		SHALL be 68653-5, LOINC, Discharge summary note			
Opt and Card	Condition	Header Element or Section Name	Template ID	Specification Document	Vocabulary Constraint
Header Elements					
R[1..1]	QRPH 6.3.1.D1.5.2.7	Personal Information: name	1.3.6.1.4.1.19376.1.5.3.1.1.1		
R2[0..1]	QRPH 3: 6.3.1.D1.5.2.1	Personal Information: birthtime	1.3.6.1.4.1.19376.1.5.3.1.1.1		

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R2[0..1]	QRPH 6.3.1.D1.5.2.8	Personal Information: addr	1.3.6.1.4.1.19376.1.5.3.1.1.1		
O[0..1]	QRPH 6.3.1.D1.5.2.2	Personal Information: ethnicity	1.3.6.1.4.1.19376.1.5.3.1.1.1		PHVS_EthnicGroup_HL7_2x 2.16.840.1.114222.4.11.6066
O[0..N]	QRPH 6.3.1.D1.5.2.3	Personal Information: race	1.3.6.1.4.1.19376.1.5.3.1.1.1		PHVS_Race_HL7_2x. 2.16.840.1.113883.1.11.14914
R[1..1]	QRPH 6.3.1.D1.5.2.4	Personal Information: gender	1.3.6.1.4.1.19376.1.5.3.1.1.1		HVS_AdministrativeGender_HL7_V3 2.16.840.1.113883.1.11.1
R2[0..1]	QRPH 6.3.1.D1.5.2.6	Personal Information: id	1.3.6.1.4.1.19376.1.5.3.1.1.1		
R[1..1]	QRPH 6.3.1.D1.5.2.5	realmCode	1.3.6.1.4.1.19376.1.5.3.1.1.1		
R[1..1]	QRPH 6.3.1.D1.5.2.9	sdct:deceasedTime	1.3.6.1.4.1.19376.1.5.3.1.1.1		
R[1..1]	QRPH 6.3.1.D1.5.2.10	sdct:deceasedInd	1.3.6.1.4.1.19376.1.5.3.1.1.1		
Sections					
R[1..1]	QRPH3: 6.3.1.D2.5.1	Encompassing Encounter	2.16.840.1.113883.10.20.1.21	PCC TF-2	QRPH V3: 6.3.1.D2.5.1
R[1..1]	QRPH 3: 6.3.1.D2.5.2	Active Problems	1.3.6.1.4.1.19376.1.5.3.1.3.6	PCC TF-2	QRPH V3: 6.3.1.D2.5.2
R2[0..1]	QRPH 3: 6.3.1.D2.5.3	Procedures and Interventions	1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11	PCC TF-2	QRPH V3: 6.3.1.D2.5.3
R2[0..*]	QRPH 3: 6.3.1.D2.5.5	Coded Results	1.3.6.1.4.1.19376.1.5.3.1.3.28	PCC TF-2	QRPH V3: 6.3.1.D2.5.4

2285 **6.3.1.D2.5.1 Encompassing Encounter Section Condition**

The encompassingEncounter/ location/healthCareFacility/location/name SHALL contain the facility name where the patient died.

The encompassingEncounter/ location/healthCareFacility/location/addr SHALL contain the facility address where the patient died.

2290 **6.3.1.D2.5.2 Active Problems Section Condition**

The Active Problems Section SHALL be Required if Known and SHALL include the Problems Concern Entry.

6.3.1.D2.5.2.1 Problems Concern Entry Condition

2295 SHALL include the following problems using the following value sets, unless further extended by national extension, where these findings are known at the time of death:

To indicate that the patient is pregnant:

Pregnant 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.95

For Autopsy Findings:

2300 VRDR Autopsy Not Performed 1.3.6.1.4.1.19376.1.7.3.1.1.23.8.2

Autopsy Not Performed (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.23.8.2

For Death Pronouncement Finding:

Death Pronouncement Finding (NCHS) 2.16.840.1.114222.4.11.7273

In:

2305 ClinicalDocument/
component/structuredBody/component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.3.6]]/entry/act/entryRelationship/observation/value

Where the following location SHALL be populated with the code for ‘finding’, ‘404684003’

2310 ClinicalDocument/
component/structuredBody/component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.3.6]]/entry/act/entryRelationship/observation/code

These findings SHALL include the associated finding date/times in

2315 ClinicalDocument/
component/structuredBody/component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.3.6]]/entry/act/entryRelationship/observation/effectiveTime

The Problem Concern Entry SHOULD include additional problems leading up to the death. Additional problems of interest and timeframes may be further specified by National Extension or jurisdiction.

6.3.1.D2.5.3 Procedures and Interventions Section Condition

2320 6.3.1.D2.5.3.1 Procedures and Interventions Entry Condition

Procedure SHALL include the coded procedure using the following value sets, unless further extended by national extension, where these procedures were performed on the deceased:

To indicate that an autopsy was performed:

2325 VRDR Autopsy Procedure Performed 1.3.6.1.4.1.19376.1.7.3.1.1.23.8.1
Autopsy Performed (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.23.8.1

For the **Death Pronouncement** Event:

Death Pronouncement Procedure (NCHS) 2.16.840.1.114222.4.11.7274

For the **Death Certification** Event:

Death Certification (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.23.8.6

2330 In:

.../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure/code

For the **Death Pronouncement** Event AND For the **Death Certification** Event:

The Procedures and Interventions SHALL also indicate the

2335 **Provider License** in:

.../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure/performer/assignedEntity/id

Provider Name in:

2340 .../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure/performer/assignedEntity/assignedPerson/name

For the **Death Certification** Event:

The Procedures and Interventions SHALL also indicate the

Provider Type in:

using suffix element

2345 In:

.../component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/procedure/performer/assignedEntity/associatedPerson/name

Procedures and Interventions Entry SHOULD include additional procedures performed leading up to the death. Additional procedures of interest and timeframes may be further specified by
2350 National Extension.

6.3.1.D2.5.4 Coded Results Section Condition

6.3.1.D2.5.4.1 Coded Results Entry Condition

2355 Coded Results and associated result date/times SHOULD be included for test results leading up to the death (e.g., Malaria test results). Additional test results of interest and timeframes may be further specified by National Extension.

6.3.1.D2.6 Medical Summary for VRDR (MS-VRDR) Conformance and Example

CDA Release 2.0 documents that conform to the requirements of this document content module shall indicate their conformance by the inclusion of the 1.3.6.1.4.1.19376.1.7.3.1.1.23.2 XML elements in the header of the document.

2360 A CDA Document may conform to more than one template. This content module inherits from the Medical Summary (1.3.6.1.4.1.19376.1.5.3.1.1.2) and so must conform to the requirements of those templates as well this document specification, Medical Summary for VRDR (MS-VRDR) 1.3.6.1.4.1.19376.1.7.3.1.1.23.2.

2365 A complete example of the Medical Summary for VRDR (MS-VRDR) Document Content Module is available on the IHE ftp server at:
ftp://ftp.ihe.net/TF_Implementation_Material/QRPH/VRDR/ReportingDeathInfoExample.xml.

Note that this is an example and is meant to be informative and not normative. This example shows the 1.3.6.1.4.1.19376.1.7.3.1.1.23.2 elements for all of the specified templates.

6.3.3 CDA Section Content Modules

2370 *Add to Section 6.3.3.10 Section Content Modules*

NA, no new Section Content Modules.

6.3.4 CDA Entry Content Modules

Add to Section 6.3.4.E Entry Content Modules

2375 The definitions of the following entry content modules can be found in the IHE PCC CDA supplement located at http://ihe.net/Technical_Frameworks/#pcc.

6.3.4.58 Death Pronouncement Entry Content Module (1.3.6.1.4.1.19376.1.7.3.1.4.23.1)

6.3.4.59 Death Location Type Entry Content Module (1.3.6.1.4.1.19376.1.7.3.1.4.23.2)

2380

Add to Section 6.4

6.4 Section not applicable

This heading is not currently used in a CDA document.

2385 *Add to Section 6.5*

6.5 QRPH Value Sets

2390 The following table describes each of the value sets used to support the VRDR Profile. These are all published by and available from the PHIN Vocabulary Access and Distribution System (PHIN VADS). Each of the value sets below are established as extensional with the discrete values available at the PHIN-VADS URL provided. Version status may change from time-to-time as these value sets are maintained by NCHS, so version number should not be referenced when using these value sets in support of the VRDR Profile. Similarly, associated date related metadata attributes will change as a result of value set maintenance activities, and can be obtained at the PHIN-VADS URL provided. VRDR Vocabulary has dynamic binding of value sets. In dynamic binding, the most current version of the value set in the terminology server is used.

6.5.1 Vital Records and Death Reporting (VRDR) Value Sets

Table 6.5.1-1: Value Sets used in the VRDR Profile

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
Autopsy Performed (NCHS)	1.3.6.1.4.1.19 376.1.7.3.1.1. 23.8.1	To reflect information on whether an autopsy was performed	SNOME D CT	https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.23.8.1	VRDR
Autopsy Not Performed (NCHS)	1.3.6.1.4.1.19 376.1.7.3.1.1. 23.8.2	To reflect information on whether an autopsy was not performed	SNOME D CT	https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.23.8.2	VRDR
Death Certification (NCHS)	1.3.6.1.4.1.19 376.1.7.3.1.1. 23.8.6	To reflect the certification of death	SNOME D CT	https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.23.8.6	VRDR
Discharge Death (NCHS)	1.3.6.1.4.1.19 376.1.7.3.1.1. 23.8.4	To reflect information on the discharge disposition for the decedent	HL7	https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.23.8.4	VRDR
Death Pronouncement Finding (NCHS)	2.16.840.1.11 4222.4.11.72 73	To reflect whether the pronouncer reports the pronounced date and time in the problem list	SNOME D CT	https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7273	VRDR

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
Death Pronouncement Procedure (NCHS)	2.16.840.1.11.4222.4.11.7274	When an authorized person views the body and declares that death has occurred.	SNOMED CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7274	VRDR
Female Gender (NCHS)	1.3.6.1.4.1.19.376.1.7.3.1.1.13.8.43	To reflect the sex of the deceased as female	HL7 Administrative Gender	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.43	VRDR
Male Gender (NCHS)	1.3.6.1.4.1.19.376.1.7.3.1.1.13.8.42	To reflect the sex of the deceased as male	HL7 Administrative Gender	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.42	VRDR
Place of Death (NCHS)	2.16.840.1.11.4222.4.11.7216	To reflect the death location of the decedent	SNOMED CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7216	VRDR
Pregnant	1.3.6.1.4.1.19.376.1.7.3.1.1.13.8.95	To reflect the pregnancy and associated dates with finding	SNOMED CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.95	VRDR

2400 6.6 QRPH Data Mapping to FHIR Resources

6.6.1 QRPH VRDR Data Source Mapping to FHIR Resources

2405 The following table shows the mapping of the FHIR Resources supporting the queries for clinical systems and funeral home obtained information as a source for each of the VRDR Data Elements/Attributes. These FHIR Resources support the collection of the death reporting information that is used to generate the jurisdiction death record for the decedent. Data Responders SHALL support the Resources identified by this table. Data Consumers SHALL be able to retrieve death reporting related health information from the specified resource for one or more attributes.

Table 6.6-1: Required Mappings – Death Reporting Attribute to FHIR Resource

Attribute Name	Death Report Data Element	FHIR Resource Location	FHIR Source Element Name	Notes
DOD (for date) TOD (For Time)	Patient Death Date and Time	Patient.Resource	deceasedDateTime	

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Attribute Name	Death Report Data Element	FHIR Resource Location	FHIR Source Element Name	Notes
AGED	Age at Death	Patient.Resource	birthDate (extension)	This profile constrains the search parameter guidance provided in Patient HL7 Extensions for age as a search parameter. Age at death shall be calculated based on date of death and date of birth.
NLTLY	Nationality of Deceased	Patient.Resource	patient-nationality (extension)	Needed for WHO support
CERTID	Certificate number	Composition.Resource	identifier	
BCID	Birth certificate ID	Composition.Resource	section[0].entry	
BCYR	Birth certificate {birth} year	N/A	Needed for WHO support N/A	
DREG	Date of Death Registration	Composition.Resource	date	
FORMSRC	Source flag	N/A	N/A	
BPLACEST	State or Province of Birth	Composition.Resource	birthplace (extension)	
COD	Cause of Death	Condition.Resource	valueString	where the sequence of events based on the decedent's health history is informed by the conditions
INTERVAL	Onset to death interval for cause of death reported	Condition.Resource	onsetQuantity	where the Onset to Death interval is informed by the conditions
OTHCOD	Cause of Death - Other Significant Conditions	Observation.Resource	valueString	where code = 69441-4 Death Cause Other Significant Conditions, LOINC
CERTADDR	Certifier Address	Practitioner.Resource	Address	
CERT	Certifier Type	Practitioner.Resource	practitionerRole.role	
CERTIFYBY	Death Certified By	Practitioner.Resource	Name	
DOB	Date of Birth (Mo/Day/Yr)	Patient.Resource	birthDate	

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Attribute Name	Death Report Data Element	FHIR Resource Location	FHIR Source Element Name	Notes
BPLACE	Birth Place	Patient.Resource	birthplace (extension)	
MARITAL	Marital Status	Patient.Resource	maritalStatus	
DEDUC	Education level	Observation.Resource	valueCodeableConcept	where code is 80913-7 Highest level of education
DOI	Date of Injury	Observation.Resource	valueCodableConcept	value where code = 69445-5 Injury date, LOINC
PD	Date pronounced Dead	Observation.Resource	Value	where code = 80616-6 Date/time pronounced dead
		Condition.Resource	onsetDateTime	where code contains valueSet (Death Pronouncement Finding (NCHS) 2.16.840.1.114222.4.11.7273)
		Procedure.Resource	performedDateTime	where code contains valueSet (Death Pronouncement Procedure (NCHS) 2.16.840.1.114222.4.11.7274)
CERTDATE	Death Certificate Signed	Composition.Resource	attester.time	
DETHNIC	Ethnicity	Patient.Resource	us-core-ethnicity	
DECNAME	Decedent's Name Known by Certifier	Patient.Resource	Name	
FSNAME	Father's Surname	RelatedPerson.Resource	Name	Where relationship = FTH Father, HL7 PatientRelationshipType
MMAIDEN	Mother's Maiden Name	Patient.Resource	patient-mothersMaidenName (extension)	Needed for WHO support:
DRACE	Decedent's Race	Patient.Resource	us-core-race	
DOCC	Occupation	Observation.Resource	valueCodeableConcept	Coded value where code = 21843-8^ Usual Occupation ^LN
DIND	Industry	Observation.Resource	valueCodeableConcept.text	Coded value where code = 21844-6^industry^LN"
DEMPSTAT	Employment Status	Observation.Resource	valueCodeableConcept.text	Coded value where code= 11295-3^current employment^LN"
DADDR	Decedent's Residence	Patient.Resource	address	
INJDESC	Describe how the injury occurred	Observation.Resource	valueCodableConcept	where code = 11374-6 Injury incident description, LOINC

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Attribute Name	Death Report Data Element	FHIR Resource Location	FHIR Source Element Name	Notes
TOBAC	Did tobacco use contribute to death?	Observation.Resource	valueCodableConcept	where code = 69443-0 Did Tobacco Use Contribute to Death, LOINC
DINSTI	Facility Name (Geographic location where the death occurred)	Organization.Resource	Name	Can be used to either provide the name of the facility where the patient died or if the location type is “Other”, to provide more detail.
DSTREETADDR	Street address where death occurred if not facility	Location.Resource	address	
		Observation.Resource	valueCodeableConcept	where code = 69435-6 Street address where death occurred
PREG	Female pregnancy status at time of death	Observation.Resource	valueCodeableConcept	where code = 69442-2 ^Timing of Recent Pregnancy Related to Death, LOINC
WORKINJ	Injury at Work	Observation.Resource	valueCodeableConcept	where code = 69444-8 Did Death Result from Injury at Work, LOINC
CLICNUM	License Number of Person Certifying Death	Practitioner.Resource	qualification.code	
		Procedure.Resource.Performer.Practitioner	qualification.code	where code contains valueSet (Death Certification (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.23.8.6)
PLICNUM	License Number of Person Pronouncing Death	Practitioner.Resource	qualification.code	
		Condition.Resource.Asserter.Practitioner	qualification.code	where code contains valueSet (Death Pronouncement Finding (NCHS) 2.16.840.1.114222.4.11.7273)
		Procedure.Resource.Performer.Practitioner	qualification.code	where code contains valueSet (Death Pronouncement Procedure (NCHS) 2.16.840.1.114222.4.11.7274)
INJLOCNAR	Injury location Narrative	Observation.Resource	valueCodableConcept	where code = 69447-1 The street address for the place where the injury occurred, LOINC
MANNER	Manner of Death	Observation.Resource	valueCodableConcept	where code = 69449-7 manner of death, LOINC

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Attribute Name	Death Report Data Element	FHIR Resource Location	FHIR Source Element Name	Notes
NAMECOD	Name of person completing COD	Composition.Resource.attester.party.Practitioner.Resource	Name	
DPLACE	Place of Death	Observation.Resource	valueCodeableConcept	where code = 58332-8 Location of Death, LOINC
DISP	Method of Disposition	Observation.Resource	valueCodeableConcept	where code = 80905-3 Method of disposition, LOINC
INJPL	Injury location	Observation.Resource	valueCodeableConcept	where code = 71481-6^Place of Injury (NCHS), LOINC
SEX	Sex	Patient.Resource	gender	
PRONOUNCESIG	Signature of Person Pronouncing Death	N/A	N/A	
JURISID	Jurisdiction Person Identifier (e.g., Social Security Number (SSN))	Patient.Resource	identifier	
TOI	Time of Injury	Observation.Resource	valueCodeableConcept	where code = 69445-5 Injury date, LOINC
PD	Time pronounced Dead	Observation.Resource	valueCodeableConcept	where code = 80616-6 Date and time pronounced dead, LOINC
CERTL	Title of Certifier	Procedure.Resource.Performer.Practitioner	practitionerRole.role	where code contains valueSet (Death Certification (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.23.8.6)
TRANSPINJ	Injury leading to death associated with transportation event	Observation.Resource	valueCodeableConcept	where code = 69448-9^Injury leading to death associated with transportation event, LOINC
TRANSP	Transportation Role of Decedent	Observation.Resource	valueCodeableConcept	where code = 69451-3 Transportation role of decedent, LOINC
AUTOP	Was an autopsy performed?	Observation.Resource	valueCodeableConcept	
		Condition.Resource	Is 'N'	where code contains valueSet (Autopsy Not Performed (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.23.8.2)

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Attribute Name	Death Report Data Element	FHIR Resource Location	FHIR Source Element Name	Notes
		Procedure.Resource	Is 'Y'	where.code contains valueSet (Autopsy Performed (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.23.8.1)
REF	Was Medical Examiner or Coroner contacted?	Observation.Resource	valueCodeableConcept	where code = 69438-0 Forensic medicine Referral note, LOINC
AUTOPTF	Were autopsy findings available to complete the COD	Observation.Resource	valueCodeableConcept	where code = 69436-4 Autopsy results available, LOINC
PLANG	Primary Language	Patient.Resource.Communication	Language	
BPLACE	Birth Place	Patient.Resource	birthplace (extension)	
NLTLY	Nationality of Deceased	Patient.Resource	Patient-nationality (extension)	Needed for the WHO form to reflect nationality, but may be further constrained by national extension

2410

6.6.2 QRPH VRDR FHIR Document Composition Bundle Content Specification

This section specifies the content that is conveyed to communicate the VRDR information as compiled from source reporting. As described in Volume 1 use cases, this may be used to convey compiled death reporting information to a jurisdiction, from the jurisdiction to the national agency, or from the jurisdiction to an analytics organization.

6.6.2.1 Referenced Standards

This section specifies the content that is conveyed to communicate the VRDR information as:

Title	URL
HL7 FHIR standard STU3	http://hl7.org/fhir/STU3/index.html
Vital Records Death Reporting FHIR Implementation Guide based on FHIR R4	https://trifolia-fhir.lantanagroup.com/igs/lantana_hapi_r4/vrdr/index.html

6.6.2.2 FHIR Document Composition Bundle Content

The following table specifies the FHIR Resources and Structured Definitions supporting the VRDR FHIR Document Composition Bundle. Inclusion in the FHIR Document Composition Bundle may be further constrained by jurisdiction disclosure policies. Optionality for each of the FHIR Document Composition Bundle Options is detailed in the Optionality column.

Table 6.6.2.2-1: FHIR Document Composition Bundle Structure Definitions

FHIR Resource location	Optionality									Cardinality	Structured Definition
	IDNI	CAI	FDDI	CDI	JDI	VOID	CCOD	CREI	RI		
	Decedent Demographics										
Birth Record Identifier	NA	NA	NA	NA	R	NA	NA	NA	NA	[1..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-BirthRecordIdentifier.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/BirthRecordIdentifier)
Decedent's Age	NA	NA	RE	RE	R	NA	NA	NA	RE	[1..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Decedent-Age.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR_DecedentAge)
Decedent	R	R	R	R	R	R	R	NA	R	[1..1]	http://ihe.net/fhir/StructureDefinition/IHE.VRDR.Decedent.StructuredDefinition
	NA	NA	NA	NA	NA	NA	NA	R	NA	[1..1]	http://ihe.net/fhir/StructureDefinition/IHE.VRDR.Decedent.StructuredDefinition
Decedent's Education Level	NA	NA	RE	NA	RE	NA	NA	NA	NA	[0..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Decedent-Education-Level.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR_DecedentEducationLevel)
Decedent;s Usual Work	NA	NA	RE	NA	RE	NA	NA	NA	RE	[0..1]	http://ihe.net/fhir/StructureDefinition/VRDR-Decedent-usual-work)
Decedent Father	NA	NA	RE	NA	RE	NA	NA	NA	NA	[0..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Decedent-Father.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR_DecedentFather)

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FHIR Resource location	Optionality									Cardinality	Structured Definition
	IDNI	CAI	FDDI	CDI	JDI	VOID	CCOD	CREI	RI		
Decedent's Mother	NA	NA	RE	NA	RE	NA	NA	NA	RE	[0..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Decedent-Mother.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR_DecedentMother)
Decedent Spouse	NA	NA	RE	NA	RE	NA	NA	NA	NA	[0..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Decedent-Spouse.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR_DecedentSpouse)
Death Certification											
Cause of Death Condition	NA	NA	NA	R	R	NA	R	NA	O	[1..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Cause-Of-Death-Condition.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR-Cause-Of-Death-Condition)
Cause of Death Pathway	NA	NA	NA	R	R	NA	R	NA	R	[1..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Cause-of-Death-Pathway.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR-Cause-of-Death-Pathway)
Certifier	NA	NA	NA	RE	RE	NA	NA	NA	NA	[0..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Certifier.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR-Certifier)
Interested Party	NA	NA	NA	NA	R	NA	RE	NA	NA		http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Interested-Party.html

FHIR Resource location	Optionality									Cardinality	Structured Definition
	IDNI	CAI	FDDI	CDI	JDI	VOID	CCOD	CREI	RI		
											(PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR_InterestedParty)
Condition Contributing to Death	NA	NA	NA	RE	R	NA	R	NA	R	[1..1]	http://ihe.net/fhir/StructureDefinition/IVRDR-Condition-Contributing-To-Death
Death Certificate	NA	NA	NA	NA	RE	NA	NA	NA	RE	[0..1]	http://ihe.net/fhir/StructureDefinition/VRDR-Death-Certificate
Death Certificate Document	NA	NA	NA	NA	RE	NA	NA	NA	RE	[0..1]	http://ihe.net/fhir/StructureDefinition/VRDR-Death-Certificate-Document
Death Certificate Reference	NA	NA	NA	NA	R	R	R	NA	RE	[0..1]	http://ihe.net/fhir/StructureDefinition/VRDR-Death-Certificate-Reference
Death Certification	NA	NA	NA	RE	RE	NA	NA	NA	NA	[0..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Death-Certification.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR-Death-Certification)
Interested Party	NA	NA	NA	NA	RE	NA	NA	NA	NA	[0..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Interested-Party.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR-Interested-Party)
Manner of Death	NA	NA	NA	R	R	NA	NA	NA	RE	[1..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Manner-of-Death.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR-Manner-of-Death)

FHIR Resource location	Optionality									Cardinality	Structured Definition
	IDNI	CAI	FDDI	CDI	JDI	VOID	CCOD	CREI	RI		
	Death Investigation										
Autopsy Performed Indicator	NA	NA	NA	R	RE	NA	NA	NA	RE	[0..1]	http://ihe.net/fhir/StructureDefinition/VRDR-Autopsy-Performed-Indicator)
Death Date	R	RE	RE	R	R	NA	R	NA	R	[1..1]	http://ihe.net/fhir/StructureDefinition//VRDR-Death-Date
Death Location	NA	NA	RE	RE	R	NA	NA	NA	RE	[1..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Death-Location.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR-Death-Location)
Death Pronouncement Performer	RE	NA	NA	R	RE	NA	NA	NA	RE	[0..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Death-Pronouncement-Performer.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR-Death-Pronouncement-Performer)
Decedent Pregnancy	NA	NA	NA	R	RE	NA	NA	NA	RE	[0..1]	http://ihe.net/fhir/StructureDefinition//VRDR-Decedent-Pregnancy
Decedent Transportation Role	NA	NA	NA	RE	RE	NA	NA	NA	RE	[0..1]	http://ihe.net/fhir/StructureDefinition/VRDR-Decedent-Transportation-Role
Examiner Contacted	NA	NA	NA	R	RE	NA	NA	NA	RE	[0..1]	http://ihe.net/fhir/StructureDefinition/VRDR-Examiner-Contacted
Injury Incident	NA	NA	NA	RE	RE	NA	NA	NA	RE	[0..1]	http://ihe.net/fhir/StructureDefinition/VRDR-Injury-Incident
Injury Location	NA	NA	NA	RE	RE	NA	NA	NA	RE	[0..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Injury-Location.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR_InjuryLocation)

FHIR Resource location	Optionality									Cardinality	Structured Definition
	IDNI	CAI	FDDI	CDI	JDI	VOID	CCOD	CREI	RI		
Tobacco Use Contributed to Death	NA	NA	NA	RE	RE	NA	NA	NA	RE	[0..1]	http://ihe.net/fhir/StructureDefinition/VRDR-Tobacco-Use-Contributed-To-Death
Decedent Disposition											
Decedent Disposition Method	NA	NA	RE	NA	RE	NA	NA	NA	RE	[0..1]	http://ihe.net/fhir/StructureDefinition/VRDR-Decedent-Disposition-Method
Disposition Location	NA	NA	RE	NA	RE	NA	NA	NA	RE	[0..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Disposition-Location.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR-Disposition-Location)
Funeral Home	NA	NA	RE	O	RE	NA	NA	NA	NA	[0..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Funeral-Home.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR_FuneralHome)
Funeral Service Licensee	NA	NA	RE	O	RE	NA	NA	NA	NA	[0..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Funeral-Service-Licensee.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR_FuneralServiceLicensee)
Mortician	NA	NA	RE	O	RE	NA	NA	NA	NA	[0..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-Mortician.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/VRDR_Mortician)

6.6.2.2.1 FHIR Resource Data Specifications

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The following table shows the mapping of the FHIR Resources supporting the content for VRDR Content Module Data Elements/Attributes. The Content Creator SHALL support the Resources identified by this table. Content Consumer SHALL receive VRDR Content Module content from the specified resource for each attribute.

Table 6.6.2.2.1-1: FHIR Resource Data Specification Data Elements

VRDR Data Element	FHIR Resource Location	Cardinality	VRDR Data Element Description	Constraints
DOD (for date) TOD (For Time)	DeathDate observation/value Where /observation/code code="81956-5" Date and time of death (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	1..1	Patient Death Date and Time	
AGED	DecedentAge observation/value[x]/value Where /observation/code code="30525-0" AGE (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) Where value[x]/unit shall be bound to CommonUCUMCodesForAge (required)	1..1	Age at Death	
NLTLY	Decedent Patient.extension:nationality	0..1	Nationality of Deceased	
CERTID	DeathCertificate Entry.resource: Composition/identifier	0..1	Certificate number	
BCID	BirthRecordIdentifier observation/value[x]	0..1	Birth certificate ID	
BCYR	BirthRecordIdentifierObservation/component:birthYear /value[x] Where /observation/code code="21112-8"Where year is the birth year of the birth certificate	0..1	Birth certificate {birth} year	
DREG	See Open Issues observation/value[x] Where /observation/code where code="80907-9" Death registration date (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	0..1	Date of Death Registration	
FORMSRC	See Open Issues Not used	0..1	Source flag	
BPLACEST	BirthRecordIdentifierbirthplace Observation/component:birthState/value[x] Where /observation/code code="21842-0"	0..1	State or Province of Birth	

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VRDR Data Element	FHIR Resource Location	Cardinality	VRDR Data Element Description	Constraints
COD	CauseOfDeathCondition condition/code/text where the COD is narrative, OR condition/code/coding/code where the COD is coded cause of death in the CCOD option	0..1	Cause of Death	
INTERVAL	Cause of Death Condition Condition.onsetString	1..1	Onset to death interval for cause of death	
OTHCOD	ConditionContributingToDeathCondition/code/text where the code is narrative OR Condition/code/ coding/code where the other cause is coded in the CCOD option	1..1	Cause of Death - Other Significant Conditions	
CERT	VRDR_Certifier Practitioner.qualification Where qualification.code SHALL be selected from ValueSet CodeSystem: 2.16.840.1.114222.4.11.6001 Certifier Types (NCHS)	0..1	Certifier Type	
CERTIFBY	Certifier Practitioner.name	0..1	Death Certified By	
CERTADDR	Certifier Practitioner.address	0..1	Certifier Address	
CERTSIG	Document Digital Signature may be used to reflect the signature. See QRPH TF-1: X.5 VRDR Security Considerations	0..1	Certifier signature	
BPLACE	Decedent Patient.extension: birthPlace	0..1	Birth Place	
MARITAL	Decedent Patient.maritalStatus	0..1	Marital Status	
DEDUC	DecedentEducationLevel observation/value[x] Where /observation/code where code=="80913-7" Decedent education level (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) And where observation/value[x] is bound to Decedent Education Level (NCHS) 2.16.840.1.114222.4.11.7385 unless otherwise constrained by Jurisdiction.	0..1	Education level	
DOCC	DecedentEmploymentHistory observation/component:componentUsualWorkOccupation/ value[x] Where / observation/component:componentUsualWorkOccupati	0..1	Occupation	

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VRDR Data Element	FHIR Resource Location	Cardinality	VRDR Data Element Description	Constraints
	on/ code=="21843-8" occupation (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) And where observation/component:componentUsualWorkOccupation/ /value is selected from Concept Domain CD_OccupationCode			
DIND	DecedentEmploymentHistory observation/component:componentusualWorkIndustry/ value[x] Where /observation/ component:componentusualWorkIndustry/ code=="21844-6" occupation (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) And where observation/ component:componentusualWorkIndustry/ is selected from Concept Domain CD_IndustryCode	0..1	Industry	
DOI	InjuryIncident Observation/value[x]valueDateTime Where /observation/code = "11374-6" Injury incident description (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	0..1	Date of Injury	
PD	DeathDate (see Open Issues) Observation/component/code/value Where observation/code =" 80616-6" Date and time pronounced dead (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	1..1	Date pronounced Dead	
CERTDATE	DeathCertificate Composition/date	0..1	Death Certificate Signed	
DETHNIC	Decedent Patient.extension: ethnicity	0..1	Ethnicity	
DECNAME	Decedent Patient.name	1..1	Decedent's Name Known by Certifier	
DADDR	Decedent Patient.address	0..1	Decedent's Residence	
DRACE	Decedent Patient.extension: race	0..1	Decedent's Race	
INJDESC	InjuryIncident Observation.value[x]/valueString	0..1	Describe how the injury occurred	

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VRDR Data Element	FHIR Resource Location	Cardinality	VRDR Data Element Description	Constraints
	Where /observation/code where code= "11374-6" Injury incident description (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)			
TOBAC	TobaccoUseContributedToDeath Observation.valueCodableConcept which SHALL be selected from Contributory Tobacco Use (NCHS) [Observation: templateId 2.16.840.1.114222.4.11.6004] Where /observation/code where code= "69443-0" Did tobacco use contribute to death, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	0..1	Did tobacco use contribute to death?	
DINSTI	DeathLocation Location.name	1..1	Facility Name (Geographic location where the death occurred)	
DSTREETADDR	DeathLocation Location.address	0..1	Street address where death occurred if not facility	
PREG	DecedentPregnancy Observation.value[x] which SHALL be selected from (CodeSystem: 2.16.840.1.114222.4.11.6003 Pregnancy Status (NCHS)) Where /observation/code where code= "69442-2" Timing of Recent Pregnancy Related to Death, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	0..1	Female pregnancy status at time of death	
WORKINJ	Injury Incident Observation.component.workInjuryIndicator/value[x] which SHALL be selected from HL7 Version 2 Table 0532 Where /observation.component2/code where code="69444-8" Did death result from injury at work, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	0..1	Injury at Work	
CLICNUM	Certifier Practitioner.qualification.identifier	0..1	License Number of Person Certifying Death	
PLICNUM	DeathPronouncementPerformer Practitioner.qualification.identifier	0..1	License Number of Person	

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VRDR Data Element	FHIR Resource Location	Cardinality	VRDR Data Element Description	Constraints
			Pronouncing Death	
INJLOCNAR	InjuryLocation Location.address Location.description if the place where the injury occurred is not known. (see Open Issues)	0..1	Injury location Narrative	
MANNER	MannerOfDeath Observation.value[x] which SHALL be selected from (CodeSystem: 2.16.840.1.114222.4.11.6002 Manner Of Death (NCHS)) Where observation.code="69449-7" Manner of Death, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	1..1	Manner of Death	
NAMECOD	DeathCertification Procedure.performer (VRDR Certifier: Practitioner.name)	0..1	Name of person completing COD	
DPLACE	DeathLocation (see Open Issues) Location.type which SHALL be selected from (CodeSystem: 2.16.840.1.114222.4.11.7216 Place of Death (NCHS))	1..1	Place of Death	
DISP	DecedentDispositionMethod Observation.value[x] which SHALL be selected from (CodeSystem: 2.16.840.1.114222.4.11.7379 Methods of Disposition (NCHS)) Where observation.code="80905-3" Method of disposition, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	0..1	Method of Disposition	
INJPL	InjuryLocation (see Open Issues) Location.valueCodedConcept which SHALL be selected from (CodeSystem: 2.16.840.1.114222.4.11.7374 Place of Injury (NCHS)) Where observation.code="11374-6" Injury incident, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	0..1	Place of Injury	
SEX	Decedent Patient.gender		Sex	
PRONOUNCESIG	Document Digital Signature may be used to reflect the signature. See Security Considerations Section QRPH TF-1: X.5 VRDR Security Considerations	0..1	Signature of Person Pronouncing Death	
JURISID	Decedent Patient.id	0..1	Jurisdiction Person Identifier (e.g., Social	

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Death Reporting (VRDR)

VRDR Data Element	FHIR Resource Location	Cardinality	VRDR Data Element Description	Constraints
			Security Number (SSN))	
TOI	InjuryIncident Observation.value[x].valueDateTime	0..1	Time of Injury	
PD	DeathDate Observation.component.value[x] Where /observation.component.code = "80616-6 " Date/time pronounced dead, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	1..1	Time pronounced Dead	
CERTL	Certifier Practitioner.name	0..1	Title of Certifier	
TRANSPINJ	InjuryIncident Observation.component.component:transportationEvent Indicator.value[x] Where Observation.component.component:transportationEvent Indicator.code = "69448-9" Injury leading to death associated with transportation event, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	0..1	Transportation Injury	
TRANSP	DecedentTransportationRole (see Open Issues) Observation.value[x] which SHALL be selected from (CodeSystem: 2.16.840.1.114222.4.11.6005 Transportation Relationships (NCHS)) Where /observation/code = "69451-3" Transportation Role of Decedent, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	0..1	Transportation Role of Decedent	
AUTOP	AutopsyPerformedIndicator Observation.value[x] Where /observation/code where code= "85699-7" Autopsy was performed, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	0..1	Was an autopsy performed?	
REF	ExaminerContacted Observation.value[x] Where /observation/code/ code= " 74497-9", Medical examiner or coroner was contacted, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	0..1	Was Medical Examiner or Coroner contacted?	
AUTOPF	AutopsyPerformedIndicator Observation.component.value[x] Where /observation/code where code="69436-4" Were autopsy findings available to complete the cause of death?, (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1)	0..1	Were autopsy findings available to complete the COD	

Volume 3 Appendices

2435 None

Volume 3 Namespace Additions

<i>Add the following terms to the IHE Namespace:</i>
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None

2440

2445

Volume 4 – National Extensions

<i>Add appropriate Country section</i>
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4 National Extensions

4.1 National Extensions for IHE United States

4.1.1 Comment Submission

2450 This national extension document was authored under the sponsorship and supervision of IHE QRPH with collaboration from the CDC/National Center for Health Statistics who welcome comments on this document and the IHE USA initiative. Comments should be directed to http://ihe.net/QRPH_Public_Comments.

4.1.2 Vital Records Death Reporting (VRDR)

2455 4.1.2.1 VRDR US Volume 1 Constraints

4.1.2.1.1 VRDR Actors and Options US Constraints

2460 The US National Extension constrains the actors and options defined in QRPH TF-1: Table X.2-1: VRDR - Actors and Options. Death reporting in the US requires that State Jurisdictions support the following Profile Options for message transactions that will be conducted with NCHS and Provider information sources. Information is also provided for prospective Infrastructure/HIE communications that may serve to facilitate some of these communications.

Table 4.1.2.1.1-1: VRDR - Actors and Options

Business Actor	Actor	Optionality	Option Name	Reference
State Vital Records	Form Receiver Message Exporter	O ^{Note 1}	Immediate Death Notification Information Option	QRPH TF-1: X.2.6
		O ^{Note 1}	Certifier Death Information Option	QRPH TF-1: X.2.7
		O ^{Note 1}	Funeral Director Death Information Option	QRPH TF-1: X.2.8
		O ^{Note 2}	Jurisdiction Death Information Option	QRPH TF-1: X.2.1.10
	Form Processor	O ^{Note 1}	None	
	Information Source	O ^{Note 2}	Case Assigned Information Option	QRPH TF-1: X.2.9
		O ^{Note 2}	Jurisdiction Death Information Option	QRPH TF-1: X.2.1.10
		R	Void Certificate Reporting Option	QRPH TF-1: X.2.1.11
	Information Recipient	O ^{Note 1}	Immediate Death Notification Information Option	QRPH TF-1: X.2.6

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Business Actor	Actor	Optionality	Option Name	Reference
		O ^{Note 1}	Certifier Death Information Option	QRPH TF-1: X.2.7
		O ^{Note 1}	Funeral Director Death Information Option	QRPH TF-1: X.2.8
		R	Coded Cause of Death Option	QRPH TF-1: X.2.1.12
		R	Coded Race / Ethnicity	QRPH TF-1: X.2.1.13
National Center for Health Statistics (NCHS)	Information Recipient	R	Jurisdiction Death Information Option	QRPH TF-1: X.2.1.10
		R	Void Certificate Reporting Option	QRPH TF-1: X.2.1.11
	Information Source	R	Coded Cause of Death Option	QRPH TF-1: X.2.1.12
		R	Coded Race / Ethnicity	QRPH TF-1: X.2.1.13
HIE	Form Receiver Message Exporter	O	Immediate Death Notification Information Option	QRPH TF-1: X.2.6
		O	Certifier Death Information Option	QRPH TF-1: X.2.7
		O	Funeral Director Death Information Option	QRPH TF-1: X.2.8
		O	Jurisdiction Death Information Option	QRPH TF-1: X.2.1.10
	Information Source	O	Immediate Death Notification Information Option	QRPH TF-1: X.2.6
		O	Certifier Death Information Option	QRPH TF-1: X.2.7
		O	Funeral Director Death Information Option	QRPH TF-1: X.2.8
	Information Recipient	O	Immediate Death Notification Information Option	QRPH TF-1: X.2.6
		O	Certifier Death Information Option	QRPH TF-1: X.2.7
		O	Funeral Director Death Information Option	QRPH TF-1: X.2.8
		O	Case Assigned Information Option	QRPH TF-1: X.2.9

Business Actor	Actor	Optionality	Option Name	Reference
		O	Jurisdiction Death Information Option	QRPH TF-1: X.2.1.10
		O	Void Certificate Reporting Option	QRPH TF-1: X.2.1.11
		O	Coded Cause of Death Option	QRPH TF-1: X.2.1.12
		O	Coded Race / Ethnicity	QRPH TF-1: X.2.1.13

Note 1 The State Vital Records System SHOULD implement one or more of the Form Processor, Form Receiver Message Exporter, Form Processor Message Exporter [Immediate Death Notification Information Option, Certifier Death Information Option, Funeral Director Death Information Option, Jurisdiction Death Information Option], or the Information Recipient [Jurisdiction Death Information Option] in order to collect Death Information.

Note 2 The State Vital Records System SHALL implement the Form Receiver Message Exporter [Jurisdiction Death Information Option], the Form Processor Message Exporter [Jurisdiction Death Information Option], or the Information Source [Jurisdiction Death Information Option] in order to communicate State Registry information to NCHS.

4.1.2.1.2 Data Elements Constraints

The civil registration system in the United States is decentralized. The responsibility for registration of vital events is managed by the individual states that have complete autonomy in their registration requirements. There is no national registration office. The system is coordinated by the Centers for Disease Control and Prevention's (CDC) National Center for Health Statistics (NCHS), which is responsible for setting standards and guidelines. These are generally adopted voluntarily by the jurisdictions, and support national compilation of vital statistics. There is variation from state to state with regard to the specific attributes collected, in some cases due to restrictions in state law, and in some cases due to variation in statistical monitoring conducted within a given state.

The following data elements identified in this profile are not relevant for reporting to NCHS and may be omitted from [QRPH-38] messages, [QRPH-47] messages, the Vital Records Death Reporting Document (VRDR), and the Medical Summary for VRDR Pre-pop (MS-VRDR). These MAY be optionally included by any local jurisdiction to support provider reporting where applicable:

- Mother's Maiden Name
- Language
- Nationality of the Deceased

All other data elements that are defined in Table 4.1.2.3.1.2-1: US National Constraints to VRDR Form Element Mapping Specification SHALL be collected unless otherwise further constrained by the jurisdictional requirements.

4.1.2.2 VRDR US Volume 2 Constraints

2495 In the International realm, the following segments are required if known. In the US, Diagnoses, Procedures, and Test Results are captured in order to inform statistics and to inform clinicians in determining the cause of death. Diagnoses, Procedures, and Test Results are NOT used for the US National Extension. These MAY be optionally included by any local jurisdiction to support provider reporting where applicable.

As a result, the following message semantics are modified for the US National Extension:

2500 The US National Extension constrains the VRDRFeed [QRPH-38] message defined in QRPH TF-2: Table 3.38.4.1.2-2: VRDRFeed Constraints on the HL7 VRDR V2.6 IG Message Profile Use Cases. The table below shows the optionality per segment for each of the VRDR options for the US National Extension.

Table 4.1.2.2-1: US National Extension constrains on VRDRFeed [QRPH-38]

Segment	Name	Segment repeatable (Y/N)	Optionality						See Section
			CDI	DI	JDI	JDI-VOID	CCOD	CREI	
OBX	Observation/Result	Y	R	R	R	O	R	R	4.38.4.1.2.11
DG1	Diagnosis Information	Y	O	O	O	O	O	O	4.38.4.1.2.13
[{	Procedure Begin	Y							
PR1	Procedure	N	O	O	O	O	O	O	4.38.4.1.2.15
ROL	Role	Y	O	O	O	O	O	O	4.38.4.1.2.24
[{	Procedure End	N/A							
[{	Insurance End	N/A							
ACC	Accident Information	N	O	O	O	O	O	O	4.38.4.1.2.20

2505

The following table shows the optionality for the PID segment that differ for the US National Extension

Table 4.1.2.2-2: US National Constraints to VRDRFeed - PID segment

SEQ	LEN	DT	OPT						TBL#	ITEM#	ELEMENT NAME	Description/ Comments
			CDI	DI	JDI	JDI – VOID	CCOD	CREI				
3	250	CX	R	R	R	R	R	R		00106	Patient Identifier List	Field used to convey all types of patient/person identifiers. It is expected that Social Security Number will be provided if it is available. This field is also used to support identifiers for the death certificate. Business Rule: If SSN cannot be included, one of the following null flavor values should be used: “NA” should be used when there is no SSN, as in non-US citizens, and newborns. “”UNK” should be used when the SSN is unknown and the informant cannot provide it, as in reporting the death of an unidentified person. “OTH” should be used when a social security number was provided and later determined to be not valid The value “99999999” may continue to be used for persons who do not have a social security number. Conformance Statement: PID.3.5 (Identifier Type Code) shall be valued with one of the following values from the Death Reporting Identifier Type (NCHS) value set: SS, DC, or DCFN.
6	250	XPN	O	O	O	O	O	O		00109	Mother’s Maiden Name	These MAY be optionally included by any local jurisdiction to support provider reporting where applicable When the attribute is populated, the VRDR Information receiver shall either accept this information or ignore the attribute, but SHALL NOT raise an application error
10	250	CE	O	O	R	O	O	R	0005	00113	Race	Race information for the decedent.

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SEQ	LEN	DT	OPT						TBL#	ITEM#	ELEMENT NAME	Description/ Comments
			CDI	DI	JDI	JDI – VOID	CCOD	CREI				
15	250	CE	O	O	O	O	O	O	0296	00118	Primary Language	These MAY be optionally included by any local jurisdiction to support provider reporting where applicable. When the attribute is populated, the VRDR Information receiver shall either accept this information or ignore the attribute, but SHALL NOT raise an application error
22	250	CE	O	O	R	O	O	R	Detailed Ethnicity (NCHS)	00125	Ethnic Group	Information regarding the Hispanic origin of the decedent.
23	250	ST	O	O	O	O	O	O		00126	Birth Place	These MAY be optionally included by any local jurisdiction to support provider reporting where applicable
26	250	CE	O	O	O	O	O	O	0171	00129	Citizenship	These MAY be optionally included by any local jurisdiction to support provider reporting where applicable

2510 **4.1.2.3 VRDR US Volume 3 Constraints**

4.1.2.3.1 VRDR Pre-Population Specification for U.S. Standard Certificate of Death

2515 Death reporting is a process for creating the legal record of a decedent and the process is subject to state or jurisdictional and international laws and regulations. Other uses of the information (e.g., statistical and public health) are byproducts of this process. Because a legal document is being created, concerns about capture in the native EHR are about verifying information, obtaining legally recognized signatures, making corrections, and how to handle transfers of responsibility when necessary.

2520 The data that may be pre-populated for US vital records purposes has been limited, as described in Table 4.1.2.3.1.2-1: Form Element Mapping Specification, to a very small subset of requirements based on an agreement between key vital records stakeholders. However, individual US vital records jurisdictions may decide to support more broad-based sharing of death related information

4.1.2.3.1.1 VRDR Data Element Index

2525 A relevant data set for death record content reporting includes those elements identified within the US efforts under the CDC/National Center for Health Statistics (NCHS) that can be computed from data elements in the electronic health record. The VRDR Summary CDA mapping rules described below overlays these data elements typically presented to the death registrar. This Derived Data Element Index specifies which sections are intended to cover which domains, the value sets to be used to interpret the Summary CDA Document content, and rules for examining Summary CDA content to determine whether or not the data element is satisfied. These rules may specify examination of one or more Summary CDA Document locations to make a determination of the data element result. The list includes derived data elements that compose knowledge concepts not currently represented in standards, most of which are optional. Where such standards do not exist, the Form Manager will enhance with non-standard fields.

2535 Any Summary CDA document may be used to populate the form.

4.1.2.3.1.2 VRDR Form Manager Pre-population Data Element Mapping Specification

2540 Sets of detailed specifications have been developed for collecting and reporting the items on the U.S. Standard Certificate of Death. It is critical that all U.S. vital registration areas follow these standards to promote uniformity in data collection across registration areas. The best sources to collect the information for specific data items are identified in the Death Edit Specifications for the 2003 Revision of the U.S. Standard Certificate of Death.

2545 The US National Extension constrains the pre-population support defined in QRPH TF-3: Table 6.3.1.D1.4.3-2 Data Element Requirement Mappings to Form Pre-population. Table 4.1.2.3.1.2-1 describes the US domain mapping to the VRDR data elements and the form for the U.S. Standard Certificate of Death. It also indicates attributes that are permissible in the US for pre-

2550 population and those that require data entry. Further edit specifications are in the Edit Specifications for the 2003 Revision of the U.S. Standard Certificate of Death (http://www.cdc.gov/nchs/data/dvs/death_edit_specifications.pdf). Mapping to these attributes is also provided below. For the US, all of the data elements are required as indicated on the U.S. Standard Certificate of Death. Form Managers SHALL support direct data entry to offer the opportunity to modify all pre-populated information before it is submitted to VR systems.

Table 4.1.2.3.1.2-1: US National Constraints to VRDR Form Element Mapping Specification

US Death Certificate Form Question	Description	Mapping to US Death Certificate Form Number	US Requirements for Direct Data Entry or Pre-populate	VRDR Data Element
Patient Death Date and Time	Calendar date when decedent died.	29	Pre-populate	DOD_YR
				DOD_MO
				DOD_DY
Patient Death Date and Time	Clock time when decedent died. The Death Edit Specifications for the 2003 Revision of the U.S. Standard Certificate of Death indicates that the Time of Death (hour and minute) should be stated using a 24-hour clock.	30	Pre-populate	TOD
Cause of Death (Immediate)	Causes of death are diseases, abnormalities, injuries, or poisonings that contributed directly or indirectly to death. In this section of the cause of death statement, the certifier reports the immediate cause (final disease or condition resulting in death. Cause of death reported on line a, Part I	32	Data Entry Required	

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US Death Certificate Form Question	Description	Mapping to US Death Certificate Form Number	US Requirements for Direct Data Entry or Pre-populate	VRDR Data Element
Cause of Death (Intermediate and Underlying)	In this section of the cause of death statement, a chain of events that result in death are reported. The conditions are listed sequentially, if any lead to the immediate cause of death. The number of conditions reported will vary according to the individual death. Cause of Death - Chain Of Events Cause of death reported on line b, Part I Cause of death reported on line c, Part I Cause of death reported on line d, Part I	32 Part I.	Data Entry Required	
Onset to death interval for cause of death reported on line a, Part I Onset to death interval for cause of death reported on line b, Part I Onset to death interval for cause of death reported on line c, Part I Onset to death interval for cause of death reported on line d, Part I	An interval between onset and death is reported for each of the conditions in Part I. The other section of the cause of death statement is for reporting other conditions that contributed to death but were not part of the chain of events reported in Part I.	32 Part I.	Data Entry Required	CODIa CODIb CODIc CODId INTIa INTIb INTIc INTId
Cause of Death - Other Significant Conditions		32 Part II.	Data Entry Required	CODII
Death Certifier	Death Certifier (Type)	45	Data Entry Required	CERT CERTL
Name of person completing COD	Name of the person completing the cause of death (item 32 on the U.S. Standard Certificate of Death)	46		
Certifier Address	Address of the person completing the cause of death (item 32 on the U.S. Standard Certificate of Death)	46		
Certifier signature	Certifier's signature. Depending on jurisdictional law, the signature may be electronic approval, an approval button, or other method for indicating acceptance in place of a physical signature.	45	Data Entry Required	

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US Death Certificate Form Question	Description	Mapping to US Death Certificate Form Number	US Requirements for Direct Data Entry or Pre-populate	VRDR Data Element
Date certified	Calendar date when the death record is certified	49	Data Entry Required	CERT_YR CERT_MO CERT_DY
Date of Birth (Mo/Day/Yr)	Calendar date when decedent was born	5	Pre-populate	DOB_YR DOB_MO DOB_DY
Date of Injury	Actual or presumed date when decedent sustained injury	38 (Date) 39 (Time)	Data Entry Required	DOI_YR DOI_MO DOI_DY
Date pronounced Dead	Month, day and year decedent was pronounced dead.	24 (Date) 25 (Time)	Data Entry Required	PD_YR PD_MO PD_DY
Date Signed	Date the death record is signed by the person that pronounces death	26	Data Entry Required	SIGN_YR SIGN_MO SIGN_DAY
Decedent of Hispanic Origin (Ethnicity)	Hispanic origin of the decedent. The primary source for this data element is the funeral director and/or next of kin. Any information for these data elements that comes from the EHR may be changed by the funeral director or next of kin. However, the EHR may also serve as a resource for documenting race and ethnicity information to inform the content of this attribute.	52	Data Entry Required.	DETHNIC1 DETHNIC2 DETHNIC3 DETHNIC4 DETHNIC5
Decedent's Name Known by Certifier	Current legal name of the decedent including first name, middle name, last name, suffixes, and AKAs would be useful; however, name as known for decedent is sufficient.	1	Pre-populate	GNAME MNAME LNAME SUFF ALIAS
Decedent's Race	Race(s) that best describes what the decedent considered himself/herself to be. The primary source for this data element is the funeral director and/or next of kin. Any information for these data elements that comes from the EHR may be changed by the funeral director or next of kin. However, the EHR may also serve as a resource for documenting race and ethnicity information to inform the content of this attribute.	53	Data Entry Required.	RACE1- RACE23

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US Death Certificate Form Question	Description	Mapping to US Death Certificate Form Number	US Requirements for Direct Data Entry or Pre-populate	VRDR Data Element
Decedent's Residence	The geographic location of the decedent's residence.	7a-7f	Data Entry Required	STNUM PREDIR STNAME STDESIG POSTDIR UNUM CITY ZIP COUNTY COUNTRY
Describe how the injury occurred	Information on how the injury occurred is requested in narrative form	43	Data Entry Required	LINJURY
Did tobacco use contribute to death?	A clinical opinion on whether tobacco use contributed to the decedent's death.	35	Data Entry Required	TOBAC
Facility Name (Geographic location where the death occurred)	The facility name at the geographic location where the death occurred.	15	Pre-populate	DINSTI
Street address where death occurred if not facility	The facility name is provided when the death occurs in an institution. If not in an institution, the geographic location where the death occurred is provided including the street & number.	15	Data Entry Required	DINSTI DSTNUM DSTNAME DSTDESIG DNAME DSTATE DZIP9 COD
Female pregnancy status at time of death	Item for females that requests information on the pregnancy status of the deceased woman within the last year of her life	36	Data Entry Required	PREG
Injury at Work	Information on whether or not an injury to the deceased indicated on the death certificate occurred at work.	41	Data Entry Required	WORKINJ
License Number of Person Certifying Death	License number of person certifying the cause of death.	48	Data Entry Required	CLICNUM
License Number of Person Pronouncing Death	License number of person pronouncing death (includes whether licensed and state determined)	27	Data Entry Required	PLIC PPROF PLICNUM

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US Death Certificate Form Question	Description	Mapping to US Death Certificate Form Number	US Requirements for Direct Data Entry or Pre-populate	VRDR Data Element
Injury location Narrative	The street address for the place where the injury occurred	42	Data Entry Required	ISTNUM IPREDIR ISTNAME ISTDESIG IPOSTDIR IUNUM IPNAME IZIP9 ISTATE
Manner of Death	An item where the certifying physician, medical examiner or coroner identifies the manner or how the deceased died	37	Data Entry Required	MANNER
Name of person completing COD	Name of the person completing the cause of death	46	Data Entry Required	
Place of Death	The physical location where the decedent died.	14	Data Entry Required	DPLACE
Place of Injury	Requests information on the type of place where an injury occurred	40	Data Entry Required	INJPLL
Sex	The sex of the deceased.	2	Pre-populate	SEX
Signature of Person Pronouncing Death	The signature of the person who pronounced death and signed the death record. Depending on jurisdictional law, the signature may be electronic approval, an approval button, or other method for indicating acceptance in place of a physical signature.	26	Data Entry Required	
Jurisdiction Person Identifier (e.g., Social Security Number (SSN))	The Jurisdiction Person Identifier (e.g., social security number) of the deceased.	3	Pre-populate	
Time of Injury	Actual or presumed time of injury. The Death Edit Specifications for the 2003 Revision of the U.S. Standard Certificate of Death indicates that the Time of Injury (hour and minute) should be stated using a 24-hour clock.	39 (Time) 38 (Date)	Data Entry Required	TOI_HR
Time pronounced Dead	Hour and minute decedent was pronounced dead.	30 (Time) 29 (Date)	Data Entry Required	TD

US Death Certificate Form Question	Description	Mapping to US Death Certificate Form Number	US Requirements for Direct Data Entry or Pre-populate	VRDR Data Element
Title of Certifier	Medical professional label used to signify a professional role or membership in a professional society	47	Data Entry Required	
Transportation Injury	Information on the role of the decedent involved in a transportation accident.	44	Data Entry Required	TRANSP TRANSPL (literal)
Was an autopsy performed?	Information on whether or not an autopsy was performed	33	Data Entry Required	AUTOP
Was Medical Examiner or Coroner contacted?	Item records whether the medical examiner or coroner was contacted in reference to this case	31	Data Entry Required	REF
Were autopsy findings available to complete the COD	Information on whether or not the findings of the autopsy were available for completing the medical portion of the death certificate	34	Data Entry Required	AUTOFP

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4.1.2.3.2 VRDR CDA Specification for U.S. Standard Certificate of Death

The Following constraints apply for the US National extension:

- The Document code for the Vital Records Death Reporting (VRDR) Document Content Module defined in Volume 3 SHALL be:
 - 69409-1 U.S. standard certificate of death - 2003 revision, LOINC.
- Data flowing from the provider system to the Jurisdiction SHALL support the Provider Death Registration Document (2.16.840.1.113883.10.20.26.1.1.1) template.
- Data flowing from the Jurisdiction to NCHS SHALL support the Jurisdiction Death Information Document (2.16.840.1.113883.10.20.26.1.1.2) template.

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4.1.2.3.3 FHIR Document Composition Bundle Content

The following constraints apply for the US National Extension to Volume 3 Table 6.6.X.2.1-1: FHIR Document Composition Bundle Structure Definitions:

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Table 4.1.2.3.3-1: FHIR Document Composition Bundle Structure Definitions

FHIR Resource location	Optionality	Cardinality	Structured Definition
Decedent Demographics			
Patient Birthplace	RE	[0..1]	http://ihe.net/fhir/StructureDefinition/IHE.VRDR.Patient-Birthplace . VRDR-Patient-Birthplace.StructuredDefinition
Decedent	R	[1..1]	http://ihe.net/fhir/StructureDefinition/IHE.VRDR.Decedent .StructuredDefinition

4.1.2.3.4 VRDR Value Sets

The following table describes each of the value sets used to support the US Extension for the VRDR Profile. These are all published by and available from the PHIN Vocabulary Access and Distribution System (PHIN VADS). Each of the value sets below are established as extensional with the discrete values available at the PHIN-VADS URL provided. Version status may change from time-to-time as these value sets are maintained by NCHS, so version number should not be referenced when using these value sets in support of the VRDR Profile. Similarly, associated date related metadata attributes will change as a result of value set maintenance activities, and can be obtained at the PHIN-VADS URL provided. VRDR Vocabulary has dynamic binding of value sets. In dynamic binding, the most current version of the value set in the terminology server is used.

4.1.2.3.3.4 QRPH Value Sets

The following value sets SHALL be used to fulfill the specified concept domains in the US implementation:

Table 4.1.2.3.3.4-1: Value Sets Fulfilling Concept Domains

UV Concept Domain	US Value Set
CD_EmploymentStatus	Employment Status urn:oid:2.16.840.1.113883.1.11.20562
CD_OccupationCode	Occupation CDC Census 2010 urn:oid:2.16.840.1.114222.4.11.7186
CD_IndustryCode	Industry CDC Census 2010 urn:oid:2.16.840.1.114222.4.11.7187
CD_DetailedRace	Detailed Race urn:oid: 2.16.840.1.114222.4.11.876
CD_DetailedEthnicity	Detailed Ethnicity urn:oid: 2.16.840.1.114222.4.11.877