NEMSIS v3.5.0 to v3.4.0 Translation

# Date

January 15, 2020  
December 8, 2020 (fixed documentation: eHistory.17, eDisposition.21; fixed translation: dPersonnel.12, dFacility.01, sFacility.01, “NotRecorded” attribute set in EMSDataSet, eMedications.05/eMedications.06; improved translation: eDisposition.12)  
August 19, 2021 (fixed translation: eDisposition.31/eDisposition.12)

# Overview

The NEMSIS v3.5.0 to v3.4.0 Translation provides XSL transformations to translate NEMSIS DEMDataSet and EMSDataSet documents from version 3.5.0.191130CP1 to version 3.4.0.200910CP2.

# Elements Removed

Do not map the following elements that are new in v3.5.0.

| Element No. | Element Name |
| --- | --- |
| eTimes.17 | Unit Arrived at Staging Area Date/Time |
| ePatient.22 | Alternate Home Residence |
| ePayment.59 | Insurance Company Phone Number |
| ePayment.60 | Date of Birth of the Insured |
| eScene.24 | First Other EMS or Public Safety Agency at Scene to Provide Patient Care |
| eSituation.19 | Justification for Transfer or Encounter |
| eSituation.20 | Reason for Interfacility Transfer/Medical Transport |
| eArrest.10 | Therapeutic Hypothermia by EMS |
| eArrest.20 | Who First Initiated CPR |
| eArrest.21 | Who First Applied the AED |
| eArrest.22 | Who First Defibrillated the Patient |
| eHistory.20 | Current Medication Frequency |
| eDisposition.32 | Level of Care Provided per Protocol |
| eOutcome.18 | Date/Time of Emergency Department Admission |
| eOther.22 | File Attachment Name |
| sSoftware |  |
| sSoftware.SoftwareGroup |  |
| sSoftware.01 | Software Creator |
| sSoftware.02 | Software Name |
| sSoftware.03 | Software Version |

# Elements Removed if Empty

The following elements that are nillable in v3.5.0 are not nillable in v3.4.0. Remove if empty.

| Element No. | Element Name |
| --- | --- |
| ePatient.05 | Patient's Home Address |
| ePatient.06 | Patient's Home City |
| ePatient.12 | Social Security Number |
| ePatient.18 | Patient’s Phone Number |
| eSituation.18 | Date/Time Last Known Well |
| eMedications.04 | Medication Administered Route |
| eOutcome.09 | Emergency Department Procedures |
| eOutcome.10 | Date/Time Emergency Department Procedure Performed |
| eOutcome.11 | Emergency Department Diagnosis |
| eOutcome.12 | Date/Time of Hospital Admission |
| eOutcome.13 | Hospital Diagnosis |
| eOutcome.16 | Date/Time of Hospital Discharge |
| eOutcome.19 | Date/Time Emergency Department Procedure Performed |
| eOutcome.20 | Date/Time Hospital Procedure Performed |
| dConfiguration.11 | EMS Agency Specialty Service Capability |
| dConfiguration.15 | Patient Monitoring Capability(ies) |
| sConfiguration.02 | EMS Certification Levels Permitted to Perform Each Procedure |
| sConfiguration.04 | EMS Certification Levels Permitted to Administer Each Medication |
| sConfiguration.05 | Medications Permitted by the State |
| sAgency.01 | EMS Agency Unique State ID |
| sAgency.02 | EMS Agency Number |
| sFacility.01 | EMS Agency Name |
| sFacility.02 | Facility Name |
| sFacility.03 | Facility Location Code |
| sFacility.04 | Hospital Designations |
| sFacility.09 | Facility State |
| sFacility.10 | Facility ZIP Code |
| sFacility.11 | Facility County |

# Mandatory Elements Added

Add the following v3.4.0 mandatory elements that were retired in v3.5.0, with the following values.

| Element No. | Element Name | Value |
| --- | --- | --- |
| dConfiguration.02 | State Certification/Licensure Levels | 9911019 (Other) |

# Required Elements Added

Add the following v3.4.0 required elements that were retired in v3.5.0, and set to Not Value = 7701003 (Not Recorded).

| Element No. | Element Name |
| --- | --- |
| eArrest.05 | CPR Care Provided Prior to EMS Arrival |
| dConfiguration.03 | Procedures Permitted by the State |
| dConfiguration.04 | Medications Permitted by the State |
| dConfiguration.05 | Protocols Permitted by the State |

# Element Usage Changed to Mandatory

The following non-mandatory elements in v3.5.0 are mandatory in v3.4.0. If they are missing or empty, add with the following values.

| Element No. | Element Name | Value |
| --- | --- | --- |
| dAgency.15 | Statistical Calendar Year | *(Last year)* |
| dConfiguration.11 | EMS Agency Specialty Service Capability | 1211019 (None) |
| dConfiguration.15 | Patient Monitoring Capability(ies) | 1215019 (Vital Sign Monitoring) |

# Element Usage Changed to Required

The following non-required elements in v3.5.0 are required in v3.4.0. If they are missing, add with Not Value = 7701003 (Not Recorded).

| Element No. | Element Name |
| --- | --- |
| eVitals.08 | Method of Blood Pressure Measurement |
| eProtocols.02 | Protocol Age Category |
| eOther.05 | Suspected EMS Work Related Exposure, Injury, or Death |
| dAgency.16 | Total Primary Service Area Size |
| dAgency.17 | Total Service Area Population |
| dAgency.18 | 911 EMS Call Center Volume per Year |
| dAgency.19 | EMS Dispatch Volume per Year |
| dAgency.20 | EMS Patient Transport Volume per Year |
| dAgency.21 | EMS Patient Contact Volume per Year |

# @UUID

Remove.

# eCustomConfiguration.08 - Custom Data Element Potential Pertinent Negative Values (PN) dCustomConfiguration.08 - Custom Data Element Potential Pertinent Negative Values (PN) seCustomConfiguration.08 - Patient Care Report Custom Data Element Potential Pertinent Negative Values (PN) sdCustomConfiguration.08 - Agency Demographic Custom Data Element Potential Pertinent Negative Values (PN)

Remove instances with the following new v3.5.0 values.

| Code | Label |
| --- | --- |
| 8801025 | Not Immunized |
| 8801027 | Order Criteria Not Met |
| 8801029 | Approximate |
| 8801031 | Symptom Not Present |

# Code Mappings

Map codes that are new in 3.5.0 as follows.

| Element No. | Element Name | 3.5.0 | | 3.4.0 | |
| --- | --- | --- | --- | --- | --- |
| eResponse.05 | Type of Service Requested | 2205015  2205017  2205019 | Hospital to Non-Hospital Facility Transfer  Non-Hospital Facility to Non-Hospital Facility Transfer  Non-Hospital Facility to Hospital Transfer | 2205007 | Medical Transport |
| 2205021  2205023  2205025  2205027  2205029  2205031  2205033  2205035 | Support Services  Non-Patient Care Rescue/Extrication  Crew Transport Only  Transport of Organs or Body Parts  Mortuary Services  Mobile Integrated Health Care Encounter  Evaluation for Special Referral/Intake Programs  Administrative Operations | 2205011 | Public Assistance/Other Not Listed |
| eResponse.07 | Unit Transport and Equipment Capability | 2207015  2207017  2207019 | Ground Transport… | 2207003 | Ground Transport |
| 2207021  2207023 | Non-Transport-Medical Treatment... | 2207009 | Non-Transport Rescue |
| 2207025 | Wheel Chair Van/Ambulette | 2207003 | Ground Transport |
| 2207027 | Non-Transport-No Medical Equipment | 2207005 | Non-Transport Administrative (e.g., Supervisor) |
| eResponse.08 | Dispatch Delay | 2208019  2208021  2208023 | Communication Specialist-Assignment Error  No Receiving MD, Bed, Hospital  Specialty Team Delay | 2208015 | Other |
| eDispatch.01 | Dispatch Reason | 2301085  2301087  2301089  2301091 | Altered Mental Status  Intercept  Nausea  Vomiting | 2301051 | No Other Appropriate Choice |
| eCrew.02  dPersonnel.24  dPersonnel.38 | Crew Member Level | 9925002 | Emergency Medical Technician - Intermediate | 9925017 | EMT-Intermediate |
| ePatient.13  dPersonnel.12 | Gender | 9906007 | Female-to-Male, Transgender Male | NV=‌7701003 | Not Recorded |
| 9906009 | Male-to-Female, Transgender Female | NV=‌7701003 | Not Recorded |
| 9906011 | Other, neither exclusively male or female | NV=‌7701003 | Not Recorded |
| ePayment.42 | Specialty Care Transport Care Provider | 2643014 | Emergency Medical Technician - Intermediate | 2642023 | EMT-Intermediate |
| eSituation.13 | Initial Patient Acuity | 2813009 | Non-Acute/Routine | 2813005 | Lower Acuity (Green) |
| eInjury.07 | Use of Occupant Safety Equipment | 2907033 | Unable to Determine | NV=‌7701003 | Not Recorded |
| eArrest.09 | Type of CPR Provided | 3009021 | Compressions-Hands Only CPR | 3009001 | Compressions-Continuous |
| 3009023  3009025  3009027 | Ventilation-with OPA/NPA  Ventilation-Advanced Airway Device  Ventilation-Passive Ventilation with Oxygen | 3009013 | Ventilation-Bag Valve Mask |
| eArrest.17  eVitals.03 | Cardiac Rhythm on Arrival at Destination  Cardiac Rhythm / Electrocardiography (ECG) | 9901030  9901058 | Non-STEMI Septal Ischemia  STEMI Septal Ischemia | 9901031 | Other |
| eHistory.01 | Barriers to Patient Care | 3101033  3101035 | Alcohol Use, Suspected  Drug Use, Suspected | NV=‌7701003 | Not Recorded |
| eHistory.15  eMedications.04 | Current Medication Administration Route  Medication Administered Route | 9927063  9927065  9927067  9927069  9927071  9927073  9927075 | Auto Injector  BVM  CPAP  IV Pump  Nebulizer  Umbilical Artery Catheter  Umbilical Venous Catheter | 9927037 | Other/miscellaneous |
| eHistory.17 | Alcohol/Drug Use Indicators | 3117013 | Physical Exam Indicates Suspected Alcohol or Drug Use | 3117011 | Smell of Alcohol on Breath |
| eVitals.04 | ECG Type | 3304000 | 2 Lead ECG (pads or paddles) | 3304015 | Other (AED, Not Listed) |
| eVitals.18 | Blood Glucose Level | High |  | 600 |  |
| Low |  | 20 |  |
| eVitals.30 | Stroke Scale Type | 3330004 | Los Angeles Prehospital Stroke Screen (LAPSS) | 3330003 | Los Angeles |
| 3330015  3330017  3330019  3330021  3330023 | Boston Stroke Scale (BOSS)  Ontario Prehospital Stroke Scale (OPSS)  Melbourne Ambulance Stroke Screen (MASS)  Rapid Arterial oCclusion Evaluation (RACE)  Los Angeles Motor Score (LAMS) | 3330011 | Other Stroke Scale Type |
| eExam.18 | Eye Assessment | 3518061 | Dilated | 3518015 | 8mm or > |
| 3518063 | Pinpoint | 3518001 | 1mm |
| eExam.19 | Mental Status Assessment | 3519037  3519039 | Pharmacologically Paralyzed  Pharmacologically Sedated | 3519019 | Pharmacologically Sedated |
| eExam.20 | Neurological Assessment | 3520026  3520055 | Status Seizure  Other Seizures | 3520025 | Seizures |
| eProtocols.02  eOther.05  dAgency.16  dAgency.17  dAgency.18  dAgency.19  dAgency.20  dAgency.21 | Protocol Age Category  Suspected EMS Work Related Exposure, Injury, or Death  Total Primary Service Area Size  Total Service Area Population  911 EMS Call Center Volume per Year  EMS Dispatch Volume per Year  EMS Patient Transport Volume per Year  EMS Patient Contact Volume per Year | NV=‌7701005 | Not Reporting | NV=‌7701003 | Not Recorded |
| eMedications.03  eProcedures.03 | Medication Administered  Procedure | PN=‌8801027 | Order Criteria Not Met | PN=‌8801001 | Contraindication Noted |
| eMedications.10  eProcedures.10 | Role/Type of Person Administering Medication  Role/Type of Person Performing the Procedure | 9905002 | Emergency Medical Technician - Intermediate | 9905011 | EMT-Intermediate |
| 9905043  9905045  9905049 | Patient  Lay Person  Family Member | 9905023 | Patient/Lay Person |
| 9905047  9905051 | Law Enforcement  Fire Personnel (non-EMS) | 9905021 | Other Non-Healthcare Professional |
| eProcedures.13 | Vascular Access Location | 3913079 | Wrist-Left | 3913021 | Hand-Left |
| 3913081 | Wrist-Right | 3913023 | Hand-Right |
| eAirway.04 | Airway Device Placement Confirmed Method | 4004021 | Chest Rise | 4004015 | Other |
| eDisposition.19 | Final Patient Acuity | 4219009 | Dead with Resuscitation Efforts (Black) | 4219007 | Dead without Resuscitation Efforts (Black) |
| 4219011 | Non-Acute/Routine | 4219005 | Lower Acuity (Green) |
| eDisposition.21 | Type of Destination | 4221029  4221033 | Assisted Living Facility  Nursing Home | 4221011 | Nursing Home/Assisted Living Facility |
| 4221025  4221027  4221031  4221035  4221037  4221039  4221041 | Dialysis Center  Diagnostic Services  Mental Health Facility  Other Recurring Care Center  Physical Rehabilitation Facility  Drug and/or Alcohol Rehabilitation Facility  Skilled Nursing Facility | 4221009 | Other |
| eDisposition.23  dFacility.04  sFacility.04 | Hospital Capability  Hospital Designations  Hospital Designations | 9908037  9908039  9908041  9908043 | Stroke… | 9908017 | Stroke Center |
| eDisposition.24 | Destination Team Pre-Arrival Alert or Activation | 4224019 | Yes-Sepsis | 4224009 | Yes-Other |
| eOther.07 | Natural, Suspected, Intentional, or Unintentional Disaster | 4507029  4507031  4507033  4507035  4507037  4507039 | Earthquake  Flood  Land Slide  Winter Storm  Tornado  Hurricane | 4507027 | Weather |
| eOther.09 | External Electronic Document Type | 4509006  4509008 | DNR  Living Will | 4509007 | DNR/Living Will |
| 4509027 | ePCR | 4509013 | Other Healthcare Record |
| eOther.15 | Signature Status | 4515035 | Not Signed-Illiterate (Unable to Read) | 4515011 | Not Signed - Language Barrier |
| 4515037 | Not Signed-Restrained | 4515017 | Not Signed - Physical Impairment of Extremities |
| 4515039 | Not Signed-Combative or Uncooperative | 4515005 | Not Signed - Due to Distress Level |
| dAgency.11  dConfiguration.06  dConfiguration.08  dVehicle.05  sConfiguration.02  sConfiguration.04 | Level of Service  EMS Certification Levels Permitted to Perform Each Procedure  EMS Certification Levels Permitted to Administer Each Medication  Crew State Certification/Licensure Levels  EMS Certification Levels Permitted to Perform Each Procedure  EMS Certification Levels Permitted to Administer Each Medication | 9917002 | Emergency Medical Technician - Intermediate | 9917013 | EMT-Intermediate |
| dPersonnel.29 | EMS Personnel's National Registry Certification Level | 1529012 | Emergency Medical Technician - Intermediate | 1529011 | EMT-Intermediate |
| dFacility.01  sFacility.01 | Type of Facility  Type of Facility | 1701019  1701021  1701023  1701025  1701027  1701029  1701031  1701033  1701035 | Diagnostic Services  Freestanding Emergency Department  Morgue/Mortuary  Police/Jail  Other EMS Responder (air)  Other EMS Responder (ground)  Other Recurring Care Center  Drug and/or Alcohol Rehabilitation Facility  Skilled Nursing Facility | 1701009 | Other |
| sConfiguration.01 | State Certification/Licensure Levels | 9917001 | Advanced Emergency Medical Technician (AEMT) | 9911001 | 2009 Advanced Emergency Medical Technician (AEMT) |
| 9917002 | Emergency Medical Technician - Intermediate | 9911011 | EMT-Intermediate |
| 9917003 | Emergency Medical Responder (EMR) | 9911003 | 2009 Emergency Medical Responder (EMR) |
| 9917005 | Emergency Medical Technician (EMT) | 9911005 | 2009 Emergency Medical Technician (EMT) |
| 9917007 | Paramedic | 9911007 | 2009 Paramedic |
| 9917019 | Physician | 9911021 | Physician |
| 9917021 | Critical Care Paramedic | 9911023 | Critical Care Paramedic |
| 9917023 | Community Paramedicine | 9911025 | Community Paramedicine |
| 9917025 | Nurse Practitioner | 9911027 | Nurse Practitioner |
| 9917027 | Physician Assistant | 9911029 | Physician Assistant |
| 9917029 | Licensed Practical Nurse (LPN) | 9911031 | Licensed Practical Nurse (LPN) |
| 9917031 | Registered Nurse | 9911033 | Registered Nurse |

# eResponse.15 - Level of Care of This Unit

Map to retired v3.4.0 mandatory element from eResponse.07 - Unit Transport and Equipment Capability and eCrew.02 - Crew Member Level. The mapping is not precise. The first condition met in the following table is used.

| v3.5.0 | | | | v3.4.0 | |
| --- | --- | --- | --- | --- | --- |
| eResponse.07 | | | | eResponse.15 | |
| 2207011  2207013  2207015  2207021 | | Air Transport-Helicopter  Air Transport-Fixed Wing  Ground Transport (ALS Equipped)  Non-Transport-Medical Treatment (ALS Equipped) | |  | |
| eCrew.02 | | |  | |
| 9925027 | | Physician | 2215019 | ALS-Physician |
| 9925037  9925041  9925043 | | …Nurse… | 2215017 | ALS-Nurse |
| 9925033 | | Critical Care Paramedic | 2215021 | Specialty Critical Care |
| 9925035 | | Community Paramedicine | 2215015 | ALS-Community Paramedicine |
| 9925007 | | Paramedic | 2215013 | ALS-Paramedic |
| 9925002 | | Emergency Medical Technician - Intermediate | 2215011 | ALS-Intermediate |
| 9925001 | | Advanced Emergency Medical Technician (AEMT) | 2215009 | ALS-AEMT |
| \* | | *All other values or element missing* | 2215013 | ALS-Paramedic |
| 2207017  2207023 | | Ground Transport (BLS Equipped)  Non-Transport-Medical Treatment (BLS Equipped) | |  | |
| eCrew.02 | | |
| 9925035 | | Community Paramedicine | 2215023 | BLS-Community Paramedicine |
| 9925002 | | Emergency Medical Technician - Intermediate | 2215007 | BLS-Intermediate |
| 9925001 | | Advanced Emergency Medical Technician (AEMT) | 2215005 | BLS-AEMT |
| 9925005 | | Emergency Medical Technician (EMT) | 2215003 | BLS-Basic /EMT |
| 9925003 | | Emergency Medical Responder (EMR) | 2215001 | BLS-First Responder/EMR |
| \* | | *All other values or element missing* | 2215003 | BLS-Basic /EMT |
| 2207019 | | Ground Transport (Critical Care Equipped) | | 2215021 | Specialty Critical Care |
| 2207025 | | Wheel Chair Van/Ambulette | | 2215001 | BLS-First Responder/EMR |
| 2207027 | | Non-Transport-No Medical Equipment | |  | |
| eCrew.02 | | |
| 9925027 | | Physician | 2215019 | ALS-Physician |
| 9925037  9925041  9925043 | | …Nurse… | 2215017 | ALS-Nurse |
| 9925033 | | Critical Care Paramedic | 2215021 | Specialty Critical Care |
| 9925035 | | Community Paramedicine | 2215015 | ALS-Community Paramedicine |
| 9925007 | | Paramedic | 2215013 | ALS-Paramedic |
| 9925002 | | Emergency Medical Technician - Intermediate | 2215011 | ALS-Intermediate |
| 9925001 | | Advanced Emergency Medical Technician (AEMT) | 2215009 | ALS-AEMT |
| 9925005 | | Emergency Medical Technician (EMT) | 2215003 | BLS-Basic /EMT |
| 9925003 | | Emergency Medical Responder (EMR) | 2215001 | BLS-First Responder/EMR |
| \* | | *All other values or element missing* | 2215013 | BLS-First Responder/EMR |

# ePayment.05 - Healthcare Provider Type Signing Physician Certification Statement

Remove instances with the following new v3.5.0 values.

| Code | Label |
| --- | --- |
| 2605013 | Licensed Practical Nurse (LPN) |
| 2605015 | Case Manager |
| 2605017 | Social Worker |

# ePayment.51 - EMS Condition Code eOutcome.10 - Emergency Department Diagnosis

Truncate ICD-10 code to 7 characters.

# eScene.20 - Scene Cross Street or Directions

Truncate to 50 characters.

# eSituation.01 - Date/Time of Symptom Onset

Map Pertinent Negative 8801023 (Unable to Complete) to Not Value 7701003 (Not Recorded).

Remove Pertinent Negative 8801029 (Approximate).

# eSituation.10 - Other Associated Symptoms

Map Pertinent Negative 8801031 (Symptom Not Present) to Not Value 7701003 (Not Recorded) and remove element value.

# eHistory.ImmunizationsGroup dPersonnel.ImmunizationsGroup

Remove group element and child elements if eHistory.10 - The Patient's Type of Immunization / dPersonnnel.18 - EMS Personnel's Immunization Status is 9910053 (None).

Remove group element and child elements if eHistory.10 - The Patient's Type of Immunization / dPersonnnel.18 - EMS Personnel's Immunization Status has Pertinent Negative 8801025 (Not Immunized).

# eHistory.12 - Current Medications eMedications.03 - Medication Administered

Remove CodeType attribute. Remove value and Pertinent Negative (if present) and set Not Value = 7701003 (Not Recorded) if CodeType is 9924005 (SNOMED) or value is longer than 7 characters.

# eVitals.07 - DBP (Diastolic Blood Pressure)

Map values 1–9 to 0.

# eVitals.16 - End Tidal Carbon Dioxide (ETCO2)

Convert Percentage and kPa values to mmHg and remove the ETCO2CodeType attribute.

Percentage: The percentage to mmHg conversion assumes BTPS (body temperature, pressure saturated), with air pressure = 760mmHg and water vapor pressure = 47mmHg. The formula is:

round((760 − 47) × value ÷ 100)

kPa: 1kPa is 7.5mmHg. The formula is:

round(value × 7.5)

If the ETCO2CodeType attribute is missing, assume mmHg, round the value, and limit the value to a maximum of 200.

# eLabs.03 - Laboratory Result Type

Remove instances with the following new v3.5.0 values.

| Code | Label |
| --- | --- |
| 3403115 | ACT Celite (ACTc) |
| 3403117 | ACT Kaolin (ACTk) |
| 3403119 | Bands |
| 3403121 | Basophils |
| 3403123 | Creatine Phosphokinase (CK) |
| 3403125 | Eosinophils |
| 3403127 | Erythrocyte Count |
| 3403129 | Erythrocyte Morphology |
| 3403131 | Erythrocyte Sedimentation Rate |
| 3403133 | High-Sensitivity C-reactive Protein (hs-CRP) |
| 3403135 | Lymphocytes |
| 3403137 | Mean Corpuscular Hemoglobin (MCH) |
| 3403139 | Mean Corpuscular Hemoglobin Concentration (MCHC) |
| 3403141 | Mean Corpuscular Volume (MCV) |
| 3403143 | Monocytes |
| 3403145 | Myoglobin |
| 3403147 | Neutrophils |
| 3403149 | Oxygen Saturation (SaO2) |
| 3403151 | Oxygen Volume/Content (SVO2) |
| 3403153 | Phosphorus (PO4) |
| 3403155 | Prothromblin test time (PT/INR) |
| 3403157 | Red Cell Distribution Width (RDW) |
| 3403159 | Reticulocyte Count |

# eExam.15 - Extremity Assessment Finding Location

Remove instances with the following new v3.5.0 values.

| Code | Label |
| --- | --- |
| 3515097 | Arm-Whole Arm and Hand-Left |
| 3515099 | Arm-Whole Arm and Hand-Right |
| 3515101 | Hand-Whole Hand-Left |
| 3515103 | Hand-Whole Hand-Right |
| 3515105 | Leg-Whole Leg-Left |
| 3515107 | Leg-Whole Leg-Right |
| 3515109 | Foot-Whole Foot-Left |
| 3515111 | Foot-Whole Foot-Right |

# eExam.LungGroup eExam.ChestGroup

Map values from new elements in v3.5.0 eExam.LungGroup and eExam.ChestGroup to v3.4.0 eExam.08. In mappings that create multiple instances of eExam.08 from a single instance of eExam.LungGroup or eExam.ChestGroup, copy @CorrelationID to the first instance of eExam.08.

Values are mapped from eExam.LungGroup as follows.

| v3.5.0 | | | | v3.4.0 | |
| --- | --- | --- | --- | --- | --- |
| eExam.23 | | eExam.22 | | eExam.08 | |
| 3523001 | Breath Sounds-Absent | 3522001 | Left | 3508011 | Breath Sounds-Absent-Left |
| 3522003 | Right | 3508013 | Breath Sounds-Absent-Right |
| \* | Bilateral or *missing* | 3508011 | Breath Sounds-Absent-Left |
| 3508013 | Breath Sounds-Absent-Right |
| 3523003 | Breath Sounds-Decreased | 3522001 | Left | 3508015 | Breath Sounds-Decreased-Left |
| 3522003 | Right | 3508017 | Breath Sounds-Decreased-Right |
| \* | Bilateral or *missing* | 3508015 | Breath Sounds-Decreased-Left |
| 3508017 | Breath Sounds-Decreased-Right |
| 3523005 | Breath Sounds-Equal | \* | \* | 3508019 | Breath Sounds-Equal |
| 3523007 | Breath Sounds-Normal | 3522001 | Left | 3508021 | Breath Sounds-Normal-Left |
| 3522003 | Right | 3508023 | Breath Sounds-Normal-Right |
| \* | Bilateral or *missing* | 3508021 | Breath Sounds-Normal-Left |
| 3508023 | Breath Sounds-Normal-Right |
| 3523011 | Foreign Body | \* | \* | 3508041 | Foreign Body |
| 3523011 | Increased Respiratory Effort | \* | \* | 3508047 | Increased Respiratory Effort |
| 3523013 | Normal | \* | \* | 3508053 | Normal |
| 3523015 | Not Done | \* | \* | 3508055 | Not Done |
| 3523017 | Pain | \* | \* | 3508057 | Pain |
| 3523019 | Pain with Inspiration/Expiration | 3522001 | Left | 3508059 | Pain with Inspiration/expiration - Left |
| 3522003 | Right | 3508061 | Pain with Inspiration/expiration - Right |
| \* | Bilateral or *missing* | 3508059 | Pain with Inspiration/expiration - Left |
| 3508061 | Pain with Inspiration/expiration - Right |
| 3523021 | Rales | 3522001 | Left | 3508065 | Rales - Left |
| 3522003 | Right | 3508067 | Rales - Right |
| \* | Bilateral or *missing* | 3508065 | Rales - Left |
| 3508067 | Rales - Right |
| 3523023 | Rhonchi | 3522001 | Left | 3508071 | Rhonchi - Left |
| 3522003 | Right | 3507073 | Rhonchi - Right |
| \* | Bilateral or *missing* | 3508071 | Rhonchi - Left |
| 3507073 | Rhonchi - Right |
| 3523025 | Rhonchi/Wheezing | \* | \* | 3508075 | Rhonchi/Wheezing |
| 3523027 | Stridor | 3522001 | Left | 3508077 | Stridor-Left |
| 3522003 | Right | 3508079 | Stridor-Right |
| \* | Bilateral or *missing* | 3508077 | Stridor-Left |
| 3508079 | Stridor-Right |
| 3523029 | Wheezing-Expiratory | 3522001 | Left | 3508089 | Wheezing-Expiratory-Left |
| 3522003 | Right | 3508091 | Wheezing-Expiratory-Right |
| \* | Bilateral or *missing* | 3508089 | Wheezing-Expiratory-Left |
| 3508091 | Wheezing-Expiratory-Right |
| 3523031 | Wheezing-Inspiratory | 3522001 | Left | 3508093 | Wheezing-Inspiratory-Left |
| 3522003 | Right | 3508095 | Wheezing-Inspiratory-Right |
| \* | Bilateral or *missing* | 3508093 | Wheezing-Inspiratory-Left |
| 3508095 | Wheezing-Inspiratory-Right |

Values are mapped from eExam.ChestGroup as follows.

| v3.5.0 | | | | v3.4.0 | |
| --- | --- | --- | --- | --- | --- |
| eExam.25 | | eExam.24 | | eExam.08 | |
| 3525001 | Abrasion | \* | \* | 3508001 | Abrasion |
| 3525003 | Avulsion | \* | \* | 3508003 | Avulsion |
| 3525005 | Accessory Muscles Used with Breathing | \* | \* | 3508005 | Accessory Muscles Used with Breathing |
| 3525007 | Bleeding Controlled | \* | \* | 3508007 | Bleeding Controlled |
| 3525009 | Bleeding Uncontrolled | \* | \* | 3508009 | Bleeding Uncontrolled |
| 3525011 | Burn-Blistering | \* | \* | 3508025 | Burn-Blistering |
| 3525013 | Burn-Charring | \* | \* | 3508027 | Burn-Charring |
| 3525015 | Burn-Redness | \* | \* | 3508029 | Burn-Redness |
| 3525017 | Burn-White/Waxy | \* | \* | 3508031 | Burn-White/Waxy |
| 3525019 | Crush Injury | \* | \* | 3508033 | Crush Injury |
| 3525021 | Deformity | \* | \* | 3508035 | Deformity |
| 3525023 | Flail Segment | 3524001  3524003  3524013 | Left… | 3508037 | Flail Segment-Left |
| 3524005  3524007  3524015 | Right… | 3508039 | Flail Segment-Right |
| \* | General… or *missing* | 3508037 | Flail Segment-Left |
| 3508039 | Flail Segment-Right |
| 3525025 | Implanted Device | \* | \* | 3508049 | Implanted Device |
| 3525027 | Laceration | \* | \* | 3508051 | Laceration |
| 3525029 | Normal | \* | \* | 3508053 | Normal |
| 3525031 | Not Done | \* | \* | 3508055 | Not Done |
| 3525033 | Pain | \* | \* | 3508057 | Pain |
| 3525035 | Pain with Inspiration/Expiration | 3524001  3524003  3524013 | Left… | 3508059 | Pain with Inspiration/expiration - Left |
| 3524005  3524007  3524015 | Right… | 3508061 | Pain with Inspiration/expiration - Right |
| \* | General… or *missing* | 3508059 | Pain with Inspiration/expiration - Left |
| 3508061 | Pain with Inspiration/expiration - Right |
| 3525039 | Retraction | \* | \* | 3508069 | Retraction |
| 3525041 | Tenderness | 3524001  3524003  3524013 | Left… | 3508085 | Tenderness-Left |
| 3524005  3524007  3524015 | Right… | 3508087 | Tenderness-Right |
| \* | General… or *missing* | 3508085 | Tenderness-Left |
| 3508087 | Tenderness-Right |
| 3525043 | Gunshot Wound | \* | \* | 3508097 | Gunshot Wound |
| 3525045 | Swelling | \* | \* | 3508099 | Swelling |
| 3525047 | Contusion | \* | \* | 3508101 | Contusion |
| 3525049 | Tenderness | \* | \* | 3508103 | Tenderness |

# eExam.18 - Eye Assessment

Remove instances with the following new v3.5.0 values.

| Code | Label |
| --- | --- |
| 3519029 | Altered mental status, unspecified |
| 3519031 | Developmentally Impaired |
| 3519033 | Disorientation, unspecified |
| 3519035 | Pharmacologically Paralyzed |
| 3519037 | Pharmacologically Sedated |
| 3519039 | Psychologically Impaired |
| 3519041 | Slowness and poor responsiveness |
| 3519043 | State of emotional shock and stress, unspecified |
| 3519045 | Strange and inexplicable behavior |
| 3519047 | Uncooperative |
| 3519049 | Unspecified coma |

# eMedications.DosageGroup

v3.4.0 does not support v3.5.0 eMedications.06 - Medication Dosage Units value 3706055 (Milligrams per Hour (mg/hr)). Convert the dosage and map the dosage units:

eMedications.05: format-number(value ÷ 60, '#.###')

eMedications.06: 3706041 (Milligrams per Minute (mg/min))

# eAirway.05 - Tube Depth

Remove instances with value less than 8.

# eDisposition.15 - How Patient Was Moved From Ambulance

Copy the first instance (and remove @CorrelationID) and remove all other instances.

# eDisposition.IncidentDispositionGroup

Map new v3.5.0 elements to retired v3.4.0 element eDisposition.12 - Incident/Patient Disposition. The v3.4.0 [Extended NEMSIS V3 Data Definitions](https://nemsis.org/wp-content/uploads/2018/09/Extended-Data-Definitions_v3_Final.pdf) document informed the development of these mappings. In v3.5.0, national Schematron rules flag combinations of element values that don’t make sense; however, the rules are warnings, so documents are still considered valid. The mapping uses a hierarchical if/else-if algorithm that starts by looking at the value of v3.5.0 mandatory element eDisposition.27 - Unit Disposition, followed by other elements in eDisposition.IncidentDispositionGroup as needed.

The first condition met in the following table is used.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| v3.5.0 | | | | | | | | v3.4.0 | |
| eDisposition.27 - Unit Disposition | | | | | | | | eDisposition.12 - Incident/Patient Disposition | |
| 4227001 | | | Patient Contact Made | | | | |  | |
| eDisposition.28 - Patient Evaluation/Care | | | | | | |  | |
| 4228001  4228009  *NV* | | | | Patient Evaluated and Care Provided  Patient Support Services Provided  *Not Values* | | |
| eDisposition.31 - Reason for Refusal/Release | | | | | |  | |
| 4231001 | | | | Against Medical Advice | | 4212027 | Patient Treated, Released (AMA) |
| 4231005 | | | | Released Following Protocol Guidelines | | 4212029 | Patient Treated, Released (per protocol) |
| 4231007 | | | | Released to Law Enforcement | | 4212035 | Patient Treated, Transported by Law Enforcement |
| 4231009 | | | | Patient/Guardian States Intent to Transport by Other Means | | 4212037 | Patient Treated, Transported by Private Vehicle |
| 4231011  4231013 | | | | DNR  Medical/Physician Orders for Life Sustaining Treatment | |  | |
| eDisposition.30 - Transport Disposition | | | |
| 4230001  4230003  4230005  4230007 | | | Transport By… | 4212017 | Patient Dead at Scene-Resuscitation Attempted (With Transport) |
| 4230013 | | | No Transport | 4212019 | Patient Dead at Scene-Resuscitation Attempted (Without Transport) |
| eDisposition.29 - Crew Disposition | | | | | |  | |
| 4229003 | | | | Initiated Primary Care and Transferred to Another EMS Crew | | 4212031 | Patient Treated, Transferred Care to Another EMS Unit |
| eDisposition.30 - Transport Disposition | | | | | |  | |
| 4230001  4230003 | | | | Transport by This EMS Unit… | | 4212033 | Patient Treated, Transported by this EMS Unit |
| 4230005  4230007 | | | | Transport by Another EMS Unit… | | 4212031 | Patient Treated, Transferred Care to Another EMS Unit |
| 4230009 | | | | Patient Refused Transport | | 4212027 | Patient Treated, Released (AMA) |
| 4230011  4230013  *NV* | | | | Non-Patient Transport (Not Otherwise Listed)  No Transport  *Not Values* | | 4212029 | Patient Treated, Released Per Protocol |
| 4228003  4228007 | | | | Patient Evaluated and Refused Care  Patient Refused Evaluation/Care | | |  | |
| eDisposition.30 - Transport Disposition | | | | | |
| 4230001  4230003  4230005  4230007 | | | | Transport by… | | 4212023 | Patient Refused Evaluation/Care (With Transport) |
| 4230009  4230011  4230013  *NV* | | | | *All other values or Not Values* | | 4212025 | Patient Refused Evaluation/Care (Without Transport) |
| 4228005 | | | | Patient Evaluated, No Care Required | | |  | |
| eDisposition.31 - Reason for Refusal/Release | | | | | |
| 4231011  4231013 | | | | DNR  Medical/Physician Orders for Life Sustaining Treatment | |
| eDisposition.30 - Transport Disposition | | | |
| 4230001  4230003  4230005  4230007 | | | Transport by… | 4212013 | Patient Dead at Scene-No Resuscitation Attempted (With Transport) |
| 4230013 | | | No Transport | 4212015 | Patient Dead at Scene-No Resuscitation Attempted (Without Transport) |
| \* | | | | *All other values or element missing* | |  | |
| eDisposition.30 - Transport Disposition | | | |
| 4230001  4230003 | | | Transport by This EMS Unit… | 4212033 | Patient Treated, Transported by this EMS Unit |
| 4230005  4230007 | | | Transport by Another EMS Unit… | 4212031 | Patient Treated, Transferred Care to Another EMS Unit |
| 4230011 | | | Non-Patient Transport (Not Otherwise Listed) | 4212043 | Transport Non-Patient, Organs, etc. |
| 4230009 4230013 *NV* | | | *All other values or Not Values* | 4212021 | Patient Evaluated, No Treatment/Transport Required |
| 4227003 | | | Cancelled on Scene | | | | | 4212009 | Canceled on Scene (No Patient Contact) |
| 4227005 | | | Cancelled Prior to Arrival at Scene | | | | | 4212007 | Canceled (Prior to Arrival At Scene) |
| 4227007  4227009  4227011 | | | No Patient Contact  No Patient Found  Non-Patient Incident (Not Otherwise Listed) | | | | |  | |
| eDisposition.30 - Transport Disposition | | | | | |
| 4230011 | | | | Non-Patient Transport (Not Otherwise Listed) | | 4212043 | Transport Non-Patient, Organs, etc. |
| eDisposition.29 - Crew Disposition | | | | | |  | |
| 4229011  4229013 | | | | Back in Service, No Care/Support Services Required  Back in Service, Care/Support Services Refused | | 4212039 | Standby-No Services or Support Provided |
| 4229001  4229003  4229005  4229007  4229009  *NV* | | | | All other values or *Not Values* | | 4212041 | Standby-Public Safety, Fire, or EMS Operational Support Provided |

The mapping never produces the following values for v3.4.0 eDisposition.12 - Incident/Patient Disposition, because insufficient information exists in the v3.5.0 elements to differentiate them from Standby dispositions.

| Code | Label |
| --- | --- |
| 4212001 | Assist, Agency |
| 4212003 | Assist, Public |
| 4212005 | Assist, Unit |

# eDisposition.23 - Hospital Capability

Implement the first condition matched in the following sequence:

1. If there are non-empty instances with a v3.4.0-supported value, map the first one.
2. If there are instances with 9908045 (Cancer Center) and 9908047 (Labor and Delivery), map the first one to 9908007 (Hospital (General)).
3. If there are only empty instances, map the first one.

Remove @CorrelationID.

# eOutcome.09 - Emergency Department Procedures

Un-enclose from new element eOutcome.EmergencyDepartmentProceduresGroup. Move @CorrelationID from eOutcome.EmergencyDepartmentProceduresGroup to eOutcome.09.

# eOutcome.12 - Hospital Procedures

Un-enclose from new element eOutcome.HospitalProceduresGroup. Move @CorrelationID from eOutcome.HospitalProceduresGroup to eOutcome.12.

# eCustomResults.01 - Custom Data Element Result dCustomResults.01 - Custom Data Element Result

Map values with the following Pertinent Negative attribute values to Not Value 7701003 (Not Recorded).

| Code | Label |
| --- | --- |
| 8801025 | Not Immunized |
| 8801027 | Order Criteria Not Met |
| 8801029 | Approximate |
| 8801031 | Symptom Not Present |

Remove Pertinent Negative 8801029 (Approximate).

# AnnualAgencyStatistics

For the following elements, map values greater than 4,000,000 to 4,000,000.

| Element No. | Element Name |
| --- | --- |
| dAgency.16 | Total Primary Service Area Size |
| dAgency.17 | Total Service Area Population |
| dAgency.18 | 911 EMS Call Center Volume per Year |
| dAgency.19 | EMS Dispatch Volume per Year |
| dAgency.20 | EMS Patient Transport Volume per Year |
| dAgency.21 | EMS Patient Contact Volume per Year |

# dConfiguration.09 - EMS Agency Medications

Remove @CodeType. Remove instances where @CodeType is 9924005 (SNOMED) or value is longer than 7 characters. If no instances remain, insert one instance with value 7806 (Oxygen).

# dFacility.04 - Hospital Designations sFacility.04 - Hospital Designations

Remove instances with the following new v3.5.0 values.

| Code | Label |
| --- | --- |
| 9908045 | Cancer Center |
| 9908047 | Labor and Delivery |

# StateDataSet Element Numbers

StateDataSet element numbers were changed in v3.5.0. Renumber elements as follows:

| v3.5.0 | v3.4.0 |  |
| --- | --- | --- |
| Element No. | Element No. | Element Name |
| sState.01 | dConfiguration.01 | State |
| sdCustomConfiguration | dCustomConfiguration |  |
| sdCustomConfiguration. ‌CustomGroup | dCustomConfiguration.‌CustomGroup |  |
| sdCustomConfiguration.01 | dCustomConfiguration.01 | Agency Demographic Custom Data Element Title |
| sdCustomConfiguration.02 | dCustomConfiguration.02 | Agency Demographic Custom Definition |
| sdCustomConfiguration.03 | dCustomConfiguration.03 | Agency Demographic Custom Data Type |
| sdCustomConfiguration.04 | dCustomConfiguration.04 | Agency Demographic Custom Data Element Recurrence |
| sdCustomConfiguration.05 | dCustomConfiguration.05 | Agency Demographic Custom Data Element Usage |
| sdCustomConfiguration.06 | dCustomConfiguration.06 | Agency Demographic Custom Data Element Potential Values |
| sdCustomConfiguration.07 | dCustomConfiguration.07 | Agency Demographic Custom Data Element Potential NOT Values (NV) |
| sdCustomConfiguration.08 | dCustomConfiguration.08 | Agency Demographic Custom Data Element Potential Pertinent Negative Values (PN) |
| sdCustomConfiguration.09 | dCustomConfiguration.09 | Agency Demographic Custom Data Element Grouping ID |
| seCustomConfiguration | eCustomConfiguration |  |
| seCustomConfiguration. ‌CustomGroup | eCustomConfiguration. ‌CustomGroup |  |
| seCustomConfiguration.01 | eCustomConfiguration.01 | Patient Care Report Custom Data Element Title |
| seCustomConfiguration.02 | eCustomConfiguration.02 | Patient Care Report Custom Definition |
| seCustomConfiguration.03 | eCustomConfiguration.03 | Patient Care Report Custom Data Type |
| seCustomConfiguration.04 | eCustomConfiguration.04 | Patient Care Report Custom Data Element Recurrence |
| seCustomConfiguration.05 | eCustomConfiguration.05 | Patient Care Report Custom Data Element Usage |
| seCustomConfiguration.06 | eCustomConfiguration.06 | Patient Care Report Custom Data Element Potential Values |
| seCustomConfiguration.07 | eCustomConfiguration.07 | Patient Care Report Custom Data Element Potential NOT Values (NV) |
| seCustomConfiguration.08 | eCustomConfiguration.08 | Patient Care Report Custom Data Element Potential Pertinent Negative Values (PN) |
| seCustomConfiguration.09 | eCustomConfiguration.09 | Patient Care Report Custom Data Element Grouping ID |
| sElement | dState |  |
| sElement.01 | dState.01 | State Collected Element |
| sElement | eState |  |
| sElement.01 | eState.01 | State Collected Element |
| sConfiguration | dConfiguration |  |
| sConfiguration.01 | dConfiguration.02 | State Certification/Licensure Levels |
| sConfiguration. ‌ProcedureGroup | dConfiguration. ‌ProcedureGroup |  |
| sConfiguration.02 | dConfiguration.06 | EMS Certification Levels Permitted to Perform Each Procedure |
| sConfiguration.03 | dConfiguration.03 | Procedures Permitted by the State |
| sConfiguration. ‌MedicationGroup | dConfiguration. ‌MedicationGroup |  |
| sConfiguration.04 | dConfiguration.08 | EMS Certification Levels Permitted to Administer Each Medication |
| sConfiguration.05 | dConfiguration.04 | Medications Permitted by the State |
| sConfiguration.06 | dConfiguration.05 | Protocols Permitted by the State |
| sAgency | dAgency |  |
| sAgencyGroup | dAgencyGroup |  |
| sAgency.01 | dAgency.01 | EMS Agency Unique State ID |
| sAgency.02 | dAgency.02 | EMS Agency Number |
| sAgency.03 | dAgency.03 | EMS Agency Name |
| sFacility | dFacility |  |
| sFacilityGroup | dFacilityGroup |  |
| sFacility.01 | dFacility.01 | Type of Facility |
| sFacility.FacilityGroup | dFacility.FacilityGroup |  |
| sFacility.02 | dFacility.02 | Facility Name |
| sFacility.03 | dFacility.03 | Facility Location Code |
| sFacility.04 | dFacility.04 | Hospital Designations |
| sFacility.05 | dFacility.05 | Facility National Provider Identifier |
| sFacility.06 | dFacility.06 | Facility Room, Suite, or Apartment |
| sFacility.07 | dFacility.07 | Facility Street Address |
| sFacility.08 | dFacility.08 | Facility City |
| sFacility.09 | dFacility.09 | Facility State |
| sFacility.10 | dFacility.10 | Facility ZIP Code |
| sFacility.11 | dFacility.11 | Facility County |
| sFacility.12 | dFacility.12 | Facility Country |
| sFacility.13 | dFacility.13 | Facility GPS Location |
| sFacility.14 | dFacility.14 | Facility US National Grid Coordinates |
| sFacility.15 | dFacility.15 | Facility Phone Number |

# seCustomConfiguration sdCustomConfiguration

Switch order.

# StateDataSet

Remove @EffectiveDate.

# sState.01 - State

Un-enclose from sState element.

# sElement.01 - State Collected Element

Split instances into dState/dState.01 and eState/eState.01 based the first character of the element value:

* “e”: Copy to eState.01.
* “d”: Copy to dState.01.
* Otherwise: Remove.

# sConfiguration.05 - Medications Permitted by the State

Remove @CodeType. Remove instances where @CodeType is 9924005 (SNOMED) or value is longer than 7 characters.