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## Boot Camp 2021: Utilization of Defined Lists in v3.5

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### Process of Suggested to Defined Lists

- 2016: NEMSIS TAC developed “suggested lists” of codes for elements utilizing standards developed by national organizations.
- Lists were organized in a hierarchical fashion, in two-steps (parent and child codes), promoting software developers to utilize code “drill-downs” for ease of use.
- Use of suggested lists was not mandatory and uptake was sporadic.
- 2019: NEMSIS TAC evaluated the codes included in the suggested lists, by comparing them to codes actually submitted in 2018 through mid-2019 (36 million records) and revised the 2016 suggested lists to reflect the most commonly used codes.




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### Development

- A work-group consisting of the NEMSIS TAC, State EMS Data Managers, and stakeholders participated in the Spring 2020 v3 Implementation meetings to discuss and approve a process to require the use of the 2019 Suggested Lists.
- Of the 22 NEMSIS v3 elements utilizing standardized terminology code sets, nine elements have no associated list but implement defined code patterns to implement lists such as ICD-10-CM, SNOMED-CT, RxNorm, and LOINC\*.
- For the remaining 13 elements, suggested value lists become “defined” (i.e., “Required Use”).

\*See <https://www.nlm.nih.gov/healthit/index.html> for more information on HHS Clinical Terminology Standards.




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### Defined Lists

- Refined the suggested list of values to those most often used.
- Defined lists must be presented to the clinician at the time of patient care documentation.
- Improve the accuracy of documentation by eliminating obscure, redundant and frivolous values.



eScene.09: Incident Location Type			
PARENT	EMS DESCRIPTION	ICD-10	ICD-10 DESCRIPTION
Commercial	Airport	Y92.50	Airport
	Gym	Y92.39	Gymnasium
	Industrial/construction area	Y92.6	Industrial and construction area
	Place of business, NEDS	Y92.5	Trade and service area
	Restaurant/café	Y92.511	Restaurant or café
	Store	Y92.51	Private commercial establishments
	Warehouse	Y92.59	Warehouse

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277  
different  
Cause of  
Injury  
codes  
used for  
fall.

Accidental fall from a ladder, step, or scaffold	W19.01	Fall from a ladder, step, or scaffold	W19.01
Accidental fall from a platform, scaffolding, or structure	W19.02	Fall from a platform, scaffolding, or structure	W19.02
Accidental fall from a roof	W19.03	Fall from a roof	W19.03
Accidental fall from a height	W19.04	Fall from a height	W19.04
Accidental fall from a vehicle	W19.05	Fall from a vehicle	W19.05
Accidental fall from a moving vehicle	W19.06	Fall from a moving vehicle	W19.06
Accidental fall from a train	W19.07	Fall from a train	W19.07
Accidental fall from a trolley	W19.08	Fall from a trolley	W19.08
Accidental fall from a cart	W19.09	Fall from a cart	W19.09
Accidental fall from a truck	W19.10	Fall from a truck	W19.10
Accidental fall from a bus	W19.11	Fall from a bus	W19.11
Accidental fall from a car	W19.12	Fall from a car	W19.12
Accidental fall from a motorcycle	W19.13	Fall from a motorcycle	W19.13
Accidental fall from a bicycle	W19.14	Fall from a bicycle	W19.14
Accidental fall from a horse	W19.15	Fall from a horse	W19.15
Accidental fall from a boat	W19.16	Fall from a boat	W19.16
Accidental fall from a ship	W19.17	Fall from a ship	W19.17
Accidental fall from a plane	W19.18	Fall from a plane	W19.18
Accidental fall from an aircraft	W19.19	Fall from an aircraft	W19.19
Accidental fall from a train engine	W19.20	Fall from a train engine	W19.20
Accidental fall from a locomotive	W19.21	Fall from a locomotive	W19.21
Accidental fall from a trolley car	W19.22	Fall from a trolley car	W19.22
Accidental fall from a streetcar	W19.23	Fall from a streetcar	W19.23
Accidental fall from a tram	W19.24	Fall from a tram	W19.24
Accidental fall from a trolley	W19.25	Fall from a trolley	W19.25
Accidental fall from a streetcar	W19.26	Fall from a streetcar	W19.26
Accidental fall from a tram	W19.27	Fall from a tram	W19.27
Accidental fall from a trolley	W19.28	Fall from a trolley	W19.28
Accidental fall from a streetcar	W19.29	Fall from a streetcar	W19.29
Accidental fall from a tram	W19.30	Fall from a tram	W19.30
Accidental fall from a trolley	W19.31	Fall from a trolley	W19.31
Accidental fall from a streetcar	W19.32	Fall from a streetcar	W19.32
Accidental fall from a tram	W19.33	Fall from a tram	W19.33
Accidental fall from a trolley	W19.34	Fall from a trolley	W19.34
Accidental fall from a streetcar	W19.35	Fall from a streetcar	W19.35
Accidental fall from a tram	W19.36	Fall from a tram	W19.36
Accidental fall from a trolley	W19.37	Fall from a trolley	W19.37
Accidental fall from a streetcar	W19.38	Fall from a streetcar	W19.38
Accidental fall from a tram	W19.39	Fall from a tram	W19.39
Accidental fall from a trolley	W19.40	Fall from a trolley	W19.40
Accidental fall from a streetcar	W19.41	Fall from a streetcar	W19.41
Accidental fall from a tram	W19.42	Fall from a tram	W19.42
Accidental fall from a trolley	W19.43	Fall from a trolley	W19.43
Accidental fall from a streetcar	W19.44	Fall from a streetcar	W19.44
Accidental fall from a tram	W19.45	Fall from a tram	W19.45
Accidental fall from a trolley	W19.46	Fall from a trolley	W19.46
Accidental fall from a streetcar	W19.47	Fall from a streetcar	W19.47
Accidental fall from a tram	W19.48	Fall from a tram	W19.48
Accidental fall from a trolley	W19.49	Fall from a trolley	W19.49
Accidental fall from a streetcar	W19.50	Fall from a streetcar	W19.50
Accidental fall from a tram	W19.51	Fall from a tram	W19.51
Accidental fall from a trolley	W19.52	Fall from a trolley	W19.52
Accidental fall from a streetcar	W19.53	Fall from a streetcar	W19.53
Accidental fall from a tram	W19.54	Fall from a tram	W19.54
Accidental fall from a trolley	W19.55	Fall from a trolley	W19.55
Accidental fall from a streetcar	W19.56	Fall from a streetcar	W19.56
Accidental fall from a tram	W19.57	Fall from a tram	W19.57
Accidental fall from a trolley	W19.58	Fall from a trolley	W19.58
Accidental fall from a streetcar	W19.59	Fall from a streetcar	W19.59
Accidental fall from a tram	W19.60	Fall from a tram	W19.60
Accidental fall from a trolley	W19.61	Fall from a trolley	W19.61
Accidental fall from a streetcar	W19.62	Fall from a streetcar	W19.62
Accidental fall from a tram	W19.63	Fall from a tram	W19.63
Accidental fall from a trolley	W19.64	Fall from a trolley	W19.64
Accidental fall from a streetcar	W19.65	Fall from a streetcar	W19.65
Accidental fall from a tram	W19.66	Fall from a tram	W19.66
Accidental fall from a trolley	W19.67	Fall from a trolley	W19.67
Accidental fall from a streetcar	W19.68	Fall from a streetcar	W19.68
Accidental fall from a tram	W19.69	Fall from a tram	W19.69
Accidental fall from a trolley	W19.70	Fall from a trolley	W19.70
Accidental fall from a streetcar	W19.71	Fall from a streetcar	W19.71
Accidental fall from a tram	W19.72	Fall from a tram	W19.72
Accidental fall from a trolley	W19.73	Fall from a trolley	W19.73
Accidental fall from a streetcar	W19.74	Fall from a streetcar	W19.74
Accidental fall from a tram	W19.75	Fall from a tram	W19.75
Accidental fall from a trolley	W19.76	Fall from a trolley	W19.76
Accidental fall from a streetcar	W19.77	Fall from a streetcar	W19.77
Accidental fall from a tram	W19.78	Fall from a tram	W19.78
Accidental fall from a trolley	W19.79	Fall from a trolley	W19.79
Accidental fall from a streetcar	W19.80	Fall from a streetcar	W19.80
Accidental fall from a tram	W19.81	Fall from a tram	W19.81
Accidental fall from a trolley	W19.82	Fall from a trolley	W19.82
Accidental fall from a streetcar	W19.83	Fall from a streetcar	W19.83
Accidental fall from a tram	W19.84	Fall from a tram	W19.84
Accidental fall from a trolley	W19.85	Fall from a trolley	W19.85
Accidental fall from a streetcar	W19.86	Fall from a streetcar	W19.86
Accidental fall from a tram	W19.87	Fall from a tram	W19.87
Accidental fall from a trolley	W19.88	Fall from a trolley	W19.88
Accidental fall from a streetcar	W19.89	Fall from a streetcar	W19.89
Accidental fall from a tram	W19.90	Fall from a tram	W19.90
Accidental fall from a trolley	W19.91	Fall from a trolley	W19.91
Accidental fall from a streetcar	W19.92	Fall from a streetcar	W19.92
Accidental fall from a tram	W19.93	Fall from a tram	W19.93
Accidental fall from a trolley	W19.94	Fall from a trolley	W19.94
Accidental fall from a streetcar	W19.95	Fall from a streetcar	W19.95
Accidental fall from a tram	W19.96	Fall from a tram	W19.96
Accidental fall from a trolley	W19.97	Fall from a trolley	W19.97
Accidental fall from a streetcar	W19.98	Fall from a streetcar	W19.98
Accidental fall from a tram	W19.99	Fall from a tram	W19.99
Accidental fall from a trolley	W19.00	Fall from a trolley	W19.00

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### Implementation

- These defined lists are expected to be presented to clinicians in the EMS field software's graphical interface.
- Values outside of defined lists are allowed through existing defined code patterns.
- Standard code "roll-ups" are provided by the NEMESIS TAC allowing all reported codes at the National and State-levels to be properly aggregated for performance assessment and research purposes.




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### Flexibility

Lists are designed to include greater than 90% of needed codes to document a patient encounter. Agencies can build upon these lists, if needed.

They are not intended to capture the nuances of localized care from every corner of the nation.

For instance, Colorado will need to reflect ski injuries while California documents more surfing injuries.




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### Hierarchy Structure

This is a sample of the Defined List codes for Primary and Secondary Impression (eSituation.11 and .12).

General classification	More precise description	ICD-10 CODE	ICD-10 DESCRIPTION
Cardiovascular	Angina (pain related to heart)	I20.9	Angina pectoris, unspecified
	Arrhythmia	I49.9	Cardiac arrhythmia, unspecified
	Cardiac arrest	I46.9	Cardiac arrest, cause unspecified
	Chest pain, NOS	R07.9	Chest pain, unspecified (not angina)
	Myocardial Infarction, NOS	I21	Acute myocardial infarction

See complete lists here: <https://nemesis.org/technical-resources/version-3/version-3-resources/>




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### Elements with Defined Lists

**Procedures**

- eProcedures.03 - Procedure
- sConfiguration.03 - Procedures Permitted by the State
- dConfiguration.07 - EMS Agency Procedures

**Medications**

- eMedications.03 - Medications Administered
- sConfiguration.04 - Medications Permitted by the State
- dConfiguration.09 - EMS Agency Medications

**Symptoms**

- eSituation.09 – Primary Symptom
- eSituation.10 - Other Associated Symptoms

**Impressions**

- eSituation.11 - Provider’s Primary Impression
- eSituation.12 - Provider’s Secondary Impressions

**Causes of Injury (eInjury.01)**

**Incident Location Types (eScene.09)**



<https://nemesis.org/technical-resources/version-3/version-3-resources/>

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## State/Optional Elements with Suggested Lists

### History

- eHistory.06 – Medication Allergies
- eHistory.07 – Environmental/Food Allergies
- eHistory.08 – Medical/Surgical History

### Activity

- eSituation.17 – Patient Activity

No Suggested List: eHistory.12 – Current Medications



<https://nemsis.org/technical-resources/version-3/version-3-resources/>

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## Impact to Stakeholders

### EMS Clinicians

- Field software products should have a minimal list with a logical hierarchy to select appropriate values for documenting a patient encounter.

### State/Territory Offices of EMS

- May require training with agencies and field clinicians.
- Not a required addition to the State Schematron.
- No requirement to modify state validity rules to incorporate Defined Lists.
- No impact to the new NEMESIS v3.5.0 standard.**

### EMS Software Vendors

- EMS software vendors will be required to **demonstrate** that their software can present the Defined Lists during v3.5.0 software compliance testing\*.
- EMS software vendors will need to demonstrate their process for an agency or state to add a value that is needed for their particular area.
- NEMESIS will **NOT** dictate how a software user interface will present codes, but will validate the ability of EMS software to implement Defined Lists.

<https://nemsis.org/technical-resources/version-3/v3-compliance/>




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## Field Software Examples




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## Resources

Defined Lists for Required Elements: <https://nemsis.org/technical-resources/version-3/version-3-resources/>

**Informational**


- Suggested to Defined Lists General Overview: [https://nemsis.org/wp-content/uploads/2021/04/NEMSIS-Suggested-to-Defined-Lists-General-Overview\\_04-2021v4.pptx](https://nemsis.org/wp-content/uploads/2021/04/NEMSIS-Suggested-to-Defined-Lists-General-Overview_04-2021v4.pptx)
- Suggested to Defined Lists Info-Sheet: <https://nemsis.org/wp-content/uploads/2021/04/Suggested-lists-4-22-21c.pdf>

**Process**

- Outline of the Process Moving NEMSIS Suggested Lists to Defined Lists: <https://nemsis.org/wp-content/uploads/2020/08/Outline-of-Process-moving-NEMSIS-Suggested-Lists-to-Defined-Lists.pdf>
- Use of Defined Lists for Specific NEMSIS Elements: <https://nemsis.org/wp-content/uploads/2020/08/Use-of-Defined-Lists-for-Specific-NEMSIS-Elements-V2.pdf>

**Technical**

- External Standards Maintenance white paper: Technical aspects of "roll-up" and implementation.




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## Any questions?

Email: [nemsis@hsc.Utah.edu](mailto:nemsis@hsc.Utah.edu)

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