

# NEMESIS V3 Suggested List – eProcedure.03 - Procedure

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## Authors

Karen E. Jacobson – NEMESIS Director

N. Clay Mann – NEMESIS P.I.

Keith R. Davis – NEMESIS Data Architect

## eProcedures.03 - Procedure

The code list associated with eProcedures.03 (Procedure) represents a list of values found in **Systematized Nomenclature of Medicine -- Clinical Terms (SNOMED CT)**. The process for gaining access to the SNOMED CT code values is provided below.

## Suggested List

The suggested code list for eProcedures.03 (Procedure) is represented by SNOMED CT Procedure codes. The term types utilized for the suggested procedures are preferred terms (PT). There are synonyms for each procedure code that can be used to display the procedure “concept”. The specific 193 suggested SNOMED CT codes are listed at the end of this document, beginning on page four.

When the procedure suggested list was developed, the primary goal within SNOMED CT was to utilize “Therapeutic or Preventive Procedure” codes to identify EMS procedures. This was not always possible to accurately represent procedures performed by EMS professionals in the pre-hospital setting. Thus, additional code types within SNOMED CT were utilized. However, for consistency in reporting, it is important that Software Developers expanding the list of EMS procedures rely on the use of “Therapeutic or Preventive Procedure” codes. If it is necessary to utilize other code types, the NEMESIS TAC suggests utilizing the following limited hierarchy to identify a code:

1. Therapeutic or Preventive Procedure
2. Diagnostic Procedure
3. Laboratory Procedure
4. Health Care Activity

If an appropriate code cannot be found in among these code types, the Software Developer should contact the NEMIS TAC, who will work with SNOMED to add an appropriate code to the SNOMED

standard. The suggested SNOMED CT procedure list, available on the NEMSIS download site, provides codes in alphabetical order by description. The list of procedure descriptions is also provided below.

## **Licensed “Suggested Lists”**

The U.S. National Library of Medicine provides access to the SNOMED CT code values through the Unified Medical Language System (UMLS). An applicant must accept the terms of the UMLS Metathesaurus License and create a UMLS Terminology Services (UTS) account for access to UMLS datasets and terminology browsers.

More information can be found at: <http://www.nlm.nih.gov/databases/umls.html>.

The NEMSIS TAC may only distribute suggested lists with specific value codes from the UMLS system to entities licensed through the UMLS system. Thus, each software developer must seek licensing and provide proof of licensing before gaining access to all of the pre-defined suggested lists available through the NEMSIS TAC.

The SNOMED CT Concept Identifier codes are the only codes that can be shared publicly in tandem with the concept names. Similar to the other UMLS datasets, the UMLS experts recommend the use of one primary code (e.g. SNOMED - Concept ID) to identify a specific procedure. SNOMED CT allows for multiple similar descriptions /names for the same UMLS identified primary code (concept) which in turn provides a synonym for use. Together the Concept ID and TTY are used to define and identify a specific code and the corresponding description.

## **Access to “Suggested List” Archive Files**

Access to suggested code lists will be provided on a special section of the NEMSIS TAC’s download site. A licensed user will be able to login to the site and download the appropriate archive file (SNOMED CT, RxNorm, ICD-10, etc).

The UMLS license verification service helps determine if the remote user has a license to use and/or distribute certain code sets. If the user does not have a current license, access to the “suggested lists” archive will be denied.

The “suggested list” files will be zipped archives that are automatically created each time one of the licensed code databases is updated in the NEMSIS master data repository.

## **Viewing and Using the “Suggested List” Archive Files**

The downloaded suggested list appears in a pipe-delimited text format. The proper code to utilize is the code with the name of the element and closest to the value description. Please note that the CUI, AUI, and TTY fields are included for reference purposes. These codes allow one to locate the exact code and description in the UMLS Metathesaurus that was selected for inclusion in the suggested list.

The list provides additional fields indicating when a record became active in the NEMSIS TAC's master data repository as well as the version of the source used for a particular code and description in the suggested list.

## **Conclusions**

By maintaining a single source of these data and making it available internally as well as to our customers, we improve our data quality and consistency. This will reduce reporting errors in data submissions provided it is used as part of our own and our customer's data management best practices.

## Unified Medical language System (UMLS) Term Types (TTY)

This is a partial list of Term Types in Source (TTY) from the National Library of Medicine website. The NEMESIS TAC will be using primarily the designated preferred name (PT) and occasionally the hierarchical term (HT) Term Types in its suggested lists. To view the full list of UMLS abbreviations used in data element please visit the National Library of Medicine website:

[http://www.nlm.nih.gov/research/umls/knowledge\\_sources/metathesaurus/release/abbreviations.html](http://www.nlm.nih.gov/research/umls/knowledge_sources/metathesaurus/release/abbreviations.html) .

TTY (Term Type in Source)		TTY (Term Type in Source)	
DN	Display Name	HT	Hierarchical term
DO	Domain	LT	Lower Level Term
ET	Entry term	PT	Designated preferred name
HC	Hierarchical class	RT	Designated related term
HD	Hierarchical descriptor		

## SNOMED CT Suggested List for eProcedures.03 - Procedure

	Procedure Description	SNOMED CT Code	TTY Code	Explanation of Inclusion (Description: of possible use; Clarification: guidance regarding procedure description and the intended use; or Other SNOMED CT Name [AKA/SY])
1	12 lead ECG	268400002	PT	
2	3 lead electrocardiographic monitoring	428803005	PT	
3	Active compression decompression cardiopulmonary resuscitation with use of inspiratory impedance threshold device	441893003	PT	Descr: CPR with Impedance Threshold Device
4	Active cooling of patient	241741007	PT	
5	Active external cooling of subject	431774007	PT	
6	Active external warming of subject	431949004	PT	
7	Active warming of patient	241740008	PT	
8	Administration of medication using nebulizer mask	445141005	PT	
9	Adult continuous physical assessment	422440002	PT	
10	Adult pain assessment	423184003	PT	
11	Airway clearance by finger sweep	232706008	PT	

	Procedure Description	SNOMED CT Code	TTY Code	Explanation of Inclusion
12	Airway insertion and stabilization	386508008	PT	Clar: This airway is not an invasive airway; it is the initial stabilization of the airway. The specific device should also be documented.
13	Airway patency status	404996007	PT	
14	Airway suction technique	230040009	PT	AKA/SY: Airway suctioning
15	Apical pulse taking	4625008	PT	
16	Application of cervical collar	49689007	PT	
17	Application of chemical hemostatic agents	372045002	PT	
18	Application of cricoid pressure	241726007	PT	AKA/SY: Sellick's maneuver
19	Application of dressing, pressure	26906007	PT	
20	Application of fetal scalp electrode	177108001	PT	
21	Application of gauze swab	427277002	PT	
22	Application of pressure to wound	447686008	PT	
23	Application of pressure trouser	448970001	PT	
24	Application of splint	79321009	PT	
25	Application of tourniquet	20655006	PT	
26	Arterial catheter care	422744007	PT	AKA/SY: Arterial line care
27	Arterial puncture for withdrawal of blood for diagnosis	55841001	PT	
28	Automatic defibrillator procedure	233169004	PT	
29	Bag valve mask ventilation	425447009	PT	
30	Blind nasal intubation	232681006	PT	
31	Blood gas analysis	278297009	PT	
32	Blood pressure taking	46973005	PT	
33	Burn care	133901003	PT	
34	Capillary blood glucose measurement	302789003	PT	
35	Carboxyhemoglobin measurement	19821003	PT	AKA/SY: Carbon monoxide measurement
36	Cardiac monitor surveillance	88140007	PT	
37	Cardiac monitoring	23852006	PT	
38	Cardiac pacing	18590009	PT	

	Procedure Description	SNOMED CT Code	TTY Code	Explanation of Inclusion
39	Cardiopulmonary resuscitation	89666000	PT	
40	Cardiopulmonary resuscitation discontinued - medical control order	425519007	PT	
41	Cardioversion	250980009	PT	
42	Care of central line	226005007	PT	
43	Carotid sinus massage test	448334008	PT	
44	Catheterization of common femoral vein	405442007	PT	
45	Catheterization of external jugular vein	405427009	PT	
46	Catheterization of internal jugular vein	405425001	PT	
47	Catheterization of subclavian vein	405430002	PT	
48	Catheterization of umbilical vein	42550007	PT	
49	Catheterization of vein	392230005	PT	
50	Cervical spine immobilization	398041008	PT	
51	Changing tracheostomy tube	2267008	PT	
52	Chemical restraint	406164000	PT	
53	Chin lift	232665001	PT	
54	Circulatory care: mechanical assist device	386237008	PT	Descr: To document the patient maintenance of or problems with the Ventricular Assist Device (Left or Right)
55	Cleaning wound	225150002	PT	
56	Closed reduction of dislocation	58825001	PT	AKA/SY: Manual reduction of dislocation
57	Colorimetric respired carbon dioxide monitoring	428482009	PT	
58	Compression bandaging	413899004	PT	
59	Continuous positive airway pressure ventilation treatment	47545007	PT	AKA/SY: CPAP treatment; CPAP - Continuous positive airways pressure
60	Control of wound hemorrhage	386220001	PT	
61	Cricothyroidotomy	173067007	PT	
62	Decompression of cardiac tamponade	175180005	PT	
63	Decontamination	409530006	PT	
64	Delivery care	409006000	PT	

	Procedure Description	SNOMED CT Code	TTY Code	Explanation of Inclusion
65	Delivery of placenta following delivery of infant outside of hospital	56620000	PT	
66	Demand pacing	18723003	PT	
67	Direct laryngoscopy	78121007	PT	
68	Dressing of wound	182531007	PT	
69	Dual pressure spontaneous ventilation support	243142003	PT	AKA/SY: BIPAP - Biphasic pressure airway support
70	End tidal carbon dioxide concentration	250784008	PT	AKA/SY: ETCO2 - End tidal carbon dioxide
71	Epidural catheter maintenance	424432007	PT	
72	Escharotomy	70177008	PT	
73	Esophageal bougie	44806002	PT	
74	Expired carbon dioxide tension	250788006	PT	AKA/SY: PECO2 - Expired partial pressure of carbon dioxide
75	External fetal monitor surveillance	36708009	PT	
76	External ventricular defibrillation	426220008	PT	
77	Extraction	62972009	PT	AKA/SY: Manual extraction Descr: Extrication of patient
78	Femoral artery cannula insertion	233516009	PT	
79	Fetal heart monitoring using fetal scalp electrode	408807004	PT	
80	Flexible fiberoptic laryngoscopy	49077009	PT	
81	Glasgow coma testing and evaluation	68664003	PT	
82	Glucose measurement, blood	33747003	PT	AKA/SY: Blood sugar level
83	Glucose measurement, post glucose dose	104690002	PT	
84	Heimlich maneuver	23690002	PT	
85	Hypothermia induction therapy	430189000	PT	
86	Hypothermia risk assessment	372033006	PT	
87	Inadvertent esophageal intubation	398279005	PT	
88	Inadvertent tracheal extubation	405639008	PT	
89	Indirect laryngoscopy	673005	PT	
90	Informing doctor	304562007	PT	AKA/SY: Contacting physician
91	Infusion pump for enteral feeding	433295009	PT	

	Procedure Description	SNOMED CT Code	TTY Code	Explanation of Inclusion
92	Infusion pump for intravenous fluids	433296005	PT	
93	Injection	59108006	PT	
94	Insertion of catheter into artery	392247006	PT	
95	Insertion of catheter into urinary bladder	410024004	PT	
96	Insertion of endocardial electrode for temporary cardiac pacing	233178005	PT	AKA/SY: Transvenous pacing
97	Insertion of esophageal tracheal combitube	429705000	PT	
98	Insertion of esophageal tracheal double lumen supraglottic airway	427753009	PT	
99	Insertion of nasogastric tube	87750000	PT	
100	Insertion of orogastric tube	235425002	PT	
101	Insertion of oropharyngeal airway	7443007	PT	
102	Insertion of pleural tube drain	264957007	PT	AKA/SY: Insertion of chest tube; Insertion of chest drain; Tube thoracostomy
103	Intermittent positive pressure breathing treatment with nebulized medication	19861002	PT	
104	Intraaortic balloon pump maintenance	34475007	PT	
105	Intraosseous cannulation	430824005	PT	
106	Intubation using medication	429734006	PT	
107	Irrigation	67889009	PT	
108	Irrigation of eye	49999004	PT	
109	Irrigation of wound	225116006	PT	
110	Isolation procedure	40174006	PT	
111	IV/irrigation monitoring	353008	PT	
112	Jaw thrust	232666000	PT	
113	Laryngeal mask airway insertion	424979004	PT	AKA/SY: LMA - Laryngeal mask airway insertion
114	Log roll	398213004	PT	
115	Lung inflation by intermittent compression of reservoir bag	243140006	PT	AKA/SY: Hand Bagging
116	Maintenance of cervical collar	79821001	PT	
117	Maintenance of thoracic drain	55628002	PT	AKA/SY: Maintenance of chest tube
118	Manual and mechanical traction	59900003	PT	



	<b>Procedure Description</b>	<b>SNOMED CT Code</b>	<b>TTY Code</b>	<b>Explanation of Inclusion</b>
119	Manual establishment of airway	232664002	PT	
120	Manual inline stabilization of cervical spine	449199004	PT	
121	Mechanically assisted chest compression	429283006	PT	
122	Monitoring of patient	182777000	PT	
123	Moving a patient	56469005	PT	
124	Moving a patient to a stretcher	58715004	PT	
125	Nasal intubation awake	232680007	PT	
126	Nasogastric tube maintenance	52260009	PT	
127	Nasopharyngeal airway insertion	182692007	PT	
128	Nasotracheal fiberoptic intubation	232682004	PT	
129	Nasotracheal intubation	232679009	PT	
130	Nebulizer therapy	56251003	PT	
131	Normal delivery procedure	177184002	PT	
132	Obstructed labor	199746004	PT	
133	Obtaining airway by head extension	445392009	PT	
134	Obturator airway insertion	232673005	PT	
135	Open cricothyroidotomy	232692007	PT	
136	Oral intubation awake	232675003	PT	
137	Orotracheal fiberoptic intubation	232678001	PT	
138	Orotracheal intubation	232674004	PT	
139	Pain assessment	225399009	PT	
140	Patient on intra-aortic balloon pump assist	371818002	PT	
141	Pedal pulse taking	91161007	PT	
142	Pediatric continuous physical assessment	423850004	PT	
143	Pediatric pain assessment	423401003	PT	
144	Pelvic sling	182556001	PT	
145	Percutaneous cricothyroidotomy	232689008	PT	
146	Pericardiocentesis	309849004	PT	
147	Peripheral pulse taking	424411004	PT	

	Procedure Description	SNOMED CT Code	TTY Code	Explanation of Inclusion
148	Peripheral venous cannula insertion - scalp	233526002	PT	
149	Phlebotomy	396540005	PT	ADA/SY: Blood Draw; Venous blood draw
150	Physical restraint	386423001	PT	
151	Physician notified	418473002	PT	
152	Pneumatic splinting	274475000	PT	
153	Pneumothorax relief	281582006	PT	
154	Positive end expiratory pressure increased	243161004	PT	AKA/SY: PEEP increased - Positive end expiratory pressure increased
155	Positive end expiratory pressure reduced	243164007	PT	AKA/SY: PEEP reduced - Positive end expiratory pressure reduced
156	Positive end expiratory pressure ventilation therapy, initiation and management	45851008	PT	
157	Positive end-expiratory pressure monitoring	398292008	PT	
158	Precordial thump	225708008	PT	
159	Pulmonary catheterization with Swan-Ganz catheter	65677008	PT	
160	Pulse oximetry	252465000	PT	
161	Pulse taking	65653002	PT	
162	Radial pulse taking	72027000	PT	
163	Rapid infusion device	405677002	PT	Descr: Pressure Bag around IV
164	Rapid sequence induction	241689008	PT	
165	Removal of airway	232711005	PT	
166	Removal of catheter	103715008	PT	
167	Removal of endotracheal tube	271280005	PT	AKA/SY: Endotracheal extubation by the EMS professional
168	Removal of foreign body from airway	232707004	PT	
169	Removal of peripheral intravenous catheter	424287005	PT	

	Procedure Description	SNOMED CT Code	TTY Code	Explanation of Inclusion
170	Rescue vehicle	83887000	PT	Clarification: Rescue vehicle should only be used for v2.2.1 to v3.x mapping purposes. This description does not represent rescue efforts made by the responders to remove the patient from the environment.
171	Respired carbon dioxide monitoring	284029005	PT	
172	Revision of automatic implantable cardioverter/defibrillator	34955007	PT	
173	Soft foam cervical collar	408014001	PT	
174	Stabilization of spine	426498007	PT	
175	Taking orthostatic vital signs	425058005	PT	
176	Taking patient vital signs	61746007	PT	
177	Taking respiratory rate	408867002	PT	
178	Temperature taking	56342008	PT	
179	Temporary transcutaneous pacing	59218006	PT	
180	Tension pneumothorax relief	182705007	PT	
181	Thoracentesis	91602002	PT	
182	Tracheal intubation through a laryngeal mask airway	418613003	PT	
183	Tube care: endotracheal	409088002	PT	AKA/SY: Maintenance of endotracheal tube
184	Umbilical artery cannula insertion	233519002	PT	
185	Unintended endobronchial intubation	398024006	PT	
186	Vagal stimulation	128968000	PT	
187	Vaginal delivery, medical personnel present	22633006	PT	Clarification: This indicates that EMS personnel did not assist in the delivery of the infant, only observed.
188	Venous catheter care	385757000	PT	
189	Ventilator care and adjustment	385857005	PT	
190	Ventilator care assessment	410208007	PT	
191	Ventilator care management	410210009	PT	
192	Videolaryngoscope	448907002	PT	
193	Wound care	225358003	PT	