National EMS Quality Alliance

Pseudocode for 2019-2020 NEMSIS Implementation

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NEMSIS Pseudocode: Hypoglycemia-01: Treatment Administered for Hypoglycemia

Measure Score Interpretation: For this measure, a higher score indicates better quality

Measure Components	
Numerator Pseudocode	eMedications.03 Medication Given is in (4832 ("Glucagon"), 4850 ("Glucose"), 377980 (Glucose Oral Gel), 376937 (Glucose Injectable Solution), 372326 (Glucose Chewable Tablet), 237653 ("Glucose 500 MG/ML Injectable Solution"), 260258 ("Glucose 250 MG/ML Injectable Solution"), 309778 ("Glucose 50 MG/ML Injectable Solution"), 1795610 ("250 ML Glucose 50 MG/ML Injection"), 1795477 ("500 ML Glucose 100 MG ML Injection"), 1794567 ("Glucose Injection") 1165823 ("Glucose Oral Product") 1165822 ("Glucose Oral Liquid Product") 1165819 ("Glucose Injectable Product")) or eProcedures.03 Procedure is in (710925007 ("Provision of food"), 225285007 ("Giving oral fluid"))

Denominator Pseudocode	((
	    eSituation.11 Provider's Primary Impression
	    matches/^E16.2/("Hypoglycemia, unspecified")
	
	or eSituation.12 Provider's Secondary Impressions
	    matches/^E16.2/("Hypoglycemia, unspecified")
	)
	and (eVitals.23 Total Glasgow Coma Score is < 15
	
	or eVitals.26 Level of responsiveness (AVPU) is in
	    (
	    3326003 ("Verbal")
	    3326005 ("Painful")
	    3326007 ("Unresponsive")
	    )
	))
	
	or
	((

	eSituation.11 Provider's Primary Impression matches/^R41.82/("Altered Mental Status, unspecified")
	or eSituation.12 Provider's Secondary Impressions matches/^ R41.82/("Altered Mental Status, unspecified"))
	and eVitals.18 Blood Glucose Level is less than 60)
	and eResponse.05 Type of Service Requested is 2205001 ("911 Response (Scene)")
Denominator Exclusion Pseudocode	((ePatient.15 Age is less than 24 and ePatient.16 Age in Units is 2516003 ("Hours")) or (ePatient.15 Age is less than or equal to 120 and ePatient.16 Age Units is 2516005 ("Minutes")))

NEMSIS Pseudocode: Pediatrics-01: Pediatric Respiratory Assessment

Measure Score Interpretation: For this measure, a higher score indicates better quality

Measure Components		
Numerator Pseudocode		eVitals.12 Pulse Oximetry is not null
	and	eVitals.14 Respiratory Rate is not null
Denominator Pseudocode	(	
	(	
		ePatient.15 Age is less than 18
	and	ePatient.16 Age Units is 2516009 ("Years")
	)	
	or	
	(	
		ePatient.15 Age is not null
	and	ePatient.16 Age Units is in (
		2516001 ("Days"),
		2516003 ("Hours"),
		2516005 ("Minutes"),
		2516007 ("Months")
		)
	)	
	)	
	and	
	(	
		eSituation.11 Provider's Primary Impression matches /^I50.9|J00|J05|J18.9|J20.9|J44.1|J45.901|J80|J81|J93.9|J96|J98.01|R05R06|R09.2| T17.9/
		("Heart failure, unspecified,"
		"Acute nasopharyngitis….,"
		"Acute obstructive laryngitis and epiglottitis…,"
		"Pneumonia, unspecified organism,"
		"Acute bronchitis, unspecified,"
		"Chronic obstructive pulmonary disease with (acute) exacerbation,"
		"Unspecified asthma with (acute) exacerbation,"
		"Acute respiratory distress syndrome,"
		"Pulmonary edema…,"
		"Pneumothorax, unspecified,"
		"Respiratory failure, unspecified,"
		"Acute bronchospasm,"
		"Respiratory disorder, unspecified,"
		"Cough,"
		"Abnormalities of breathing,"
		"Respiratory arrest," or
		"Foreign body in respiratory tract, part unspecified")

	or eSituation.12 Provider's Secondary Impressions matches /^I50.9|J00|J05|J18.9|J20.9|J44.1|J45.901|J80|J81|J93.9|J96|J98.01|R05 R06|R09.2| T17.9/ ("Heart failure, unspecified," "Acute nasopharyngitis….," "Acute obstructive laryngitis and epiglottitis…," "Pneumonia, unspecified organism," "Acute bronchitis, unspecified," "Chronic obstructive pulmonary disease with (acute) exacerbation," "Unspecified asthma with (acute) exacerbation," "Acute respiratory distress syndrome," "Pulmonary edema…," "Pneumothorax, unspecified," "Respiratory failure, unspecified," "Acute bronchospasm," "Respiratory disorder, unspecified," "Cough," "Abnormalities of breathing," "Respiratory arrest," or "Foreign body in respiratory tract, part unspecified")) **and** eResponse.05 Type of Service Requested is 2205001 ("911 Response (Scene)")

NEMSIS Pseudocode: Pediatrics-02: Administration of Beta Agonist for Pediatric Asthma

Measure Score Interpretation: For this measure, a higher score indicates better quality

Measure Components	

Numerator Pseudocode	eMedication.03 Medication Given is in
	(
	      435 ("Albuterol"),
	      7688 ("metaproterenol"),
	      214199 ("Albuterol/Ipratropium"),
	      237159 ("Levalbuterol"),
	      487066 ("levalbuterol tartrate"),
	      1154062 ("Albuterol Inhalant Product"),
	      1163444 ("Levalbuterol Inhalant Product"),
	      1649559 ("Albuterol Dry Powder Inhaler"),
	      1165719 ("metaproterenol Inhalant Product"),
	      2108209 ("Levalbuterol Inhalation Solution"),
	      2108252 ("metaproterenol Inhalation Solution")
	
	)

Denominator Pseudocode	(
	    (
	        ePatient.15 Age is greater than or equal to 2
	   and ePatient.15 Age is less than or equal to 18
	   and ePatient.16 Age Units is 2516009 ("Years")
	
	    )
	
	   or
	    (
	        ePatient.15 Age is greater than or equal to 24
	   and ePatient.16 Age Units is 2516007 ("Months")
	    )
	)
	and
	    (
	        eSituation.11 Provider's Primary Impression matches /^(J45)|(J98.01$)/ ("Asthma…" or "Acute Bronchospasm")
	   or eSituation.12 Provider's Secondary Impressions matches /^(J45)|(J98.01$)/ ("Asthma…" or "Acute Bronchospasm")
	    )
	
	   and eResponse.05 Type of Service Requested is 2205001 ("911 Response (Scene)")

NEMSIS Pseudocode: Seizure-02: Patient Received Intervention for Status Epilepticus

Measure Score Interpretation: For this measure, a higher score indicates better quality

Measure Components	
Numerator Pseudocode	Patients receiving EMS intervention (e.g. benzodiazepine) aimed at terminating their status seizure: eMedications.03 Medication Given is in (3322 ("Diazepam"), 6960 ("Midazolam"), 203128 ("Midazolam Hydrochloride"), 6470 ("Lorazepam"))
Denominator Pseudocode	(eSituation.11 Provider's Primary Impression matches /^G40…[1,3]/ ("Epilepsy,…, with status epilepticus") or eSituation.12 Provider's Secondary Impressions matches /^G40…[1,3]/ ("Epilepsy,…, with status epilepticus")) and eResponse.05 Type of Service Requested is 2205001 ("911 Response (Scene)")

NEMSIS Pseudocode: Stroke-01: Suspected Stroke Patient Receiving Prehospital Stroke Assessment

Measure Score Interpretation: For this measure, a higher score indicates better quality

Measure Components		
Numerator Pseudocode	or	eVitals.29 Stroke Scale Score is not null
		eVitals.30 Stroke Scale Type is not null
Denominator Pseudocode	(	
		eSituation.11 Provider's Primary Impression matches /^(I60)|(I61)|(I63)|(G45)|(G46)/ ("Nontraumatic subarachnoid hemorrhage…," "Nontraumatic intracerebral hemorrhage…," "Cerebral infarction…" "Transient cerebral ischemic attacks…," or "Vascular syndromes of brain in cerebrovascular diseases…")
	or	eSituation.12 Provider's Secondary Impressions matches /^(I60)|(I61)|(I63)|(G45)|(G46)/ ("Nontraumatic subarachnoid hemorrhage…," "Nontraumatic intracerebral hemorrhage…," "Cerebral infarction…" "Transient cerebral ischemic attacks…," or "Vascular syndromes of brain in cerebrovascular diseases…")
	)	
	and	eResponse.05 Type of Service Requested is 2205001 ("911 Response (Scene)")
Denominator Exclusion Pseudocode	or	eVitals.23 Total Glasgow Coma Score is less than or equal to 9
		eVitals.26 Level of responsiveness (AVPU) is 3326007 ("Unresponsive")

NEMSIS Pseudocode: Trauma-01: Injured Patients Assessed for Pain

Measure Score Interpretation: For this measure, a higher score indicates better quality.

Measure Components	
Numerator Pseudocode	eVitals.27 Pain Scale Score is not null

Denominator Pseudocode	eSituation.02 Possible Injury is 9922005 ("Yes")
	and
	(
	    eVitals.23 Total Glasgow Coma Score is equal to 15
	or eVitals.26 Level of responsiveness (AVPU) is 3326001 ("Alert")
	)
	and
	
	(
	    eResponse.05 Type of Service Requested is 2205001 ("911 Response (Scene)")
	and eDisposition.12 Incident/Patient Disposition is 4212033 ("Patient Treated, Transported by this EMS Unit")
	)

NEMSIS Pseudocode: Trauma-03: Effectiveness of Pain Management for Injured Patients

Measure Score Interpretation: For this measure, a higher score indicates better quality.

Measure Components	
Numerator Pseudocode	last (eVitals.27 Pain Scale Score where e.Vitals.01 Date/Time Vital Signs Taken is not null sorted by eVitals.01 Date/Time Vital Signs Taken) is less than first (eVitals.27 Pain Scale Score where e.Vitals.01 Date/Time Vital Signs Taken is not null sorted by eVitals.01 Date/Time Vital Signs Taken)

Denominator Pseudocode	(
	    eSituation.02 Possible Injury is 9922005 ("Yes")
	and first (eVitals.27 Pain Scale Score where e.Vitals.01 Date/Time Vital Signs Taken is not null sorted by eVitals.01 Date/Time Vital Signs Taken) is greater than 0
	
	)
	
	and
	
	(
	    eResponse.05 Type of Service Requested is 2205001 ("911 Response (Scene)")
	and eDisposition.12 Incident/Patient Disposition is 4212033 ("Patient Treated, Transported by this EMS Unit")
	)

NEMSIS Pseudocode: Safety-01: Use of Lights and Sirens During Response to Scene

Measure Score Interpretation: For this measure, a higher score indicates better quality

Measure Components	
Numerator Pseudocode	eResponse.24 Additional Response Mode Descriptors is 2224019 ("No Lights or Sirens"),
Denominator Pseudocode	eResponse.05 Type of Service Requested is 2205001 ("911 Response (Scene)")

NEMSIS Pseudocode: Safety-02: Use of Lights and Sirens During Transport

Measure Score Interpretation: For this measure, a higher score indicates better quality

Measure Components		
Numerator Pseudocode		Disposition.18 Additional Transport Mode Descriptors is 4218015 ("No Lights or Sirens)
Denominator Pseudocode		eResponse.05 Type of Service Requested is 2205001 ("911 Response (Scene)")
	and	eDisposition.12 Incident/Patient Disposition is 4212033 ("Patient Treated, Transported by this EMS Unit")