

## Disclaimer

The FDA chose a specific outcome algorithm that met its need for a given medical product-outcome assessment. The use of a specific outcome algorithm in a Sentinel assessment should not be interpreted as an endorsement from FDA to use the algorithm for all safety assessments. Investigators should always consider the objective, study design, analytic approach, and data source of a given medical product safety assessment when choosing the outcome algorithm. The suitability of an outcome algorithm may change when applied to different scenarios. For additional information, please refer to the

[Best Practices for Conducting and Reporting Pharmacoepidemiologic Safety Studies Using Electronic Healthcare Data](#)

guidance document provided by the FDA.

## Overview

<b>Title</b>	Severe COVID-19 Algorithm Defined in "COVID-19 Hospitalization and Severe COVID-19 Infection Following Proton Pump Inhibitor (PPI) Use in Patients with Gastroesophageal Reflux Disease (GERD): An Inverse Probability of Treatment Weighting Analysis"
<b>Request ID</b>	cder_mpl2r_wp018
<b>Description</b>	<p>This report lists lists International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnosis codes, International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Second Edition (CPT-2) codes, Current Procedural Terminology, Third Edition (CPT-3) codes, Current Procedural Terminology, Fourth Edition (CPT-4) codes, Healthcare Common Procedure Coding System (HCPCS) codes, Revenue (RE) codes, and algorithms used to define severe COVID-19 in this request.</p> <p>For additional information about the algorithm and how it was defined relative to the cohort and exposure(s) of interest in the analysis, refer to the analysis webpage here:  <a href="https://www.sentinelinitiative.org/studies/drugs/individual-drug-analyses/covid-19-hospitalization-and-severe-covid-19-infection-0">https://www.sentinelinitiative.org/studies/drugs/individual-drug-analyses/covid-19-hospitalization-and-severe-covid-19-infection-0</a></p>
<b>Outcome</b>	Severe COVID-19
<b>Algorithm to Define Outcome</b>	The severe COVID-19 outcome is defined as a COVID-19 diagnosis in the inpatient care setting in any diagnosis position (see Code List 1) AND the presence of a mechanical ventilation diagnosis or procedure code (see Code List 2) OR a procedure code indicating an ICU admission during an inpatient hospitalization for COVID-19 (see Code List 3) OR an inpatient encounter with a discharge disposition as "EXPIRED" (i.e., mortality) in the Encounter Table. All codes had to be in the inpatient care setting and occur during the same inpatient encounter.
<b>Query Period</b>	April 1, 2020 - October 1, 2020
<b>Request Send Date</b>	June 1, 2023

## Glossary

**Care Setting** - type of medical encounter or facility where the exposure, event, or condition code was recorded. Possible care settings include: Inpatient Hospital Stay (IP), Non-Acute Institutional Stay (IS), Emergency Department (ED), Ambulatory Visit (AV), and Other Ambulatory Visit (OA). For laboratory results, possible care settings include: Emergency department (E), Home (H), Inpatient (I), Outpatient (O), or Unknown or missing (U)

**Outcome** - outcome of interest (either primary or secondary)

**Principal Diagnosis (PDX)** - diagnosis or condition established to be chiefly responsible for admission of the patient to the hospital. 'P' = principal diagnosis, 'S' = secondary diagnosis, 'X' = unspecified diagnosis, '.' = blank. Along with the Care Setting values, forms the Caresetting/PDX parameter.

**Query Period** - period in which the modular program looks for exposures and outcomes of interest

**Request Send Date** - date the request was sent to Sentinel Data Partners

**Code List 1. List of International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Diagnosis Codes Used to Define COVID-19 Diagnosis in this Request**

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<b>Code</b>	<b>Description</b>	<b>Care Setting</b>	<b>Principal Diagnosis</b>	<b>Code Category</b>	<b>Code Type</b>
U07.1	COVID-19	IP	Any	Diagnosis	ICD-10-CM

**Code List 2. List of Current Procedural Terminology, Second Edition (CPT-2) Codes, Current Procedural Terminology, Fourth Edition (CPT-4) Codes, Healthcare Common Procedure Coding System (HCPCS) Codes, International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Diagnosis Codes Used to Define Mechanical Ventilation in this Request**

<b>Code</b>	<b>Description</b>	<b>Care Setting</b>	<b>Principal Diagnosis</b>	<b>Code Category</b>	<b>Code Type</b>
31500	Intubation, endotracheal, emergency procedure	IP	Any	Procedure	CPT-4
31719	Transtracheal (percutaneous) Introduction Of Indwelling Tube For Therapy (eg, Tickle Tube, Catheter For Oxygen Administration)	IP	Any	Procedure	CPT-4
31730	Transtracheal (percutaneous) introduction of needle wire dilator/stent or indwelling tube for oxygen therapy	IP	Any	Procedure	CPT-4
33946	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; initiation, veno-venous	IP	Any	Procedure	CPT-4
33947	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; initiation, veno-arterial	IP	Any	Procedure	CPT-4
33948	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; daily management, each day, veno-venous	IP	Any	Procedure	CPT-4
33949	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; daily management, each day, veno-arterial	IP	Any	Procedure	CPT-4
33952	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; insertion of peripheral (arterial and/or venous) cannula(e), percutaneous, 6 years and older (includes fluoroscopic guidance, when performed)	IP	Any	Procedure	CPT-4
33954	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; insertion of peripheral (arterial and/or venous) cannula(e), open, 6 years and older	IP	Any	Procedure	CPT-4
33956	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; insertion of central cannula(e) by sternotomy or thoracotomy, 6 years and older	IP	Any	Procedure	CPT-4

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<b>Code</b>	<b>Description</b>	<b>Care Setting</b>	<b>Principal Diagnosis</b>	<b>Code Category</b>	<b>Code Type</b>
33958	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; reposition peripheral (arterial and/or venous) cannula(e), percutaneous, 6 years and older (includes fluoroscopic guidance, when performed)	IP	Any	Procedure	CPT-4
33962	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; reposition peripheral (arterial and/or venous) cannula(e), open, 6 years and older (includes fluoroscopic guidance, when performed)	IP	Any	Procedure	CPT-4
33964	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; reposition central cannula(e) by sternotomy or thoracotomy, 6 years and older (includes fluoroscopic guidance, when performed)	IP	Any	Procedure	CPT-4
33966	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; removal of peripheral (arterial and/or venous) cannula(e), percutaneous, 6 years and older	IP	Any	Procedure	CPT-4
33984	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; removal of peripheral (arterial and/or venous) cannula(e), open, 6 years and older	IP	Any	Procedure	CPT-4
33986	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; removal of central cannula(e) by sternotomy or thoracotomy, 6 years and older	IP	Any	Procedure	CPT-4
33987	Arterial exposure with creation of graft conduit (eg, chimney graft) to facilitate arterial perfusion for ECMO/ECLS (List separately in addition to code for primary procedure)	IP	Any	Procedure	CPT-4

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Code	Description	Care Setting	Principal Diagnosis	Code Category	Code Type
33988	Insertion of left heart vent by thoracic incision (eg, sternotomy, thoracotomy) for ECMO/ECLS	IP	Any	Procedure	CPT-4
33989	Removal of left heart vent by thoracic incision (eg, sternotomy, thoracotomy) for ECMO/ECLS	IP	Any	Procedure	CPT-4
4168F	Patient receiving care in the intensive care unit (ICU) and receiving mechanical ventilation, 24 hours or less (CRIT)	IP	Any	Procedure	CPT-2
94002	Ventilation assist and management, initiation of pressure or volume preset ventilators for assisted or controlled breathing; hospital inpatient/observation, initial day	IP	Any	Procedure	CPT-4
94003	Ventilation assist and management, initiation of pressure or volume preset ventilators for assisted or controlled breathing; hospital inpatient/observation, each subsequent day	IP	Any	Procedure	CPT-4
94004	Ventilation assist and management, initiation of pressure or volume preset ventilators for assisted or controlled breathing; nursing facility, per day	IP	Any	Procedure	CPT-4
94656	Ventilation assist and management, initiation of pressure or volume preset ventilators for assisted or controlled breathing; first day	IP	Any	Procedure	CPT-4
94657	Ventilation assist and management, initiation of pressure or volume preset ventilators for assisted or controlled breathing; subsequent days	IP	Any	Procedure	CPT-4
A0396	ALS specialized service disposable supplies; esophageal intubation	IP	Any	Procedure	HCPCS
A4483	Moisture exchanger, disposable, for use with invasive mechanical ventilation	IP	Any	Procedure	HCPCS
A4608	Transtracheal oxygen catheter, each	IP	Any	Procedure	HCPCS
A4623	Tracheostomy, inner cannula	IP	Any	Procedure	HCPCS
A4624	Tracheal suction catheter, any type other than closed system, each	IP	Any	Procedure	HCPCS
0BH13EZ	Insertion of Endotracheal Airway into Trachea, Percutaneous Approach	IP	Any	Procedure	ICD-10-PCS
0BH17EZ	Insertion of Endotracheal Airway into Trachea, Via Natural or Artificial Opening	IP	Any	Procedure	ICD-10-PCS
0BH18EZ	Insertion of Endotracheal Airway into Trachea, Via Natural or Artificial Opening Endoscopic	IP	Any	Procedure	ICD-10-PCS

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<b>Code</b>	<b>Description</b>	<b>Care Setting</b>	<b>Principal Diagnosis</b>	<b>Code Category</b>	<b>Code Type</b>
0CHY7BZ	Insertion of Airway into Mouth and Throat, Via Natural or Artificial Opening	IP	Any	Procedure	ICD-10-PCS
0CHY8BZ	Insertion of Airway into Mouth and Throat, Via Natural or Artificial Opening Endoscopic	IP	Any	Procedure	ICD-10-PCS
0DH57BZ	Insertion of Airway into Esophagus, Via Natural or Artificial Opening	IP	Any	Procedure	ICD-10-PCS
0DH58BZ	Insertion of Airway into Esophagus, Via Natural or Artificial Opening Endoscopic	IP	Any	Procedure	ICD-10-PCS
0DL57DZ	Occlusion of Esophagus with Intraluminal Device, Via Natural or Artificial Opening	IP	Any	Procedure	ICD-10-PCS
0DL58DZ	Occlusion of Esophagus with Intraluminal Device, Via Natural or Artificial Opening Endoscopic	IP	Any	Procedure	ICD-10-PCS
0WHQ73Z	Insertion of Infusion Device into Respiratory Tract, Via Natural or Artificial Opening	IP	Any	Procedure	ICD-10-PCS
0WHQ7YZ	Insertion of Other Device into Respiratory Tract, Via Natural or Artificial Opening	IP	Any	Procedure	ICD-10-PCS
5A09	Assistance / Respiratory	IP	Any	Procedure	ICD-10-PCS
5A0920Z	Assistance with Respiratory Filtration, Continuous	IP	Any	Procedure	ICD-10-PCS
5A09357	Assistance with Respiratory Ventilation, Less than 24 Consecutive Hours, Continuous Positive Airway Pressure	IP	Any	Procedure	ICD-10-PCS
5A09358	Assistance with Respiratory Ventilation, Less than 24 Consecutive Hours, Intermittent Positive Airway Pressure	IP	Any	Procedure	ICD-10-PCS
5A09359	Assistance with Respiratory Ventilation, Less than 24 Consecutive Hours, Continuous Negative Airway Pressure	IP	Any	Procedure	ICD-10-PCS
5A0935A	Assistance with Respiratory Ventilation, Less than 24 Consecutive Hours, High Nasal Flow/Velocity	IP	Any	Procedure	ICD-10-PCS
5A0935B	Assistance with Respiratory Ventilation, Less than 24 Consecutive Hours, Intermittent Negative Airway Pressure	IP	Any	Procedure	ICD-10-PCS
5A0935Z	Assistance with Respiratory Ventilation, Less than 24 Consecutive Hours	IP	Any	Procedure	ICD-10-PCS
5A09457	Assistance with Respiratory Ventilation, 24-96 Consecutive Hours, Continuous Positive Airway Pressure	IP	Any	Procedure	ICD-10-PCS

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<b>Code</b>	<b>Description</b>	<b>Care Setting</b>	<b>Principal Diagnosis</b>	<b>Code Category</b>	<b>Code Type</b>
5A09458	Assistance with Respiratory Ventilation, 24-96 Consecutive Hours, Intermittent Positive Airway Pressure	IP	Any	Procedure	ICD-10-PCS
5A09459	Assistance with Respiratory Ventilation, 24-96 Consecutive Hours, Continuous Negative Airway Pressure	IP	Any	Procedure	ICD-10-PCS
5A0945A	Assistance with Respiratory Ventilation, 24-96 Consecutive Hours, High Nasal Flow/Velocity	IP	Any	Procedure	ICD-10-PCS
5A0945B	Assistance with Respiratory Ventilation, 24-96 Consecutive Hours, Intermittent Negative Airway Pressure	IP	Any	Procedure	ICD-10-PCS
5A0945Z	Assistance with Respiratory Ventilation, 24-96 Consecutive Hours	IP	Any	Procedure	ICD-10-PCS
5A09557	Assistance with Respiratory Ventilation, Greater than 96 Consecutive Hours, Continuous Positive Airway Pressure	IP	Any	Procedure	ICD-10-PCS
5A09558	Assistance with Respiratory Ventilation, Greater than 96 Consecutive Hours, Intermittent Positive Airway Pressure	IP	Any	Procedure	ICD-10-PCS
5A09559	Assistance with Respiratory Ventilation, Greater than 96 Consecutive Hours, Continuous Negative Airway Pressure	IP	Any	Procedure	ICD-10-PCS
5A0955A	Assistance with Respiratory Ventilation, Greater than 96 Consecutive Hours, High Nasal Flow/Velocity	IP	Any	Procedure	ICD-10-PCS
5A0955B	Assistance with Respiratory Ventilation, Greater than 96 Consecutive Hours, Intermittent Negative Airway Pressure	IP	Any	Procedure	ICD-10-PCS
5A0955Z	Assistance with Respiratory Ventilation, Greater than 96 Consecutive Hours	IP	Any	Procedure	ICD-10-PCS
5A1935Z	Respiratory Ventilation, Less than 24 Consecutive Hours	IP	Any	Procedure	ICD-10-PCS
5A1945Z	Respiratory Ventilation, 24-96 Consecutive Hours	IP	Any	Procedure	ICD-10-PCS
5A1955Z	Respiratory Ventilation, Greater than 96 Consecutive Hours	IP	Any	Procedure	ICD-10-PCS
Z99.1	Dependence on respirator	IP	Any	Diagnosis	ICD-10-CM
Z99.11	Dependence on respirator [ventilator] status	IP	Any	Diagnosis	ICD-10-CM

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<b>Code</b>	<b>Description</b>	<b>Care Setting</b>	<b>Principal Diagnosis</b>	<b>Code Category</b>	<b>Code Type</b>
Z99.12	Encounter for respirator [ventilator] dependence during power failure	IP	Any	Diagnosis	ICD-10-CM

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<b>Code</b>	<b>Description</b>	<b>Care Setting</b>	<b>Principal Diagnosis</b>	<b>Code Category</b>	<b>Code Type</b>
0188T	Remote real-time interactive video-conferenced critical care, evaluation and management of the critically ill or critically injured patient; first 30-74 minutes	IP	Any	Procedure	CPT-3
0189T	Remote real-time interactive video-conferenced critical care, evaluation and management of the critically ill or critically injured patient; each additional 30 minutes (List separately in addition to code for primary service)	IP	Any	Procedure	CPT-3
0581F	Patient transferred directly from anesthetizing location to critical care unit (Peri2)	IP	Any	Procedure	CPT-2
0582F	Patient not transferred directly from anesthetizing location to critical care unit (Peri2)	IP	Any	Procedure	CPT-2
31500	Intubation, endotracheal, emergency procedure	IP	Any	Procedure	CPT-4
33946	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; initiation, veno-venous	IP	Any	Procedure	CPT-4
33947	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; initiation, veno-arterial	IP	Any	Procedure	CPT-4
33948	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; daily management, each day, veno-venous	IP	Any	Procedure	CPT-4
33949	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; daily management, each day, veno-arterial	IP	Any	Procedure	CPT-4
33952	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; insertion of peripheral (arterial and/or venous) cannula(e), percutaneous, 6 years and older (includes fluoroscopic guidance, when performed)	IP	Any	Procedure	CPT-4

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<b>Code</b>	<b>Description</b>	<b>Care Setting</b>	<b>Principal Diagnosis</b>	<b>Code Category</b>	<b>Code Type</b>
33954	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; insertion of peripheral (arterial and/or venous) cannula(e), open, 6 years and older	IP	Any	Procedure	CPT-4
33956	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; insertion of central cannula(e) by sternotomy or thoracotomy, 6 years and older	IP	Any	Procedure	CPT-4
33958	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; reposition peripheral (arterial and/or venous) cannula(e), percutaneous, 6 years and older (includes fluoroscopic guidance, when performed)	IP	Any	Procedure	CPT-4
33960	Prolonged extracorporeal circulation for cardiopulmonary insufficiency; initial day	IP	Any	Procedure	CPT-4
33961	Prolonged extracorporeal circulation for cardiopulmonary insufficiency; each subsequent day	IP	Any	Procedure	CPT-4
33962	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; reposition peripheral (arterial and/or venous) cannula(e), open, 6 years and older (includes fluoroscopic guidance, when performed)	IP	Any	Procedure	CPT-4
33964	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; reposition central cannula(e) by sternotomy or thoracotomy, 6 years and older (includes fluoroscopic guidance, when performed)	IP	Any	Procedure	CPT-4
33966	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; removal of peripheral (arterial and/or venous) cannula(e), percutaneous, 6 years and older	IP	Any	Procedure	CPT-4

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Code	Description	Care Setting	Principal Diagnosis	Code Category	Code Type
33984	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; removal of peripheral (arterial and/or venous) cannula(e), open, 6 years and older	IP	Any	Procedure	CPT-4
33986	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; removal of central cannula(e) by sternotomy or thoracotomy, 6 years and older	IP	Any	Procedure	CPT-4
33987	Arterial exposure with creation of graft conduit (eg, chimney graft) to facilitate arterial perfusion for ECMO/ECLS (List separately in addition to code for primary procedure)	IP	Any	Procedure	CPT-4
33988	Insertion of left heart vent by thoracic incision (eg, sternotomy, thoracotomy) for ECMO/ECLS	IP	Any	Procedure	CPT-4
33989	Removal of left heart vent by thoracic incision (eg, sternotomy, thoracotomy) for ECMO/ECLS	IP	Any	Procedure	CPT-4
36822	Insertion of cannula(s) for prolonged extracorporeal circulation for cardiopulmonary insufficiency (ECMO) (separate procedure)	IP	Any	Procedure	CPT-4
94002	Ventilation assist and management, initiation of pressure or volume preset ventilators for assisted or controlled breathing; hospital inpatient/observation, initial day	IP	Any	Procedure	CPT-4
94003	Ventilation assist and management, initiation of pressure or volume preset ventilators for assisted or controlled breathing; hospital inpatient/observation, each subsequent day	IP	Any	Procedure	CPT-4
99160	Critical Care, Initial, Including The Diagnostic And Therapeutic Services And Direction Of Care Of The Critically Ill Or Multiply Injured Or Comatose Patient, Requiring The Prolonged Presence Of The Physician; First Hour	IP	Any	Procedure	CPT-4
99162	Critical Care, Initial, Including The Diagnostic And Therapeutic Services And Direction Of Care Of The Critically Ill Or Multiply Injured Or Comatose Patient, Requiring The Prolonged Presence Of The Physician; Each Additional 30 Minutes	IP	Any	Procedure	CPT-4

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<b>Code</b>	<b>Description</b>	<b>Care Setting</b>	<b>Principal Diagnosis</b>	<b>Code Category</b>	<b>Code Type</b>
99171	Critical Care, Subsequent Follow-up Visit; Brief Examination, Evaluation And/or Treatment For Same Illness	IP	Any	Procedure	CPT-4
99289	Critical care services delivered by a physician, face-to-face, during an interfacility transport of critically ill or critically injured pediatric patient, 24 months of age or less; first 30-74 minutes of hands on care during transport	IP	Any	Procedure	CPT-4
99290	Critical care services delivered by a physician, face-to-face, during an interfacility transport of critically ill or critically injured pediatric patient, 24 months of age or less; each additional 30 minutes (List separately in addition to code for primary service)	IP	Any	Procedure	CPT-4
99291	Critical care, evaluation and management of the critically ill or critically injured patient; first 30-74 minutes	IP	Any	Procedure	CPT-4
99292	Critical care, evaluation and management of the critically ill or critically injured patient; each additional 30 minutes (List separately in addition to code for primary service)	IP	Any	Procedure	CPT-4
99293	Initial inpatient pediatric critical care, per day, for the evaluation and management of a critically ill infant or young child, 29 days through 24 months of age	IP	Any	Procedure	CPT-4
99294	Subsequent inpatient pediatric critical care, per day, for the evaluation and management of a critically ill infant or young child, 29 days through 24 months of age	IP	Any	Procedure	CPT-4
99295	Initial inpatient neonatal critical care, per day, for the evaluation and management of a critically ill neonate, 28 days of age or less	IP	Any	Procedure	CPT-4
99296	Subsequent inpatient neonatal critical care, per day, for the evaluation and management of a critically ill neonate, 28 days of age or less	IP	Any	Procedure	CPT-4
99466	Critical care face-to-face services, during an interfacility transport of critically ill or critically injured pediatric patient, 24 months of age or younger; first 30-74 minutes of hands-on care during transport	IP	Any	Procedure	CPT-4

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<b>Code</b>	<b>Description</b>	<b>Care Setting</b>	<b>Principal Diagnosis</b>	<b>Code Category</b>	<b>Code Type</b>
99467	Critical care face-to-face services, during an interfacility transport of critically ill or critically injured pediatric patient, 24 months of age or younger; each additional 30 minutes (List separately in addition to code for primary service)	IP	Any	Procedure	CPT-4
99468	Initial inpatient neonatal critical care, per day, for the evaluation and management of a critically ill neonate, 28 days of age or younger	IP	Any	Procedure	CPT-4
99469	Subsequent inpatient neonatal critical care, per day, for the evaluation and management of a critically ill neonate, 28 days of age or younger	IP	Any	Procedure	CPT-4
99471	Initial inpatient pediatric critical care, per day, for the evaluation and management of a critically ill infant or young child, 29 days through 24 months of age	IP	Any	Procedure	CPT-4
99472	Subsequent inpatient pediatric critical care, per day, for the evaluation and management of a critically ill infant or young child, 29 days through 24 months of age	IP	Any	Procedure	CPT-4
99475	Initial inpatient pediatric critical care, per day, for the evaluation and management of a critically ill infant or young child, 2 through 5 years of age	IP	Any	Procedure	CPT-4
99476	Subsequent inpatient pediatric critical care, per day, for the evaluation and management of a critically ill infant or young child, 2 through 5 years of age	IP	Any	Procedure	CPT-4
99477	Initial hospital care, per day, for the evaluation and management of the neonate, 28 days of age or younger, who requires intensive observation, frequent interventions, and other intensive care services	IP	Any	Procedure	CPT-4
99478	Subsequent intensive care, per day, for the evaluation and management of the recovering very low birth weight infant (present body weight less than 1500 grams)	IP	Any	Procedure	CPT-4

**Code List 3. List of Current Procedural Terminology, Second Edition (CPT-2) Codes, Current Procedural Terminology, Third Edition (CPT-3) Codes, Current Procedural Terminology, Fourth Edition (CPT-4) Codes, Healthcare Common Procedure Coding System (HCPCS) Codes, International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Revenue (RE) Codes Used to Define Intensive Care Unit Encounter in this Request**

<b>Code</b>	<b>Description</b>	<b>Care Setting</b>	<b>Principal Diagnosis</b>	<b>Code Category</b>	<b>Code Type</b>
99479	Subsequent intensive care, per day, for the evaluation and management of the recovering low birth weight infant (present body weight of 1500-2500 grams)	IP	Any	Procedure	CPT-4
99480	Subsequent intensive care, per day, for the evaluation and management of the recovering infant (present body weight of 2501-5000 grams)	IP	Any	Procedure	CPT-4
99485	Supervision by a control physician of interfacility transport care of the critically ill or critically injured pediatric patient, 24 months of age or younger, includes two-way communication with transport team before transport, at the referring facility and during the transport, including data interpretation and report; first 30 minutes	IP	Any	Procedure	CPT-4
99486	Supervision by a control physician of interfacility transport care of the critically ill or critically injured pediatric patient, 24 months of age or younger, includes two-way communication with transport team before transport, at the referring facility and during the transport, including data interpretation and report; each additional 30 minutes (List separately in addition to code for primary procedure)	IP	Any	Procedure	CPT-4
A0396	ALS specialized service disposable supplies; esophageal intubation	IP	Any	Procedure	HCPCS
A4483	Moisture exchanger, disposable, for use with invasive mechanical ventilation	IP	Any	Procedure	HCPCS
E0472	Respiratory assist device, bi-level pressure capability, with backup rate feature, used with invasive interface, e.g., tracheostomy tube (intermittent assist device with continuous positive airway pressure device)	IP	Any	Procedure	HCPCS
E0481	Intrapulmonary percussive ventilation system and related accessories	IP	Any	Procedure	HCPCS
G0240	Critical care service delivered by a physician, face to face; during interfacility transport of a critically ill or critically injured patient; first 30-74 minutes of active transport	IP	Any	Procedure	HCPCS

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Code	Description	Care Setting	Principal Diagnosis	Code Category	Code Type
G0390	Trauma response team associated with hospital critical care service	IP	Any	Procedure	HCPCS
G0508	Telehealth consultation, critical care, initial, physicians typically spend 60 minutes communicating with the patient and providers via telehealth	IP	Any	Procedure	HCPCS
G0509	Telehealth consultation, critical care, subsequent, physicians typically spend 50 minutes communicating with the patient and providers via telehealth	IP	Any	Procedure	HCPCS
G8569	Prolonged postoperative intubation (> 24 hrs) required	IP	Any	Procedure	HCPCS
J0171	Injection, adrenalin, epinephrine, 0.1 mg	IP	Any	Procedure	HCPCS
J1250	Injection, dobutamine HCl, per 250 mg	IP	Any	Procedure	HCPCS
J1265	Injection, dopamine HCl, 40 mg	IP	Any	Procedure	HCPCS
09HN7BZ	Insertion of Airway into Nasopharynx, Via Natural or Artificial Opening	IP	Any	Procedure	ICD-10-PCS
09HN8BZ	Insertion of Airway into Nasopharynx, Via Natural or Artificial Opening Endoscopic	IP	Any	Procedure	ICD-10-PCS
0BH13EZ	Insertion of Endotracheal Airway into Trachea, Percutaneous Approach	IP	Any	Procedure	ICD-10-PCS
0BH17EZ	Insertion of Endotracheal Airway into Trachea, Via Natural or Artificial Opening	IP	Any	Procedure	ICD-10-PCS
0BH18EZ	Insertion of Endotracheal Airway into Trachea, Via Natural or Artificial Opening Endoscopic	IP	Any	Procedure	ICD-10-PCS
0CHY7BZ	Insertion of Airway into Mouth and Throat, Via Natural or Artificial Opening	IP	Any	Procedure	ICD-10-PCS
0CHY8BZ	Insertion of Airway into Mouth and Throat, Via Natural or Artificial Opening Endoscopic	IP	Any	Procedure	ICD-10-PCS
0DH57BZ	Insertion of Airway into Esophagus, Via Natural or Artificial Opening	IP	Any	Procedure	ICD-10-PCS
0DH58BZ	Insertion of Airway into Esophagus, Via Natural or Artificial Opening Endoscopic	IP	Any	Procedure	ICD-10-PCS
0WHQ73Z	Insertion of Infusion Device into Respiratory Tract, Via Natural or Artificial Opening	IP	Any	Procedure	ICD-10-PCS
0WHQ7YZ	Insertion of Other Device into Respiratory Tract, Via Natural or Artificial Opening	IP	Any	Procedure	ICD-10-PCS
3E030XZ	Introduction of Vasopressor into Peripheral Vein, Open Approach	IP	Any	Procedure	ICD-10-PCS
3E033XZ	Introduction of Vasopressor into Peripheral Vein, Percutaneous Approach	IP	Any	Procedure	ICD-10-PCS

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<b>Code</b>	<b>Description</b>	<b>Care Setting</b>	<b>Principal Diagnosis</b>	<b>Code Category</b>	<b>Code Type</b>
3E040XZ	Introduction of Vasopressor into Central Vein, Open Approach	IP	Any	Procedure	ICD-10-PCS
3E043XZ	Introduction of Vasopressor into Central Vein, Percutaneous Approach	IP	Any	Procedure	ICD-10-PCS
3E050XZ	Introduction of Vasopressor into Peripheral Artery, Open Approach	IP	Any	Procedure	ICD-10-PCS
3E053XZ	Introduction of Vasopressor into Peripheral Artery, Percutaneous Approach	IP	Any	Procedure	ICD-10-PCS
3E060XZ	Introduction of Vasopressor into Central Artery, Open Approach	IP	Any	Procedure	ICD-10-PCS
3E063XZ	Introduction of Vasopressor into Central Artery, Percutaneous Approach	IP	Any	Procedure	ICD-10-PCS
0200	General classification for intensive care unit (ICU)	IP	Any	Procedure	RE
0201	Surgical ICU	IP	Any	Procedure	RE
0202	Medical ICU	IP	Any	Procedure	RE
0203	Pediatric ICU	IP	Any	Procedure	RE
0204	Psychiatric ICU	IP	Any	Procedure	RE
0206	Intermediate ICU	IP	Any	Procedure	RE
0207	Burn care	IP	Any	Procedure	RE
0208	Trauma care	IP	Any	Procedure	RE
0209	Other intensive care	IP	Any	Procedure	RE
0210	General classification cardiac care unit (CCU)	IP	Any	Procedure	RE
0211	Myocardial infarction care	IP	Any	Procedure	RE
0212	Pulmonary care	IP	Any	Procedure	RE
0213	Heart transplant	IP	Any	Procedure	RE
0214	Intermediate CCU	IP	Any	Procedure	RE
0219	Other coronary care	IP	Any	Procedure	RE