



National
COVID
Cohort
Collaborative

N3C Research Team Code Set: ECMO

Code Set ID: 1000038025

Intention: .

Version: 2

Flag for Most Recent: t

Update Note:

Approval Date: 2024-01-30T18:49:12.643Z

Release Name: Release-v157-2024-01-25

OMOP Vocabulary Version: v5.0 31-AUG-23

Author:

Project Name(s):

Description: ECMO itself plus procedures to accomplish ECMO

Issues:

Provenance: 1/3/2024 3 standard, relevant concepts added, as per Vocabulary Change Management.

DOI: <https://doi.org/10.5281/zenodo.10601619>

Acknowledgements: <https://covid.cd2h.org/acknowledgements>

This code set was prepared for use with the NCATS N3C Data Enclave (<https://covid.cd2h.org/enclave>) and supported by NCATS U24 TR002306. This code set does not contain any patient data. The enclave itself is made possible by the patients whose information is included within the data from participating organizations (<https://covid.cd2h.org/dtas>) and the organizations and scientists (<https://covid.cd2h.org/duas>) who have contributed to the on-going development of this community resource (<https://doi.org/10.1093/jamia/ocaa196>).

Logic Expression:

Concept ID	Concept Code	Concept Name	Domain	Standard Concept	Exclude	Descendants	Mapped
------------	--------------	--------------	--------	------------------	---------	-------------	--------

Included Concepts:

Concept ID	Concept Name
1531632	Extracorporeal Oxygenation, Membrane, Central
46257400	Insertion of left heart vent by thoracic incision (eg, sternotomy, thoracotomy) for ECMO/ECLS
46257438	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
46257468	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
46257511	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; daily management, each day, veno-arterial
46257685	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; removal of central cannula(e) by sternotomy or thoracotomy, birth through 5 years of age
46257398	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; insertion of central cannula(e) by sternotomy or thoracotomy, 6 years and older
46257512	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; insertion of peripheral (arterial and/or venous) cannula(e), percutaneous, birth through 5 years of age (includes fluoroscopic guidance, when performed)
46257680	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; removal of central cannula(e) by sternotomy or thoracotomy, 6 years and older
37206601	Venoarterial extracorporeal membrane oxygenation
46257397	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; insertion of central cannula(e) by sternotomy or thoracotomy, birth through 5 years of age
46257441	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)
44515635	Extracorporeal membrane oxygenation
46257439	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; reposition of central cannula(e) by sternotomy or thoracotomy, birth through 5 years of age (includes fluoroscopic guidance, when performed)
2787821	Extracorporeal Hyperbaric Oxygenation, Continuous
37206602	Arteriovenous extracorporeal membrane oxygenation
44811012	Fluoroscopy guided percutaneous insertion of cannula for extracorporeal membrane oxygenation
2787820	Extracorporeal Supersaturated Oxygenation, Intermittent
4052536	Extracorporeal membrane oxygenation
1524103	Extracorporeal Oxygenation, Membrane, Peripheral Veno-venous, Intraoperative
1524105	Extracorporeal Oxygenation, Membrane, Central, Intraoperative
1531630	Extracorporeal Oxygenation, Membrane, Peripheral Veno-venous
37206603	Venovenous extracorporeal membrane oxygenation
46257543	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; initiation, veno-venous
46257585	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician
46257730	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; removal of peripheral (arterial and/or venous) cannula(e), percutaneous, birth through 5 years of age

Concept ID	Concept Name
4338595	Cardiac support using extracorporeal membrane oxygenation circuitry
46257399	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
46257467	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)
46257544	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; removal of peripheral (arterial and/or venous) cannula(e), open, birth through 5 years of age
46257682	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; initiation, veno-arterial
46257683	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; insertion of peripheral (arterial and/or venous) cannula(e), open, birth through 5 years of age
46257729	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; reposition peripheral (arterial and/or venous) cannula(e), open, birth through 5 years of age (includes fluoroscopic guidance, when performed)
2002247	Extracorporeal membrane oxygenation [ECMO]
1531631	Extracorporeal Oxygenation, Membrane, Peripheral Veno-arterial
46257586	Extracorporeal Membrane Oxygenation or Extracorporeal Life Support Services and Procedures
46257684	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)
46257440	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)
46257466	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)
46257510	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; daily management, each day, veno-venous
1524104	Extracorporeal Oxygenation, Membrane, Peripheral Veno-arterial, Intraoperative
46257469	Removal of left heart vent by thoracic incision (eg, sternotomy, thoracotomy) for ECMO/ECLS
46257513	Extracorporeal membrane oxygenation (ECMO)/extracorporeal life support (ECLS) provided by physician; reposition peripheral (arterial and/or venous) cannula(e), percutaneous, birth through 5 years of age (includes fluoroscopic guidance, when performed)

JSON:

```
{
  "id": 1000038025,
  "name": "ECMO",
  "expression": {
    "items": [
      {
        "concept": {
          "domain_id": "Procedure",
          "concept_id": 2002247,
          "concept_code": "39.65",
          "concept_name": "Extracorporeal membrane oxygenation [ECMO]",
          "vocabulary_id": "ICD9Proc",
          "invalid_reason": "V",
          "concept_class_id": "4-dig billing code",
          "standard_concept": "",
          "invalid_reason_caption": "Valid",
          "standard_concept_caption": ""
        },
        "includedescendants": true
      },
      {
        "concept": {
          "domain_id": "Procedure",
          "concept_id": 2787821,
          "concept_code": "5A05221",
          "concept_name": "Extracorporeal Hyperbaric Oxygenation, Continuous",
          "vocabulary_id": "ICD10PCS",
          "invalid_reason": "V",
          "concept_class_id": "ICD10PCS",
          "standard_concept": "S",
          "invalid_reason_caption": "Valid",
          "standard_concept_caption": "Standard"
        },
        "includedescendants": false
      },
      {
        "concept": {
          "domain_id": "Procedure",
          "concept_id": 2787820,
          "concept_code": "5A0512C",
          "concept_name": "Extracorporeal Supersaturated Oxygenation, Intermittent",
          "vocabulary_id": "ICD10PCS",
          "invalid_reason": "V",
          "concept_class_id": "ICD10PCS",
          "standard_concept": "S",
          "invalid_reason_caption": "Valid",
          "standard_concept_caption": "Standard"
        },
        "includedescendants": false
      },
      {
        "concept": {
          "domain_id": "Procedure",
          "concept_id": 1531630,
          "concept_code": "5A1522H",
          "concept_name": "Extracorporeal Oxygenation, Membrane, Peripheral Venovenous",
          "vocabulary_id": "ICD10PCS",
          "invalid_reason": "V",
          "concept_class_id": "ICD10PCS",

```

```

        "standard_concept": "S",
        "invalid_reason_caption": "Valid",
        "standard_concept_caption": "Standard"
    },
    "includedescendants": false
},
{
    "concept": {
        "domain_id": "Procedure",
        "concept_id": 1531631,
        "concept_code": "5A1522G",
        "concept_name": "Extracorporeal Oxygenation, Membrane, Peripheral Ven-
arterial",
        "vocabulary_id": "ICD10PCS",
        "invalid_reason": "V",
        "concept_class_id": "ICD10PCS",
        "standard_concept": "S",
        "invalid_reason_caption": "Valid",
        "standard_concept_caption": "Standard"
    },
    "includedescendants": false
},
{
    "concept": {
        "domain_id": "Observation",
        "concept_id": 46257586,
        "concept_code": "1021846",
        "concept_name": "Extracorporeal Membrane Oxygenation or Extracorporeal Life Supp
ort Services and Procedures",
        "vocabulary_id": "CPT4",
        "invalid_reason": "V",
        "concept_class_id": "CPT4 Hierarchy",
        "standard_concept": "C",
        "invalid_reason_caption": "Valid",
        "standard_concept_caption": "Classification"
    },
    "includedescendants": true
},
{
    "concept": {
        "domain_id": "Procedure",
        "concept_id": 1531632,
        "concept_code": "5A1522F",
        "concept_name": "Extracorporeal Oxygenation, Membrane, Central",
        "vocabulary_id": "ICD10PCS",
        "invalid_reason": "V",
        "concept_class_id": "ICD10PCS",
        "standard_concept": "S",
        "invalid_reason_caption": "Valid",
        "standard_concept_caption": "Standard"
    },
    "includedescendants": false
},
{
    "concept": {
        "domain_id": "Procedure",
        "concept_id": 44515635,
        "concept_code": "X58.1",
        "concept_name": "Extracorporeal membrane oxygenation",
        "vocabulary_id": "OPCS4",
        "invalid_reason": "V",
        "concept_class_id": "Procedure",

```

```

        "standard_concept": "",
        "invalid_reason_caption": "Valid",
        "standard_concept_caption": ""
    },
    "includedescendants": true
},
{
    "concept": {
        "domain_id": "Procedure",
        "concept_id": 4338595,
        "concept_code": "232969009",
        "concept_name": "Cardiac support using extracorporeal membrane oxygenation circu
        itry",
        "vocabulary_id": "SNOMED",
        "invalid_reason": "V",
        "concept_class_id": "Procedure",
        "standard_concept": "S",
        "invalid_reason_caption": "Valid",
        "standard_concept_caption": "Standard"
    },
    "includedescendants": false
},
{
    "concept": {
        "domain_id": "Procedure",
        "concept_id": 44811012,
        "concept_code": "862791000000106",
        "concept_name": "Fluoroscopy guided percutaneous insertion of cannula for extrac
        orporeal membrane oxygenation",
        "vocabulary_id": "SNOMED",
        "invalid_reason": "V",
        "concept_class_id": "Procedure",
        "standard_concept": "S",
        "invalid_reason_caption": "Valid",
        "standard_concept_caption": "Standard"
    },
    "includedescendants": false
},
{
    "concept": {
        "domain_id": "Procedure",
        "concept_id": 4052536,
        "concept_code": "233573008",
        "concept_name": "Extracorporeal membrane oxygenation",
        "vocabulary_id": "SNOMED",
        "invalid_reason": "V",
        "concept_class_id": "Procedure",
        "standard_concept": "S",
        "invalid_reason_caption": "Valid",
        "standard_concept_caption": "Standard"
    },
    "includedescendants": true
}
]
}
}

```