



**NPIC**

National Perinatal Information Center

## **ADVERSE OUTCOME INDEX (AOI) V4.0.1**

Definitions & ICD-10 Code Tables

# Adverse Outcome Index (AOI) Algorithm (V4.0.1)

## Definitions and ICD-10 Code Tables

The ICD-10 code tables used to determine each indicator count for the Adverse Outcome Index: [AOI Code Tables \(effective 1/1/2021\)](#)

### Event Populations

**Deliveries:** Cases assigned to any of the following MS DRGs: 768, 796-798, 805-807, 783-788, or  $\geq 981$  with an ICD-10-PCS delivery code, and also assigned to any of the following APR-DRGs: 539-542, 560 (*Code Table M.1.1*)

**Inborns:** All neonates born in your hospital (*Code Table B.1.1*)

### Event Definitions

#### **In-hospital Maternal Death {Case Weight: 750}**

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Deliveries and discharge disposition = died

**Exclusions:** None

#### **In-hospital Neonatal Death $\geq 2500$ grams and $\geq 37$ weeks Gestation<sup>2</sup> {Case Weight: 400}**

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**Inclusions:** Inborns with birthweight<sup>1</sup>  $\geq 2500$  grams and  $\geq 37$  weeks gestation<sup>2</sup> with discharge disposition of died **within 28 days of birth**

**Exclusions:** Cases with congenital anomalies and other disorders (*Code Table B.2.1*)

#### **Uterine Rupture During Labor {Case Weight: 100}**

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**Inclusions:** Deliveries with diagnosis code O71.1 (rupture of uterus during labor) in the **primary, first** or **second diagnosis** code position only

**Exclusions:** None



### Maternal Intensive Care {Case Weight: 65}

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**Inclusions:** Deliveries with [AIM<sup>3</sup> Severe Maternal Morbidity \(SMM\) diagnosis and/or procedure codes](#) (Code Table M.3.1) **OR** Deliveries with the NPIC Blood Transfusion Indicator = 1 on submitted file; **AND**

- with an ICU day or charge **OR**
- discharged to another hospital (UB04 disp=02)

**Exclusions:** Cases with placental disorders (Code Table M.3.1) or any AIM SMM diagnosis code(s) with Present on Admission (POA)<sup>4</sup> indicator = Y

### Birth Trauma {Case Weight: 60}

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**Inclusions:** Inborns with birthweight<sup>1</sup> ≥ 2500 grams and ≥ 37 weeks gestation<sup>2</sup> with TJC PC-06<sup>5</sup> severe birth trauma diagnosis codes (Code Table B.3.1)

**Exclusions:** Cases with osteogenesis imperfecta (Code Table B.3.1)

### Unanticipated Operative Procedure {Case Weight: 40}

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**Inclusions:** Deliveries with unanticipated operative procedure codes (Code Table M.4.1) in the **first** or **second procedure** field

**Exclusions:** Cases with placental disorders or cervical cancers; Also excludes hysterectomy cases with an ICU day or charge or discharged to another hospital (UB04 disp=02) (Code Table M.4.1)

### Admission to NICU of Neonate Birthweight<sup>1</sup> ≥ 2500 grams and ≥ 37 weeks Gestational Age<sup>2</sup> (GA) for > 1 day {Case Weight: 35}

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**Inclusions:** Inborns with birthweight<sup>1</sup> ≥ 2500 grams and ≥ 37 weeks gestation<sup>2</sup>; **AND**

- NICU admission within one day of birth for greater than one day; **OR**
- transferred to another hospital (UB04 disp=02 or =05) within one day of birth

**Exclusions:** Cases with congenital anomalies and other disorders (Code Table B.2.1) or neonatal drug/alcohol exposure (Code Table B.5.1)

### APGAR 5 < 7 {Case Weight: 25}

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**Inclusions:** Inborns with birthweight<sup>1</sup> ≥ 2500 grams and ≥ 37 weeks completed gestation<sup>2</sup>; APGAR 5 < 7

**Exclusions:** Cases with congenital anomalies and other disorders (Code Table B.2.1) or neonatal drug/alcohol exposure (Code Table B.5.1)



### Maternal Blood Transfusion {Case Weight: 20}

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**Inclusions:** Deliveries with [AIM Severe Maternal Morbidity \(SMM\) blood transfusion procedure codes](#) (*Code Table M.5.1*); **OR**

- additional select code for transfusion of non-blood products (*Code Table M.5.1*); **OR**
- NPIC Blood Transfusion Indicator = 1 on submitted file

**Exclusions:** Delivery cases that are included in the “Maternal Intensive Care” event (see definition above).

### 4th Degree Perineal Laceration {Case Weight: 5}

**Inclusions:** Deliveries with fourth degree perineal laceration diagnosis code (*Code Table M.6.1*)

**Exclusions:** Cases with shoulder dystocia (*Code Table M.6.1*)

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<sup>1</sup> Birthweight is determined by numeric value or ICD-10-CM coding

<sup>2</sup> Gestational Age is determined by numeric value or ICD-10-CM coding. Cases missing gestational age information default to  $\geq 37$  weeks if birthweight is  $\geq 2000$  grams.

<sup>3</sup> Alliance for Innovation on Maternal Health (AIM)

<sup>4</sup> Present on Admission (POA) indicator Y = diagnosis was present at time of inpatient admission

<sup>5</sup> [The Joint Commission PC-06 measure](#): Unexpected Complications in Term Newborns

