Emergency Department Claim Analyzer Guide

Optum

Overview

The goal of Optum® Emergency Department Claim (EDC) Analyzer is to achieve fair and consistent evaluation and management coding and reimbursement of facility outpatient emergency department (ED) claims. EDC Analyzer™ systematically evaluates each ED visit level code in the context of other claim data (i.e., diagnosis codes, procedure codes, patient age and patient sex*) to ensure that it reasonably relates to the intensity of hospital resource utilization as required per CMS Guidelines. Optum is committed to simplifying the health care system and promoting transparency in the coding and reimbursement process.

Learn more about EDC Analyzer.

The appropriate visit level of an ED claim is determined by EDC Analyzer using the following 4-step process:

Step 1: Standard weights

Determines the standard weight of the visit based on the patient's demographic characteristics and presenting problem. Assigns a standard weight to the visit based on this evaluation. Learn more

Step 2: Extended weights

Evaluates the intensity of the diagnostic workup performed by the facility based on diagnostic CPT codes. Assigns an extended weight to the visit based on this evaluation. Learn more

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Step 3: Patient complexity weights

Determines if the patient has any conditions or has experienced any circumstances that may increase the complexity of the visit. Assigns a patient complexity weight to the visit based on this determination. Learn more

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Final step: Calculate visit level

The weights from steps 1 through 3 are summed and a visit level is assigned based on that summation. Learn more

To view how EDC Analyzer processes specific claim scenarios, review the following examples:

- Claim Example 1
- Claim Example 2
- Claim Example 3
- Claim Example 4
- Claim Example 5

*Patient sex assigned at birth

EDC Analyzer background

Emergency Department (ED) visits should be coded based on hospital resource utilization, which is dictated by the patient's clinical condition and the treatment provided. There are 5 visit levels that the ED can choose from when submitting claims. Visit level 1 is the least resource-intensive for the facility and visit level 5 is the most resource-intensive. These visit levels are represented by the following Evaluation and Management (E/M) procedure codes:

Procedure codes and corresponding levels for ED claims

Visit level	Procedure codes*	Explanation
1	99281/G0380	Used for very simple and limited services. The presenting problem is usually self-limited or minor.
2	99282/G0381	Typically assigned for an acute episodic illness and/or minor injury evaluation. The presenting problem is of low to moderate severity.
3	99283/G0382	Generally requires additional facility resources, including X-ray, laboratory testing or additional nursing time. The presenting problem is of moderate severity.
4	99284/G0383	For encounters associated with acute illness or injury that require prolonged evaluation and typically diagnostic studies, repeat nursing evaluations, or other therapeutic interventions. The presenting problem is high severity, requiring urgent evaluation.
5	99285/G0384	For encounters that are associated with serious presenting symptoms, often a life-threatening disease or injury, requiring treatment that is complex and/or resource-intensive. The presenting problem is of high severity and/or poses an immediate significant threat to life or physiological function.

*Procedure codes starting with "9" above are considered Type A codes, and procedure codes starting with a "G" above are considered Type B codes. "[CMS] considers the main distinguishing feature between Type A and Type B emergency departments to be the full-time versus part-time availability of staffed areas for emergency medical care, not the process of care or the site of care (on the hospital's main campus or offsite)," per the CY 2008 OPPS Final Rule.

At the time of the introduction of the Medicare Outpatient Prospective Payment System (OPPS) and the associated ED Ambulatory Payment Classifications (APCs), Medicare did not specify a standard approach for classification of the acuity levels for ED E/M visit codes. Instead, facilities were instructed to use any methodology as long as it met certain Centers for Medicare & Medicaid Services (CMS) guidelines. Per the current CMS guidelines, the facility must bill the visit level that most reasonably relates to the intensity of hospital resources used in the treatment of the patient.

CMS guidelines

1. Follow the intent of the CPT® code descriptor in that the guidelines should be designed to reasonably relate the intensity of hospital resources to the different levels of effort represented by the code
2. Be based on hospital facility resources, not on physician resources
3. Be clear to facilitate accurate payments and be usable for compliance purposes and audits
4. Meet the HIPPA requirements
5. Only require documentation that is clinically necessary for patient care
6. Not facilitate upcoding or gaming
7. Be written or recorded, well-documented and provide the basis of selection of a specific code
8. Be applied consistently across patients in the clinic or emergency department to which they apply
9. Not change with great frequency
10. Be readily available for fiscal intermediary (or if applicable, MAC contractor) review
11. Result in coding decisions that could be verified by other hospital staff, as well as outside sources

The goal of EDC Analyzer is to achieve fair and consistent E/M coding and reimbursement of facility outpatient ED claims. EDC Analyzer systematically evaluates each ED visit code in the context of other claim data (i.e., diagnosis codes, procedure codes, patient age and patient sex*) to determine if it reasonably relates to the intensity of utilized hospital resources. Optum is committed to simplifying the health care system and promoting transparency in the coding and reimbursement process.

*Patient sex assigned at birth

Step 1: Standard weights

EDC Analyzer reviews all reason-for-visit diagnosis codes and assigns a Proportional Standard Cost Allocation (PSCA) and associated standard weight to each code based on the age and sex* of the patient. If multiple PSCAs are assigned to a claim, EDC Analyzer takes the highest PSCA found. There are 5 possible PSCAs corresponding to the 5 ED visit levels.

PSCA values

Visit level	Description
1 (lowest weight)	Presenting problem is self-limited or minor
2	Presenting problem is low to moderate severity
3	Presenting problem is moderate severity
4	Presenting problem is high severity, requiring urgent evaluation
5 (highest weight)	Presenting problem is high severity, posing an immediate, significant threat to physiological function

*Patient sex assigned at birth

Standard weights were calculated by analyzing the typical amount of facility resources utilized for each presenting problem, which includes the following:

- **Nursing and ancillary staff time** (for a routine arrival, triage, registration, basic patient/family communications and a routine discharge)
- **Creation of a medical record**
- **The room**
- **Coding and billing**

Step 1 examples

Presenting problem	Diagnosis code	Age range	Sex*	Standard weight**
Blood pressure check	Z01.30	>2	M & F	***
Weakness	R53.1	>2	M & F	****
Seizure: pregnant	O15.9	7–54	F	****
Fever	R50.9	2–74	M & F	***
Fever	R50.9	75+	M & F	***
Wheezing	R06.2	2–11	M & F	***
Wheezing	R06.2	12+	M & F	****

*Patient sex assigned at birth
**Redacted

Step 2: Extended weights

EDC Analyzer reviews all line-level services on the claim to identify diagnostic tests that fall into each of the following categories:

- Laboratory tests
- X-rays (film)
- CT/MRI/ultrasound
- EKG/respiratory therapy/other diagnostic services

Each category carries an extended weight. EDC Analyzer adds together the weights for each unique category of tests found on the claim to determine the overall extended weight. For example, if 2 laboratory tests and 3 X-rays are billed, EDC Analyzer will count the laboratory tests as one and the X-rays as one.

Extended weights were calculated for each category based on the level of ED resources expended (including staff time) to note orders, communicate with the patient and staff and follow up as needed.

Below are some examples showing how EDC Analyzer assigns an extended weight based on a diagnostic test:

Diagnostic category	CPT code	Code description	Extended weight*
Lab	80048	BASIC METABOLIC PANEL CALCIUM TOTAL	***
Lab	85025	COMPL CBC W AUTO DIFFIAL WBC	***
CT/MRI/ultrasound	70450	CT HEAD/BRN C-MATRL	***
EKG/RT/other diagnostic	93005	ECG ROUTINE ECG W/LEAST 12 LDS TRCG ONLY W/O I&R	***
EKG/RT/other diagnostic	94640	INHALATION TREATMENT	***
Lab	80053	COMPRE METAB PANEL	***
Lab	83605	LACTATE (Lactic Acid)	***
X-ray – plain film	71020	CHEST XRAY 2VW FRONTAL LATL	***

*Redacted

Step 3: Patient complexity weights

EDC Analyzer reviews all principal, secondary and external cause of injury diagnosis codes on the claim, looking for complicating conditions or circumstances that may impact facility resource utilization. EDC Analyzer then assigns a weight to each complicating diagnosis code that is found. The highest weighted diagnosis code on the claim is used to determine the overall patient complexity weight. Reason-for-visit diagnosis codes that are also reported as principal or secondary diagnosis codes are excluded from acting as complicating conditions during this step.

Patient complexity weights were developed for each complicating condition or circumstance by analyzing the additional services typically provided to patients with that complicating condition or circumstance.

Below are some examples showing how EDC Analyzer assigns a patient complexity weight based on a diagnosis code:

Diagnosis code	Code description	Patient complexity weight*
M05.9	RHEUMATOID ARTHRITIS WITH RHEUMATOID FACTOR, UNSPECIFIED	***
J44.9	CHRONIC OBSTRUCTIVE PULMONARY DISEASE, UNSPECIFIED	***
I50.9	HEART FAILURE, UNSPECIFIED	***
F10.920	ALCOHOL USE, UNSPECIFIED WITH INTOXICATION, UNCOMPLICATED	***
G40.801	OTHER EPILEPSY, NOT INTRACTABLE, WITH STATUS EPILEPTICUS	***
E11.8	TYPE 1 DIABETES MELLITUS WITH UNSPECIFIED COMPLICATIONS	***
E11.29	TYPE 2 DIABETES MELLITUS WITH OTHER DIABETIC KIDNEY COMPLICATION	***

*Redacted

Final step: Visit level assignment

All 3 weights described in steps 1–3 will be used in combination to assign the final visit level (level 1, 2, 3, 4 or 5) to the claim using this formula:

Total weight = standard weight + extended weight + patient complexity weight

Each visit level equates to a range of weights. The total weight is compared to these ranges and the final visit level is assigned to the claim.

Visit level	Procedure codes	Explanation
1	99281/G0380	Used for very simple and limited services. The presenting problem is usually self-limited or minor.
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3	99283/G0382	Generally requires additional facility resources, including X-ray, laboratory testing or additional nursing time. The presenting problem is of moderate severity.
4	99284/G0383	For encounters associated with acute illness or injury that requires prolonged evaluation and typically diagnostic studies, repeat nursing evaluations, or other therapeutic interventions. The presenting problem is high severity requiring urgent evaluation.
5	99285/G0384	For encounters that are associated with serious presenting symptoms, often a life-threatening disease or injury, requiring treatment that is complex and/or resource intensive. The presenting problem is of high severity and/or poses an immediate significant threat to life or physiological function.

Claim example 1

Patient information

A 26-year-old male presents to the ED complaining of low back pain. The patient had labs with no other diagnostic testing. The patient received treatment and was discharged home. Below is a subset of the claim that was submitted for this visit.

Claim information

Age	26
Sex*	Male
Reason for visit diagnosis code	M54.50, Low back pain, unspecified
External cause of injury diagnosis codes	None
Principal diagnosis code	M54.50, Low back pain, unspecified
Secondary diagnosis codes	D17.1, Benign lipomatous neoplasm of skin, subcutaneous tissue of trunk R11.0, Nausea
Diagnostic procedure codes	80053, Comprehensive metabolic panel 85025, Blood count complete auto & auto differential WBC

*Patient sex assigned at birth

Analyzer processing

Step 1: This claim contains one reason-for-visit diagnosis code (M54.50). This diagnosis code is assigned to a PSCA of 3 and a standard weight of 400.

Step 2: This claim contains 2 lab services (80053 and 85025). Since there is one unique diagnostic category on this claim, this claim is assigned an extended weight of 100.

Step 3: This claim contains a principal (M54.50) and 2 secondary diagnosis codes (D17.1 and R11.0). Since M54.50 is also billed as the reason-for-visit diagnosis code, it will be ignored in this step. Of the remaining diagnosis codes, only one (D17.1) is considered to be a diagnosis code that increases the complexity of the ED visit. As such, the patient complexity weight is 100.

Final step: All 3 weights are added together to determine the total weight for the claim:

Total weight = 400 + 100 + 100 = 600

This total weight falls into the weight range used by EDC Analyzer for a visit level 3. As such, EDC Analyzer would recommend that the ED visit code on this claim be 99283 or G0382.

Claim example 2

Patient information

A 27-year-old female presents to the ED with complaints of chest pain. The patient was ordered applicable diagnostic testing. The patient received treatment and was discharged home. Below is a subset of the claim that was submitted for this visit.

Claim information

Age	27
Sex*	Female
Reason for visit diagnosis code	R07.9, Chest pain unspecified
External cause of injury diagnosis codes	None
Principal diagnosis code	R07.89, Other chest pain
Secondary diagnosis codes	R07.9, Chest pain unspecified
Diagnostic procedure codes	71046, X-ray exam chest 2 views 80047, Metabolic panel ionized ca 84484, Assay of troponin, quant 84703, Chorionic gonadotropin assay 85025, Complete CBC w/auto diff WBC 85379, Fibrin degradation, quant 93005, Electrocardiogram, tracing

*Patient sex assigned at birth

Analyzer processing

Step 1: This claim contains one reason-for-visit diagnosis code (R07.9). This diagnosis code is assigned to a PSCA of 5 and a standard weight of 1,000.

Step 2: This claim contains several diagnostic services, including X-ray (71046), 5 lab services (80047, 84484, 84703, 85025, 85379), and EKG (93005). Since there are 3 unique diagnostic categories on this claim, this claim is assigned an extended weight of 300.

Step 3: This claim contains a principal (R07.89) and one secondary diagnosis code (R07.9). Since R07.9 is also billed as the reason-for-visit diagnosis code, it will be ignored in this step. The remaining diagnosis code (R07.89) is not considered to be a diagnosis code that increases the complexity of the ED visit. As such, the patient complexity weight is 0.

Final step: All 3 weights are added together to determine the total weight for the claim:

Total weight = 1,000 + 300 + 0 = 1,300

This total weight falls into the weight range used by EDC Analyzer for a visit level 5. As such, EDC Analyzer would recommend that the ED visit code on this claim be 99285 or G0384.

Claim example 3

Patient information

A 50-year-old female presents to the ED with complaints of a bad cough. Several lab services and a chest X-ray are performed. She is seen by a physician and discharged home. Below is a subset of the claim that was submitted for this visit.

Claim information

Age	50
Sex*	Female
Reason for visit diagnosis code	R05.9, Cough unspecified
External cause of injury diagnosis codes	None
Principal diagnosis code	J22, Unspecified acute lower respiratory infection
Secondary diagnosis codes	R05.9, Cough unspecified
Diagnostic procedure codes	71046, X-ray exam chest 2 views 87400, Influenza A/B AG IA 87430, Strep A AG IA

*Patient sex assigned at birth

Analyzer processing

Step 1: This claim contains one reason-for-visit diagnosis code (R05.9). This diagnosis code is assigned to a PSCA of 3 and a standard weight of 400.

Step 2: This claim contains one X-ray (71046) and two lab services (87400 and 87430). Since there are 2 unique diagnostic categories on this claim, this claim is assigned an extended weight of 200.

Step 3: This claim contains a principal (J22) and one secondary diagnosis code (R05.9). Since R05.9 is also billed as the reason-for-visit diagnosis code, it will be ignored in this step. The remaining diagnosis code (J22) increases the complexity of the ED visit with a patient complexity weight of 100.

Final step: All 3 weights are added together to determine the total weight for the claim:

Total weight = 400 + 200 + 100 = 700

This total weight falls into the weight range used by EDC Analyzer for a visit level 3. As such, EDC Analyzer would recommend that the ED visit code on this claim be 99283 or G0382.

Claim example 4

Patient information

A 60-year-old male presents to the ED with complaints of a bad cough and shortness of breath. A chest CT scan and multiple nebulizer treatments are performed. He is seen by a physician and discharged home. Below is a subset of the claim that was submitted for this visit.

Claim information

Age	60
Sex*	Male
Reason for visit diagnosis code	R05.9, Cough unspecified R06.02, Shortness of breath
External cause of injury diagnosis codes	None
Principal diagnosis code	J45.51, Severe persistent asthma with (acute) exacerbation
Secondary diagnosis codes	R06.02, Shortness of breath R05.9, Cough unspecified
Diagnostic procedure codes	94640 (2 units), Airway inhalation treatment 71270, CT thorax w/o & w/dye

*Patient sex assigned at birth

Analyzer processing

Step 1: This claim contains 2 reason-for-visit diagnosis codes (R05.9 and R06.02). Diagnosis code R05.9 is assigned to a PSCA of 3 and a standard weight of 400. Diagnosis code R06.02 is assigned to a PSCA of 5 and a standard weight of 1,000. Since the highest weight is 1,000, this claim is assigned to a standard weight of 1,000.

Step 2: This claim contains one CT scan (71270) and 2 breathing treatments (94640). Since there are 2 unique diagnostic categories on this claim, this claim is assigned an extended weight of 300.

Step 3: This claim contains a principal (J45.51) and 2 secondary diagnosis codes (R06.02, and R05.9). Since R05.9 and R06.02 are also billed as reason-for-visit diagnosis codes, they will be ignored in this step. The remaining diagnosis code (J45.51) is considered to be a diagnosis code that increases the complexity of the ED visit. The patient complexity weight for this code is 100.

Final step: All 3 weights are added together to determine the total weight for the claim:

Total weight = 1,000 + 300 + 100 = 1,400

This total weight falls into the weight range used by EDC Analyzer for a visit level 5. As such, EDC Analyzer would recommend that the ED visit code on this claim be 99285 or G0384.

Claim example 5

Patient information

A 37-year-old female presents to the ED with complaints of abdominal pain. Several lab services and a CT scan are performed. She is seen by a physician and discharged home. Below is a subset of the claim that was submitted for this visit.

Claim information

Age	37
Sex*	Female
Reason for visit diagnosis code	R10.9, Unspecified abdominal pain
External cause of injury diagnosis codes	None
Principal diagnosis code	R10.11, Right upper quadrant pain
Secondary diagnosis codes	None
Diagnostic procedure codes	80053, Comprehensive metabolic panel 81001, Urinalysis dip stick/tablet reagent auto microscopy 85025, Blood count complete auto & auto differential WBC 74177, CT abdomen and pelvis with contrast

*Patient sex assigned at birth

Analyzer processing

Step 1: This claim contains one reason-for-visit diagnosis code (R10.9). Diagnosis code R10.9 is assigned to a PSCA of 4 and a standard weight of 600.

Step 2: This claim contains one CT scan (74177) and 3 lab services (80053, 81001, 85025). Since there are 2 unique diagnostic categories on this claim, this claim is assigned an extended weight of 300.

Step 3: This claim contains a principal (R10.11) and no secondary diagnosis codes. The principal diagnosis code does not increase the complexity of the ED visit. As such, the patient complexity weight is 0.

Final step: All 3 weights are added together to determine the total weight for the claim:

Total weight = 600 + 300 + 0 = 900

This total weight falls into the weight range used by EDC Analyzer for a visit level 4. As such, EDC Analyzer would recommend that the ED visit code on this claim be 99284 or G0383.