

IMO Precision Normalize

Unlock value from your unstructured data, at scale.

Nearly 80% of all clinical data exists in unstructured formats like clinical notes in the EHR, making this wealth of information inefficient to use. Converting clinical free text into structured, standardized data is necessary to gain insights, but is costly and time-consuming. Additionally, underutilizing this valuable data source can negatively impact initiatives across the healthcare IT ecosystem, including reduced accuracy of patient data; loss of information needed for population health management; delays in developing new products and services; and increased costs associated with clinical trials and drug development.

Natural language processing (NLP) holds great promise to extract more value from clinical data, but current applications within healthcare fall short. Larger NLP vendors often lack sufficient expertise in clinical terminology and coding, resulting in inaccurate identification of clinical concepts. And home-grown solutions that rely on open-source NLP models often require significant investment and resources to achieve the clinical language expertise necessary to train the models.

IMO Precision Normalize is built on an award-winning NLP development platform to efficiently extract problem, diagnosis, procedure, and medication data from unstructured clinical notes. Trained on IMO Health's rich, foundational terminology – which includes more than five million clinical terms with comprehensive code mappings – IMO Precision Normalize is uniquely designed to accurately identify clinical concepts and operationalize unstructured data faster.



Streamline the extraction and standardization of unstructured text

IMO Precision Normalize with NLP automatically and efficiently:

01
Extracts clinical concepts from unstructured free text and standardizes information to a common terminology with extensive code mappings

02
Identifies and connects clinical concepts and relationships across related entities

03
Detects a variety of contextual metadata including time orientation, negation, and body location, for more specific and accurate matching

04
Allows for flexible deployment with IMO Health-hosted or self-hosted options, and integrates seamlessly within tech stacks via API calls

Simplify the process to extract, standardize, and codify unstructured free text

Medical Text

58 y/o man presenting with 3 days of dry cough and shortness of breath. He denies chest pain and fever, and there is no productive cough. Patient has CAD, DM2 with stage 3 chronic kidney disease, chronic diastolic CHF, and high cholesterol. He also states he had a heart attack 2 years ago followed by stenting of his LAD. Medications include labetalol, metformin, Mevacor, and Lasix. He is allergic to penicillin as it gives him a rash. He has no fever. There is a soft systolic ejection murmur, crackles at the lung bases, and right ankle edema.

Normalized

Problem (16)

Normalized Term	Entities	Normalized code
Stage 3 chronic kidney disease due to type 2 diabetes mellitus	DM2 stage 3 chronic kidney disease	E11.22
Chronic diastolic congestive heart failure	chronic diastolic CHF	I50.32
High blood cholesterol	high cholesterol	E78.00
Myocardial infarction	heart attack	I21.9
Allergy to penicillin	allergic to penicillin	Z88.0
Rash	rash	R21
Fever	fever	R50.9
Systolic ejection murmur	systolic ejection murmur soft	R01.1
Respiratory crackles	crackles lung bases	R09.89
Edema of right ankle	ankle edema right	M25.471

Procedure (1)

Medication (4)

Lab (0)

Identifies body location and assertion status – regardless of whether the entity is present, possible, or absent.

Maps diagnosis, problem, procedure, medication, and lab entities to IMO Health's clinician-friendly terminology.

Medical Text

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High blood cholesterol	hig
Myocardial infarction	has
Allergy to penicillin	all
Rash	ras
Fever	fev
Systolic ejection murmur	sys sof
Respiratory crackles	cra lun
Edema of right ankle	ank righ

Procedure (1)

Medication (4)

Lab (0)

Comprehensively maps identified clinical terms to all relevant standard code sets.

Stage 3 chronic kidney disease due to type 2 diabetes mellitus

Domain PROBLEM

Assertion Status Present

Related Entities

DM2

stage 3 chronic kidney disease

Score 0.85

Mapping details

ICD-10-CM

E11.22 Type 2 diabetes mellitus with diabetic chronic kidney disease

N18.30 Chronic kidney disease, stage 3 unspecified

ICD-9-CM

250.40 Type II or unspecified type diabetes mellitus with renal manifestations, not stated as uncontrolled

585.3 Chronic kidney disease, Stage III (moderate)

SNOMED

731000119105 Chronic kidney disease stage 3 due to type 2 diabetes mellitus

44054006 Type 2 diabetes mellitus

IMO Lexical

52863162 Stage 3 chronic kidney disease due to type 2 diabetes mellitus

Ready to improve clinical data quality at scale? Contact us at sales@imohealth.com or **847-272-1242** to learn more about IMO Precision Normalize.

