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# MIMIC-III as a Relational Database

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# MIMIC-III Tables

Patient Tracking:	ICU Data:	Hospital Data:	Dictionary Tables:
• admissions	• chartevents	• caregivers	• d_cpt
• icustays	• inpatientevents_cv	• cptevents	• d_icd_procedures
• patients	• inpatientevents_mv	• diagnoses_icd	• d_items
• callout	• datetimedevents	• drgcodes	• d_icd_diagnoses
• transfers	• outputevents	• labevents	• d_labitems
	• procedureevents_mv	• microbiologyevents	
		• noteevents	
		• prescriptions	
		• procedures_icd	
		• services	



# MIMIC-III Basic Tables

## Patient Tracking:

- admissions
- icustays
- patients
- callout
- transfers

patients			
row_id	subject_id	...	
			46,520 rows 19 >

admissions			
row_id	subject_id	hadm_id	...
< 1	58,976 rows	18	>

icustays			
row_id	subject_id	hadm_id	icustay_id
< 2	61,532 rows	8	>



# MIMIC-III: ICU Tables

Patient Tracking:	ICU Data:
• <b>admissions</b>	• <b>chartevents</b>
• <b>icustays</b>	• <b>inputevents_cv</b>
• <b>patients</b>	• <b>inputevents_mv</b>
• <b>callout</b>	• <b>datetimeevents</b>
• <b>transfers</b>	• <b>outputevents</b>
	• <b>procedureevents_mv</b>



# MIMIC-III: ICU Tables

## Patient Tracking:

- **admissions**
- **icustays**
- **patients**
- **callout**
- **transfers**
- **chartevents**
- **inputevents\_cv**
- **inputevents\_mv**
- **datetimeevents**
- **outputevents**
- **procedureevents\_mv**

## Dictionary Tables:

- **d\_cpt**
- **d\_icd\_procedures**
- **d\_items**
- **d\_icd\_diagnoses**
- **d\_labitems**



# MIMIC-III Tables

Patient Tracking:	ICU Data:	Hospital Data:	Dictionary Tables:
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• <b>icustays</b>	• inputevents_cv	• cptevents	• d_icd_procedures
• <b>patients</b>	• inputevents_mv	• <b>diagnoses_icd</b>	• <b>d_items</b>
• callout	• datetimeevents	• drgcodes	• d_icd_diagnoses
• transfers	• <b>outputevents</b>	• <b>labevents</b>	• <b>d_labitems</b>
	• procedureevents_mv	• microbiologyevents	
		• noteevents	
		• prescriptions	
		• <b>procedures_icd</b>	
		• services	





# Summary

- It is important to understand the schema of the database
- The basic tables are needed to extract descriptive statistics about patients
- There is more than one ways to extract similar information
- It is important to understand the source of the data



## References

- Johnson et al. 'MIMIC-III, a freely accessible critical care database', Scientific Data, 2016.
- Gamal et al. 'Standardized electronic health record data modeling and persistence: A comparative review', Journal of Biomedical Informatics, 2020.