The eICU Collaborative Research Database, a freely available database for critical care research

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Abstract

- Introduce the eICU Collaborative Research Database.
- Valuable dataset for research and education.

1 Introduction

- Introduction to the database (Cousteau Jacques & Dugan James 1963).
- Previously shared MIMIC-III (Johnson et al. 2016)

1.1 Patient characteristics

- How many patients, characteristics, etc.
- Table 1 provides a breakdown of the population.
- Table 2 shows the most common ICD codes

1.2 Classes of data

- Data includes time stamped physiological measurements, etc.

- Table 2 gives overview of the classes of data available.
- Figure 1 shows an example for a single patient.

2 Methods

2.1 Database development

- Data collected as part of the Philips eICU programme.
- Outline data streams etc

2.2 Sample selection

- Sample was selected to represent the full dataset

2.3 Deidentification

- Deidentification using Python package.
- HIPAA compliant etc.

2.4 Code availability

- Code used to extract concepts from the data is under development and shared at: https://github.com/mit-eicu/eicu-code

3 Data records

- eICU Collaborative Database is a relational database comprising X tables.
- Structure is…

4 Technical validation

- Changes were kept to a minimum
- Issue tracking used to keep track of issues
- Compared distribution of X to MIMIC. Figure shows…

5 Usage notes

5.1 Data access

- Data can be accessed by…

5.2 Example usage

- Examples of usage include…

5.3 Conclusion

- Shared a unique resource
- Move towards end-to-end reproducible research

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Author contributions

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Competing interests

The MIT Laboratory for Computional Physiology received funding from Philips Healthcare to undertake work on the database described in this paper. XXX are employees of Philips Healthcare. The authors have no additional competing interests to declare.

References

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