

Data Quality and Hidden Influences in Electronic Medical Record Data

LeaRRN Spring 20223 Webinar Series

Michael G. Kahn (Michael.Kahn@cuanschutz.edu)

12-January-2023

References

1. Blacketer C, Defalco FJ, Ryan PB, Rijnbeek PR. Increasing trust in real-world evidence through evaluation of observational data quality. *Journal of the American Medical Informatics Association*. 2021 Sep 18;28(10):2251–7.
2. Blacketer C, Voss EA, DeFalco F, Hughes N, Schuemie MJ, Moinat M, et al. Using the Data Quality Dashboard to Improve the EHDEN Network. *Applied Sciences*. 2021 Jan;11(24):11920.
3. Callahan T, Barnard J, Helmkamp L, Maertens J, Kahn M. Reporting Data Quality Assessment Results: Identifying Individual and Organizational Barriers and Solutions. *EGEMS (Wash DC)*. 2017 Sep 4;5(1):16.
4. Callahan TJ, Baumgartner Jr. WA, Matentzoglou NA, Vasilevsky NA, Hunter LE, Kahn MG. Adapting the Harmonized Data Quality Framework for Ontology Quality Assessment [Internet]. Zenodo; 2022. Available from: <https://doi.org/10.5281/zenodo.6941289>
5. Callahan TJ, Bauck AE, Bertoch D, Brown J, Khare R, Ryan PB, et al. A Comparison of Data Quality Assessment Checks in Six Data Sharing Networks. *EGEMS (Wash DC)*. 2017 Jun 12;5(1):8.
6. Holmes JH, Beinlich J, Boland MR, Bowles KH, Chen Y, Cook TS, et al. Why Is the Electronic Health Record So Challenging for Research and Clinical Care? *Methods Inf Med*. 2021 May;60(01/02):032–48.
7. Kahn MG, Callahan TJ, Barnard J, Bauck AE, Brown J, Davidson BN, et al. A Harmonized Data Quality Assessment Terminology and Framework for the Secondary Use of Electronic Health Record Data. *eGEMs (Generating Evidence & Methods to improve patient outcomes) [Internet]*. 2016 Sep 11 [cited 2016 Sep 12];4(1). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5051581/pdf/egems1244.pdf>
8. Khare R, Ruth BJ, Miller M, Tucker J, Utidjian LH, Razzaghi H, et al. Predicting Causes of Data Quality Issues in a Clinical Data Research Network. *AMIA Jt Summits Transl Sci Proc*. 2018 May 18;2017:113–21.
9. Khare R, Utidjian L, Ruth BJ, Kahn MG, Burrows E, Marsolo K, et al. A longitudinal analysis of data quality in a large pediatric data research network. *J Am Med Inform Assoc*. 2017 Nov 1;24(6):1072–9.
10. Liaw ST, Guo JGN, Ansari S, Jonnagaddala J, Godinho MA, Borelli AJ, et al. Quality assessment of real-world data repositories across the data life cycle: A literature review. *Journal of the American Medical Informatics Association*. 2021 Jul 14;28(7):1591–9.
11. Micallef L, Rodgers P. Drawing area-proportional venn-3 diagrams using ellipses. 12th Annual Grace Hopper Celebration of Women in Computing, ACM Student Research Competition and Poster Session; Baltimore, MD2012.

12. Qualls LG, Phillips TA, Hammill BG, Topping J, Louzao DM, Brown JS, et al. Evaluating Foundational Data Quality in the National Patient-Centered Clinical Research Network (PCORnet®). *eGEMs (Generating Evidence & Methods to improve patient outcomes)*. 2018 Apr 13;6(1):3.
13. Raebel MA, Haynes K, Woodworth TS, Saylor G, Cavagnaro E, Coughlin KO, et al. Electronic clinical laboratory test results data tables: lessons from Mini-Sentinel. *Pharmacoepidemiol Drug Saf*. 2014 Jun;23(6):609–18.
14. Razzaghi H, Greenberg J, Bailey LC. Developing a systematic approach to assessing data quality in secondary use of clinical data based on intended use. *Learning Health Systems*. 2022;6(1):e10264.
15. Reynolds MW, Bourke A, Dreyer NA. Considerations when evaluating real-world data quality in the context of fitness for purpose. *Pharmacoepidemiol Drug Saf*. 2020 Oct;29(10):1316–8.
16. Weiskopf NG, Weng C. Methods and dimensions of electronic health record data quality assessment: enabling reuse for clinical research. *Journal of the American Medical Informatics Association: JAMIA*. 2013 Jan 1;20:144–51.
17. Weiskopf NG, Hripcsak G, Swaminathan S, Weng C. Defining and measuring completeness of electronic health records for secondary use. *J Biomed Inform*. 2013 Oct;46(5):830–6.
18. Weiskopf NG et al. Towards augmenting structured EHR data: a comparison of manual chart review and patient self-report. *AMIA Annual Symposium Proceedings 2019 (Vol. 2019, p. 903)*.