Implementing a quality assurance program for technology-enabled curation of oncology real-world data

Wicks M, Levie K, Burkhart J, Hess D, Kennedy S, Wolf F, Lorenzo R, Widmer L Syapse, San Francisco, CA

BACKGROUND

- Quality Assurance (QA) is the backbone of clinical data abstraction. Quality Control (QC) procedures provide confidence in the completeness and accuracy of critical data elements. QA is an organization's philosophical approach to quality and the implementation of various benchmark practices and methods to ensure the production of high quality data.¹ QA activities include both automated and manual assessment of abstracted data.
- QC utilizes procedures to measure and improve data accuracy and completeness. QC planning specifies which QC activities should be performed and how to perform them. It also outlines methods and resources used to perform QC. At Syapse, QC aims to identify areas for data curation improvement and maintain a high value of data that is used to draw meaningful insights.
- QA determines the value of data collected for cancer control initiatives using real-world evidence (RWE), supporting delivery of patient care and research. Meaningful insights can only be drawn from quality data.

METHODS

- Syapse's RWE platform combines data from diverse sources, curating a comprehensive view of the patient journey, creating powerful insights that impact patient care. Certified Tumor Registrars (CTRs) enrich patient data with additional information sourced directly from the Electronic Health Record (EHR). CTRs are data information specialists who collect and report cancer statistics, capturing a complete history, diagnosis, treatment, and health status for every cancer patient in the United States.²
- This technology-enabled curation allows for the structuring of complex data that is often found in provider notes and scanned documents. CTRs possess specialized expertise regarding oncology data and EHR navigation, enabling nuanced curation of data surrounding patient care. Datasets are tested for quality using the Syapse QC model. This consists of metrics conforming to oncology Standard Setters–professional organizations and government agencies who set stringent requirements for cancer data collection. Syapse developed a proprietary Average Accuracy Rate (AAR) calculation, measuring concordance between abstractors, weighing data elements based on importance to the dataset (e.g., greater weight for histology given the cruciality of understanding the patient's diagnosis). Syapse CTRs are required to maintain a standard of 95% or greater overall accuracy.



RESULTS

5,468 patient cases were randomly selected in 2021-2022 from the Syapse Learning Health Network. These underwent quality review, receiving an overall AAR of 97.0%. Cancer cohorts included: Acute Myeloid Leukemia, receiving an AAR of 97.8%; Bladder 97.1%; Breast 97.2%; Lung 97.9%; Ovarian 96.7%, and Prostate 97.3%.

CONCLUSIONS

Through the development of robust QC processes for technology-enabled curation, Syapse CTRs enrich oncology RWD to generate RWE, supporting oncology patient care and research for a network of community health systems. With an overall AAR of 97.0% across disease sites, quality data is the foundation of RWE.

Cohort	Average Accuracy Rate (AAR)
AML	97.8%
Bladder	97.1%
Breast	97.2%
Lung	97.9%
Prostate	97.3%
Ovarian	96.7%
Overall total	97.0%

TABLE 1 Average Accuracy Rates across Cohorts, 2021-2022



ISPOR 2023

May 7-10, 2023 Poster ID: RWD97 Abstract Number: 126900



REFERENCES

- . Hilsenbeck SG, Glaefke GS, Feigl P, et al. Quality Control for Cancer Registries. 2nd printing. U.S Department of Health and Human Services; 1985. Accessed February 1, 2023. https://seer.cancer. gov/archive/manuals/historic/quality_control.pdf
- 2. National Cancer Registrars Association. Certified Tumor Registrar (CTR®) Credential. National Cancer Registrars Association. Accessed January 15, 2023. https://www.ncra-usa.org/CTR/Potential-CTRs