LOUISIANA TUMOR REGISTRY

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NPCR 2024 SUCCESS STORY

Using eMaRC Lite to Streamline Pathology Report Reviews and Enhance Rapid-Case Ascertainment Studies

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SUMMARY

The Louisiana Tumor Registry (LTR)'s new Reportability application programming interface (API) increased the number of false-positive reports by 30%, resulting in a significant backlog of e-path reports that require manual review. This backlog hindered rapid case ascertainment for numerous ongoing research studies and timely identification of reportable cancer cases. To reduce false-positive e-path reports, we implemented the National Program of Cancer Registries' (NPCR's) eMaRC Lite software to supplement the Reportability API. eMaRC Lite significantly reduced the false-positive e-path reports, lowering our pathology report screeners' workload. LTR developed more eMaRC Lite models to help identify potentially eligible cases for our rapid case ascertainment studies.

CHALLENGE

- In late 2023, the license for the pathology screening software used by the laboratories reporting to the LTR expired and was not renewed. This software was installed at the pathology laboratories and transmitted potentially reportable e-path reports to LTR. After the license expired, we asked all e-path laboratories to transmit e-path reports in HL7 format, for which we implemented a new API that uses natural language processing to identify potentially reportable e-path reports for manual review.
- Due to the lack of maturity of the new API, the number of false-positive e-path reports increased by 30%. The increased manual review workload slowed down the screening process, leading to an extensive backlog of e-path reports.
- The delay in screening e-path reports to determine reportability adversely affected LTR's rapid case ascertainment for numerous ongoing studies and timely data reporting.

SOLUTIONS

- Reducing non-reportable pathology reports in the registry database:
  - » Step 1. Filter pathology reports through the Reportability API; those deemed reportable become screening tasks in the registry database.
  - » Step 2. Export screening tasks and run through the LTR-specific configuration of NPCR's eMaRC Lite.
  - » Step 3. For reports eMaRC Lite deems non-reportable, create a mass change to code them as non-reportable in the registry database.
  - » Step 4: Remaining e-path screening tasks are reviewed by pathology screeners.
- Identifying cases for rapid-case ascertainment studies:
  - » Step 1. Reports filtered by the Reportability API and eMaRC Lite are exported and scanned by a project-specific eMaRC Lite configuration.
  - » Step 2. Reports deemed potentially eligible for a particular project are added to the "Special Study" in the registry database.
  - » Step 3. The study coordinator reviews the potentially eligible reports for inclusion based on the eligibility criteria.

RESULTS

- Reducing non-reportable pathology reports in the registry database:
  - » The eMaRC Lite software reduced the number of e-path screening tasks by 45%.
  - » The false-negative rate is about 1%.
- Identifying cases for rapid-case ascertainment studies:
  - » eMaRC Lite software has been configured for two special projects: one for collecting pre-invasive cervical cancers and one for identifying colon cancer cases prior to initiation of chemotherapy.
  - » About 75% of the cases identified for the pre-invasive cervical cancer project are reportable.

CONCLUDING REMARKS

- eMaRC Lite has been invaluable to our registry in terms of reducing false-positive e-path reports and saving staff time.
- The ability to tailor the eMaRC Lite for special projects enables us to continue moving forward with our commitment to cancer research.

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