Development of an Electronic Surgical Site Surveillance Program in a Multi-Surgery ASC without an Electronic Medical Record

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Background & Significance

- The surgical site surveillance program for tracking surgical site infections (SSIs) was manual, time-consuming, and included all procedures in our multi-specialty Ambulatory Surgery Centers (ASCs) – tracking everything, but tracking nothing
- Research review prompted updating the current practice from tracking all procedures to a targeted list aligned with the National Healthcare Safety Network (NHSN)
- Leveraged technology in the absence of an EMR, utilizing REDCap, a web-based platform to facilitate the transition from a manual process to an electronic surveillance program
- Transitioning to an electronic database provided automated reporting of SSI, improved efficiencies, reduced costs, time, and leveraged economies of scale

Purpose

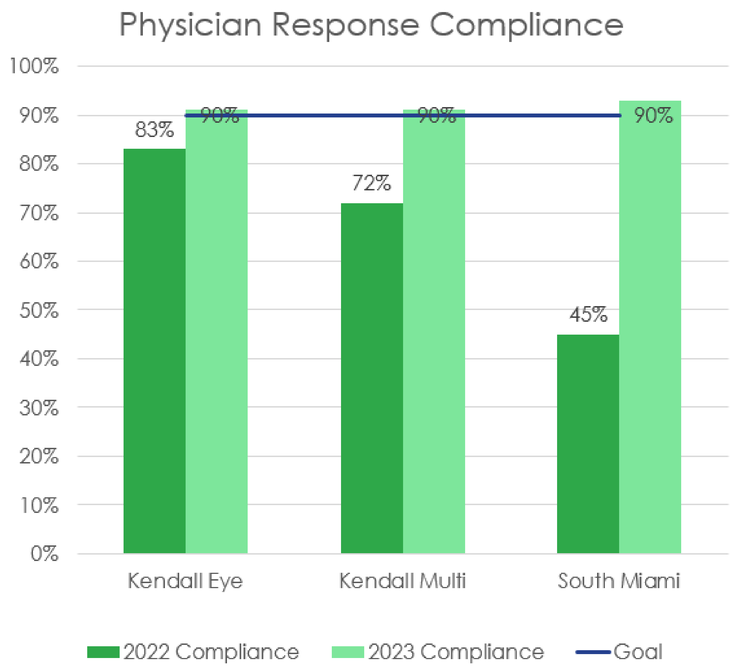
- Implemented an evidence-based approach aligned with NHSN Operative Procedure Categories (OPCs) for SSI surveillance
- Utilized the operative procedures deemed high-risk by NHSN to track SSIs in our multi-specialty ASCs to enhance patient outcomes and decrease risk of post-operative infections

Methods

- Workflow analysis was conducted to transition the program from paper to the REDCap database
- Assessment included pulling all Current Procedural Terminology (CPT) and ICD-10 codes for surgical procedures at the sites and developing a query to track the operative procedures listed under the NHSN
- A REDCap survey was built utilizing the NHSN's post discharge worksheet for suspected SSIs
- Data queries were validated and tested in the database; branching logic was included in the survey to enhance the physician experience when completing attestations within the platform
- A unique physician worklist was created in the database allowing each site to track physician compliance with SSI attestations
- Previous SSI data was reviewed across three ASC sites; site-specific ophthalmology procedure codes not listed under the NHSN's OPCs were added to the SSI surveillance program

Results

- In 2022, physician response rates were below the benchmark of 90% across the three ASC sites prior to the workstream implementation
- In 2023, physician response rates increased to 90% post workstream implementation across the three ASC sites

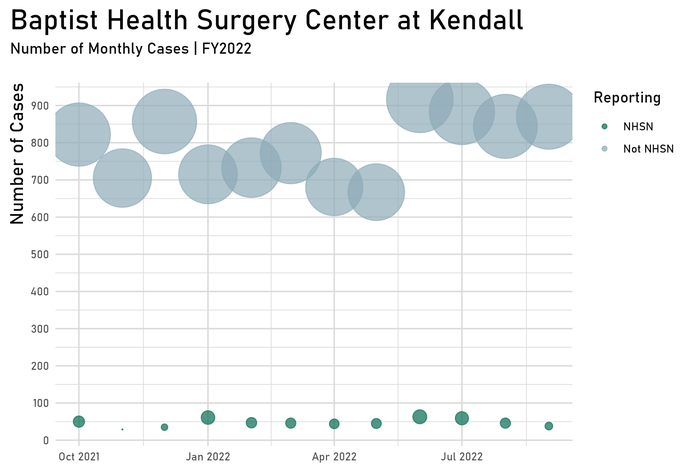


Conclusion

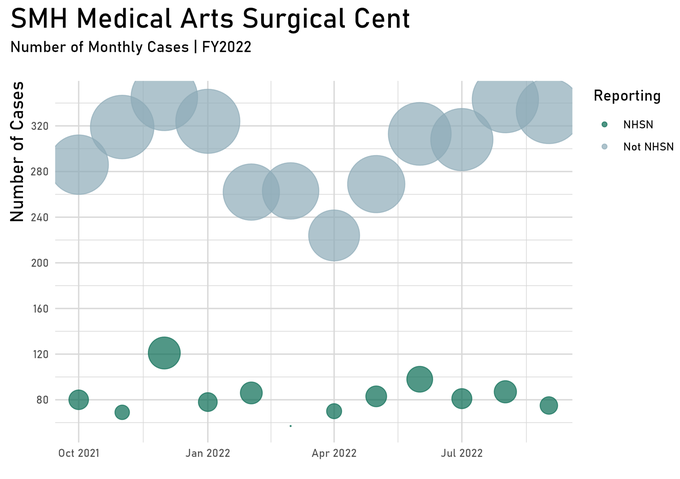
- Primary purpose of a robust SSI surveillance program is to gain a better understanding of patient outcomes and infection rates post operatively
- Transitioning the program from paper to an electronic database allowed the sites to decrease physician turnaround time for attestations; electronic reporting provided data on patient outcomes allowing us to track and trend data to improve patient care
- Timely feedback enables nursing teams to make adjustments to patient education and care during future patient interactions to prevent SSIs

Discussion

- Analysis of surgeries (excluding ophthalmology) at the ASCs revealed 84% of the cases collectively at three centers were not procedures listed under the NHSN's OPC
- The work stream redesign for surgical site surveillance reduced the tracking volume from 100% of all procedures to a manageable percentage of cases which allowed us to target our physician population and align care with evidenced-based practices identified by NHSN



Bubble Size = Number of Cases



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