Using Innovation to Empower the Nursing Staff and Support Proper Wound Classification in the Operating Room

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THE CHALLENGE

While Wound Classification has been defined and widely promoted by national organizations like AORN, our three hospital Singing River Health System (SRHS) found that frontline nursing staff needed additional support to improve outcomes, save lives and reduce costs. We identified a critical need to hardwire classification practices across departments. In the context of a workforce increasingly comprised of “digital natives,” and the added complexities of distancing in the post-COVID "New Normal,” a new approach to learning was needed.

Previous approaches to reinforcing the four wound classification categories included:

- Posters strategically placed in the Operating Room (OR)
- Discussions at Staff Meetings with sharing of metrics
- Email reminders to staff about the importance of proper wound classification and how to document in the Electronic Health Record (EHR).

Even with these practices in place, regular wound assessment audits by hospital leadership found frequent errors in wound classification, especially on obstetrical cases and abdominal surgery cases. It was clear that traditional training methods did not adequately support our staff.

BACKGROUND: INAPPROPRIATE WOUND CLASSIFICATION

The Centers for Disease Control and Prevention defined a surgical wound classification (SWC) system to preemptively identify patients at risk of surgical site infection (SSI):

- SWC I: clean
- SWC II: clean/contaminated
- SWC III: contaminated
- SWC IV: dirty

Proper wound classification is important for:

- appropriate patient care and safety
- post surgical care and SSI prevention
- team communication
- reimbursement

All surgical nurses should be competent in SWC; yet maintaining consistency in nursing practice across a large distributed workforce is difficult.

APPLICATION OF CLOUD-BASED INNOVATION TO SUPPORT NURSE TRAINING AND COMMUNICATION

SRHS deployed a team-based digital microlearning solution (Elemeno Health, Oakland, CA) to support staff training and communication, both asynchronously and contextually (Fig. A). The solution was delivered on web-enabled devices, including workstations and personal mobile. The application allowed dissemination of team updates (Fig. B) and multi-media refreshable training (Fig. C), on-demand, at the point of care. Gamification was also used to drive engagement (Fig. D). This allowed our team to reduce time in classroom training, while providing staff simple repeatable access to desired support for procedures, equipment, and workflows.

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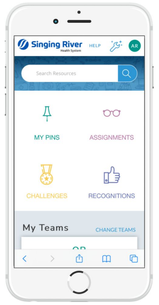

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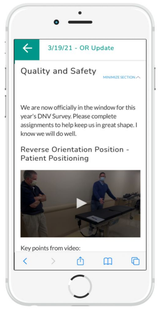

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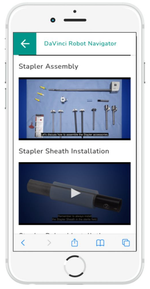

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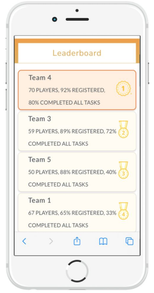


ACTION PLAN: ADDRESSING SWC TRAINING AND SUPPORT AT THE POINT OF CARE

SRHS developed a cross-system team with representatives from the procedural and operating rooms to develop a plan for process improvement (“Workplan”) targeting wound classification, leveraging the new point of care microlearning solution. Steps included:

- Development of an interactive decision guide and self-assessment for wound classification, based upon the AORN Decision Tree, for deployment on Elemeno and fingertip distribution to all staff in the OR, procedural areas, and Labor & Delivery (L&D).
- Running a gamified challenge for all OR and L&D staff where they were able to use the actionable Decision Guide for any case where they were uncertain of classification stage.
- Communicate SWC training to staff via Elemeno through (i) highlighting new resources, (ii) weekly team updates, and (iii) gamified challenges.
- Tracking engagement by team and individual, helping team leaders determine how to optimally focus personal 1:1 training.
- Randomly auditing SWC monthly by hospital leadership to determine overall nursing performance.

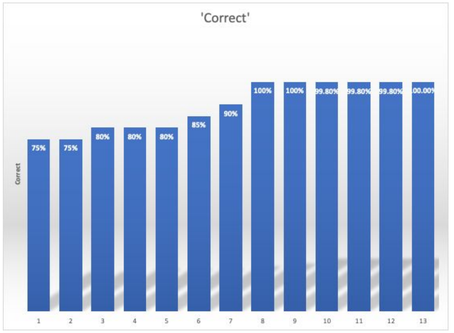
RESULTS

Data was collected for one year (July 2020 – July 2021) following the implementation of the Workplan: **SWC frontline staff accuracy improved by 35%, to reach 98% by Feb 2021.**

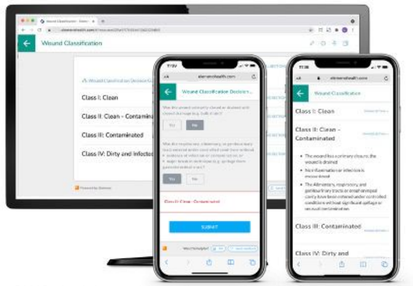
From March 2021 through July 2021 the following audit findings were observed:

- 6 colon/bowel cases needed reclassification
- No L&D and other OR cases required reclassification
- The average case totals per month is 895 for the two main SRHS surgical programs (Ocean Springs and Pascagoula, MS).
- Over the past five months (March to July 2021), of the total cases reviewed (4475), six (6) cases were incorrectly classified resulting in a sustained improvement of correct classification of 99.87%.

SWC accuracy rates continue to be reported to the staff through the weekly updates delivered via the Elemeno platform.



Monthly frontline surgical nurse SWC accuracy



SWC decision guide delivered via microlearning solution

CONCLUSIONS

By leveraging an innovative cloud-based team microlearning and communication solution, we successfully delivered sustainable surgical wound classification training to our frontline surgical nurses - improving outcomes, saving lives and reducing costs

The increasingly complex post pandemic world requires us to look to innovation to:

- Simplify access to readily consumable information to support accurate patient care and documentation
- Deliver information where and when needed, including at the point of care
- Involve frontline staff in process improvement, as both active participants and contributors
- Equip the frontline with the tools needed to optimally do their job, elevate engagement and reduce burnout

REFERENCES

J Am Acad Orthop Surg Glob Res Rev. 2017 Jun; 1(3): e022.

AORN J - 2004 Aug;80(2):208-9, 212-23. doi: 10.1016/s0001-2092(06)60559-0.