

Improving Surgical Site Infection Monitoring and Surveillance in a Rehabilitation Hospital



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Background

There was an increase noted in the number of patients with Surgical Site Infections (SSI's) in Clontarf hospital in Q1 2023.

Clinical definition of a Surgical Site Infection:

'Infectious process present at the site of surgery. Clinical signs and symptoms of infection include heat, redness, swelling, elevated body temperature and purulent exudate from the wound or the drain.'(1)

Definition of a Surgical Site Infection for Surveillance:

Infections occurring up to 30 days after surgery (or up to 90 days after surgery in patients with implants) and affecting either the incision or deep tissue at the operation site. According to the range of affected tissues SSI can be: superficial, deep or organ space (1).

Conclusion

Surveillance and monitoring of SSI's has been shown to reduce rates of infection and is the vital component of infection prevention and control programmes (2).

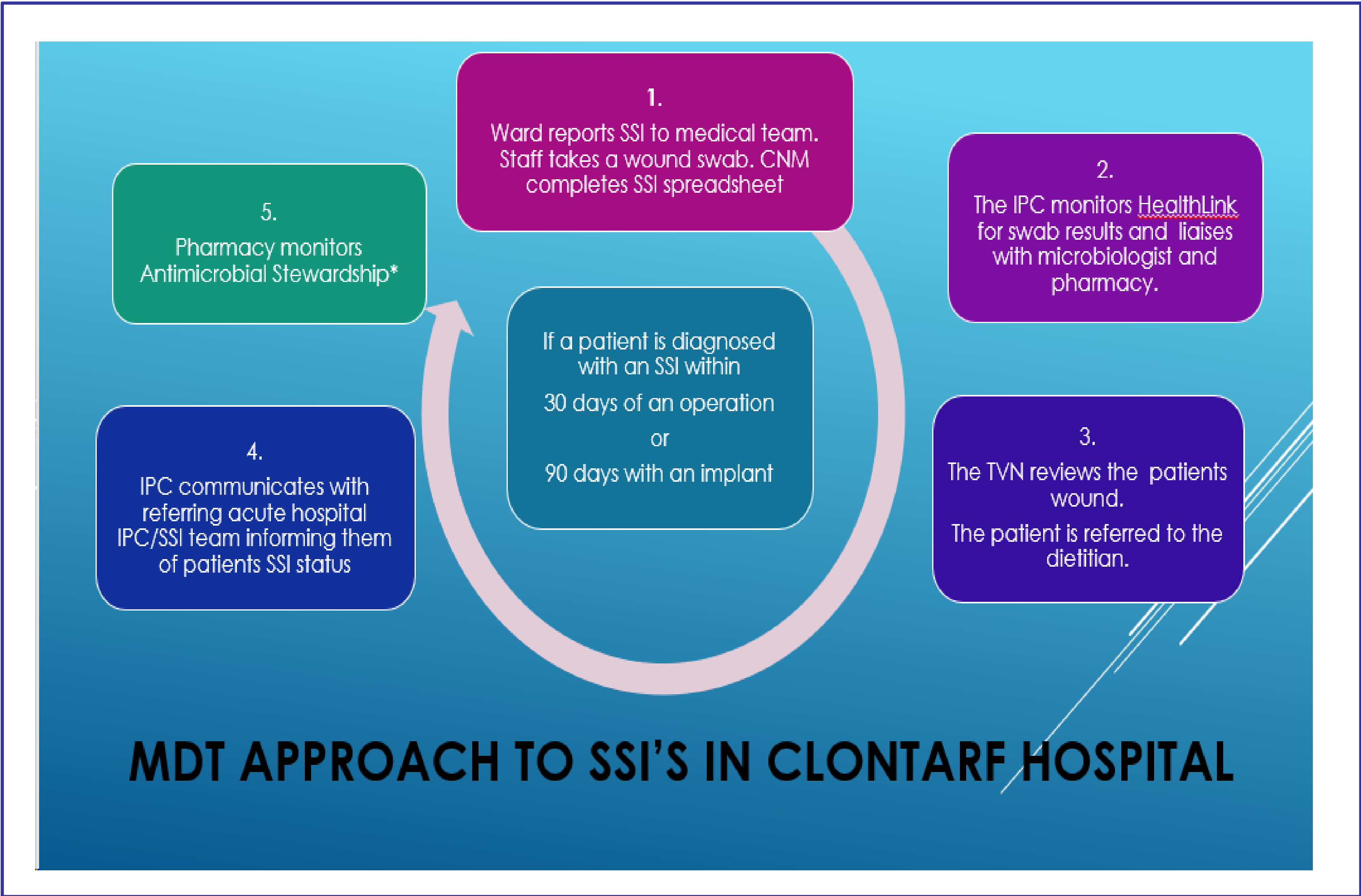


Plan, Do, Study, Act (PDSA) Quality Improvement Plan

Aims & Objectives of Project:

- To capture wound infection rates
- To capture appropriate wound swab usage and cost
- To capture wound swab results and appropriate treatment
- To feedback results to admitting hospitals

Figure A: Plan



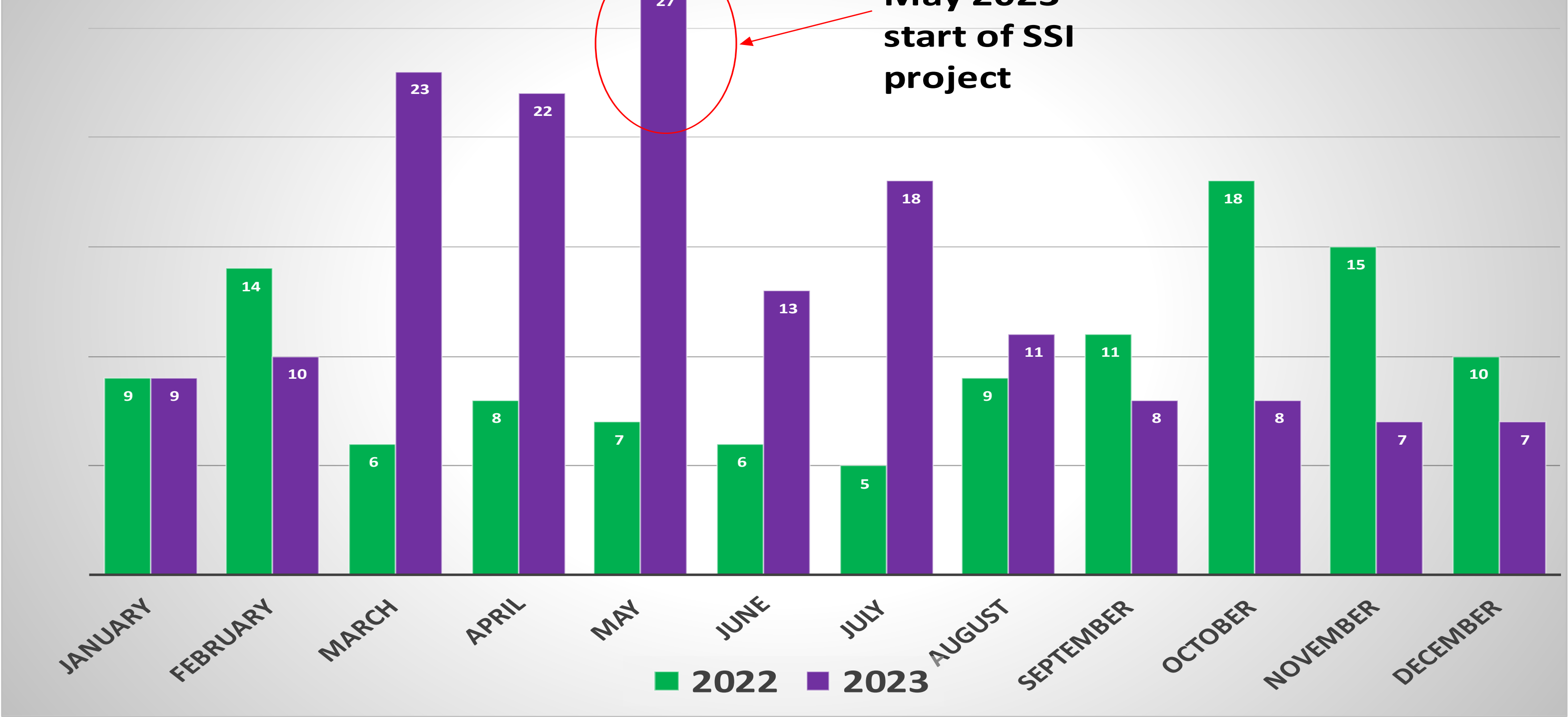
Do – The Intervention

A spreadsheet was developed and placed on all the Clinical Nurse Managers (CNM's) computer desktops. They were educated on the wound infection project, spreadsheet and how to input patient data.

An education programme was rolled out to all staff on signs & symptoms of wound infection and the correct procedure for taking a wound swab (3). Nursing staff were also educated on wound dressing changes (1).

A letter was sent out to all IPC departments in the acute hospitals informing them of our SSI project and seeking advice on who to formally contact regarding wound infections (Fig A).

Figure B Surgical Site Wound Swabs 2022 & 2023

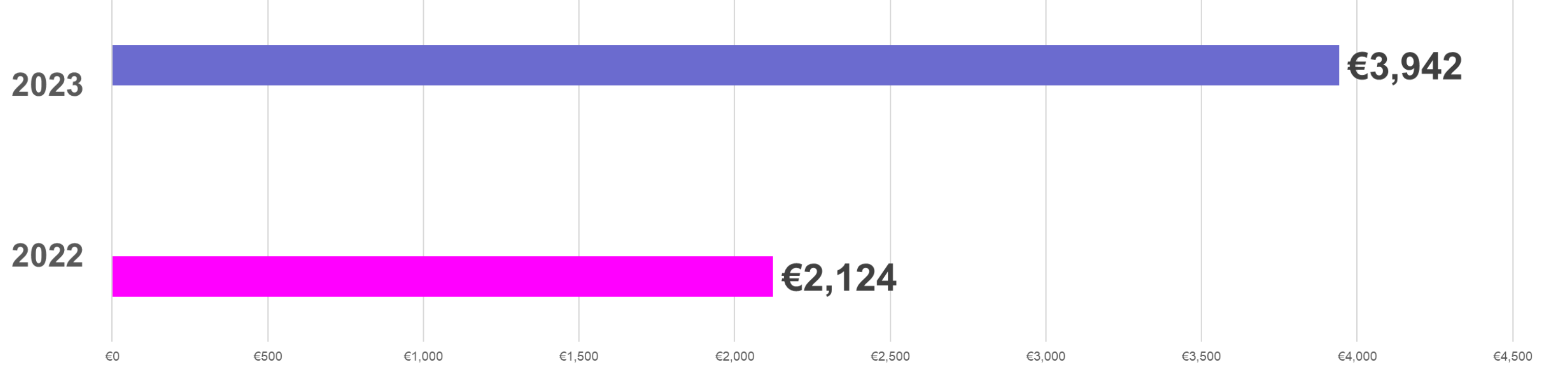


Study– The Results

Wound swab usage had decreased from 27 to 7 from May to December 2023(Fig B). There was a higher percentage of positive wound swabs: May = 67% to December = 83%. Staff trained on signs and symptoms of wound infection and how to correctly take a wound swab =63%. In 2022 a total of 118 wound swabs were taken, cost = €2124 (€18 per swab). In 2023 a total of 163 wound swabs were taken at a cost = €3942 (€18 per swab Jan-Feb, increased to €25 per swab from March onwards) (Fig c).

Figure C.

Cost of Wound Swabs 2022 v's 2023



Act -To Maintain & Sustain

All positive wound swabs for SSI's are feedback to the referring hospital IPC department. This is a new pathway which has been set up to ensure communication between hospitals and record infected wounds.

The TVN and IPC will continue to monitor and sustain this project.

References

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- Castella A, Argentero PA, Farina EC et al. Incidence of surgical-site infections in orthopaedic surgery: a northern Italian experience. Epidemiol Infect 2011; 139(5):777–782. <https://doi.org/10.1017/S0950268810001627>.
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