

Introduction

In 2016, the Skin Integrity Team (SIT) at Doncaster and Bassetlaw Teaching Hospitals NHS Foundation Trust (DBTH) identified inconsistencies and variability in the wound care provisions provided in the outpatient wound care clinic for wound cleansing and a rise in wound infections rate. Unwarranted variation was also recognised nationally by the work undertaken by Guest et al (2015) highlighted the burden of wound care. SIT began the process of understanding and planning to improve practice with the aim of improve patient's outcomes. Through introducing the evidence based decision into the local formulary and pathway, supported with education, it has enabled patient outcomes to be improved through a reduction in wound infections. Results from this has shown the change has achieved a reduction in wound infection in the outpatients dressing clinic and this has been sustained below the average trend for over the last 5 years. By continuous review of the evidence and process, through research review, evaluations and audits, the impact of the decision and sustained improvement has been quantified, providing the assurance that evidence based decision making was achieved and is successful.



Method and Discussion

What to Improve: The main area that required improvement was to reduce the high levels of infection rate within the complex wound clinic (CWC) at DBTH.

Understanding the problem: There was no consistent approach to wound bed preparation (WBP). Where WBP was undertaken the main product choice was Normal Saline.

Change ideas: SIT gained a background and understanding to the evidence that was available around the role of an 'active cleanser' as an integral part of the wound bed preparation process following attending Wounds UK in 2016.

Planning: SIT reviewed the current literature and evidence available around PHMB and betaine surfactant solutions which identified there were 11 pieces of evidence available. SIT critically appraise the evidence to judge its trustworthiness, its value and relevance in the context of wound bed preparation to reduce wound infection.

Testing: An evaluation was undertaken in 2016 over 13 weeks including patients within the CWC that has a wound which had failed to reduce in size over a preceding 21 days and/or had received repeated rounds of

Antimicrobial treatments. The practice of wound cleansing within the CWC was replaced with a PHMB and betaine solution soak (Prontosan Wound Irrigation Solution). This was undertaken consistently at every dressing change. No other procedural changes were implemented during this phase.

Measuring: A clear reduction in wound size for the wounds by 40% to 73% over the 13 weeks.

Concluding: SIT concluded that Prontosan Wound Irrigation Solution had a combination of high level evidence with local evidence built from user experience.

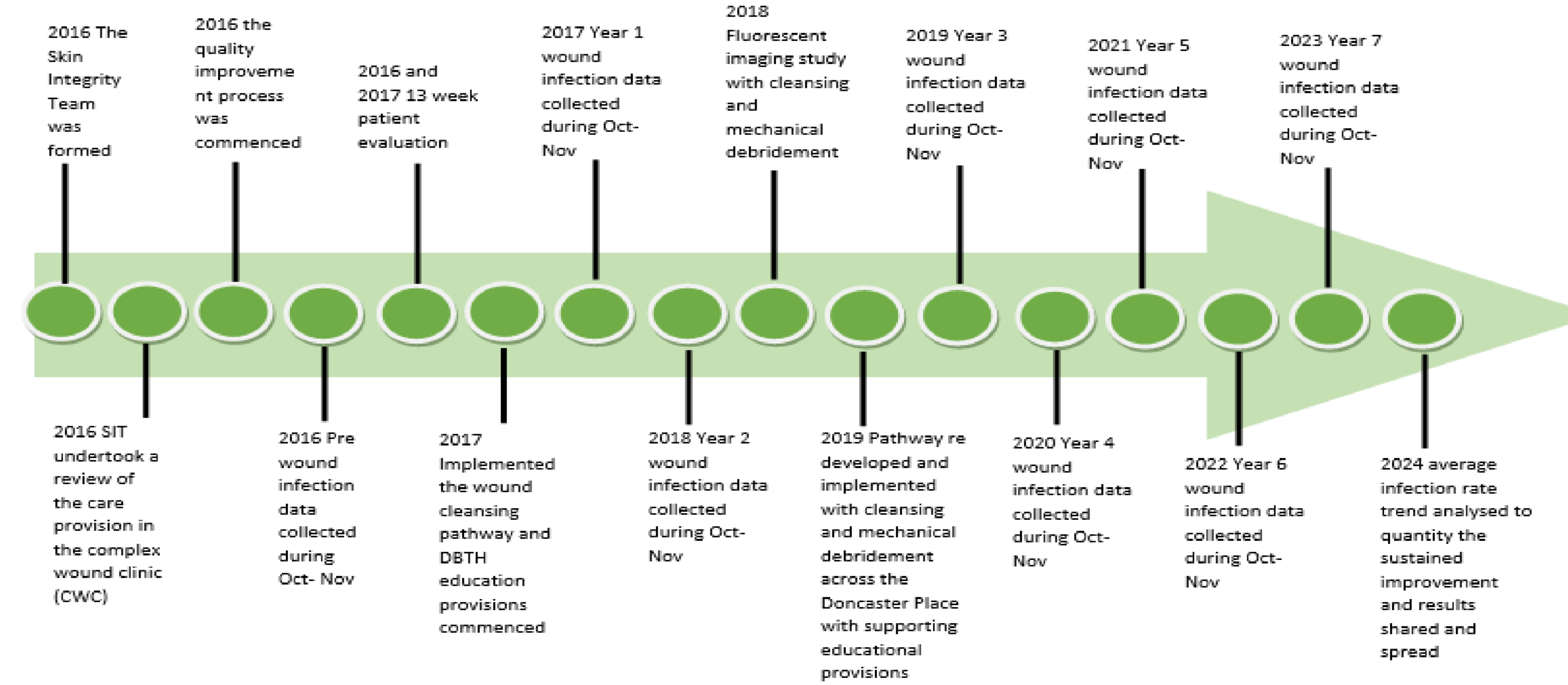
Planning: This product was selected to form part of the wound care formulary and pathways to provide an optimum environment for wound bed preparation and reduce wound infection rates (T Vernon, K Moore, M Collier, 2021).

Implementing : In 2017 the Pathway and accompanying user guide was implemented across DBTH. In addition to this as we could demonstrate the EPB through high level evidence and user experience it was also implemented across 3 other organisations within the Doncaster place.

Embedding: SIT provided education and support across the Doncaster Place. Pre and post education assessments were conducted to gain an understanding of level of knowledge around wound cleansing, including on topics such as biofilms, wound infection and wound assessment (Atkin and Tettelbach, 2019). Every year over the same 4 week period an evaluation is undertaken to quantify the percentage of patients attending the CWC that develop a wound infection. The pathway and process is also re reviewed yearly under a PDSA cycle to identify if any changes were required.

PDSA: The wound infection rate in 2019 demonstrated an 84.3% reduction over the 2 year period. A clinical evaluation of using mechanical debridement in combination with wound cleansing, using a fluorescent imaging device to visualise a patient's wound bioburden at different stages of management was undertaken in 2019 by SIT. The pathway was update to include mechanical debridement using the Prontosan Debridement Pad.

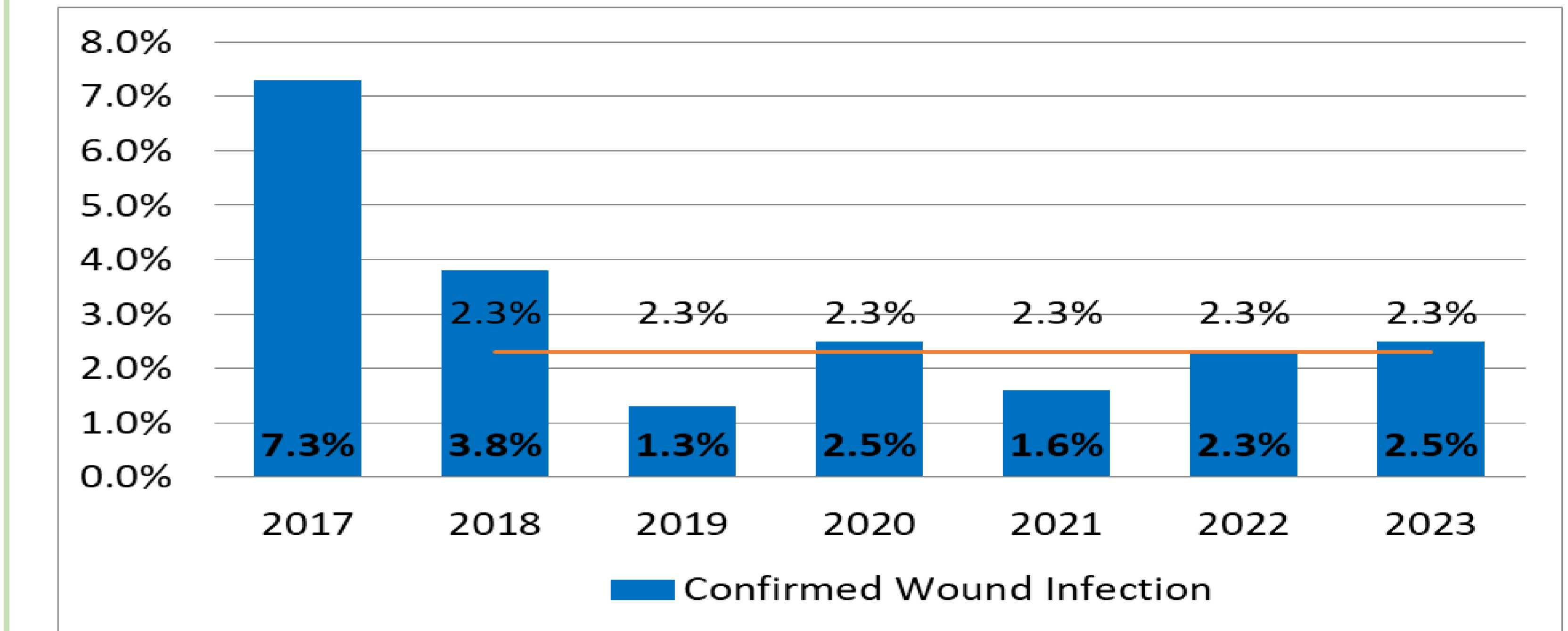
Measuring: The wound infection percentage rate in CWC reduced by a total of 65.7% since 2017 to 2023.



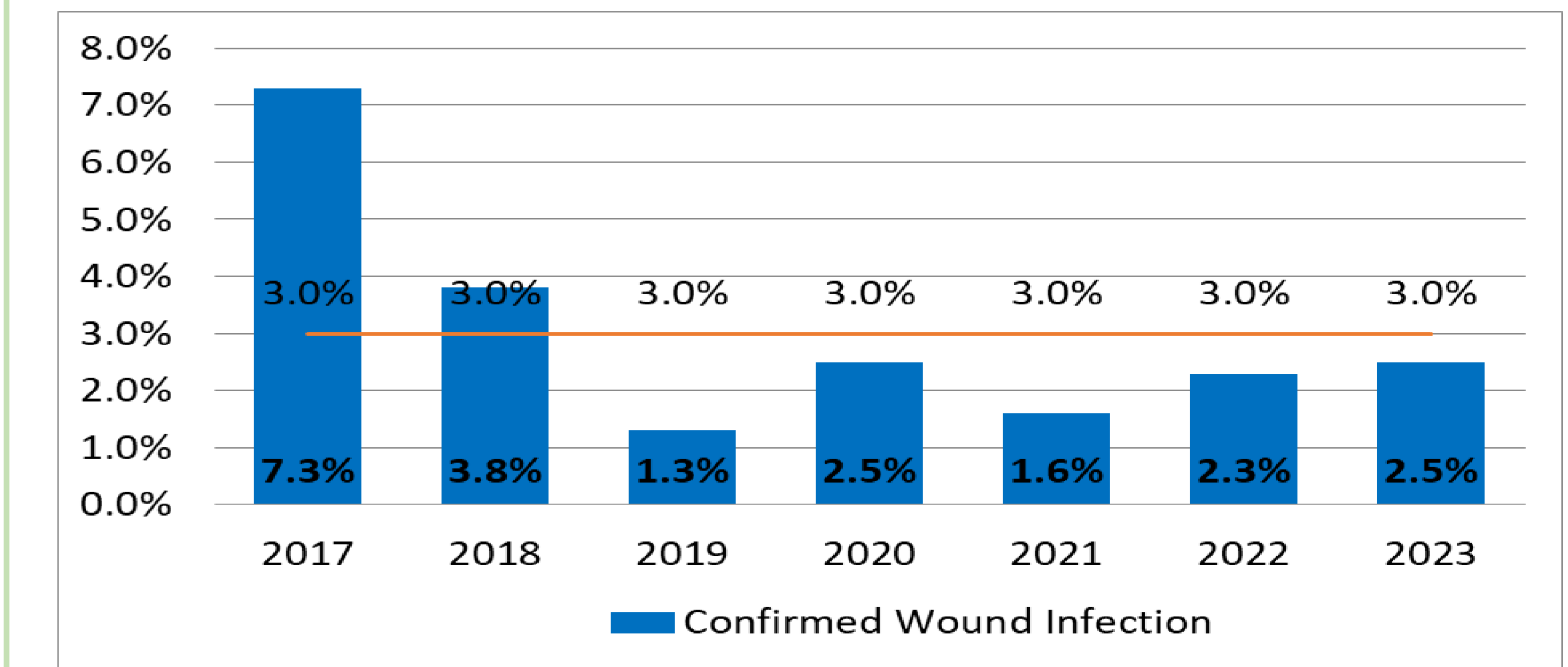
Results

Sustaining: The average % trend since 2017 has been 3% infection rates. Over the last 5 years the infection rate has been consistently below the average trend, therefore, providing assurance that the evidence-based decision making process implemented is well embedded and sustained in providing improved patient outcomes through the reduction of wound infections

Number of patients that developed a wound Infection within the CWC at DBTH over a 4-week period per year, with the average percentage after the baseline data



Number of patients that developed a wound Infection within the CWC at DBTH over a 4 week period per year, with the average trend percentage including the baseline data



Conclusion

Evidence based decisions making through critically appraisal of research evidence that is available in the field required, combined with user experience and local evaluation has enabled evidence based decision making to be completed. Through introducing the evidence based decision into the local formulary and clinical pathway, supported with education, it has enabled patient outcomes to be improved through a reduction in wound infections. By continuous review of the evidence and process, through research review, evaluations and audits, the impact of the decision & sustained improvement has been quantified, providing the assurance that evidence based decision making was achieved and is successful.

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