

Enhanced Cleaning Intervention in two DGH Acute Hospitals in the North East Region

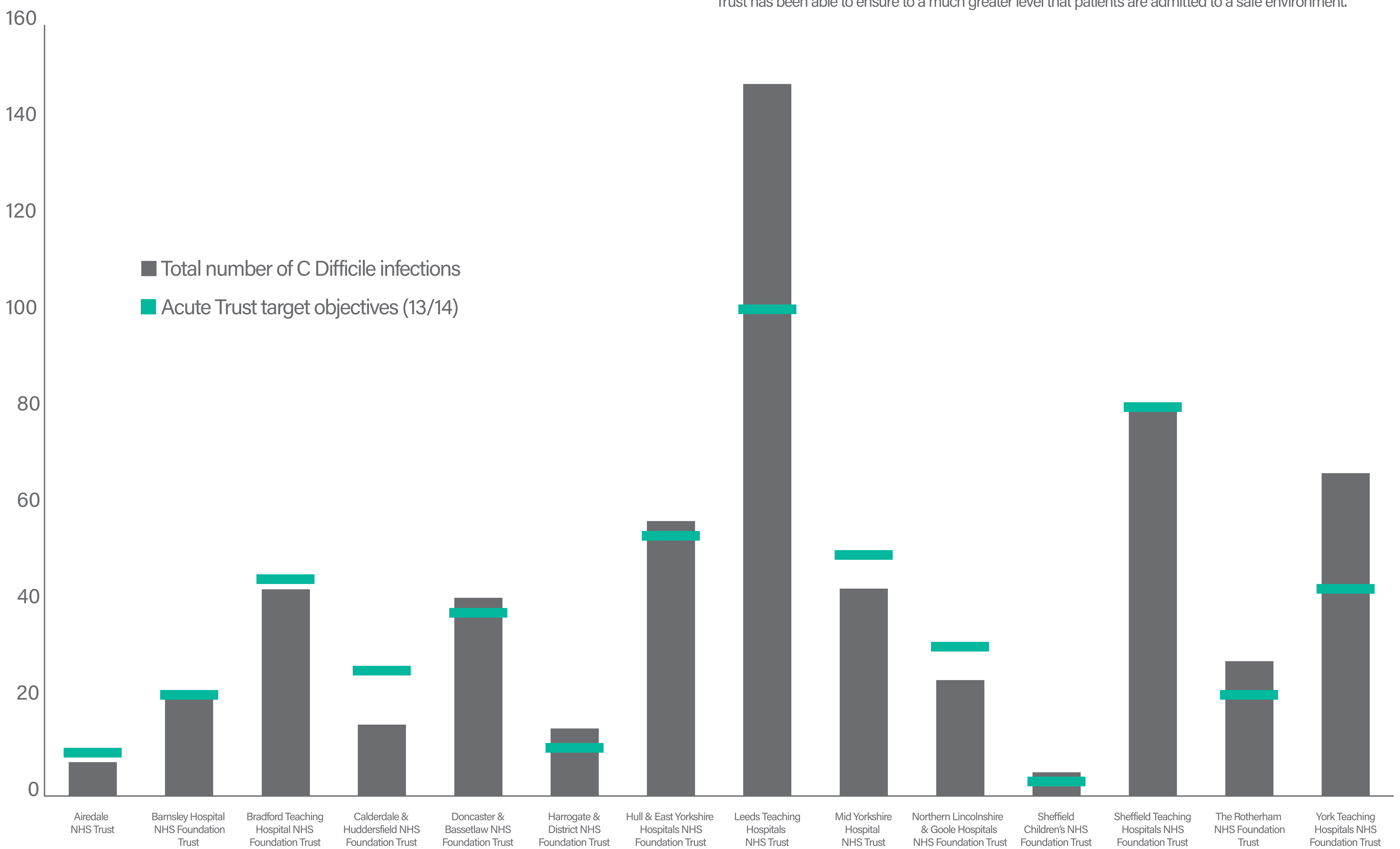
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Calderdale and Huddersfield NHS Foundation Trust operates two acute Hospitals with a total of approximately 700 beds. Infection Prevention remains one of our top priorities, and has a key focus from our Executive Board.

BACKGROUND

New and emerging technologies support strategies of traditional infection control practice to enhance the results achieved⁽¹⁾. We have evaluated the use of Hydrogen Peroxide Vapour (HPV) decontamination, and the impact this has had on our rates of C. Diff.

Previous studies have shown by statistical analysis that the introduction of HPV decontamination has reduced the incidence of C. Diff⁽²⁾⁽³⁾. Since March 2013, the Trust has operated HPV decontamination in house with regular cleaning staff. A RAG-Rated cleaning system⁽⁴⁾ has been introduced to ensure a risk-based rationale is applied to decontamination. With this clear and concise risk matrix-cum-communication tool, the Trust has been able to ensure to a much greater level that patients are admitted to a safe environment.



RESULTS

The Trust C-diff ceiling was 28 for year 2013/14; the result at the outturn was only 15 post-admission c-diff cases. When compared with other hospitals in the region, this is a significant result, with only 30% of hospitals (3/19) coming within their trajectory. Whilst some of the hospitals in our region have used HPV decontamination, Calderdale and Huddersfield is the only Trust in the region with fully developed and implemented RAG-scoring⁽⁴⁾ applied to our cleaning. This shows the importance of a risk-based approach to cleaning and decontamination in order to reduce the spread of infection.

CONCLUSION

HPV technology (ProXcide™, Inivos Ltd) has been shown to eradicate important environmental pathogens from environmental surfaces and clinical evaluations have demonstrated an impact on rates of infection.

Figure 1: Total Number of C difficile Infection.

Figure 2: Vaporised Hydrogen Peroxide (H₂O₂) (ProXcide™)

References:

1. Evaluation of cleaning effectiveness in a tertiary hospital following hydrogen peroxide (HPV) fumigation using surface contact plates and adenosine triphosphate (ATP) Eleni Mavrogiorgou, Robert Ayres, Brian Ward, Margaret Graham, Nicholas Brown
2. Impact of cleaning and other interventions on the reduction of hospital-acquired Clostridium difficile infections in two hospitals in England assessed using a breakpoint model G.J. Hughes, E. Nickerson, D.A. Enoch, J. Ahluwalia, C. Wilkinson, R. Ayers, N.M. Brown
3. Impact of environmental decontamination using hydrogen peroxide vapour on the incidence of Clostridium difficile infection in one hospital Trust Cooper T; O'Leary M