The COMPASS Value-based programme

The impact of continuous improvement utilising an infection management pathway and education to enhance clinical outcomes

Author: Joanne Taylor, Tissue viability Service Lead, Rochdale Infirmary

COMPASS
Clear direction in your wound care.

Introduction

In a recently published global online survey of over 360 clinicians, 86% reported that the three biggest challenges in their day-to-day practice were distinguishing between local infection and biofilm and selecting the right treatment according to diagnosis.[1] As a result, a new evidence-based Infection management (IM) pathway (Image 1) was developed by a group of expert clinicians.[1]

The aim of the project was to implement the IM pathway, which is a simple tool that summarises key clinical signs and symptoms of either biofilm or local infections, which supports targeted diagnosis and guidance on appropriate treatment.[1] NHS Heywood, Middleton (HMR) and Rochdale Clinical Commissioning Group (CCG) took part in the COMPASS value-based programme, which is a simple 4-step to deliver tailored insights into practice (Orientate, Navigate, Activate and Evaluate) which has been developed by Smith+Nephew to help healthcare partners to improve wound care services.

Image 1

Method

- **Orientate** In 2020, HMR commenced a wound compass practice review tool to evaluate existing clinical practices. Insights into their personalised data identified the need for further interventions to improve IM practices and reduce variations in care.
- **Navigate** Through collaboration; the lead nurse worked in partnership with Smith+Nephew to implement the IM project across 3 areas in HMR to effectively diagnose and manage Infections and Biofilms with the use of ACTICOAT© Antimicrobial Barrier Dressing and IODOFLEX© Cadexomer Iodine Dressing.
- **Activate** The project requirements were first to collect data prior to the implementation of the pathway, which would allow an in-depth understanding of Infection management practices to give some baseline data to enable the Tissue viability nurse to evaluate the impact of education and pathway implementation.
- Following this, education on IM and biofilm management was rolled out across the teams, including product and pathway training. Clinicians then used the pathway for 12 weeks alongside clinical support before the second phase (post) data collection was carried out.

Results: Clinical pathway and educational impact

Evaluate Data were collected prior to education and implementation of the pathway on n=189 wounds and n=145 wounds in the follow-up period after the education and 10-week implementation of the IM pathway. Over the total data set, Leg Ulcer (35%) was the most prominent wound type in terms of the wounds they were managing (43% of the leg ulcers were venous, 25% were of unknown aetiology, 4% arterial, and 23% mixed aetiology) this was followed by open surgical wounds (16%), other (10%) and skin tears (8%).

Following training and education, the post-data analysis (figure 1) highlighted those wounds which showed no signs of classic infection or biofilm increased from 38.6% (n=73) in the pre-pathway evaluation and 44.8% (n=65) in the post. Data did show an increase in the prevalence of infection from 16.9% to 22.8%, which is likely an educational impact as further in-depth analysis into data collection prior to education and pathway implementation identified 71% of wounds were showing signs of infection were not diagnosed as infected.

The incidence of wounds with biofilm decreased from 33.3% to 15.9%. As part of the analysis, it was observed that in the data collected before education, only 18% of clinicians indicated they would use an antimicrobial for biofilm. This percentage increased to 33% in the post-data collection, suggesting an educational benefit and improved product usage. The pre-data collection period revealed that 76% of wounds identified as having biofilm did not have an antimicrobial applied, emphasising the positive impact of the subsequent education on correct product application. Furthermore, figure 1 shows a reduction in the duration of wounds aged 6 weeks to 6 months and >9 months to >12 months was observed, likely attributed to a concurrent decrease in signs and symptoms associated with biofilm. This suggests that the positive impact of addressing biofilm through the intervention contributed not only to a decrease in its prevalence but also to an improvement in the overall healing trajectory of wounds within this specific time range.

The duration of antimicrobial dressing use demonstrated changes, with 54% being utilised for 2 weeks or less in the pre-evaluation. This figure increased to 58% post-evaluation, indicating early recognition and treatment of wounds displaying signs and symptoms of infection/biofilm. Furthermore, 68% of dressings were aligned with the pathway. Shorter durations, particularly in the 2-4 weeks range, were seen and showed a commendable adherence to the pathway, with 90% of dressings appropriately used. While there was a slight rise in the 4 weeks or more category by 2%, a detailed analysis revealed that 80% of patients were not currently using products in line with the pathway.

Pre and post signs of or stated biofilm

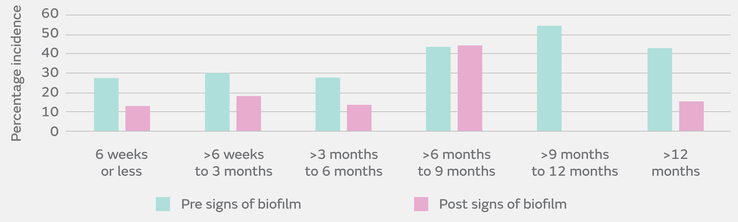


Figure 1. Histogram of the percentage incidence of signs of biofilm pre- and post-implementation

formeo next-generation digital wound management ecosystem

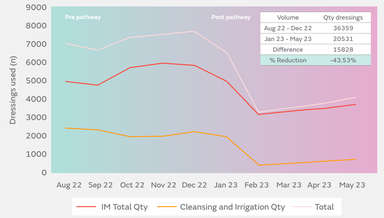
The Burden of Wounds study[1] examined the health economic burden of different wound types on the UK's National Health Service (NHS). Significant inconsistencies in clinical practices were identified, revealing inadequate assessment, inaccurate diagnoses, underutilisation of evidence-based practices, and considerable variations in service, which impact the quality of care for patients with chronic wounds.

To tackle these challenges, prior to the IM project, HMR had introduced formeo, a digital wound management system. Formeo offers control and visibility, optimising wound management compliance. to enhance wound management formulary compliance.

By utilising formeo in this project we were able to minimise inappropriate usage and streamline the selection of IM dressing variants, thereby promoting standardised care. Figure 2 illustrates a 43.53% reduction in the volume of antimicrobial dressings and irrigation solutions used post education and implementation of the pathway (Pre n=36,359, post n=20,531). This data indicates a decrease in variations, which overall can positively impact the overall patient experience.

HMR pre pathway Aug 22 - Dec 22 | HMR post pathway Jan 23 - May 23

Volume of individual dressings



5 vs 5	Pre pathway					Post pathway				
	5 month total					5 month total				
HMR	Aug 22	Sep 22	Oct 22	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	Apr 23	May 23
IM total qty	4848	4633	5648	5874	5801	4857	2999	3180	3303	3548
Cleaning and irrigation qty	2176	2040	1691	1686	1962	1659	91	196	294	404
Total	7024	6673	7339	7560	7763	6516	3090	3376	3597	3952

Case Study

Author: Thomas Harrison, Specialist Practitioner Team Lead, Rochdale South Integrated Neighbourhood Team

A 37-year-old male with a past medical history of deep vein thrombosis, poor nutrition, high alcohol intake and intravenous drug use, with a traumatic non-healing wound to the lateral aspect of the right foot.

When first assessed, the wound was 10cm(L) x 10cm(W), 50% sloughy, and 50% granulation. The wound showed no progression for 22 days. Following assessment using the infection management pathway, the wound indicated delayed healing and low-level chronic inflammation, which led to the treatment management of biofilm and IODOFLEX© Cadexomer Iodine Dressing. After 31 days, significant improvements were noted, with the wound size reduced to 0.8cm (L) x 0.8cm (W) and a 40% reduction in de-sloughing (Image 1). Another 19 days later, the patient was discharged from the service as no further treatment was required (Image 2).

The infection management pathway aided decision-making and streamlined the selection of dressings. The clinician employing this pathway affirmed that utilising a tool for infection management increased confidence.

This case is provided for informational and educational purposes only and may not represent typical outcomes.

Image 1 - 0.8cm (L) x 0.8cm (W), and a 40% reduction in dr of sloughy tissue

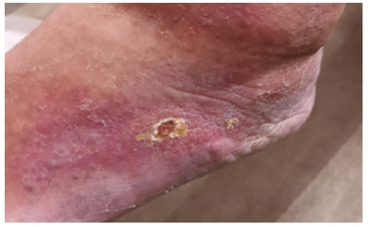


Image 2 - 80% epithelisation 20 eschar

Results may vary

Conclusions

The infection management pathway proved to be a valuable resource and supported positive clinical outcomes. It demonstrated the advantages of employing such a pathway to improve the diagnosis and management of infection practices, decreasing variations in care and encouraging appropriate use of products in line with the formulary. Furthermore, education and training in infection management contributed to enhanced diagnostic skills and improved treatment decision-making.Overall, the COMPASS value-based programme has contributed to advancing the understanding and application of infection management practices in a clinical setting, impacting positive clinical outcomes.

The author would like to thank Gemma McGrath, Healthcare Outcomes Manager at Smith+Nephew, for supporting the medical writing of this case study.

Reference 1. Dowsett, C., Bellingeri, A., Carville, K., Garten, A. & Woo, K. A route to more effective infection management: The Infection Management Pathway. Wounds Int. 11, 50–57 (2020). **2**. Guest JF, Ayoub N, McIlwraith T et al. Health economic burden that wounds impose on the National Health Service in the UK. BMJ Open 2015; 5:e009283

Smith+Nephew, Croxley Park Building 5, Hatters Lane, Watford, Hertfordshire WD18 8YE T +44 (0) 1923 477100 F +44 (0) 1923 47710