Smith+Nephew

Carmarthen 3T Report

October 2024

Helping you get **CLOSER TO ZERO**◊
wasted healthcare resources

Audit Report

Contents

Introduction

As part of ongoing practice development it is useful to evaluate the burdens wound care can place on a healthcare system. Through evaluating the wound populations, dressing selection and practice it is possible to ensure appropriate dressing usage and practice.

Through this understanding decisions can be made locally which result in patient care improvements and a more efficient use of resources.Practice can be tested against recognised standards, with steps being identified to realign this practice where required.

Methods

A survey of wound dressing practice was undertaken by nursing teams and clinicians involved in wound management. Data were collected on their wound dressing practice using a bespoke survey form, with one form being completed per wound treated. The data were entered into a database and analysed using SNAP survey software.

Objectives

• To provide a general overview of the wound care practice of a team or teams involved in wound care
• To evaluate the type, duration and healing status of wounds currently being treated and the associated utilization of hospital and referral services
• To evaluate the frequency and reasoning behind dressing change practice
• To evaluate the presence and management of local wound infection
• To support targeted education and training in order to promote best practice or to standardise practice across a team or multiple teams

Survey details

The report was produced on 07/10/24.

Wounds Included In Analysis:

• The report is based on a total sample size of 120 wounds.
• The report is based on a total patient volume of 120 patients.

Summary

Across the survey data 120 wounds were documented; the most predominant wound type being Leg ulcer (44) and Pressure ulcer (11). In total 11 pressure ulcers were seen during the survey period.

When evaluating the resource usage associated with wound care, 3 key drivers are the first things to look at when trying to increase efficiency.

The time it takes to heal a wound

It is estimated that the wounds seen over the survey period have an average duration of around 27.1 weeks.

The survey forms asked clinicians to document the healing status of each wound. The data shows that 18 wounds were considered static with a further 4 judged to be deteriorating.

Longer duration and stalled wounds can increase nursing and dressings costs and lead to further complications and strains on the overall healthcare system; whilst 101 wounds did not have a hospital admission in the 12 months prior to the survey, 14 had one hospital visit and 5 wounds were admitted to hospital 2 times or more.

In total 120 wounds had received some form of referral in the prior 12 months.

The frequency of changing dressings

In total 139 dressings were used, an average of 1.2 per wound.

Dressings are currently changed on average 2.7 times per week, "Routine change" was the reason most commonly given for changing wound dressings.

Of the 120 surveyed wounds 17 were being changed more than 3 times per week, 13 of them on a daily basis.

Higher frequency changes increase weekly dressing and nursing costs and have the potential to increase the risk of complications.

The incidence of complications (e.g. infection)

7 wounds were reported infected by the clinician completing the survey. The data shows that 2 wounds considered infected had no antimicrobial dressings recorded in their survey forms yet 34 antimicrobial dressings were used in wounds not considered infected.

Of the 120 wounds surveyed, 69 wounds showed at least one sign of infection. The most commonly observed infection sign was Local warmth which was seen in 20 wounds.

Wound infections can lead to further complications such as systemic infection and can be a major cause of the first driver, non healing. Infected wounds can also generate high levels of exudate highlighting the need for good dressing practice from the second driver.

The following clinical report analyses all data captured to provide an opportunity to highlight the burdens associated with woundcare and to provide you with an opportunity to seek efficiency gains should they be required.

Section A:
Provider Details

	Diabetic foot clinic	Leg ulcer clinic	Patient's home	Residential home
Carmarthen 3T	2	20	79	18
CCT	0	0	0	1

Fig 1. Teams & care setting
Of the 120 wounds analysed, 119 did not have a team name documented and 0 did not have a location recorded.

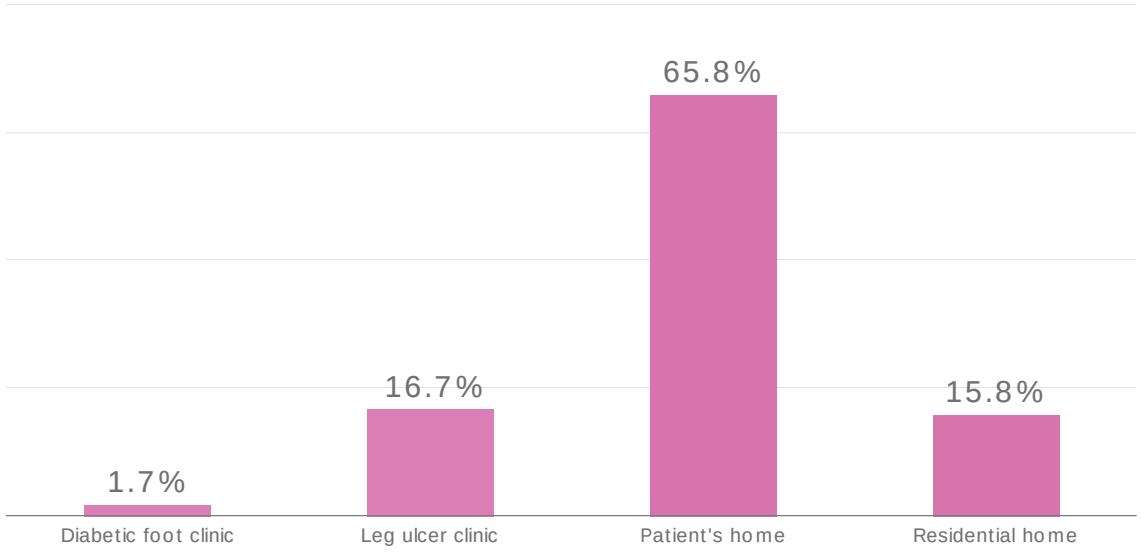


Fig 2. Treatment setting
Wounds were most frequently treated in the Patient's home (65.8%).

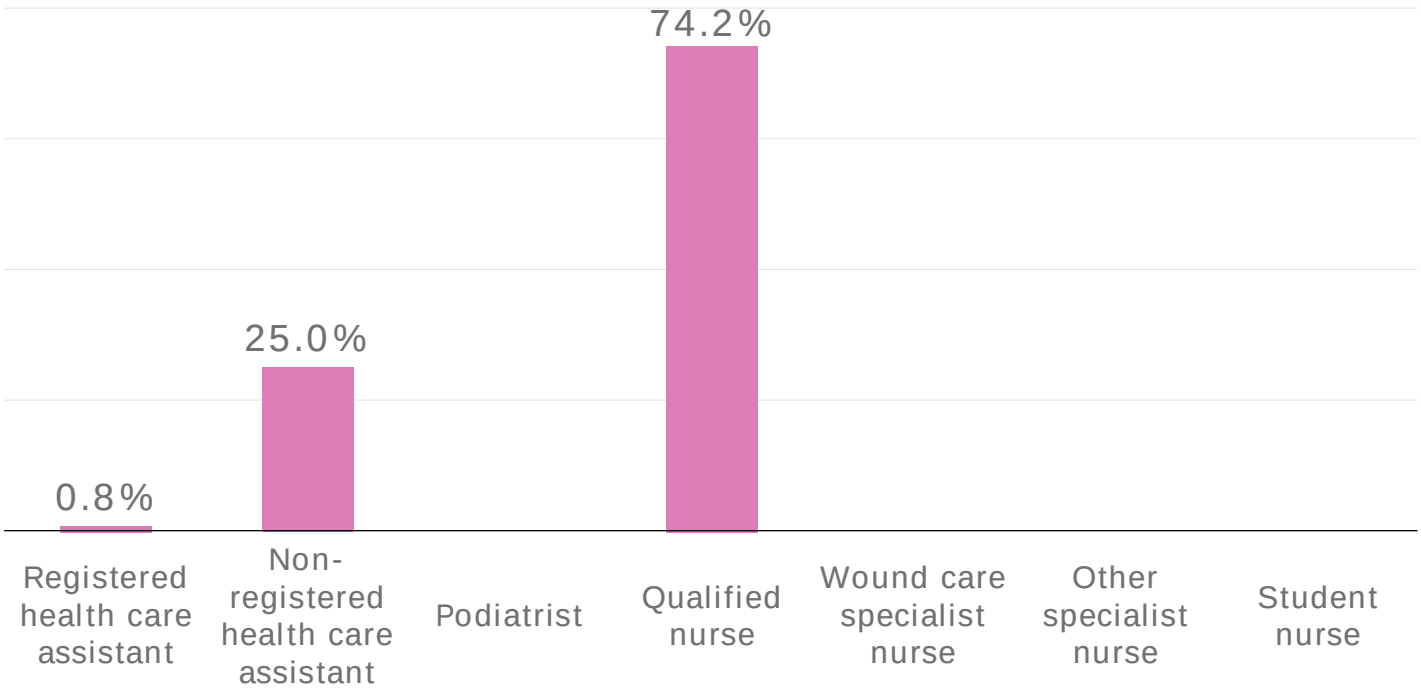


Fig 3. Clinician role
The highest proportion of wounds were treated by a Qualified nurse (74.2%). 0 wounds were treated by more than 1 clinician.

Qualified nurse	89 74.2%
Non-registered health care assistant	30 25.0%
Registered health care assistant	1 0.8%

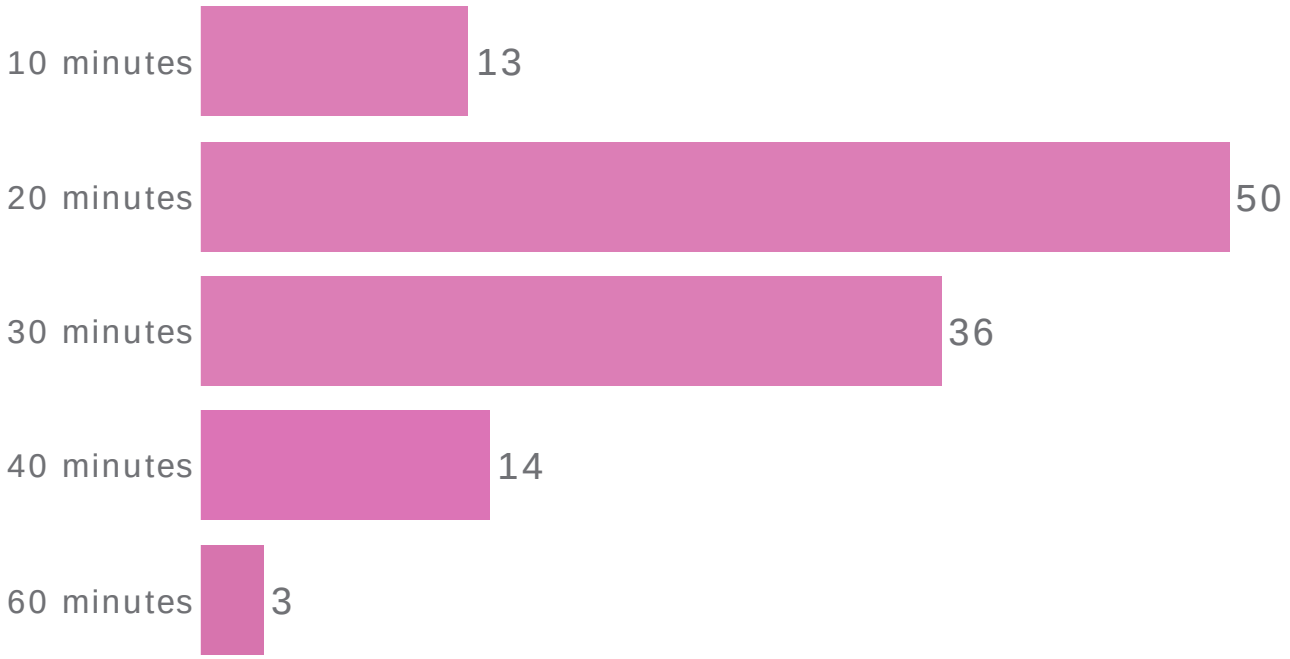


Fig 4. Total time spent at the appointment

This analysis shows the total time the clinician spent with each patient per appointment

10 minutes	20 minutes	30 minutes	40 minutes	50 minutes	60 minutes	70 minutes
13	50	36	14	2	3	2

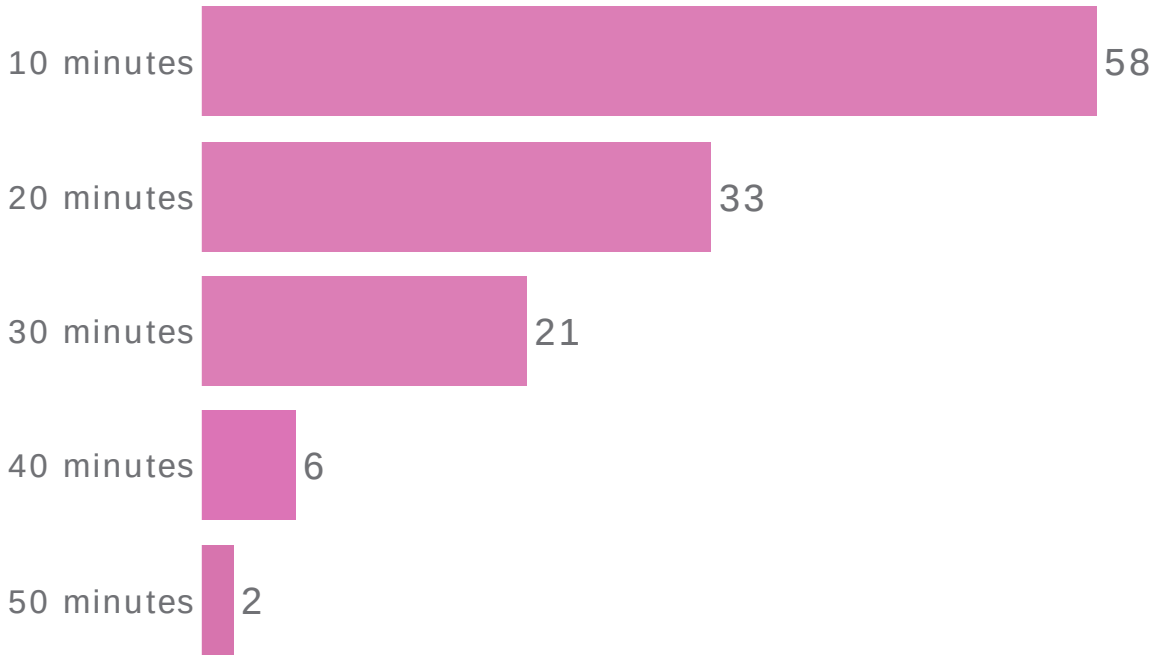


Fig 5. Time spent on wound care

This analysis shows the total time the clinician spent on woundcare with each patient per appointment

10 minutes	20 minutes	30 minutes	40 minutes	50 minutes
58	33	21	6	2

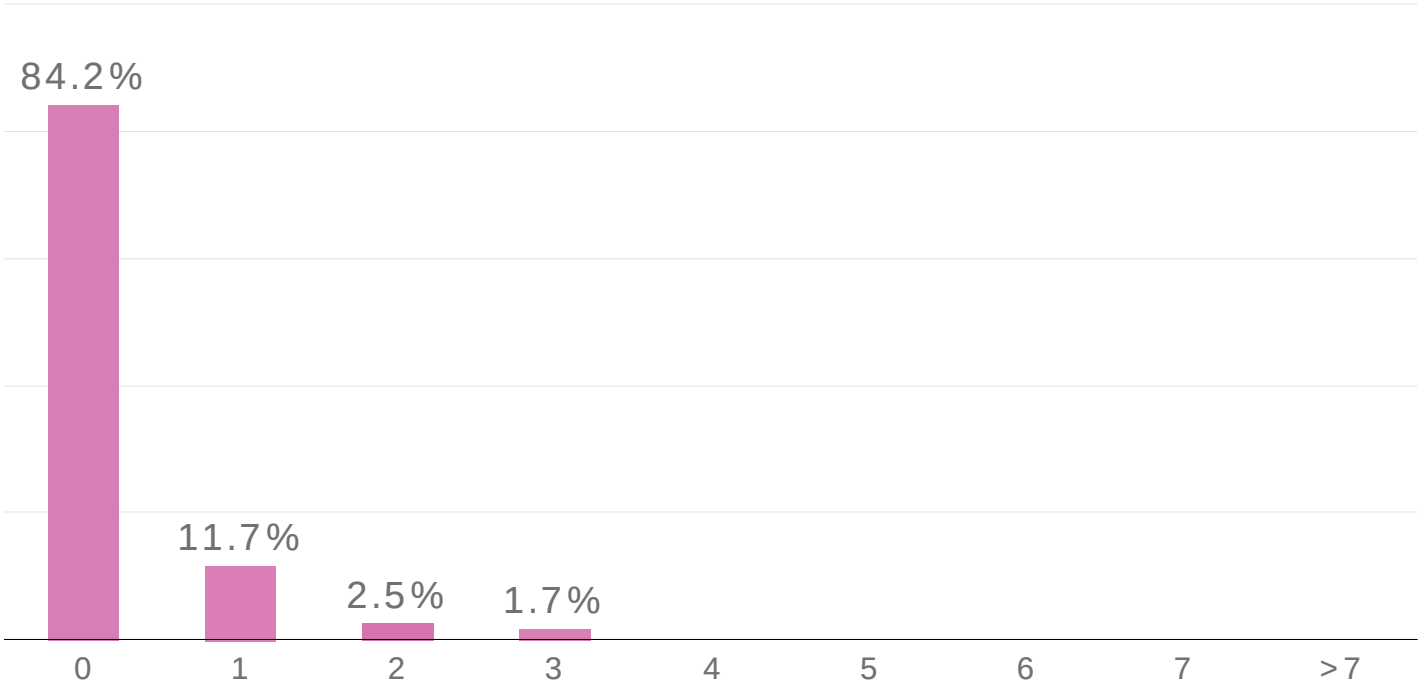


Fig 6. Hospital admissions in prior 12 months

101 patients with a wounds did not have a hospital admission in the 12 months prior to the survey. 5 patients were admitted to hospital more than once.

0	1	2	3 or more
101 84.2%	14 11.7%	3 2.5%	2 1.7%

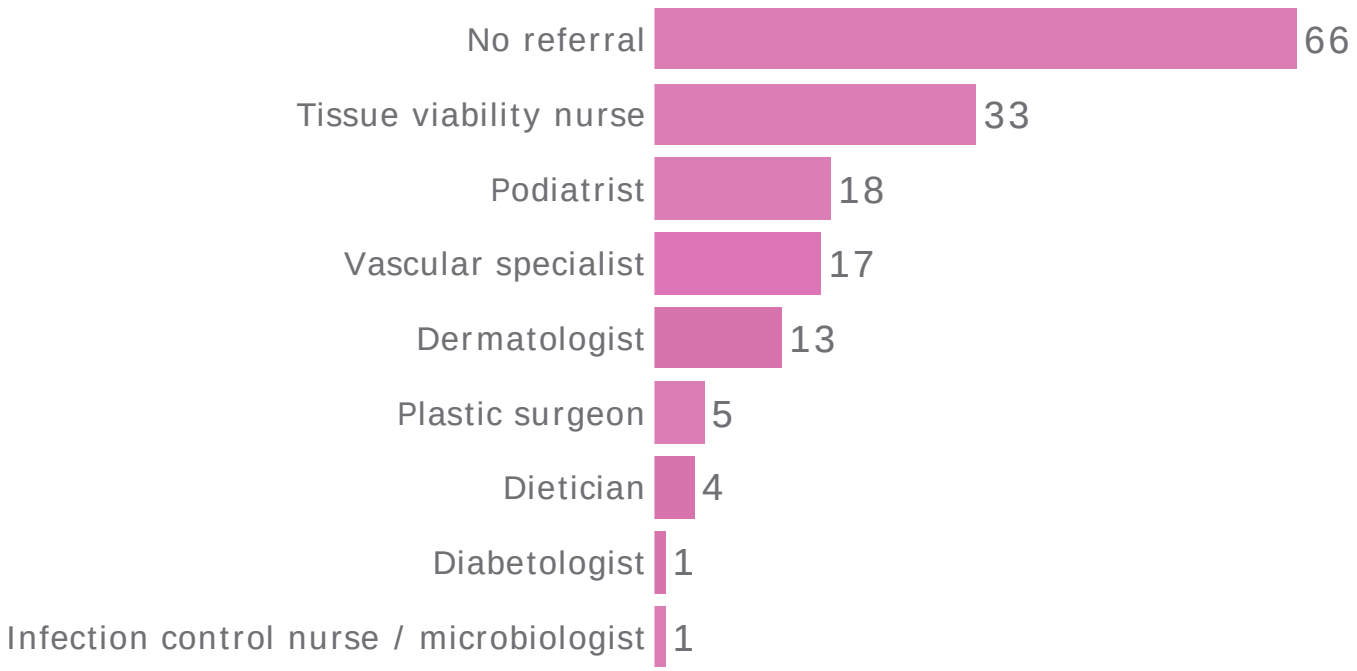


Fig 7. Wound referrals in prior 12 months

In total 120 patients with a wound had received some form of referral in the prior 12 months. The highest volume of these (66) were to No referral.

No referral	Tissue viability nurse	Podiatrist	Vascular specialist	Dermatologist	Plastic surgeon	Dietician	Diabetologist	Infection control nurse / microbiologist
66 55.0%	33 27.5%	18 15.0%	17 14.2%	13 10.8%	5 4.2%	4 3.3%	1 0.8%	1 0.8%

Section B:
Wound Details

The most common comorbidity selected was Diabetes (19). patients had 3 or more comorbidities.

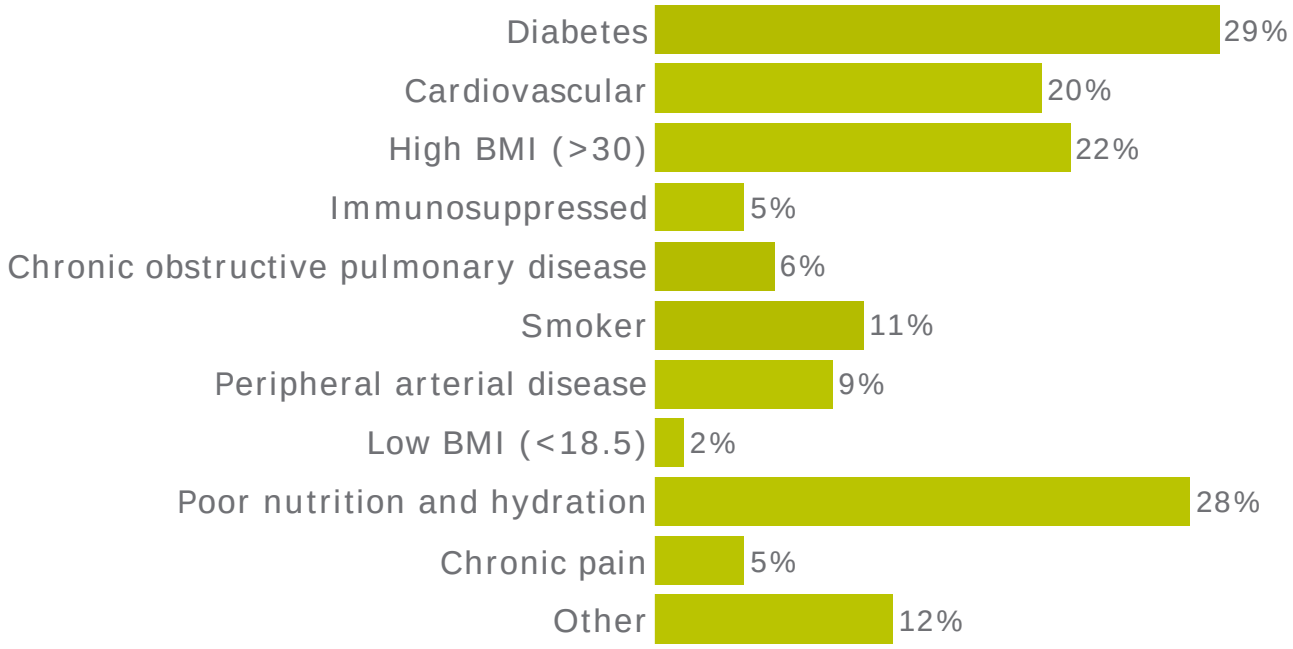


Fig 8. Comorbidities

Diabetes	19
Poor nutrition and hydration	18
High BMI (>30)	14
Cardiovascular	13
Other	8
Other	24

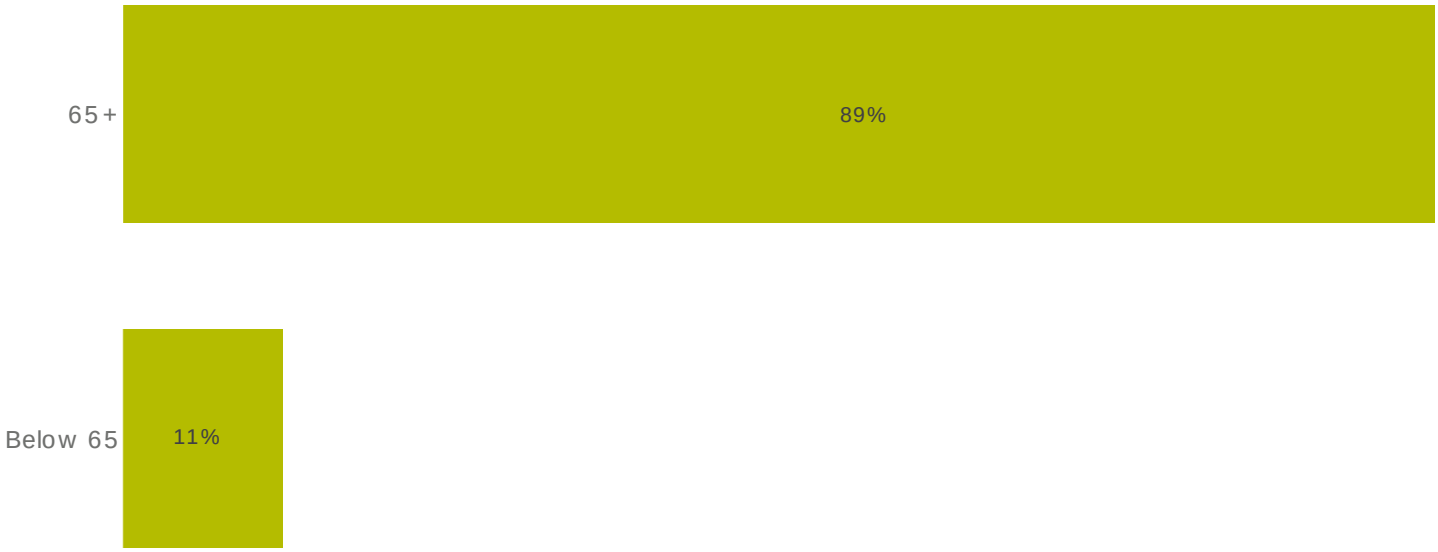


Fig 9. 65+ Comorbidities

The table below shows the most common comorbidities for patients below 65 and 65+.

Diabetes	19
Poor nutrition and hydration	18
High BMI (>30)	14
Cardiovascular	13
Other	8
Smoker	7
Peripheral arterial disease	6
Chronic obstructive pulmonary disease	4
Immunosuppressed	3
Chronic pain	3
Low BMI (<18.5)	1

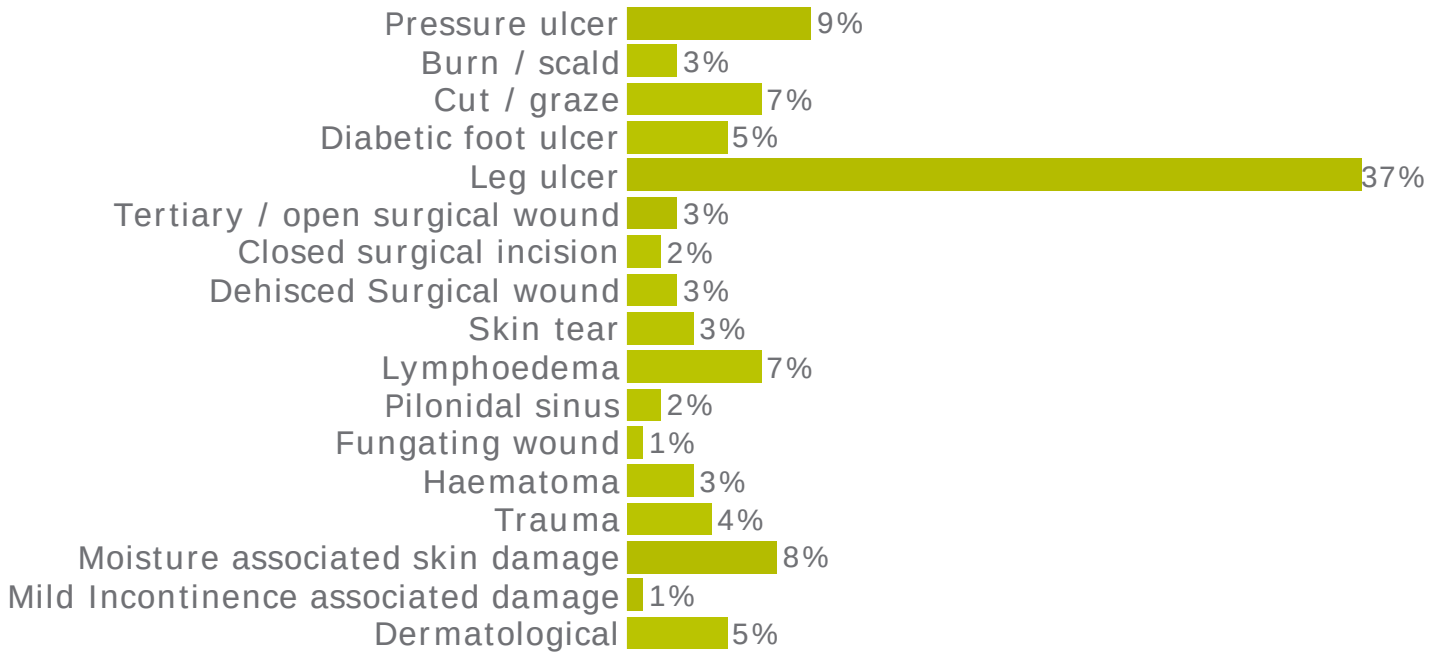


Fig 10. Wound type

The most common wound types were Leg ulcer (44) and Pressure ulcer (11).

Leg ulcer	44 36.7%
Pressure ulcer	11 9.2%
Moisture associated skin damage	9 7.5%
Cut / graze	8 6.7%
Lymphoedema	8 6.7%
Other	40 33.3%

Over the survey period, wounds were observed on patients at the anatomical locations shown below.

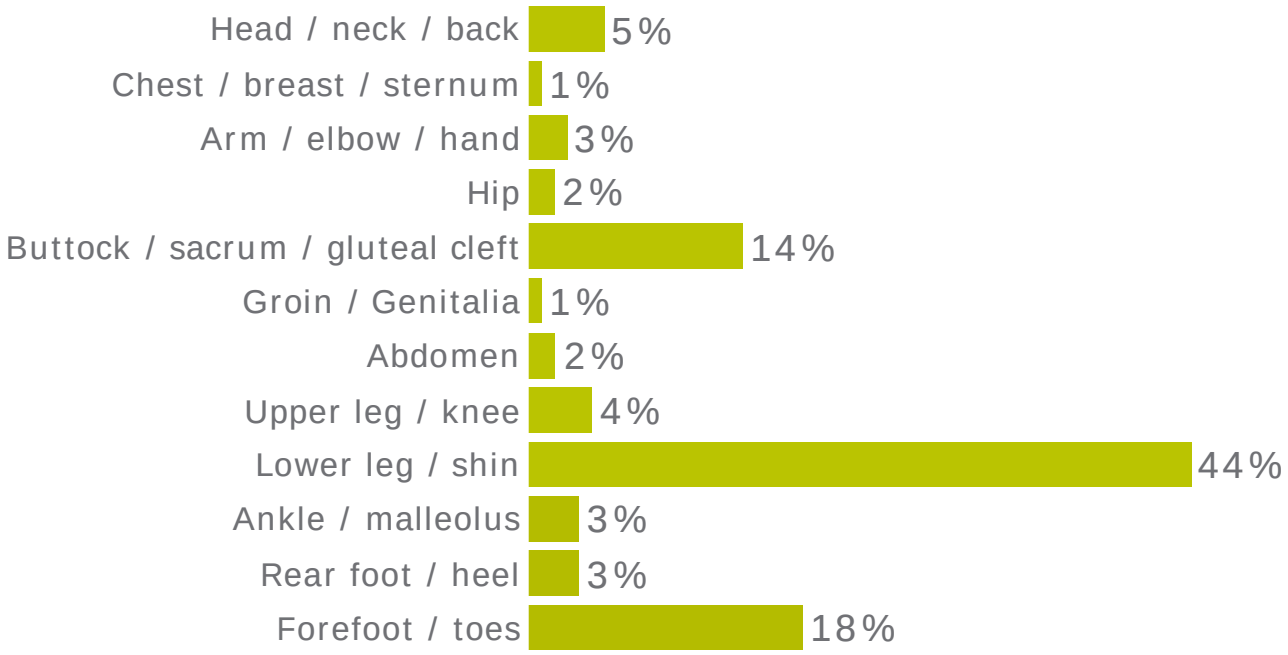


Fig 11. Wound locations

Lower leg / shin	53
Forefoot / toes	22
Buttock / sacrum / gluteal cleft	17
Other	28

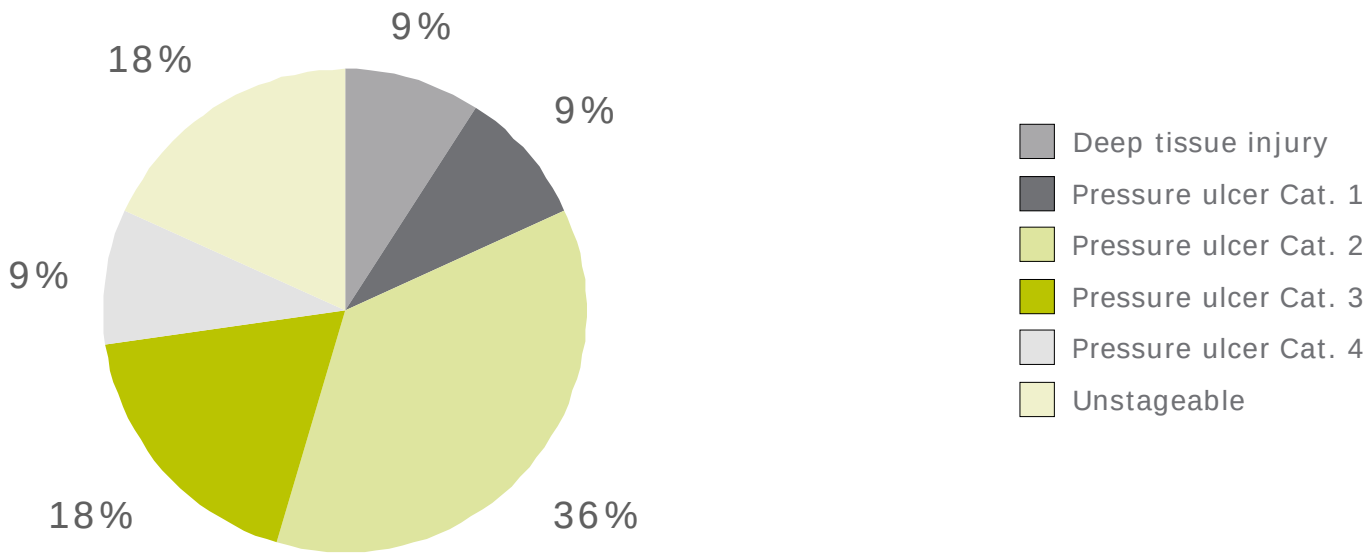


Fig 12. Pressure ulcer by grade

Of the pressure ulcers reported Pressure ulcer Cat. 2 were the most common (4).

Pressure ulcer Cat. 2	4 36.4%
Pressure ulcer Cat. 3	2 18.2%
Unstageable	2 18.2%
Pressure ulcer Cat. 1	1 9.1%
Pressure ulcer Cat. 4	1 9.1%
Deep tissue injury	1 9.1%

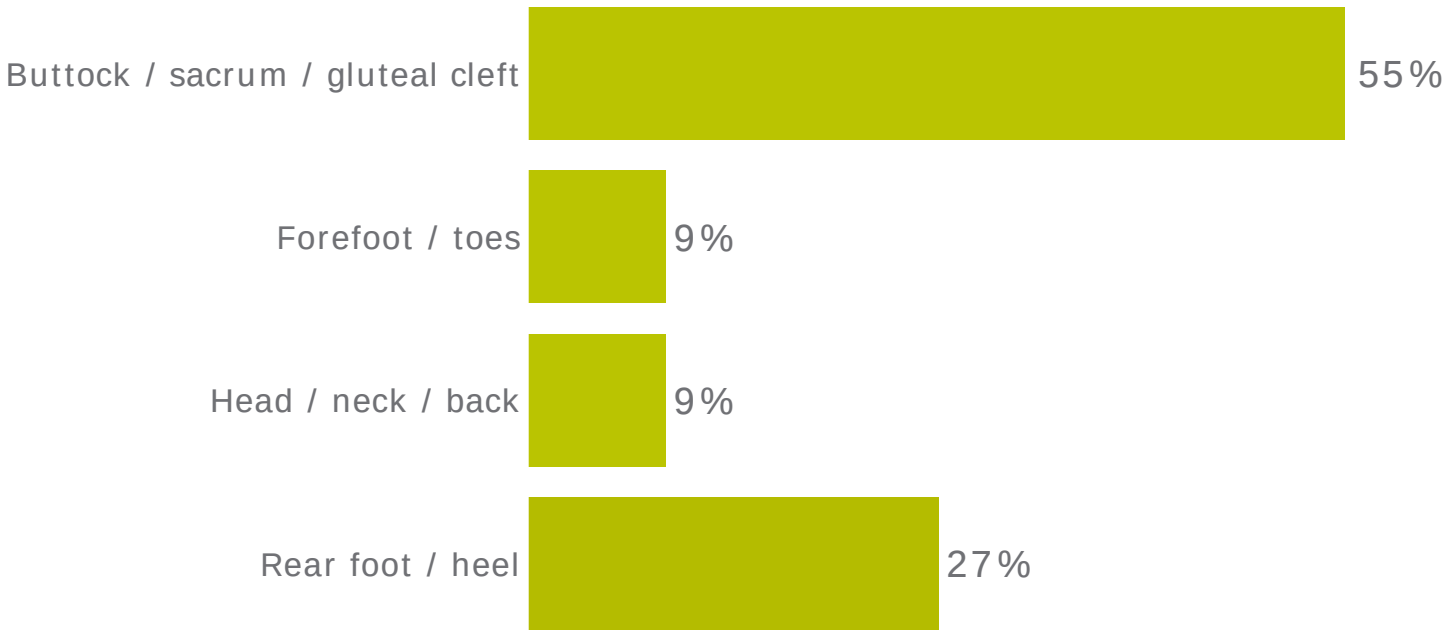
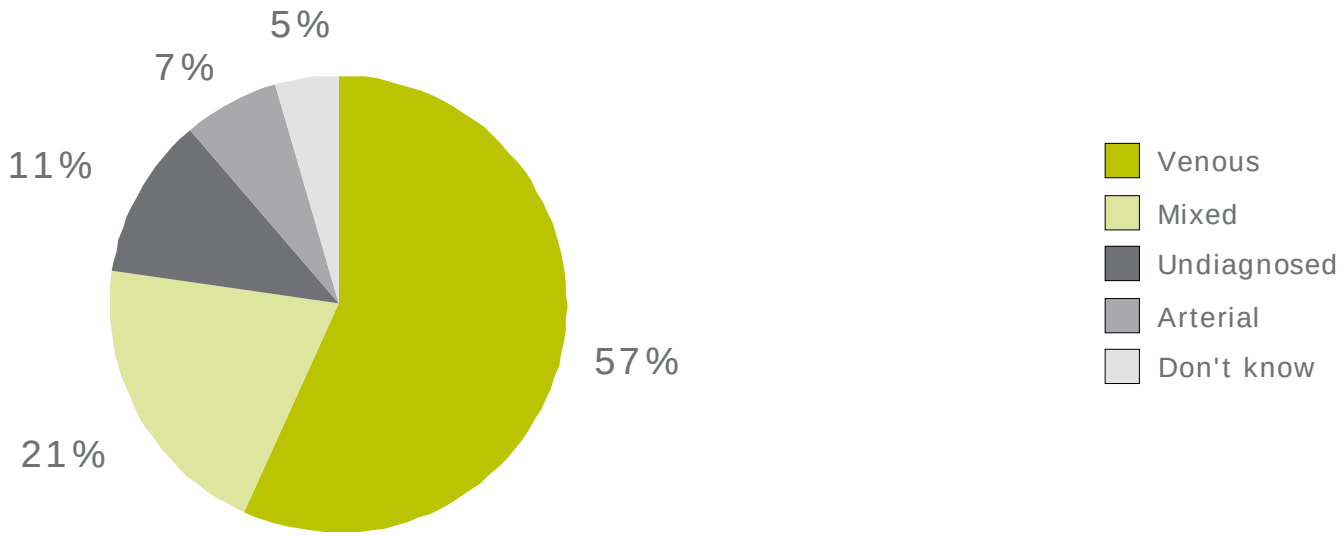


Fig 13. Pressure ulcer by location

Pressure ulcers were most commonly observed on the patient's Buttock / sacrum / gluteal cleft.

Buttock / sacrum / gluteal cleft	6 54.5%
Rear foot / heel	3 27.3%
Head / neck / back	1 9.1%
Forefoot / toes	1 9.1%



Of the leg ulcers reported, Venous ulcers were the most common (25).

Venous	25 56.8%
Mixed	9 20.5%
Undiagnosed	5 11.4%
Arterial	3 6.8%
Don't know	2 4.5%

Fig 14. Leg ulcer by aetiology

This analysis shows the surgical indications of the wounds reported as dehisced

Orthopaedics	1 50.0%
General	1 50.0%

Fig 15. Surgical indication dehisced wound

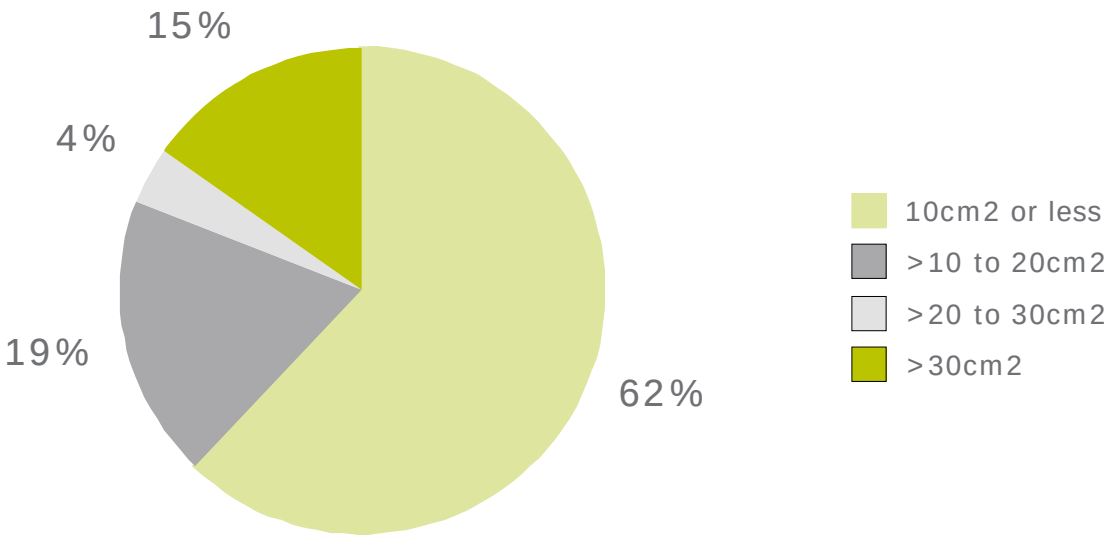


Fig 16. Wounds by area

During the survey period, the majority (91) of wounds were judged to be Superficial. The majority of wounds were measured at 10cm2 or less. Wound area calculation was made using an elipse formula, A cross tabulation of these two measures is shown below:

	10cm2 or less	>10 to 20cm2	>20 to 30cm2	>30cm2
Deep	8 50.0%	5 31.3%	0 0.0%	3 18.8%
Superficial	41 65.1%	10 15.9%	3 4.8%	9 14.3%

Fig 17. Wounds area by depth

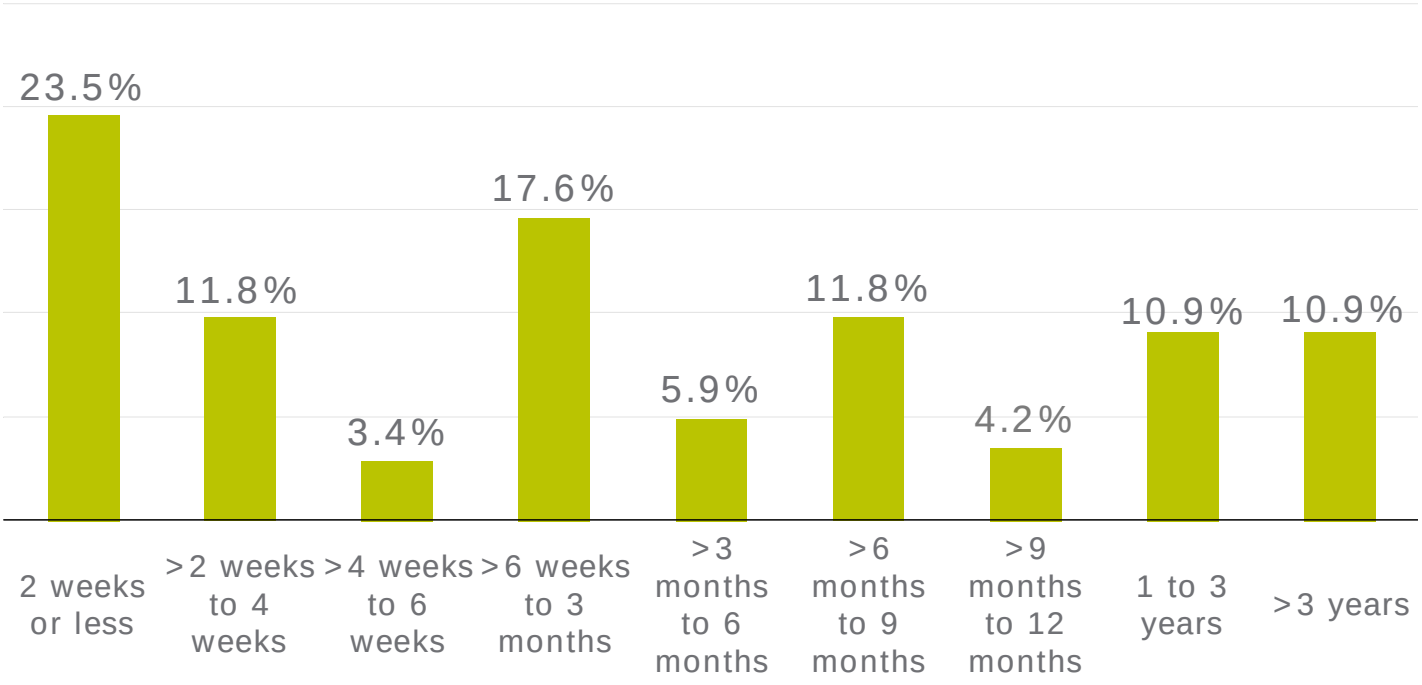


Fig 18. Wound duration

28 wounds had a duration of 2 weeks or less, with a further 14 being 2 to 4 weeks in duration. Of the surveyed wounds 14 were 6 to 9 months old. It is estimated that the wounds seen over the survey period have an average duration of around 27.1 weeks.

2 weeks or less	>2 weeks to 4 weeks	>4 weeks to 6 weeks	>6 weeks to 3 months	>3 months to 6 months	>6 months to 9 months	>9 months to 12 months	1 to 3 years	>3 years
28 23.5%	14 11.8%	4 3.4%	21 17.6%	7 5.9%	14 11.8%	5 4.2%	13 10.9%	13 10.9%

The wound durations seen varied over the surveyed wound types as shown below:

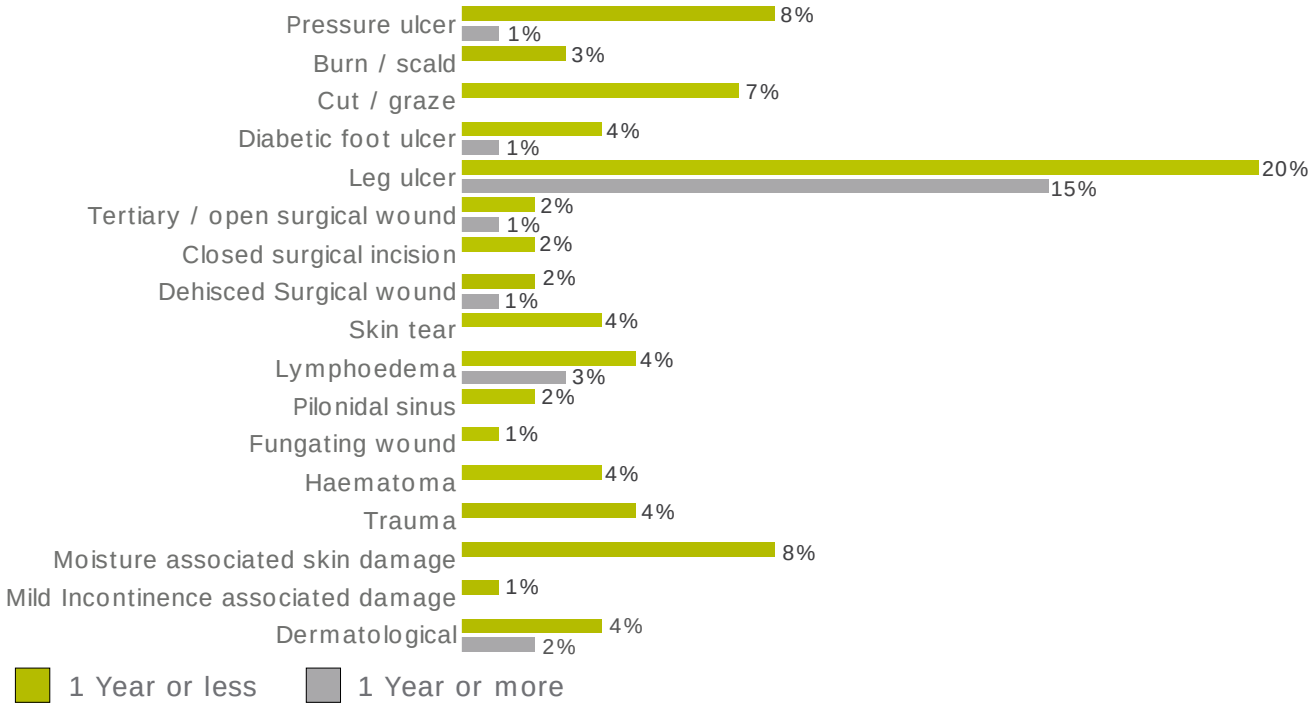


Fig 19. Wound durations by type

	1 Year or less	1 Year or more
Cut / graze	8	-
Leg ulcer	23	17
Lymphoedema	5	3
Moisture associated skin damage	9	-
Pressure ulcer	9	1

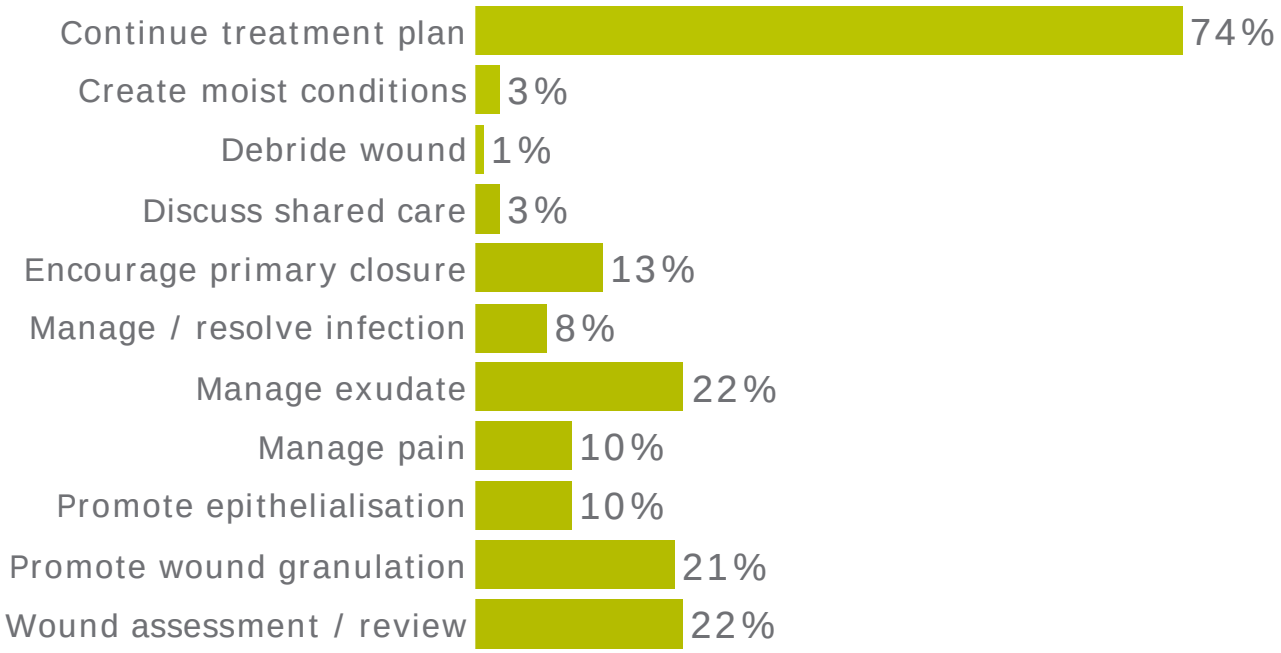


Fig 20. Priorities

This analysis highlights the top treatment priorities.

Continue treatment plan	74.2%
Create moist conditions	2.5%
Debride wound	0.8%
Discuss shared care	2.5%
Encourage primary closure	13.3%
Manage / resolve infection	7.5%
Manage exudate	21.7%
Manage pain	10.0%
Promote epithelialisation	10.0%
Promote wound granulation	20.8%
Wound assessment / review	21.7%

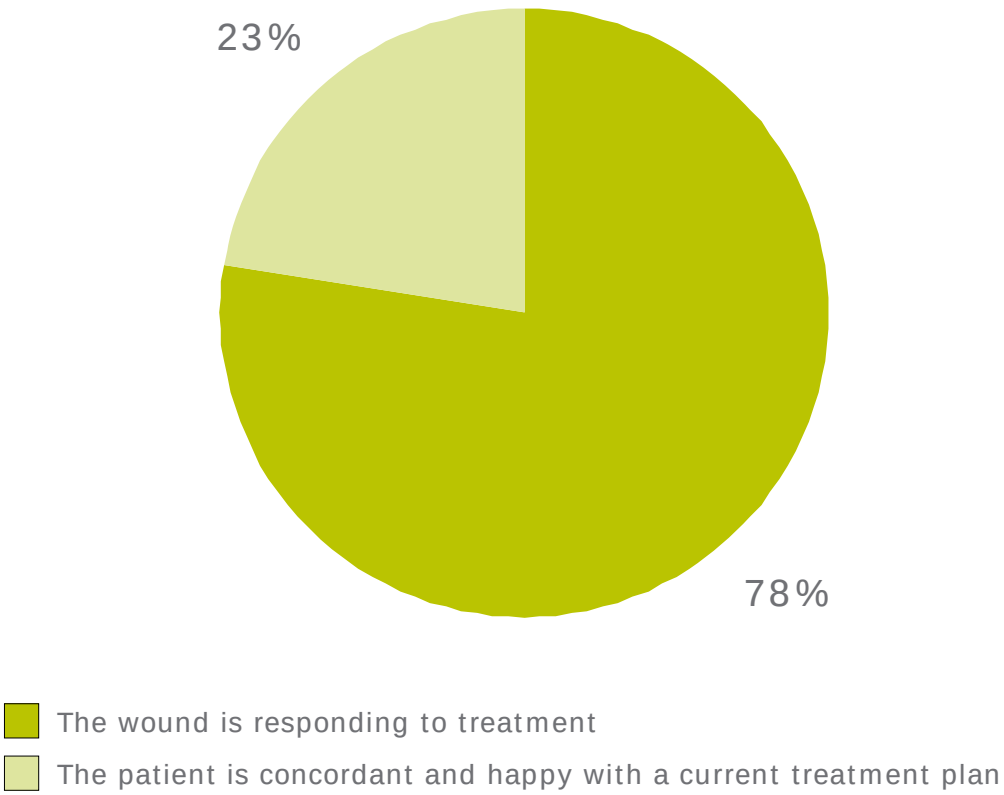


Fig 21. Reason for continuation of treatment plan

This analysis shows the reason the clinician decided to continue the treatment plan, 77.5% answered The wound is responding to treatment

The wound is responding to treatment	77.5%
The patient is concordant and happy with a current treatment plan	22.5%

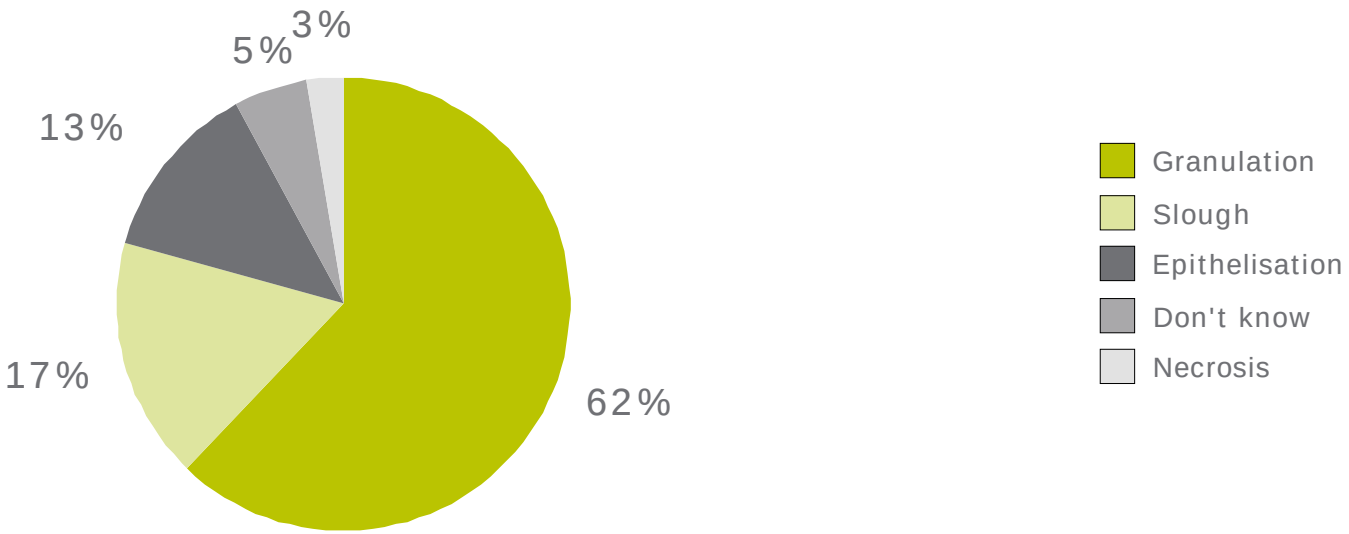


Fig 22. Percentage tissue type

The most prevalent tissue type seen in 62.1% of wounds was Granulation

Granulation	62.1%
Slough	17.2%
Epithelisation	12.9%
Don't know	5.2%
Necrosis	2.6%

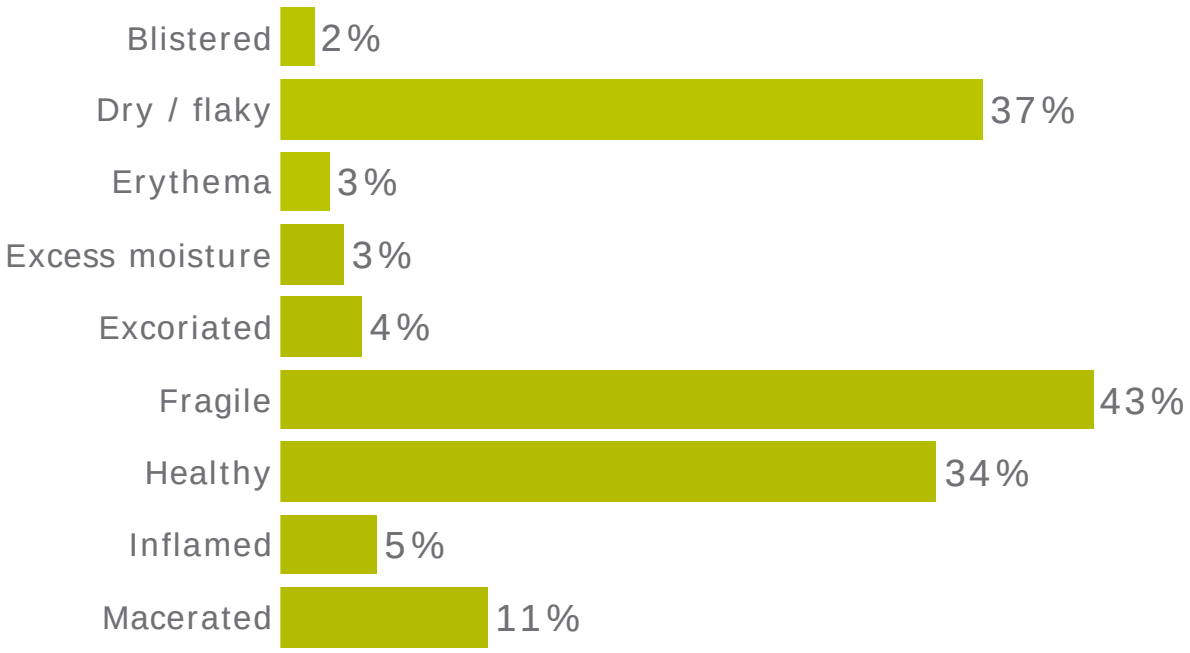


Fig 23. Skin surrounding wound

This analysis shows the differences in the condition of the skin surrounding the wound.

Blistered	1.7%
Dry / flaky	36.7%
Erythema	2.5%
Excess moisture	3.3%
Excoriated	4.2%
Fragile	42.5%
Healthy	34.2%
Inflamed	5.0%
Macerated	10.8%

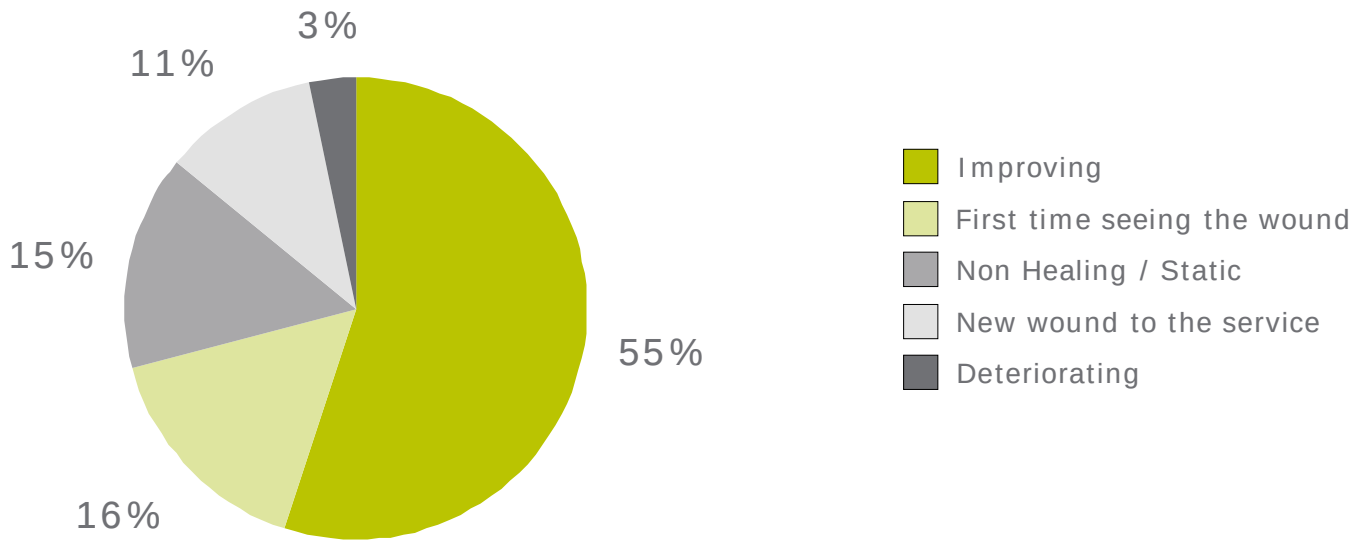


Fig 24. Wound progression

Reporting of the wound status seen showed that 55.0% of wounds were currently improving. 15.0% were considered static, 3.3% were judged to be deteriorating.

A further 15.8% wounds were being seen for the first time.

Deteriorating	4 3.3%
First time seeing the wound	19 15.8%
Improving	66 55.0%
New wound to the service	13 10.8%
Non Healing / Static	18 15.0%

Section C:
Dressing Details

The graphic below shows the variety of dressings used for wound care. The size of the text denotes the frequency at which each dressing was used, the top 10 dressings being listed in the table below. In total 139 dressings were used, an average of 1.2 per wound.

Fig 25. Wound dressings used

Inadine	26
Other Basic Dressing	18
Other Absorbent	12
Other	12
Cosmopor E	9
Other	60

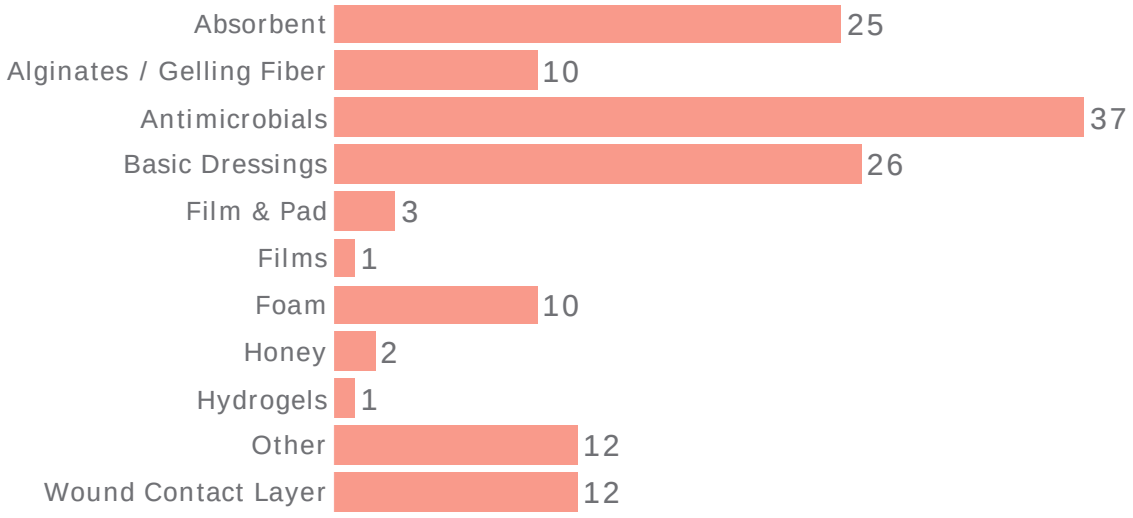


Fig 26. Dressing types

The most commonly used dressings were Antimicrobials (37), followed by Basic Dressings (26).

Antimicrobials	37
Basic Dressings	26
Absorbent	25
Other	12
Wound Contact Layer	12
Alginates / Gelling Fiber	10
Foam	10
Other	7

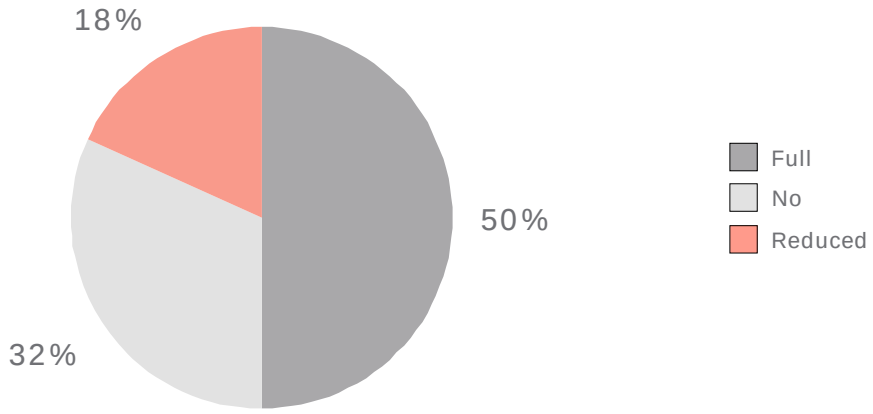


Fig 27. Compression usage by leg ulcer type

Of the wounds documented as leg ulcers, 50.0% patients were receiving full compression, 18.2% reduced compression, with a further 31.8% not currently undergoing any compression therapy.

Full	50.0%
No	31.8%
Reduced	18.2%

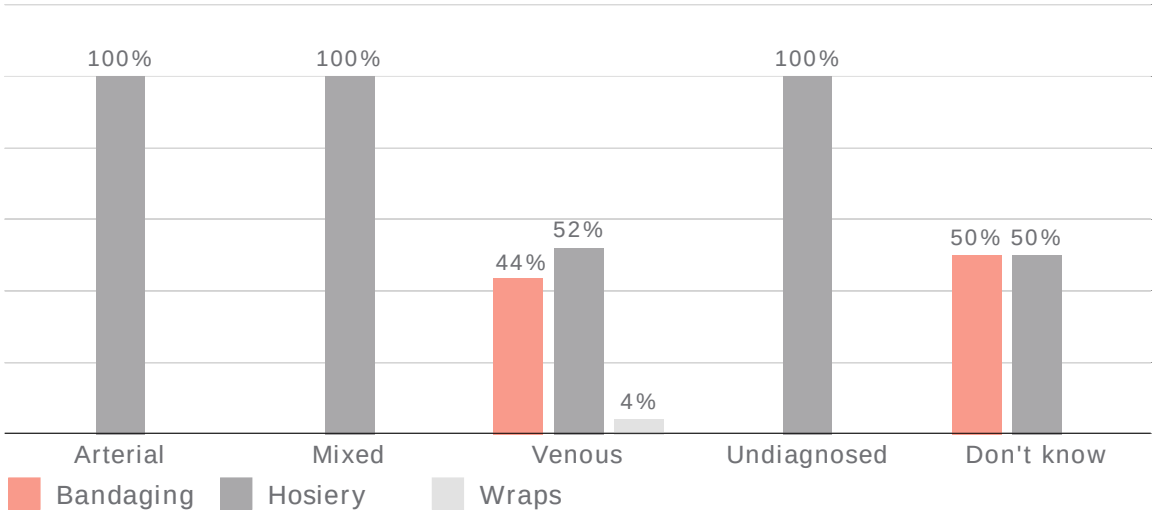


Fig 28. Leg ulcer compression types

This analysis shows which compression systems were applied on the wounds documented as leg ulcers

	Bandaging	Hosiery	Wraps
Arterial	-	100.0%	-
Mixed	-	100.0%	-
Venous	43.5%	52.2%	4.3%
Undiagnosed	-	100.0%	-
Don't know	50.0%	50.0%	-

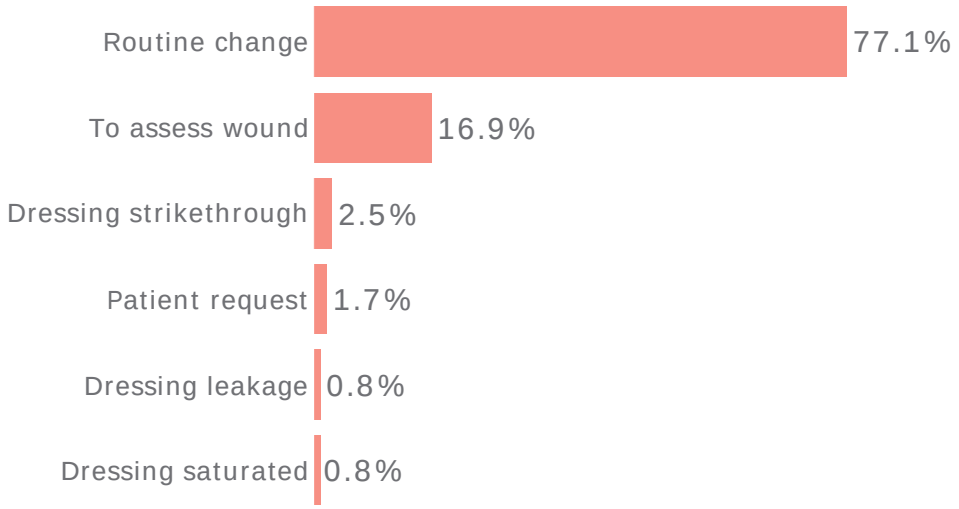


Fig 29. Change reason

"Routine change" was the reason most commonly given for changing wound dressings.

Routine change	91 77.1%
To assess wound	20 16.9%
Dressing strikethrough	3 2.5%
Patient request	2 1.7%
Other	2 1.7%

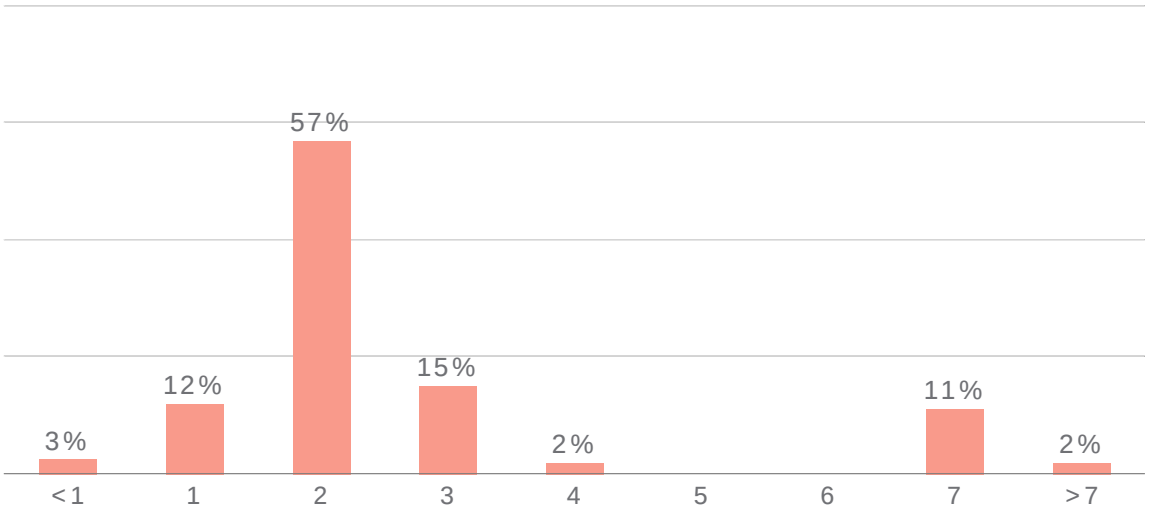


Fig 30. Change frequency

There is a large variability of change frequencies for different wound types, as shown in the table below:

Pressure ulcer	Burn / scald	Cut / graze	Diabetic foot ulcer	Leg ulcer	Tertiary / open surgical wound	Closed surgical incision	Dehisced Surgical wound	Grafts / Flaps / Donor sites	Skin tear	Lymphoede-ma	Pilonidal sinus	Fungating wound	Haematoma	Trauma	Moisture associated skin damage	Mild Incontinence associated damage	Moderate Incontinence associated damage	Severe Incontinence associated damage	Dermatologi-cal
3.3	2.0	1.6	2.8	2.4	4.0	1.8	7.7		1.8	2.9	5.0	7.0	2.0	3.0	2.7	2.0			2.0

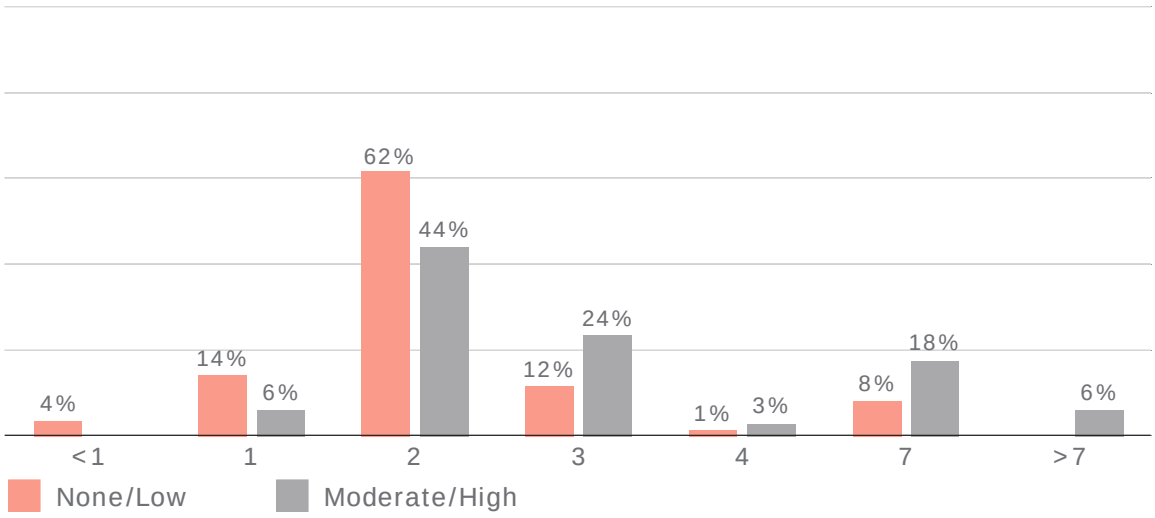


Fig 31. Change frequency by exudate level

	<1	1	2	3	4	5	6	7	>7
None/Low	3	12	53	10	1	-	-	7	-
Moderate/High	-	2	15	8	1	-	-	6	2

The below chart and table show the distribution of change frequencies where foam dressings are used compared to other wounds.

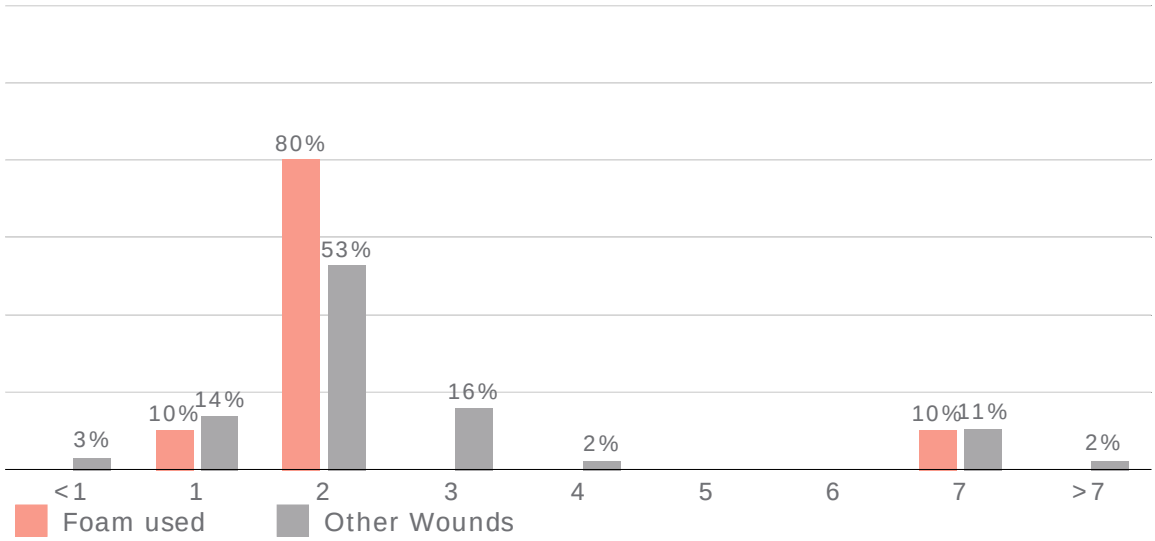


Fig 32. Change frequency by foam usage

	<1	1	2	3	4	5	6	7	>7
Foam used	-	1	8	-	-	-	-	1	-
Other Wounds	3	13	50	15	2	-	-	10	2

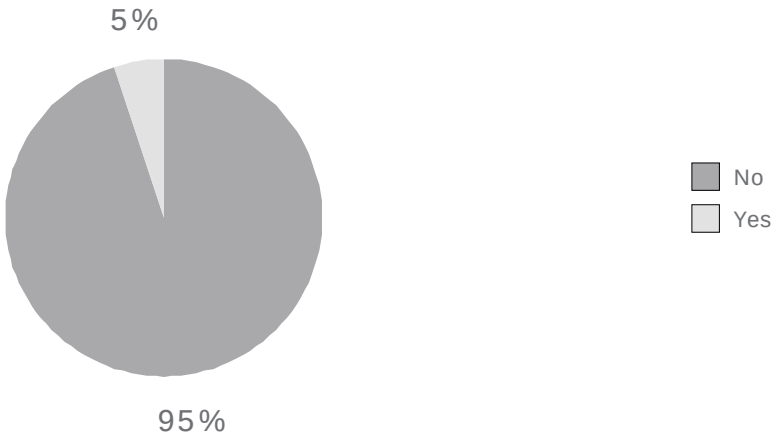


Fig 33. Unplanned dressing change

This analysis shows whether the dressing change was planned on this occasion

No	95.0%
Yes	5.0%

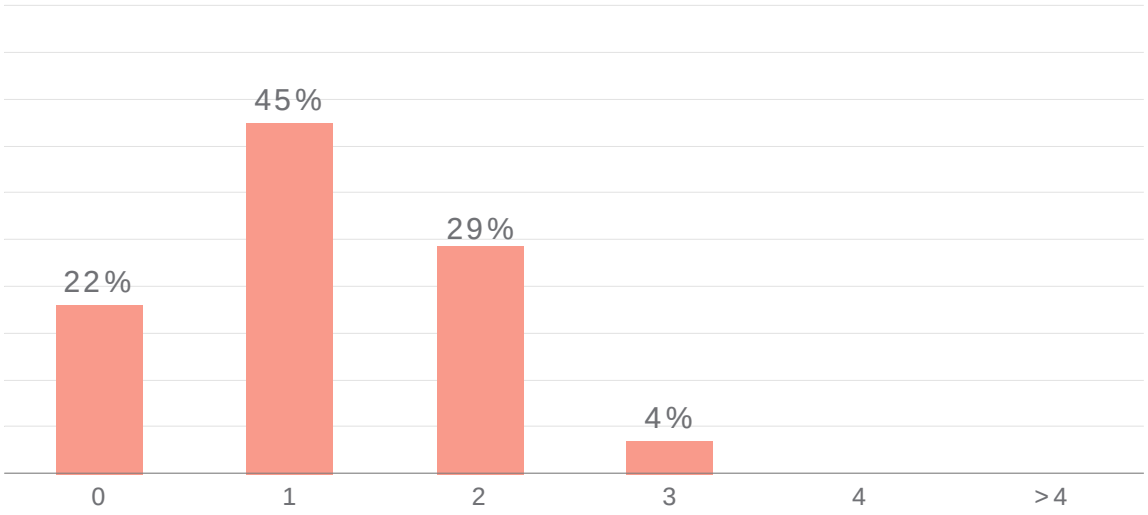


Fig 34. Number of dressings used

The above chart shows the distribution of number of dressings used to treat wounds. An average of 1.2 dressings were used per wound. 26 wounds had no dressings recorded, in some cases this may be due to incomplete data. 0 wounds had 4 dressings documented, 0 had more than 4.

0	1	2	3	4	>4
26 21.7%	54 45.0%	35 29.2%	5 4.2%	0 0.0%	0 0.0%

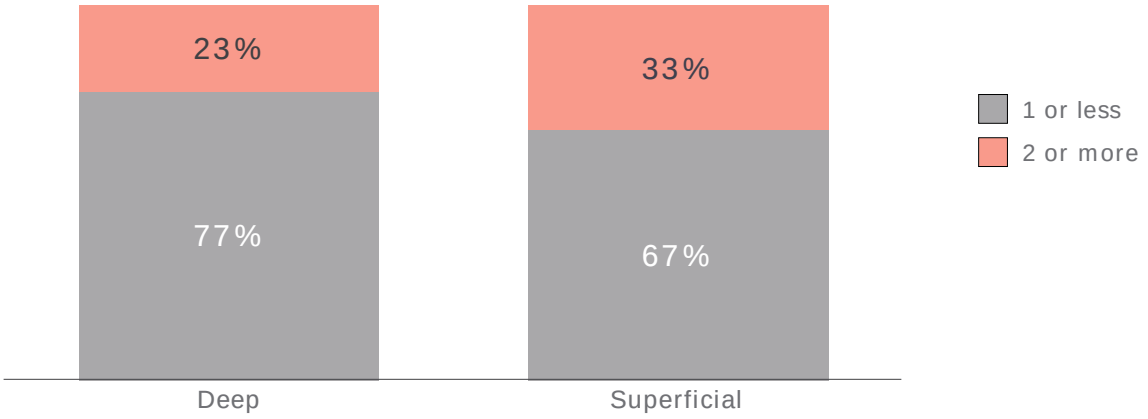


Fig 35. Dressing volume by wound depth

In superficial wounds, 33.0% wounds received 2 or more dressings, compared to 22.7% of those wounds documented as deep.

	Deep	Superficial
1 or less	17 77.3%	61 67.0%
2 or more	5 22.7%	30 33.0%

Section D:
Infection

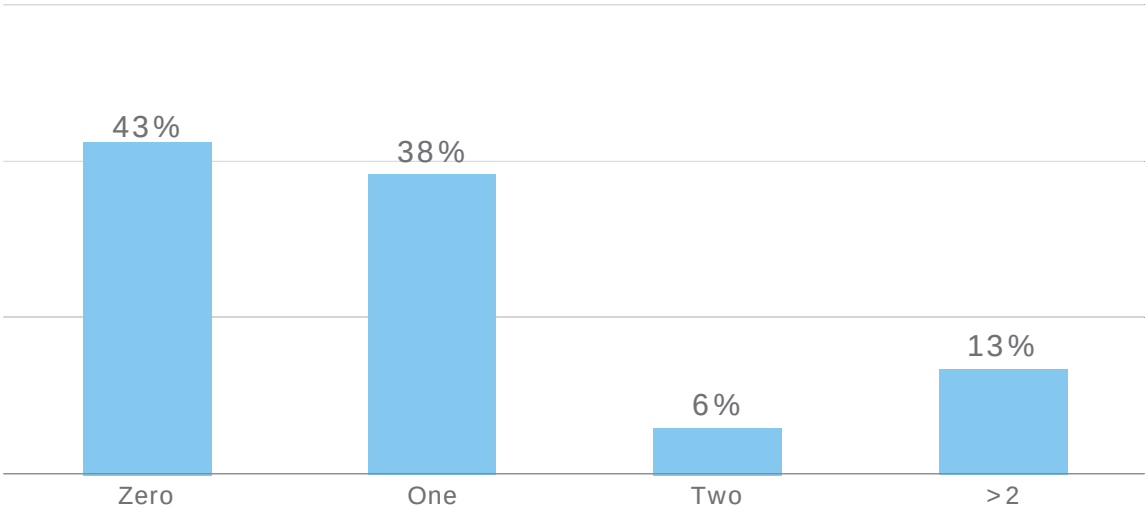


Fig 36. Number of signs of infection

Of the 120 wounds surveyed, 69 wounds showed at least one sign of infection. 51 wounds had no documented signs of infection.

Zero	51 42.5%
One	46 38.3%
Two	7 5.8%
>2	16 13.3%

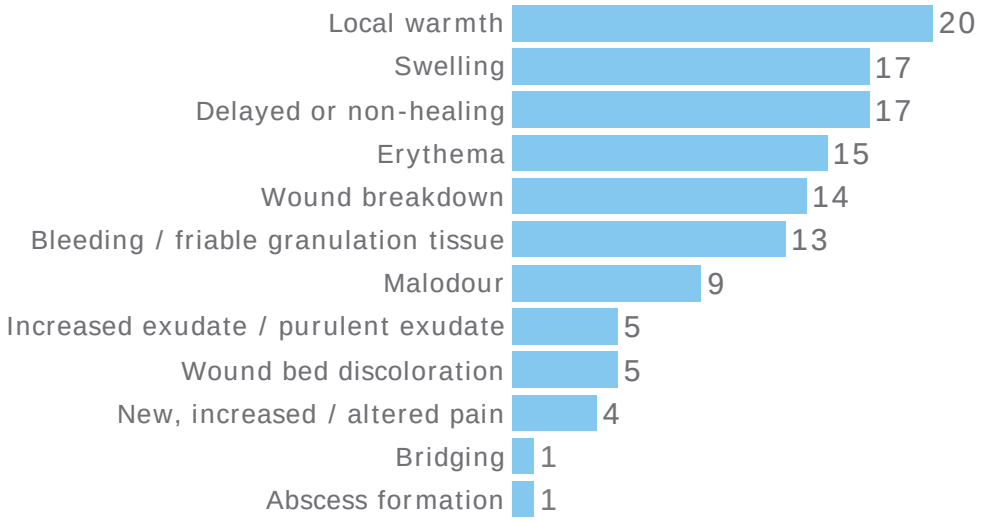


Fig 37. Signs of infection

The most commonly observed infection sign was Local warmth which was seen in 20 wounds.

Local warmth	Swelling	Delayed or non-healing	Other
20	17	17	67

The below table shows that 7 wounds were reported infected by the clinician completing the survey:

Yes	No	Don't know
7 5.8%	112 93.3%	1 0.8%

Fig 38. Stated infection

The below chart shows reported infections against the number of signs of infection:

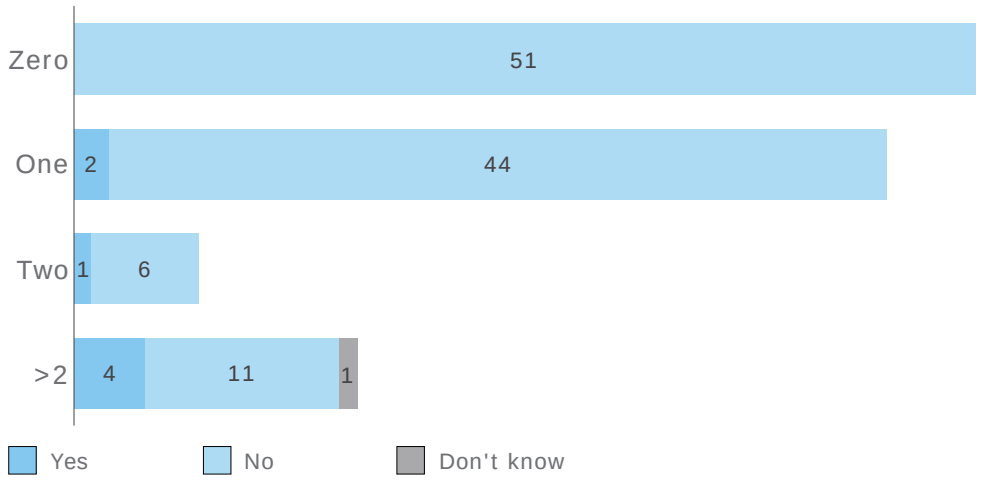


Fig 39. Stated infection by count of infection signs

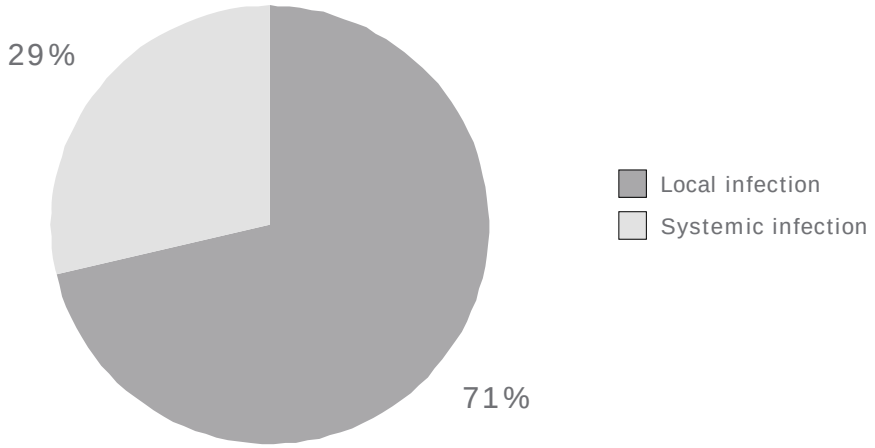


Fig 40. Infection type

The table above shows the most common infection type is Local infection (5)

Local infection	5 71.4%
Systemic infection	2 28.6%

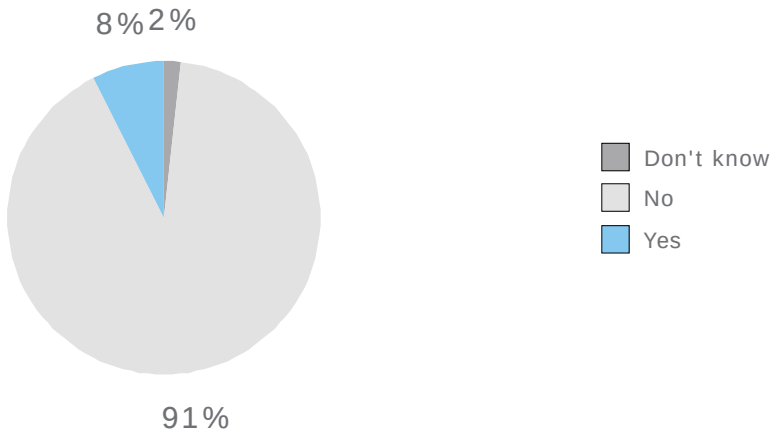


Fig 41. Infection biofilm

This analysis shows whether Biofilm was thought to be present in the wound

Don't know	1.7%
No	90.8%
Yes	7.5%

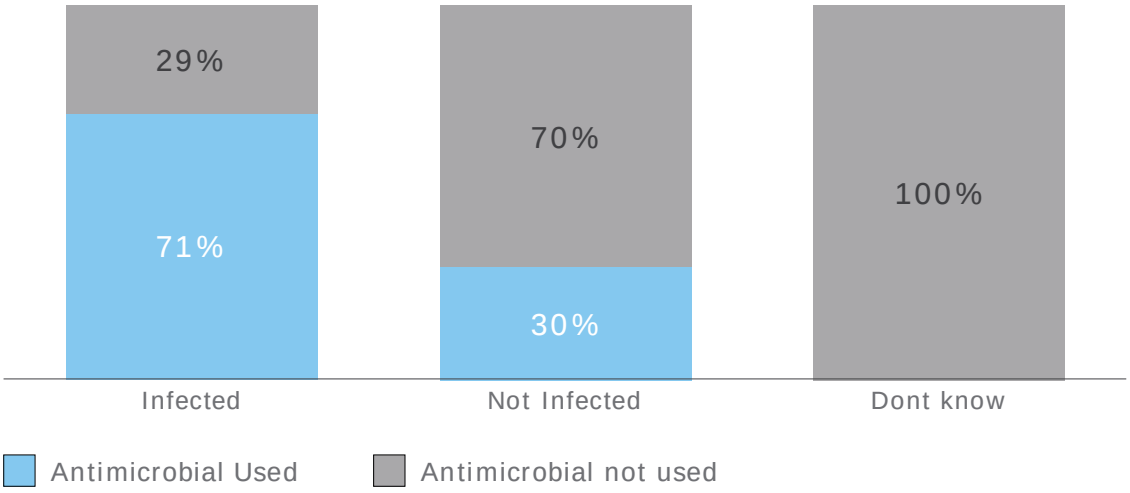


Fig 42. Antimicrobial usage by stated infection

The chart above shows the usage of antimicrobials in wounds across the clinical judgements of wound infection. This shows that 34 antimicrobial dressings were used in wounds not considered infected. Additionally 2 wounds considered infected had no antimicrobial dressings recorded in their survey forms.

	Infection	No Infection	Don't know
Yes	5 71.4%	34 30.4%	0 0
No	2 28.6%	78 69.6%	1 100.0%

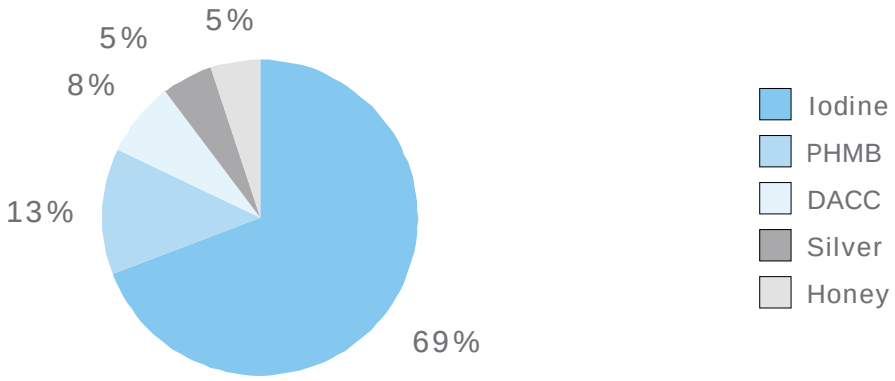


Fig 43. Antimicrobial type

The most commonly used types of antimicrobials were Iodine dressings, The most used antimicrobial dressing was Inadine, used to dress 26 wounds. The most commonly used dressings with antimicrobial properties are listed in the table below.

Iodine	PHMB	DACC	Silver	Honey
27	5	3	2	2
69.2%	12.8%	7.7%	5.1%	5.1%

Inadine	26
Kerlix AMD	4
Cutimed Sorbact	3
Other	6

Section E:

Eco

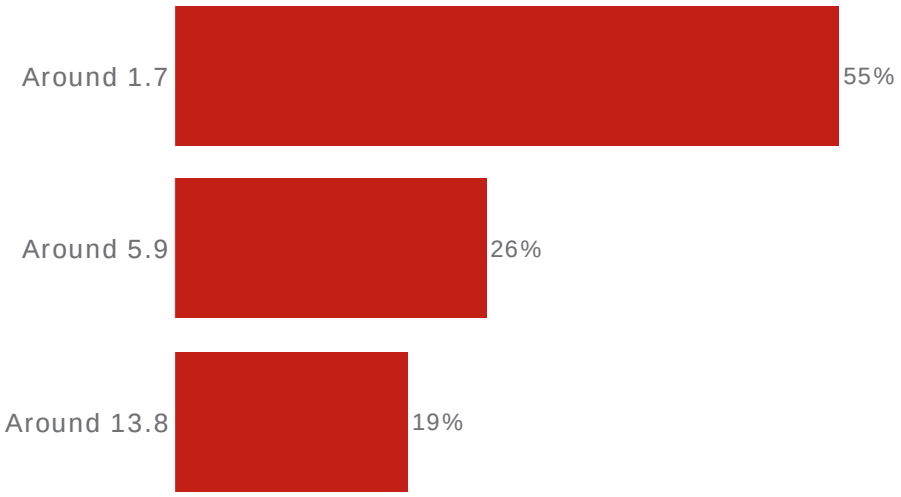


Fig 44. How many miles were travelled to the patient?

This analysis shows how many miles were travelled to the patient. miles were travelled to the patients collectively, which is an average of miles per patient

Around 1.7	Around 5.9	Around 13.8
55.0%	25.8%	19.2%

Fig 45. What dressing disposables did you use today?

This analysis shows the most commonly used dressing disposables.

Dressing / basic pack	63
Saline	19
Apron / other protective equipment	95
Extra gauze	42
Gloves	116
Plastic consumables e.g. gallipot	6

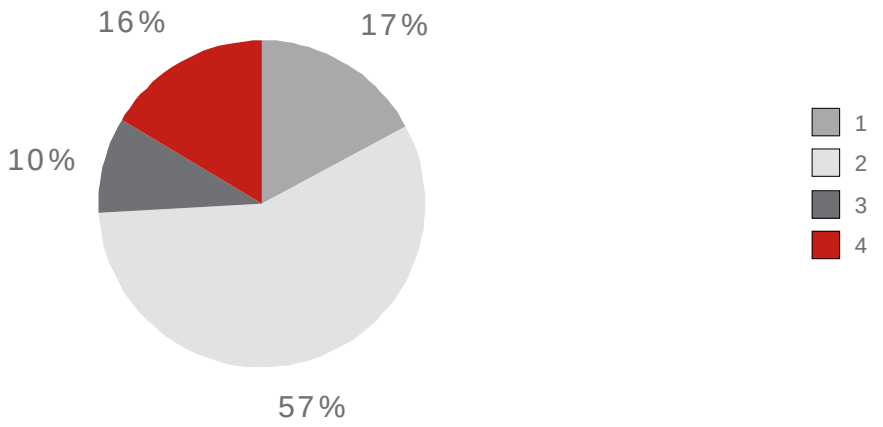


Fig 46. What dressing disposables did you use today?

This analysis shows how many pairs of gloves were used.

1	17.2%
2	56.9%
3	9.5%
4	16.4%

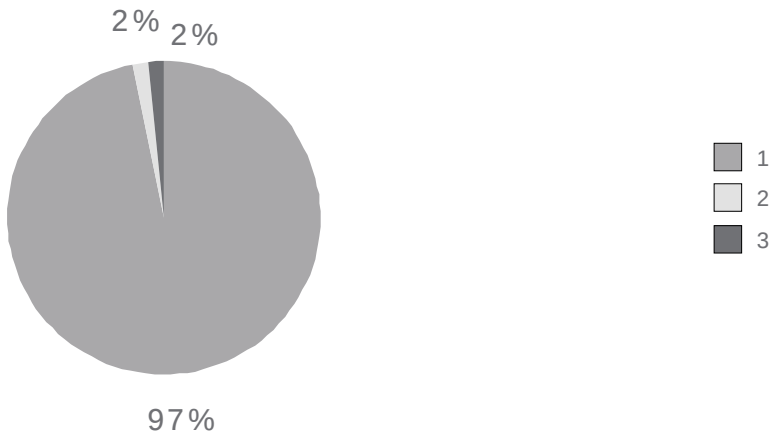


Fig 47. What dressing disposables did you use today?

This analysis shows how many dressing packs were used.

1	96.8%
2	1.6%
3	1.6%

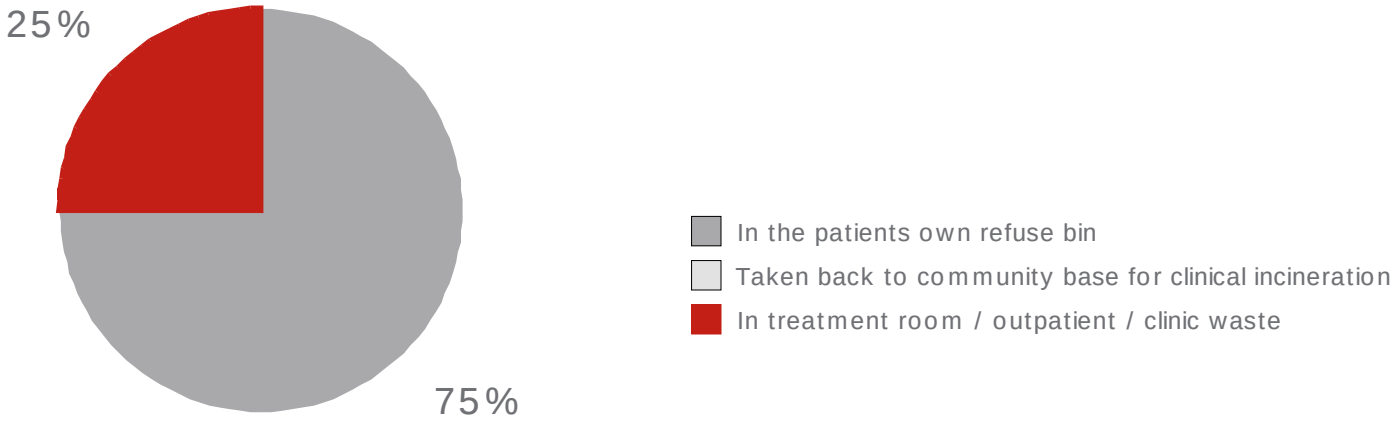


Fig 48. How did you dispose of the dressing waste today?

This analysis shows the most common ways to dispose of dressings.

In the patients own refuse bin	75.0%
Taken back to community base for clinical incineration	0.0%
In treatment room / outpatient / clinic waste	25.0%

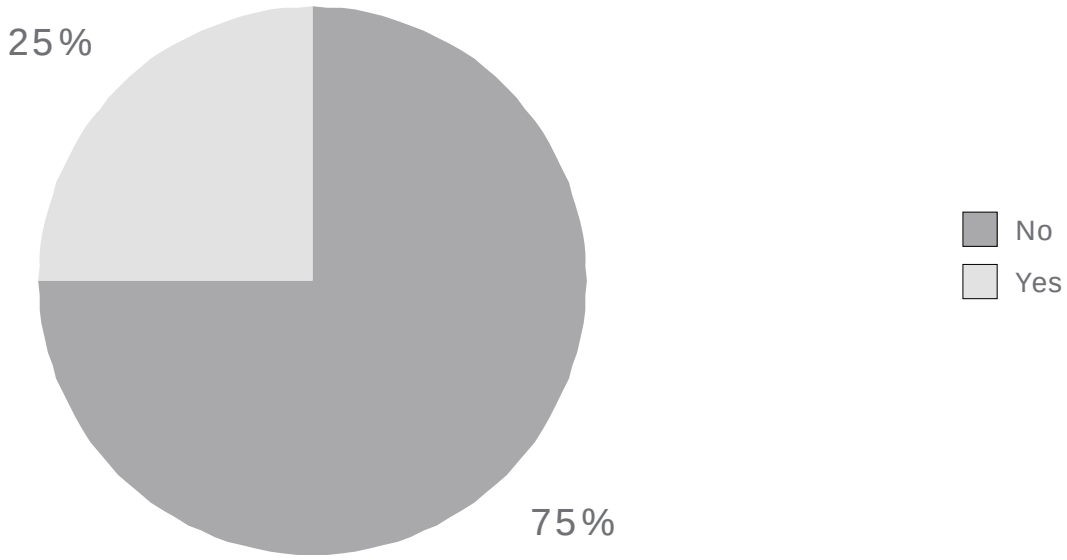


Fig 49. Would you still need to visit the patient if the dressing did not need changing?

The most common answer is No (75.0%)

No	75.0%
Yes	25.0%

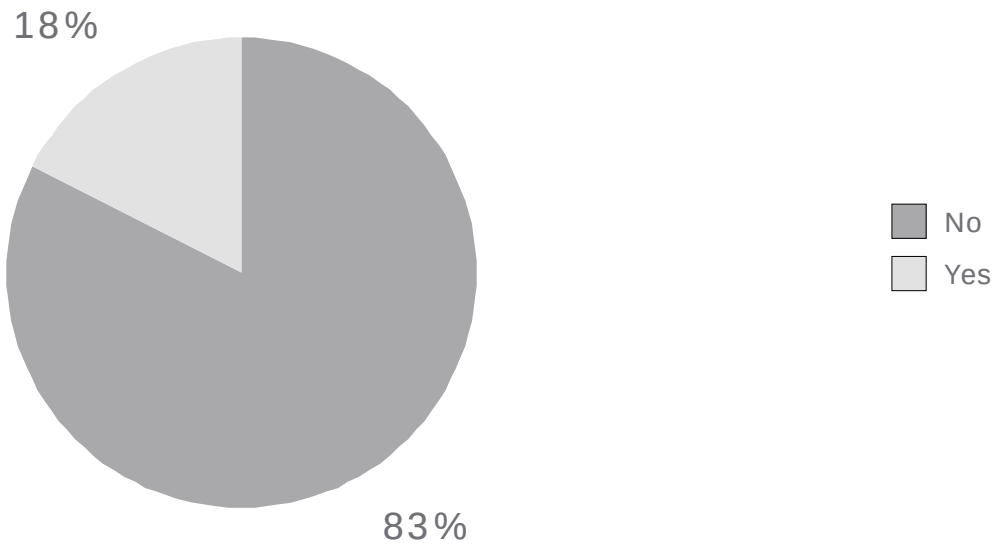


Fig 50. Would the patient cope well with self-care?

The most common answer is No (82.5%)

No	82.5%
Yes	17.5%

Smith & Nephew
Croxley Park
Building 5, Lakeside
Hatters Lane, Watford
Hertfordshire WD18 8YE

T +44 (0) 1923 477100
F +44 (0) 1923 477101

www.smith-nephew.com