

Smith+Nephew

+ Pembrokeeshire Report

July 2024

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



Audit Report

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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.



Survey details

The report was produced on 31/07/24.

Wounds Included In Analysis:

- The report is based on a total sample size of 173 wounds.
- The report is based on a total patient volume of 173 patients.



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

Summary

Across the survey data 173 wounds were documented; the most predominant wound type being Leg ulcer (55) and Pressure ulcer (42). In total 42 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 30.1 weeks.

The survey forms asked clinicians to document the healing status of each wound. The data shows that 47 wounds were considered static with a further 8 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 134 wounds did not have a hospital admission in the 12 months prior to the survey, 29 had one hospital visit and 10 wounds were admitted to hospital 2 times or more.

In total 173 wounds had received some form of referral in the prior 12 months.



The frequency of changing dressings

In total 330 dressings were used, an average of 1.9 per wound.

Dressings are currently changed on average 3.4 times per week, "Routine change" was the reason most commonly given for changing wound dressings.

Of the 173 surveyed wounds 55 were being changed more than 3 times per week, 37 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)

10 wounds were reported infected by the clinician completing the survey. The data shows that 7 wounds considered infected had no antimicrobial dressings recorded in their survey forms yet 67 antimicrobial dressings were used in wounds not considered infected.

Of the 173 wounds surveyed, 101 wounds showed at least one sign of infection. The most commonly observed infection sign was Delayed or non-healing which was seen in 45 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

	GP practice	Nursing home	Patient's home	Residential home
Manchester Square Health Centre	0	0	35	3
Winch Lane Health Centre	0	4	25	8
Argyle Medical Centre	1	0	20	5
Fishguard Health Centre	0	0	20	3
Tenby Cottage hospital	0	0	18	4
Narberth Health Centre	0	0	19	1
Crymych health centre	0	0	7	0

Fig 1. Teams & care setting
 Of the 173 wounds analysed, 38 did not have a team name documented and 0 did not have a location recorded.

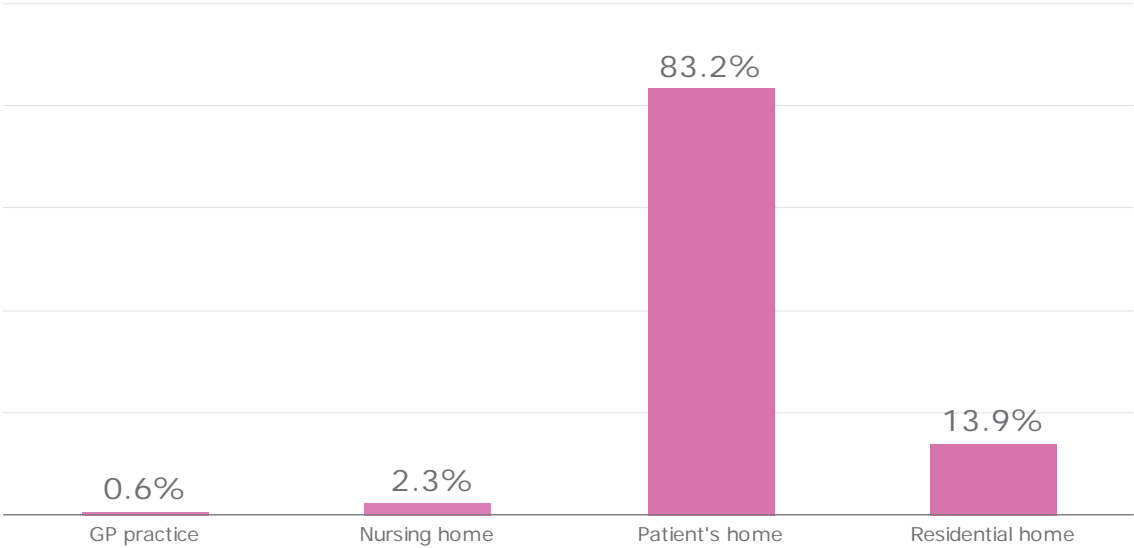


Fig 2. Treatment setting
 Wounds were most frequently treated in the Patient's home (83.2%).

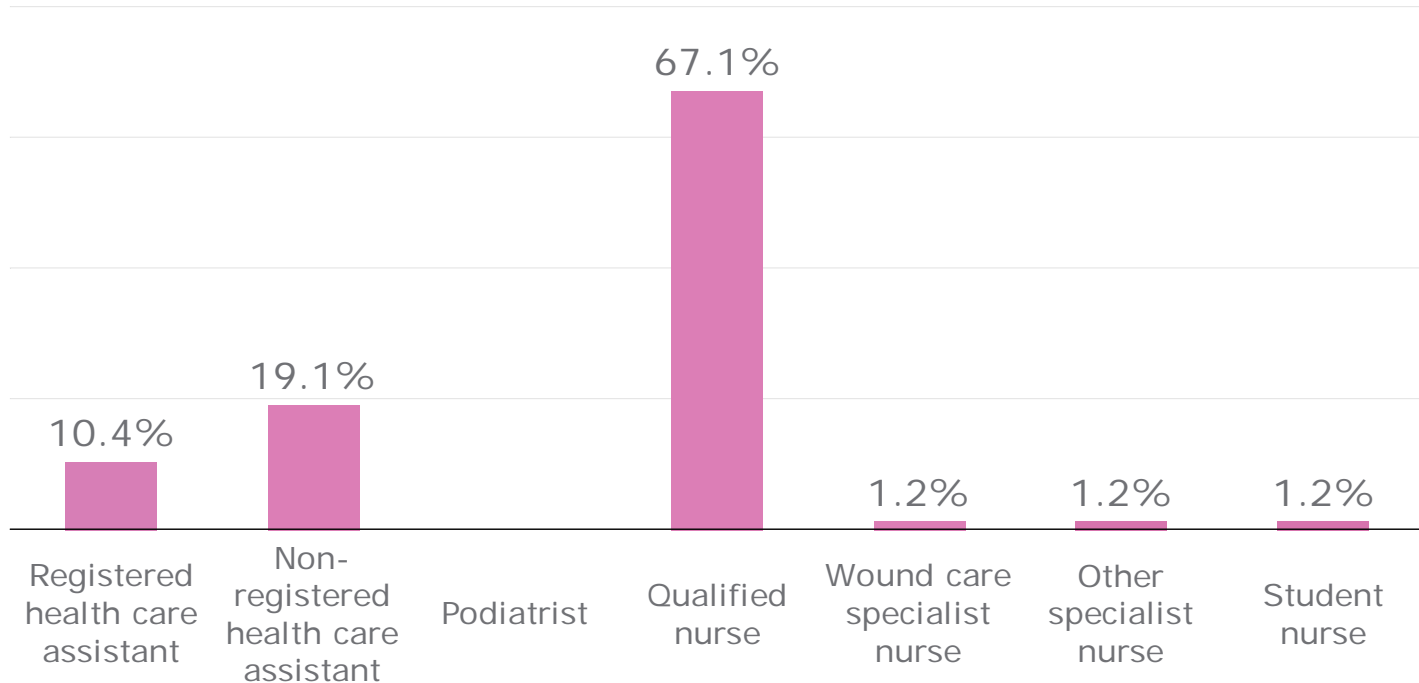


Fig 3. Clinician role

The highest proportion of wounds were treated by a Qualified nurse (67.1%). 0 wounds were treated by more than 1 clinician.

Qualified nurse	116 67.1%
Non-registered health care assistant	33 19.1%
Registered health care assistant	18 10.4%
Wound care specialist nurse	2 1.2%
Other specialist nurse	2 1.2%
Student nurse	2 1.2%

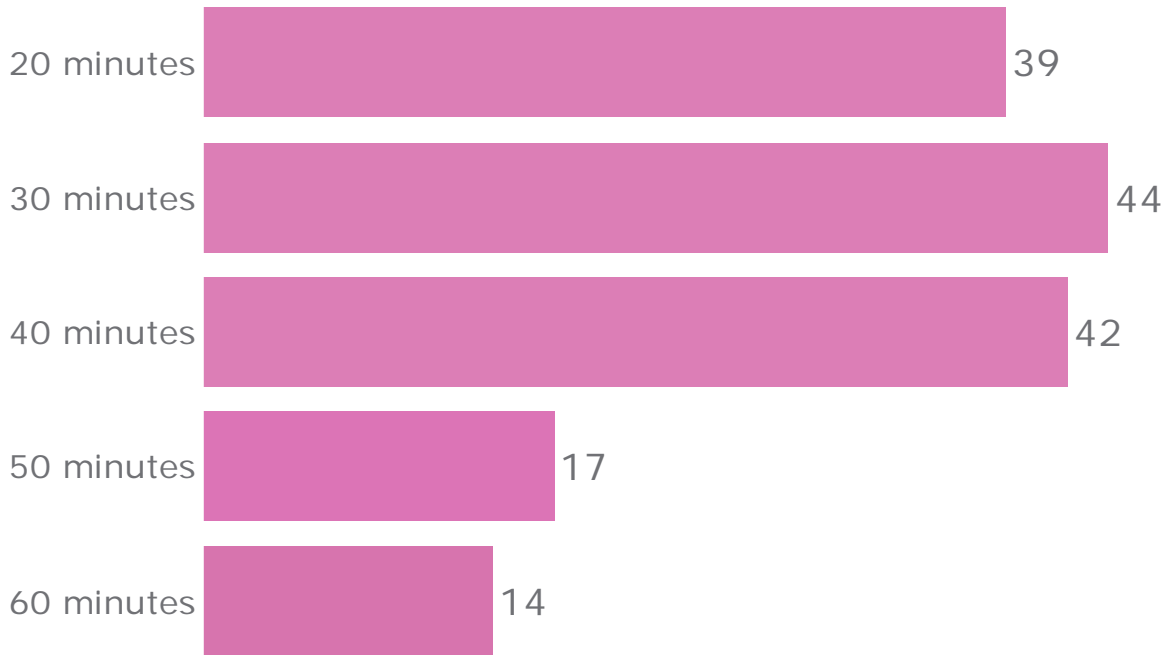


Fig 4. Total time spent at the appointment

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	80 minutes	90 minutes
6	39	44	42	17	14	8	2	1

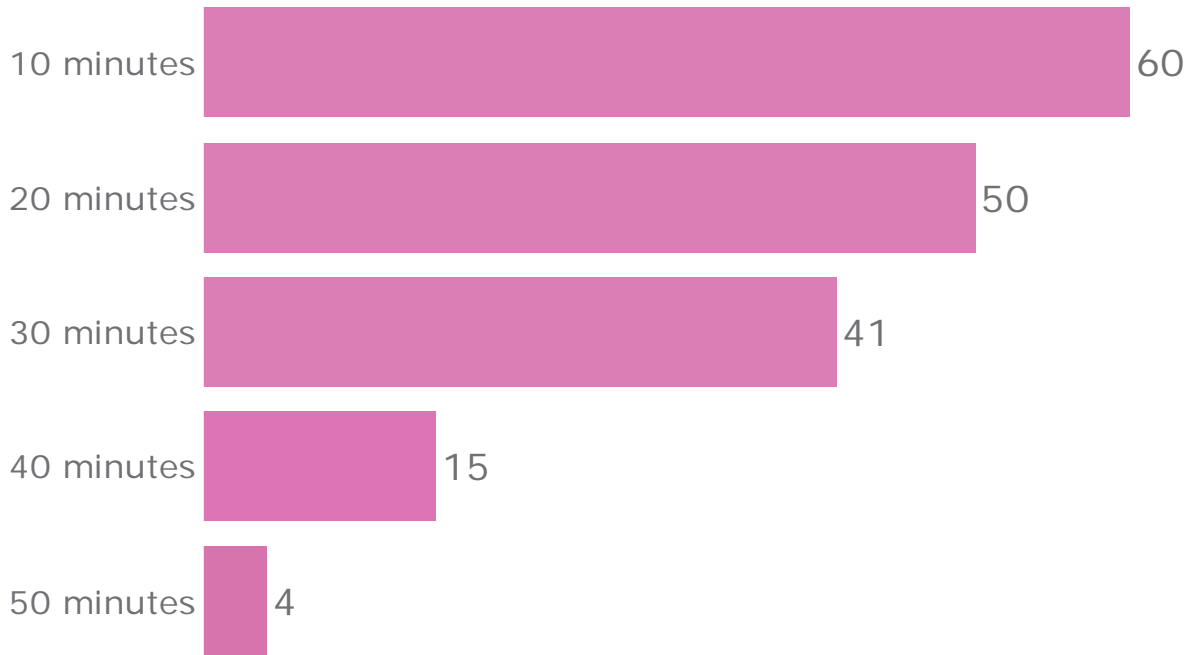


Fig 5. Time spent on wound care

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	70 minutes
60	50	41	15	4	3

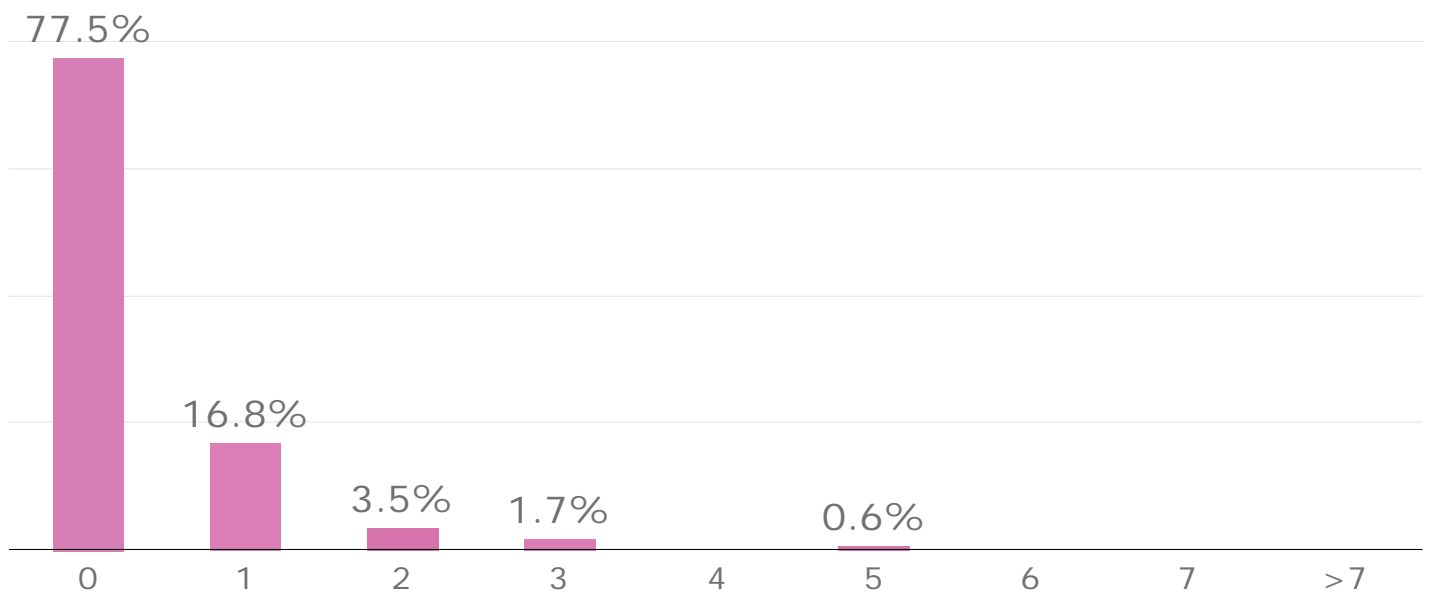


Fig 6. Hospital admissions in prior 12 months

134 patients with a wounds did not have a hospital admission in the 12 months prior to the survey. 10 patients were admitted to hospital more than once.

0	1	2	3 or more
134	29	6	4
77.5%	16.8%	3.5%	2.3%

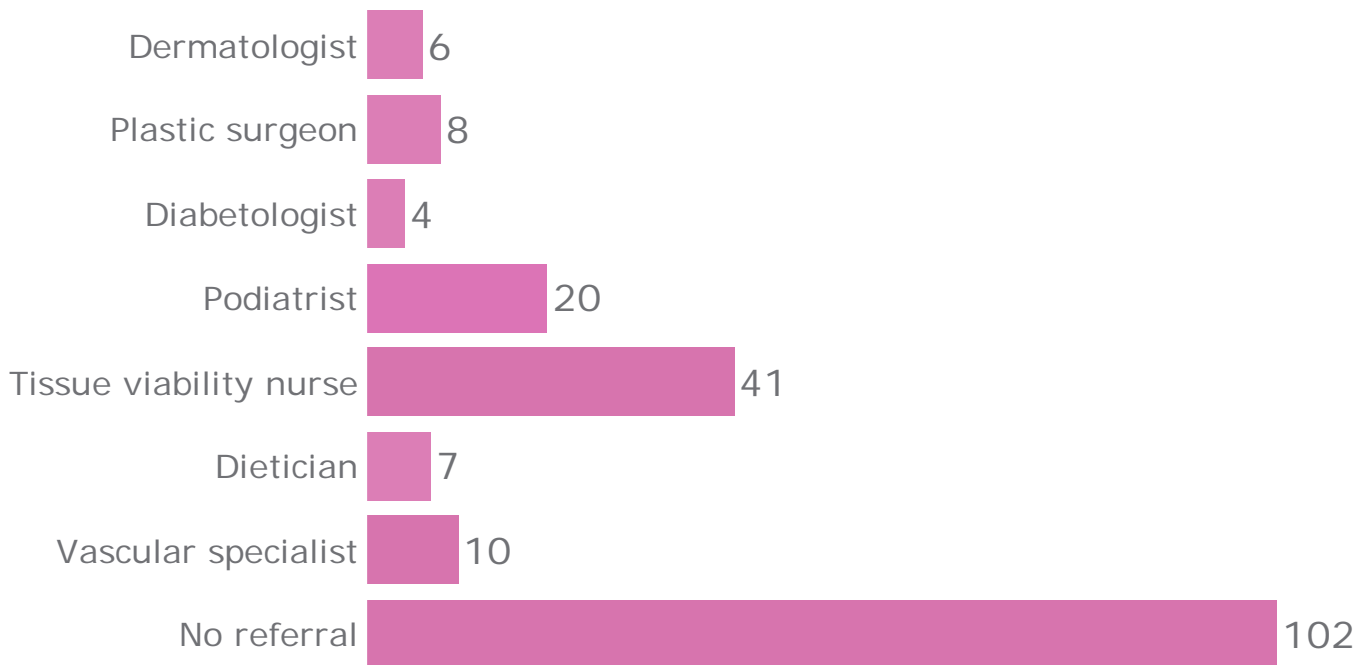


Fig 7. Wound referrals in prior 12 months

In total 173 patients with a wound had received some form of referral in the prior 12 months. The highest volume of these (102) were to No referral.

No referral	Tissue viability nurse	Podiatrist	Vascular specialist	Plastic surgeon	Dietician	Dermatologist	Diabetologist
102	41	20	10	8	7	6	4
59.0%	23.7%	11.6%	5.8%	4.6%	4.0%	3.5%	2.3%

Section B:

Wound Details

The most common comorbidity selected was Other (41). 21 patients had 3 or more comorbidities.

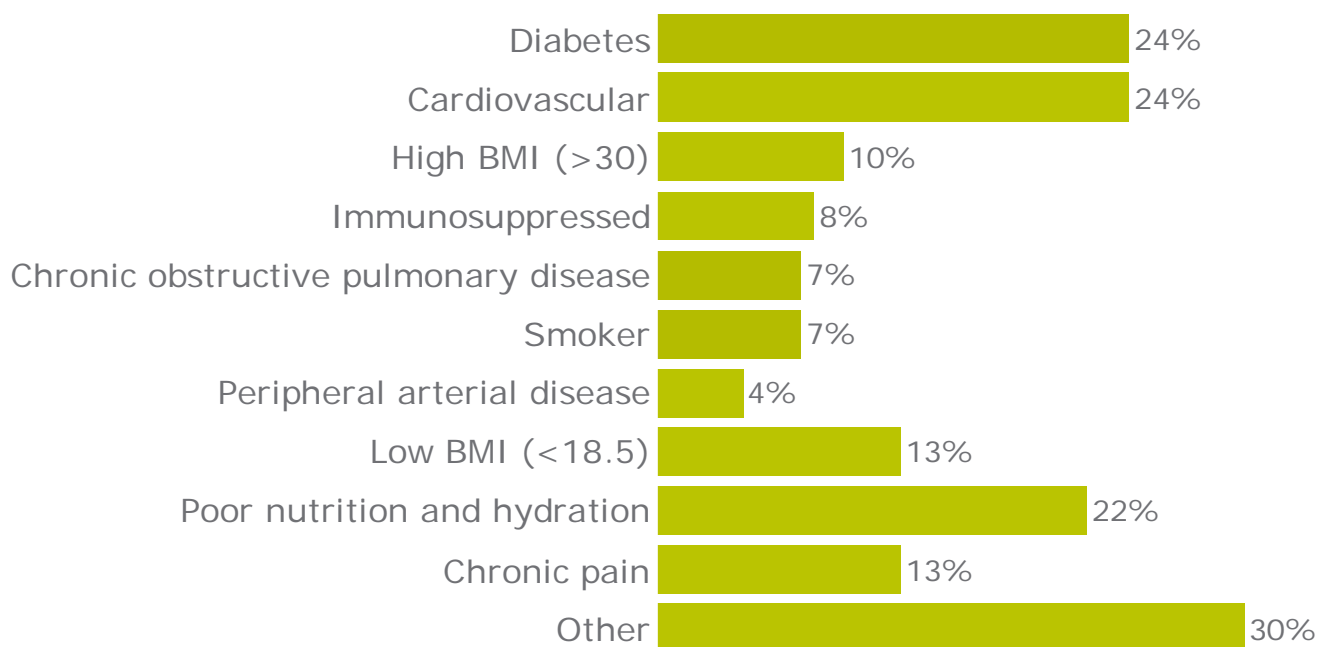


Fig 8. Comorbidities

Other	41
Diabetes	33
Cardiovascular	33
Poor nutrition and hydration	30
Low BMI (<18.5)	17
Chronic pain	17
Other	50

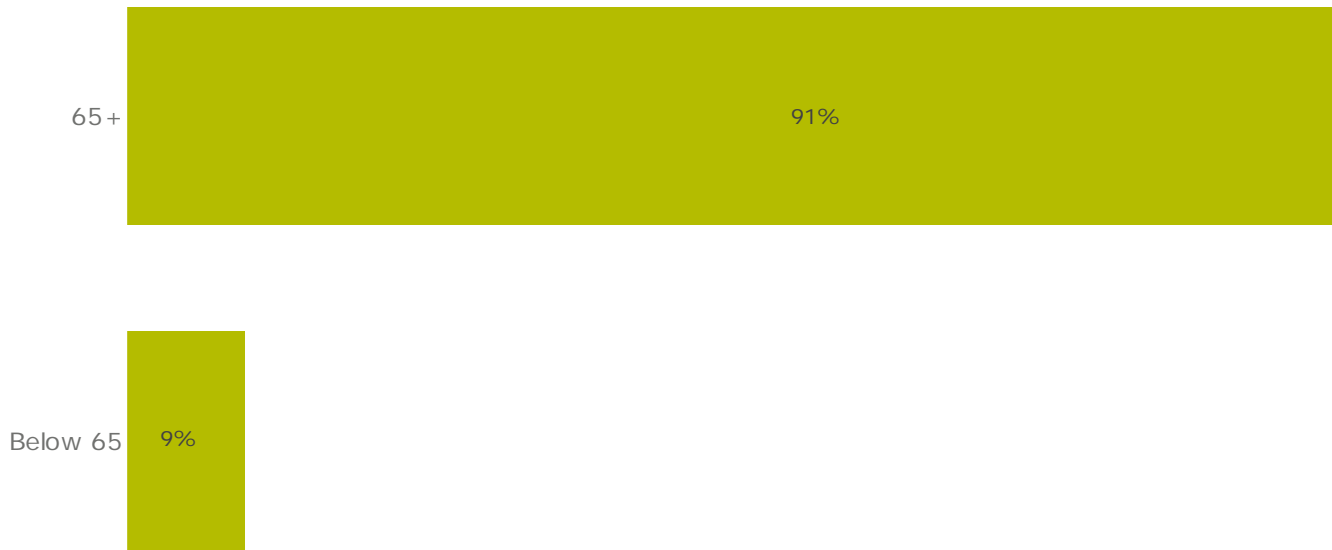


Fig 9. 65+ Comorbidities

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

Other	41
Diabetes	33
Cardiovascular	33
Poor nutrition and hydration	30
Low BMI (<18.5)	17
Chronic pain	17
High BMI (>30)	13
Immunosuppressed	11
Chronic obstructive pulmonary disease	10
Smoker	10
Peripheral arterial disease	6

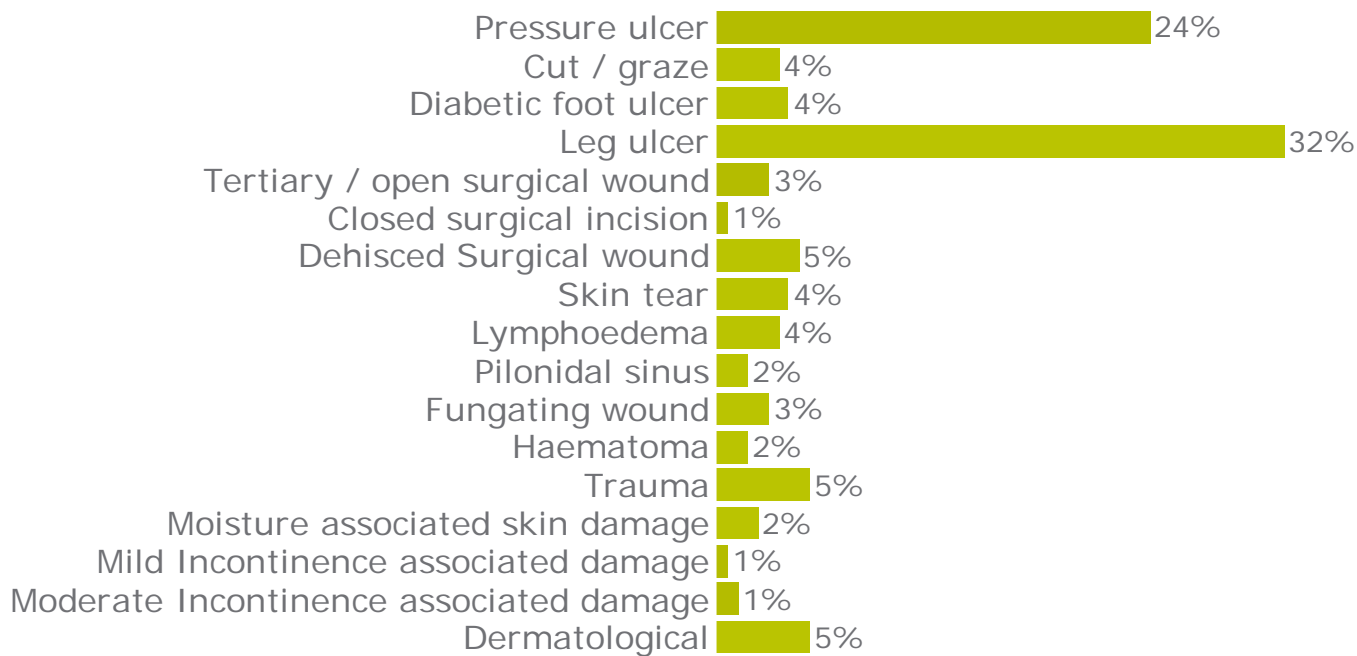


Fig 10. Wound type

The most common wound types were Leg ulcer (55) and Pressure ulcer (42).

Leg ulcer	55 31.8%
Pressure ulcer	42 24.3%
Trauma	9 5.2%
Dermatological	9 5.2%
Dehisced Surgical wound	8 4.6%
Other	50 28.9%

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

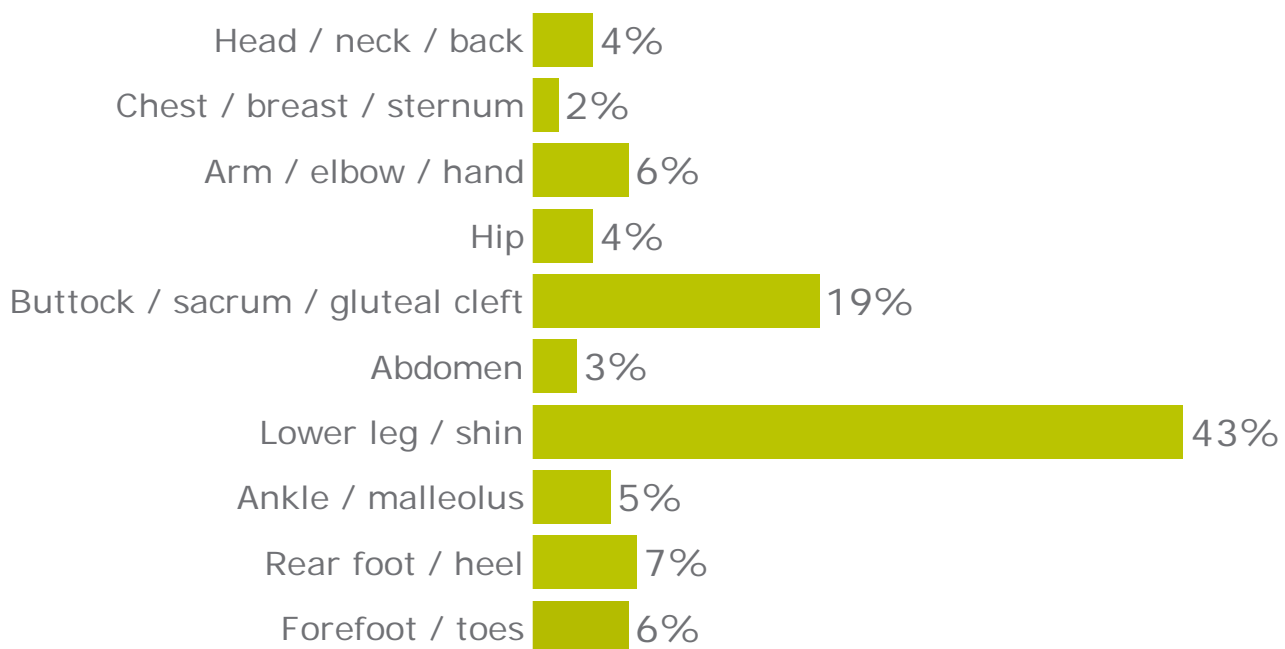


Fig 11. Wound locations

Lower leg / shin	75
Buttock / sacrum / gluteal cleft	33
Rear foot / heel	12
Other	53

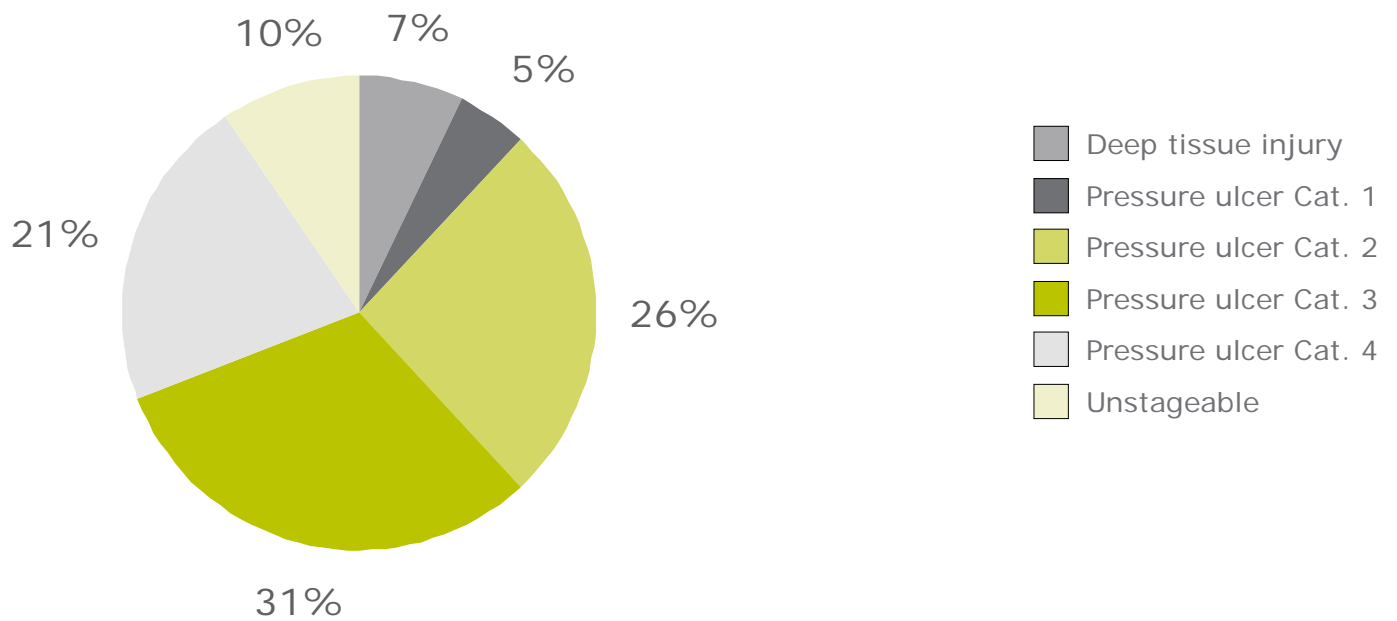


Fig 12. Pressure ulcer by grade

Of the pressure ulcers reported Pressure ulcer Cat. 3 were the most common (13).

Pressure ulcer Cat. 3	13 31.0%
Pressure ulcer Cat. 2	11 26.2%
Pressure ulcer Cat. 4	9 21.4%
Unstageable	4 9.5%
Deep tissue injury	3 7.1%
Pressure ulcer Cat. 1	2 4.8%

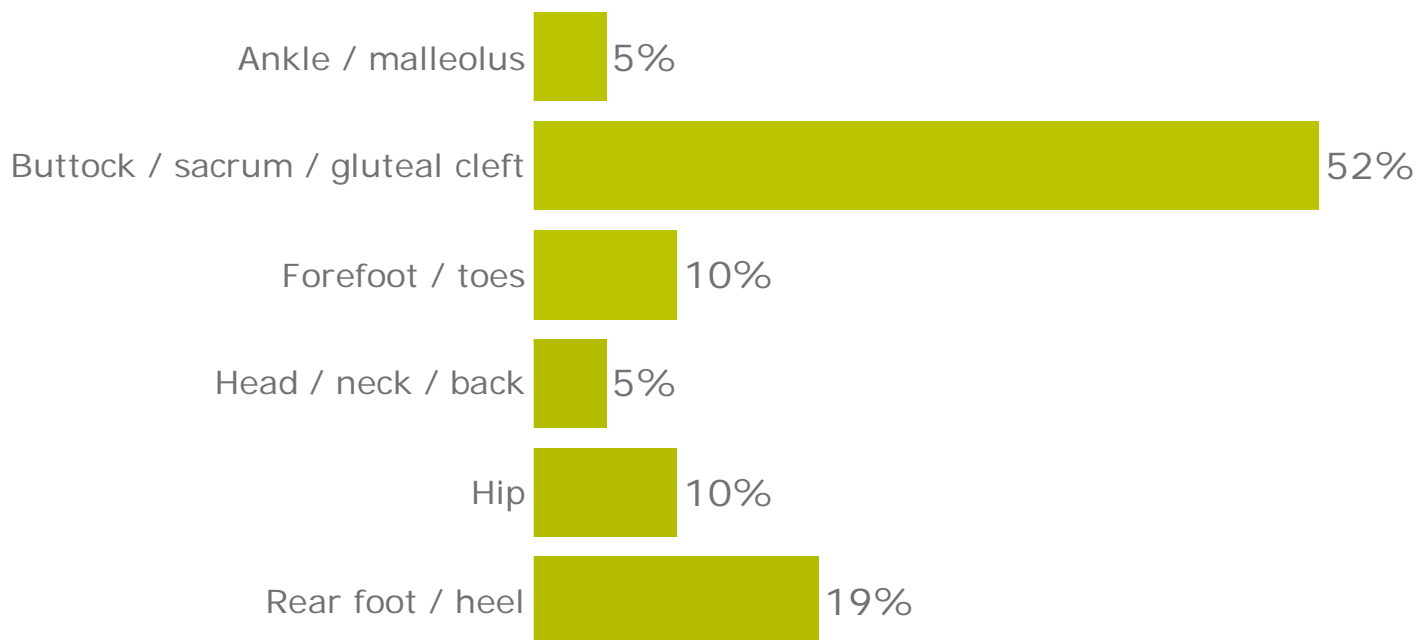
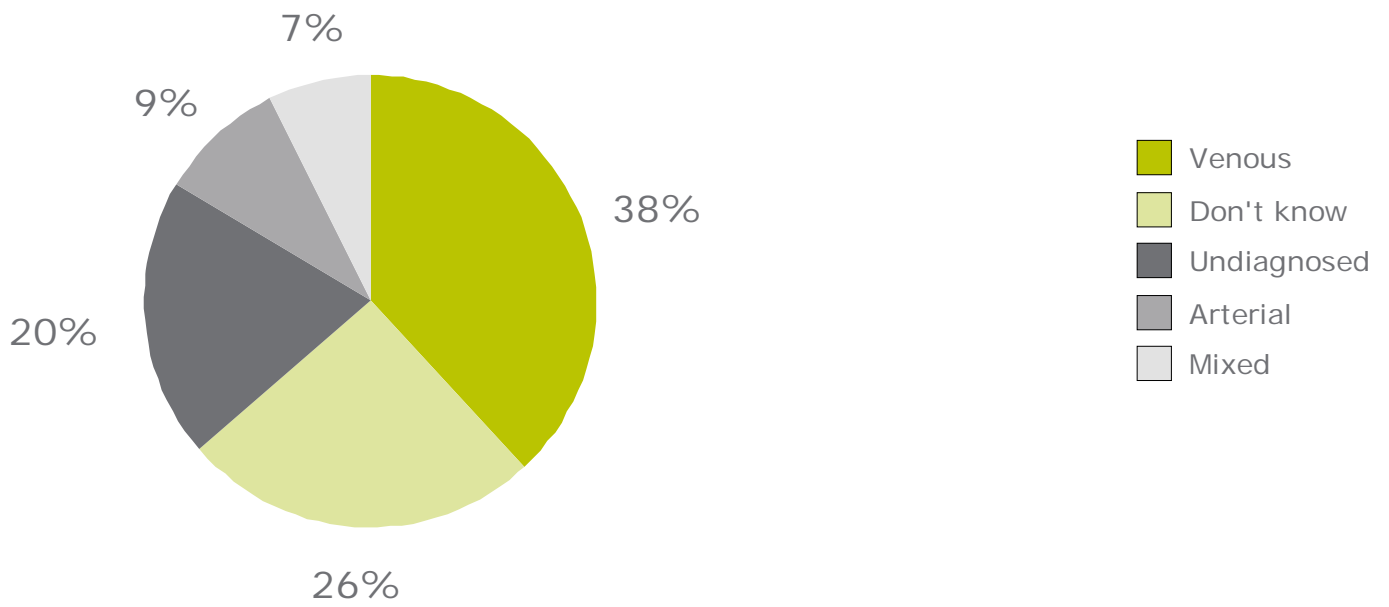


Fig 13. Pressure ulcer by location

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

Buttock / sacrum / gluteal cleft	22 52.4%
Rear foot / heel	8 19.0%
Hip	4 9.5%
Forefoot / toes	4 9.5%
Other	4 9.5%



Of the leg ulcers reported, Venous ulcers were the most common (21).

Venous	21 38.2%
Don't know	14 25.5%
Undiagnosed	11 20.0%
Arterial	5 9.1%
Mixed	4 7.3%

Fig 14. Leg ulcer by aetiology

Orthopaedics



100%

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

Orthopaedics	1
	100.0%

Fig 15. Surgical indication dehisced wound

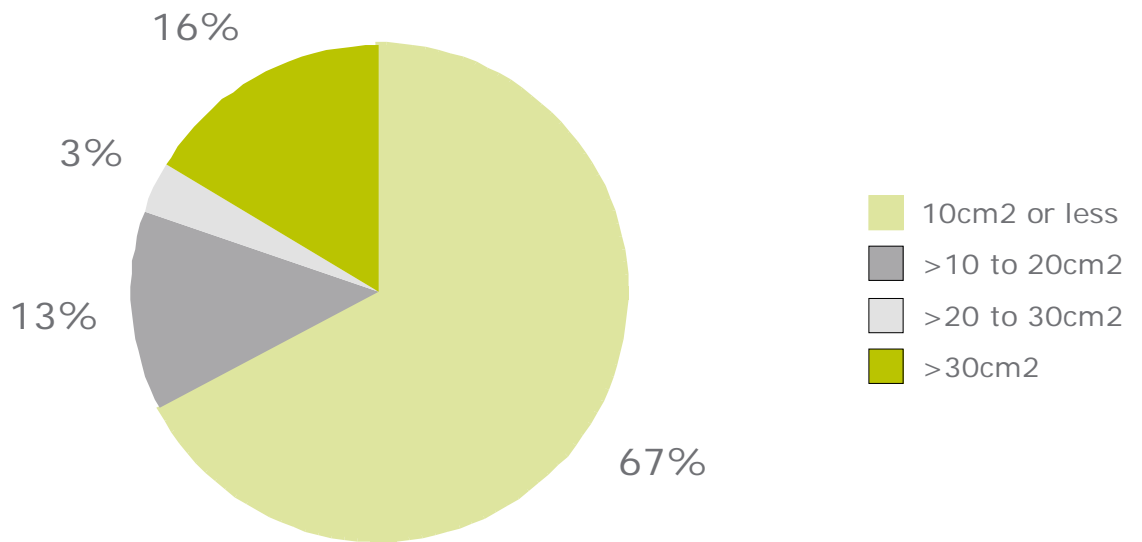


Fig 16. Wounds by area

During the survey period, the majority (110) of wounds were judged to be Superficial. The majority of wounds were measured at 10cm² or less. Wound area calculation was made using an ellipse formula, A cross tabulation of these two measures is shown below:

	10cm ² or less	>10 to 20cm ²	>20 to 30cm ²	>30cm ²
Deep	26 65.0%	5 12.5%	2 5.0%	7 17.5%
Superficial	50 68.5%	9 12.3%	2 2.7%	12 16.4%

Fig 17. Wounds area by depth

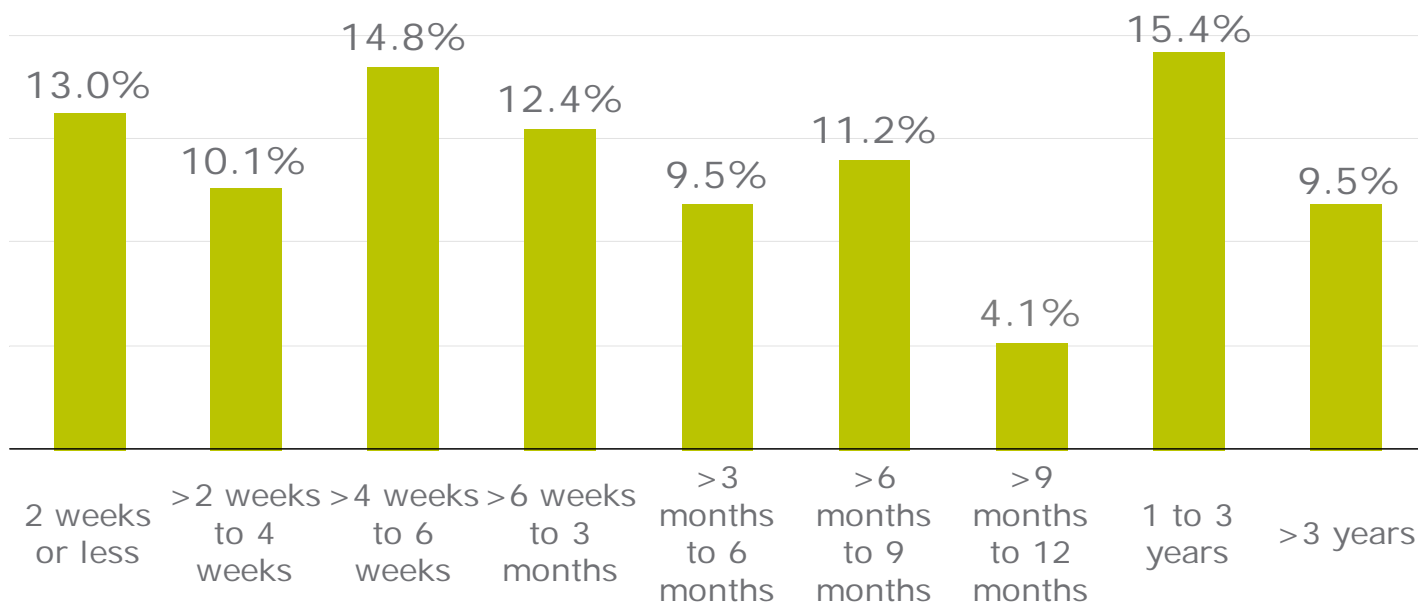


Fig 18. Wound duration

22 wounds had a duration of 2 weeks or less, with a further 17 being 2 to 4 weeks in duration. Of the surveyed wounds 19 were 6 to 9 months old. It is estimated that the wounds seen over the survey period have an average duration of around 30.1 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
22	17	25	21	16	19	7	26	16
13.0%	10.1%	14.8%	12.4%	9.5%	11.2%	4.1%	15.4%	9.5%

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

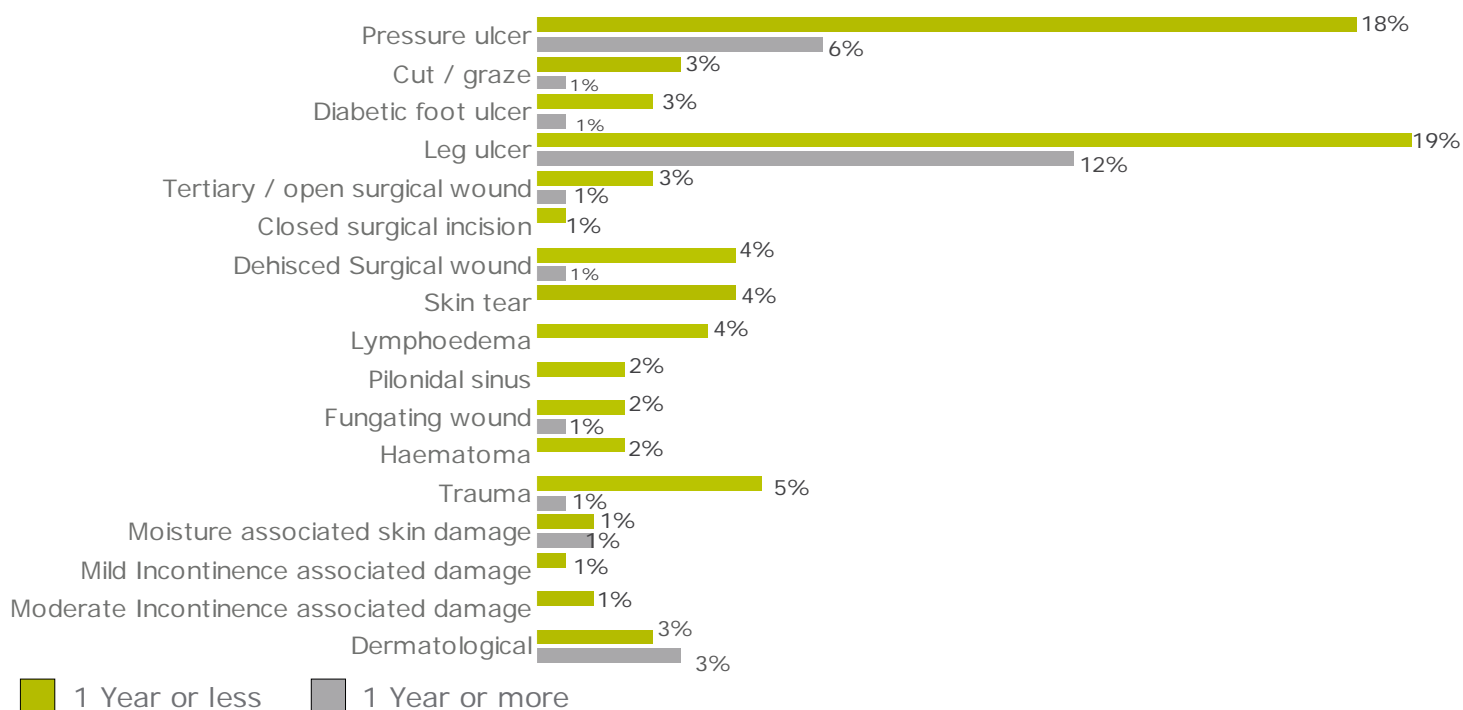


Fig 19. Wound durations by type

	1 Year or less	1 Year or more
Dehisced Surgical wound	7	1
Dermatological	4	5
Leg ulcer	31	19
Pressure ulcer	29	10
Trauma	8	1

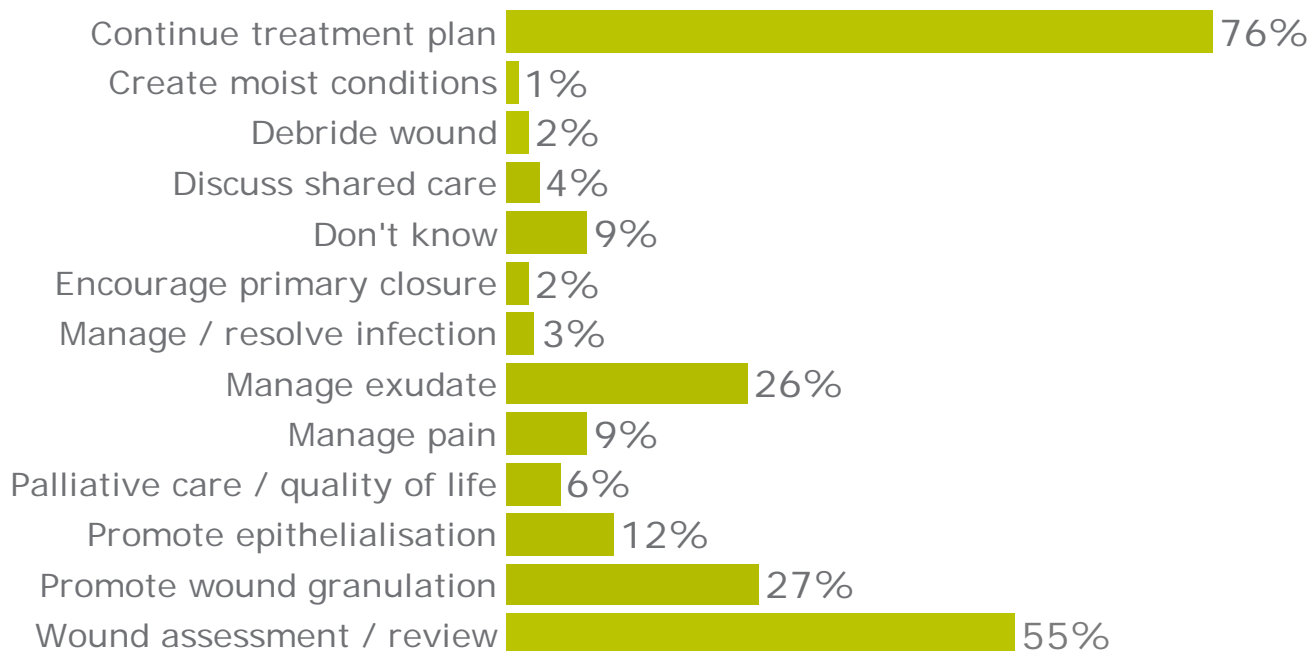


Fig 20. Priorities

This analysis highlights the top treatment priorities.

Continue treatment plan	76.3%
Create moist conditions	1.2%
Debride wound	2.3%
Discuss shared care	3.5%
Don't know	8.7%
Encourage primary closure	2.3%
Manage / resolve infection	2.9%
Manage exudate	26.0%
Manage pain	8.7%
Palliative care / quality of life	5.8%
Promote epithelialisation	11.6%
Promote wound granulation	27.2%
Wound assessment / review	54.9%

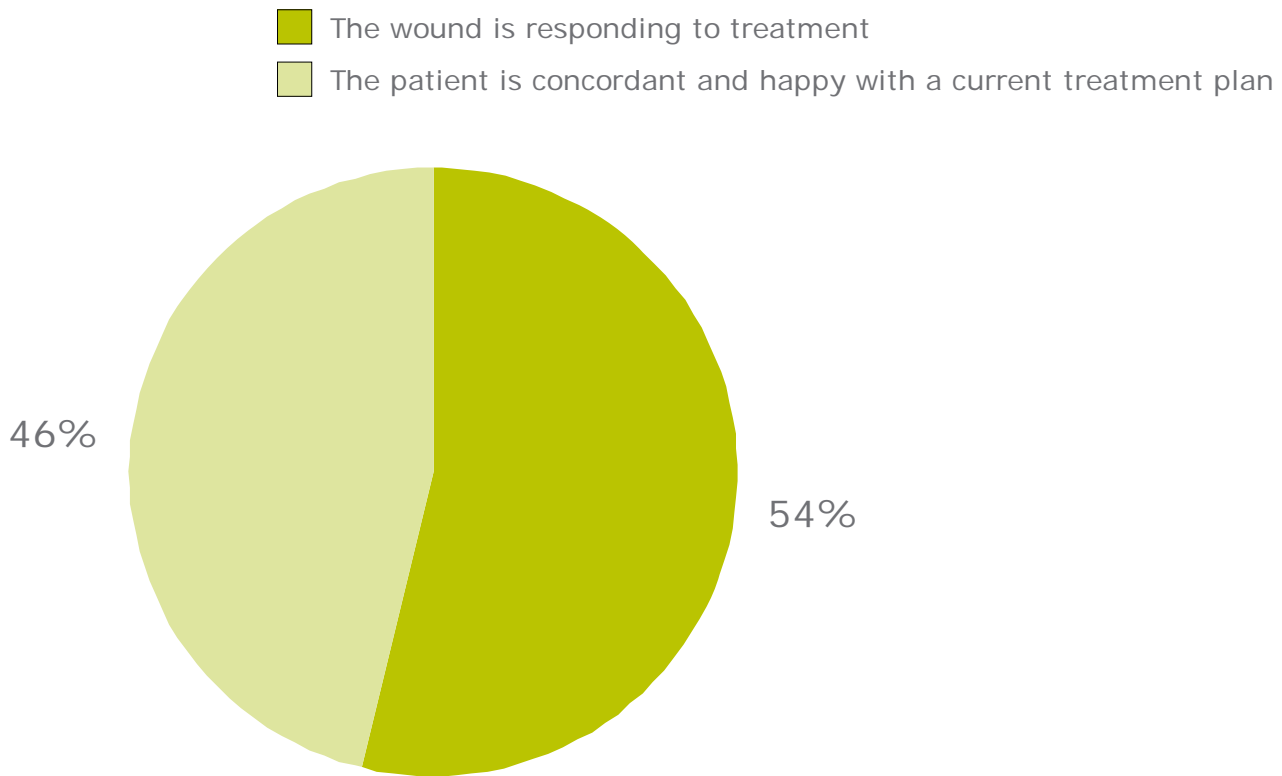


Fig 21. Reason for continuation of treatment plan

This analysis shows the reason the clinician decided to continue the treatment plan, 53.8% answered The wound is responding to treatment

The wound is responding to treatment	53.8%
The patient is concordant and happy with a current treatment plan	46.2%

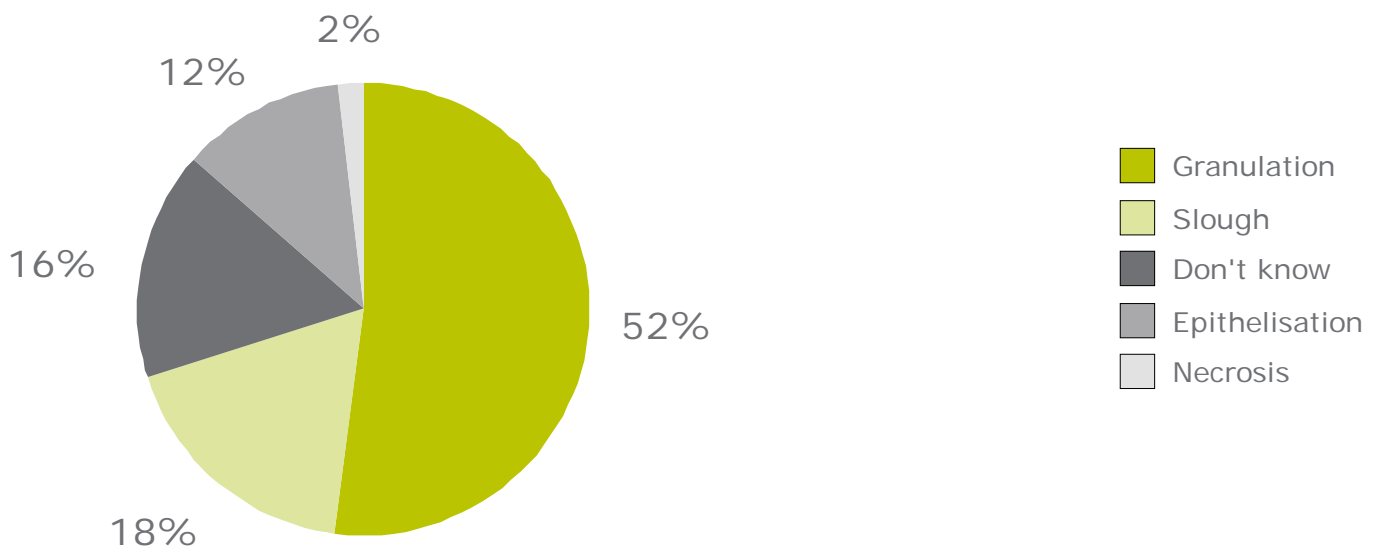


Fig 22. Percentage tissue type

The most prevalent tissue type seen in 52.0% of wounds was Granulation

Granulation	52.0%
Slough	18.1%
Don't know	16.4%
Epithelisation	11.7%
Necrosis	1.8%

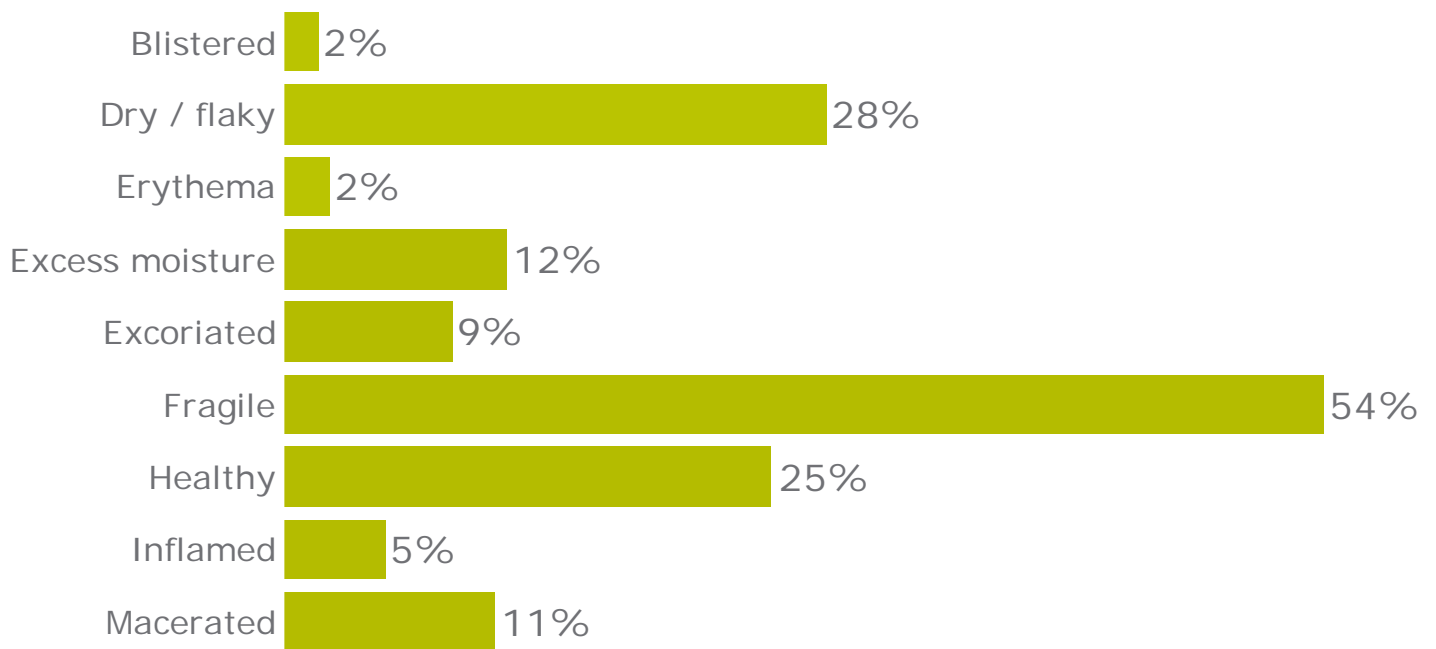


Fig 23. Skin surrounding wound

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

Blistered	1.7%
Dry / flaky	28.3%
Erythema	2.3%
Excess moisture	11.6%
Excoriated	8.7%
Fragile	54.3%
Healthy	25.4%
Inflamed	5.2%
Macerated	11.0%

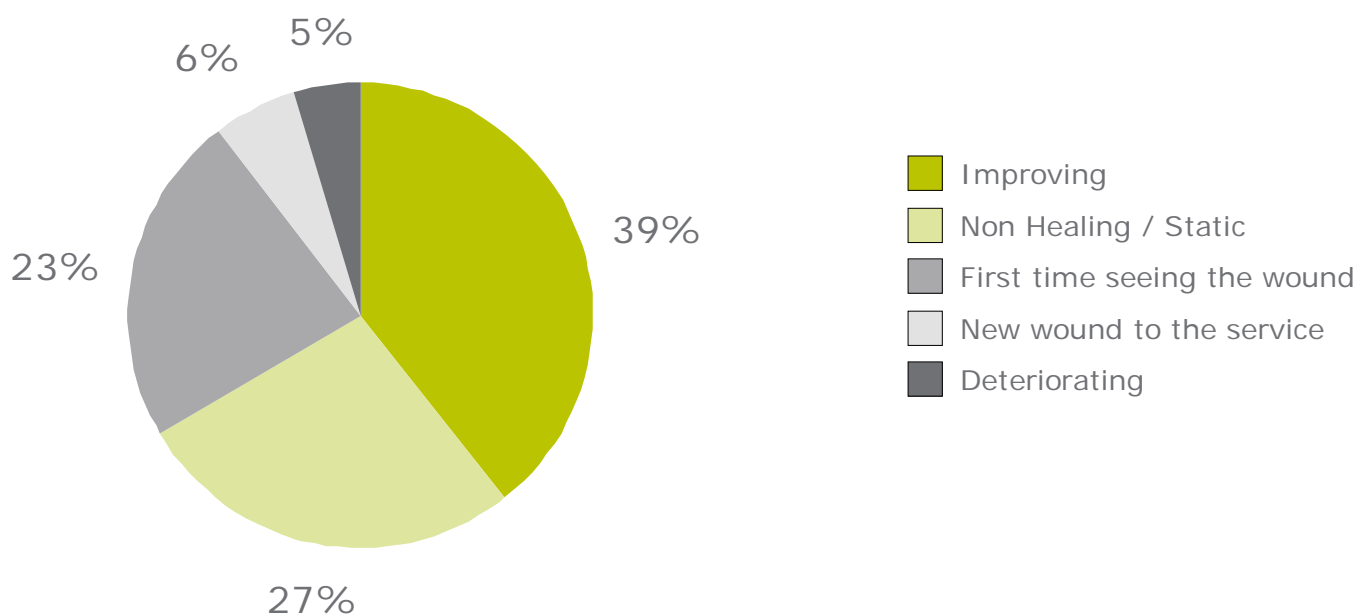


Fig 24. Wound progression

Reporting of the wound status seen showed that 39.3% of wounds were currently improving. 27.2% were considered static, 4.6% were judged to be deteriorating.

A further 23.1% wounds were being seen for the first time.

Deteriorating	8 4.6%
First time seeing the wound	40 23.1%
Improving	68 39.3%
New wound to the service	10 5.8%
Non Healing / Static	47 27.2%

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 330 dressings were used, an average of 1.9 per wound.



Fig 25. Wound dressings used

Other Absorbent	96
Inadine	58
Aquacel Extra	31
Atrauman	29
Allevyn Gentle Border	27
Other	88

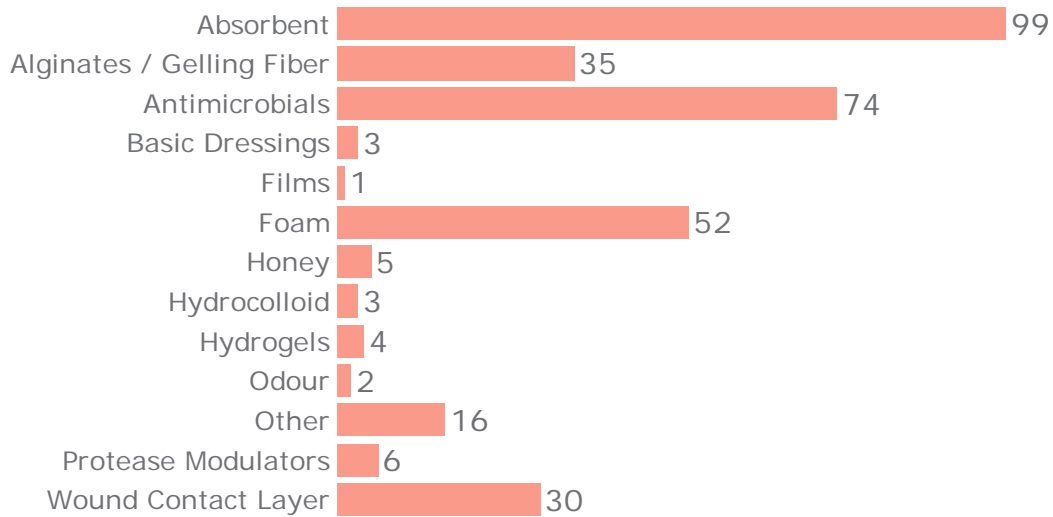


Fig 26. Dressing types

The most commonly used dressings were Absorbent (99), followed by Antimicrobials (74).

Absorbent	99
Antimicrobials	74
Foam	52
Alginates / Gelling Fiber	35
Wound Contact Layer	30
Other	16
Other	24

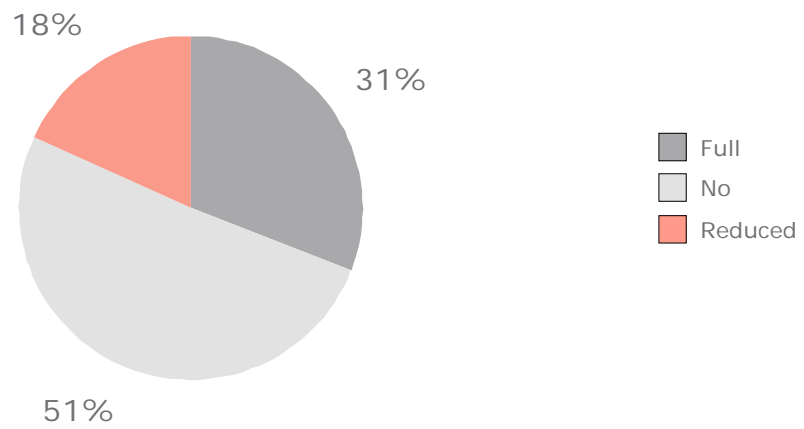


Fig 27. Compression usage by leg ulcer type

Of the wounds documented as leg ulcers, 30.9% patients were receiving full compression, 18.2% reduced compression, with a further 50.9% not currently undergoing any compression therapy.

Full	30.9%
No	50.9%
Reduced	18.2%

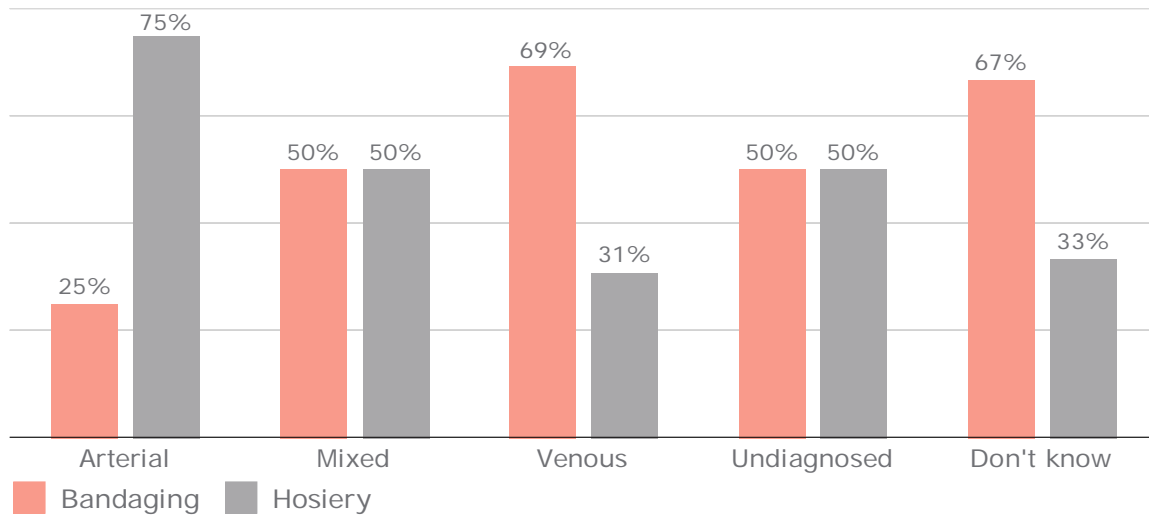


Fig 28. Leg ulcer compression types

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

	Bandaging	Hosiery
Arterial	1	3
Mixed	1	1
Venous	9	4
Undiagnosed	1	1
Don't know	4	2

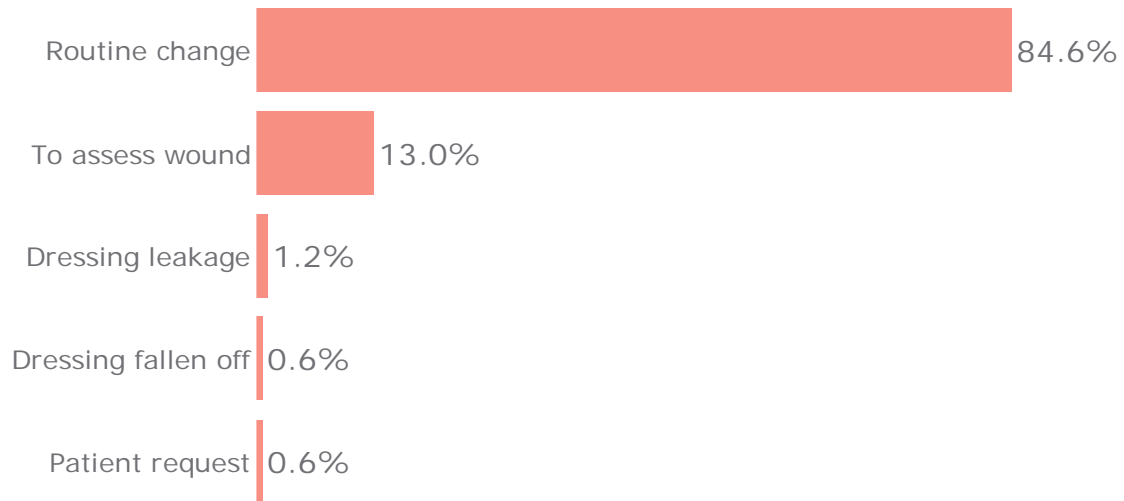


Fig 29. Change reason

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

Routine change	143 84.6%
To assess wound	22 13.0%
Dressing leakage	2 1.2%
Dressing fallen off	1 0.6%
Patient request	1 0.6%

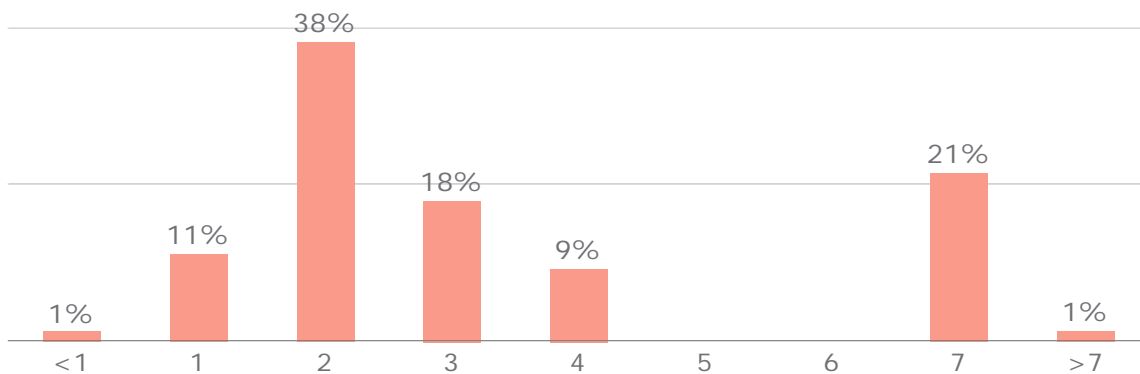


Fig 30. Change frequency

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	Lymphoedema	Pilonidal sinus	Fungating wound	Haematoma	Trauma	Moisture associated skin damage	Mild Incontinence associated damage	Moderate Incontinence associated damage	Severe Incontinence associated damage	Dermatological
4.6		1.5	2.6	3.2	4.4	2.0	3.8		1.9	3.2	7.0	5.3	2.0	2.3	1.1	2.0	2.0		2.3

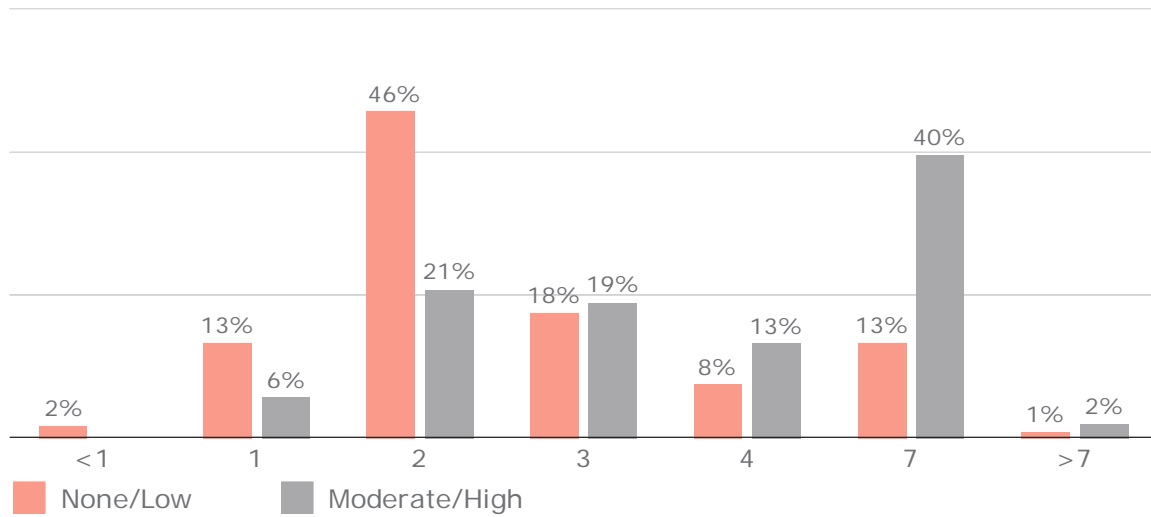


Fig 31. Change frequency by exudate level

	<1	1	2	3	4	5	6	7	>7
None/Low	2	16	55	21	9	-	-	16	1
Moderate/H-igh	-	3	11	10	7	-	-	21	1

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

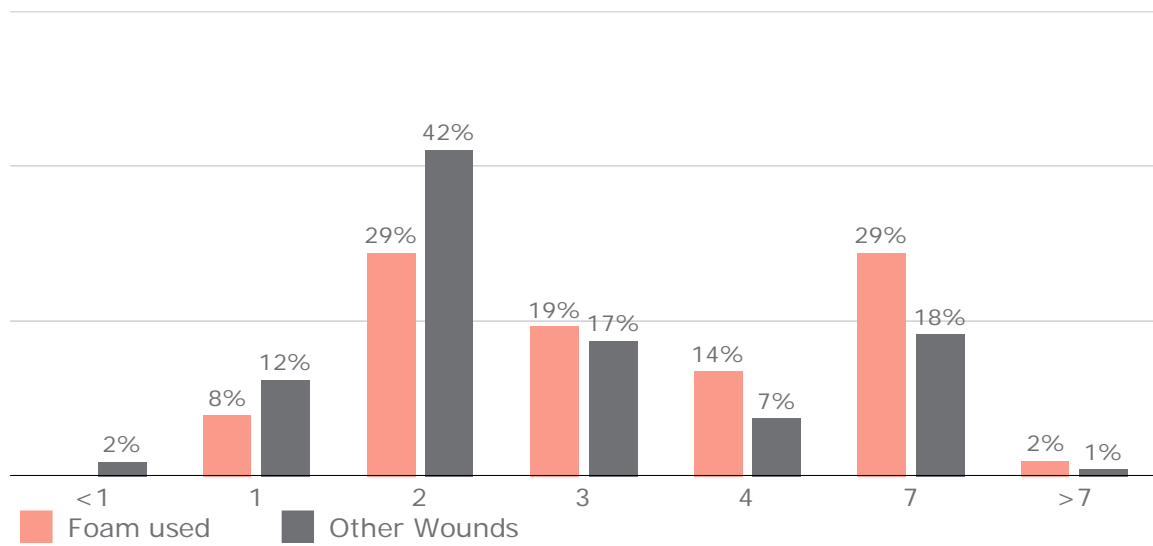


Fig 32. Change frequency by foam usage

	<1	1	2	3	4	5	6	7	>7
Foam used	-	4	15	10	7	-	-	15	1
Other Wounds	2	15	51	21	9	-	-	22	1

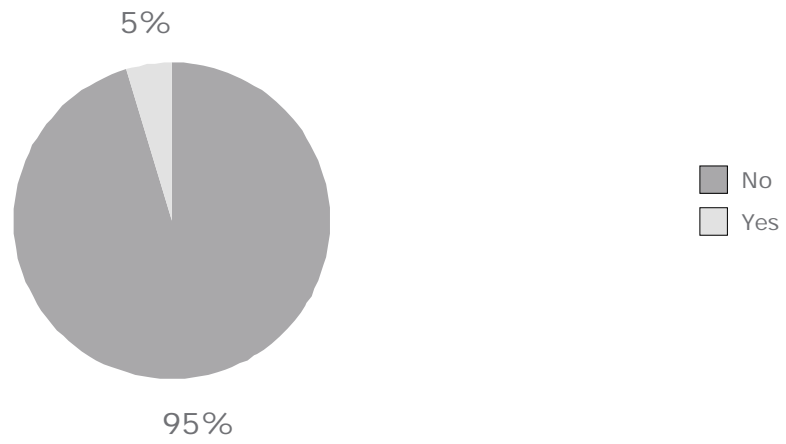


Fig 33. Unplanned dressing change

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

No	95.4%
Yes	4.6%

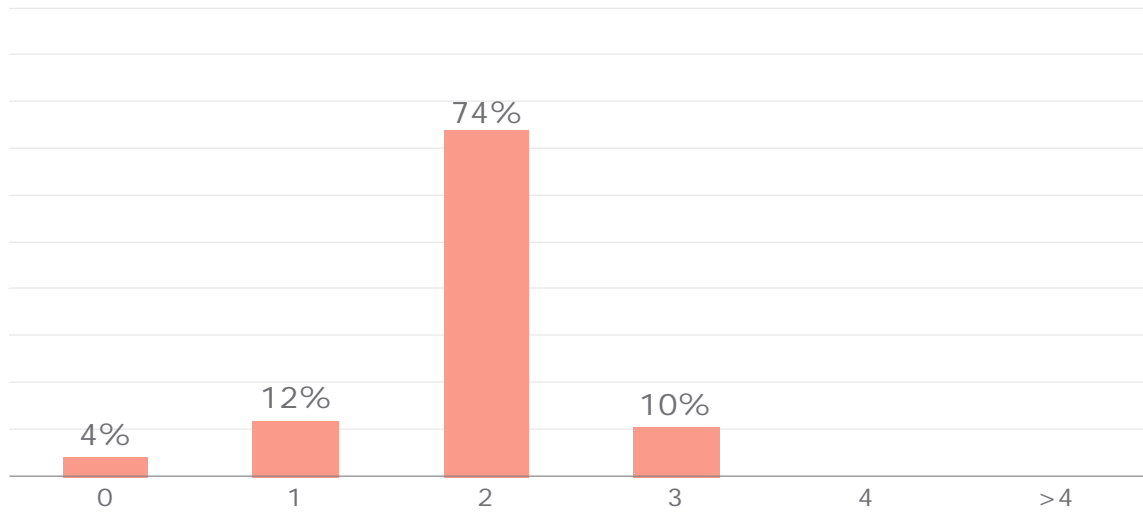


Fig 34. Number of dressings used

The above chart shows the distribution of number of dressings used to treat wounds. An average of 1.9 dressings were used per wound. 7 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
7	20	128	18	0	0
4.0%	11.6%	74.0%	10.4%	0.0%	0.0%

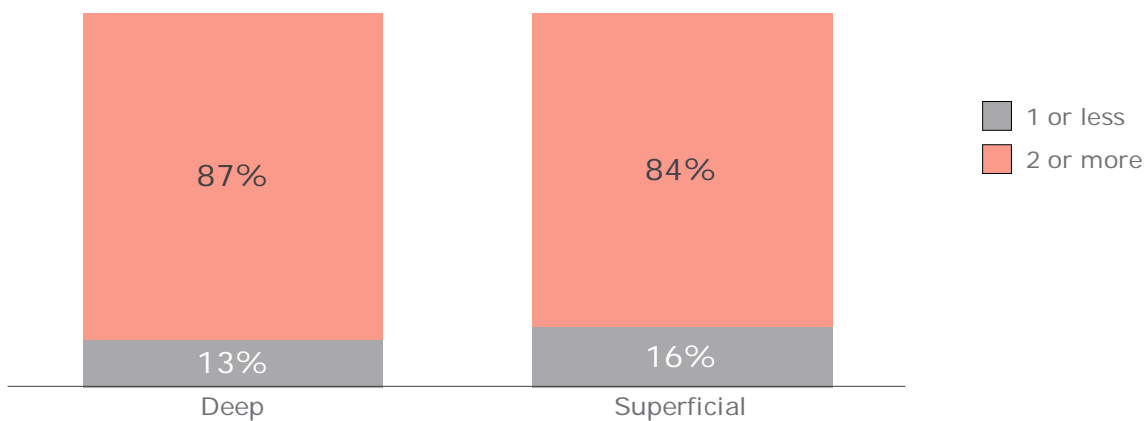


Fig 35. Dressing volume by wound depth

In superficial wounds, 83.6% wounds received 2 or more dressings, compared to 87.0% of those wounds documented as deep.

	Deep	Superficial
1 or less	6 13.0%	18 16.4%
2 or more	40 87.0%	92 83.6%

Section D:

Infection

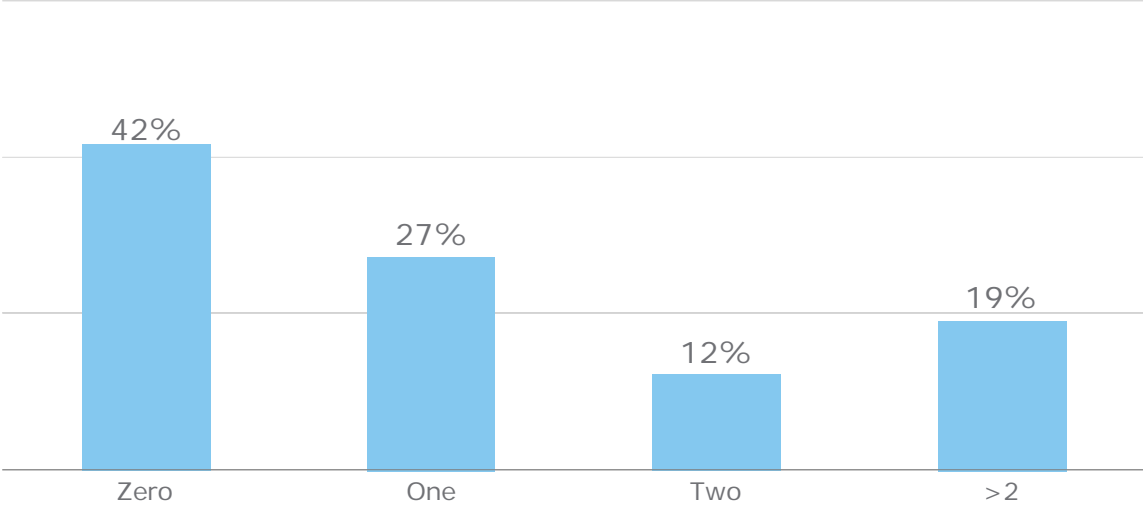


Fig 36. Number of signs of infection

Of the 173 wounds surveyed, 101 wounds showed at least one sign of infection. 72 wounds had no documented signs of infection.

Zero	72 41.6%
One	47 27.2%
Two	21 12.1%
>2	33 19.1%

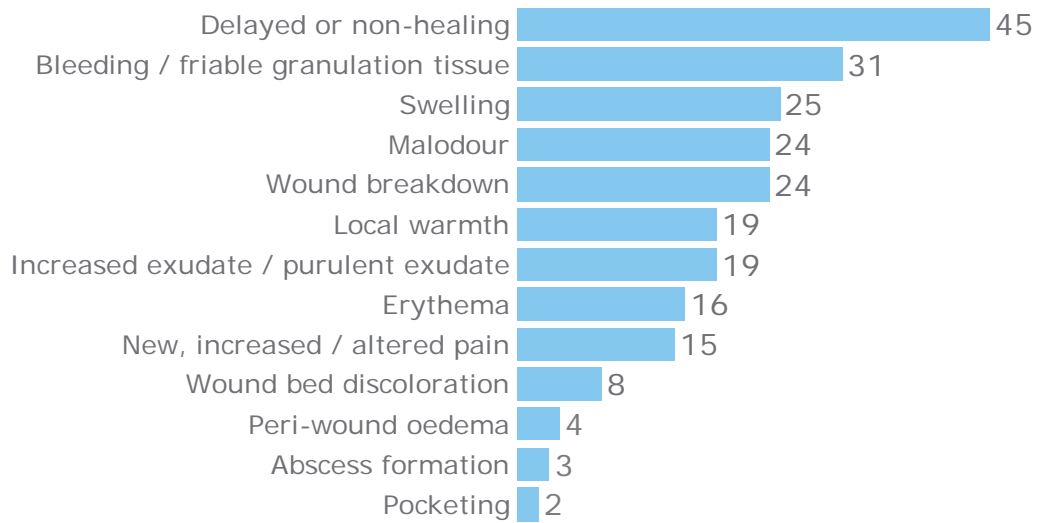


Fig 37. Signs of infection

The most commonly observed infection sign was Delayed or non-healing which was seen in 45 wounds.

Delayed or non-healing	Bleeding / friable granulation tissue	Swelling	Other
45	31	25	134

The below table shows that 10 wounds were reported infected by the clinician completing the survey:

Yes	No	Don't know
10	152	11
5.8%	87.9%	6.4%

Fig 38. Stated infection

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

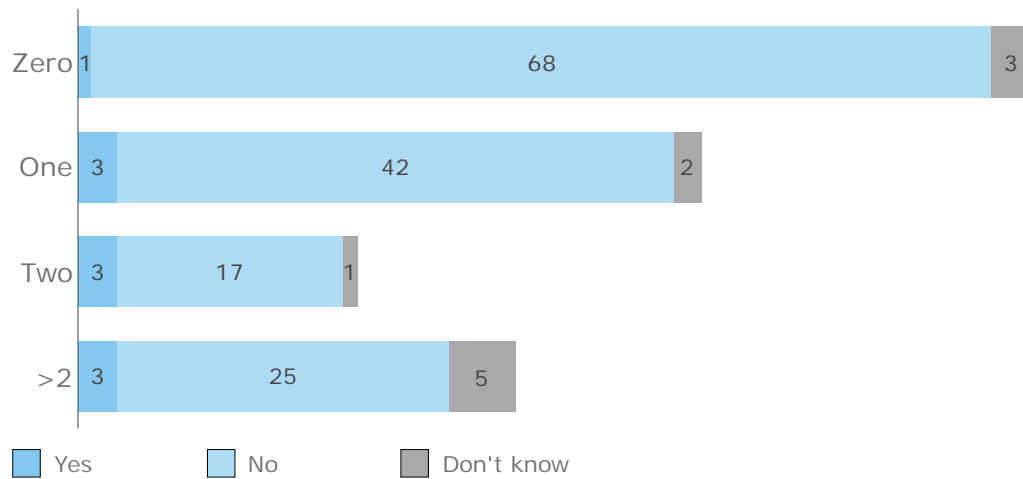


Fig 39. Stated infection by count of infection signs

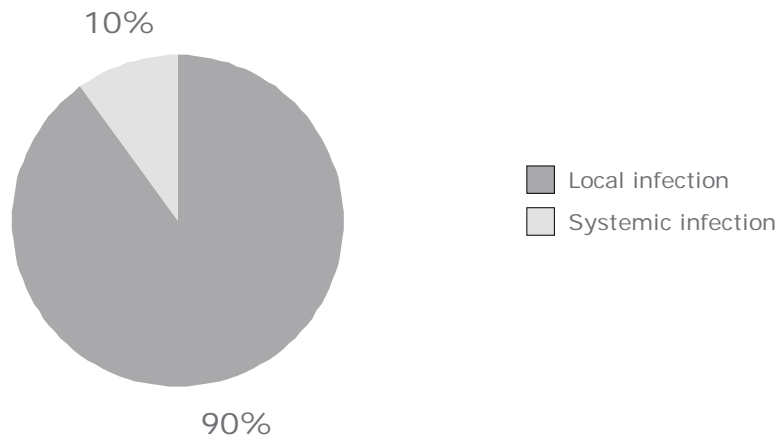


Fig 40. Infection type

The table above shows the most common infection type is Local infection (9)

Local infection	9 90.0%
Systemic infection	1 10.0%

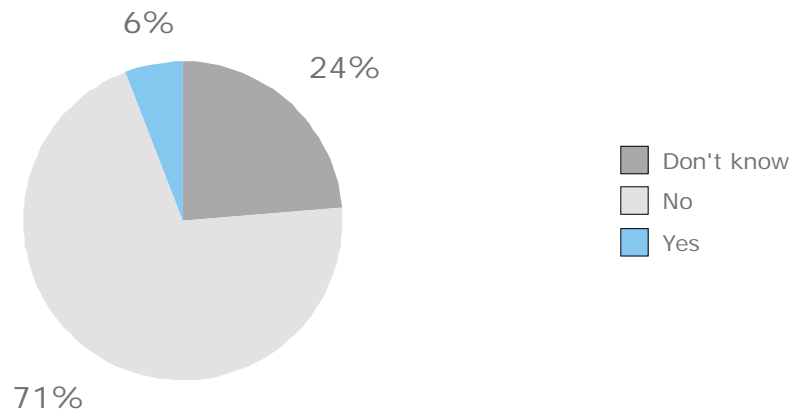


Fig 41. Infection biofilm

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

Don't know	23.7%
No	70.5%
Yes	5.8%

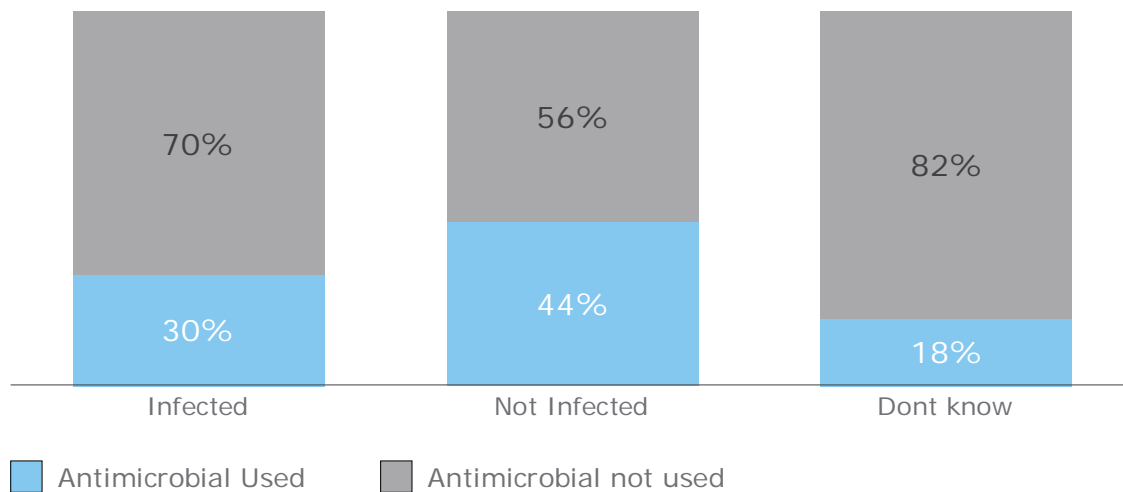


Fig 42. Antimicrobial usage by stated infection

The chart above shows the usage of antimicrobials in wounds across the clinical judgements of wound infection. This shows that 67 antimicrobial dressings were used in wounds not considered infected. Additionally 7 wounds considered infected had no antimicrobial dressings recorded in their survey forms.

	Infection	No Infection	Don't know
Yes	3 30.0%	67 44.1%	2 18.2%
No	7 70.0%	85 55.9%	9 81.8%

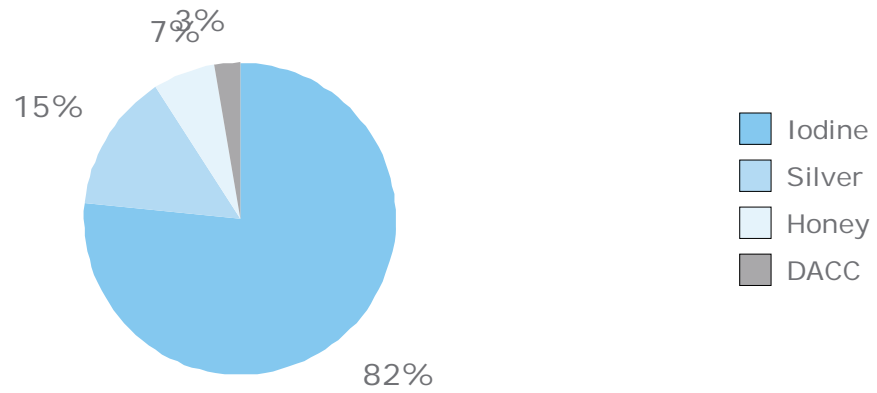


Fig 43. Antimicrobial type

The most commonly used types of antimicrobials were Iodine dressings, The most used antimicrobial dressing was Inadine, used to dress 58 wounds. The most commonly used dressings with antimicrobial properties are listed in the table below.

Iodine	Silver	Honey	DACC
59	11	5	2
81.9%	15.3%	6.9%	2.8%

Inadine	58
Iodoflex	9
Flaminal Forte	4
Other	15

Section E:

Eco

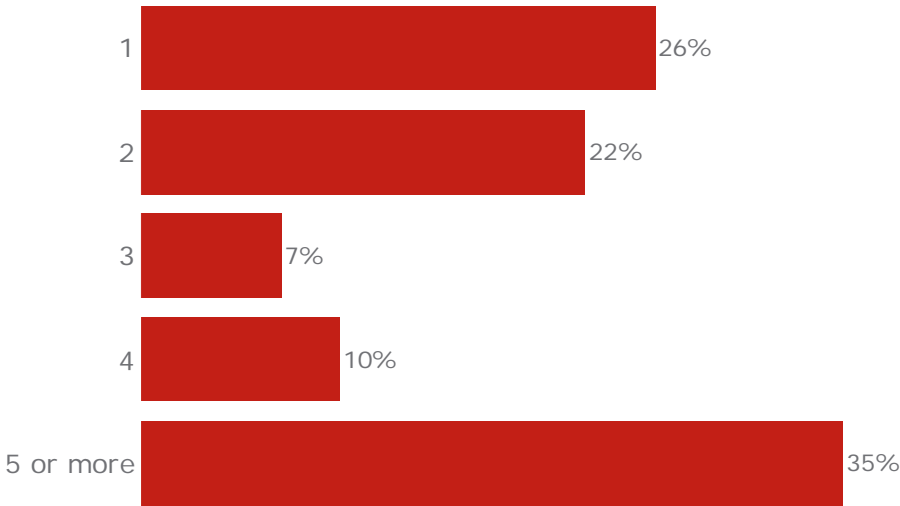


Fig 44. How many miles were travelled to the patient?

This analysis shows how many miles were travelled to the patient. 928 miles were travelled to the patients collectively, which is an average of 5 miles per patient

1	2	3	4	5 or more
44	38	12	17	60
25.7%	22.2%	7.0%	9.9%	35.1%

Dressing / basic pack
SalineGloves
Apron / other protective equipment
Extra gauze Plastic consumables e.g. gallipot

Fig 45. What dressing disposables did you use today?

This analysis shows the most commonly used dressing disposables.

Dressing / basic pack	169
Saline	115
Apron / other protective equipment	157
Extra gauze	47
Gloves	173
Plastic consumables e.g. gallipot	29

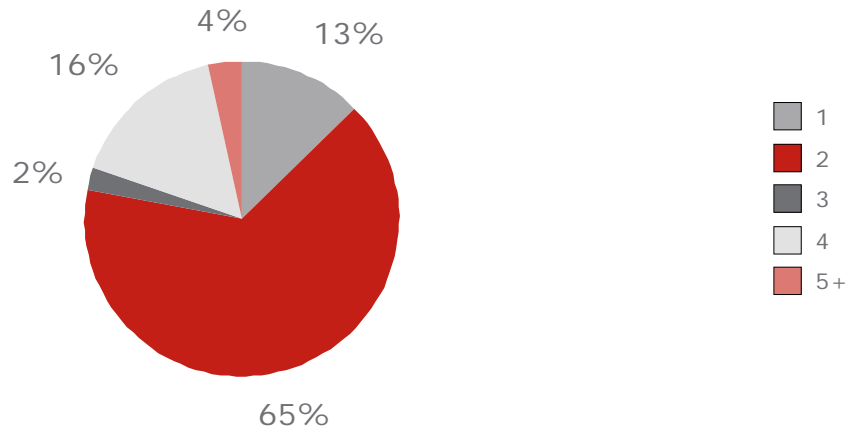


Fig 46. What dressing disposables did you use today?

This analysis shows how many pairs of gloves were used.

1	12.7%
2	65.3%
3	2.3%
4	16.2%
5+	3.5%

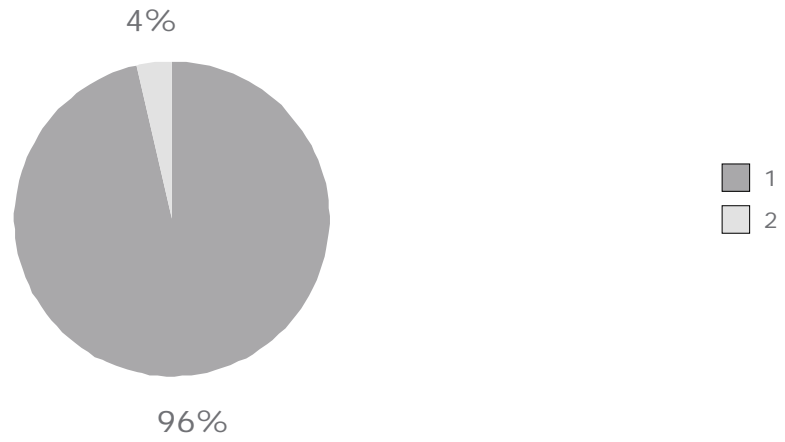


Fig 47. What dressing disposables did you use today?

This analysis shows how many dressing packs were used.

1	96.4%
2	3.6%

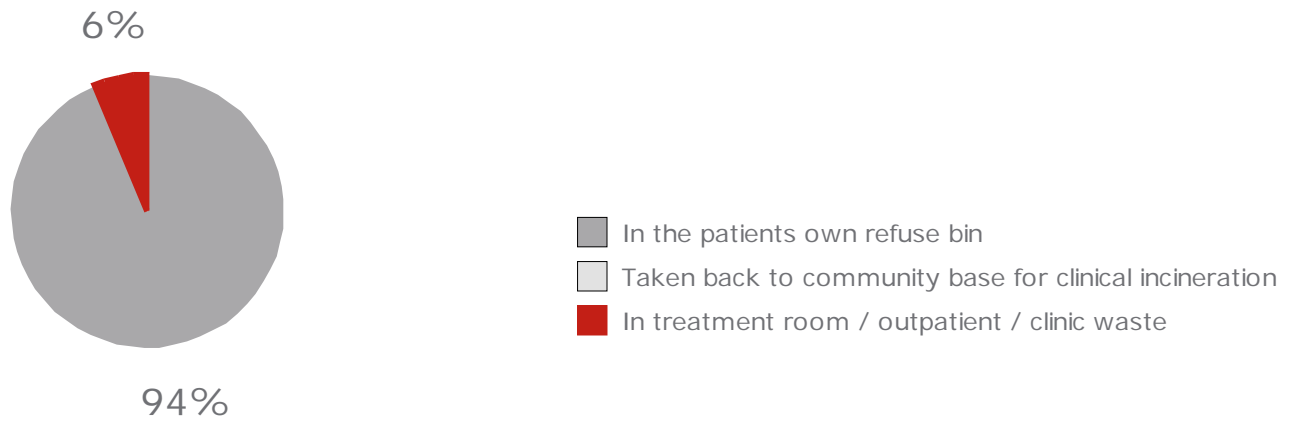


Fig 48. How did you dispose of the dressing waste today?

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

In the patients own refuse bin	93.6%
Taken back to community base for clinical incineration	0.0%
In treatment room / outpatient / clinic waste	6.4%

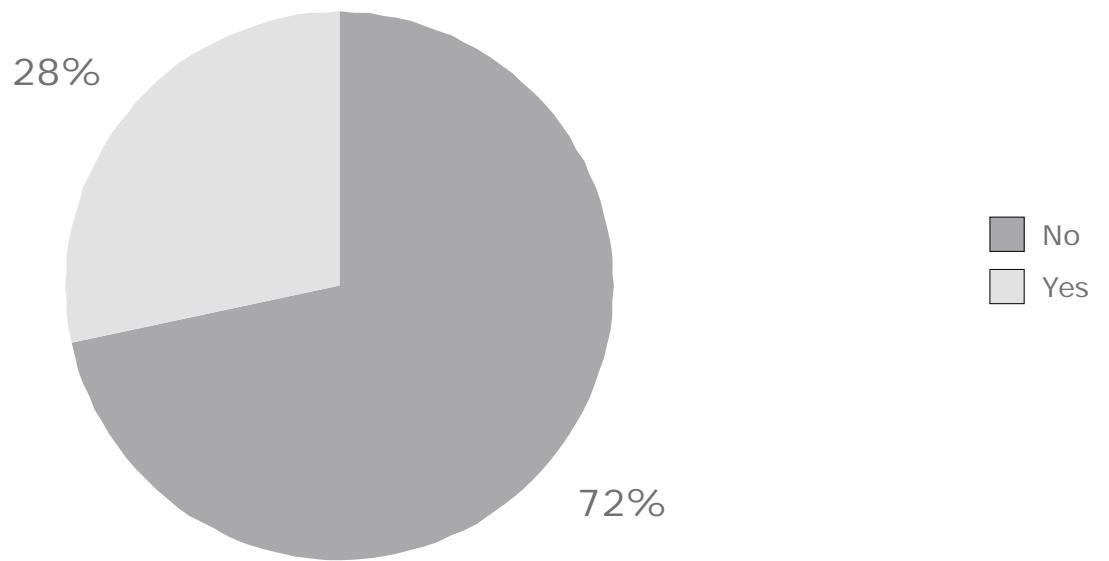


Fig 49. Would you still need to visit the patient if the dressing did not need changing?

The most common answer is No (71.7%)

No	71.7%
Yes	28.3%

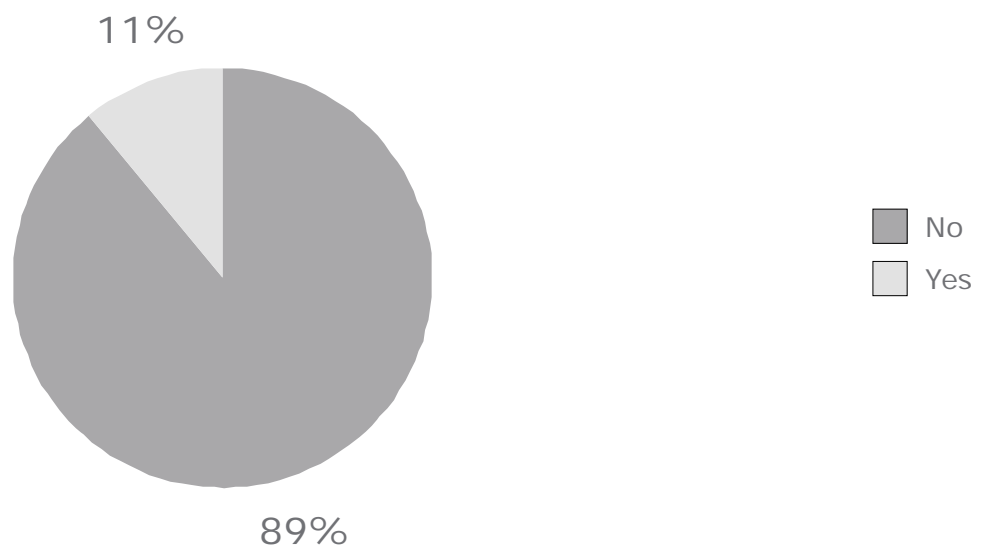


Fig 50. Would the patient cope well with self-care?

The most common answer is No (89.0%)

No	89.0%
Yes	11.0%



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