

# Dolphin therapy mattress: A 6 month review in a large London teaching hospital

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## Introduction

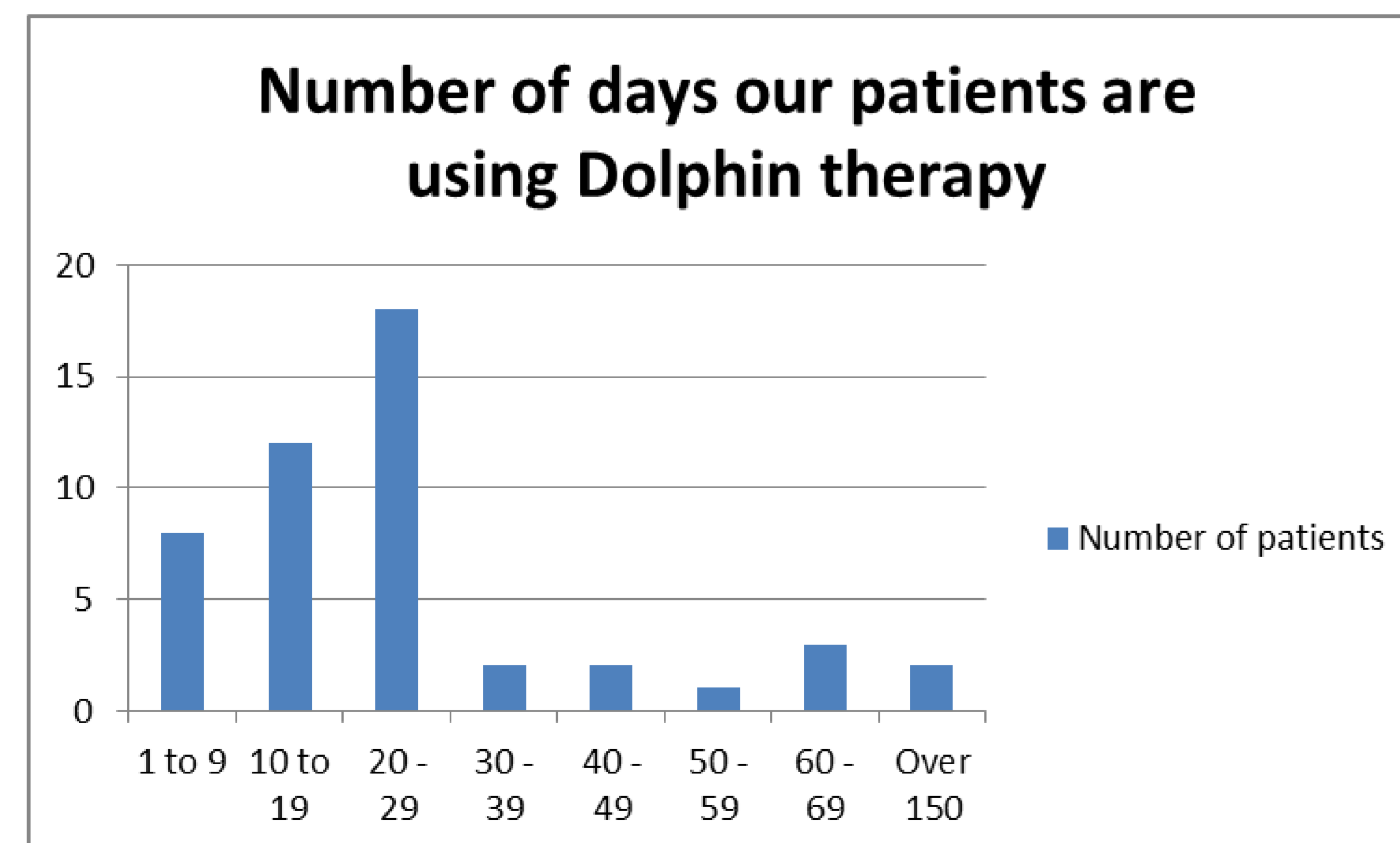
UCLH provides first-class acute and specialist services in five hospitals in central London. Our mission is to deliver top-quality patient care, excellent education and world-class research, in partnership with University College London (UCL).

As a tertiary referral centre for many specialities and with a diverse patient population, we care for many patients at high risk of developing pressure ulcers (PU). One aspect of our pressure ulcer prevention strategy includes a specialist mattress, Dolphin Therapy.

Dolphin Therapy is a reactive mattress system that aims to create a simulated fluid environment. This therapy redistributes pressure, reduces shear and tissue deformation (Medstrom, 2016) through greater immersion and envelopment for our high risk patients. As with all new equipment patient experience and clinical outcomes continue to be monitored.

A review of their usage over a 6 month period (June 2015 – December 2015) identified that 49 patients had used 1424 bed days of the therapy (Average 29 days range 2 – 179 days) see figure 1.

Figure 1 length of time spent on the Dolphin therapy



There are approximately 15 Dolphin units in use at any one time. In order to access the Dolphin therapy, staff must seek authorisation from senior staff within the trust, which we believe encourages an in-depth patient assessment and also highlights the most at risk patients to our senior Nurses.

Figure 2 category of pressure damage

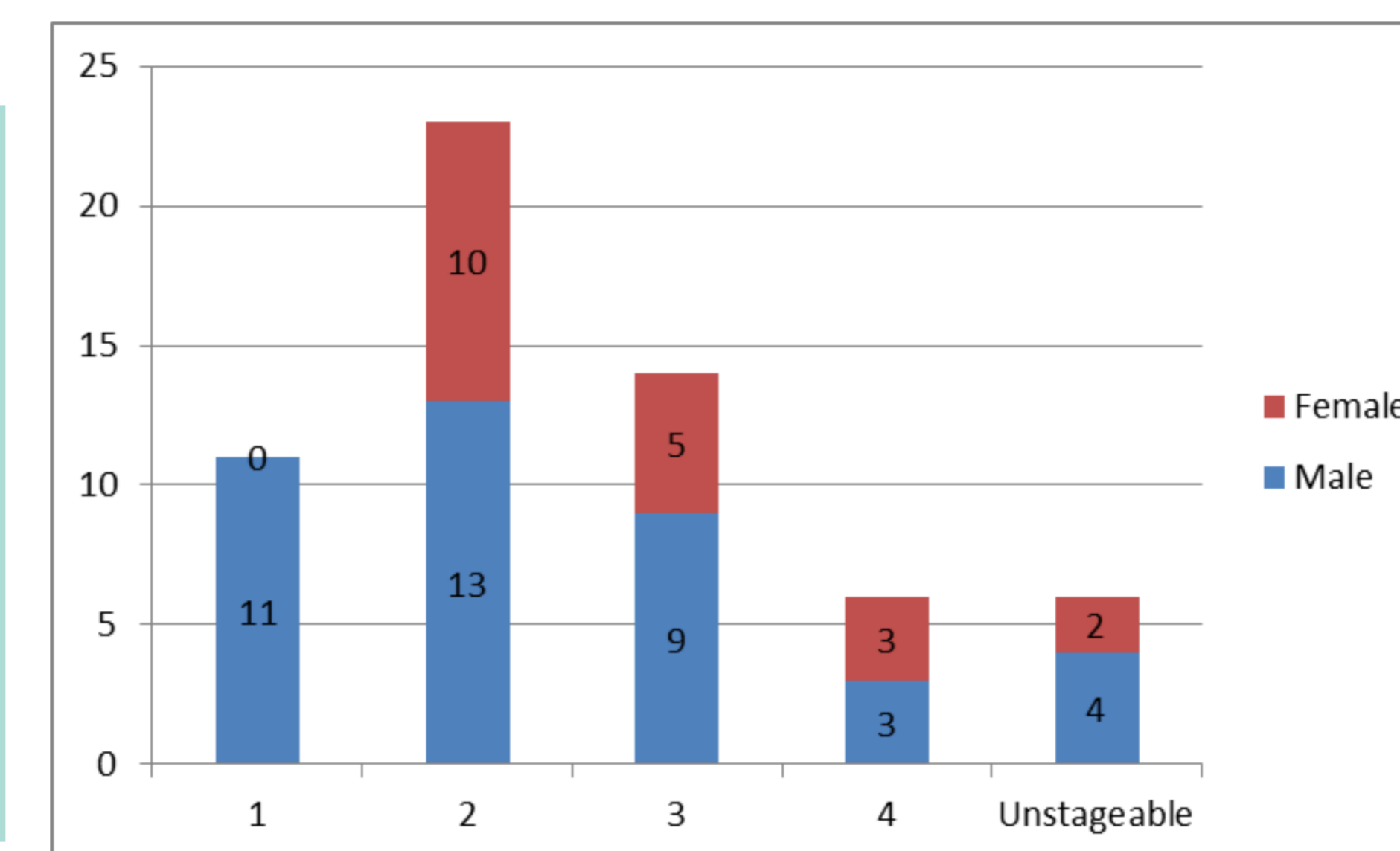
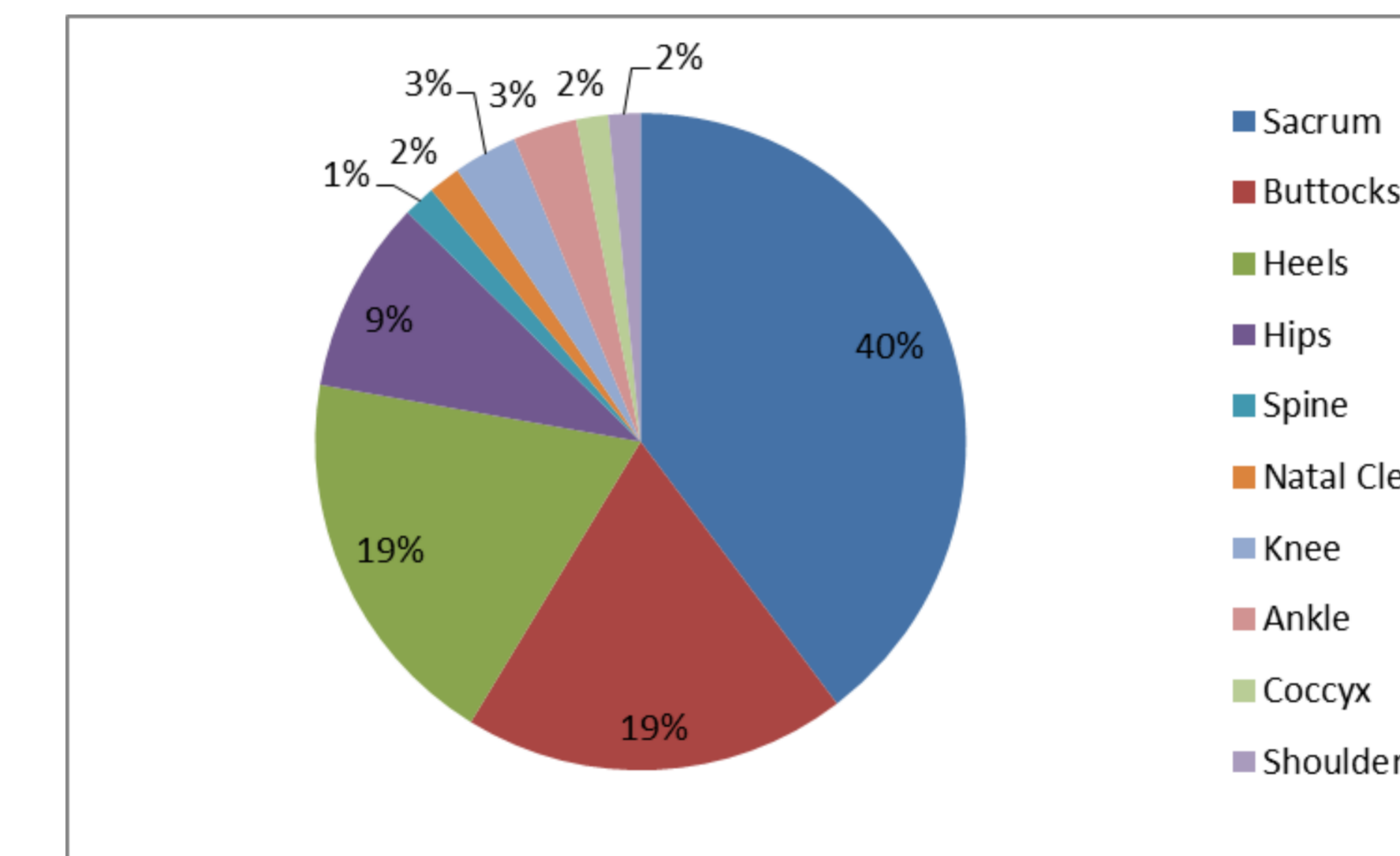


Figure 3 anatomical location of pressure damage



## Results

8 of the 13 patients with moisture lesions were reported to have improved skin, 3 patients remained static (1 of whom died) and there was no response for 2 patients.

21 patients with pressure ulcers reported an improvement, 2 had their PU heal (category I and II), 4 remained static and there was no response for 4 patients.

Ward staff expressed improvements in patient outcomes related to sweating (7 patients), pain (33 patients), comfort (44 patients) and concordance with care (17 patients).

## Discussion

The Dolphin mattress has provided a high quality support surface for our most complex patients including those that are unable to be repositioned and / or have multiple pressure ulcers so that it is difficult to reposition them without adding to an existing area of skin damage. For many of these patients achieving concordance with repositioning regimens are key and the perceived improvements in comfort and pain, can help achieve this difficult goal. Whilst Dolphin therapy is not appropriate for many patients, for those who present myriad of clinical challenges it presents an easy to use alternative for ward staff.

## Conclusion

The Dolphin Therapy mattress has provided improved outcomes for complex very high risk patients and as such forms a key part of the pressure ulcer prevention strategy at UCLH.

The majority of patients were deemed to be very high risk (n = 40) with 6 patients having risk scores of 31, the remaining 9 were deemed at high risk (utilising the Waterlow score). The most common clinical conditions cited for using the Dolphin mattress included; existing or multiple PU (14 times) palliative or metastatic Cancer (14 times) and diabetes 4 times. 27 patients were described as bed bound, 3 had faecal incontinence and 2 urinary incontinence.

30 patients were identified as having 60 pressure ulcers at time of placement on the Dolphin (see figure 2) with the most common locations being sacrum (40%), buttock (19%) and heels (19%) (See figure 3). A further 13 patients had moisture lesions. Staff stated that 4 patients could not be repositioned.

## References

1. Medstrom 2016 Product information <http://www.medstrom.com/dolphin-therapy/>