

Development of an outreach service to promote surgical/non-surgical treatment of pressure ulcers

The Odstock Centre for Burns, Plastic and Maxillo-Facial Surgery is a regional unit with a catchment area that includes most of Wiltshire, Hampshire, Dorset and Somerset and is located at Salisbury District Hospital in South Wiltshire. The Duke of Cornwall Spinal Treatment Centre is also based on the same site, this is a supra-regional unit whose boundaries extend to Cornwall in the west and parts of Surrey and Sussex in the east. A proportion of the patients from these more distant regions are also referred to the outreach service for advice regarding pressure ulcer management.

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KEY WORDS

Pressure ulcers
Holistic management
Multidisciplinary team
Wheelchair dependent

The pressure ulcer outreach service, which is based in the Department of Medical Engineering, Salisbury District Hospital, has been in existence since September 2001. The plastic surgery team previously received support for the management of patients with pressure ulcers from medical engineering staff, but this was mainly regarding environmental issues such as wheelchairs and seating, and mattress and overlay selection provision — the vast majority of referrals being wheelchair-dependent.

Often by correcting some of these environmental issues, it was possible to bring about major improvements in pressure ulcers and, in some cases, to promote complete healing. As a result of the success of the outreach service, a case was made to secure funding for a specialist nurse, with experience in both pressure ulcer and wound management and a long history of working with spinal cord-injured patients. The addition of the nurse to the team enhanced the skill mix to offer a truly holistic service. In addition to environmental and mobility needs, a more hands-on approach to the actual management of ulcers with regards to dressings, dressing techniques and nutritional advice became available. The aim being to work with the professionals already engaged in the care of these patients to bring about a satisfactory conclusion, whether healing via conservative management, or with surgery if appropriate.

Between September 2001 and December 2009, 350 referrals have been received for people presenting with grade 3–4 pressure ulcers (European Pressure Ulcer Advisory Panel-National Pressure Ulcer Advisory Panel [EPUAP-NPUAP], 2009). There have been a few internal referrals but the vast majority of patients have been at home, resulting in over 1300 domiciliary visits. These referrals have been divided into four groups:

- ▶▶ Spinal cord injured (SCI) (115)
- ▶▶ Multiple sclerosis (57)
- ▶▶ Spina bifida (47)
- ▶▶ A broad grouping of everyone else under an umbrella heading of medical/orthopaedic (131).

Of these groups, 51 of the SCI patients, 15 of the spina bifida, 12 of the MS and four of the medical/orthopaedic required surgery to close their ulcers. This equates to 80% of patients referred to the service with large and generally chronic pressure ulcers achieving healing without the need for surgery. In a few cases, healing is not the prime objective, and here regimens are instigated which allow the patient to live in symbiosis with their ulcer. This includes people with terminal conditions or those whose underlying medical conditions make them a poor anaesthetic risk, or simply those who do not want a hospital admission and are unwilling to commit to the reduced mobility and increase in bed rest time needed to promote healing.

While those with spinal cord injuries present by far the largest single group of patients requiring surgery who are referred to the pressure ulcer outreach team, it should be noted that the figure of 115 referrals represents less than 5% of patients on the spinal unit treatment list, while 51 requiring surgery is slightly over 2% of the total.

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The total number of patients referred to the outreach service is small compared to other referrals for plastic surgery, and the number of patients requiring surgery is minimal compared to other admissions — five of the elective long-stay admissions out of 1108 were people with pressure ulcers. However, these figures do not reflect the misery of living with a pressure ulcer(s) and the debilitating effect that these ulcers can have on the health and lifestyle of the sufferer (Benbow, 2009). They also do not reflect the extra costs generated to treat someone with a grade four pressure ulcer in addition to their primary condition (Bennett et al 2004).

Referral process

Following a referral, the outreach service respond with a domiciliary visit within three weeks, along with the district nursing team who have been caring for the patient and any other interested parties. The key issues for assessment are causative factors, nutritional status, current treatment regimen and daily routines, along with previous medical history. Once this information is gathered, it gives the opportunity not only to influence the management of the ulcer, but to set in motion any plans which may be necessary to reduce the opportunity for similar damage to occur in the future, such as wheelchair modification or replacement and cushion prescription, especially should it be necessary for the patient to continue to mobilise despite having an ulcer.

With regard to the management of pressure ulcers, accurate measurements and photographs are taken to give a point of reference. Frequently, ulcers will have progressed to partial closure, but leaving a difficult to treat cavity underneath. Such cavities need to be probed to determine their extent (Figure 1).

To obtain accurate measurements, the Visitrak™ wound measurement device (Smith and Nephew, London UK) and digital photographs for wound bed comparisons are employed (Gunnewicht and Dunford, 2004). If

the underlying cavities or sinuses are beyond probing, it may be necessary to request a sinogram, computed tomograph (CT) or even magnetic resonance imaging (MRI) scan to give the full picture.

Generally, the aim is to instigate healing with conservative management. The health of the patient who has been living with a pressure ulcer for months or years may not be up to the rigours of surgery or a lengthy anaesthetic, but with the introduction of dietary supplements or in some cases nasogastric or percutaneous endoscopic gastrostomy (PEG) feeding, the authors often find that a patient who has been unresponsive before reacts well to treatment and healing is promoted (Ousey, 2009). In some cases, identifying the extent of the undermining wound brings about a more effective means of treating the ulcer, or may prove the need for surgical debridement to improve access to the wound bed. In other instances, it may be that surgical closure is the most realistic option, i.e. where there is boney involvement, or if the idea of further bed rest is intolerable when healing has been minimal, or perhaps when the patient has changed their mind about hospital admission.

Case reports

The following three case reports describe wound management strategies which resulted in healed ulcers and were undertaken in accordance with the patients' wishes.

Case report 1

Jane is a 50-year-old female who sustained a spinal cord injury at C4 ten years ago (Swain and Grundy, 2002).

Following an episode in hospital she developed a pressure ulcer over the left ischial tuberosity within three weeks of being discharged home.

The pressure ulcer was initially treated by community nurses with bed rest and conventional dressings until it became static. Six weeks later the opening of the pressure ulcer was dilated to aid access to the wound bed.

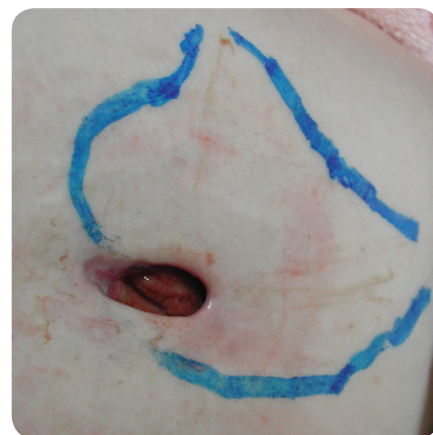


Figure 1. The blue line shows the full extent of the wound.

Thereafter, some improvement was noted but this was short-lived and Jane was referred to plastic surgery. The pressure ulcer had been present for five months when she was assessed at home by the pressure ulcer outreach service.

It was established that the local conditions at the wound site were inaccurately assessed and characteristics that delay healing had not been identified. Accurate assessment is essential to ensure that appropriate treatment is instigated which will optimise wound healing, leading to a swifter resolution of care, and that preventative management equipment and strategies are put in place.

Wound bed preparation (WBP) is a concept known to wound care professionals, and is an umbrella term for the clinical measures taken to remove the barriers to wound healing at the wound site, including:

- ▶▶ Control of exudate
- ▶▶ Removal of unhealthy tissue
- ▶▶ Management of infection (Falanga, 2006).

It is a process which is just part of overall good wound care and encourages practitioners to be more aware of factors highlighted during the wound assessment process, therefore enabling optimal treatment.

Assessment of Jane's pressure ulcer showed a grade 3 pressure ulcer over the left ischial tuberosity. It was a 4.5cm

deep, smooth-walled cavity the size of a small finger. There was no pain, odour, undermining or bone palpable, and no apparent necrotic tissue or obvious infection, but the periwound was macerated and the wound bled readily. A moderate to high level of exudate was reported. Bleeding or tissue friability may indicate bacterial colonisation or wound infection (Santy, 2008). In the authors' opinion, the well vascularised wound can be and was, on this occasion, mistaken for a healthy, non-infected wound.

Jane's pressure ulcer was most likely to be critically colonised and traumatised. Subtle clinical signs were present, such as delayed healing, friable granulation tissue and increased exudate.

The dressing employed by the community nurses was alginate rope packed into the cavity. Alginates are indicated for moderate to heavily exuding wounds, and wounds with undermining or tunnelling. Instructions for use of these products advocate that wounds are not packed too tightly, although in the authors' experience this does happen. Anderson (2002) suggests that tight packing inhibits the action of the dressing and causes pressure on the wound with a plug effect as fluid builds up behind the dressing. Thus, although the traditional practice of relieving the external pressure over the ulcer had been followed, as the National Institute for Health and Clinical Excellence (NICE) guidelines (2005) suggest, the method of dressing the cavity was causing additional pressure, repeated trauma and additional tissue damage to the wound.

Following consideration of the available evidence and resources, a treatment plan was devised for the care of Jane's pressure ulcer by the outreach service. The aims were firstly to reduce the exudate and bacterial load to establish a well vascularised wound bed, and ultimately to heal the ulcer through conservative measures.

Jane did not wish to endure another hospital admission, and although other interventions could

have been considered, including surgical debridement, use of interactive dressings or use of antimicrobial agents, e.g. cadexomer iodine or silver sulfadiazine, topical negative pressure (TNP) therapy (TNP) addressed all the treatment objectives for Jane's pressure ulcer. Its several therapeutic effects included:

- ▶▶ Removing excess fluid
- ▶▶ Promoting new blood capillaries in the wound bed
- ▶▶ Promoting granulation tissue
- ▶▶ Removing bacteria from the wound bed (KCI clinical guidelines, 2007).

After only four weeks of treatment with TNP therapy, Jane's ischial pressure ulcer had decreased in depth from 4.5cm to 3.5cm, the diameter had also narrowed considerably and it was increasingly difficult to visualise or access the wound bed with the foam dressing. There was no visible exudate, although the wound was moist, the periwound area was healthy and granulation tissue was present. It was at this stage in the treatment plan that Promogran Prisma® (Systagenix Wound Care) was introduced.

Promogran is an advanced dressing product which binds with matrix metalloproteases (MMPs) and growth factors, its action re-balances the wound by inactivating MMPs and protecting growth factors. Cullen et al (2010) have shown this to be an effective product, but it should, as suggested by Casey (2002), only be used on carefully selected wounds. A more conventional wound dressing, for example, an alginate or hydrocolloid, may have been equally as effective in this instance after using the TNP system.

Within just 19 days of treatment with the advanced dressing product, Jane's pressure ulcer had healed and she was able to start a programme of gradual mobilisation. Jane's mood improved considerably and all involved in her care were buoyant by the accelerated improvement in her pressure ulcer, which could have been a contributing factor to the healing time. The relationship between mind and body is recognised and it has been

demonstrated that positive attitudes play a significant part in healing (Morison et al, 1998).

Case report 2

Jim was a 42-year-old male, who had been quadriplegic since a road traffic accident in 1992. He was referred to the outreach service following the development of a sinus over his coccyx, with an undermining cavity which had been conservatively managed at home for four months without healing being achieved.

When the outreach service visited Jim at home, the sinus was almost inaccessible leaving the underlying cavity untreated and there was a danger of the ulcer healing over the underlying cavity, causing breakdown in the future. Options for further management were discussed with Jim, namely: to leave things as they were; to admit for debridement, reconstruction and closure; or to admit for debridement followed by conservative management at home under the outreach team's supervision. Being unwilling to undergo a prolonged hospital admission, Jim chose the third option. He was aware that he would need to continue on bed rest as before, but preferred being at home. He employed his own carers familiar with his particular needs, and his parents who lived nearby would continue to provide support.

He was admitted to the spinal injuries unit and the ulcer was excised in theatre, leaving a cavity 4cm in diameter and 5cm deep. After the decision had been made to manage the wound in this way, it was decided that TNP therapy would be the most appropriate way forward. This was agreed with Jim, his surgeon and the district nursing team, provided the outreach service were able to offer training in the use of the equipment. Jim was discharged home the next day, the cavity packed with an alginate dressing and the following day the outreach service travelled to his house to meet the district nursing team and set up the TNP system and go through the technique with his nurses.

At this time TPN was a relatively new concept and its use was rare in the acute setting and unknown in the community. There were reservations about funding this treatment. To overcome this, a pump was provided free of charge as well as enough dressings and canisters to treat the wound for a month, on the understanding that if the therapy proved to be effective the PCT would cover the cost of further treatment. This proved to be the case and the district nurses continued the therapy for three months, with the outreach service monitoring progress on fortnightly domiciliary visits. Complete closure was achieved six weeks later following treatment with a protease modulating matrix. The time had now come to remobilise Jim in his wheelchair:

Jim used a privately funded, electrically-powered wheelchair for his mobility needs. The chair offered a variety of facilities including tilt-in-space and recline, all of which can be utilised to offer pressure relief by means of changing position (Maurer and Springer, 2004). The seating system supplied with the chair was a car seat type, with no inherent pressure-relieving properties, relying rather on maximising pressure distribution to reduce risk as opposed to supplying in-built pressure reduction.

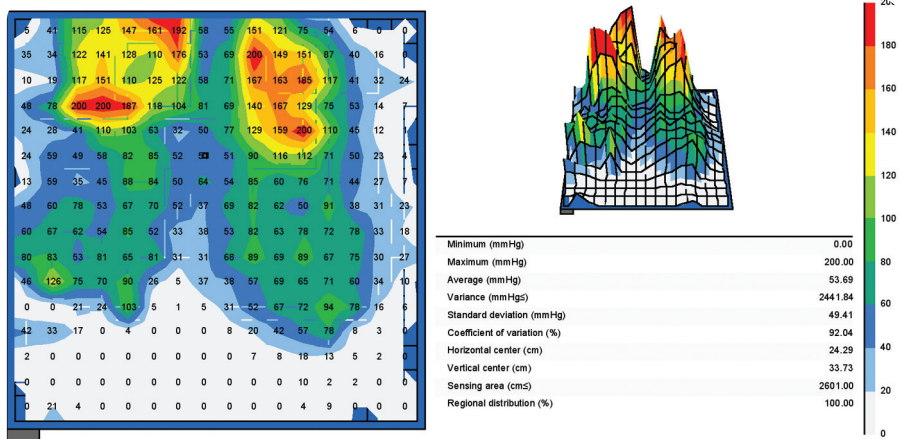
Pressure mapping, an invaluable tool (Stinson et al, 2003), demonstrated extremely high interface pressures beneath the ischial tuberosities in whatever configuration the seat was put through (Figure 2). While these

areas had not sustained damage, a change in the seating would normally be recommended as a matter of priority. However, Jim was not in a financial position to do so at this time. The local wheelchair service were willing to reassess his needs and to provide an alternative wheelchair and appropriate pressure-relieving cushion, but the timescale of this process was too lengthy to be practical and so the decision was taken to modify Jim's existing seating to provide at least an element of inherent pressure relief. This was done by replacing the sprung section of the seat base with a polyurethane foam insert and using a fluid-type insert from a high quality pressure-relieving cushion supplied by the wheelchair service, to offer a high degree of pressure reduction.

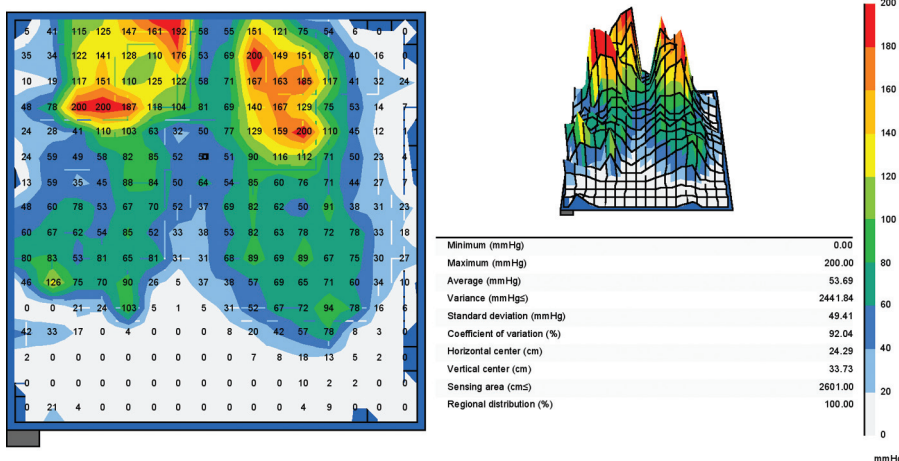
It was also necessary to examine the reasons why the ulcer developed over the sacral region. This was primarily due to Jim's posture in the seat, which was relatively simple to correct with the insertion of a lumbar support into the backrest. This reduced his ability to sit sacrally without upsetting his stability.

Having made these changes the service were able to start a mobilising plan with Jim. This was taken slowly, at first increasing his daily times up in increments of no longer than 15 minutes — the logic being that any resulting damage would have occurred within a short period and would be easily rectifiable, whereas if tissue damage had occurred over a longer period of time, i.e. of an hour or more per day, it is possible that this might have taken days or weeks of bed rest to resolve. After months of being bedbound, it was considered that this was a risk not worth taking.

Jim's mobilisation was uneventful and within a month he was spending as much time up in his chair as he had ever done. In the six years since this episode there has been no recurrence, although during this time Jim has bought a new powered chair and taken the outreach service's advice regarding the most appropriate seating.



Front right – bilateral high ischial interface pressures and evidence of sacral sitting, particularly on the right – the red areas indicate readings higher than 200mmHg



Front right – modifications to the seat base result in much improved interface pressure measurements

Figure 2. FSA Pressure mapping results (Vista Medical, Winnipeg, Canada).

This small history demonstrates the value of the team approach to the management of pressure ulcers. The ability not only to plan care, but to have clinicians who can plan, manufacture and deliver wheelchair and seating and other activities of daily living (ADL) modifications has proved invaluable in providing long-term, sustainable resolutions for people with pressure ulcers.

Case report 3

John was a 40-year-old married man with two children. He had a history of recurrent depression and was paraplegic due to a spinal cord injury at T3 following a fall a year ago.

John was initially treated in intensive care. Two weeks following admission it was noted that he had a grade 2 sacral pressure ulcer in his natal cleft, described as 'horseshoe-shaped, sloughy and dark purple'. The action taken was to install a 'pressure-relieving air mattress'.

John's pressure ulcer was treated over the next six months with periods of bed rest and many wound dressing products, including; Purilon Gel (Smith and Nephew), Aquacel® Ag (ConvaTec), Iodoflex®, (Smith and Nephew) GranuFLEX® (ConvaTec), Mepitel® (Mölnlycke Health Care) and Biatain (Coloplast) in varying combinations. These had little effect and the ulcer remained covered in slough throughout (Figure 3). During this time, John had also started rehabilitation and mobilising in a wheelchair, initially with a cut-out to allow pressure relief to the area, followed by a Jay 2 backrest (Sunrise Medical, Woolaston UK) which offered the same degree of pressure relief.

John was referred to the outreach service seven months after his initial admission to the spinal unit.

John had endured many months with his pressure ulcer and it was now greatly impinging on his quality of life and speed of rehabilitation. Considering his previous history of depression, it was decided to treat

the ulcer aggressively to enhance his quality of life and expedite discharge home to his family.

Following thorough assessment, examination of documentation of previous treatment and careful consideration of John's wishes (which at this time did not include surgery) and the available resources, a treatment plan was devised. It was established that the ulcer was grade 4 (EPUAP-NPUAP, 2009), which required rapid debridement of the necrotic tissue not only to promote healing, but to enable the stage of the ulcer to be assessed accurately (Grey et al, 2006).

John was put on bed rest and, as other methods including autolytic and chemical debridement had so far failed, the use of larval therapy was discussed with him and the ward staff. It was hoped that the removal of devitalised tissue would accelerate healing and prevent surgery (Richardson, 2004).

Larval therapy started the following day. Two days later the larvae were removed to reveal a 1x2cm cavity, with slough at the base. As there were no larvae available that day the wound was dressed with an alginate dressing and further larvae were ordered. Following the second application of larvae, the cavity was a little larger and revealed 1.5cm of undermining, the wound was clean and granulating (Figure 4).

John's pressure ulcer was regraded as grade 3. At this time, a CT scan of the pelvis was requested to eliminate any underlying problems which may prevent healing. The results showed that there was no bony involvement, ruling out one barrier to healing.

To move John's wound along the continuum of healing, a protease modulating matrix dressing was introduced to the treatment plan (Cullen et al, 2010).

John was keen to carry on with his rehabilitation. Despite reservations and taking into account his previous history of depression, the decision was made by the patient, his primary care team



Figure 3. Before application of larval therapy.



Figure 4. After two applications of larval therapy.



Figure 5. Deterioration following mobilisation.



Figure 6. Myocutaneous flap to rectify defect.

on the spinal unit and the outreach service to restart mobilisation. The dressing was checked when John was up in his chair and a cut-out cushion was made to accommodate his sacrum, as before ensuring no interface pressure over the area. The dressing was renewed on alternate days over the following ten days and dramatic improvement was seen.

However, just 12 days later following the removal of the larval therapy, John's wound deteriorated beyond recognition, 'huge deterioration' was reported, with 'a fixed, red mark (grade 1) and necrosis', which was 'exudating heavily'. Further assessment by the outreach team found increased undermining to 3cm. The deterioration had been caused by incorrect positioning of the sacral cut-out for the period of time John had spent away from the ward (Figure 5).

Reduction of pressure is paramount when dealing with pressure ulcers (Stockton et al, 2009). Once again, John was put back on bed rest. In hindsight, the team felt that they had been too lenient with John, and that had he not had a history of depression he would have remained on strict bed rest following the larval treatment until healing had been achieved. Further assessment found that John was also marking on other areas, including his right scapula, right hip and both malleoli, suggesting that his general health had deteriorated. The opinion of a plastic surgeon was immediately sought; meanwhile, the ulcer was dressed with a hydrocolloid ribbon.

John was seen by a plastic surgeon a few days later and the following was noted:

- ▶▶ Sacral pressure ulcer since July 2006 — never fully responded to conservative management (seven months)
- ▶▶ Continue to dress with hydrocolloid ribbon
- ▶▶ Theatre when surrounding skin has recovered.

Netscher et al (1996) suggest flap closure of pressure ulcers is superior

to non-operative management and direct closure, whereas Schryvers et al (2000) suggest the decision to use a particular repair depends on the surgeon, but that 'sacral ulcers usually do well with large radius buttock rotation flaps even if the ulcer is relatively small'.

The pressure ulcer outreach service believes that conservative or non-operative management is preferable, but should surgery be indicated, as in this instance for a

Regardless of how ulcers develop, in the authors' opinion the plan has to be the same — clean the wound and create the optimum conditions to promote healing while removing barriers to healing.

chronic ulcer in a healthy individual, direct closure would not be the method of choice, as invariably the closure is under tension and dehiscence ensues.

Debridement revealed a 5x5cm cavity, to which TNP therapy was applied. This was to allow time for microbiological investigation and diagnosis, and to ensure that the wound bed was optimised before definitive surgical closure (Banwell et al, 2005). Sealing a pressure ulcer with a flap may conceal an infection beneath, leading to failure of the reconstruction (Sorensen et al, 2001).

Two weeks later John's pressure ulcer was finally closed via a right myocutaneous gluteus maximus flap rotated into the sacral ulcer. This type of flap has the advantage of being free of suture lines in the area of sitting and is therefore suitable for patients with spinal cord injury. Netscher et al (1996) also suggest that the suture line should be placed away from areas of direct pressure (Figure 6).

After surgery the operated area remains at risk and so postoperative

instructions were for John not to lie on his left side (Sorenson et al, 2001). A turning regimen was instigated on the alternating pressure-relieving mattress. John remained on bed rest over the next two weeks, his recovery was uneventful and the suture line healed well.

John's sacral pressure ulcer and skin problems had persisted for ten months, during which time he underwent many treatments. This case highlighted several issues, including:

- ▶▶ Initial poor assessment
- ▶▶ Inability to identify conditions of the wound bed
- ▶▶ Inappropriate dressings and management
- ▶▶ Extended hospitalisation
- ▶▶ Quality of life.

A study by Spilsbury (2007) found that pressure ulcers and their treatment affect patients mentally, physically and socially and, as in John's case, 'prevented full recovery' and rehabilitation to normal life.

Mobilisation

Mobilising post-surgery or post-healing of a pressure ulcer is gradual to reduce pressure ulcer recurrence. From the literature it would appear that 4–6 weeks is the traditional length of post-surgical immobilisation, starting with 15 to 30 minutes on the first day (Netscher et al, 1996; Schryvers et al, 2000). Stal (1983) indicates the immobilisation period can be reduced to two weeks for patients with spinal cord injury. Sorensen et al (2001) and Sanders (2005) also suggest a period of 2–3 weeks is most acceptable. The authors' pressure ulcer outreach service mobilise patients 2–3 weeks post-surgery (Figure 7), but mobilising will not start until the pressure areas and suture line are completely intact.

Conclusion

The three case reports illustrate different approaches to the same problems. What all share in common, apart from being people who are wheelchair-dependent with pressure ulcers, is that they were all subject to a delay of some months before seeking specialist advice. In John's case,

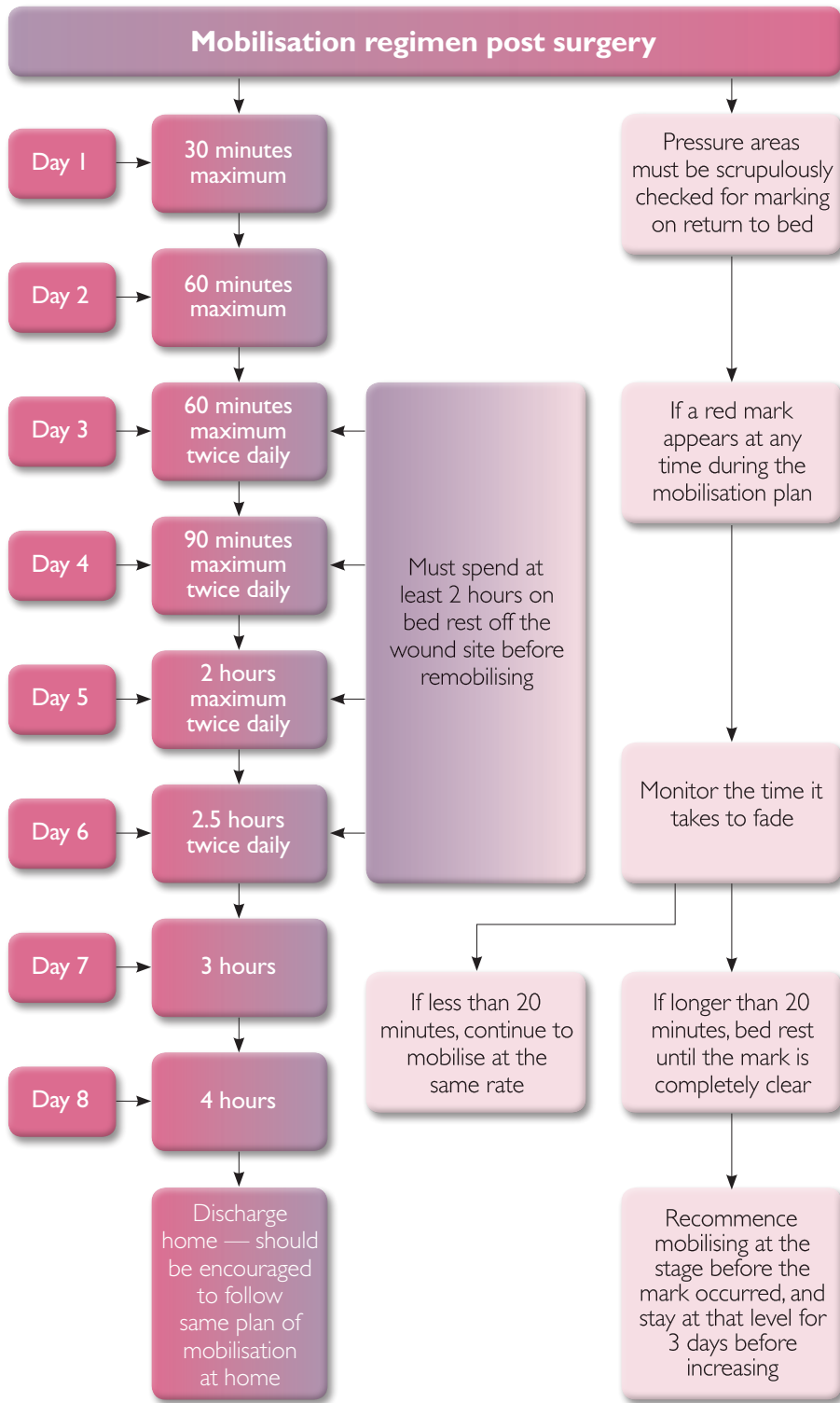


Figure 7. The most rapid rate that the pressure ulcer outreach service would mobilise someone following healing, whether by conservative or surgical management.

the pressure ulcer outreach service could have been alerted earlier, as his pressure ulcer did not change in appearance despite various treatments during the first six months but, as the ulcer was small, it was not thought that surgery would be necessary.

While some pressure ulcers develop slowly, deteriorating from the stage one fixed red mark, shearing and coning injuries may develop much more quickly, presenting as a red mark one day and as a full-thickness stage four ulcer the next (EPUAP-NPUAP, 2009).

Regardless of how ulcers develop, in the authors' opinion the plan has to be the same — clean the wound and create the optimum conditions to promote healing while removing barriers to healing.

Continuity must be ensured so that progress or deterioration can be reliably reported and specialist advice sought at the earliest opportunity. Inform and involve other healthcare professionals who have an interest in the care of the patient, particularly wheelchair service rehabilitation engineers and therapists. When potentially looking for altered seating or wheelchair prescriptions, as much notice as possible will be appreciated, as will a collaborative rather than prescriptive approach. If surgical closure is going to be the resolution, ensure that the surgeon is aware that the patient spends their life sitting and considers this in planning repairs/reconstruction, ensuring tension-free suture lines and avoiding scars running over bony prominences.

Based on the clinical histories for those waiting for a plastic surgical opinion in Salisbury in 2001, it seems that plastic surgery was once the last resort of treatment for someone presenting with a pressure ulcer. Before 2001, referrals at the authors' hospital were received for people who had had their ulcers for over three years, while 18 months to two years was commonplace. Currently, the authors' pressure ulcer outreach service can offer much more than surgical repair for pressure ulcers, and the multidisciplinary approach is aimed at providing long-term solutions, rather than treating ulcers in isolation: the key being early referral and a holistic approach.

The success of the authors' pressure ulcer outreach service in providing satisfactory outcomes for patients has been the management of people who have been referred predominately with grade 4 pressure ulcers. The similar success of the Pressure Ulcer Prevention Intervention Service in South Wales (PUPIS, 2009) has been based on its early

interventions with people presenting with grade 1–2 ulcers, which has brought about a reduction in the development of grade 3–4 pressure ulcers and a corresponding reduction in the number of hospital admissions. This would appear to indicate that the integrated approach to pressure ulcer treatment is the appropriate way to manage existing ulcers and to prevent recurrence.

The overall message of continual holistic reassessment and a multidisciplinary team approach cannot be overemphasised to reach the ultimate goal of avoiding unnecessary suffering and a waste of resources. **WUK**

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Key points

- ▶▶ The pressure ulcer outreach service aims, where possible, to heal grade 3–4 pressure ulcers referred for plastic surgery by conservative management, therefore avoiding admission to hospital.
- ▶▶ Success relies in collaborative multidisciplinary team work to address the patient's individual holistic needs, with care tailored for the best possible outcome.
- ▶▶ Assessment is ongoing, ensuring that treatment and equipment is changed or continued as required.
- ▶▶ Living with a pressure ulcer impacts hugely on a patient's quality of life and education is key to prevent reoccurrence, but responsibility and concordance ultimately lie with the patient. The outreach team and colleagues can help patients by applying evidence-based care enhanced by positive psychosocial support.
- ▶▶ Patients are followed and supported throughout their whole treatment episode and beyond healing, whether via surgery or conservative measures, by the same team to reinforce continuity and trust.

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