

Start recovery right – Changing the world of incision care

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This report summarises a presentation at the EORNA (European Operating Room Nurses Association) Congress by an associate professor, an orthopaedic surgeon, and a general and plastic surgeon, looking at the importance of post-incision care, the discrepancies that still exist among surgeons and practice, and improvements that can be made. The presentation was held in Stavanger, Norway on 13 May and was supported by Mölnlycke.

The decisions that are made as part of post-surgical incision care greatly affect a patient's recovery, as well as the risk of infection and associated complications. Dr Sandy-Hodgetts opened the presentation, stating that there are concerns in the pace of sector developments for patient care following advanced surgical procedures, with changes often being slow to implement.

It is estimated that surgical wound complications (SWCs) are one of the leading global causes of morbidity following surgery; rates vary according to surgical discipline, complexity and urgency, with mortality affecting 1–4% of patients following gastrointestinal surgery, up to 8% for cardiac surgery, and generally lower (0.1%) for gynaecology, obstetrics, and ophthalmology (Pearse et al, 2012; Collaborative GS, 2017; Cutti et al, 2020). SWCs continue to be a challenge to clinicians and researchers across the globe (Sandy-Hodgetts et al, 2020).

Surgical site infection (SSI) continues to be a significant issue, affecting approximately 500,000 surgical patients a year in the US, and leading to around 8,000 deaths annually (Najjar & Smink, 2015). In the UK, SSI is estimated to affect 6.4% of surgical procedures (Leaper, 2015). Across Europe, the overall percentage of SSI has been found to vary from 0.5% to 9.0%, depending on the type of surgical procedure (ECDC, 2018).

The importance of highlighting SWCs

SWCs include SSI, surgical wound dehiscence, seroma, haematoma, local skin ischaemia and delayed healing. Poor quality or abnormal scarring may also be later unwanted outcomes of surgical incisions (WUWHS, 2016; WUWHS,

2018). The global economic burden of SSI is considerable and costs are usually related to the further surgical readmission to manage the wound; for example, the extended length of stay in a care setting. Globally, SSIs are the third-most common surgical wound complication and the most frequent type of healthcare-associated infection (HAI) on hospital admission (ECDC, 2018). In general, studies of the epidemiology of SSIs are problematic due to the diverse nature, and lack of standardised definitions and accurate recording of the wound complication. The occurrence of SWCs differ widely between surgical procedures and health care settings.

Interestingly, due to rapid or early discharge, many patients' wounds are treated in the community/ homecare setting, or with the family general practitioner. Therefore, the healthcare sector is lacking a considerable and substantial dataset to get a real understanding of the true economic burden.

The work of ISWCAP

Dr Sandy-Hodgetts introduced the work of the International Surgical Wound Complications Advisory Panel (ISWCAP). This is a not-for-profit organisation aiming to raise awareness of the prediction and prevention of SWCs, to ultimately reduce the incidence of complications worldwide.

Formed in 2018, ISWCAP is a multidisciplinary team representing many countries and regions with an aim to improve early detection, prevention and management of SWCs through advocacy, research and education. ISWCAP's mission is to generate awareness of the causes of complications such as SSI and dehiscence, educate the patient, carer and provider, and reduce the incidence of SWCs worldwide.

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The organisation published a best practice document on the early identification and prevention of SWCs (Sandy-Hodgetts et al, 2020), and believes the sector needs to broaden its view of all types of SWCs, such as dehiscence, where infection is absent from the complication. ISWCAP is also working with other industry partners on incision care and incision management, and the seminal work for the organisation – coming from Dr Sandy-Hodgetts’ doctoral work – is the development of a clinical grading system for wound dehiscence (Sandy-Hodgetts 2013; Sandy-Hodgetts, 2017; Sandy-Hodgetts, 2018, WUWHS 2018), and an international consensus document on optimising prevention of SWCs (Sandy-Hodgetts et al, 2022).

The WUWHS SWD Sandy Grading System [Figure 1] has been developed for surgical wound dehiscence. It is intended that this grading system can provide a suitable preliminary diagnostic tool for enhanced clinical decision-making and inform strategies in clinical management. (Sandy-Hodgetts, 2017). ISWCAP is working to externally validate this grading system on an international basis.

Dressing choices

Dressing selection and protocol plays a key role in post-surgical incision care (WUWHS, 2016). Anecdotal evidence from international consensus meetings has shown a range of

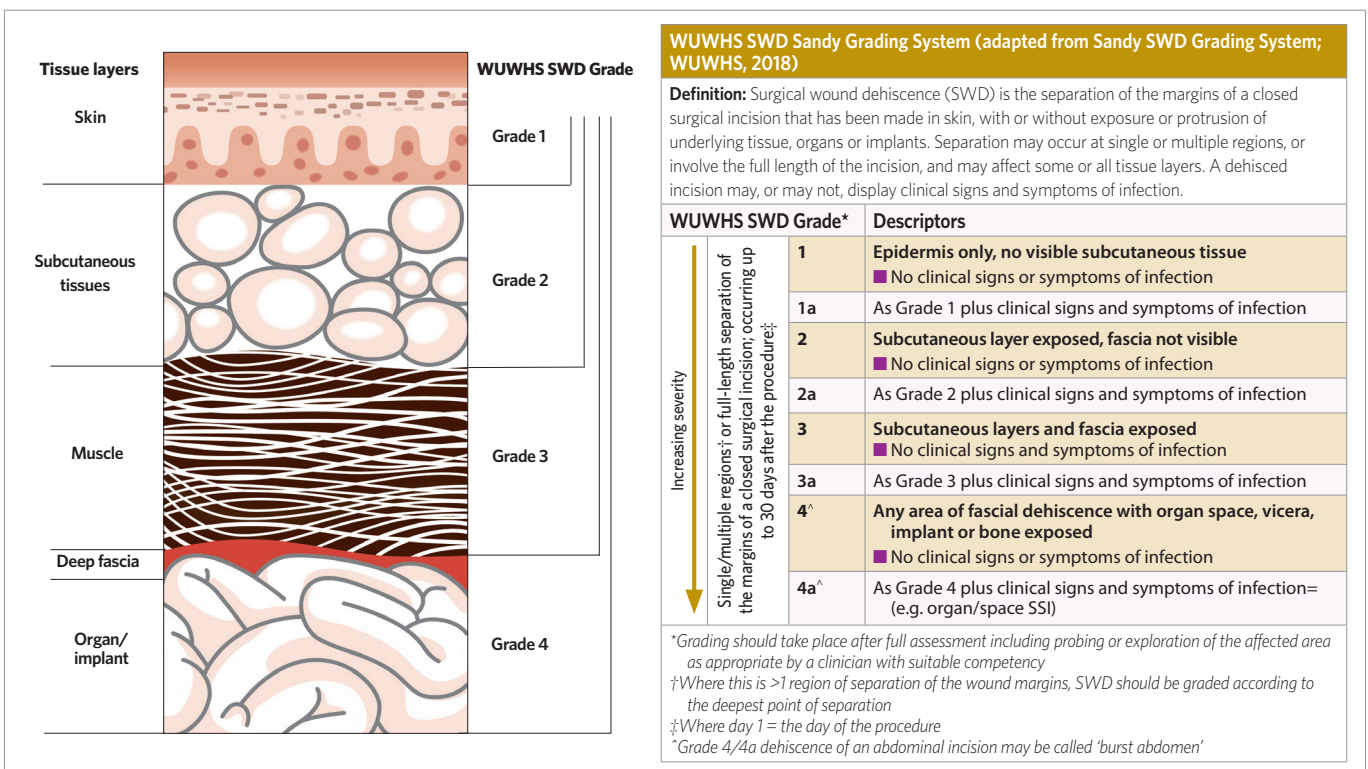
factors contributing to what constitutes the ideal dressing protocol and dressing change time. A variety of factors are required, with conventional dressings often not meeting requirements. Taking the individual patient’s needs and preferences into account was agreed to be a key element in dressing selection and the resulting dressing change protocol, with communication and patient education playing a vital role in this process.

Mr Morgan-Jones explained that one of the key factors in achieving improved incision care is creating alignment over the different aspects that are involved. He reiterated that, when a wound is infected, it can be managed, resolved and treated, but the outcome is never the same. Patients can be left with disability and pain, and if they have chronic wounds, this requires increased care both in and out of hospital. It is important that the main focus is always on the patient and ensuring that they remain at the centre of the care process.

Avoiding post-surgical complications should start in the preoperative phase, and a thorough pre-surgical risk assessment is key. The choices surgeons make directly impact the outcomes for patients. For example, the following should be considered:

- Are there scars, inflammation, ulceration or vascularity issues?
- Have comorbidities, ASA status and BMI

Figure 1. The WUWHS Sandy Grading System (Sandy-Hodgetts et al, 2017; WUWHS, 2018)



been considered?

- Does the patient smoke or suffer from diabetes?
- What is the patient's immune status?
- Is the operation simple and short, or complex and long?
- Is the surgeon the right person for this operation?

Dressing consensus

Mr Morgan-Jones reiterated that consensus is about agreeing a reasonable position to take that will benefit the most patients, even if it does not reflect individual practice or behaviour. It is not about everyone reaching agreement on the same issue. Individual choices should be discussed in a consensus meeting, along with individual differences.

As outlined in the consensus documents that arose from the four recent international meetings, some of the key issues around dressings that have been agreed upon are as follows (Morgan-Jones et al, 2019; Morgan-Jones et al, 2021; Morgan-Jones et al, 2022a; Morgan-Jones et al, 2022b):

- Preoperative risk assessment. It was agreed that this is very important and should directly involve the choice of dressing. Not every dressing is right for every patient and dressing choice should reflect the specific risk to the individual patient.
- The ideal dressing properties. Although an 'ideal' dressing could not be agreed upon, the dressing properties that were agreed were:
 - Absorbent, able to handle exudate
 - Eliminate dead space where necessary to avoid maceration
 - Flexible, should not impede the patient's movement
 - Waterproof, to seal the wound and enabling showering
 - Long wear time, to promote undisturbed wound healing (UWH)
 - Patient comfort
 - Good adhesion, to minimise medical adhesive-related skin injuries (MARSIs).
- Dressing change reasons. The main reasons to change a dressing that were agreed upon were saturation, leakage around the wound, clear cellulitis/ infection and dehiscence. It was agreed that habitual wound changes should be avoided.
- Undisturbed wound healing. It was agreed that UWH promotes healing, prevents contamination, reduces workload and cost, and is considered to be safe. Primary wound healing should always be the main

goal, as opposed to early discharge.

However, despite having a consensus approach and agreeing upon a number of issues, dressing change in practice still varies greatly, as seen in [Box 1](#).

One of the main reflections from the four recent international consensus meetings on post-incision wound care (the UK, Scandinavia, North-East Europe and Asia) was that surgeons work differently depending on where they are located, and they do not always get involved in the decision-making process. When it comes to dressing selection (and when to change them), many factors drive surgeons' choices. These factors include habit, training, experience, bias, cost, research and delegation. However, the surgeon is often not involved in choosing a dressing for their patient.

Many different dressings are available for different clinical situations. By assessing the incidence of SSI and SWCs against their severity, this can help to inform the decision for the dressing according to the specific operation possibility.

Mr Morgan-Jones reiterated that dressing choice should be consistent and standardised across care settings, whether in or out of hospital. There is still a need for education and training, including among surgeons, who should engage in the dressing choice and not delegate. Further education in this area should have a positive impact on patient outcomes.

Changing the mindset: saving time and money

Although dressings can be costly, the biggest issue in terms of cost is nursing time and inpatient costs in chronic wound care, as seen in [Figure 2](#).

Dr Berg further emphasised the importance of planning ahead and choosing an appropriate dressing during the preoperative patient risk assessment, to reduce risk and save costs in the longer term. In many hospitals (for example in Finland, where new hospitals and storerooms are smaller), it can be difficult to immediately obtain the right dressing, so prior planning is vital.

Consistent care and standardisation are required across care settings, not forgetting the role of industry. All staff should be trained, familiar and confident with the post-incisional care, and embrace opportunities to learn from wound care professionals and specialists, and how to work with different dressings.

Further education and UWH

In terms of making further changes that are

Box 1. Suggestions for dressing wear time following surgery, demonstrating differences in local protocols and clinician preferences:

- Until stitches are removed
- 14 days
- 7 days
- 4 days
- 48 hours
- When the patient is discharged (2–4 days)
- Depends on individual patient's infection risk
- Only when dressing is saturated or infection is suspected

cost and time effective, Dr Berg wants the industry to move away from ritualistic dressing change. A dressing might be changed due to possible complications, such as:

- Saturation of the wound dressing material
- Excessive bleeding
- Suspected local/systemic infection (e.g. local wound pain, redness or swelling)
- Potential dehiscence
- Loss of adherence of the dressing.

A dressing might also be changed due to other factors. In some areas, patients have to travel long distances and may have limited resources available at home, so prefer their dressing to be changed before discharge. There may be limited resources (product availability), or the patient may simply prefer the dressing to change.

The potential benefits of UWH depend on the individual patient and their circumstances. However, in appropriate patients, longer wear time can result in a range of benefits such as (Brindle and Farmer, 2019):

- Healing is optimised if the wound remains undisturbed (unless there is a specific reason to do so)
- Risk of contamination and potential infection is reduced
- Further potential benefits, such as savings in cost and clinician time.

The person carrying out the dressing change can influence the decision-making, depending on the structure and staff in place to safely

change the dressing. Dr Berg highlighted the need for further education about dressing capability and the potential benefits of UWH for clinicians, patients and carers. Considering the individual needs of the patient and their wound should play a key role in rethinking the ritualistic aspects of dressing change protocol.

Improving post-incision care: Conclusions

This presentation explored the work of ISWCAP, choices of dressings for post-incisional wound care, reaching consensus on the 'ideal' dressing and when dressings should be changed, and the need for further education in the sector to align decision-making processes.

SWCs are a significant challenge and pose a huge clinical and economic burden. There is a clear need for improvement and alignment internationally in post-incision wound care.

More research evidence is needed to demonstrate the value of UWH, and continuous development is required of specific dressings to extend wear time and reduce the risk of wound contamination.

Post-operative wound dressing choices should be standardised and consistent across care settings. Education is essential for this to progress.

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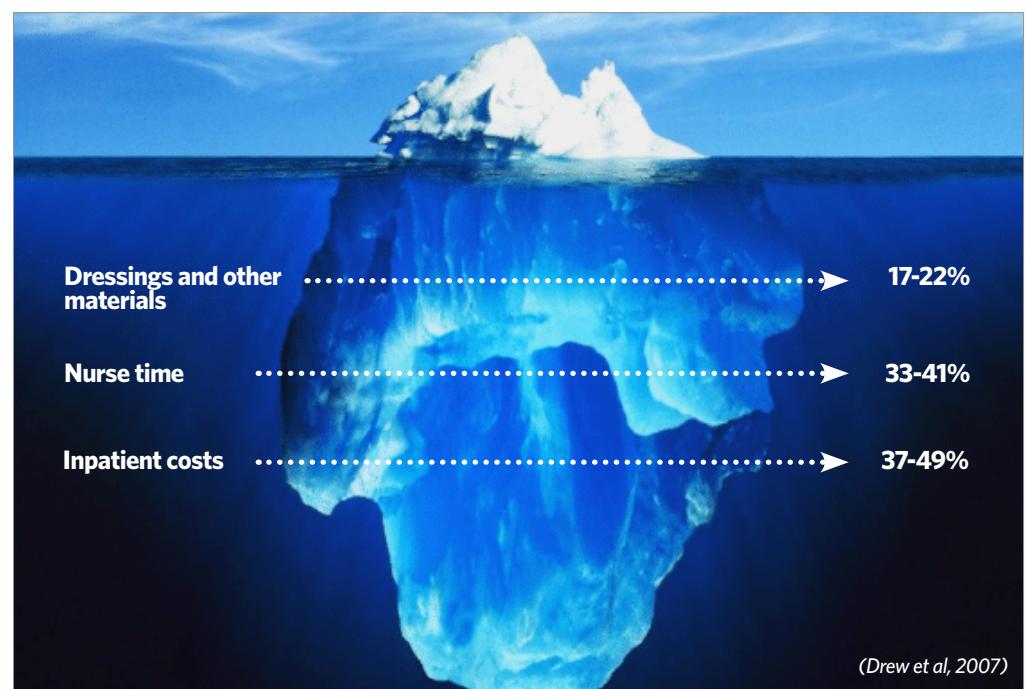


Figure 2. The cost of wound care

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