National Wound Care Strategy Programme

Surgical Wounds

Reducing Surgical Wound Complications:

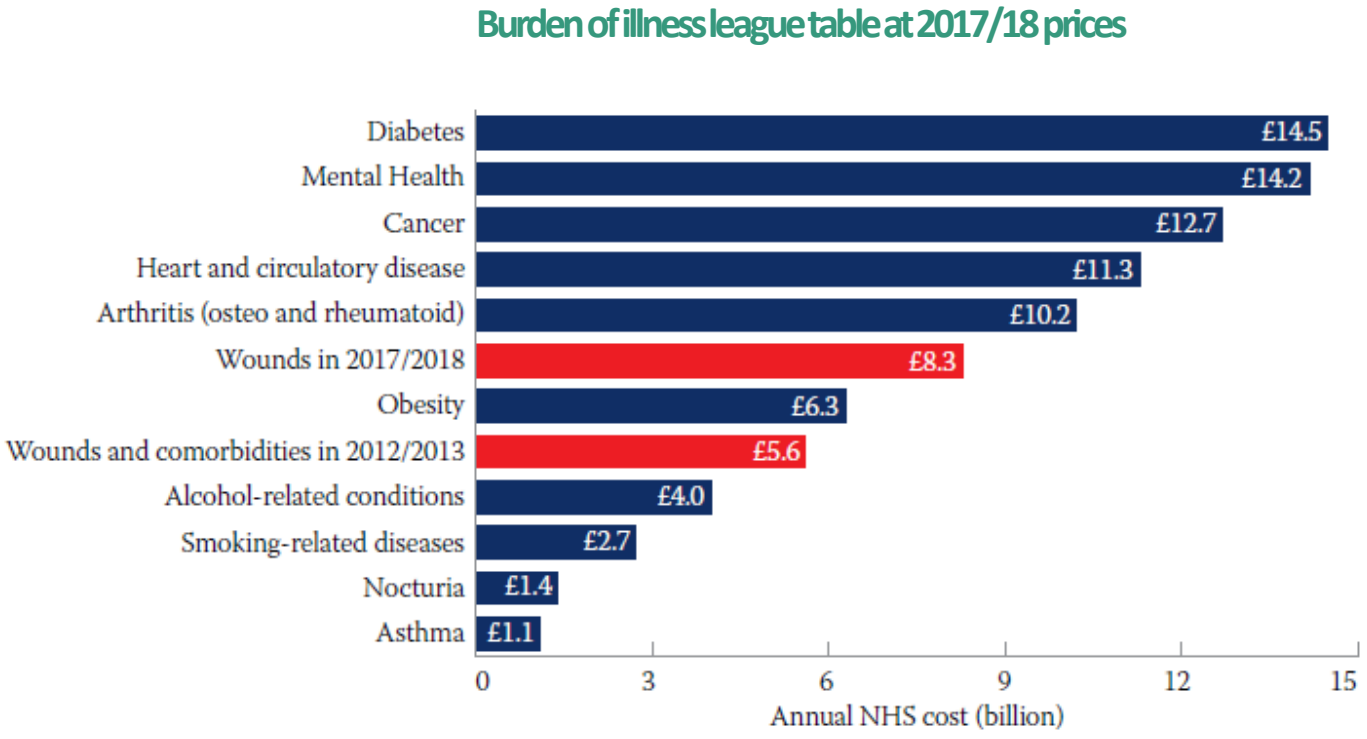
How the National Wound Care Strategy Programme is addressing this

Jacky Edwards
Clinical Lead for Surgical Wound Complications
Lead for Education and Workforce

Health Innovation Network

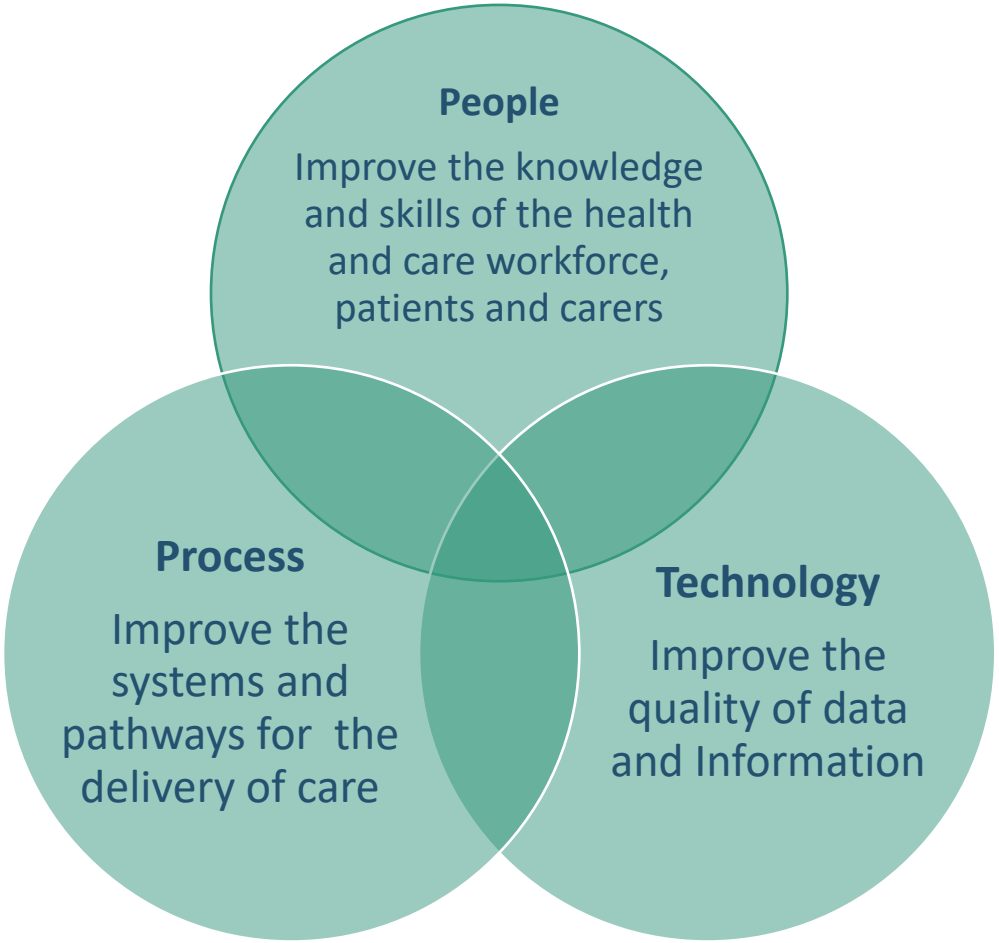
The Challenge

- The cost of wound care in England is high and continues to rapidly increase.
- Too few patients are receiving evidence-based care (unwarranted variation).
- Too many wound care pathways are poorly organised.
- There is a lack of data and information to inform quality improvement.



Guest, J. F. (2020). "Burden of wounds to the NHS: what has changed since 2012/13?" Wounds UK **17**(1): 10-15.

NWCSP Aims and Vision



Clinical Priorities

Lower Limb Wounds

37% of all wounds and 71% of NHS spend on wound care[1]

Pressure Ulcers

5% of all wounds and 7% of NHS spend on wound care[1]

Surgical Wounds

14% of all wounds and 7% of NHS spend on wound care[1]

1. Guest, J.F., G.W. Fuller, and P. Vowden, *Cohort study evaluating the burden of wounds to the UK's National Health Service in 2017/2018: update from 2012/2013.* BMJ Open, 2020. **10**(12): p. e045253.

Surgical Wounds

The most common type of wound that requires NHS care are surgical wounds (57%)

Surgical wounds are deliberately caused through a surgical incision and heal either by:

- Primary intention (where the edges are brought together in approximation).
- Secondary intention (where tissue has been lost or because the wound edges cannot be brought into apposition for suturing).

Most heal without complications or delay, but healing is problematic in a significant minority

Surgical Wound Complications

Complications leading to delayed healing

- Surgical Site Infection.
- Surgical Wound dehiscence (including Seroma & Haematoma).

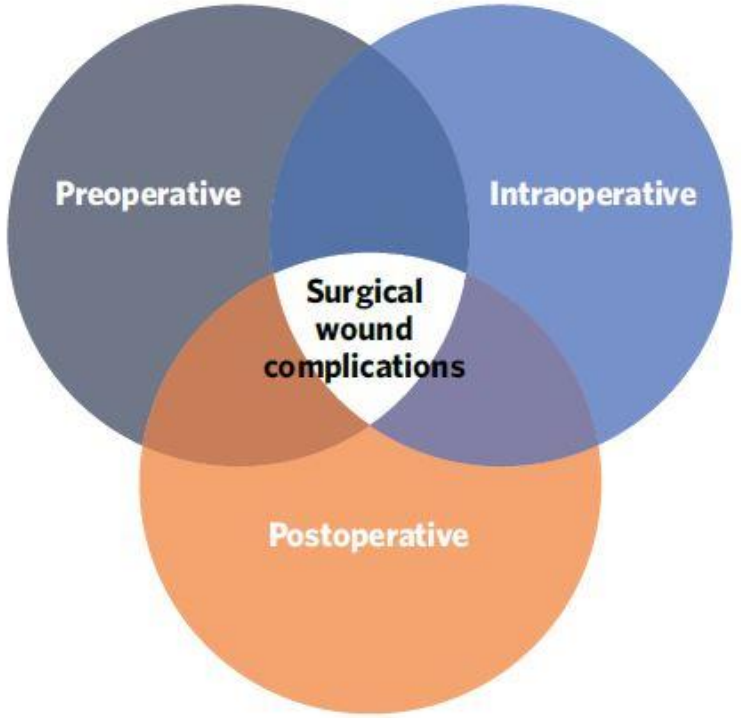
Other wound healing complications:

- Hypergranulation.
- Medical Adhesive Related Skin Injury (MARSI).
- Moisture Associated Skin Damage (MASD) / Maceration.

Complications unrelated to delayed healing

- Scarring.
- Incisional hernia.

Sandy-Hodgetts et al (2017)[1]



1. Sandy-Hodgetts K, Leslie GD, Parsons R, et al. Prevention of postsurgical wound dehiscence after abdominal surgery with NPWT: a multicentre randomised controlled trial protocol. *J Wound Care* 2017; 26(2): S23–26.

Surgical Wound Complications:

Surgical wound dehiscence (SWD)

- The separation of the margins of a closed surgical incision, with or without exposure or protrusion of underlying tissue, organs or implants. Separation may occur at single or multiple regions, or involve the full length of the incision, and may affect some or all tissue layers.

Surgical Site Infection (SSI)

- An infection related to an operative procedure that occurs at, or near, the surgical incision within 30 days of the procedure (or within 90 days if prosthetic material is implanted at surgery).

SWD increases the risk of SSI and vice versa.

- A dehisced surgical incision may or may not display clinical signs and symptoms of infection.
- Not all infected or inflamed wounds dehisce[1].

1. World Union of Wound Healing Societies (2018) Surgical wound dehiscence: Improving prevention and outcomes. Wounds International

UK SSI Initiatives

NICE – Surgical Site Infections: Prevention and Treatment
UKHSA - Surgical Site infection (SSI): guidance, data and analysis
One Together UK
GIRFT - Surgical Site Infection Audit (2019)
WHO

Reasons for Surgical Wound Dehiscence

- Technical Issues - issues with the closure of the incision.
- Mechanical Issues – mechanical stress placed on the incision.
- Disrupted Healing - can be due to both local and systemic factors.

Disrupted Healing

Local Factors

- Hypoxia/Ischaemia
- Devitalised tissue
- Infection/contamination
- Inflammatory conditions
- Larger initial wound size
- Ongoing mechanical stress or trauma

Systemic Factors

- Very young or very old
- Psychological stress
- Chronic disease/comorbidities
- Medication
- Radiotherapy
- Smoking, alcoholism, substance misuse
- Malnutrition
- Connective tissue disorder
- Poor concordance with treatment plans

Scale of the problem

- The annual cost to the NHS of managing delayed healing in surgical wounds is estimated to be between £957.4 and £985.8 million[1].
- The scale of the problem is uncertain as it is unclear how many surgical wounds have delayed healing.
- The lack of standardisation for post-discharge data collection has resulted in a limited understanding of delayed healing following hospital discharge.
- Current estimates of SSI are from 0.4- 11.3%[2].
- At present, most SSI surveillance ends at hospital discharge but approximately 60% of SSIs occur following discharge so the true rate of SSI is likely underreported[3].
- Current estimates of SWD are 0.4-41.8%[4].

1. Guest JF, Ayoub N, McIlwraith T, et al. Health economic burden that different wound types impose on the UK's National Health Service. Int Wound J 2017;14:322–30
2. UKHSA (2022) Surgical site infections (SSI) surveillance: NHS Hospitals in England.
3. Andersen BM (2018) Prevention of postoperative wound infections. Prevention and Control of Infections in Hospitals 25: 377-437
4. World Union of Wound Healing Societies (2018) Surgical wound dehiscence: Improving prevention and outcomes. Wounds International

Surgical Wound Dehiscence

Surgery	Incidence
Laparotomy	0.4%–3.8%
Cardiothoracic (sternotomy)	0.65%–2.1%
Caesarean section	1.9%–7.6%
Orthopaedic surgery	1.1%–3.6%
Saphenous vein harvesting	8.9%
Pilonidal sinus (primary closure)	16.9–41.8%
Oncoplastic breast reconstruction	4.6%–13.3%
Abdominoplasty following bariatric surgery	18.7%–21.5%

Impact on patient of surgical wound complications

- Delayed healing can impact patients' mental health, physical and social functioning, pain and potentially long-lasting disability.
- Multiple theatre episodes, delayed discharge and hospital readmission.
- Increased hospital and community visits.
- Increased mortality especially in the presence of infection.
- Impact on ability to work and finances.

(With Permission)

Health & Social Care impact of surgical wound complications

- Delayed discharges.
- Increased length of stay.
- Hospital readmissions.
- Additional surgical episodes.
- Impact on elective surgery rates.
- Increased workload for primary and community care.
- Increased dressing costs.
- Increased reliance on welfare and social security benefits.

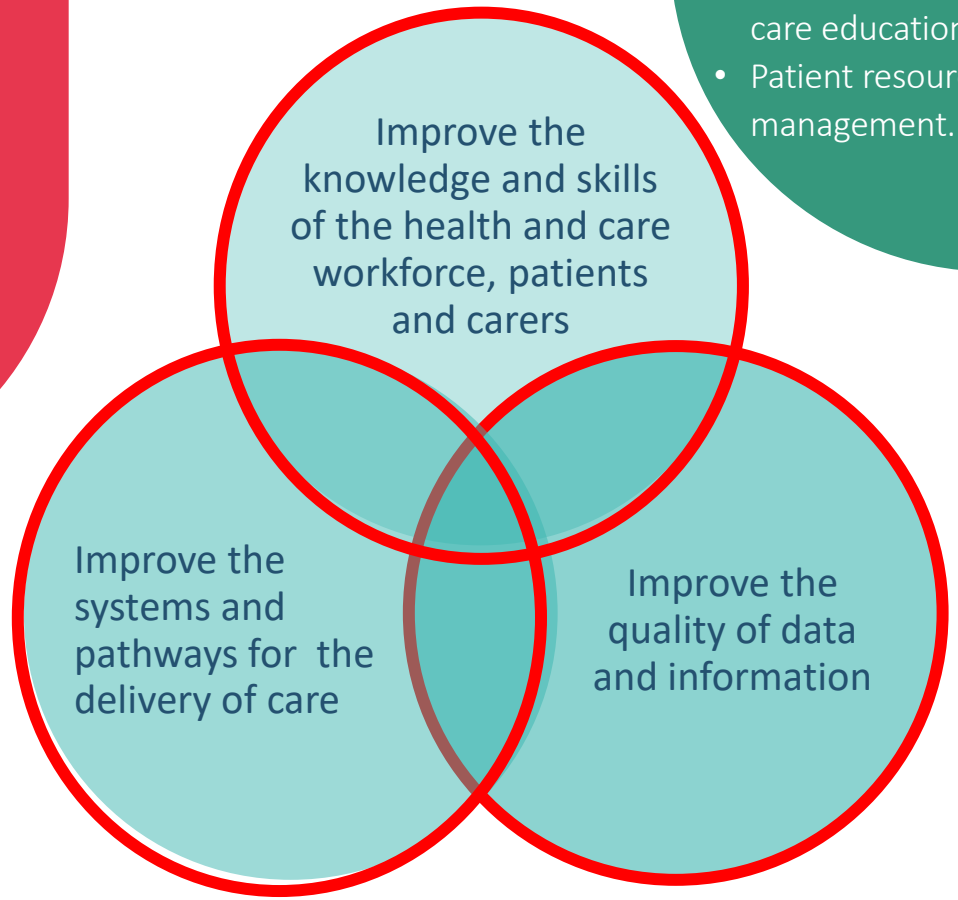
Our aims & vision

Process

- Redesign clinical pathways across primary care, community services and secondary care.
- Promote supported self-management.

People

- National wound care core Capabilities Framework.
- Topic specific education curricula and online free-to-access wound care education resources.
- Patient resources to support self-management.



Technology

- Information feedback systems to inform clinical and business needs.
- Point of care NHS compliant mobile digital technology.

Evidence

Key action 1: Aim for evidence-based good practice

- Recommendations written to concentrate on surgical wound complications
- End 2023 consultation
- Publication End March 2024

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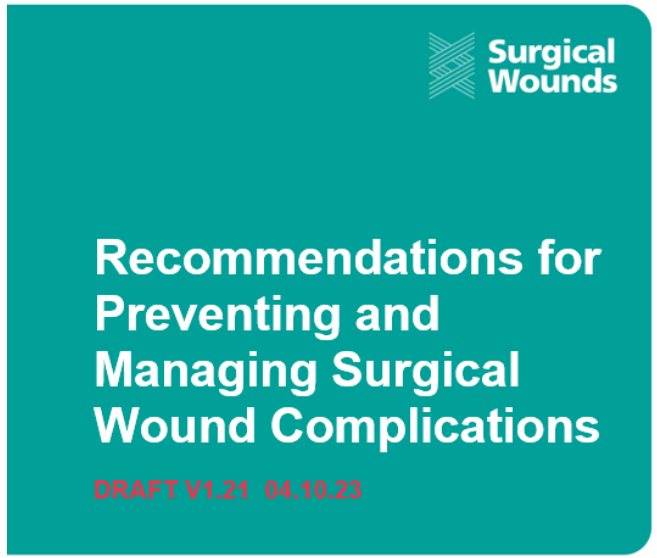
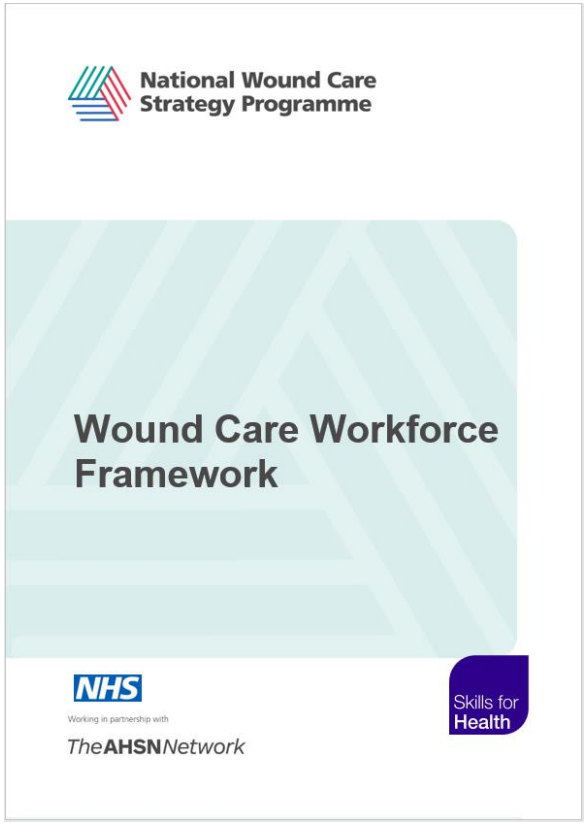
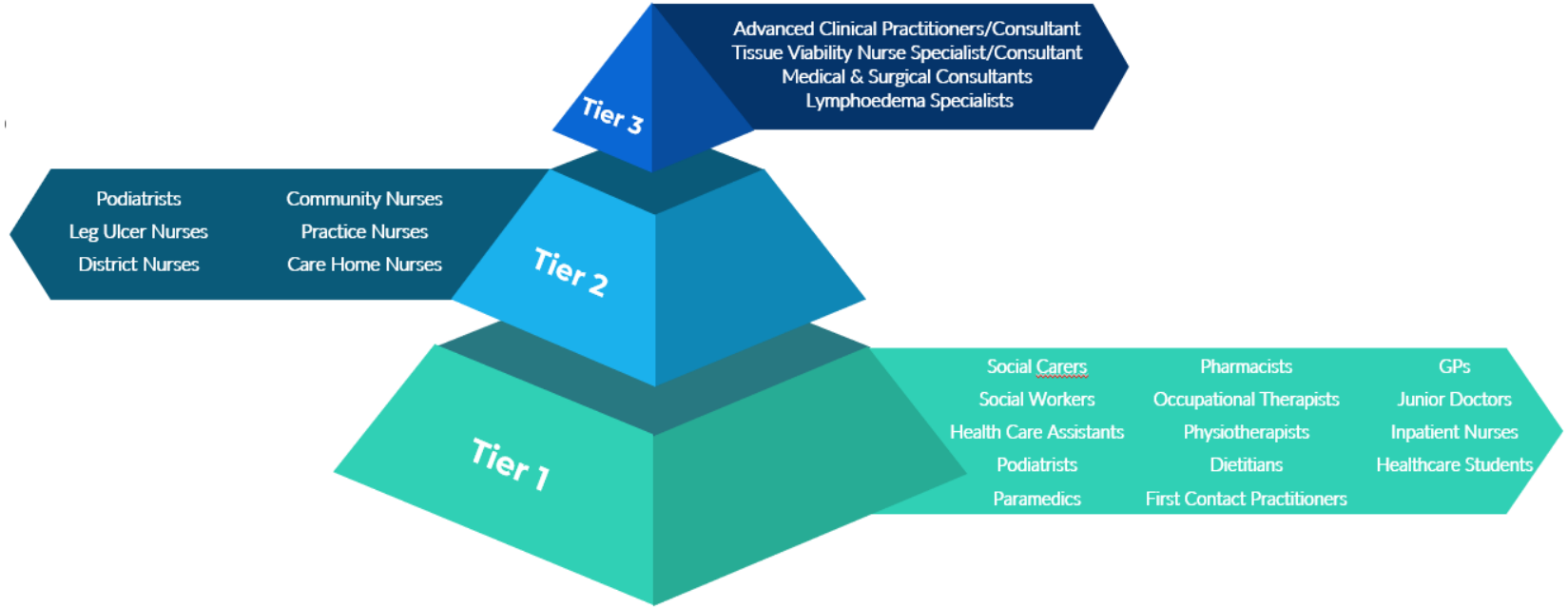


Education and Workforce

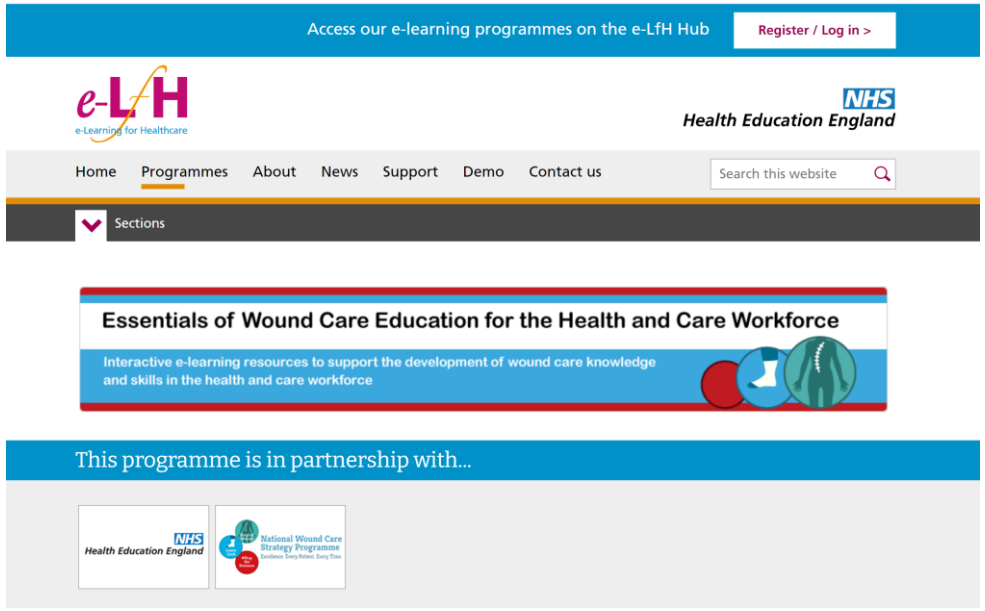
Key action 2: *Map the capabilities of whole workforce who care for people with wounds.*





Education and Workforce

Key action 3: Address knowledge and skills gaps in the workforce



Tier 1

- Essentials of Skin Care
- Essentials of Wound Assessment
- Essentials of Digital Wound Imaging
- *Essentials of Nutrition and Lifestyle**
- *Essentials of Wound Infection**
- Essentials of Leg Ulceration
- Essentials of the Foot at Risk
- Diabetic Foot Screening
- Granulation Game
- Essentials of Pressure Ulcer Prevention
- *Purpose T**
- *Essentials of Surgical Wounds**

Tier 2

- *Diagnosing and Managing Wound infection**
- Adult Lymphoedema
- *Vascular Assessment**
- *Making Differential and Formal diagnoses (Case Studies)**
- Foot at Risk
- *Principles of Managing Surgical Wound Complications*
- *Principles of Managing Open Surgical Wounds*

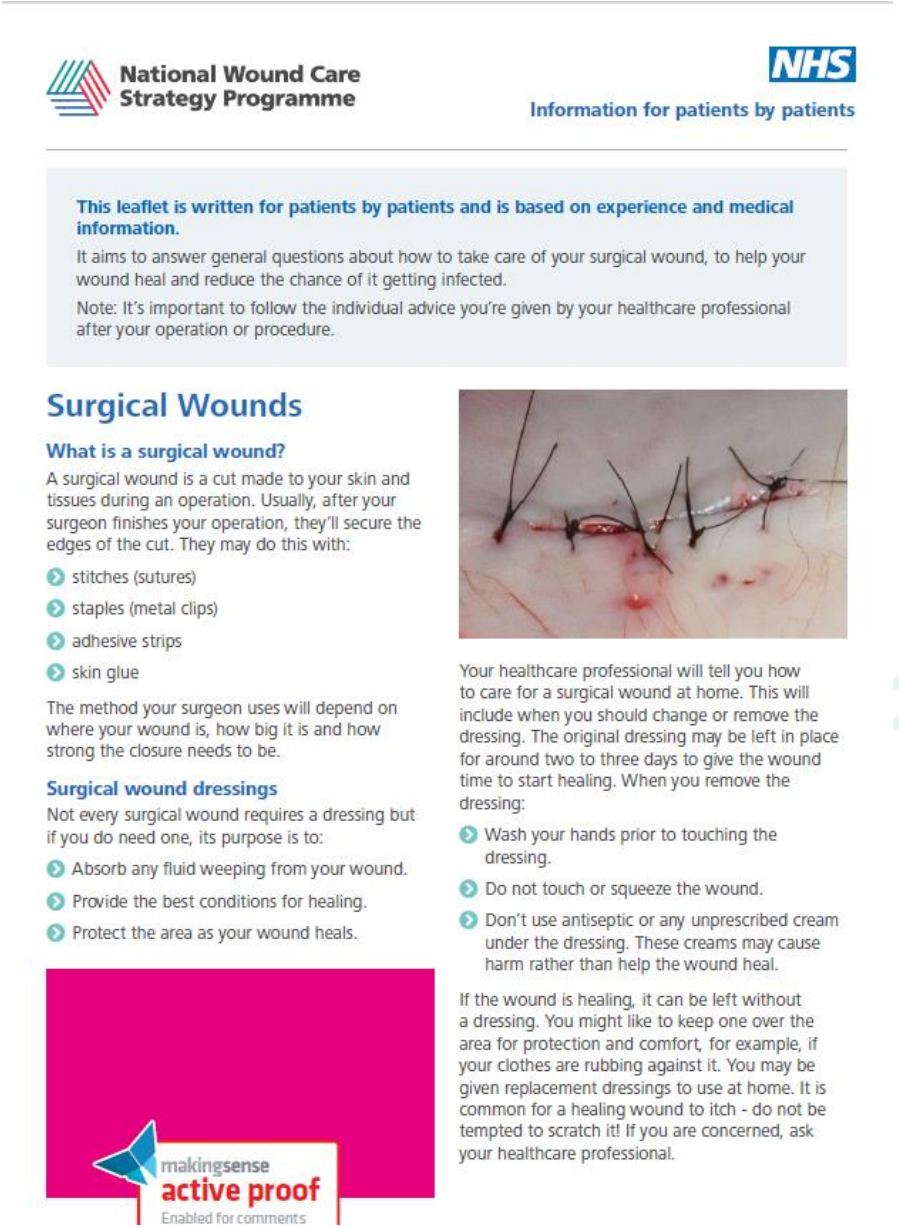
Tier 3

- HEI education

Information for patients and carers

Key action 4: *Identify opportunities for supported self-care*

- Additional leaflets are in development:
- Infection in Surgical Wounds
- Supported Self-Management for Patients with Surgical Wounds



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Information for patients by patients

This leaflet is written for patients by patients and is based on experience and medical information.

It aims to answer general questions about how to take care of your surgical wound, to help your wound heal and reduce the chance of it getting infected.

Note: It's important to follow the individual advice you're given by your healthcare professional after your operation or procedure.

Surgical Wounds

What is a surgical wound?

A surgical wound is a cut made to your skin and tissues during an operation. Usually, after your surgeon finishes your operation, they'll secure the edges of the cut. They may do this with:

- stitches (sutures)
- staples (metal clips)
- adhesive strips
- skin glue

The method your surgeon uses will depend on where your wound is, how big it is and how strong the closure needs to be.

Surgical wound dressings

Not every surgical wound requires a dressing but if you do need one, its purpose is to:

- Absorb any fluid weeping from your wound.
- Provide the best conditions for healing.
- Protect the area as your wound heals.

Your healthcare professional will tell you how to care for a surgical wound at home. This will include when you should change or remove the dressing. The original dressing may be left in place for around two to three days to give the wound time to start healing. When you remove the dressing:

- Wash your hands prior to touching the dressing.
- Do not touch or squeeze the wound.
- Don't use antiseptic or any unprescribed cream under the dressing. These creams may cause harm rather than help the wound heal.

If the wound is healing, it can be left without a dressing. You might like to keep one over the area for protection and comfort, for example, if your clothes are rubbing against it. You may be given replacement dressings to use at home. It is common for a healing wound to itch - do not be tempted to scratch it! If you are concerned, ask your healthcare professional.

Issues with data

Data on surgical wounds is not comprehensively and routinely collected in a standardised way, particularly in primary and community settings.

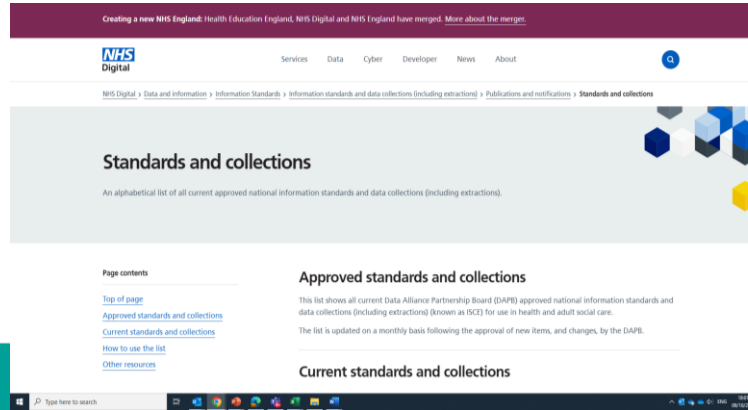
What is collected is restricted to specific surgeries and limited to snapshots.

Collection of data is time consuming.

Any data that is collected is not published in a timely manner, so data is often not available for quality improvement.

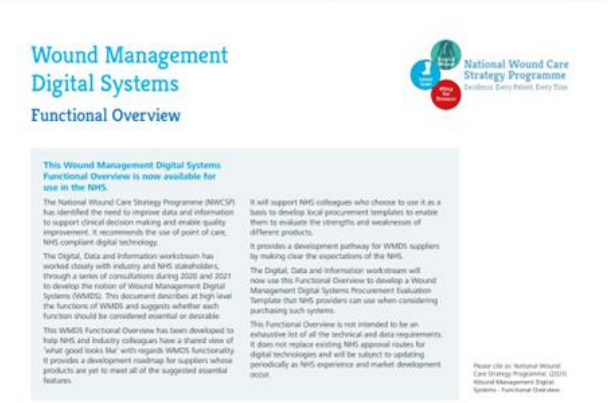
Digital, Data and Information
Key action 5: Use data to improve data

- Adopt the Wound Care Information Standard Notice (*DAPB4086*) to improve clinical documentation:
- Type of surgery
- Emergency /Elective Surgery
- Date of Surgery
- Duration of surgery
- Antibiotic prophylaxis given
- Wound type/classification - clean, clean-contaminated, contaminated dirty
- Approximation of wound edges
- Closure method
- Date of closure removal
- Drain in situ/type of drain
- Prosthesis/Implant present
- Fluid collection beneath the wound closure (Abscess, Haematoma, Seroma)
- Crepitus present
- Dehiscence (size and number)
- Healing ridge present



Digital, Data and Information
Key action 6: Optimise digital technology

- Improve the data collection for surgical wound complications by the use of **digital data surveillance systems** (EPRs, WMDS).
- **Support the flow of clinical care delivery** (assessment, diagnosis, treatment, ongoing care) and where care is delivered (clinic setting, patient's place of residence).
- Support the capture and sharing of **wound images**



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Digital Images

Practical Recommendations for the use of Digital Images in Wound Care

Surgical Wound Complications

Key action 7: *Develop & Implement Surgical Wound Complications Best Practice Bundle*

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Working in partnership with TheAHSNNetwork

NHS

Content

- Interventions (based on NWCSP Surgical Wound Complications Recommendations).
- Rationale
- Implementation Guidance
- Impact Metrics: Process and Outcome indicators
- Continuous Learning
- Supporting Resources

In summary.... Key Actions

1. *Aim for evidence-based good practice*
2. *Map the capabilities of whole workforce who care for people with wounds.*
3. *Address knowledge and skills gaps in the workforce*
4. *Identify opportunities for supported self-care*
5. *Use data to improve data*
6. *Optimise digital technology to support good clinical documentation, which results in quality data collection.*
7. *Develop & Implement Surgical Wound Complications Best Practice Bundle.*

Connect with us

www.nationalwoundcarestrategy.net

NatWoundStrat

NatWoundStrat@mft.nhs.uk

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Thank you for your attention

Any Questions?

Jacky.Edwards@mft.nhs.uk

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