# Case studies and Wound Challenges

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# District nursing service

- District nursing service is a  community based , specialist general service  which includes post operative surgical wounds
- 4500 contacts per month
- The service provides a wide range of care to patients in their own homes , workplace and  nurse lead clinics
- The district nurse model is a rehabilitation model of care

# Case study 1

- Background
- District nurse person centered approach
- Challenges managing surgical wounds in community
- Mrs B experience

# Background

- Mrs B 67 year old -female
- Lives alone in adjoining flats in a central part of town
- Supportive son
- Does not drive
- Non smoker, non drinker
- No special cultural needs
- Interests include –reading, talking books
- Up to this year worked part time with looking after children and tour guide

# General Assessment

- Medical and surgical history
- Current health-active comorbidities - nutrition status
- Lifestyle
- Current medication
- Pain-including current location , and severity ,related to wound or elsewhere
- Psychosocial status-family support ,home environment ,patients  understanding and ability to engage in care
- Impact of wound on quality of life - physical ,social ,and emotional

# Definition of Surgical wound dehiscence

- Surgical wound dehiscence (SWD) is the separation of the margins of a closed surgical incision that has been made in skin, 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.
- A dehisced incision may or may not display clinical signs of infection

(Wound Union of Wound Healing Societies 2018 )

# Medical History

Partial gastrectomy for peptic ulcer 1980s
Familiar adenomatous polyposis syndrome (FAP)
-laparoscopic pan proctocolectomy ,end ileostomy, adhesiolysis February 2020

Admitted to hospital with severe abdomen pain 17/7/2020
- laparotomy ,reduction of parastomal hernia, incarcerated parastomal hernia, midline para umbilical hernia
19/7/2020 further laparotomy
-ileus no obvious mechanical obstruction , Post operative hypotensive

# Medical History continues

29/7/2020 developed  severe abdomen pain and distention/parasomal bulge-repair of parasomal hernia with ileal resection

-**abdominal/parastomal wound dehiscence**

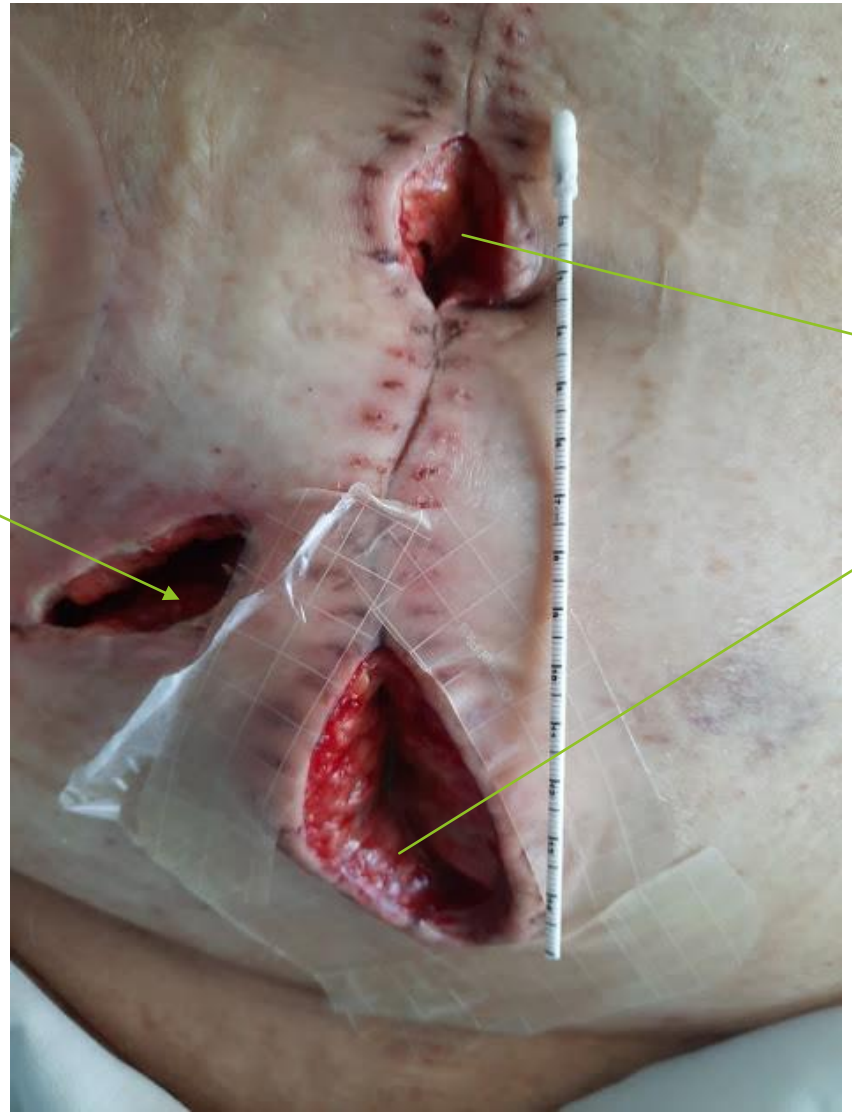
-wound infection

-lung consolidation, hypocalcaemia

Discharged to home in community 13/8/2020 4 weeks in hospital

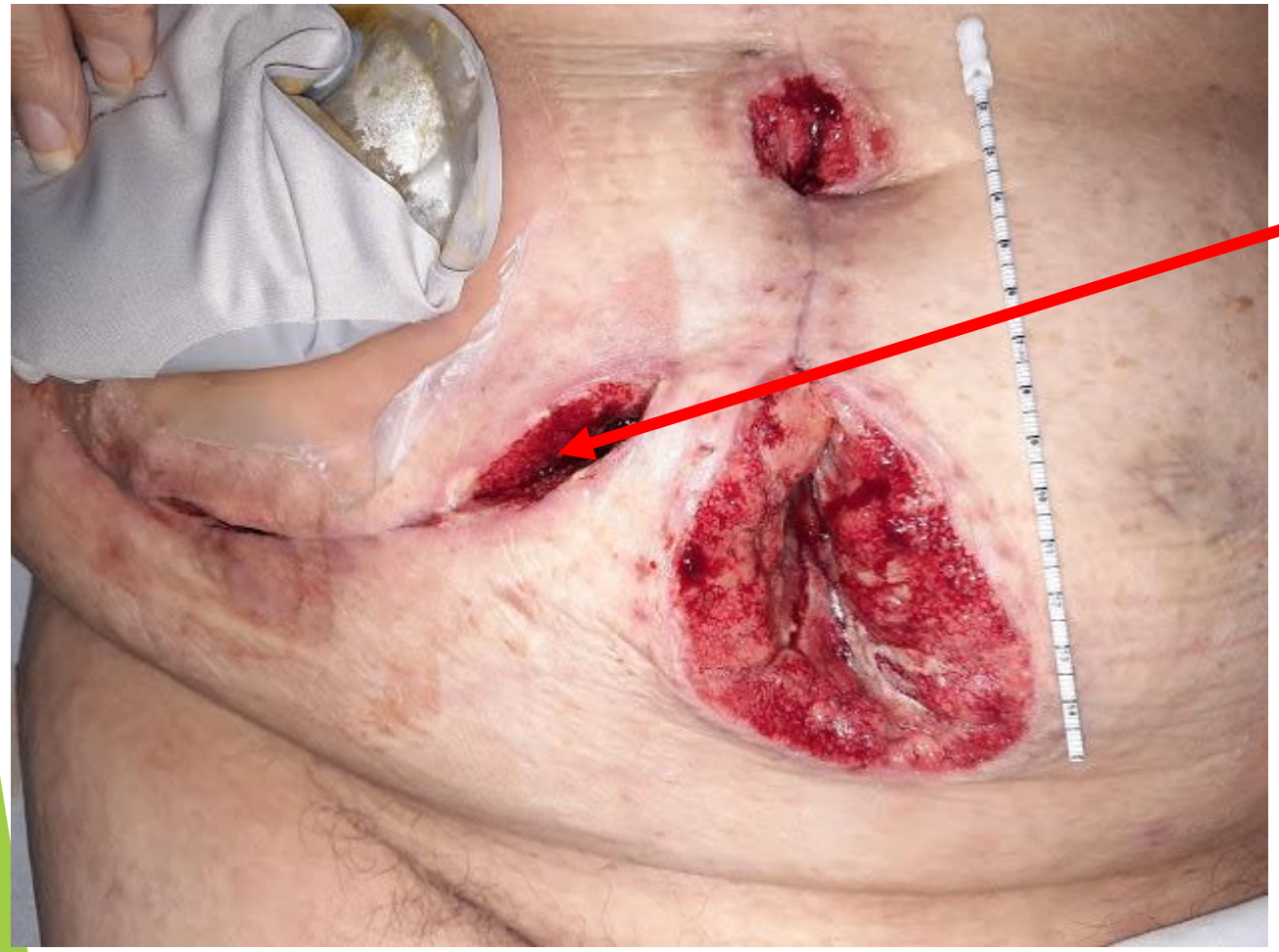
# 3rd August Mrs B photos in hospital prior to discharge

**Parastomal dehiscence**



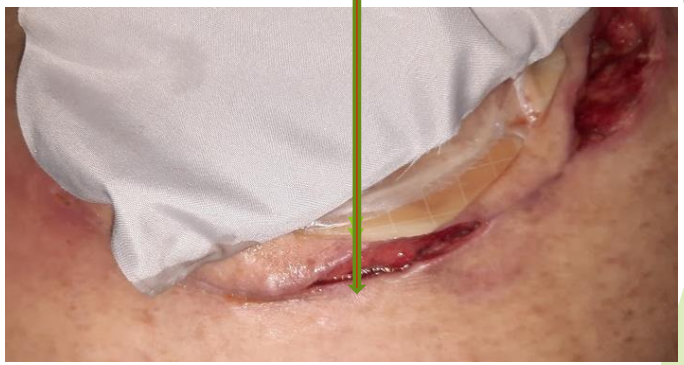
**Midline Abdominal desinence**

Mrs B 07.08.2020

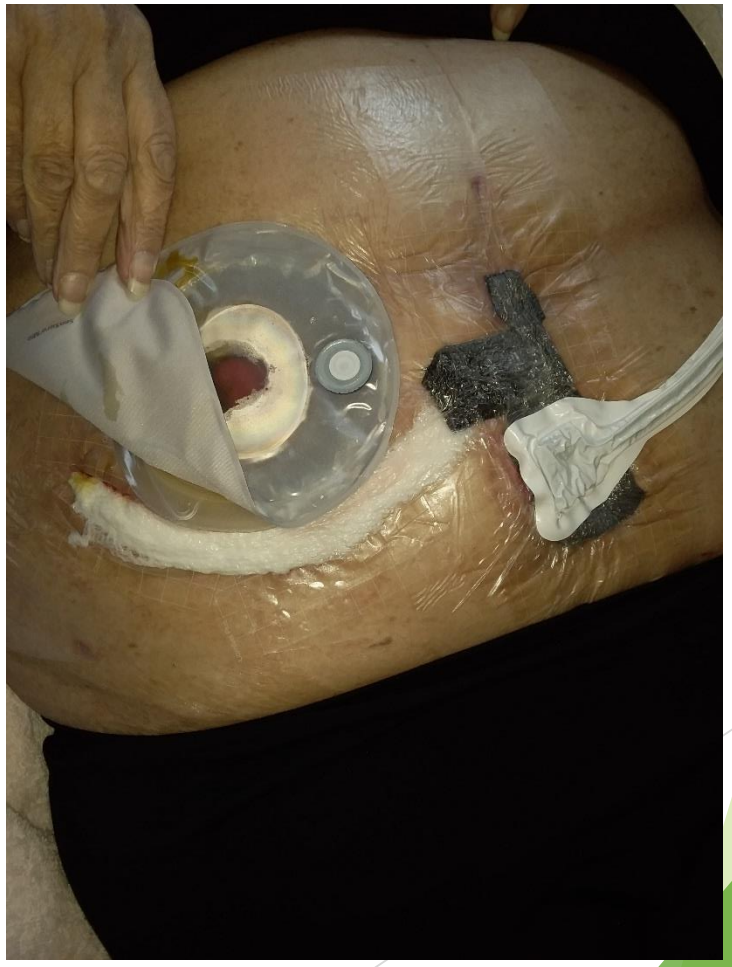


Bowel very close by, 2-3 cm deep

Wound very close to ileostomy



In the community 17/08/2020
4 distinct areas of dehiscence-stoma under Mrs B hand

NPWT
Mix of foam
with gauze

# Measurements


Number 1
Umbilical 2cm x 2cm
Granulating
Depth 2cm

Number 2
7cm x 6cm depth 7cm
Unable to see base

Number 3
4cm x 2cm with depth medial end 3cm

Number 4
8 cm x 1cm with depth 1cm
Granulating

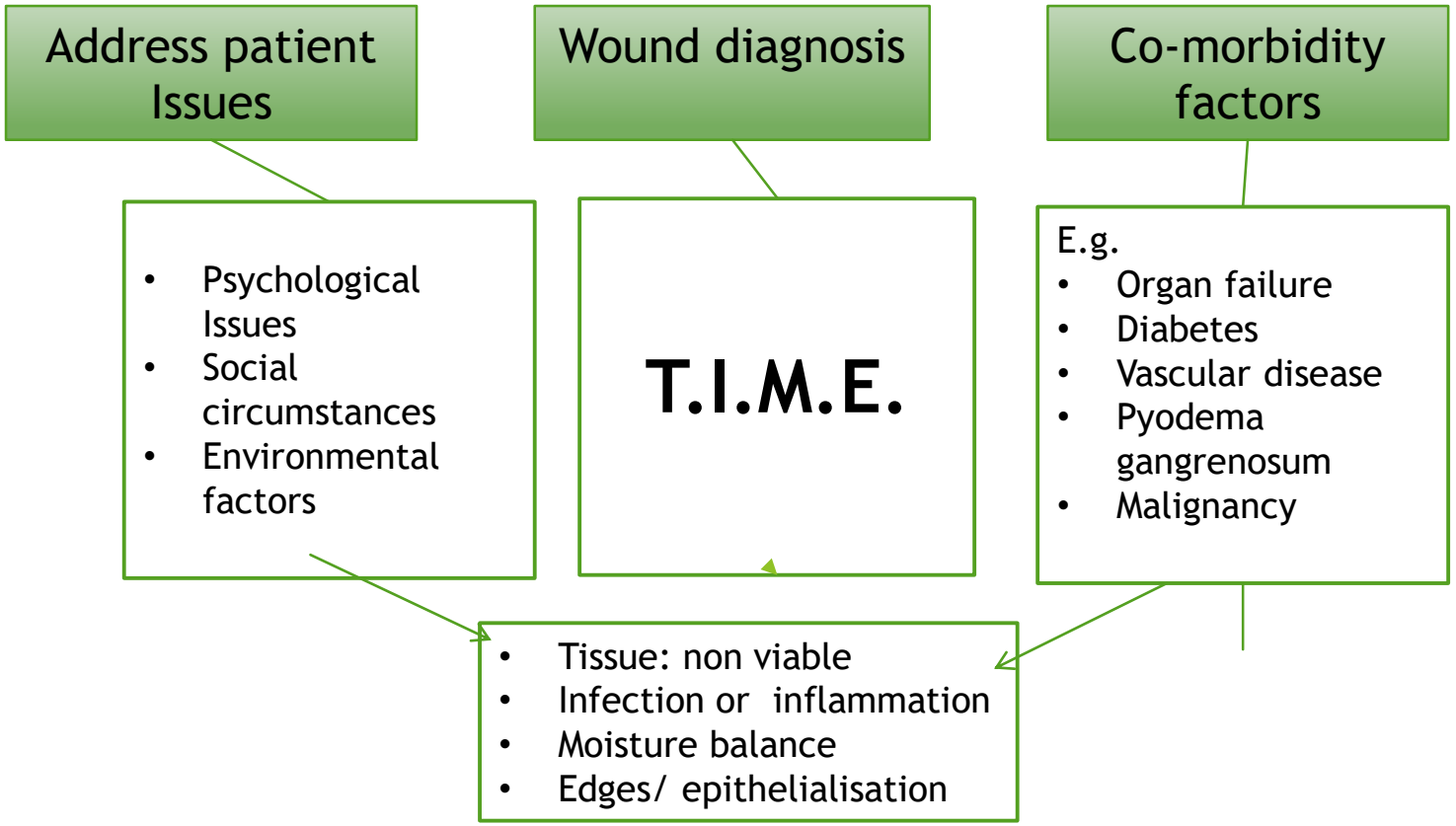
No signs of infection
Good moisture balance

# Southern District Health Board values

# Multidisciplinary approach

- Stoma therapist
- Dietician
- Physiotherapist
- Occupational therapy
- Social worker
- Home supports
- District nurses
- General practitioner
- Wound specialist
- Consultant follow up

# WOUND BED PREPARTION



# District nurse -wound

- TIME principles assessment

Tissue –looking at incision colour and healing ridge(thickened tissue indicating newly formed collagen)

- Location and extent of dehiscence, depth ,tissue viability, dimensions

Inflammation /infection- signs of inflammation, pain, systemic signs and symptoms that may be associated with infection

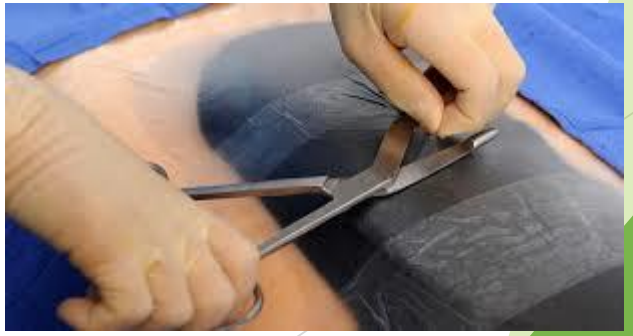
**Moisture** –exudate management

- Exudate drainage colour, consistency, type and colour, exudate drainage level

Edges-wound margins ,edges of dehisced area, colour of the surrounding skin

# Negative Pressure Wound Therapy (NPWT)

- Provides a physical barrier to external contamination and removes excess wound drainage
- Facilitates wound closure through
  - Facilitating wound contraction
  - Reducing oedema
  - Removing wound exudate, which may be a medium for bacterial colonization
  - Decreasing harmful levels of proinflammatory agents eg metalloprotease MMPs
  - Promoting angiogenesis
  - Improved tissue perfusion
  - Granulating tissue formation
  - Facilitation of moist wound healing



# NPWT in community

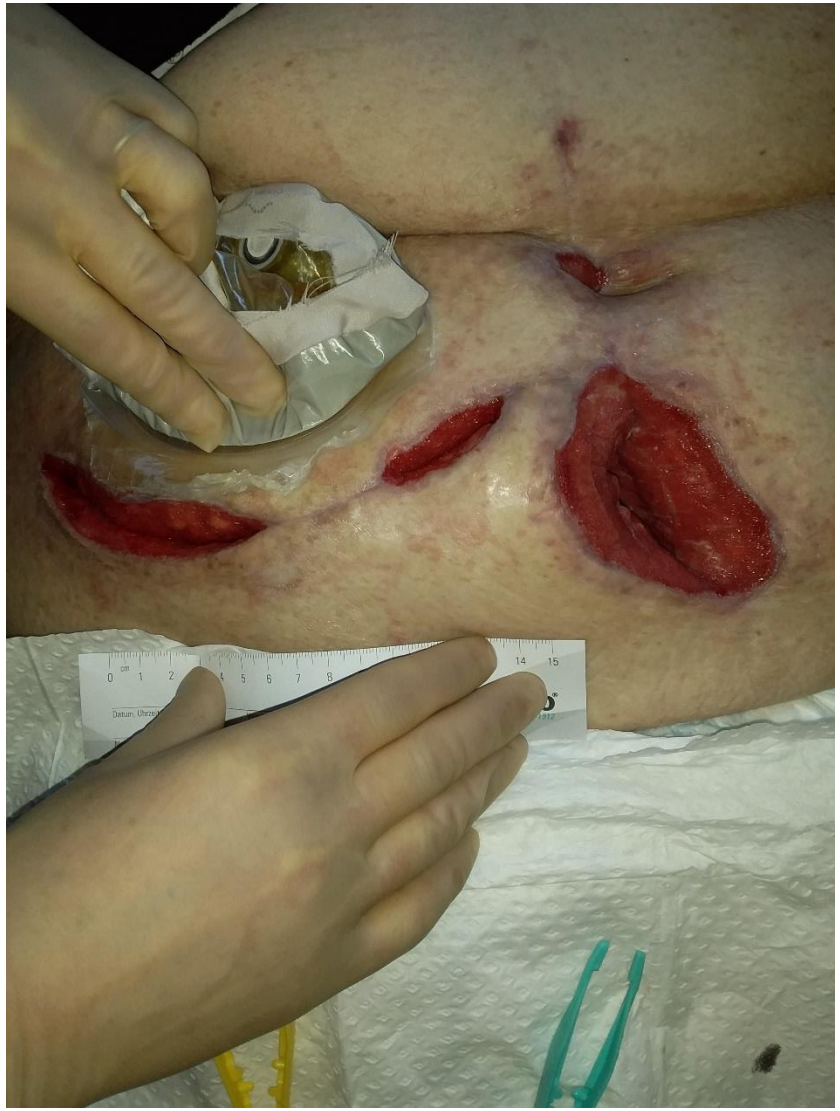
- Clinicians in the community play an important role in supporting, monitoring and managing patients receiving treatment with NPWT to ensure it is used safety and appropriately and effectively( WUWHS 2018)
- UK survey found half patients with surgical wounds  healing by secondary intention were care for in community settings (Chetter , 2017)

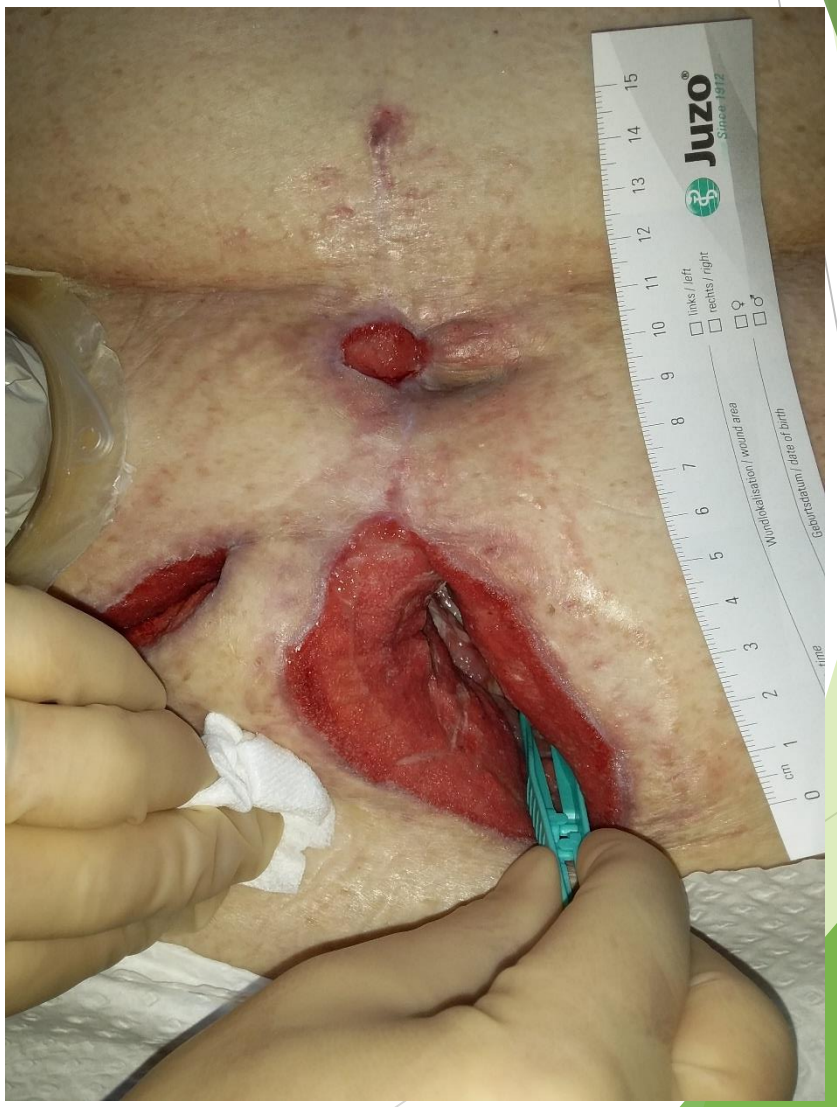
  -trend is for decreasing length of hospital inpatient stays

  -the development of portable NPWT devices

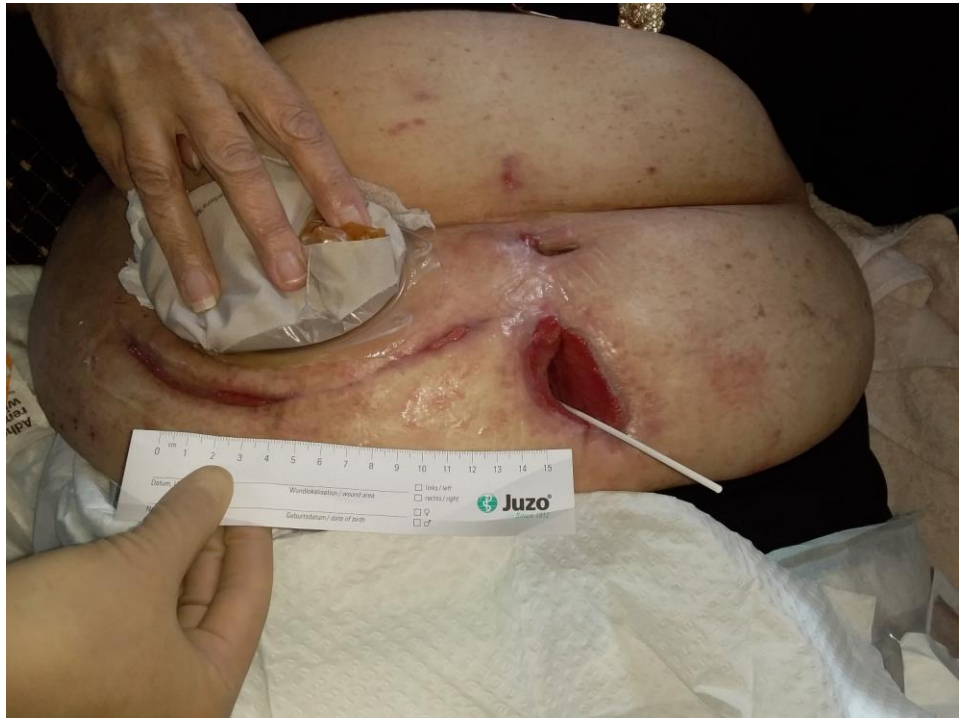
  -clinicians working in the community are increasing likely to be involved who have been discharged with NPWT

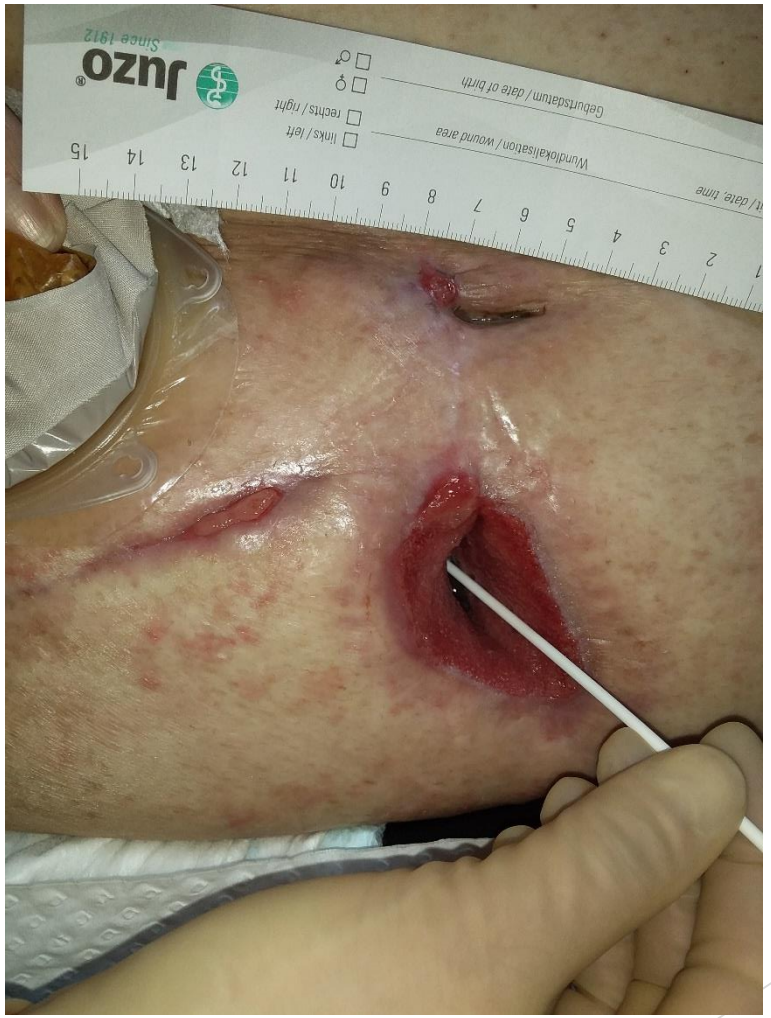
# Progress 26/8/2020  9 days at home

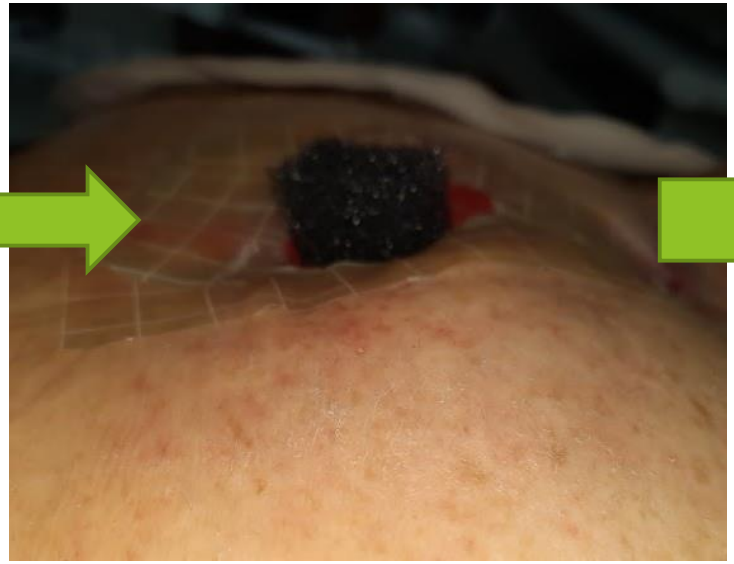


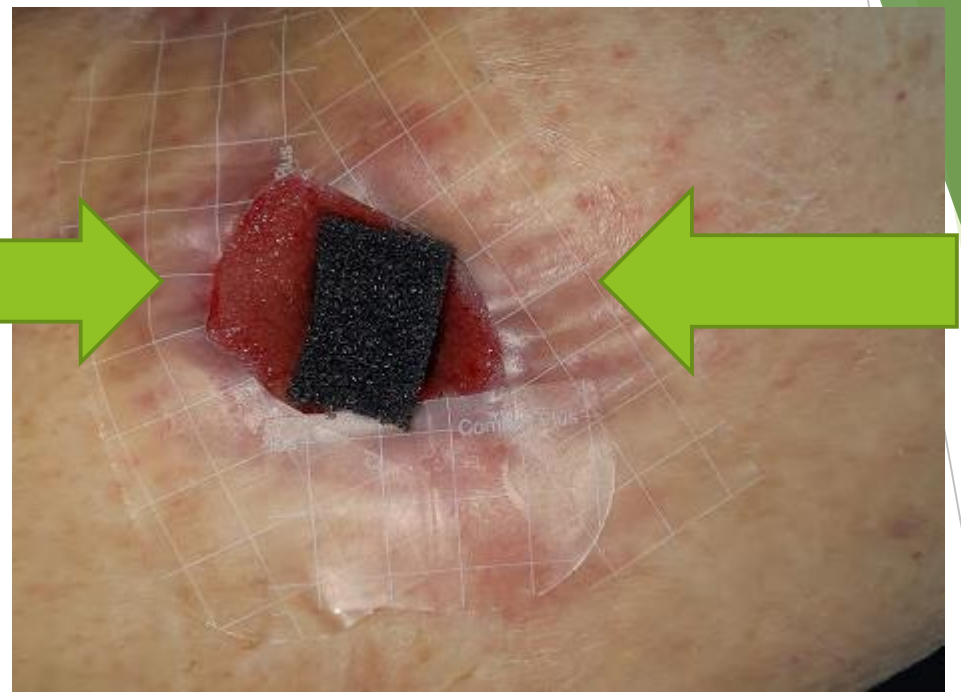


# 7 weeks later 19/9/2020



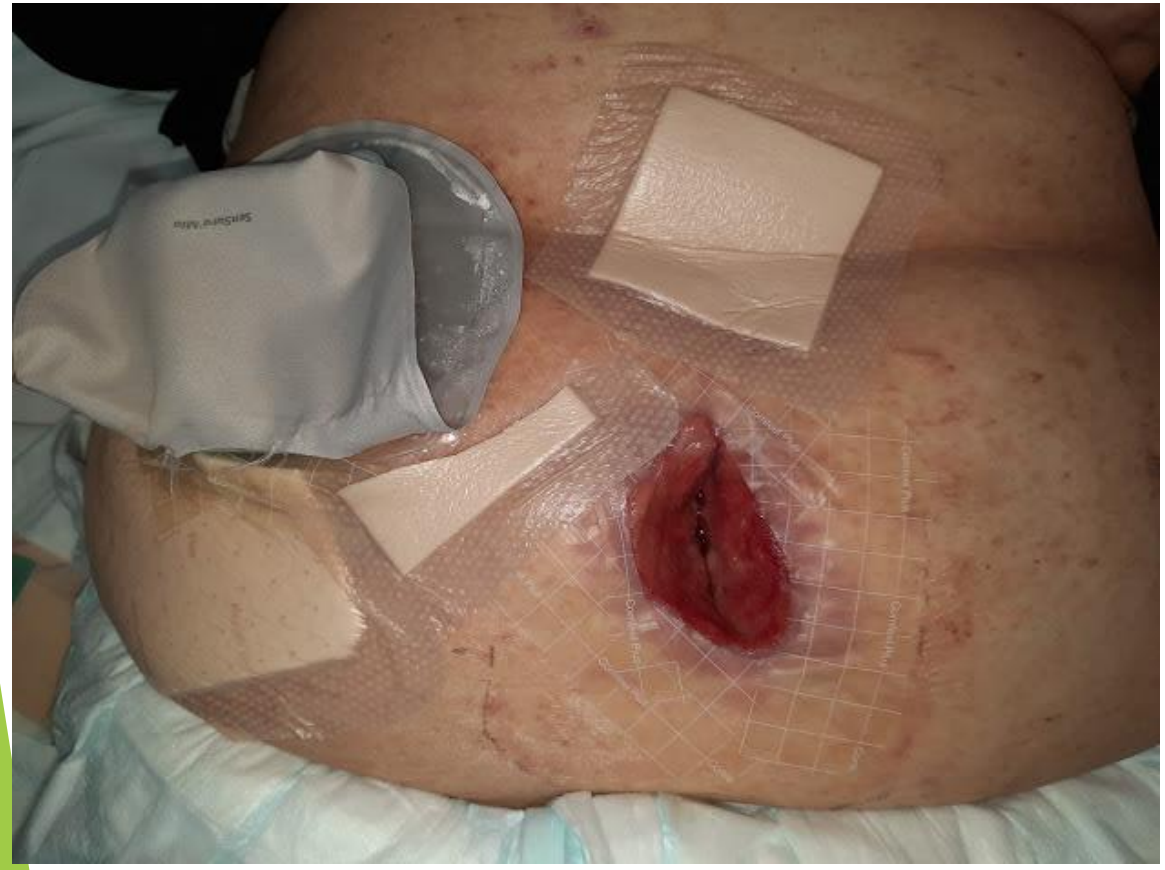


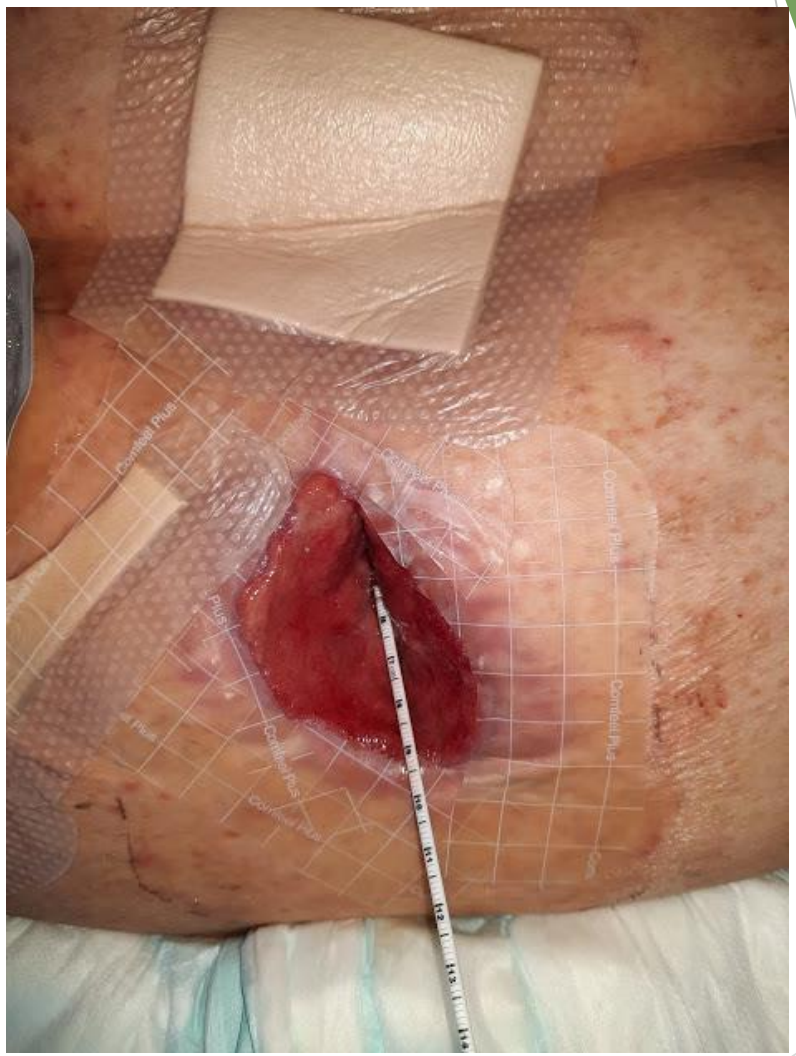


Overpacking

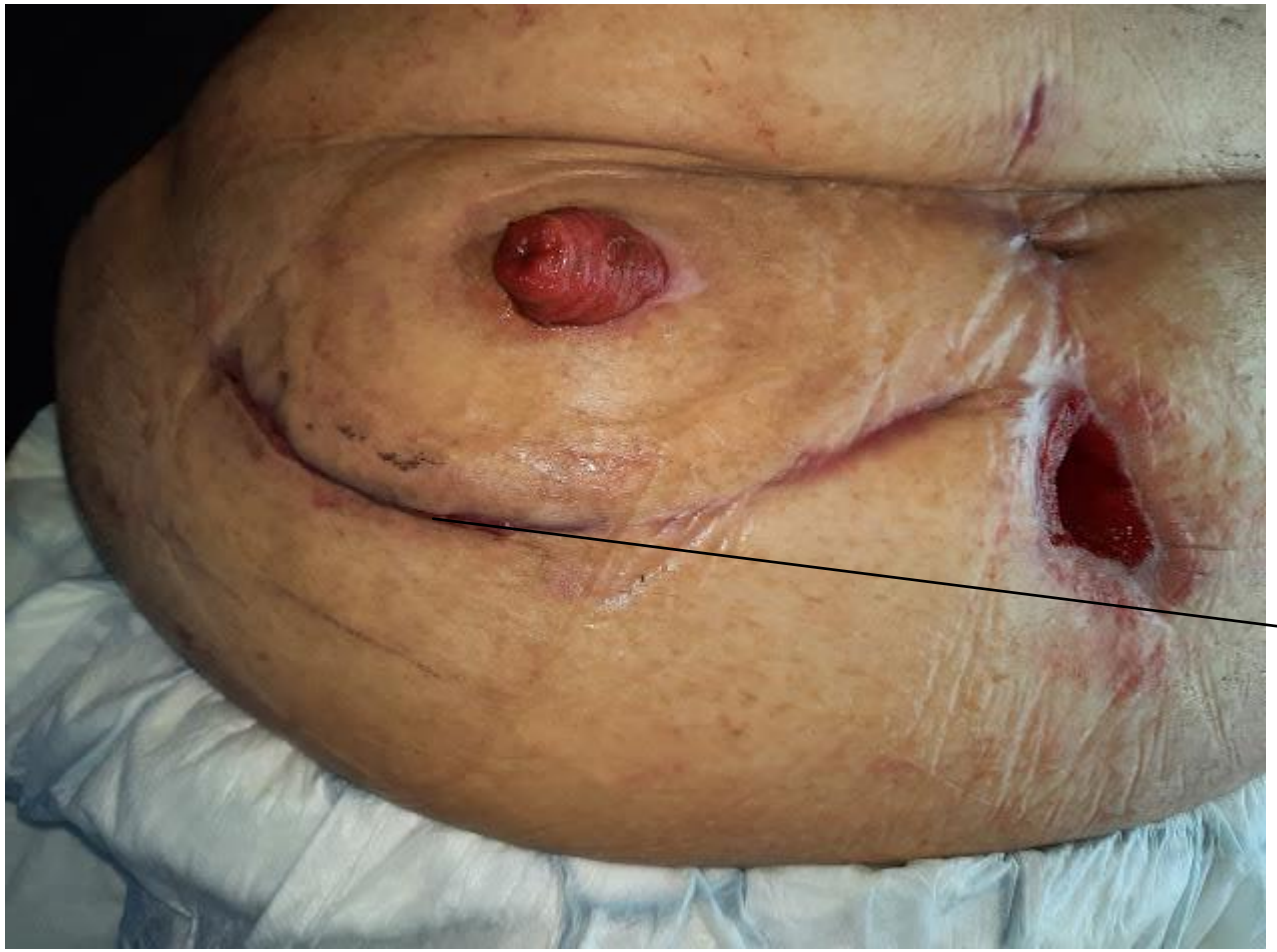
Document the number of pieces
What goes in must come out
2-3 cm longer than needed

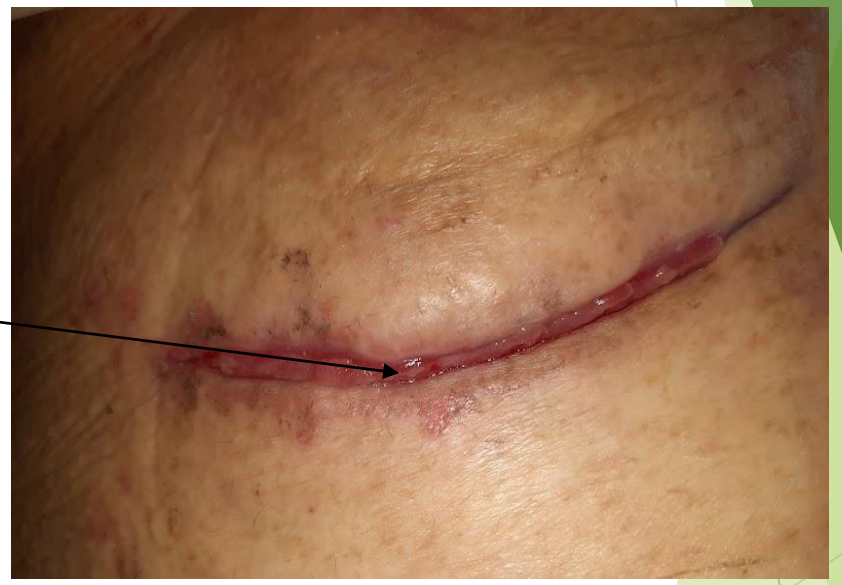
11.09.2020 7 weeks post dehiscence





25.09.2020  9.5 weeks since initial dehiscence-  Hypergranulation





# Challenges for district nurses

- Time
- Space in home
- Parking
- Consistency/documentation


# Mrs B challenges

- Pain
- Independence
- Weight loss/body shape
- Personal care
- Rubbish bags
- Noisy neighbours

# Mrs B shared experience

Reassurance , management of expectations and patient education

-Surgical Wound Dehiscence is frightening

-Patients need to be reassured with an explanations tailored to individual needs

-Patients need an understanding of what is happening, reasons why and long term outlook

-Functional and practical advice

-Patients should be encouraged to voice concerns and even talk to someone that has experienced similar issues

-Always refer and liaise with the wider multidisciplinary team

Florence Nightingale quote

“nature heals the wound and what nursing has to do is to put the patient in the best condition for nature to act upon him…” 1856

# Case study 2

Sally

35 year old

Married supportive partner

Working as office manager and part time study towards commence degree

Generally fit-active member in squash club, enjoys bike riding and swimming

Has personal physical trainer once week

Non smoker, limited alcohol

# Medical history- Perianal abscess

- 5 week history of perineal pain and lump
- GP weekly consults until referred to Colorectal consultant
- Completed one week course of oral Augmentin, Metronidazole 5 days prior to admission
- Increased tenderness  3 days prior to surgery ,no fever ,perianal lump at 7 o'clock
- Blood markers CRP increased to 11
- Incision and drainage of ischiorectal abscess on 7/9/2020 Discharged home 8/9/2020

# Medical history

| History | Medications |
| --- | --- |
| Type 2 diabetes | Metformin |
| Polycystic ovary syndrome | Labetalol |
| Hypertension | Folic acid |
| Lumber back sprain 2019 | |

No known Allergies or drug reactions

# Perianal abscess

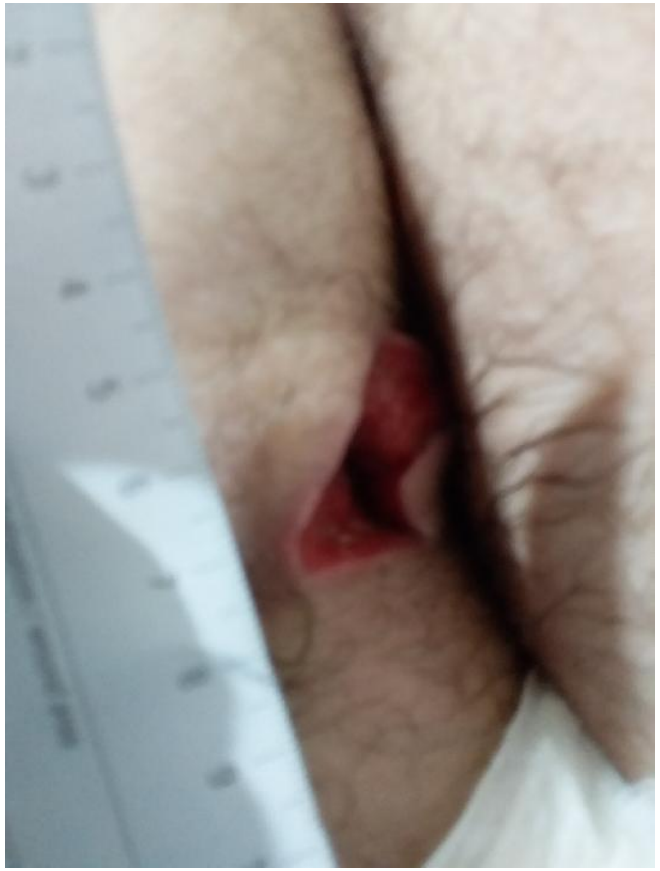
An abscess is a collection of pus in an localized space in the body

An anal abscess is one that develops in the tissues around the anus

The result is an acute infection of the glands of the anus ,as bacteria  ,facial matter or foreign matter can clog an anal gland and tunnel into the tissue

An anal fistula is the tunnel that forms and connects the infected glands to an abscess often occurs in 50% of patients with an abscess

# Wound assessment Photo 11/9/2020



4.5 x4.5 cm area
Depth 4cm at 3 o'clock

**Tissue** -unable to see base
100% granulating at opening
**Infection/inflammation-**nil systemic signs
Moisture -good balance with Alginate wick fully absorbed after 24 hours
Edges -migrating at surface
Undermining towards 3 o'clock
Periwound -clean no signs of irritation

# Assessment

## Nutrition

Diet described well balanced but too much protein often causes loose motions

Sally's weigh management as been an issue and is too scared to weigh self

## Elimination

Daily  bowel motions

**Physical activity**-limited to walking initially, unable to sit comfortably therefore not driving

Pain -Ibuprofen and Panadol, Lignocaine gel prior to dressing changes

# District Nurse

Person centered approach Daily wound care with acquceal rope dressing and secondary dressing

TIME principles

Showering and pain relief prior to visiting

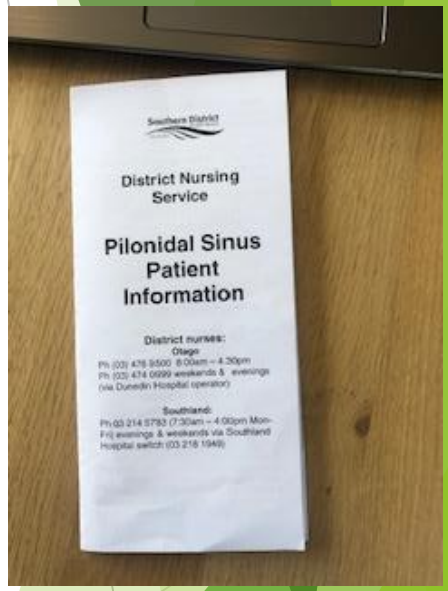
Education re bowel care/hygiene

Diet-high fibre

Gentle exercise-standing and lying initially

Declined suitable Pressure relieving cushion

Documentation



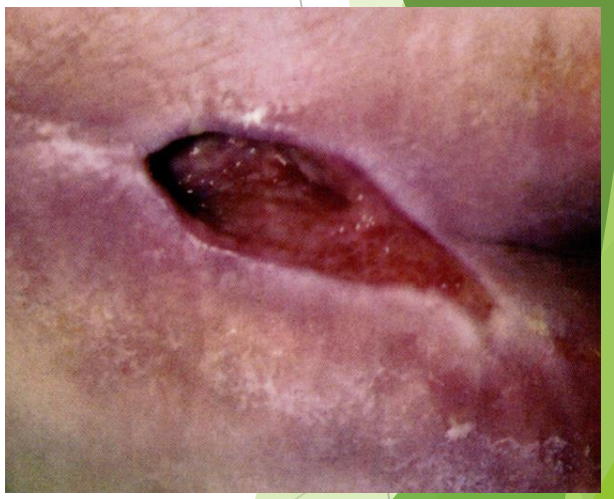
# Acquceal

- Properties
  - composed of hydrocolloid fibres.Sodium carboxymethylcellulose spun into a fibre that forms a gel in contact with wound exudate
  - allows for the absorption & retention of exudates
- Wound types:
  - indicated as primary dressing for management of medium to highly exuding wounds
- How to use, when to change:
  - apply directly to the wound requires at least 1cm margin overlapping surrounding skin to ensure adhesion/reduce leakage/seal wound borders
- Contraindications: lightly exuding wounds

# Hints

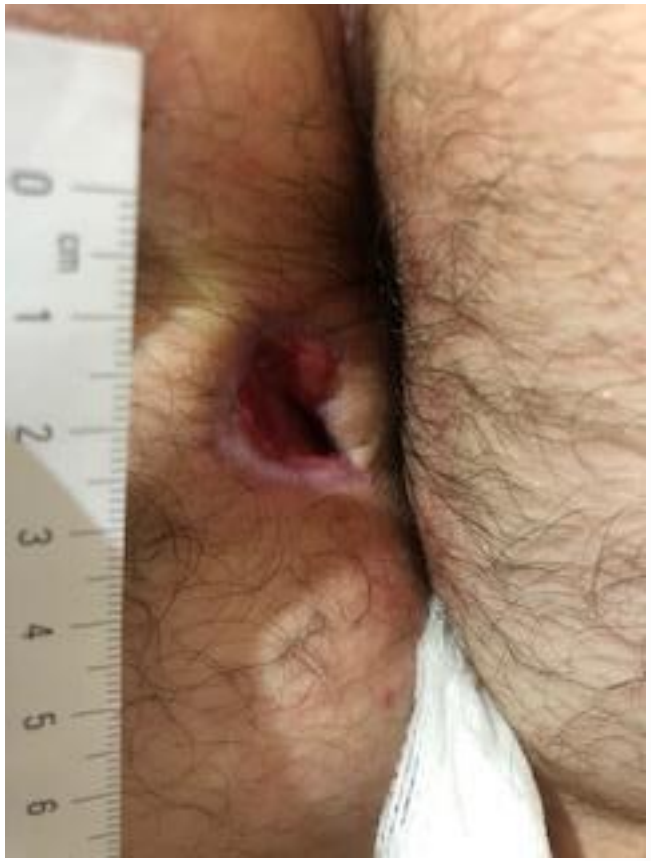
Dead space must be filled with dressing material to ensure that wound closure is delayed until the space has been replaced with granulation tissue

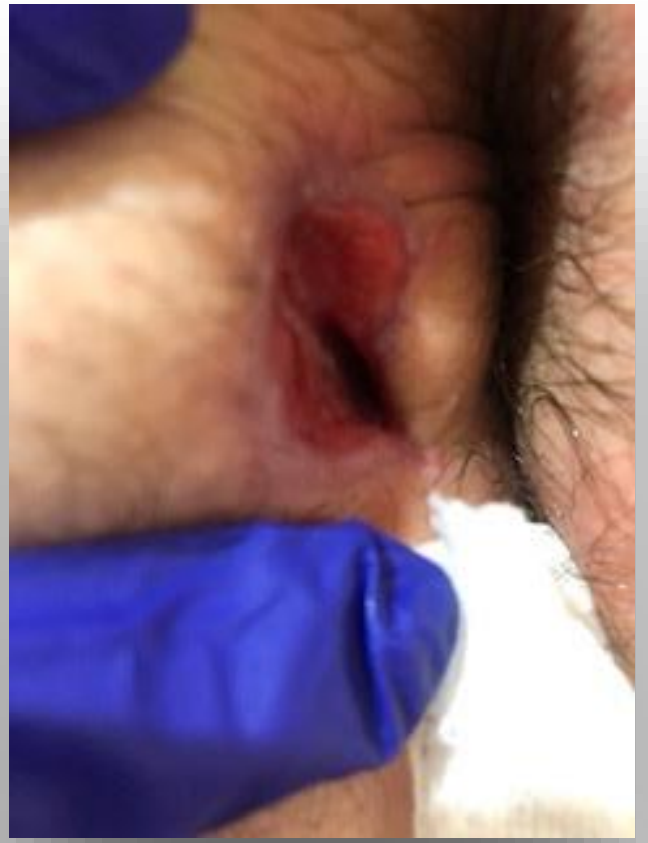
- Cavities
- Undermined tissue
- Tracts



Make sure you can get it out in and out

# Progress 30/9/2020 3 weeks post op





1.5cm x2cm
Depth 3cm tract at 3 o'clock

Tissue-epithelising from edges
Granulating with cavity at 3cm tract at 3 oclock
Infection-no clinical signs
Moisture-fully absorbed wick daily
Edges –migrating
Sally more comfortable ,and returned to work

# Challenges in the community

- Timing
- Phoning prior to visiting to allow showering/pain relief
- Consistency with staff
- Arrangement to come to nurse lead clinic at time that worked for patient
- Early bird clinic allowed Sally to continue her routine, go to work and have a suitable time and start the day “fresh”
- Described clinic “super helpful” having continuity of same clinic nurse

# Sally's reflection/challenges

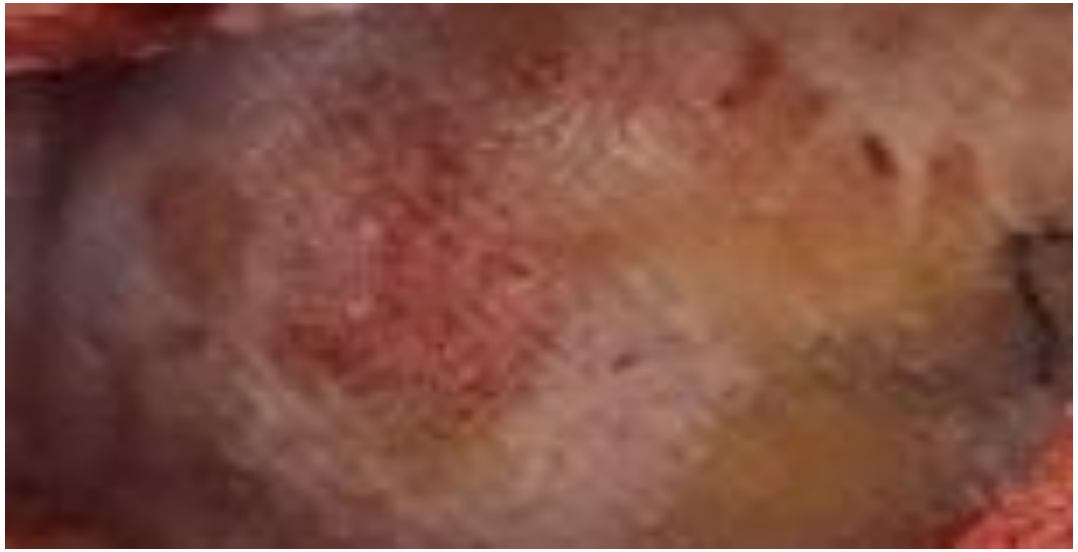
- Standing or lying difficult to sit initially
- Lack of exercise-unable to move furniture-knowing limits
- Anxiety related to first packing removed in hospital which described as “horrific”
- Good education re showering and using shower head to cleansed area prior to district nurse coming-often packing removed and wound base cleaned
- Using wet wipes when post voiding as fear of contamination

# Sally's reflection/challenges

- Appreciated phone call to enable shower and pain relief prior to dressing change
- Sally would appreciate more photos to see progress as difficult to see area-was afraid to ask.
- Sally keen to know measurement for improvement- nurses saying “Gosh its improved” didn’t give her a measurable outcome

The most important tools to promote patient involvement in wound management are knowledge, skills and understanding(Optimising patient involvement in wound management 2016)

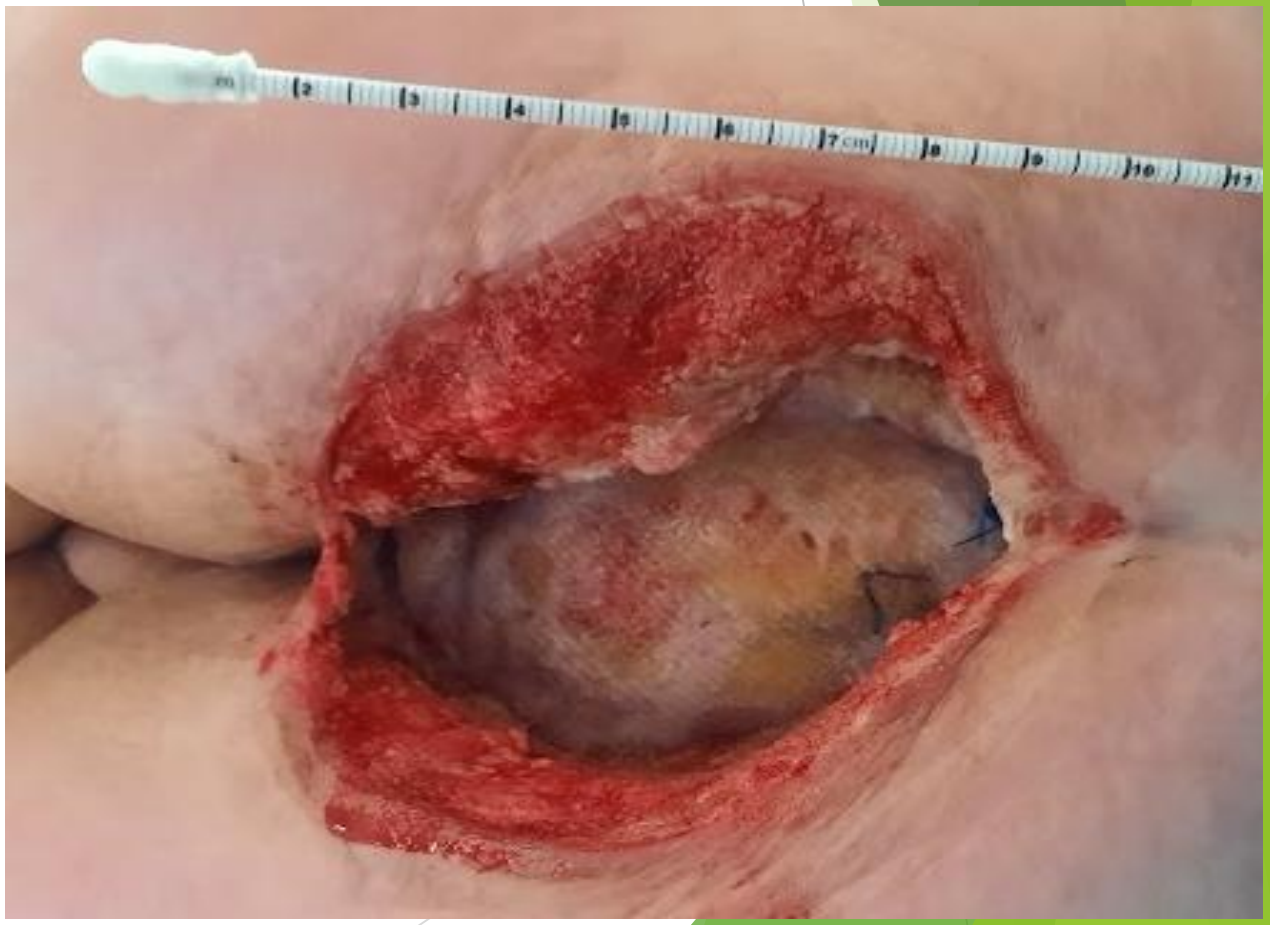
# NPWT in community -Not always successful



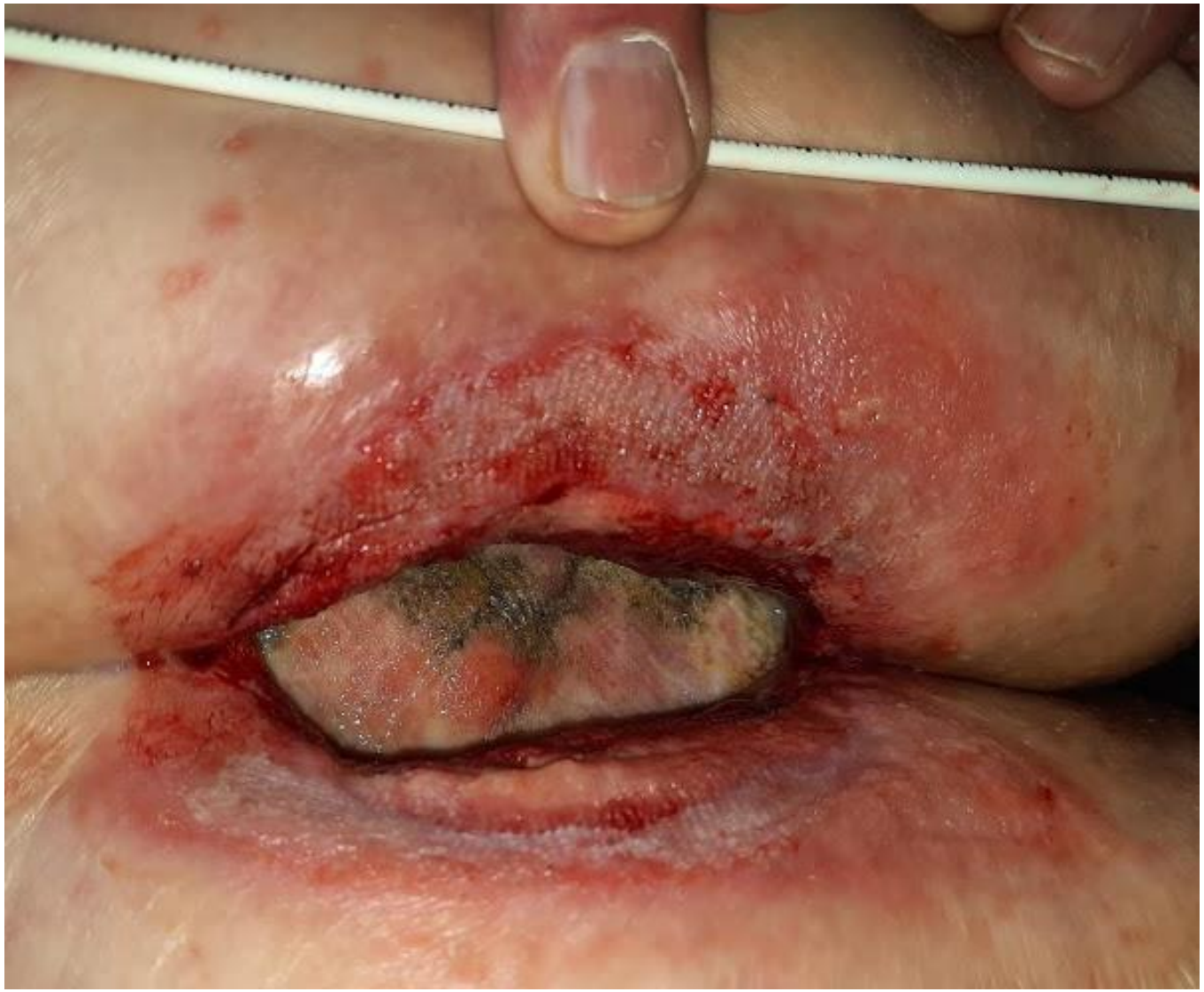
Perineal hernia repair + mesh
then wound dehiscence and SSI
75 year old

Washout and NPWT applied

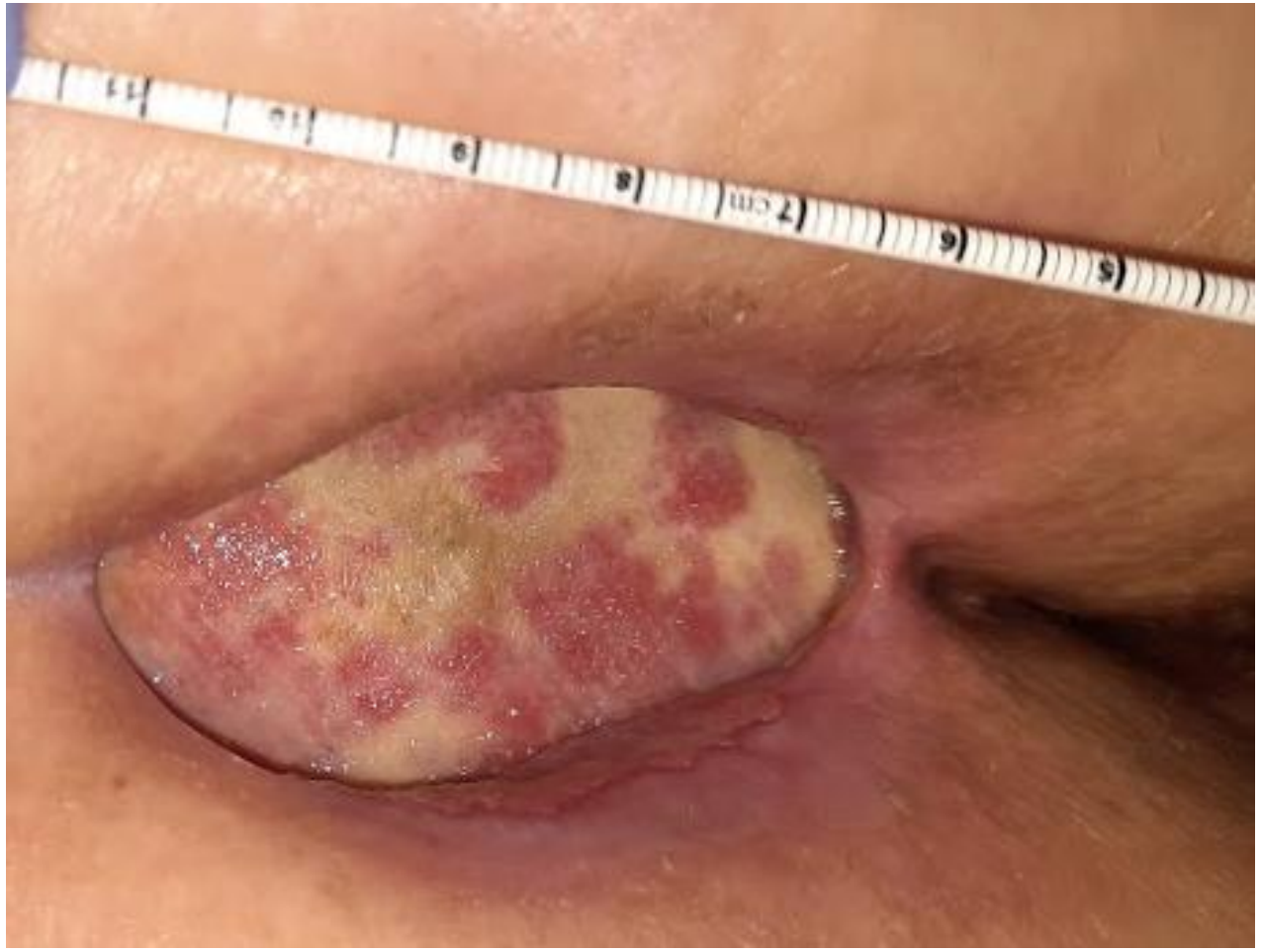
Mrs H 31 July 2020



# 18 August  2020 follow up from wound care specialist



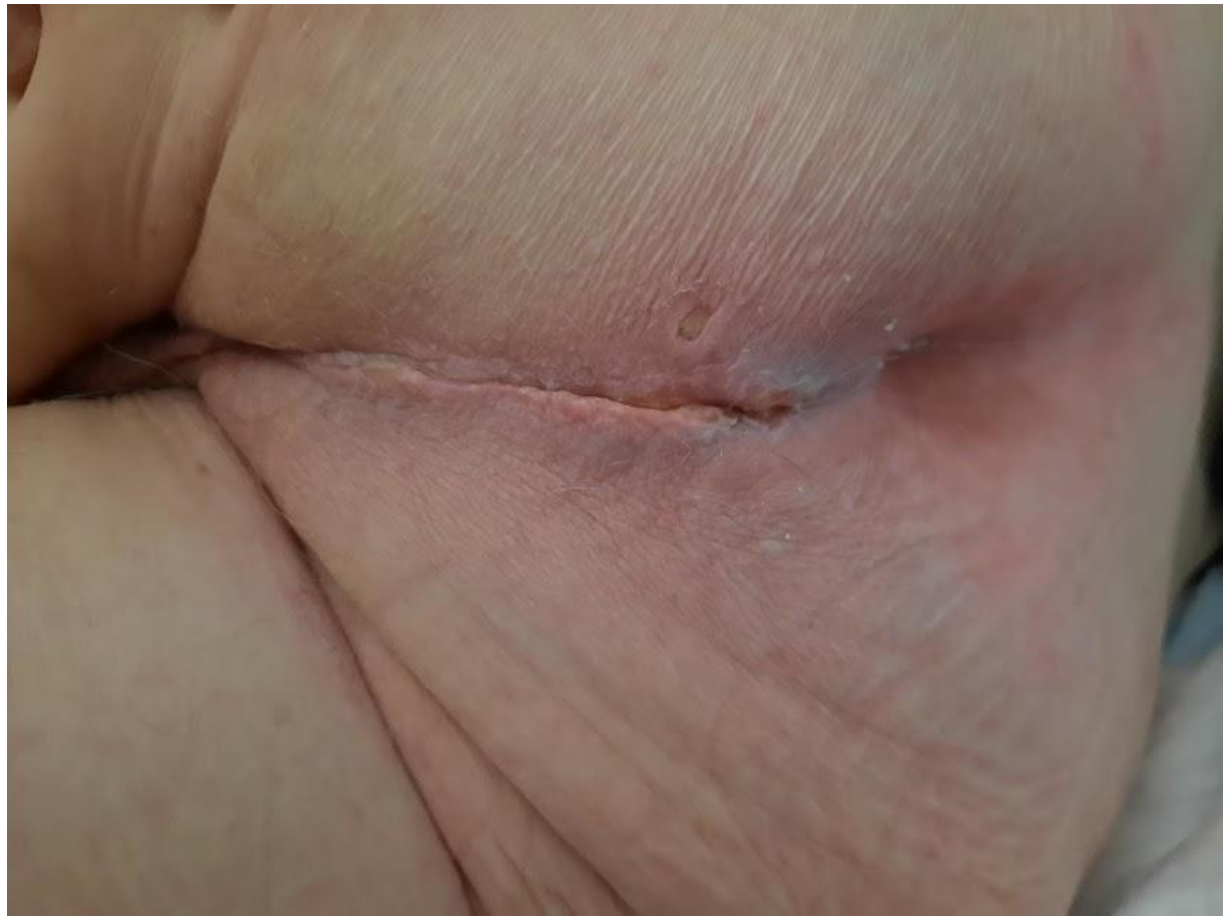
The NPWT was left in place for 2 weeks despite
Clear cellultis and dermatitis and pain +++
Clinical signs of infection and fascial dehiscence with the mesh exposed
Here the NPWT was stopped, Aristocort for surrounding skin, daily Kerlix gauze soaked with 1:10 Iodine
Dressings
Pain improved  very quickly, NPWT was stopped



4 weeks later
Wound heals well
Mesh healing in
No sign of infection
Pain free

# NPWT in community PREVENTATIVE

A patient were we used PICO and NPWT for 6 weeks topical to prevent complete dehiscence





Smith and Nephew photos

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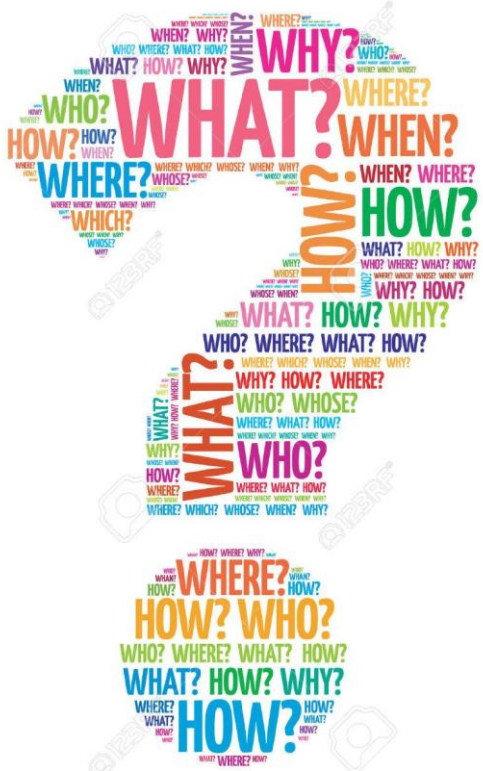
# Acknowledgements

For all patients that have shared their experience

Dunedin team of dedicated district nursing team

Andrea Dorne , Jenna Notman Clinical Nurse Educators

Emil Schmidt Wound Care Specialist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