JCN LIVE 2020

Journal of Community Nursing JCN

SESSION THREE: EXUDATE MANAGEMENT: EFFECTIVE DRESSING SELECTION

PRESENTED BY: Gillian Mould & Joy Tickle

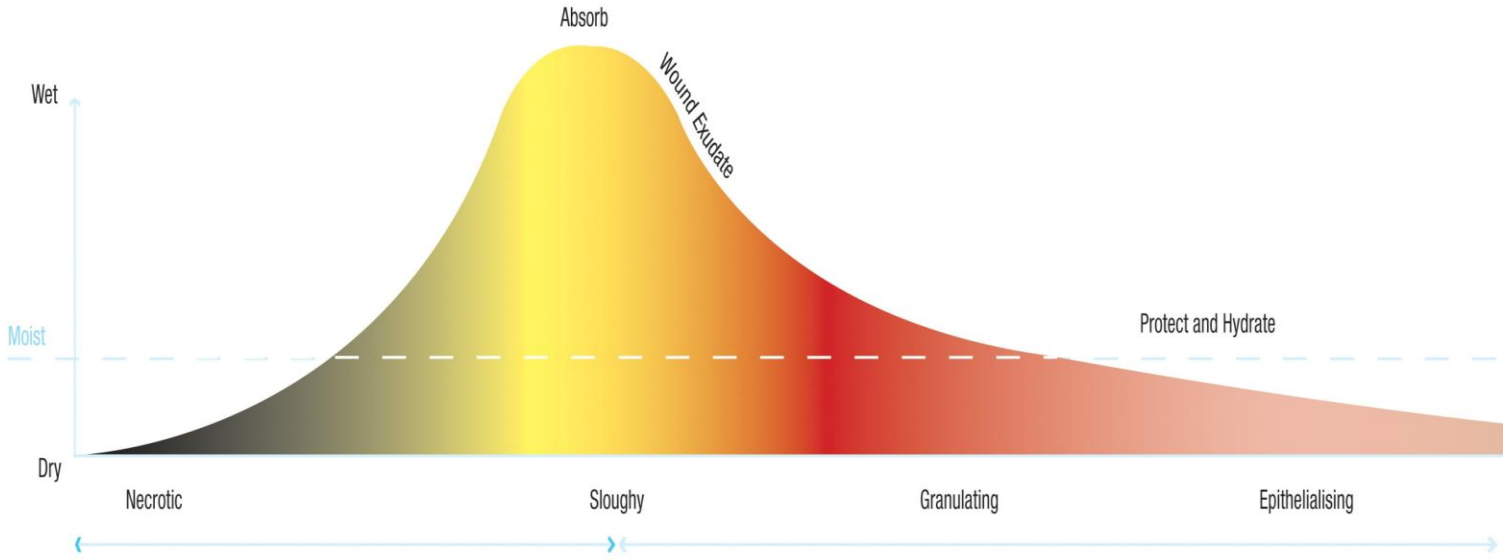
This session is brought to you by: ConvaTec

Exudate

- A generic term given to fluid produced by chronic wounds and acute injuries once haemostasis has been achieved
- Slow escape of liquid containing water, electrolytes, nutrients, inflammatory mediators, white blood cells, protein-digesting enzymes, growth factors and waste products
- It is released from blood vessels as a result of inflammation and is a normal part of the body's defence mechanism.

Wound progression: exudate volume

- In a healing wound, exudate production generally reduces over time
- In a wound that is not healing as expected, exudate production may continue and be excessive due to ongoing inflammation or other processes.



JOURNAL OF COMMUNITY NURSING JCN

ConvaTec

Importance of exudate

Exudate assists healing by:

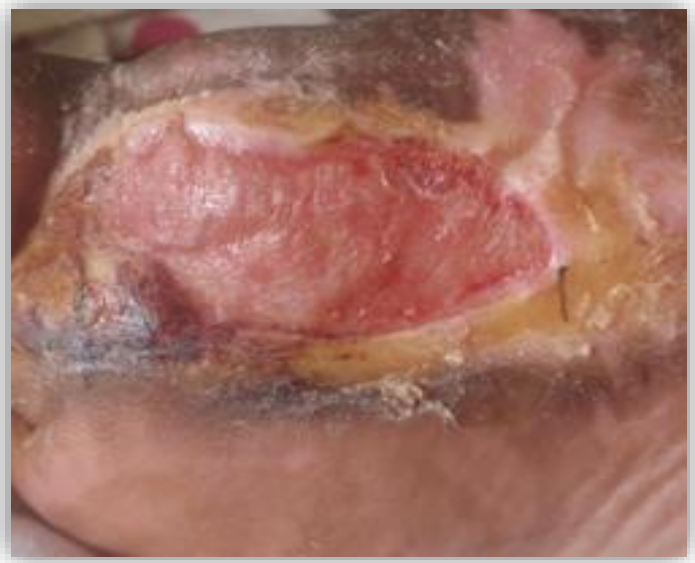
- Preventing the wound bed from drying out
- Aiding the migration of epithelial cells
- Carrying essential growth factors for cell regeneration
- Assisting separation of dead or damaged tissue (autolysis).

Wounds with a moist environment heal more quickly than those that dry out and form a scab (Winter,1962). In fact, moist wounds heal 2–3 times faster than dry wounds (Swezey, 2014).

Wound exudate

- Wound exudate needs to be delicately balanced to optimise the wound healing environment.

  You don't want to desiccate *or* macerate the wound.



Causes of excessive exudate

- Inflammatory response
- Wound infection
- Congestive cardiac failure (CCF)
- Oedema
- Venous hypertension
- Low serum albumin levels.

Consequences of excessive exudate

Consequences of excessive exudate

Can cause maceration and/or excoriation of surrounding tissue.

Can cause an increased demand on healthcare resources.

Can cause wound to breakdown

May delay or prevent wound healing.

Can lead to Psychosocial impact

Impact on quality of life

Assessing wound exudate

- It can be produced in various types of consistency, colour and quantity, depending on the wound.

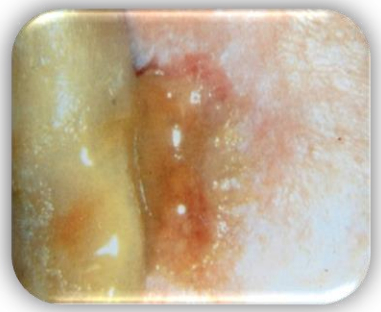
High viscosity
Thick, sometimes sticky — could be residue or infection.

Low viscosity
Thin, runny — CCF, malnutrition or lymphatic fistula.

Colour

- How important is exudate colour in our assessment?
- Do you document exudate colour?
- Would you know what each colour can indicate?

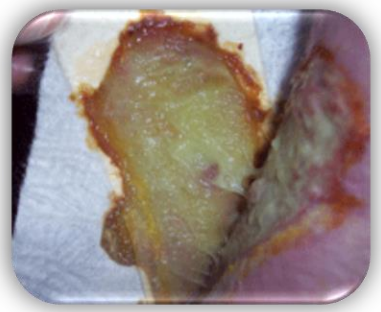
Colour



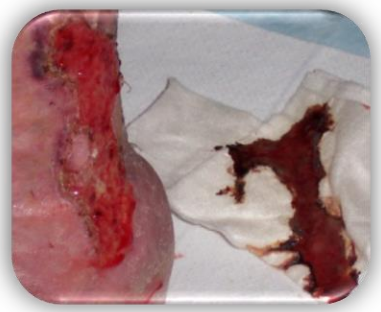
Straw-coloured serous fluid is considered normal.

Beware:

Lymphatic or urinary fistula.



Yellow/brown exudate may be due to the presence of wound slough, liquefaction of necrotic tissue or possible infection.



Red/pink exudate may suggest the exudate contains blood cells, possible infection or traumatic dressing removal.

Colour

Cloudy, milky or creamy exudate indicates the presence of fibrin strands in response to inflammation or to infection. Purulent exudate contains white blood cells and bacteria.

Green, pus-like exudate may be indicative of bacterial infection, i.e. *Pseudomonas aeruginosa.*

Grey/blue exudate can be as a result of using certain silver dressings.

Quantity

Wound types that produce high and low volumes of exudate.

High volume of exudate:

- Chronic venous leg ulcers
- Dehisced surgical wounds
- Malignant fungating wounds
- Burns
- Inflammatory ulcers (e.g. rheumatoid ulcers, *Pyoderma gangrenosum*)
- Skin donor sites.

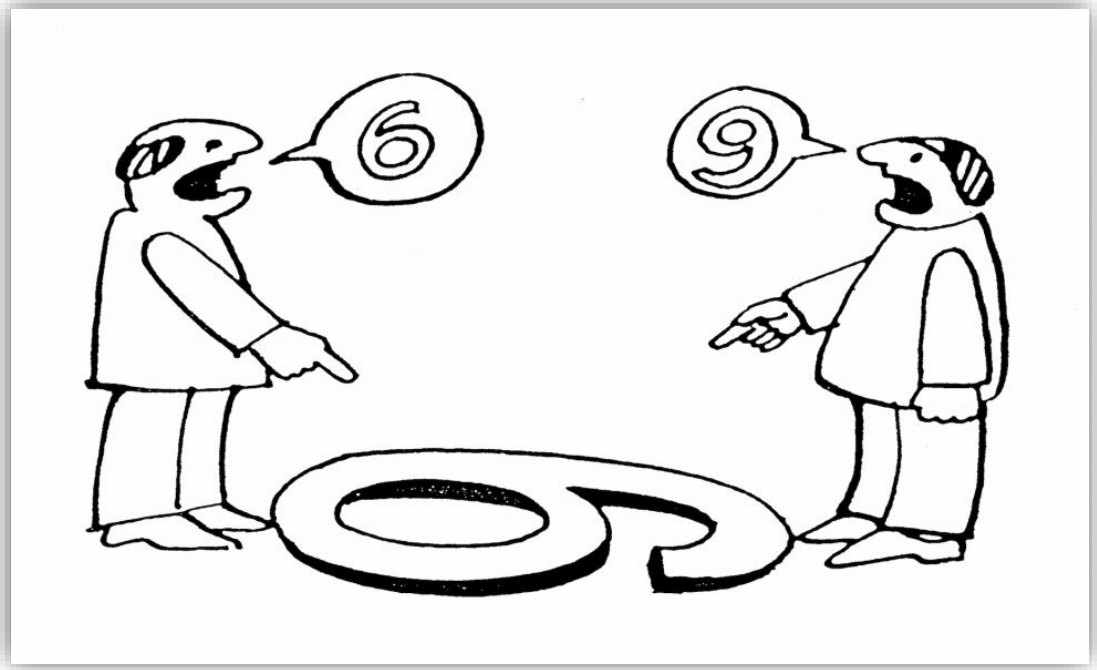
Low volume of exudate:

- Necrotic wounds
- Ischaemic/arterial wounds
- Neuropathic diabetic foot ulcers.

Quantity

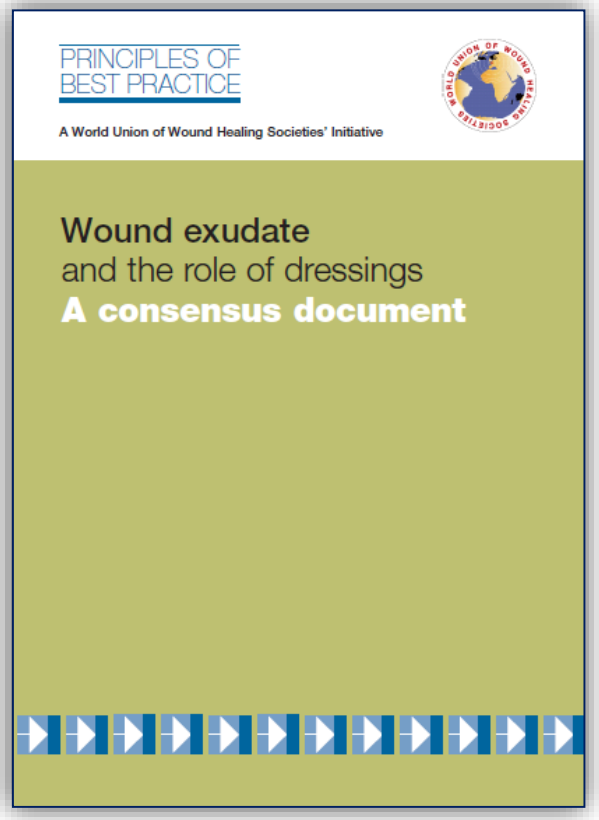
Describing exudate levels:

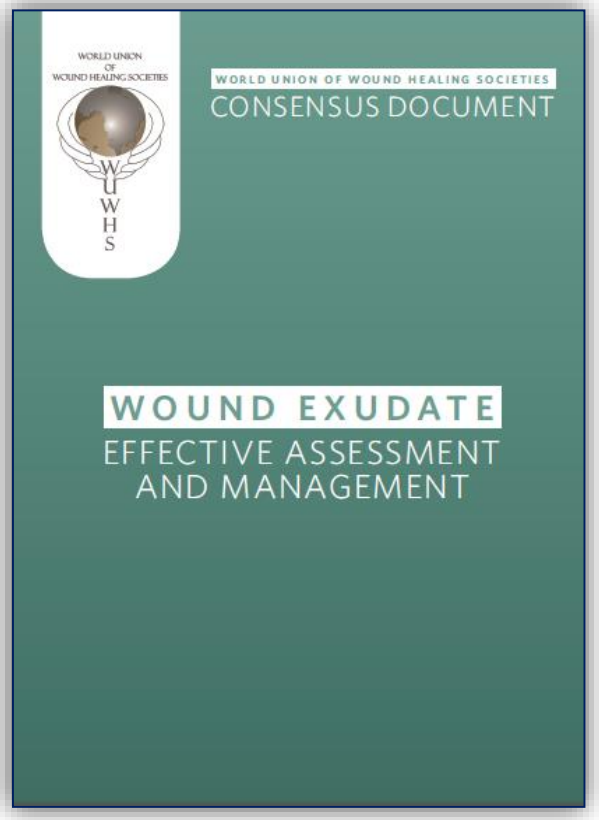
- \+ ++ +++
- Low, medium, high
- Minimal, moderate, heavy
- None, scant, moderate, heavy.



World Union of Wound Healing Societies (WUWHS)

Dry, moist, wet, saturated, leaking (WUWHS, 2007, 2019).





Dry

Wound bed is dry, primary dressing is unmarked.

Moist

Small amounts of fluid visible, primary dressing may be lightly marked.

Wet

Small amounts of fluid visible when dressing removed, primary dressing extensively marked, but no strikethrough.

Saturated

Primary dressing is wet and strikethrough is occurring, periwound skin may be macerated.

Leaking

Dressings are saturated and exudate is escaping from primary and secondary dressing onto clothes or beyond.
Dressing change is required much more frequently than usual.

Exudate management

- Optimise the wound bed moisture level
- Manage symptoms and improve quality of life
- Protect surrounding skin (WUWHS, 2019).

Consider factors influencing exudate levels, e.g. debridement, infection and biofilm:

- Local management
- Dressings
- Negative pressure wound therapy (NPWT)
- Fluid collection devices.

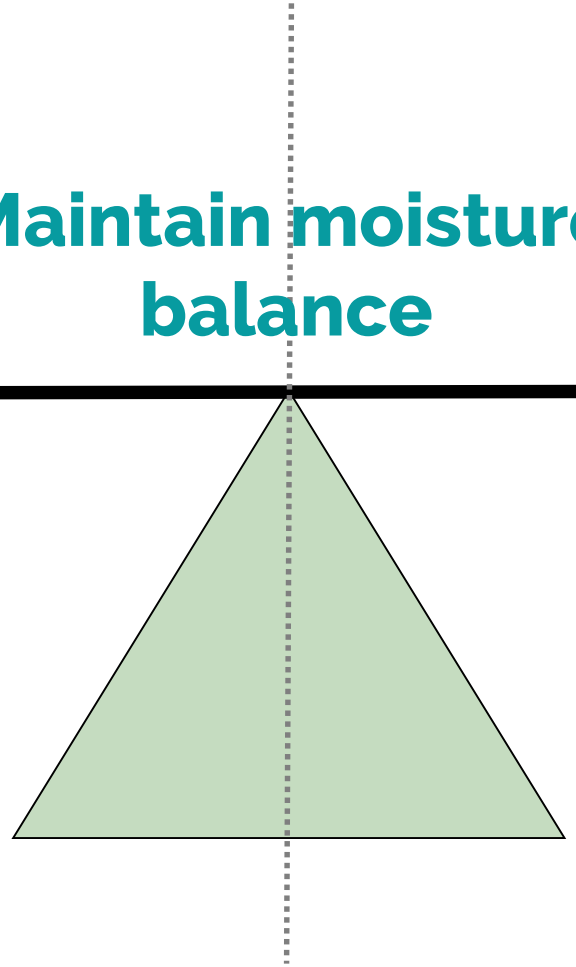
Exudate management

- Where excessive exudate is a problem, or where exudate composition is suspected of impeding healing, removal of exudate from the wound bed is a priority
- Dressings are the main option for managing exudate at wound level, e.g. simple dressings and multi-layer dressings
- Understanding how a dressing functions will assist in making appropriate dressing choices according to individual patient need.

Optimise the wound bed

E.g. Hydrofiber®
Alginates
Foams
Super Absorbents

Maintain moisture balance



Too dry:

- Add moisture.

Too wet:

- Remove moisture
- Absorption/retention/ sequestration
- Debridement
- Treat infection.

E.g. Hydrogels
Hydrocolloids
Films

JOURNAL OF COMMUNITY NURSING JCN

Sometimes a dry environment is optimal

- Ischaemic wounds
- Immunocompromised patients
- The focus for these patients is to prevent infection
- It is recommended for some pressure ulcers.

Considerations

Consider vertical wicking, absorption and retention to prevent lateral spreading or fluid being forced out of the dressing.

What do we need from a dressing

To manage exudate:

- Absorption
- Retention
- Protection of periwound skin
- Respond.

Summary

- Exudate production is a normal feature of healing wounds
- When the exudate produced is too much, too little or of the wrong composition, a wide variety of problems can occur, ranging from psychosocial issues, delayed healing and infection
- Careful attention to contributory factors and local management can help to reduce the likelihood of problems, encourage healing and avoid unnecessary health burden costs.

Combining wound dressings for effective outcomes

Joy Tickle

MSc, BSc (Hons), NDN, RGN, Cert.Ed.
Tissue Viability Nurse Specialist, UK

Evidence-based exudate management

- Evidence-based practice is crucial in todays world of healthcare to ensure safe and accountable practice
- Effective clinical Patient Reported Outcome Measures (PROMs) are essential
- Economic drivers — cost effectiveness
- Legal and accountable considerations.

Evidence-based exudate management

- Despite this, the frequent use of wound dressing combinations without evidence or clear clinical rationale, can have a detrimental impact on the patients wound
- Frequent use of multiple dressings to one wound — the ‘sandwich’ effect
- Products in this instance are being used off license.

Consequences of incorrect decisions

- Pain
- Maceration/excoriation
- Wound deterioration/delayed healing
- Increased risk of infection
- Leakage
- Increased dressing changes
- Poor quality of life.

JOURNAL OF COMMUNITY NURSING JCN

Wound dressing combinations

- Clinicians are constantly striving to find the right dressing to manage complex wounds
- Frequently use combinations of dressings
- There appears to be little consideration given to their compatibility
- No evidence as to clinical effectiveness when used together.

JOURNAL OF COMMUNITY NURSING JCN

How was this addressed in clinical practice?

- A wound dressing product evaluation was undertaken
- Patients who previously had two primary dressings (where no evidence was available on their effectiveness, when used together)
- Wound management regimen changed to two primary dressings with supporting evidence
- There were no other changes in protocols of care
- For the purpose of the study each wound was followed up for four weeks or 20 dressing changes, whichever came first.

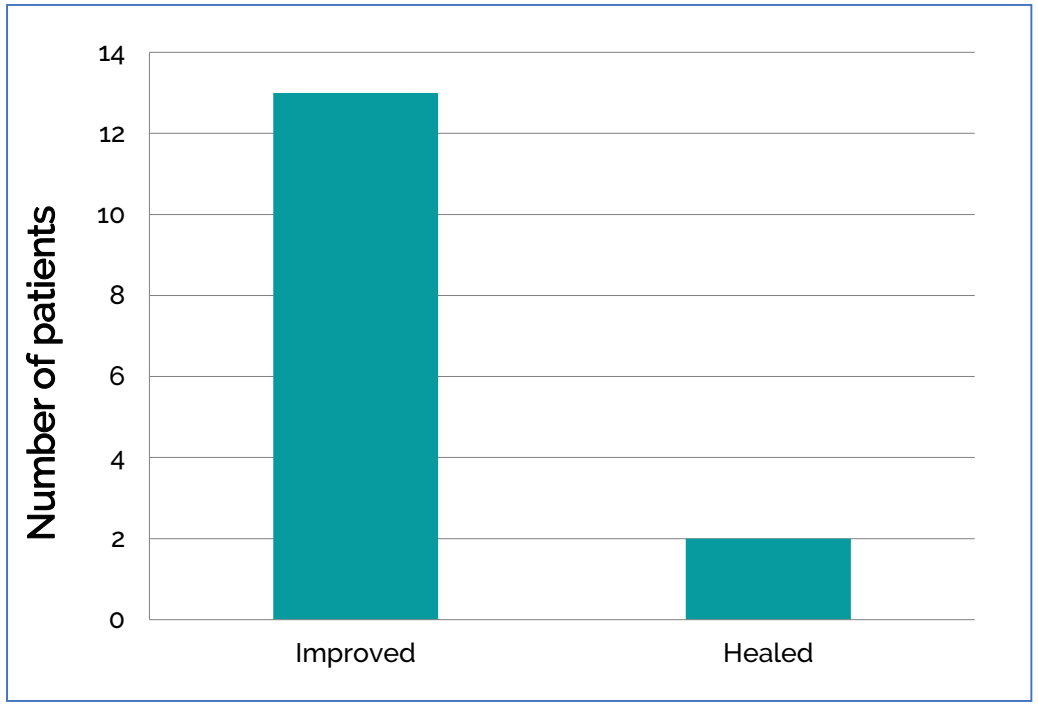
How was this addressed in clinical practice?

Outcomes evaluated included:

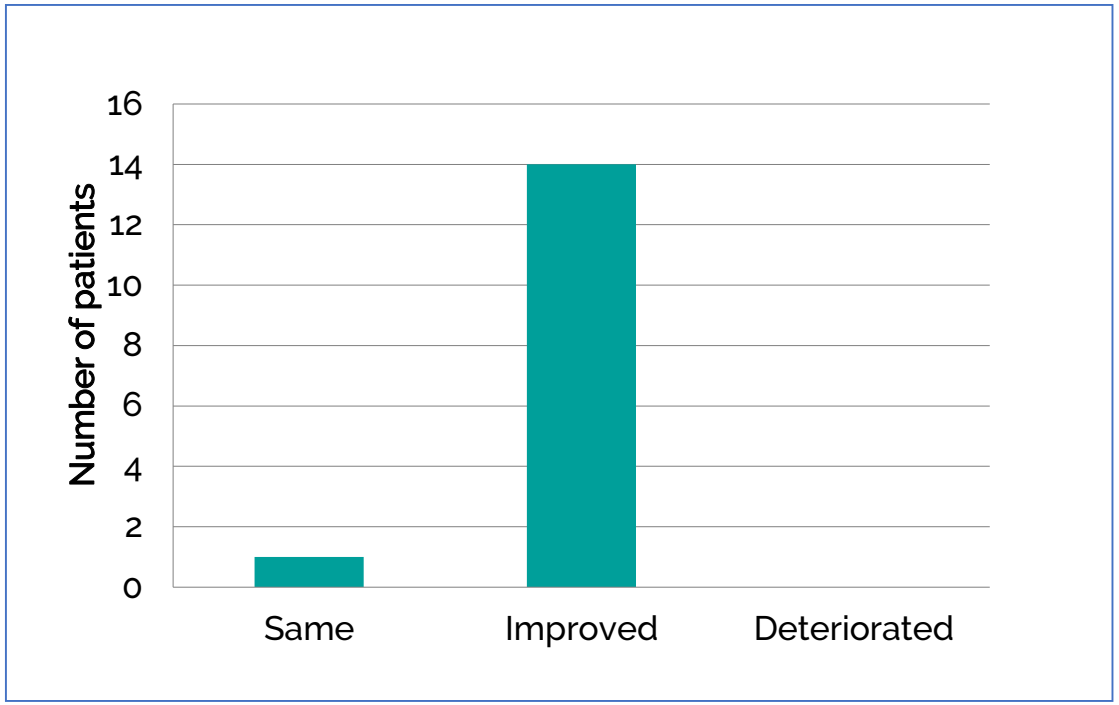
- Wound progression
- Management of exudate
- Periwound skin condition
- Pain
- Frequency of dressing change
- Dressing performance, compared to previous dressings.

Results: combining synergistic dressings

Wound progression



Surrounding skin



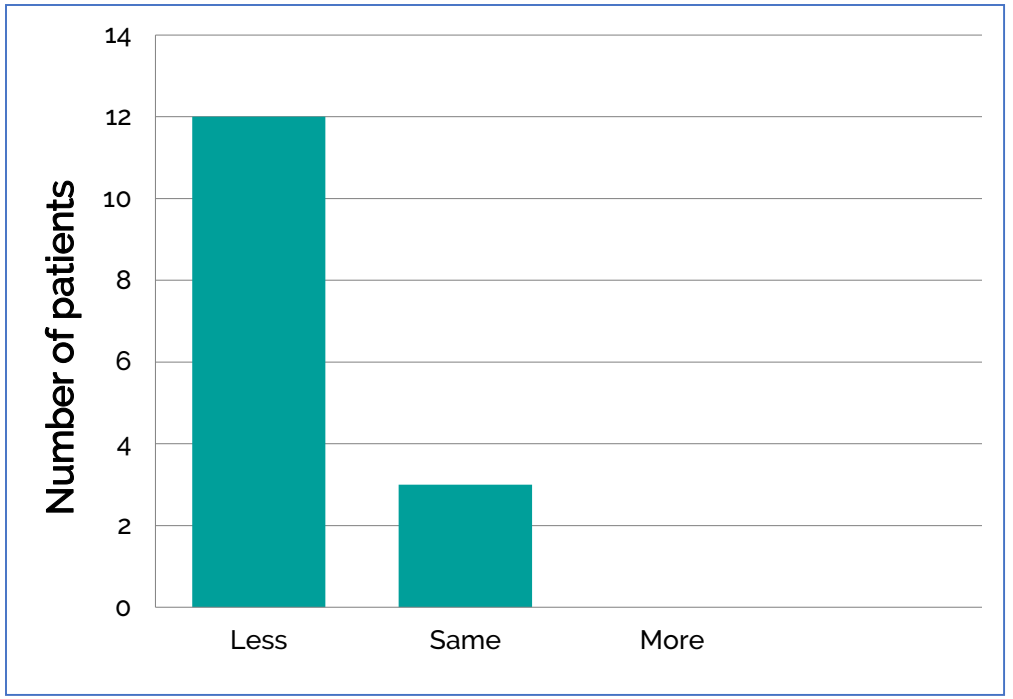
JOURNAL OF COMMUNITY NURSING JCN

ConvaTec

Results: combining synergistic dressings

Patient comfort

Frequency of dressing



JOURNAL OF COMMUNITY NURSING JCN

ConvaTec

Overall results: combining synergistic dressings

- All wounds progressed to healing or towards healing
- In all cases improved dressing performance compared to previous dressings
- In 93% of cases periwound skin improved or remained healthy
- In 80% of wounds the frequency of dressing changes reduced
- In all cases exudate was managed effectively
- Where pain was an issue, it improved
- In all cases, there were no other changes in protocols of care reported.

Key requirements for a primary and secondary combination

Customer needs: Primary
Absorb and retain exudate
Moisture vapor transmission rate (MVTR) to manage exudate with moisture balance
Manages lateral spread of exudate
Atraumatic, repositionable adhesive
Intimately contacts wound bed
Supports progression towards wound healing
Soft, conformable and a range of shapes and sizes
Showerproof, bacterial and viral barrier
Cuttable

Customer needs: Secondary
Absorb and retain exudate
MVTR to manage exudate with moisture balance
Manages lateral spread of exudate
Atraumatic, repositionable adhesive
Intimately contacts wound bed
Supports progression towards wound healing
Soft, conformable and a range of shapes and sizes
Showerproof, bacterial and viral barrier
Cuttable

Perfect partners in practice

- Patient age and gender — 54-year-old female
- Past medical history — hypertension, venous insufficiency, anaemia
- Social — smoker, works as a catering assistant, married with two children, 14-month wound duration
- Medications – ramipril, co-codamol, ferrous sulphate
- Previous treatments — multiple courses of antibiotics and antimicrobial therapies, venous ligation and compression bandaging.

JOURNAL OF COMMUNITY NURSING JCN

Perfect partners in practice

Treatment implemented:

- Effective cleansing and debridement (biofilm pathway)
- AQUACEL® Ag+ Extra™ dressing and AQUACEL ® Foam dressing
- Compression bandage system
- Patient education and support.

JOURNAL OF COMMUNITY NURSING JCN

ConvaTec

Perfect partners in practice

- Patient age and gender – 62year old male
- Medical history – Hypertension, diabetes , peripheral vascular disease (PVD)
- Social – Smoker, retired, married with two children, four grand children, four month wound duration, pain and poor quality of life
- Medications – Ramipril, Co-codamol, Simvastatin, insulin
- Previous treatments – Angioplasty, surgical debridement, multiple courses antibiotics and antimicrobial therapies.

JOURNAL OF COMMUNITY NURSING JCN

Perfect partners in practice

Treatment implemented:

- Effective cleansing and debridement (biofilm pathway)
- AQUACEL® Ag+ Extra™ dressing and AQUACEL® Foam dressing
- Off-loading foot device
- Patient education and support
- Eight weeks treatment
- Improved wound healing and reduced risks
- Improved quality of life.

JOURNAL OF COMMUNITY NURSING JCN

In summary

- Combining dressings together without considering compatibility is common practice
- Combining dressings that have no evidence to demonstrate how they perform together may not always provide the best clinical outcomes
- Clinicians need to consider their accountability and the product licence
- The clinical evaluation and case studies demonstrate the effectiveness of choosing two dressings designed to be applied together, if clinically needed
- AQUACEL® Extra™ primary dressing and AQUACEL® Foam secondary dressing have been shown to be more effective in managing exudate and maceration than other dual combinations.

Conclusion

As wound care technology improves, money spent on products where quality has been demonstrated can prove to be more cost-effective in the long run, for example in:

- Clinician time
- Wound-related complications
- Healthcare provider resources
- Most importantly the negative impact to the patient living with a wound.

References

- Swezey, L (2014) Moist wound healing. Wound educators. Available at https://woundeducators.com/wound-moisture-balance/
- Winter, GD (1962) Formation of the scab and the rate of epithelialisation of superficial wounds in the skin of a young domestic pig. *Nature* **193:** 293-294
- WUWHS (2007) Wound exudate and the role of dressings: a WUWHS consensus document. *Wounds International.* Available online: https://www.woundsinternational.com/resources/details/read-more-wound-exudate-and-role-dressings-wuwhs-consensus-document
- WUWHS (2019) Wound exudate. Effective assessment and management; Consensus document. *Wounds International.* Available online: https://www.wuwhs.org/wp-content/uploads/2020/09/exudate.pdf

JCN LIVE 2020

DOWNLOAD YOUR CERTIFICATE

WWW.JCN-LIVE.CO.UK/CERTIFICATE