Wound Exudate and Super-Absorbent Dressings with High Fluid Retention Capacity:
The Disconnect Between Clinical Perception and Documentation

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Wound Management Aligned

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Background

Superabsorbent dressings (S-ADs) are used for moderate to high exudating wounds, though fluid retention capacity may differ between manufacturers due to both design and construction. Because of their ability to retain exudate without peri-wound maceration, S-ADs reduce dressing change frequency.[1] In vitro studies demonstrate S-ADs can reduce inflammatory matrix metalloproteases and bioburden. [2-3] Despite this, dressing availability is often governed by regulatory requirements based on the amount of exudate. Under the current Medicare Surgical Dressing Benefit, S-ADs can be obtained daily, assuming documentation in the medical record reflects moderate to large amounts of drainage. Unfortunately, exudate amounts are based on the perception of the user, and not on clinically reliable and valid methodologies. Unintentionally, a clinician can categorize drainage on a S-AD as "scant/minimal" or "low" exudate when the fluid capacity of the S-AD is "large/copious".

Method

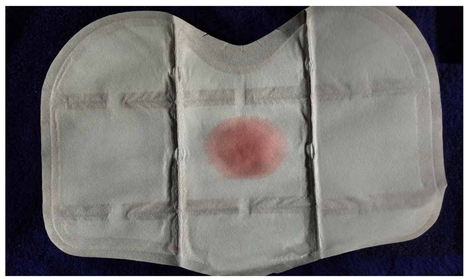
20 wound clinicians were first asked to determine how many cc's would constitute the amount of drainage on the S-AD continuum in terms of "scant", "small/minimal", "moderate", or "large/copious". Using a S-AD that holds a minimum of 500 cc exudate*, they were then shown a S-AD impregnated with fluid levels of 10cc, 50cc, 100cc, 150cc, and 200cc and asked to describe the amount of drainage in the scant to large continuum in a random order.

Results

There was a disconnect between the perception of exudate along a continuum on a S-AD with high fluid retention capacity and that of clinicians, who often underestimate the amount of fluid in the S-AD.

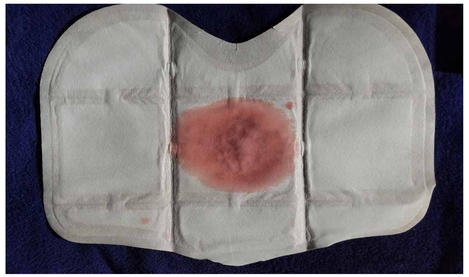
Conclusion

- In 25% of all observations by experienced wound clinicians,there was a mismatch between the amount of wound drainage they considered clinically "moderate" or "large/copious" and the actual amount of drainage on a superabsorbent dressing. This would have led to documentation of a lower amount of exudate because of an underwhelming appreciation of the fluid retention capabilities of S-ADs. This impacts clinical treatment decisions, supply availability and reimbursement.
  This disparity would undoubtedly be more profound if the clinician was not experienced in wound care
- The underestimation of fluid capacity of a S-AD when documenting exudate amount can affect treatment decisions and S-AD availability under the Surgical Dressing Benefit.
- Appropriate exudate control positively affects wound healing outcomes and quality of life for patients with chronic wounds.
- Clinicians using S-ADs should familiarize themselves with exudate retention ability and its clinical appearance in order to provide accurate medical record documentation.



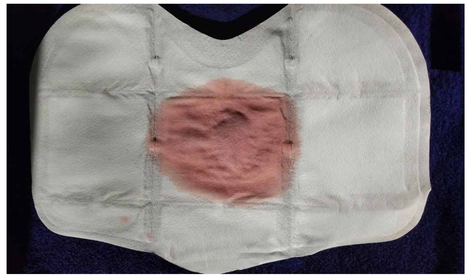
10 cc exudate
Responses from clinicians:

12 Scant | **0 Moderate**
8 Small/Medium | **0 Large/Copious**



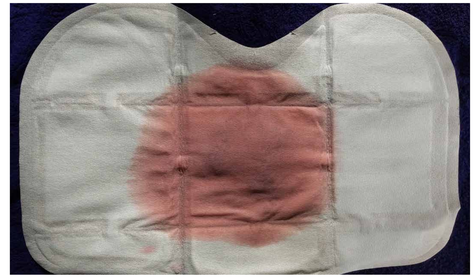
50 cc exudate
Responses from clinicians:

6 Scant | **3 Moderate**
9 Small/Medium | **2 Large/Copious**



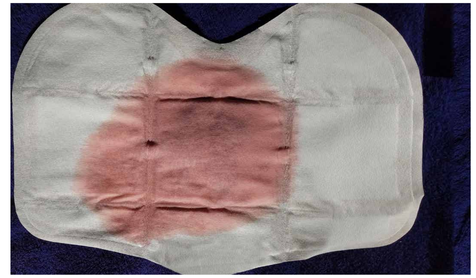
100 cc exudate
Responses from clinicians:

4 Scant | **2 Moderate**
14 Small/Medium | **0 Large/Copious**



150 cc exudate
Responses from clinicians:

0 Scant | **8 Moderate**
5 Small/Medium | **7 Large/Copious**



200 cc exudate
Responses from clinicians:

0 Scant | **12 Moderate**
2 Small/Medium | **6 Large/Copious**

Drainage (in cc's) reported as ranges by clinicians:

Scant
1 cc to 10 cc (mean =3.2 cc)

Moderate
10 cc to 60 cc (mean 45.1 cc)

Small/Medium
5 cc to 40 cc (mean = 15.5 cc)

Large/Copious
25 cc to 100 cc (mean 65.8 cc)

150 cc exudate

Outer view of superabsorbent dressing with no strike through drainage[4]

200 cc exudate

1. Ousey K, Atkin L, White R. Superabsorbent dressings: a review. Wounds UK. 2013;9(3):52-60.
2. Wiegand C and White RJ. Binding and inhibition of protease enzymes, including MMPs, by a superabsorbent dressing in vitro. J Wound Care. 2013; 22(5):221-229.
3. Wiegand C and Hipler UC. A superabsorbent polymer-containing wound dressing efficiently sequesters MMPs and inhibits collagenase activity in vitro. J Mater Sci Mater Med. 2013;24(11):2473-2478.
4. Rather L., Anthony D., Collier, M., Rather, M. Stopping the Strikethrough: An audit of patient outcomes on four superabsorbent dressings. Wounds UK. 2015: 11 (3):78-85.

*Eclypse® Contour, Advancis Medical, Nottinghamshire, UK. Distributed in US by Dukal Corporation, Ronkonkoma, NY
**Rayddal® K Short Stretch Bandage, Lohmann and Rauscher USA, Inc., Milwaukee, WI

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