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PERSPECTIVE
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Authors of "Wireless Textile Moisture Sensor for Wound Care" Misinformed

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A Perspective on

Wireless Textile Moisture Sensor for Wound Care
by Tessarolo, M., Possanzini, L., Gualandi, I., Mariani, F., Torchia, L. D., Arcangeli, D., Melandri, F., Scavetta, E., and Fraboni, B. (2021). Front. Phys. 9:722173. doi: 10.3389/fphy.2021.722173

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COMMENTARY

The researchers (Tessarolo, et al.) who conducted the study described in Wireless Textile Moisture Sensor for Wound Care seem to have been misinformed, because in the abstract they state, "Currently, clinicians monitor the wound's status by removing the dressing, disturbing the healing process. A relevant parameter that they need to monitor is wound moisture." [1] It is correct that when clinicians use most conventional dressings, they need to remove the dressing to monitor the wound's moisture status. However, several moisture "indicator" dressings already exist, including all PolyMem dressing configurations and Allevyn Life [2–6]. These dressings all have backings which facilitate a color change to indicate when they have absorbed the appropriate amount of moisture, and it is therefore time to change the dressing.

Polymeric membrane dressings (the generic name for the dressing type which includes PolyMem dressings), are moisture indicator dressings that also balance moisture across the wound bed, absorbing moisture from overly wet areas while simultaneously donating moisture to overly dry areas [2, 3, 5, 6]. Clinicians using these dressings are instructed to remove the dressing only when it is ready to be changed, because they should be monitoring the wound's moisture status by examining the outside of the dressing without lifting it [2–6].

It is certainly understandable that Tessarolo, et al. would be unaware of the existence of moisture "indicator" dressings, because there are hundreds of commercial wound dressing types, and very few include this important feature [7]. Allevyn Life is the only dressing configuration in the Allevyn line that is a moisture indicator dressing [4]. And, although the evidence base for polymeric membrane dressings goes back 30 years, they are made by a small, family-owned company [8–11]. In addition, most wound dressing review articles either overlook polymeric membrane dressings completely, or miscategorize them as

conventional foam or hydroactive dressings, without regard to their unique additional functions [12, 13]. However, polymeric membrane dressings are increasingly being recognized as a unique dressing type because of their versatility and exceptional benefits [5, 14–20]. One of these benefits is that clinicians do not need to "peek" to know when polymeric membrane dressings are sufficiently saturated that they should be changed, because they are moisture "indicator" dressings [6].

AUTHOR CONTRIBUTIONS

LB is solely responsible for every aspect of this content.

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Conflict of Interest: As a result of her extensive experience managing wound patients while working for 5 years in a remote clinic in northern Ghana, West Africa, LB became so passionate about the benefits of PMDs that she is currently an employee of Ferris Mfg. Corp., the makers of PolyMem. LB also works independently developing village health worker training programs in remote and conflict areas of tropical developing countries. She just completed the data collection portion of a randomized controlled trial for sustainable wound management options for lay health providers in rural areas of tropical developing countries using improvised dressings.

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