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Wound Management Economics Strongly Support the Use of Hydrocolloids for Institutional Cost Efficiencies and Related Patient Satisfaction

Preamble. Numerous studies published in medical journal articles have clearly identified the economic benefits of using hydrocolloids and moist wound healing methods for managing wound healing in institutions. We have highlighted several of those studies here for your ease of use. Laboratory comparison studies we have conducted encourage us to believe that we have the “best of the best,” when it comes to hydrocolloid benefits to wound healing. We believe our XM18 formulations provide the best and broadest selection of formulations targeted to specific applications, including heavily exuding wounds, ostomy skin barriers, and consumer high tech bandages. If encouraged by these economics, let us help you find the best formulation for your needs and the most cost effective means to get our bandages into your institution.

Wound Treatment Costs

In April of 2001 Nursing Homes published a medical journal article by Gwen Turnbull, RN, CETN entitled, “Wound Care: What’s Really Cost-Effective.” This article is a meta-study on the costs of treating pressure sores with hydrocolloids versus “wet-to-dry” (gauze) dressings – the “old standby.”

Apparently some clinicians still believe it makes better sense to spend less per dressing than looking at the cost of the patient’s overall treatment course. Ms. Turnbull’s article demonstrates solid evidence that the cost per patient course using hydrocolloids is substantially less than gauze. At Xennovate Medical we believe our XM18 formulations, by its patented, integrated, 3-dimensional colloidal matrix, reduce costs more than our competition. We can provide the thinnest wound dressing available combined with a translucent clarity allowing visualization of the wound bed through the dressing itself. This attribute enables clinicians to observe wounds for infection without having to frequently remove them. Within reasonable limits, the longer a healing wound remains closed to the environment, the less chance of cross infection and the faster healing should occur.

Note: The reduced frequency of dressing changes dramatically reduces the cost of hydrocolloids per treatment course versus gauze. Not only is the cost of materials less, the number of dressing changes falls dramatically, as gauze dressings are changed several times per day, while hydrocolloids may not

be changed for several days (depending on the amount of exudates from the wound), so the cost (and quality of labor content) falls precipitously. And who wants to do those changes, anyway, if they don’t have to?

Here are the comparison costs identified by Ms. Turnbull.

Summary of Clinical Studies Directed at the Economics of Hydrocolloids (vs gauze) AUTHORS	Daily Cost of Gauze	Daily Cost of HCD	Daily Cost Savings	30 Day Cost Savings
Felliin[9]	\$7.89	\$1.09	\$6.80	\$204
Gorse, Messner	\$7.50	\$0.86	\$6.64	\$199
Shannon, Miller[11]	\$2.64	\$0.92	\$1.72	\$52
Xakellis, Chrischillies[15]	\$25.31	\$15.90	\$9.41	\$282
Colwell, et al[16]	\$12.26	\$3.55	\$8.71	\$261

**Extrapolated by Xen for more significant picture of cost avoidance with HCD*

A key section quoted from Ms. Turnbull’s article below is headed “Avoiding Infection”...

Many clinicians incorrectly believe that covering a Wound for a prolonged period causes infection, but in fact, the opposite is true. In their review, which examined both retrospective and prospective studies, Hutchinson and McGuckin [24] found reported wound infection rates of 2.6% with hydrocolloid dressings and 7.1% for gauze-type dressings. By contrast, some



hydrocolloid dressings have been clinically proven to provide a 100% barrier to external contamination and bacteria. [25] More recent studies have shown them to be an effective barrier against both hepatitis B and human immunodeficiency virus (HIV). [26] In a small study, Wilson and colleagues [27] demonstrated that when hydrocolloid dressings were used to cover leg ulcers containing methicillin-resistant S aureus (MRSA), five of the six wounds were cleared of the bacteria a within two weeks, effectively isolating the bacteria and preventing transmission.

The full text of the article can be found at the URL...

<http://209.85.165.104/search?q=cache:zY-To6Yiy-4J:www.encyclopedia.com/doc/1G1-75180211.html+hydrocolloid+virus&hl=en&ct=clnk&cd=19&gl=us>

[If the link should fail to work, you can find it by typing the following in your web browser: <http://www.encyclopedia.com/> and then searching using the search terms: hydrocolloid virus]

Included with the article is, of course, a full listing of the article's references. If interested, you might want to read further into the details of these articles. It is one of the best compilations we have seen on the subject so far.

With the above summary as an opening to the topic of reducing the cost of targeted healthcare delivery systems through the effective application of medical technologies (in this case, hydrocolloids in place of gauze dressings), we cite the following references from other journal articles for your enlightenment...

- 1. Occlusive dressings (hydrocolloids) increase reepithelialization rates (tissue healing) by 30-50% over nonocclusive dressings (gauze) and also increase collagen synthesis by 20-60%.*
- 2. Epithelialization under occlusion usually begins three days earlier, and wounds heal two to six times faster than controls.*
- 3. A reference in a 2005 marketing research report is quoted as follows...*

In the United States, the Prospective Payment System Legislation is the single most significant change in Medicare reimbursement policy in recent years. The

capped rate structure requires health care providers to improve their operating efficiencies if they are to remain viable and profitable businesses. There is there fore pressure on companies providing health cover and services, and on the suppliers to these companies, to reduce costs. This encourages the use of products, which exhibit strong cost effectiveness arguments. Typically, advanced wound management treatment regimes have been shown to improve clinical and economic outcomes that yielded a 52% reduction in time to wound closure and a 67% total cost reduction in the management of wound patients, over alternative general wound management regimes.

Based on the data generated by a major health care provider in New Jersey, USA, treating just 300 wounds per year with advanced wound management treatments can reduce a \$2 million cost by approximately \$1.3 million (account for both labor and supplies).

Sources...

- 1) Bolton LL, Johnson CL, Rijswijk LV. Occlusive dressings: Therapeutic agents and effects on drug delivery. Clinics Dermatological 1992; 9:573-83. Referenced from, Moist Wound Healing with Occlusive Dressings — A Clinical Review, by Kannon GA and Garrett AG, as published in Dermatological Surgery 1995; 21:583-590.
- 2) Eaglstein WH. Experiences with biosynthetic dressings. Journal American Academy of Dermatology 1985; 12:434-60. Referenced from, Moist Wound Healing with Occlusive Dressings — A Clinical Review, by Kannon GA and Garrett AG, as published in Dermatological Surgery 1995; 21:583-590.
- 3) Hydrocolloids were the largest single category of "advanced wound management treatment regimes" identified when this report was collated and published by MedMarket Diligence, LLC of Foothill Ranch California. The title of this report is, "Worldwide Wound Management," (No S225).

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eContact: Xennovate@mac.com

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