FAST FACTS FOR WOUND CARE NURSING

Practical Wound Management in a Nutshell

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I dedicate this book to my clinical friends, colleagues, and patients who “parted the Red Sea” of clinical experiences and to my husband who financially “walked on water” so I could write this book.
Zelia Ann Kifer, RN, BSN, CWS, served as a Advanced Wound and Skin Care Specialist (AWSCS) for Medline Industries, Inc. Medline is a fast-growing distributor of medical and surgical supplies in the United States, servicing more than 250 hospitals and offering a comprehensive array of consulting and management services, including on-staff clinicians. Zelia was one of the top-ranking AWSCS for Medline, helping to implement training for new wound care representatives in the field, and establish Wound and Skin Care Protocols and Guidelines for a variety of hospital systems, long-term acute care facilities (LTAC’s) and nursing homes. In addition, she served nationally and internationally as Medline’s Burn Care Specialist and presented continuing education (CE) courses on various topics in burn, wound, and skin care. She is a Certified Wound Specialist (CWS), a member of Sigma Theta Tau International and of the WOCN.

As a board-certified Advanced Burn Specialist (ABS), Zelia worked as a ICU Burn Nurse, and then as the charge nurse responsible for the outpatient burn clinic and tank room, at The Alexander Burn Center in Tulsa, Oklahoma, from 1996–2000.

Zelia has given many seminars and presentations across the United States, and has conducted on-site in-services and training for clinical staff of all levels, educating OR, ICU, Peds/NICU, Oncology, Cardiac, and Med-Surg nurses. She is the author of Sculpting the Heart of a Nurse—A Book to Energize the Novice, Rejuvenate the Exhausted and Challenge the Average. She helped establish The Tulsa Medical Mission Team and the Medical Mission Room that provides burn care in Honduras. During her recent 2010 Annual Medical Mission visit, the team mentored residents and nurses through 15 successful burn surgeries.
Contents

Foreword  Bruce Gibbins, PhD          vii

Preface                                        xi

Acknowledgments                                xiii

Section I—Assessment, Measurement, and
Documentation

1. Attacking the Basics: Know what Fuels a
   Wound and Understand the Outcome Goal            3
2. Understanding Wound Etiology                   17
3. Assessing and Documenting Wounds               31
4. Debriding Wounds                               45
5. Documenting and Photographing Wounds           57

Section II—Defining the Spectrum of
Simple to Complex Wounds

6. Skin Injuries                                 67
7. Common Chronic Wounds                         77
8. Complex Wounds                                107
9. Recognizing Atypical Wounds                   117
Section III—Wound Care Treatment and Protocols

10. Understanding Wound Care Guidelines and Protocols 127
11. Selecting the Correct Dressings for Optimal Wound Care 141
12. Using Adjunctive Therapies 165
13. Caring for Ostomies and Fistulas 177
14. The Promotion of Skin Care Integrity 195
15. Selecting Optimal Support Surfaces and Equipment for Patient Positioning 207

Section IV—Legal Aspects and Regulations

16. Qualifications and Certifications for Specializing in Wound Care 229
17. Awareness of Your Facility’s Reputation: Certification and Accreditation 235

Appendix: Description of Skin Lesions 251
Glossary 265
References and Additional Readings 271
Index 277
Wound healing has been a lifelong fascination for me. At a very young age, a messenger at the door informed me that my mom had been hurt while picking apricots in a neighbors orchard. That I was an 8 year old left to look after younger siblings was not unusual: it was a time when parents could go out and do chores while leaving an older child to look after the younger siblings, a time when neighbors acted like parents, a time when it didn't seem strange when a family friend came in to make us sandwiches as a stand-in for our mom. All day we waited for mom to come home to start dinner, and when she hadn't by the time dad pulled in from work, we were pretty sure something bad had happened. Mom only came home for a few weeks over the next year and a half, while doctors and nurses battled to repair a compound fracture of her lower leg. Although the bones finally mended well enough so that she eventually could walk again, the soft tissue injury did not. Little did we know that our family would begin an 18 year witness of my mom's non-healing wound.

Looking back, I marvel at how that injury, brought on by a misplaced ladder, influenced my career path. The injury provided a lesson about resilience of the patient and acceptance by a family. Eventually, mom was able to function a lot like a normal mom: sending us to school, making sure we had clean clothes, playing baseball, preparing dinners. She accomplished all this in spite of her injured leg, which was measurably shorter than her other leg and also had a fairly decent-sized hole in it. When I
watched her change the dressing I would catch a glimpse of the yellow-white bone deep at the base of the wound, and wonder why that wound didn’t seem to hurt her and why it didn’t heal like my scrapes and cuts did. Throughout high school and my early university years I heard various answers to my wound healing questions, but most of them communicated a central theme: infection! Infection, likewise, seemed to point me in the direction of microbiology as a major, and a career goal of finding a way to resolve infection so that the wound would heal.

Perhaps better drugs, improved clinical interventions, or maybe simply cessation of smoking resulted in a final closure of her wound after 18 years. I continued to teach and conduct research in microbiology and immunology, until my chance involvement in a research project that developed a sophisticated polymer containing properties supporting the creation of an optimal condition to promote wound healing. I was so intrigued with the benefits that the material could lend to wound healing that I left the university to dedicate my career to exploring tools and strategies for the management of the non-healing wound.

Until recently, wound healing largely has been an art, probably with prehistoric beginnings. It has long been recognized that almost any wound would heal if infection didn’t kill the patient first—but that adage applied to ‘most’ wounds, not those few exceptional wounds that wouldn’t heal. Those non-healing wounds weren’t talked about much. Over a career of attempting to improve the tools for wound care, I have observed perhaps a thousand non-healing wounds. I have been intrigued at how many patients have become resigned to “living” with their wound. One lady lived with a venous stasis ulcer for over 32 years. It was just a “little problem . . . .” she said she “lived with.” Much like my mom’s 18 year saga with the non-healing hole in her leg, it was just part of the family.
Professional wound care statistics for the numbers of chronic non-healing wounds in the United States are surely an under-estimation of the actual number in our communities. Coping with the wound is the norm rather than an exception; partly ingrained from unsatisfactory outcomes of a failed prior intervention. Clinicians often “discover” a wound, rather that respond to one as a primary complaint for a visit.

These patients should be encouraged to try new wound care strategies, because wound care has come a long way in the past 30 years. Some medical schools are beginning to offer training in the subject, which perhaps shows there is increased confidence that intervention in non-healing wounds can make a difference. I have been intrigued at the explosion in new technologies that have been cleared for use in the clinical environment. These have ranged from sophisticated materials for controlling and optimizing conditions for healing in the wounds; antimicrobial wound dressings to combat microbial colonization and infection; biological materials that act by competing for bad-news enzymes that chew up healthy tissues; and extremely complex artificial tissues for closure of wounds. In addition there have been major leaps in understanding of the reasons why some wounds don’t heal, including overproduction of matrix metalloproteases, decreased perfusion, poor oxygenation, and lack of nutrition.

We can expect that research and innovation will deliver continuing improvements in the range and effectiveness of tools for combating non-healing wounds, including topical delivery of nutrition and oxygen and better methods of controlling bioburdens in wounds. Clinicians will have access to sophisticated instrumentation that will aid healing and perhaps enable the monitoring of success in healing.

It should be taken as a fact that these developments will occur. However in the trenches it will still be
people: The clinicians that take care of these wounds; the nurses and doctors that map out the strategies for closing these defects; the wound care specialists who monitor the successes and failures of those strategies; the people that have to make hard decisions and argue with payers to change modalities.

Wound care is arguably the single most difficult topic in medicine. It has no defined solution akin to insulin for the diabetic. It has no easy strategy that covers all wounds. Even with the best and newest of products, there are no easy answers. That is why it is so important for those that have successes to share their experiences with others. Sometimes that can be done one on one, but that isn’t tremendously efficient in reaching the ever increasing numbers of clinicians now specializing in wound care. That is why we are so tremendously blessed when one of them, like Želia, will carve out time to capture a career of experiences in text so that it can be shared with others. We are indebted to her for making this important contribution to the clinicians armament for dealing with the difficult-to-heal wounds of their patients.

Bruce Gibbins, PhD
Founder, Chief Technical Officer and Chairman of the Board
AcryMed, Inc.
Former faculty at the University of Otago Medical School
“Wounds”—What a broad term?! The Original Roget’s International Thesaurus gives all of the following terms for “wounds”: trauma, injury, hurt, lesion, cut, incision, scratch, gash, puncture, stab, laceration, mutilation, abrasion, scuff, scrape, chafe, slash, burn, scald, fracture, bruise, inflamed, gangrene, necrosis, disease, sick, ill, suffer, death. If Roget were a nurse looking at a wound for the first time, he wouldn’t stop with just a simple surface term. In a split second, he would send all that information to his mental search engine for processing. His simple surface term, abrasion, would generate more sensory input such as: classifications—common, complex, or atypical, chronic or acute; bioburden—clean, dirty, infected, and so on. Before heaving a big sigh, he might have contemplated nutrition and pain management. After all this was sufficiently processed, another broad term would surface. “I need a remedy.” Roget’s brain interface system would go into overdrive, bouncing from neuron to neuron as more definitions came to mind, such as: relief, help, restorative, medicine, drug, soothing, debridement, salve, antibiotics, poultices, bandage, healing, curative, restorative, palliative, protective…oh, and coming up for air…preventive. Whew!

Before your brain dendrites recoil: I am a certified wound care specialist and my goal is to simplify the wound care process for you. The wound care information in this book was written in the Fast Facts format to give
you, the reader, user-friendly ease of access when needing specific answers regarding the scope of wound care. This book is friendly and non-intimidating, making it a “must read” for the nursing student or the nurse with a passion for pursuing the specialty of wound care.

We’ve come a long way since the old “barber pole” days and wet-to-dry dressings. Just knowing there are over 150 wound care companies that provide over 1,000 wound care products boggles even the specialized nurse’s mind. Not only has the treatment for wounds become complex, but so have the legal aspects of wound care. It is no surprise that wound care has grown into its own specialty. Specialization? Simplification. This book will cut out the wordy textbook style and simplify and re-enforce knowledge for the nurse dedicated to providing ideal wound care in the most cost-efficient way possible. This book will also be an ideal reference guide no matter your level of wound care interest, educational preparation, or even years of work experience. The book is designed to be an easy read, bullet pointed with practical information.

Each chapter includes a brief introduction and a feature entitled “Fast Facts in a Nutshell” that provides insight to important wound care principles for your consideration. I encourage you to take note and enjoy your wound care discoveries.
This book is a cooperative effort based on the ideals of professionals across the spectrum of wound care, so my attempts to acknowledge all the contributions will essentially fall short. To all the nurses who have crossed my clinical path, either in the working trenches or during facilitated in-services: I acknowledge and thank you for your spirit, shared memories, and cherished friendships. Your passion encourages me profoundly!

I thank God for channeling my faith and providing opportunity through many epiphanies during my nursing journey that have led to the origin of this book. All my endeavors would be nothing without His wisdom, love, and guidance. I also thank my husband, Roger Kifer, for his devotion and unconditional love. He is truly a man among men for the way he sacrificed his time and provided me the working freedom I needed to complete this project. Thank you from the bottom of my heart. To my family, especially Ruth and Mom, who tag-teamed me by taking up the slack and helping me with all my other responsibilities (and projects): My unending gratitude to you all! I owe a huge debt of gratitude to Gary Williams, MD and Murray Katcher, MD at the Department of Pediatrics of The University of Wisconsin, Madison for permission to reprint their “Primary Care Dermatology Module Nomenclature of Skin Lesions.”

I would also like to thank my Publisher, Margaret Zuccarini, Springer Publishing Company, and all the
individuals who reviewed the manuscript for accuracy. Your advice, support, and confidence helped make this book possible.

And last (but not least): I would like to thank you, the reader, for your passion in wound care. My intent is that this book be a benefit to you, helping you to facilitate ideal wound care to every one of your uniquely special patients and their distinctive, individual wounds.

Thank you all ever so much!
SECTION

Assessment, Measurement, and Documentation
Attacking the Basics: Know what Fuels a Wound and Understand the Outcome Goal

INTRODUCTION

Simply put, there are three components that control the existence and outcome of a wound:

1. The wound environment (patient).
2. The nurse (caretaker).
3. The dressing (manufacture).

Each of these components plays a key role in whether or not an acceptable or positive outcome is achieved. Also, each of these components influences the desired timeframe of a realistic outcome. You must develop your own approach to wound care. As Confucius said, “By nature, men are nearly alike; by practice, they get to be wide apart.” In essence, the same is true of wounds and dressings: No two wounds or dressings are exactly alike. This chapter will help you understand how to start your approach for best practice in wound care and wound healing.
In this chapter, you will learn:

1. How the wound environment—the patient—contributes risk factors that may be detrimental not only to the patient’s skin (the largest organ of the body), but also to the healing of the wound, particularly a burn wound. As Goethe (1749–1832) wrote, “Nothing in nature is isolated. Nothing is without reference to something else. Nothing achieves meaning apart from that which neighbors it.”

2. How the wound care nurse (the clinical expert and educator) works in conjunction with other specialists, staff, and family members to provide and manage personalized wound care plans, educate and empower caretakers, and govern the efficient use of appropriate resources. Without understanding the significance of this component, a facility (or a patient) can end up with “a big problem that demands a big expensive solution,” to paraphrase John Kenagy.

3. How to determine whether a wound care product is FDA approved, and how the Centers for Medicare and Medicaid Services (CMS) and the codes of the Healthcare Common Procedure Coding System (HCPCS) process works.

THE PATIENT: THE PHYSIOLOGIC ENVIRONMENT COMPONENT

To understand what fuels a wound, the wound care nurse must understand the wound from the inside out. This knowledge will come from the initial assessment and the patient’s history. Take the time to know your patient.
## TABLE 1.1 Wound Healing Factors

<table>
<thead>
<tr>
<th>Risk Factors</th>
<th>Physical Factors</th>
<th>Chemical Factors</th>
<th>Viability Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Health:</td>
<td>Tissue Hydration:</td>
<td>Susceptibility Flag for Wound Infection:</td>
<td>Perfusion Function:</td>
</tr>
<tr>
<td>Comorbidities, such as:</td>
<td>Osmolality:</td>
<td>pH in Blood:</td>
<td>PaO₂: Normal</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Normal</td>
<td>Neutral (7.4)</td>
<td>(90 mmHg on room air)</td>
</tr>
<tr>
<td>Steroids</td>
<td>Dehydration</td>
<td>pH on Surface of Skin:</td>
<td>Affects wound PO₂</td>
</tr>
<tr>
<td>Immunosuppression</td>
<td>(295 mOsm/kg H₂O)</td>
<td>Slightly acidic (4.2–5.6)</td>
<td><strong>Optimizing Perfusion:</strong></td>
</tr>
<tr>
<td>Smoking, obesity</td>
<td>Dehydration</td>
<td>Chemicals in dressings may affect wound pH.</td>
<td>Cold → Increase warmth.</td>
</tr>
<tr>
<td>Mobility:</td>
<td>(&gt;295 mOsm/kg H₂O)</td>
<td>A mildly alkaline pH may predispose the wound to bacterial infection (Hermans,</td>
<td>Fear → Put patient at ease.</td>
</tr>
<tr>
<td>Limited mobility</td>
<td>Normal</td>
<td></td>
<td>Discontinue beta blockers.</td>
</tr>
<tr>
<td>Immobile</td>
<td>(135–150 mEq/L)</td>
<td></td>
<td>Stop smoking.</td>
</tr>
<tr>
<td>Sensory Status:</td>
<td>Dehydration</td>
<td></td>
<td>Check oxygen status by transcutaneous oxygen.</td>
</tr>
<tr>
<td>Pain</td>
<td>(&gt;150 mEq/L)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confusion or apathy</td>
<td>Serum Albumin:</td>
<td></td>
<td><strong>Continued</strong></td>
</tr>
<tr>
<td>Unconsciousness or alertness</td>
<td>(3.5–5.5 g/dL)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 1.1 Wound Healing Factors  Continued

<table>
<thead>
<tr>
<th>Risk Factors</th>
<th>Physical Factors</th>
<th>Chemical Factors</th>
<th>Viability Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutritional Status:</td>
<td>Blood Urea Nitrogen: (7–23 mg/dL)</td>
<td>Topical enzymatic debriding agents should not be mixed with silver or heavy metal ions such as mercury—these may inactivate the enzyme.</td>
<td>Check vessel compliance by ankle-brachial index (ABI).</td>
</tr>
<tr>
<td>Excellent</td>
<td>BUN-to-Creatinine Ratio:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adequate</td>
<td>Dehydration (&gt;25:1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor or taking nothing by mouth (NPO)</td>
<td>Overhydration (&lt;10:1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continence:</td>
<td>Urine Specific Gravity: (1.035–1.003)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total control</td>
<td>Dehydration (&gt;1.010)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foley or fecal catheter</td>
<td>Overhydration (&lt;1.003)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ostomy or colostomy</td>
<td>Body Temperature: (97.5–99°F)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incontinent</td>
<td>(36.4–37.2°C)</td>
<td></td>
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</tbody>
</table>

Note: Oxygen status, vessel compliance, and bacterial status are the three physiological parameters that determine the potential for wound healing.
Initial Assessment and History: A Wound Care Nurse Knows the Patient’s Baseline

FAST FACTS in a NUTSHELL

Baseline facts help the wound care nurse set realistic, advantageous goals.

- Uncontrolled diabetes can affect wound healing in the areas of nerve damage, lack of physical sensation, poor immune system functioning, higher risk of infections, dry skin, itching, and clogged (hardened) arteries.
- Smoking can affect wound healing by causing inadequate oxygenation. Oxygen is necessary to form collagen, which is necessary to close wounds.
- Pain can affect wound healing by causing vasoconstriction, which slows down the deposition of collagen and protein breakdown, and suppresses the immune system.

Malnutrition

Malnutrition is a nutrition-based disorder in which calories with no nutrients lead to an unbalanced, insufficient, or excessive diet. The three types of malnutrition are:

1. Marasmus: Example: people with cancer or chronic obstructive pulmonary disease (COPD), there is gradual weight loss, but serum albumin, pre-albumin, and transferring remain normal.
2. Kwashiorkor: Example: poor people in developing countries who have high starch and low protein diets. Onset is rapid, and most commonly, muscle mass is preserved but serum albumin is low, resulting in infections, skin breakdown, edema, and pressure ulcers.
3. Marasmus-kwashiorkor: Characterized by morbidity and mortality, with acute onset, most common in hospitalized patients with rapid weight loss and muscle wasting.
<table>
<thead>
<tr>
<th>The Six Major Classes of Nutrients</th>
<th>Role in the Wound Healing Process</th>
<th>Calorie % Needed for Daily Allowance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbohydrates</td>
<td>Provide energy and prevent gluconeogenesis.</td>
<td>50–60%</td>
</tr>
<tr>
<td>Proteins/Amino Acids</td>
<td>Repair and synthesize enzymes, collagen, and connective tissue. Also aids cell multiplication and production of antibodies.</td>
<td>2025%</td>
</tr>
<tr>
<td>Fats/Fatty Acids</td>
<td>Stored triglycerides are concentrated sources and reserves of energy.</td>
<td>20–25%</td>
</tr>
<tr>
<td>Vitamins</td>
<td>Vitamin C is essential for collagen synthesis. Vitamin A helps epithelialization, wound closure, and inflammatory response, and counteracts delayed healing in patients on corticosteroids.</td>
<td>60 mg daily, 25,000 IU daily for 10 days if on high doses of steroids</td>
</tr>
<tr>
<td>Minerals</td>
<td>Copper aids the cross-linking of collagen. Iron aids collagen formation. Magnesium promotes protein synthesis. Zinc aids collagen formation, protein synthesis, blood clotting, and immune system function.</td>
<td>900 mcg daily, 8 mg daily, 350 mg daily, 200–300 mg daily</td>
</tr>
<tr>
<td>Water</td>
<td>Aids in hydration and oxygen perfusion. Also acts as a solvent for small molecules such as minerals, vitamins, amino acids, and glucose moving in and out of cell walls. Patients on air-fluidized beds require an additional 500 mL of fluid daily.</td>
<td></td>
</tr>
</tbody>
</table>
Starvation

Starvation is a condition that develops over a long period of time as a result of a lack of essential nutrients that sustain life. This leads to multiple physiologic and metabolic dysfunctions.

Body Mass Index (BMI)

BMI is a nutritional status tool that uses height and weight to assess whether a person is underweight, has a normal weight, is overweight, or is obese. A BMI between 20 and 25 is normal.

English BMI = \[
\frac{\text{Weight in pounds}}{\text{Height in inches}} \times (\text{Height in inches}) \times 703
\]

Metric BMI = \[
\frac{\text{Weight in kilograms}}{\text{Height in meters}} \times (\text{Height in meters})
\]

Protein Requirements

- New recommendations are between 0.93 and 1.2 g protein/kg/day for adult men.
- Albumin’s half life is 12 to 21 days, making it a poor indicator of early malnutrition.
- Pre-albumin has a half life of 2 to 3 days (normal = 15–25 mg/dL).
- Protein is the most important nutrient for a patient who has suffered an injury or trauma.

Dehydration

The minimum daily fluid intake should be 1,500 mL (excluding renal or cardiac stressed patients). Patients with pressure ulcers require at least 30–33 mL/kg/day, with additional fluids to compensate for wound exudates, etc.
Comparing the Needs of Burn Patients

**FAST FACTS in a NUTSHELL**

- Burn patients require 50–125% increase in food energy.
- Gordon and Goodwin’s fluid formula during the first 24–48 hours is:
  \[ mL = 4 \times \text{Body weight (kg)} \times \% \text{Body surface area (BSA)} \] of burn
- The Parkland formula for the first 24 hours is:
  Lactated Ringer’s solution – 4 mL/kg/% Total body surface area (TBSA)
- The formula for the second 24 hours is one-half the first 24-hour amount
- The amount of fluid resuscitation can be determined from the percentage of BSA involved. “The Rule of 9s” can be used to estimate the percentage of BSA:
  The head = 9%; each arm = 9%; the back and chest = 18% each; each leg = 18%, and the perineum = 1%.

**The Harris-Benedict Equation**

This equation calculates a person’s basal metabolic rate (BMR), which is the amount of energy spent while the body is at complete rest. BMR can otherwise be stated as basal energy expenditure (BEE).

**Equation for women:**

English BEE = 655 + (4.35 \times \text{Weight in pounds})
+ (4.7 \times \text{Height in inches}) – (4.7 \times \text{Age in years})

Metric BEE = 655.1 + (9.563 \times \text{Weight in kg})
+ (1.850 \times \text{Height in cm}) – (4.676 \times \text{Age in years})

**Equation for men:**

English BEE = 66 + (13.7 \times \text{Weight in pounds})
+ (5 \times \text{Height in inches}) – (6.76 \times \text{Age in years})
Metric BEE = 66.5 + (13.75 \times \text{Weight in kg})
+ (5.003 \times \text{Weight in cm}) – (6.775 \times \text{Age in years})

**Stress Factors**

“Stress factors” are used to adjust for burns; they range as follows:

- Up to 20% TBS = 1.0–1.5
- 20–40% TBS = 1.5–1.85
- Greater than 40% TBS = 1.85–2.05

**Curreri Formula**

This is another formula used for the daily caloric requirements of burn patients:

\[
\text{Daily caloric requirements} = 25 \text{ kcal} \times \text{Body weight in kg})
\ + (40 \times \% \text{TBSA burned})
\]

The maximum TBSA is limited to 50%, but some believe that this formula tends to overestimate caloric needs.

**Indirect Calorimetry**

Another formula that can be used when a predictive equation is considered too inaccurate (e.g., in the case of limb amputation, or BMI <18 or >30) is:

The respiratory quotient (RQ) = The ratio of CO$_2$
produced to O$_2$ consumed

Results outside of the physiologic range 0.67 to 1.3 reflect a flawed measurement and are to be discarded.

- < 0.7 fat oxidation
- 1.0 glucose use
- 1.0 fat deposition or overfeeding
The clinical value of the measured RQ is limited to that of a marker of test validity and as a measure of tolerance to overfeeding (RQ >1.0) in response to overfeeding.

THE WOUND CARE NURSE COMPONENT

“Unless commitment is made, there are only promises and hopes; but no plans.”

—Peter F. Drucker

You will not likely know what patients you will care for each day, or even what wounds they will have. What is your plan? Even more important: What is your goal for your patients today?

The goal of wound care nurses is to raise the bar in wound care management. In light of current health care and economic issues, we need now more than ever to step up and define our position. Wound care teams have the potential to save hospitals money, improve patient outcomes, and raise the “novice-to-expert” bar related to wound care for nurses in every unit with a consultancy team approach. No matter the organization or health care facility, a wound care nurse’s responsibilities and roles are threefold:

2. Educator: empowering staff by teaching them quality wound care.

Clinical Expert

• Works for and has an understanding of the healthcare system’s group purchasing organization (GPO), such as Premier, Novation, HSCA, Consorta, etc.
• Works with the facility’s purchasing staff/formulary to balance development of state-of-the-art wound
management formularies and their shared cost-reduction strategy goals.

- Shares responsibility for development and implementation of wound and skin care policies, procedures, and guidelines.

**EDUCATOR**

- Is able and willing to train students, conduct new employee orientations, and offer novice and staff nurses wound care support.
- Develops a program for organizing wound and skin care products by generic category, and teaches the program and products to the wound care team and staff.
- Understands that wound care can be intimidating, continually changing, and frustrating to staff. The wound care nurse is the resource for problems related to wound and skin care, the sounding board, and the wound care escalation point person.

**RESEARCHER**

- Understands the scope of “prevalence and incidence” studies, but also appraises quality improvement with statistics such as healing rates, duration times, and percentage of wounds healed.
- Understands and develops (based on the facility) clinical markers for treatment options and treatment guidelines—from aggressive wound care to palliative care.
- Observes the wound care team and develops care maps to elevate novice team members to consultancy experts who can empower others.
Two organizations established for credentialing specialized wound management:

- The American Academy of Wound Management: www.aawm.org
- The Wound, Ostomy, and Continence Nurses Association: www.wocn.org

THE DRESSING MANUFACTURE COMPONENT

“A product takes a long, expensive, and rigorous journey to go from a manufacturer’s think tank to the hands of the end-user. Vague ideas and concepts are molded and moved into the research and development pipeline where, over time, a product is perfected. Once the product has been refined and tested, it is strategically marketed so that it will find its way to the targeted end-user.”

—Gwen Turnbull

Along with vague ideas and concepts that begin the process of perfecting a product, new or old terms—description labels—are continuously being created or resurfacing. For instance, evidence-based medicine (EBM) is a term that has resurfaced, and it should not be taken for granted.

Question: How do you know that a wound-care product that you are using is what it claims to be?

Answer: The U.S. FDA establishes and monitors the quality as well as violations of dressing manufactures, detailed on 510(k) forms. It is up to the wound care nurse to find out if a product is FDA approved.

Continued
Following is a brief example of how the CMS and the HCPCS process works. The CMS partnered with the Agency for Healthcare Research and Quality (AHRQ) to commission a review of negative pressure wound therapy (NPWT) devices. The purpose of the review was to provide information to the CMS for consideration of an HCPCS code, meaning that the CMS would pay for the devices based on this code. Section 154(c)(3) of the Medicare Improvements for Patient and Providers Act of 2008 (MIPPA) called for the Secretary of Health and Human Services to perform an evaluation of the HCPCS codes for the NPWT devices. After this process was finalized, a code was issued.

This process can be quite complicated. As Laurence J. Peter said, “Some problems are so complex that you have to be highly intelligent and well informed just to be undecided about them.” The minimum information that you will want to have on hand regarding each of your formulary products are: an HCPCS code, an MSDS sheet, a product insert (a user guide from the manufacturer that includes a description, directions for use and removal of the dressing, indications, and instructions for frequency of change), and relevant studies.

I wish I could say that I have never known of any money-making scams related to wound care products; sadly, I have. How does one tell whether a product is legitimate? Reputable wound care products are FDA approved, and
the manufacturers will provide proof of this. Knowing and understanding your products are another way of being your patients’ advocate.

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**FAST FACTS in a NUTSHELL**

**Establish a Wound and Skin Care Product Formulary notebook.**

*Supplies Needed:* A notebook with plastic sleeves and alphabet dividers.

- For each product, Alphabetically place the product insert, MSDS sheet, the product insert, and studies in a sleeve.

This is a good Scavenger Hunt game for new wound care team members to play, as each member should have his or her own such notebook as a learning and teaching tool.