OBJECTIVES

The learner will be able to:

- Understand what palliative wound care means and how it differs from curative wound care.
- Identify types of wounds requiring treatment.
- Be able to explain how wounds heal and how to develop a treatment strategy.
- Describe palliative treatment for chronic wounds.
AGENDA

• I. Palliative Wound Care
  ▫ What is it?
  ▫ How does it different from curative wound care?
  ▫ Goals of care

• II. Wound Care Primer
  ▫ Fundamental
  ▫ Types of wounds
  ▫ Wound healing
  ▫ Treatment strategies

• III. Practicum
Part I. What is palliative wound care?

- How is it different from curative wound care?
- Palliative care is treating the same kinds of wounds, but
  - The goals are different
    - Not focused on “healing the wound” but
    - Controlling pain and odor
    - Helping patient achieve quality of life
  - Treatments may be different
    - Not invasive or painful
    - Focused on comfort
Issues with Wound Care

- A skin wound is a violation of that person’s interface with the world
- A wound is painful
- There may be odor
  - Embarrassment
  - Isolation
- A wound increases risk of infection
- A person’s self-image suffers
- There is fear and loss of hope
Palliative Wound Care

- Traditionally goal is wound healing
- What is goal in palliation?
  - How long will patient live? (avg LOS 52-69 days in hospice)
  - Do they have a healable wound?
  - What is appropriate for this patient?
  - What can be done to provide comfort?
- What are our goals for our patients?
  - Comfort
  - Dignity
  - Quality of life
- Regulatory issues
Part II. Fundamental Principles of Wound Healing

• The fundamental principles are the same, and help establish goals of care
  ▫ Nutrition
  ▫ Circulation
  ▫ Immune Function

• Physiology of wound healing
Nutrition

• Need to support wound healing
  ▫ 30-35 calories/kg/day
  ▫ 1.25-1.50 gm protein/kg/day
• Tube feeding
• NutriFocus, Ensure Plus HN, TwoCal HN
• Appetite stimulants
• Supplements
  ▫ Vit C, Zn, protein
Palliative Nutrition

• What is appropriate for your patient?
  ▫ Can they eat or be fed?
  ▫ Should they eat?
  ▫ Cost?
• Do what is reasonable, and recognize limitations
• Will wound heal without nutrition?
• Tube feeding is almost never appropriate to improve wound healing
Circulation

• Peripheral vascular disease (PAD)
• Anemia
• Immobility*
• Physical exam findings
• Measure ABI (ankle brachial index)
  ▫ ankle SBP/brachial SBP
  ▫ >1 is normal
  ▫ <0.8 arterial insufficiency
Palliation for Arterial Disease

• Very common
• Look for cardiovascular disease, check ABI
• Terminal condition*
• Amputation for ischemia does not improve mortality or morbidity
  ▫ 30% mortality
  ▫ 40% not alive 2 years later
• Goal is pain relief and prevention of infection, maintain dignity

*Fowkes, G. Ankle Brachial Index Combined with Framingham Risk Score to Predict Cardiovascular Events and Mortality: A meta-analysis. JAMA, July 9, 2008. Vol 300, No. 2, 197-208
Immune Function

- Infection
- Age
- Neuropathy
- Disease states
- Medications
  - corticosteroids
  - NSAIDs
  - immunosuppressive agents
- Usually severe compromise in patients who need palliation
Types of Wounds

- Pressure ulcers
- Diabetic ulcers
- Arterial insufficiency
- Venous insufficiency
- Other
  - Surgical
  - Tumors, fungating
- Skin Failure
Pressure Ulcers

Sacrum is most common site, accounting for almost 30% of all pressure ulcers. This is the same for hospice and non-hospice, though the prevalence can be higher in hospice.
Pressure Ulcers

Heel ulcers are the second most common pressure ulcer, accounting for about 1/4 of pressure ulcers. This is the same for hospice and non-hospice, but this prevalence can be higher in hospice.
Diabetic Foot

--plantar surface
--2nd metatarsal
--poor vascular
--neuropathy
--painless
--$90,000/amp.
--one LEA every 6 minutes in U.S., every 30 seconds worldwide, 2/3 due to diabetes
Ischemic ulcers
--absent pedal pulse
--absent or low ABI
--eschar
--non-healing
--pale
--painful
--cool/cold
Venous Insufficiency (Stasis)
-- gaiter region
-- edema
-- bronze discoloration
-- dermatitis
Surgical
Tumor
--fungating
--exudative
Skin Failure
Physiology of Wound Healing

• Three Stages
  ▫ Inflammatory (0-10 days)
  ▫ Proliferative (4-24 days)
    • granulation tissue
    • contraction
    • epithelialization
  ▫ Maturation (21 days to >1 year)
    • remodeling
    • contraction
• Chronic Wound = normal process stalled
How Do We Approach Wounds at the End of Life or for Palliation

• What are palliative goals for patients?
  ▫ Comfort
  ▫ Dignity
  ▫ Quality of life
• Can wounds be prevented?
• Can wounds be treated?
• Can wounds be healed?
  ▫ Healing the person
• New NPUAP Guidelines on palliative care for pressure ulcers
Prevention

• Almost all pressure ulcers are preventable—however, many occur before they are in your care*.
• Arterial ulcers cannot be prevented—would need early vascular intervention
• Stasis ulcers cannot be prevented
• Tumors cannot be prevented
• Preventive care is first step in treatment

*OWM. 2009. Reducing the Incidence of Pressure Ulcers in Nursing Home Residents: A Prospective 6-year Evaluation. Tippett
Pressure Ulcer
--unrelieved pressure with damage of underlying tissue
--usually occur over bony prominences
--~$1600/patient/month
--increasingly common, especially foot and heel
--difficult to predict who will get a pressure ulcer
Assessing Risk for Pressure Ulcers

- Risk Assessment
  - Braden Scale
    - Sensory perception
    - Moisture
    - Activity
    - Mobility
    - Nutrition
    - Friction and Shear
  - Braden predicts risk 52% of time*
- For Hospice—all patients are high risk

Prevention is the Key

**REMEMBER:**
Nothing is easier to treat than something that isn’t there!

**Prevention works:**
reduce new pressure ulcers to less than 1% in nursing homes

OWM. 2009. Reducing the Incidence of Pressure Ulcers in Nursing Home Residents: A Prospective 6-year Evaluation. Tippett
Can Palliation Treat Wounds?

- **First, develop treatment strategy.**
  - **Evaluate the wound**
    - What is the cause of the wound?
  - **Assess the whole patient**
    - Treat underlying condition—remove cause if possible
    - What is physiologically realistic?
  - **What are goals for this patient?**

- **Second, provide good palliative care**
  - Prevent infection
  - Reduce pain
  - Reduce odor
  - Improve quality of life

- Regulatory issues.
# Treatment Strategies

## STANDARD WOUND CARE

- Debridement
- Cleansing
- Treat infection
- Control pain
- Promote granulation
- Select dressing

## Alvarez protocol SPECIAL

- Stabilize the wound
- Prevent further wounds
- Eliminate odor
- Control pain
- Infection prophylaxis
- Advanced wound dressing
- Lessen dressing changes
Debridement

- Always a priority (almost)—but is it appropriate for the patient?
- Types
  - Autolytic
  - Sharp
  - Enzymatic
    - Santyl is only one on market
  - Mechanical
    - Wet to dry (don’t do), whirlpool (never), irrigation
  - Biologic (maggots)
Cleansing

• The most overlooked step
• Normal saline is best
• Tap water is OK
• Avoid Dakin’s, betadine, hydrogen peroxide except for gangrene or necrosis
• Beware of commercial cleansers
• Main risk in cleansing is cooling the wound
• Follow U.S. Guides
Treat infection

• Debridement
• Proper cleansing
• Prevent contamination
• Topical antibiotic
• Systemic antibiotic
Pain Management

- Systemic
  - Narcotics are appropriate
- Topical
  - Viscous lidocaine
  - Spray anesthetics
- Muscle relaxants
  - Tizanidine for contractures and pain
- Do not undertreat for pain!
Select Dressing

- Good wound care is NOT about the dressing
- Purpose of dressing
  - Protect
  - Control moisture
- Twelve categories
  - Consider patient and particular situation
    - Frequency of dressing change
    - Pain with dressing change
    - Patient condition
  - Always consider gauze
    - Inexpensive, available, versatile
    - Can easily combine with other ingredients
When Odor is a Problem

Try:

Metronidazole*
Chlorophyllin
Silver Dressings
Cadexamer-
Iodine
Oil of Wintergreen

• Kalinski et al.,
• WOUNDS2005;17(4);84-90
Part III: Practicum

- Case presentation
- Evaluation of current treatment plan
- Developing a treatment plan
  - What is goal for the patient?
  - What is physiologically possible?
  - Cost and efficacy considerations.

**Average Wound Cost**
Average cost of $1,600/month is national published average for treatment of one wound

Case 1

82 yo AA female
- end stage dementia
- IDDM
- COPD
- hypothyroidism
- osteoporosis
- PVD
- nonambulatory
- tube fed
  - Glucerna 40cc/hr
  - ProMod 1 scoop tid

Wound: dry, several weeks duration, getting worse, no odor
Current TX: Santyl qd with gauze dressing
Case 1 Cost Comparison

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Less than $1/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>X 3 weeks</td>
<td>$21.</td>
</tr>
</tbody>
</table>

Avg cost

| Amputation      | $40,000          |

Total savings ~$41,000.
Case 2

84 yo AA female  
s/p CVA  
IDDM  

Tube fed Glucerna  
Low air loss mattress  

Right heel ulcer x weeks; foul odor; painful; fever; blood sugars high; lethargic; on IV antibiotics  
Current TX:  wet to dry; cleanse with seaclens.
Treatment:
debidement with 2 rounds maggot therapy medicated hydrogel dressing with zinc oxide around wound

Results:
no pain
increased alertness
no fever
blood sugars controlled
reduced odor
MEDICINAL MAGGOTS
(Phaenicia sericata)
University of California
Medical Sciences
Irvine, CA 92697-1860
Maggot Debridement Therapy
Four months after maggot therapy
Case 2 Cost Comparison

Palliative treatment:
   Maggot therapy x 2 @ $100. = $200. total
   Hydrogel drsg @ $12 ea daily x 4 months = $1440

Average cost $1600/month x 4 = $6,400.

Savings: $4,760.

Patient lived about 6 more months
   No wound treatment
   No risk of infection
   No pain
Case 3

78 yo WF
DM, HTN
afib
s/p CVA
dementia
fecal incontinence; severe leg contractures bed bound; up to chair daily per social director; good oral intake

Coccyx ulcer for > 1 year
Wound: 6 x 3 x 3 with 2-5.5 cm tunneling from 9 to 4; no odor; moderate drainage
Current TX: alginate dressing q 2 days, Allevyn dressings to cover
3 months later:
Treatment—bedrest; medicated hydrogel dressing
Case 3 Cost Comparison

Palliative Care
  hydrogel dressing daily @ $12 x 3 months = $1,080

Current cost @ $60/day x 3 months = $5400.

Savings: $4,320
64 yo WM w/IDDM
--ESRD
--peripheral neuropathy
--MRSA
--liver failure (ABX)

Diabetic Foot Ulcer

Current Treatment: cover with charcoal dressing and ABD, saran wrap tid.
Case 4 Cost Comparison

**Current Treatment**
charcoal dressing @ $10 each, tid for >$30 per day
risk of MRSA infection
odor

**Palliative Treatment**
3 rounds of maggots @ $100 each = $300
no odor
no further treatment

**Savings:**
12 days of maggot therapy for $300 vs $360 (12x$30)
>$30/day savings for life of patient (>900/month)
reduced risk of infection
enhanced relationship with facility and clients
Medicated Hydrogel Gauze

- Developed at bedside for palliative care
  - Goal to reduce pain, prevent infection, control odor
- Contains polymyxin/bacitracin
- Contains lidocaine in a hydrogel base
  - 2% oral viscous
- Contains oil of wintergreen
- Literature search to confirm safety and efficacy of ingredients
- Antimicrobial testing: in vitro inhibition of E. coli, P. aeruginosa, C. albicans, S. aureus
Wound Dressing in Place
Cincinnati Hospice Results

Total Healing Results by Wound Type

Summary

- Prevention is essential
- Develop patient specific goals
- Simple cost effective protocols using evidence-based practice
- Treatment of wounds is possible, with significant healing
- Improved quality of life
  - Restoration of wholeness
Questions?

• Contact information
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Don’t forget to bring

- Business cards
- Woundpal dressings (2 or 3)
- Woundpal info brochures