
SVH
Spring View Hospital
SVH Spring View Hospital

Partnering with Patients & Community to Achieve Clinical Excellence in Wound Care

STEFANIE SPALDING, APRN, FNP-C, CWON-AP

SAMANTHA PORT, DNP, MBA, RNC, CPPS, CPHQ

Spring View Hospital

Objectives

- Describe the nine essential elements of healing
- Describe Staff roles and responsibilities for wound care
- Describe "whole patient care" for improving outcomes for wound care
- Describe community partnerships for improving wound care outcomes

Introduction

The Wound Care Center at Spring View Hospital is a member of the Healogics® network and offers highly specialized would care to patients suffering from diabetic foot ulcers, pressure ulcers, infections and other chronic wounds which have not healed in a reasonable amount of time.

Introduction

Advanced wound care modalities provided by our wound care experts include negative pressure wound therapy, total contact casting, bio-engineered tissues, biosynthetic dressings and growth factor therapies. The Center also offers hyperbaric oxygen therapy, which works by surrounding the patient with 100 percent oxygen to help progress the healing of the wound.

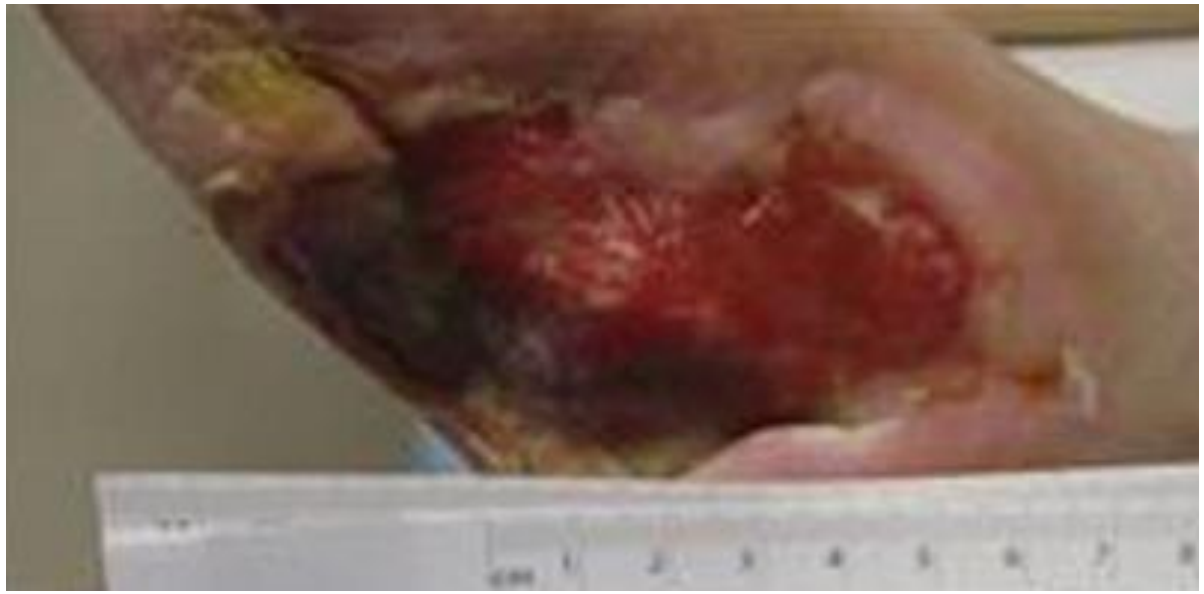
Spring View Hospital

Methodology

THE WOUND CARE CENTER TEAM UTILIZES THE 9 ESSENTIAL STEPS OF HEALING TO EXCEL IN THE KEY PERFORMANCE INDICATORS OF HEALING RATES, OUTLIER RATES, AND MEDIAN DAYS TO HEAL.

- Enhance perfusion and oxygenation
- Remove non-viable tissue
- Resolve infection and control inflammation
- Resolve edema
- Optimize wound bed moisture balance, exudate, and odor control
- Enhance tissue growth
- Relieve pressure, provide effective offloading, and preserve function
- Control and diminish pain
- Optimize host factors

Spring View Hospital



Process Measures & Data Outcomes

In 2019, the Wound Care Center team identified the need to find tactics to actively engage patients and families into their treatment plan to increase compliance and satisfaction with team and providers.

Process Measures & Data Outcomes

- The Wound Care Center team clearly defined the following staff roles and responsibilities.
  - Moved to a primary Wound Care Provider that is nationally certified in wound care with general surgeon and podiatry support
  - Nurse Case Manager is responsible for wound assessments which promotes consistency for the 9 Essential Steps to Healing.
  - Lead Office Coordinator schedules all referrals within 7 days, coordinates communication with PCP offices for progress, and calls patients with appointment reminders.

Chart 1. Healing Rate. Higher is better.

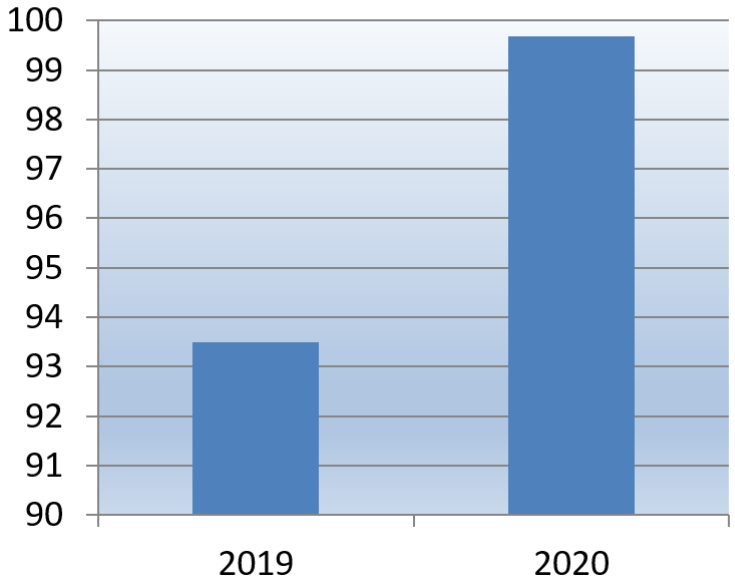


Chart 2. Patient Satisfaction. Higher is better.

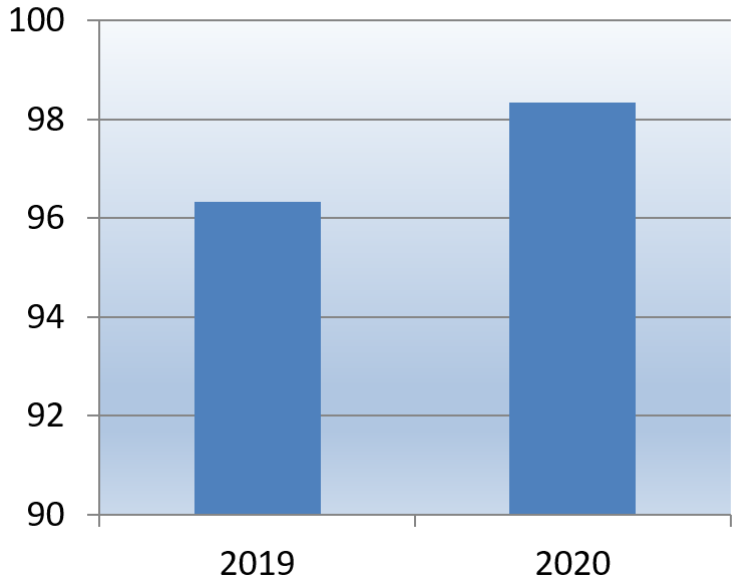


Chart 3. Median Days to Heal. Lower is better.

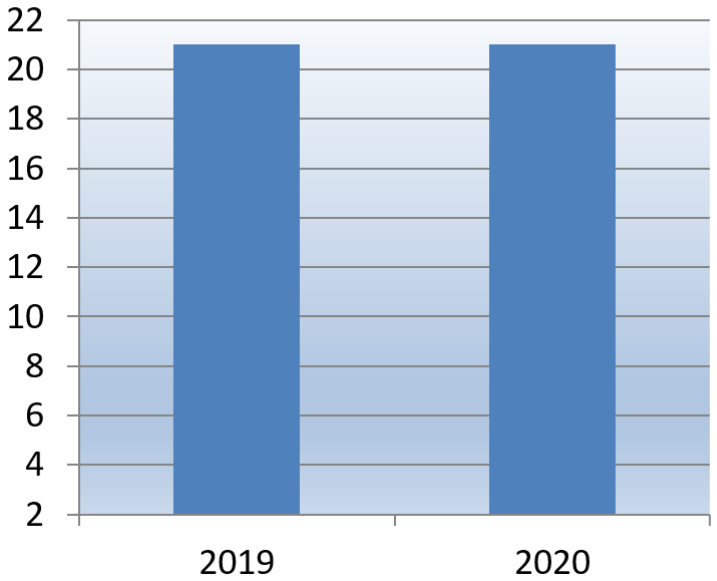
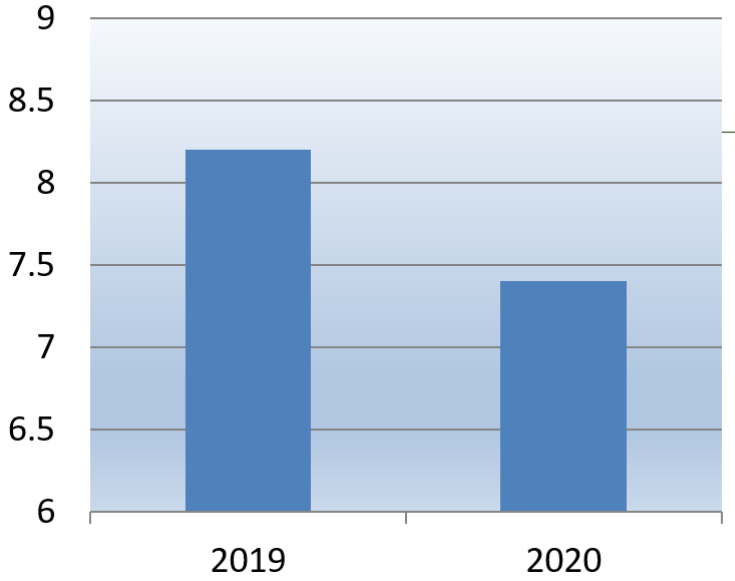


Chart 4. Patient Outlier Rate. Lower is better.



Results

Results

Measures	2019	2020
Healing Rate	93.49%	99.69%
Median Days to Heal	21	21
Patient Outlier Rate	8.2%	7.4%
Patient Satisfaction	96.32%	98.34%

Spring View Hospital

Discussion & Reliability

Wound care patients face challenges with navigating the complexity of care required to heal. By defining team roles, each team member identifies support services in the community needed to take a multidisciplinary approach to wound healing.

Discussion & Reliability

- **The Wound Care Center team has created a culture to treat the "whole" patient, not just the wound.**
  - Patients receive education on nutrition, diabetes management and wound/dressing care.
  - The Wound Care Center team has partnered with local vascular surgeons, infectious disease providers, home health agencies, pharmacies, infusion companies, transportation agencies, and DMEs to ensure continuity of care for the patients.

Conclusion & Sustainability

- The Wound Care Center team engages patients and community partners to provide evidence-based care to achieve clinical excellence.
- As a result, the team was recognized for a second year as a Center of Distinction by Healogics®.
- In addition, the team received the Center of Distinction Robert A. Warriner Center of Excellence award for scoring in the top 10% of Healogics® centers.

James Smith, MD, FACS; Jared Malan, DPM, DABPM, FAC, FAS;
Stefanie Spalding, APRN, FNP-C, CWON-AP

Heather Lamkin, Director; Lindsey Ballard, RN, WCC; Kayla Russell, RN; Amelia Farmer, RN; Emily Dobbins, RMA; Sherry Rodgers, Coordinator

Picture 1. Patient Graduation..

Picture 2. Wound Care Team.

Spring View Hospital

Contact

Samantha Port, DNP, MBA, RNC, CPPS, CPHQ

Spring View Hospital

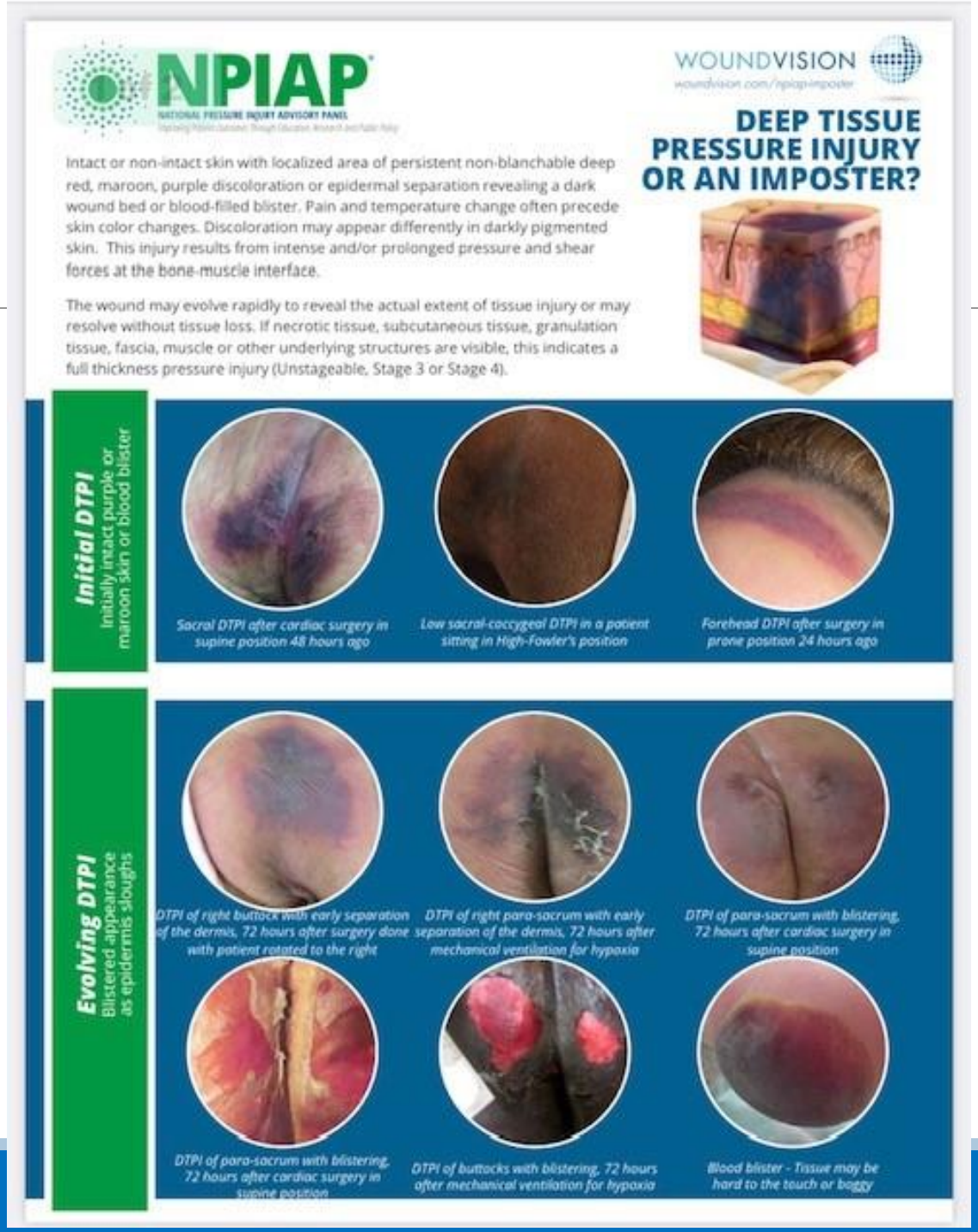
Email: Samantha.Port@lpnt.net

Website: www.springviewhospital.com

Phone: 270-692-5290

(NPIAP, 2022)

Spring View Hospital



(NPIAP, 2022)

Spring View Hospital


NPIAP
NATIONAL PRESSURE INJURY ADVISORY PANEL
WOUNDVISION
DEEP TISSUE PRESSURE INJURY OR AN IMPOSTER?
Many conditions can lead to purple or ecchymotic skin and rapidly developing eschar. Some of the most common differential diagnoses are shown below.
Ischemia
Trauma
COVID-19
COVID-19 accelerates clotting in small vessels Skin color change is not always on pressure bearing tissues
Embolic Disease
Marked disease of internal iliacs or postoperative aorto-iliac bypass with emboli
Warfarin Induced Skin Necrosis
Erythematous flushing then progressing within 24 hours to full thickness hemorrhagic bullae several days after high loading doses of Warfarin
Hematoma
History of trauma to area, often anticoagulated - Area is palpable and often tender
Vasopressor Induced Peripheral Ischemia
Levophed in use - Ischemia of ears, nose, fingers also common
Ischemia From Hypotension
Sudden purpura near end of life, no pressure events had occurred. Patient died 4 days later
Blunt Trauma
History of traumatic injury Irregular shape Painful to touch. Morel Lavallée Lesions are possible
Chronic Friction Injury
Immobile or chairbound patient who uses a slide board Skin thick and irregular lesions
DIC/Sepsis with Microvescular Emboli
Reticular presentation Spontaneous onset, rapidly necrotic
Calciphylaxis (AKA Calcific Uremic Arteriopathy)
Seen in patients in dialysis dependent renal failure due to hyper-parathyroidism, hypercalcemia and hyper-phosphatemia
Bruise
History of trauma in the area Color changes to yellow and green in a few days
Skin Tear
Patient fell attempting to ambulate. Usually, profuse bleeding

(NPIAP, 2022)

Let's Discuss Kennedy Terminal Ulcers!

Hyperbaric Oxygen Therapy

Hyperbaric oxygen therapy (HBO) is used to treat several medical conditions. It takes place in a chamber that is pressurized. The patient breathes 100% oxygen in which the blood carries the extra O2 to the injured area—called hyperoxia.

Why is Oxygen Important?

ALL ASPECTS OF WOUND HEALING REQUIRES OXYGEN.

- Aerobic respiration and energy production
- Cofactor for enzymatic processes
- Signaling mechanisms
- Leukocyte killing activities
- Collagen formation

- Growth factors in wound healing- fiberblasts, collagen synthesis
- Resistance to infection-increased efficacy of antibiotics
- Neovascularization- (angiogenesis and vasculogenesis

(Healogics, 2017)

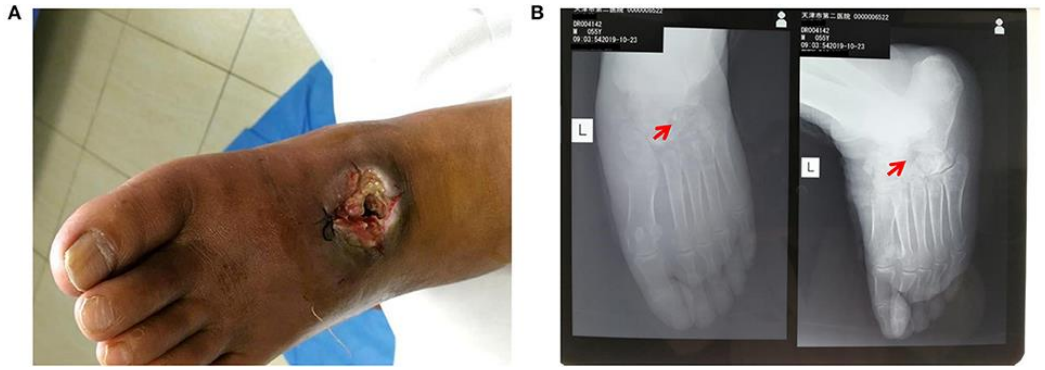
Spring View Hospital

Why is it Called Diving?

- The chamber is pressurized as if the patient is below sea level, much like when you are scuba diving 30-45 feet below sea level
- At this atmospheric pressure the body is able to use oxygen in expanded capacity.

Diabetic Foot Ulcers (DFUs)

- At least 26.9 million Americans 65 years old & older are diabetic
- At least 1.9 million newly diagnosed per year
- At least 79 million are pre-diabetic



(Healogics, 2017)

How do DFUs Qualify for HBO?

The Center's for Medicare and Medicaid Services National Coverage Determination states the criteria that must be present and clearly documented in order to meet the medical necessity requirements to initiate hyperbaric oxygen therapy for the diabetic wounds of the lower extremities.

(Wound Reference, 2021)

Getting it Covered by Insurance

- Patient has type I or type II diabetes and has a lower extremity wound that is due to diabetes
- Wound is classified as Wagner grade III or higher; and
- Patient has failed an adequate course of standard wound therapy.
- The use of HBO therapy is covered as adjunctive therapy only after there are no measurable signs of healing for at least **30 days** of treatment with standard wound therapy and must be used in addition to standard wound care.

(Wound Reference, 2021)

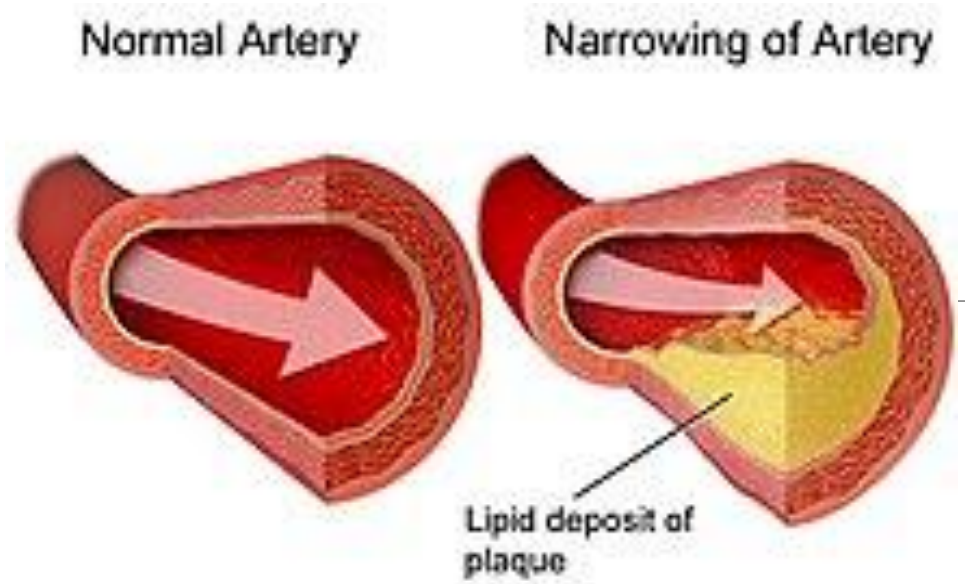
Spring View Hospital


Acti V.A.C.

Getting it Covered by Insurance

- Assessment of a patient's vascular status and correction of any vascular problems in the affected limb if possible—ABI normal? TCOM-(transcutaneous o2 monitoring) above 40?
- Optimization of nutritional status—check albumin, prealbumin (refer to dietician)
- Optimization of glucose control—A1C WNL's, adjustment in medications, monitoring
- Debridement by any means to remove devitalized tissue, maintenance of a clean, moist bed of granulation tissue with appropriate moist dressings
- Appropriate off-loading, and necessary treatment to resolve any infection that might be present

(Wound Reference, 2021)



Spring View Hospital

DFU HBO Treatment Guidelines

30 initial treatments with an air break if possible with dive to 2.5 ATA—if not 2.0 ATA

AFTER 30 TREATMENTS will RE-EVALUATE. If healing, will add 10 additional treatments. If no healing, cannot continue.

(Healogics, 2017)

Spring View Hospital

Crush Injuries

What Qualifies a Crush Injury for HBO?

CRUSH INJURY, COMPARTMENT SYNDROME AND OTHER ACUTE TRAUMATIC ISCHEMIA

- Two or more tissues (muscle, Bone or other connective tissue, skin, nerve) must be involved.
- The injury must be severe enough to rendered the viability of the tissue questionable
- Severity of the injury is from minimal to irreversible
- Acute injury that compromises circulation

Delayed Radiation Damage

OSTEORADIONECROSIS OR SOFT TISSUE RADIONECROSIS

- Prior history of radiation exposure to affected area including radiation dosage in dates of administration
- Soft tissue radionecrosis, radiation cystitis, colitis, urethritis, failed surgical wounds in previously irradiated fields
- Dysphagia with a history of radiation to the face or neck

WHAT THE PCP CAN EXPECT TO FIND IN THESE PATIENT'S: NONHEALING WOUNDS, DYSPHAGIA, BLADDER PAIN, ORAL LESIONS, NECK, FACE OR ORAL WOUNDS IN PATIENT TO OF PREVIOUSLY HAD RADIATION THERAPY.

Gas Gangrene

NECROTIZING SOFT TISSUE INFECTION

- Usually diabetic foot ulcers
- Requires immediate surgical intervention
- Clinical evidence- has on exam or x-ray, rapidly progressive soft tissue necrosis

(Healogics, 2017)

Osteomyelitis

- Evidence of osteomyelitis on exam and x-ray, nuclear scan, CT scan or MRI
- Evidence of refractory or limb threatening clinical Course
- After 20 treatments will re-evaluate, if progress will add additional 10 treatments may continue that up to 60-maximum number of recommended treatments
- Patient must have 6 weeks of IV or oral antibiotics without resolution of osteomyelitis

(Healogics, 2017)

Compromised Flap or Graft

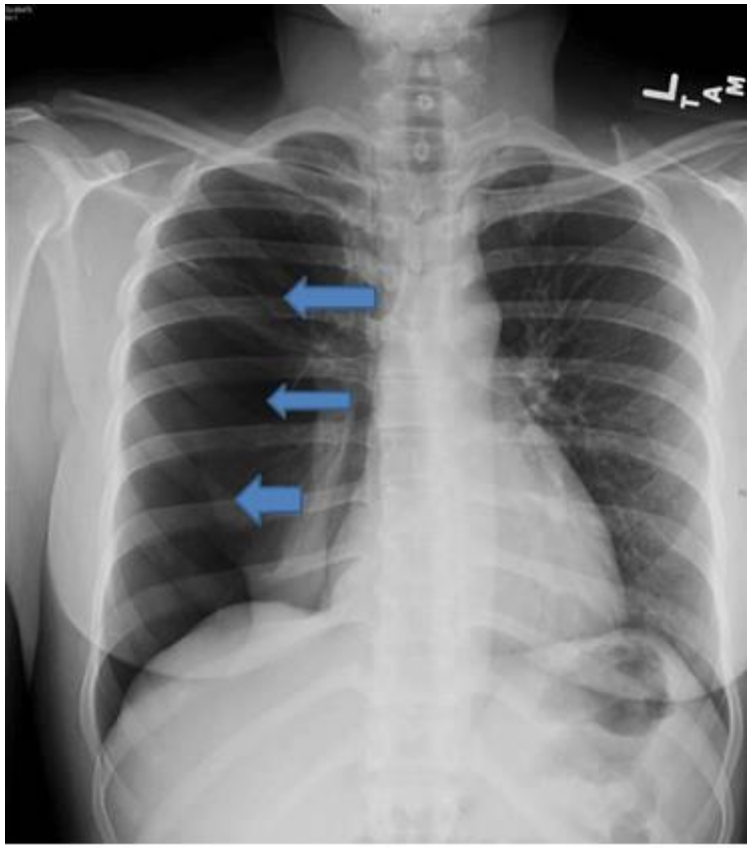
- Evidence of ischemia
- Inadequate granulation tissue
- Cultures reveal significant resistant soft tissue infection
- No wound contraction within the 1st 3 weeks of wounding

DOCUMENTATION MUST INCLUDE THE DATE, DESCRIPTION OF THE GRAFT OR FLAP PROCEDURE, THE TIMING OF THE ISCHEMIC COMPROMISE AND THE RESPONSE TO THE TREATMENT EVALUATED ON A FREQUENT BASIS

(Healogics, 2017)

Contraindications of HBO Therapy

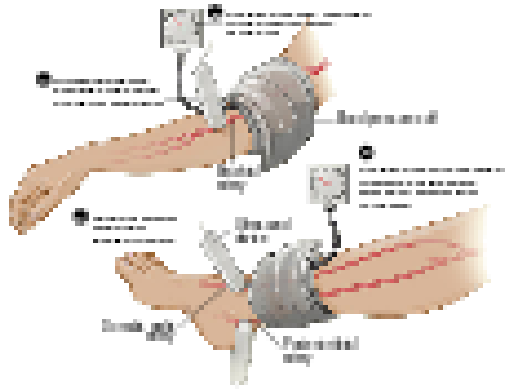
- Untreated pneumothorax
- Any current treatment with chemotherapeutic agents
- Current treatment with amiodarone > 400 mg a day
- Bleomycin administration within 12 months
- Pregnancy
- Terminal patient with irreversible disease



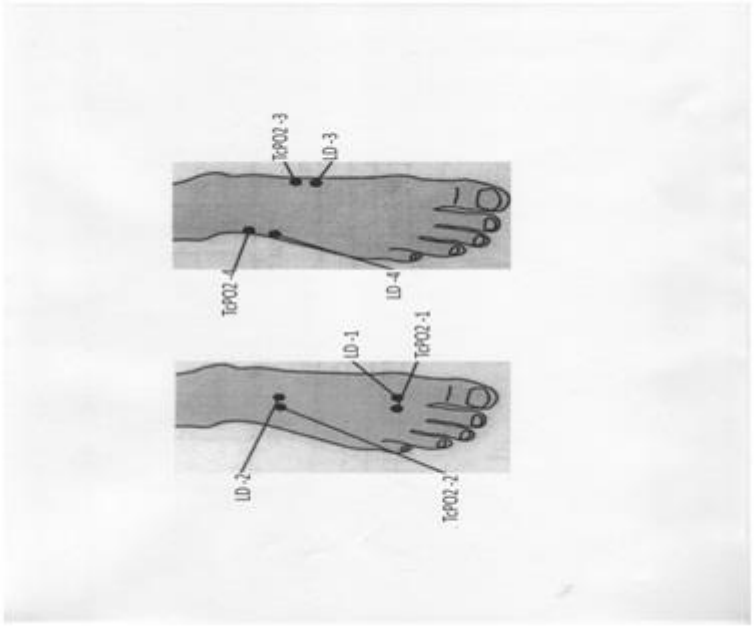
Spring View Hospital

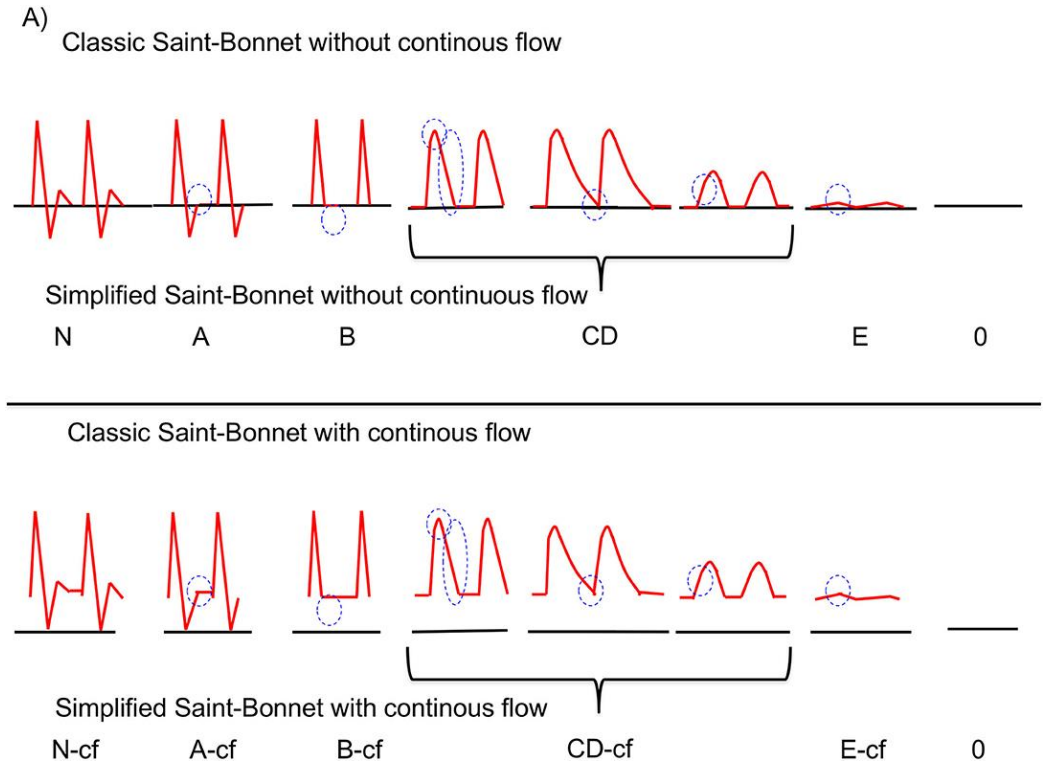
Ankle Brachial Index

Spring View Hospital wound Care Center performs our own ABI test on every lower extremity wound on admission is not necessary for the PCP to order ABI prior to referral.



Transcutaneous Oxygen Measurement (TCOM or TCPO2_





Safety

What Can go Into the HBO Chamber?

- NOTHING except the patient in their birthday suit! ☺
  - HBO gown, sheet, pillows, and blankets
  - A bottle of water
  - O2 mask connected to room air to allow for an air break if needed
- All other items pose a serious fire risk

Healogics, 2021)

Questions?


why
when
who
where
what
why
QUESTIONS
who
how
where
who
what
how
why
when

References

- Armstrong DG, Lavery LA, Vazquez JR, Nixon BP, Boulton AJM. How and why to surgically debride neuropathic diabetic foot wounds. J Am Podiatry Med Assoc 2002; 92(7): 402-404.
- Bolton L, et al. Development of a content-validated venous ulcer guideline. Ostomy/Wound Management 2006; 52(11):32-48.
- Hannon CW, Swerlick RA. Chapter 26 Vasculitis. Dermatology. (Bolognia JL, et al, eds) Mosby, New York, 2003; pp381-402.
- Healogics. (2017). Nursing care of the hyperbaric patient and wound healing.
- Hopf HW, et al. Guidelines for the treatment of arterial insufficiency ulcers (WHS). Wound Rep Reg 2006; 14:693-710.
- National Pressure Injury Advisory Panel (NPIAP). (2022). www.npiap.org
- Robson MC, et al. Guidelines for the treatment of venous ulcers (WHS). Wound Rep Reg 2006; 14:649-662.
- Wound Care and Hyperbaric Blog. (2021). Hyperbaric oxygen therapy—The 30 day requirement for diabetic foot ulcers. https://woundreference.com/blog?id=hbot--further-clarification-of-the-30-day-requirement-for-dfu
- Wound Ostomy and Continence Nurses Society (WOCN). Guideline for management of wounds in patients with lower-extremity arterial disease. Glenview (IL): Wound Ostomy and Continence Nurses Society (WOCN); 2002 Jun. 44 p. (WOCN clinical practice guideline series; no. 1).

Spring View Hospital