Improving Wound Care Quality through Collaborative Organizational Structures

Exploratory Paper

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Introduction

"Hospitals are using a variety of strategies to cut costs while improving care quality in their service lines. Some take a well-defined approach, such as clinical co-management, in which service line governance is shared. Other hospitals use structures specific to their own institutions", states Geri Aston in her January 2015 article titled, "Service-line Management: A Behind the Scenes Road to Value." [i] Debra Miller-Cox MD observes in her article, "Wound Care Silo Busting: Building a Service Line Across the Continuum," "larger hospital systems have grown piece by piece and department by department. The reality is that many patients require a combination of inpatient and outpatient services or even just multiple outpatient services and often find themselves involved in a cumbersome care continuum. As connected as healthcare may appear to be on a global scale, less efficient, disjointed treatment coordination leads to lower-quality, and more costly care overall." [ii] Both thoughts convey a need for change in the structural makeup of service lines to be more efficient.

Based on favorable reimbursement for services provided in an outpatient department of a hospital, wound care programs, such as those described by Debra Miller-Cox, MD, are common in many communities. Large organizations that provide wound care consist of independent entities providing care with modest levels of coordination. Those entities include: provider based hospital outpatient department wound care centers, acute care facilities, home health, skilled nursing facilities and independent physician primary care and specialty offices. Given the wide variety of venues, a fragmented approach to care often occurs. However, under the leadership of a Medical Director who works collaboratively with individuals and organizations providing wound care services to patients, efficiency, satisfaction and outcomes can be improved.

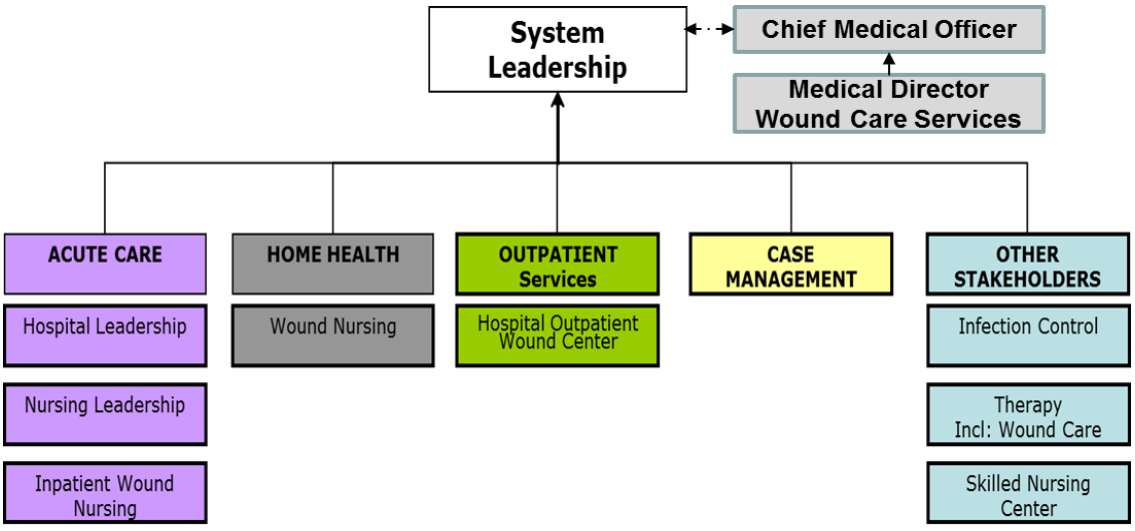
This paper utilizes observation, literature review and personal interviews with industry leaders including management firms, program directors and hospital administrators to conclude that a Medical Director, who possesses clinical expertise and leadership skills can and create a collaborative organization with the goal to produce better outcomes and increased patient satisfaction for wound care patients.

Current Organizational Structures

Wound care is provided in an array of settings. While there is communication between and among providers, a true and consistent standard of care is unlikely to be achieved as each entity operates under site specific standards of care and perceived best practice. According to a wound care industry consultant of a leading management firm, "most hospital organizations operate wound care centers as a decentralized department in a similar manner as radiology. Less than 15% of hospital organizations have formal organizational structures. While consultative and referral mechanisms are in place, there are opportunities for acute care to work more closely with the outpatient wound care center and other providers within the organization."[iii] For those organizations that have high degrees of collaboration and standardized care delivery models, performance relative to patient outcomes and lower cost of care are more favorable. The remaining organizations have varying degrees of fragmentation.

Organizational structures vary across the healthcare landscape and are dependent on size, area of focus and market characteristics with respect to care coordination. Organizations that appear to be similar may in fact have very different organizational structures. The type of structure that is in place and the reporting relationships dictate the level of coordination throughout the wound care service line. In short and not surprising, organizations that have

formal reporting relationships, such as the organizational structure pictured below, have a higher degree of engagement and accountability and therefore, higher level of communication.



Conversely, organizational structures that have parallel reporting relationships, referred often as silos, have weaker communication and coordination. A *silo mentality* arises when departments do not want to share information or knowledge within the same organization. "This kind of culture breeds isolationism, redundancy, us vs. them outlooks and poor decisions states" states Scott Warner, MLT, in his article "Bridging Silos in Healthcare, Collaboration Between Nursing and the Laboratory Helps Ensure Quality of Care for Patients." [iv] According to in the article, "Breaking Down Silos: Building High Performance Care Teams", "Silos are inherent in health care organizations at both a macro level (between each segment of the continuum of care – outpatient, inpatient, acute, rehabilitation long-term care, home care) and a micro level (between levels, departments, and functions within a hospital or other health care organization). Some have described health care as a loose confederation of silos. Our silos may have made sense at one point but currently present great problems as we move into the era of accountable care."[v] John Kotter, a leading expert in transformational change, has noted, "A siloed organization cannot act

quickly on opportunities that arise in a fast-paced business landscape, nor is it able to make productive decisions about how to change in order to seize these opportunities." and goes on to note that "silos cause breakdowns in communication"[vi].

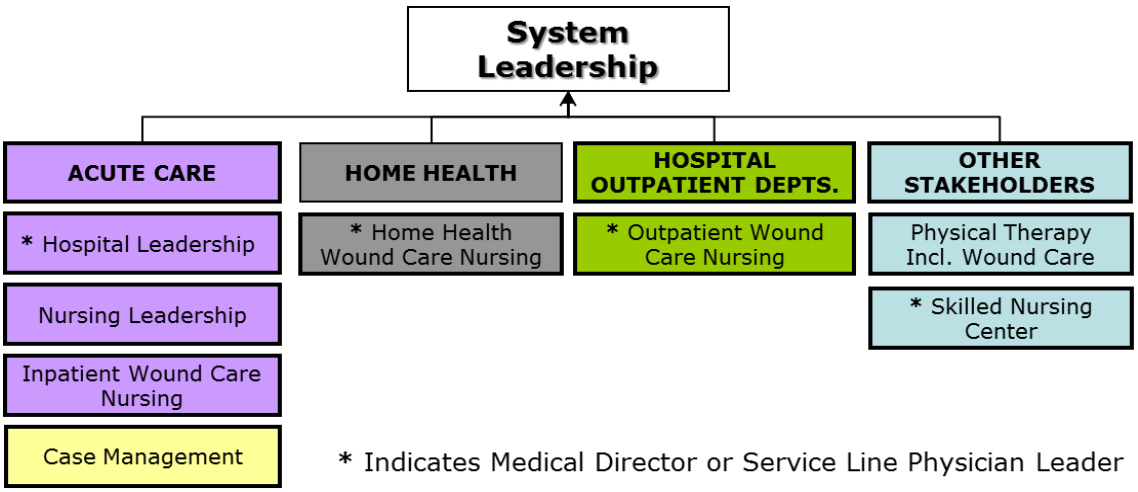
Organizations that have a direct reporting relationship are structurally aligned in a cohesive manner that promotes increased communication due to the defined structure and inherent accountability. The loose relationship that occurs in organizations where wound care is an outlying department of the parent organization or health system and not formally linked depends more on interpersonal skills and strong relationships to achieve an optimal level of communication and engagement.

In a conference call with leaders of wound care organizations, a Medical Director of a large wound care program in the Midwest, shared the composition of their organizational structure where the outpatient wound center has direct reporting relationship to the acute care entity citing that the alignment has paved the way for monthly meetings, case conferences, referral analysis, product uniformity and treatment algorithms. By virtue of the direct linkage to the service line reporting mechanisms, the inpatient wound care nursing staff have a direct accountability to the Medical Director and the wound care team. This facilitates a care delivery model that is consistent as patients navigate through the continuum. This consistency has resulted in a lower cost of care and improved quality.

In larger organizations, the organization may not allow for a tall structure as there are likely too many departments or services to effectively manage a wider span of control. During a Wound Clinic Business conference in Florida, a Program Director of an outpatient wound center stated the outpatient wound center reports to an outpatient leader and therefore is decentralized and disconnected from the acute care organization. The Program Director shared that autonomy

may seem to be a favorable characteristic and does allow for freedom and flexibility to manage the center, the effort to coordinate and communicate has been a challenge. With no formal connection, the entities operate differently in subtle ways. While wound care physicians are certainly consulted appropriately by hospitalists, community physicians and acute care nursing, there are differences in product selection, environment of care, skill sets of nursing staff and therefore variations in the way different entities care for wounds.

Skilled nursing facilities and home health operations often have reporting relationships that are outside of the acute care and outpatient reporting channels. In these types of organizations, these entities report to Post Acute Services or Continuum of Care divisions. For these entities, creating a leadership role accountable to system leadership creates accountability at the highest levels of the organization. In markets in which skilled nursing facilities are forging relationships with wound care centers or wound care providers to oversee the care rendered by the center's nursing teams, the team approach is beneficial to all. For home health organizations, relationships are also forged as the wound care center is often the most appropriate venue, as compared to the home, for assessment and treatment of wounds.



Detriments of Fragmented Structures

For organizations that struggle to develop a comprehensive model, Debra Miller-Cox, MD offered six steps to creating a collaborative organizational structure[viii]:

Step 1. Identify Your Leaders

Step 2. Identify Departments Providing Wound Care

Step 3. Create Provider Partnerships

Step 4. Allow Administrative Structure To Develop

Step 5. Bringing Components Together

Step 6. Evaluate Communication

Each of the above steps is interrelated. As Dr. Miller-Cox explains the process requires evolving assessment. "Through a detailed review of system services, consolidation, communication, and consistent leadership the creation of a functional service line through wound care has been implemented. Partnership development with administration as well as all clinical areas where wound care is provided has been essential to unifying this system. Moving forward continued expansion of services and referrals is anticipated. Wound care's relevance throughout the healthcare system puts Spartanburg Regional Healthcare System in a perfect position to improve continuity, efficiency and quality of care."[ix] Based on the experience of Spartanburg Regional Healthcare System, leaders who attempt to move too quickly and not understand the organizational dynamics may see their efforts stall or fail. Therefore, patience in allowing the structure to develop is a key step to consider when embarking on an organizational change.

Unless organizations create a formal relationship among departments providing wound are, shortcomings associated with a fragmented approach are likely to continue as opportunities for breakdowns in communication and transition of care continue. Most notably those

detriments reside in the areas of quality, cost and reimbursement. While the lack of structure does not necessarily constitute poor care, the potential exists for increased cost of care, duplication of care and possibly conflicting approaches to care. In contrast to a structured delivery system, the unstructured approach will continue to lead to decreased communication, decreased coordination, and lower quality. In addition, the quality metrics measured in each venue and will not consider the care provided throughout the continuum, such as an entity citing a short duration of care or days to heal when in fact the patient was transferred to an alternate venue for care of the same episode.

As Jay Prystowsky, MD, MBA, states in his blog on the Sg2 website in January 2016, "Successful programs will incorporate a multidisciplinary staff and advanced wound care technology to facilitate healing of chronic wounds and patient rehabilitation. A variety of models may be employed to provide wound care. At minimum, a dedicated program should employ a full-time nurse with experience in wound management and, preferably, accreditation by the Wound, Ostomy and Continence Nurses Society. The other critical program component is a physician leader who provides direction and oversight."[x]

Quality

As evidenced in Exhibit I, taken from the U.S. Wound Registry website, quality measures for wound care include primarily process measures such as: adequate off-loading of diabetic foot ulcer at each visit, plan of care for diabetic foot ulcer patients not achieving 30% closure at 4 weeks, diabetic foot & ankle care: comprehensive diabetic foot examination and adequate compression at each visit for patients with venous leg ulcers. Carolyn Fife, MD, FAAFP, CWS, co-editor of Today's Wound Clinic states in her article "The Truth About 'Wound Healing Rates", "About 66% of patients heal (not 98%). The way to measure the skill of a wound care

professional is what percentage of patients they heal when patients are risk stratified according to their likelihood of healing". [xi] Current measures inconsistently state outcomes due to internal methodology and variations in patient health status, compliance and access to care. Providers and organizations continue to maintain internal quality measures that contain subjectivity and may be based on arbitrary operational processes such in the case of days to heal that are dependent on admission and discharge date. When measuring quality in various settings, it is important to recognize the incentives to providing care in the most appropriate venue. While outpatient wound centers may have equipment, optimal lighting, technical expertise and supplies to manage a wound for a long term care patient residing in a skilled nursing facility, the cost of providing services to residents of skilled nursing facilities must be considered.

According to Desmond Bell, DPM, CWS, in his 2013 article titled, "8 Steps To Developing a Community Based Wound Care Team: A Practical Guide for Reaching Beyond Wound Center Walls", "consistency counts. Many providers who are staffed in a wound care center may only be in the facility on a part time basis, meaning there are no guarantees that everyone will be *on the same page* unless a true effort is made." [xii] This concept becomes magnified as care is to be coordinated throughout a large health system with many physical locations and departments.

Carolyn Fife MD, FAAFP, CWS, also states in her 2012 article, "The Changing Face of Wound Care: Measuring Quality" clinical practice guidelines are a way of describing what ought to be done, while quality measures are a test to determine what kind of care was actually performed. [xiii] Most measures are process measures and those outcomes measures that are cited by various providers are based on internal criteria and reporting mechanisms. Regardless of the measures utilized, there is agreement among peers, management firms and wound care nursing

staff that a skilled physician can appropriately lead organizations to provide higher quality processes that will produce higher quality outcomes.

The role of a Medical Director certainly includes the training and oversight of the individuals involved in wound care delivery. Removing silos within the continuum of care relative to wounds ensures consistency. The initiative to manage wounds for patients in acute care, the outpatient setting and skilled nursing under the direction of a single medical director is a significant step to ensure care at a skilled nursing center is consistent to the extent possible as other venues that may be considered more specialized. As noted by Les Kiemele and Paul Takahashi in their article titled "Building Collaboration between the Outpatient Wound Clinic and Long Term Care," wound clinics may have diagnostic and therapeutic option that may not be available in long term care facilities, such as specialized testing. [xiv] Wound clinics have the ability to perform surgical debridement by skilled qualified health professionals. Therefore a relationship between the nursing home and the wound care clinic can produce advantages that independently would not exist. [xv]

During a recent discussion, a Program Director of a wound care program in the southeast United States concurred with the notion of a single medical director by stating. "The quality that can be achieved to have one medical director is continuity throughout our wound care centers. Our mission is to have every wound center within our organization to have the same best practice. Staff and management have access to the medical director which facilitates communication and helps to keep projects on track."

With respect to quality of care in skilled nursing facilities, connectivity to a wound care center or provider has positive implications. In the last few years the scope of responsibilities and duties delegated to medical directors has been evolving to include more responsibility over measures of quality within their healthcare organizations. [xvii] This should be expanded to include

skilled nursing facilities. In an article titled Impact of Medical Director Certification on Nursing Home Quality of Care, research demonstrates that the presence of a certified medical director in a facility makes an appreciable positive difference in the quality of care provided in long term care facilities.[xviii] Since care delivered is either provided directly or under the direction of trained wound care physicians, higher levels of performance can be achieved. The same concept is supported by the website blog posted by Hospital Management, where it is stated, "Potentially, the greatest efficiency gains can be achieved through effective training and education of individuals involved in wound care. A structured program of training for practitioners involved in wound care, supported by best practice protocols, has real potential to reduce the variation in practice and improve patient outcomes". [xix]

Quality is an independent event relative to cost and reimbursement. However, organizations do weigh the cost and perceived quality when making care decisions. For example, to obtain a higher quality outcome for an individual in a homebound setting or a long term care setting, the cost associated with transferring a patient to a center with advanced technologies will very likely be considered. Such costs may create an incentive for the nursing staff to manage the wound inside of the facility to avoid excessive costs associated with transportation. These costs become prohibitive relative to hyperbaric treatments which are required daily for four or more weeks. In addition to the direct transportation cost, reimbursement is affected by providing a facility based service on the same day. This provides an additional incentive to treat the patient in a long term care facility, making the wound care professional and an even more valuable partner in the delivery of care. Often times the skilled nursing facility, having a relationship with a center will make financial arrangements with the outpatient center in order to provide care while not bearing the full cost of the service. These relationships clearly have benefits and add to the quality of care provided.

Benefits of a formal organizational structure

The benefits of a comprehensive model include collaboration and coordination that ensures seamless transition as patients move throughout the continuum of health services within the healthcare organization. Collaboration also ensures communication relative to patient status and treatment will occur during the *handoff* from one entity to another. In addition to higher levels of patient satisfaction and improvements in outcomes, as defined by severity adjusted heal time or amputation rates, the total cost of care is likely to decrease as patients receive the right care, at the right time and the right place.

By creating a structured approach to wound care in which all care is under the direction of a single medical director, quality and efficiency is likely to improve. The Medical Director, in collaboration with a formal group comprised of members of the various entities providing wound care in the community, improves communication and collaboration which is expected to improve overall delivery of care. Coordinated efforts among stakeholders and providers, ensures a shared vision which again leads to a structural mechanism to effectively manage wounds and improve metrics throughout the continuum.

The Case For Comprehensive Wound Care Organizations – Why Healthcare Leaders Should Embrace a Formal Structure.

At a 2016 conference hosted by Wound Clinic Business, several leaders in attendance indicated that their responsibility was limited to stand-alone physician offices and hospital based outpatient centers. There was consensus that a broader wound care program would provide value to the communities in which they operate. With a goal of improving care for patients with chronic and acute wounds, collaboration among providers becomes increasingly important. Leaders may embark on several strategies to accomplish this goal. One such strategy, to create a formal

organizational structure, provides the opportunity to ensure wound care services are provided with minimal deviation from community or organizational standards of care. Steps to achieve a formal structure involve acceptance and agreement from leaders in multiple entities. Communication is paramount to offer a value proposition in which the needs of the various entities are met and equally important, not threatened.

For organizations that may struggle to develop a collaborative approach, management firms have a role in facilitating such efforts. In a conference call with leaders of a wound care management firm, a representative stated that successes in quality of service and have been more easily achieved by those organization who embarked on a comprehensive program. A medical director of one such program shared the organization's initial reluctance to partner with a management firm as the leadership team believed they had the skills to effect organizational changes. In hindsight, the medical director conceded that the management firm's unbiased approach and industry knowledge created honest dialogue relative to opportunities while optimizing the strengths and talents of the individuals to maximize patient care. The group is now operating as a service line under the direction of a single medical director. This has led to outreach and partnerships with independent skilled nursing facilities. In addition, as evidence by an internal analysis, the total cost of care was reduced. The analysis was a manual process as the accounting information systems was unable to accurate capture cost in each department. However, confidence was high that the collaborative model was far more successful from a care and financial perspective from the prior organizational structure.

Another leader of a wound care consulting firm stated that management firms can provide consultative and management services to facilitate collaboration within large healthcare systems. Healthcare organizations enjoy successes in a comprehensive program as those

organizations have responded to a consistent strategy for the treatment of chronic, non-healing wounds. An integrated service line can serve to standardize the knowledge base among providers, adopt evidence-based protocols and improve outcomes amid the populations served by the health system. This approach also positions the organization to facilitate negotiations with private payers for the treatment of chronic wounds and limb salvage.

Discussion

"The burden of treating chronic wounds is growing rapidly due to increasing health care costs, an aging population and, in the United States and beyond, a sharp rise in the incidence of diabetes and obesity worldwide. It is claimed that an excess of $25 billion is spent annually on treatment of chronic wounds." [xxi]

This study raises some questions and concepts that organizations will choose to address related to alignment including organizational readiness, stakeholder concerns, the role of management firms and information technology.

The majority of this paper discussed a proposed organizational structure with a single medical director leading all wound care activity. While the paper included two organizational structures, many more exist. A key component to consider is an assessment of the organizational dynamics within organizations considering such realignment. Simply put, can patients benefit by creating a wound care service line and are organizations prepared to restructure areas of responsibility to others.

As discussed, wound care is complex. An area that lacked representation in this paper is the impact a focused service line will have on independent community physicians. Little experience was found on this topic in literature searches, yet it is important to understand the

impact it will have on organizations. This is certainly a component that is to be considered especially in competitive markets where referral activity is paramount to success.

Leaders may also investigate the role of management firms to assist in the development of formalized structures. With the growth of firms specializing in the management of wound care centers, the perspective relative to future organizational structures from these organizations warrants explanation. Management firms are also offering strategies to accomplish internal relationships in addition to the day to day management of wound care centers. Wound care management firms will offer services to improve outcomes such as heal rate and limb salvage. Management firms may not be a fit for all organizations. However, this study would be remiss if the role of management firms was not addressed.

The impact of integrated medical information systems was absent from this discussion. However, the positive impact of information technology has far reaching effects to greater communication and transparency of patient records and health history. For purposes of collaboration, development of uniform templates and other components of the medical record fall into the general communication category. Due to the magnitude and importance of electronic medical records, collaboration and cooperation are essential to consolidate wound care encounters. The same concepts apply to financial management to accurately capture the total cost of care for a wound care episode.

Conclusion

As Jay Prystowsky, MD, MBA, states in his blog on the Sg2 website in January 2016, "a comprehensive wound care program can offer oversight and help coordinate care across all these sites, which could result in not only better treatment for wounds, but the salvaging or preserving of limbs. In fact, a comprehensive wound care program reduces the amputation rate for patients

with chronic wounds by an estimated 60% to 80%! As such, many of these programs are self-described as limb preservation programs."[xxiii]

Creating a formalized structure for wound care services requires a physician champion who can create, in a collaborative fashion, a shared vision of all key stakeholders. Once the organizational vision is achieved, creating an advisory group and appointing members ensures viability of the group. As Paula M. White, FACMPE concludes in the MGMA professional paper, "Understanding Finances in a Service Line Model", the practice or service line executive can leverage established tools, systems, and financial management models to successfully manage the organization's service lines. Partnering with physician leadership is critically important to guide the organization into the service line structure. Service lines or service line-like structures are viewed as acceptable models to breakdown specialty silos and to promote clinical integration.[xxiv]

The vision should emphasize the collaborative nature of wound care services and propose opportunities for improved outcomes throughout the continuum. Short term activities intended to garner trust and build relationship may include round table discussions addressing industry trends and joint continuing education for nursing and providers who are invested in the practice of wound care. Intermediate strategies become more substantive in the development of common practice guidelines, protocols and product selection. Long term goals are achieved when the group establishes membership roles and responsibilities, creates an accepted nursing certification, employs a common electronic medical record and articulates standards of care common to all stakeholders.

This exploratory paper provides a background of selected wound care programs in the southeast United States and the experience of large management firms operating centers

nationwide. The discussion relates to the organizational structures of wound care programs and the correlation that successful programs have relative to organizational collaboration. As evidence by the research and opinions of industry leaders, successful programs as defined by patient outcomes and satisfaction are achieved by a collaborative approach to wound care. Leaders of wound care programs can learn that these important organizational structures take skills and resources to create. However, the journey which can be time consuming will have positive impacts to patients and improved performance of the organization.

2016 US Wound Registry Measures for Reporting

Measure Number	Title
CDR 1	Adequate Off-loading of DFU at Each Visit
CDR 2	DFU Healing or Closure
CDR 3	Plan of Care for DFU Patients not Achieving 30% Closure at 4 Weeks
CDR 4	Diabetic Foot & Ankle Care: Comprehensive Diabetic Foot Examination
CDR 5	Adequate Compression at Each Visit for Patients with Venous Leg Ulcers (VLU)
CDR 6	Venous Leg Ulcer Outcome Measure: Healing or Closure
CDR 7	Plan of Care for VLU not Achieving 30% Closure at 4 Weeks
CDR 8	Appropriate Use of Hyperbaric Oxygen Therapy (HBOT) for Patients with DFU
CDR 9	Appropriate Use of Cellular or Tissue Based Products (CTP) for Patients Aged 18 Years or Older with a DFU or VLU
CDR 10	Vascular Assessment of Patients with Chronic Leg Ulcers
CDR 11	Wound Bed Preparation Through Debridement of Necrotic or Non-Viable Tissue
CDR 12	Wound Related Quality of Life
USWR 13	Patient Vital Sign Assessment Prior to HBOT
USWR 14	Blood Glucose Check Prior to HBOT Treatment
USWR 15	Healing or Closure of Wagner Grade 3, 4, or 5 DFUs with HBOT
USWR 16	Major Amputation in Wagner Grade 3, 4, or 5 DFUs Treated with HBOT
USWR 17	Preservation of Function with a Minor Amputation Among Patients with Wagner Grade 3, 4, or 5 DFUs Treated with HBOT
USWR 18	Complications or Side Effects Among Patients Undergoing Treatment with HBOT
USWR 19	Completion of a Risk Assessment at the Time of HBOT Consultation
USWR 20	Nutritional Screening and Intervention Plan in Patients with Chronic Wounds and Ulcers
USWR 21	Patient Reported Experience of Care: Wound Outcome

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