Currently (as of June 27, 2020), more than 10 million people worldwide have been infected with the novel COVID-19 virus and over 499,000 deaths have resulted from this pandemic. Strict quarantine and safer-at-home orders were designed to “flatten the curve” to limit the number of infections in the United States and prevent healthcare systems from becoming overwhelmed. The secondary effect has resulted in limited care and access for patients to reach their healthcare providers. Many offices were closed due to lack of protective equipment and personnel, and others were complying with policies to conserve limited resources. Those offices that remained open were able to treat patients and remove further burden from hospitals. It is now evident that an effective and streamlined triage system for patients is necessary to provide care when faced with limited resources.

Podiatrists treat a large number of patients with diabetes. They provide preventative care and handle acute issues in this patient population. They are essential at reducing the risk of infection and amputation in this patient population. Immunocompromised patients such as those with diabetes are at significantly higher risk for having serious complications and higher mortality related to COVID-19. Podiatrists and practitioners in outpatient settings helped to prevent hospitalizations and emergency room visits to reduce the risk of transmission of the virus.

Triage System

Recently, Rogers et al. described a diabetic triage system (Figure 1) identifying critical, serious, guarded, and stable patients. It is now evident that an effective and streamlined triage system for patients is necessary to provide care when faced with limited resources. Podiatrists treat a large number of patients with diabetes. They provide preventative care and handle acute issues in this patient population. They are essential at reducing the risk of infection and amputation in this patient population. Immunocompromised patients such as those with diabetes are at significantly higher risk for having serious complications and higher mortality related to COVID-19. Podiatrists and practitioners in outpatient settings helped to prevent hospitalizations and emergency room visits to reduce the risk of transmission of the virus.

Figure 1: Diabetic Triage System Identifying Critical, Serious, Guarded, and Stable Patients
**Saving Limbs (from page 53)**

Relaying critical, serious, guarded, and stable patients. This system was designed to identify the acuity of the patients to determine if care could be provided away from the hospital or emergency room. It also evaluated the role of telemedicine for high-risk patient populations. By utilizing this triage system, patients with diabetes classified as critical required in-patient care or hospitalizations included: IDSA severe or moderate infection, gas gangrene, SIRS/sepsis, or acute limb-threatening ischemia; while less acute issues were addressed either in the outpatient setting or telemedicine. The triage system allows providers to give patients access to care while keeping them as safe as possible.

Due to the exponential number of people affected by the COVID-19 virus and an expected second or third wave, the need for an effective triage system in the hospital and clinical facilities cannot be overstated, especially with the high-risk diabetic patients. At our university-based hospital and clinic system, many of our podiatric patients have multiple co-morbidities and high risk conditions such as dialysis dependency or are transplant recipients. These patients require close monitoring for critical limb threatening ischemia, peripheral vascular disease, uncontrolled diabetes mellitus, and neuropathic osteoarthropathy.

A triage system allows providers who treat complicated patients with guidance as to how and when to utilize surgical intervention instead of waiting for the risk for hospital exposure. While this system is centered around patients with diabetes, it has also allowed for evaluation of other podiatric concerns and provided patients with care for non-diabetic-related issues while practicing social distancing and minimizing contact risk. Providing care and education via teleconferencing allowed us to help patients who needed help while keeping the patients and office staff safe. Creating a framework to provide guidance to help patients, even if they cannot be physically in the office, has been a critical component for providing care for our patients.

The current success and benefits of this system currently outweigh the risks during this hazardous time. Delayed care and lack of oversight from a provider can be detrimental and lead to severe infection and limb loss. Patients need to have a method of communication with specialists such as podiatrists to guide and dictate patient care and whether or not they should present to emergency rooms. Patients who wait to seek care can have catastrophic results such as permanent cardiac damage and limb loss.

Through utilization of guidelines established by IDSA and SVS WIFI, we have been able to stratify patients to determine the patients with the highest risk classifications. Those with poorly controlled diabetes and peripheral vascular disease who are high-risk and need continual monitoring are managed and are sent to the hospitals and clinics for acute issues. During the initial stay-at-home orders, we reserved in-office clinic visits for patients with existing or previously infected or gangrenous ulcerations, active or recently reconstructed Charcot joints, or new wound consults deemed high-risk by the vascular surgery team or outside treating physician.

Patient visits were scheduled for longer blocks of time to allow for social distancing, and to prevent patients co-mingling with other patients in the waiting rooms. Initial regulations halted all elective podiatric procedures unless infected or limb-threatening. Non-systemic or moderate infections were managed in the office with temporizing procedures such as partial amputations or local irrigation and debridement to prevent hospitalizations (Figure 1).

Rigorous COVID testing was performed on high-risk diabetic patients to allow them to undergo surgical intervention for abscesses and/or osteomyelitis. Staged procedures were also utilized to help prepare the wound for future skin graft application, flap, or reconstruction (Figure 2). In these cases, application of wound VACs or continual wound care was performed until a definitive procedure could be performed safely. Our diabetic Charcot patients are off-loaded and surgery is deferred unless they have concomitant osteomyelitis (Figure 3). For patients with known critical limb ischemia or worsening peripheral arterial disease, collaboration and communication with our vascular surgeons are planned for timing of debridement and revascularization (Figure 4). Many vascular laboratories were closed for non-invasive testing so aggressive wound care and off-loading were implemented to preserve tissue before patients could have open or

**Figure 2:** A 72-year-old male clinic office visit; infected diabetic foot ulceration with cellulitis and verrucous hyperplasia. Triage stratification: Serious.

**Figure 3:** A 52-year-old male clinic visit; status-post removal of infected hardware and Charcot reconstruction with midfoot osteotomy and application of external fixator. Triage stratification: Serious.

Continued on page 55
**Saving Limbs** (from page 54)

endovascular repair. Close monitoring and triaging of patients were also helpful to determine the order in which patients underwent revascularization when restrictions were lifted.

Utilized is home healthcare nurses. Utilizing reliable companies and home nurses to provide documentation, photographs, and alerts for patients who require further care or are experiencing worsening symptoms is extremely useful.

It became more challenging when many home care companies had reduced staff and could not provide the same number of visits during this period. Many patients undergoing weekly wound care stated that home care providers would sometimes not show up due to concerns regarding virus transmission. Further education and home care supplies were provided to these patients and to their families to provide care if their access to healthcare professionals was limited.

**Pandemic Challenges**

During this current viral pandemic, it has been challenging to evaluate patients with varying degrees of foot and ankle pathology in-office. Hospital-based radiology was closed as were many stand-alone radiology centers. Implementing telemedicine and remote patient monitoring for these podiatric patients classified as stable or guarded have enabled treating physicians to maintain their continuum of care. Active communication with patients via videoconferencing or telephone allowed for symptom management and education to prevent any further damage.

Further cooperation with physical therapy and private practitioners also allows for a greater spectrum of care if the patient could not make it to a university or hospital-based office. Another resource that has also been utilized is home healthcare nurses. Utilizing reliable companies and home nurses to provide documentation, photographs, and alerts for patients who require further care or are experiencing worsening symptoms is extremely useful.

It became more challenging when many home care companies had reduced staff and could not provide the same number of visits during this period. Many patients undergoing weekly wound care stated that home care providers would sometimes not show up due to concerns regarding virus transmission. Further education and home care supplies were provided to these patients and to their families to provide care if their access to healthcare professionals was limited.

**Patient Education**

Education of patients and non-pediatric providers regarding recognition and management of acute limb ischemia and revascularization has been challenging. Active communication with patients via videoconferencing or telephone allowed for symptom management and education to prevent any further damage.
Saving Limbs (from page 55)

tion of diabetic foot infections re-

mains to be a challenge in the midst

of the COVID-19 pandemic. Many

patients with existing wounds have

chosen to practice social distancing

guidelines, minimize contact risk by

avoiding medical facilities, and have

put themselves at risk for worsening

progression and/or death when they

lose communication with their pro-

viders. On the other hand, patients

who wish to seek help are limited in

the options. With the closing of sev-

eral urgent care clinics and physician

offices, many patients have a ten-

dency to flock toward emergency rooms

and many put themselves at greater risk for a

stable wound.

Consults from emergency medicine

providers for patients with non-infected,

non-ischemic stable wounds in diabetic

patients can be an im-

proper use of resources

and unnecessarily ex-

pose patients to higher

risk environments (Fig-

ure 5). One of the goals

of implementing the

diabetic foot triage sys-

tem is to help minimize

the patient overload

in emergency depart-

ments for patients with

non-emergent or non-threatening limb

pathologies. Continual supplemental

education of non-podiatric providers

on recognizing and triaging patients

will assist with reserving emergency

departments for higher risk patients.

Proper education of other providers

would therefore re-route these pa-

tients to receive proper podiatric care

based on their risk stratification and

receive either hospital, in-office, or
telemedicine care.

Shift in Health Model

Having the pre-existing health model

shift away from hospital-based care to clinic-based and virtual-based care has afforded the opportunity to reduce the patient COVID-19 risk through identification and prioritiza-
tion of patients with varying degrees of ailments complicated by diabetes and periph-
eral arterial disease. Although a few barriers currently exist regarding this shift, many patients and providers have greatly benefited from its application, and it serves as a pillar in clinical decision-making. Different regions have rec-

ommended or mandated social distancing guidelines, but these patients and their loved ones

must still be able to become cognizant of their own health risks, and the foot care options

available to them.

The role of podiatry will continue to be increasingly es-

sential in identifying, educating, and aiding these patients, as well as provide other members of the pa-

tient care team. Re-

cent implementation of the diabetic foot triage system is serv-

ing as a crucial step and has the potential to become a model for our colleagues across all health professions in the continuation of care and protection of patients during this

viral pandemic. PM

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Figure 4: A 84-year-old male inpatient visit; bilateral chronic limb threatening ischemia, forefoot gangrene, underlying sepsis and cellulitis. Triage stratification: Critical.

Figure 5: A 64-year-old male inpatient clinic with stable, non-infected, non-ischemic ulcerations to distal 2nd digit. Triage stratification: Guarded

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