

Reflections of COVID-19 on Dermatology Practice

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ABSTRACT: When the COVID-19 pandemic struck the United States in early 2020, few healthcare workers were prepared for what lay ahead. Dermatology nurses, medical assistants, and nurse practitioners experienced rapid changes in the way they conducted their daily practice. This article discusses many of those changes and explores the challenges these healthcare workers faced and continue to face. Almost every aspect of how dermatologic care was delivered pre-pandemic was affected. Some dermatology nurses, medical assistants, and nurse practitioners were redeployed to COVID-19 testing tents and inpatient hospital units or were asked to perform tasks to help support other healthcare workers. This article explores how clinical practice, dermatology staff, patient care, and education were affected. These changes forced dermatology healthcare workers to be brave, accept risks, and ultimately grow from these experiences.

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It is widely accepted that the COVID-19 pandemic has forever changed the lives of our global community. From grocery store cashiers to Prime Ministers, no individual has been spared the disruption in normalcy that COVID-19 has presented. Healthcare, as we know it in the United States, was transformed before our eyes into mobile critical care units while others triaged vital resources. For many healthcare workers, this represented their first exposure to a crisis of this magnitude. This article provides a reflection of how dermatology practices, staff, and patients have been impacted by the COVID-19 pandemic.

Coronaviruses are not new and have been recognized as a highly contagious cause of global illness. There are many strains of coronavirus including those that cause illnesses like the common cold. Most of the strains are spread from human to human, whereas others are zoonotic. In February 2020, a novel coronavirus was identified by the World Health Organization and named SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) and was thought to have evolved from bats to humans in Wuhan, China during late 2019. The disease itself is abbreviated as follows: “CO,” corona; “VI,” virus; “D,” disease; “19,” discovered in 2019. It was not until March 2020 that the Centers for Disease Control and Prevention (CDC) declared the public health crisis as a pandemic (CDC, March 11, 2020). The global spread of the disease, and subsequent strain on limited healthcare resources, not severity of the illness, was the greatest concern.

During the early stages of the pandemic, little was known about the transmission or treatment of the virus. At the outset, thousands of people continued to travel to and from China where they became vectors for the disease spread throughout the world. The slow response of border closures meant uncontrolled exposure to infected individuals. Spread of the virus was mostly person-to-person through respiratory droplets, especially among people within close contact (less than 6 feet). The incubation period was about 2 weeks. The virus was found on surfaces that when contacted by an

individual's hands could be transmitted by then touching their face, mouth, nose, or eyes. There was also a subset of individuals who were asymptomatic carriers of the disease. Now, 6 months after the announced COVID-19 pandemic, over 18 million cases have been confirmed and almost 700,000 deaths have been reported worldwide (World Health Organization, on August 5, 2020) as well as over 4.6 million confirmed cases and more than 155,000 total deaths reported in the United States (CDC, August 5, 2020).

COVID-19 is not the only virus that has threatened our communities with epidemic illness. During the last decade, we have faced global outbreaks like SARS (severe acute respiratory syndrome) and influenza virus H1N1 (Swine flu) where we learned vital lessons about epidemiology, prevention, detection, and treatment. It is imperative that we collect data and reflect on the COVID-19 pandemic so that we continue to learn how to prepare for and manage future health threats. The COVID-19 is not the first, nor will it be the last, viral outbreak that we experience in our lifetime. Although cutaneous manifestations of COVID-19 may be rare, one may argue that no other disease has ever had such a profound effect on daily functioning of dermatology practices and their providers (Bhat et al., 2020).

By early March 2020, one of the initial responses to the pandemic in the medical community was to drastically limit in-person visits into health systems in an effort to reduce the risk of exposure and spread of SARS-CoV-2. Ensuring the personal safety of patients, providers, and staff became paramount. At the same time, it was imperative to provide care to our cohort of patients at the highest risk. Dermatology practices are characteristically bustling, high-volume environments with packed waiting rooms, busy hallways, and intimate “hands-on” physical examinations. The potential for dermatology practices to become transmission points or “vectors” of disease became a major concern in our healthcare community (Kwatra et al., 2020). This resulted in mass cancellations of nearly all previously scheduled patients and, for many practices, a moratorium on new patient appointments and referrals. Thousands of patients with non-life-threatening dermatologic conditions had their appointments canceled spawning even more fear and concerns about their future health.

CHANGES IN CLINICAL PRACTICE

The routine operation of dermatology practices across the country came to a halt without any ability to predict how the future of healthcare would unfold. A single urban-based academic dermatology practice canceled nearly 11,000 appointments in the month of March (C. Morrissey, personal communication, July 23, 2020). Abrupt cancellations left a variety of dermatology patient populations uncertain about how their future care would be delivered and their diseases managed. In-person office visits were strictly limited and were reserved for serious, life-threatening dermatologic

diseases or those conditions that, if not addressed within 72 hours, would land the patient in the already overwhelmed emergency department.

The manner in which routine dermatology visits were conducted also changed drastically. Although the use of telemedicine has been around for decades, dermatology as a specialty has been reluctant to step into the virtual world. The U.S. Department of Health and Human Services found that, in 2016, 60% of all U.S. healthcare institutions and 40%–50% of hospitals used some form of telemedicine (Chuchvara et al., 2020). In the same year, the American Medical Association found that only 15% of dermatologists were working in a practice that used telemedicine. Before the pandemic, telemedicine, specifically teledermatology, was reserved for limited use such as consultation from remote corners of the country and world to access expert opinions for both clinical and histologic cases. Most dermatology clinicians clung to the notion that our specialty was rooted in and could only be practiced through face-to-face encounters in which touching and visualizing our patients at close range was possible. Technology was viewed as getting between the provider–patient dyad.

In the face of the COVID-19 pandemic, the widespread adoption of telemedicine was thrust into the forefront of healthcare out of necessity. In the month of March 2020 the Cleveland Clinic, reported completing more than 60,000 telemedicine visits, compared to its 3,000 per month average (Cutler et al., 2020). Similarly, telemedicine became the primary source for delivering dermatologic care. Patients could connect with their providers over secure networks via websites or apps accessed through their personal computers or smartphones (Gondal & Shaukat, 2020). Telemedicine allowed for lesion assessment, patient education, and disease management in real-time despite the restrictions of in-office visits and social distancing mandates. Implementation of telemedicine required entire practices to quickly pivot to a new method of care delivery, which undoubtedly required changes in workflow models and staff responsibilities.

IMPACT ON DERMATOLOGY STAFF

The pandemic brought about a high level of uncertainty among all staff from schedulers to surgeons. Physicians, advanced practice providers, nurses, medical assistants, and administrative staff working in dermatology anxiously awaited news on how their roles may change as they anticipated the virus' impact on hospitals and clinics. The reality of the pandemic resulted in a significant economic impact with little ability to anticipate any return to normalcy. The Commonwealth Fund (2020) reported that by mid-March, the United States saw a 60% decline in outpatient visits and an even steeper decline for procedure-oriented specialties such as dermatology (Ault, 2020).

Employment of dermatology staff and clinicians, previously secure in their positions, suddenly came into question

because of the financial strain created by the pandemic. Many previously thriving dermatology practices were faced with the difficult decision to terminate or reduce the employment of physicians, advanced practice clinicians, nurses, medical assistants, and administrative staff to stay in business. Some practices offered their employees optional leave of absences or furlough in an effort to preserve their medical benefits or access unemployment. Some practices cut salaries, professional education-related expense accounts, and incentives to ease the negative financial impact.

Redeployment of staff from areas of lesser need to greater need required practices to take inventory of the staff's experience and reassign them to alternate settings. Optimizing providers through redeployment meant some advanced practice providers, nurses, and medical assistants from both primary care and specialty practice were thrust into caring for patients with COVID-19. Dermatology providers were assigned to indirect or direct patient care with varying levels of acuity like the emergency department or intensive care unit, whereas others were reassigned as backup to providers with a primary role in those units. Some dermatologists and advanced practice providers were assigned the task of COVID-19 results management, which involved notifying thousands of patients from local testing sites of their test results and triaging them to appropriate next levels of care. Proudly, the nursing profession is inherently adaptable and rose to the challenge in part because of their varied skill set that includes flexibility, resourcefulness, critical thinking skills, and personal and professional sacrifice. This should not be a surprise to anyone, given that nurses have been at the historical center of the recognition, prevention, health promotion, education, and care and control of infectious diseases from before the days of Florence Nightingale (Turale et al., 2020). However, there were challenges as nurses and nurse practitioners from specialty practice had legitimate concerns about their safety as well as their clinical decision making in areas outside their established knowledge and skill set. A study by the Royal College of Nursing Research Society (2020) surveyed 2,600 nurses and midwives about their redeployment during the COVID-19 pandemic. Sixty-three percent reported that their training was either nonexistent or inadequate. Fifty-two percent reported they lacked confidence in their training or were not trained at all in COVID-19 infection control and prevention. Identifying these challenges will hopefully aid in the structure of future educational goals to address pandemic preparedness.

Clinicians and staff who remained employed in dermatology were faced with continuously adapting to state and local guidelines required to operate healthcare practices during COVID-19. Administrative staff were crucial to the daily operations of clinical practices as they bore the brunt of the tedious workload related to massive cancellations and rescheduling of patients. The previously straightforward task of scheduling patients became significantly more work intensive and time consuming in light of the

COVID-19 pandemic. Scheduling staff were now tasked with the additional role of providing patients with information regarding masking and visitation policies, while handling a staggering number of messages from clinical staff regarding rescheduling thousands of patients.

New changes in workflow required physicians and advanced practice providers to function as teledermatology experts, despite having minimal, if any prior, experience with the technology. Assessing and diagnosing via telemedicine is a skill, like any other, that requires repetition, time, and training, none of which were possible in such a rapidly evolving situation.

Telemedicine required additional time-consuming demands such as providing patients with standardized information on telemedicine, how to take high-quality photos, upload photos, and download software, which was required to conduct the virtual visit. Scheduling staff as well as medical assistants took on the role of amateur technology liaisons for patients who had difficulty with this new technologic requirement.

Medical assistants also stepped up to the challenge and took on the important role of administering the COVID-19 screening questionnaire to all patients within 24 hours of their in-person appointment to reduce the risk of an infected individual entering the practice. Screening responsibilities were in addition to their duties related to medication reconciliation and chart preparation. Conducting the screening, combined with the back-and-forth "phone tag" often encountered when attempting to reach the patient, created hours of work for the staff even before patients arrived in clinic.

In addition to aiding in triage of visit requests, medication refills, and fielding of innumerable patient questions/concerns, dermatology nurses had to add clerical duties to their job description. Daily function in practices required extraordinary teamwork. Regardless of educational preparation, printing/faxing laboratory requisitions, decontaminating surfaces, and monitoring the security of the office became the responsibility of all. Dermatology nurses also used their excellent patient education skills to develop creative ways to teach patients how to self-administer injectable medications without the luxury of hands-on teaching. Nursing utilization of thoughtfully developed written educational materials and curated lists of reputable resources for patients became invaluable.

PATIENT CARE IMPLICATIONS

Throughout the almost daily changes faced by healthcare providers and patients, the one constant that remained during the height of the pandemic and continues to the present was the preservation of the safety of patients and healthcare providers by limiting spread of the virus. Many intensivists in the intensive care unit were faced with rationing of care and resources such as ventilators to critically ill patients with COVID-19 (White & Lo, 2020). As specialists,

dermatology providers were forced to ration dermatologic care and use their astute triaging skills to identify which patients had a condition that, if left unseen, would be more detrimental to their health than the risk posed by potential exposure to SARS-CoV-2.

Immune-modulating and immunosuppressant drugs are used with great frequency to successfully manage various dermatological diseases. Along with the efficacy that these drugs provide comes the potential side effects that require frequent monitoring and evaluation. Initially, there were many uncertainties surrounding the risk of COVID-19 on immunosuppressed individuals. This led some patients to stop these therapies, without consulting their provider, leading to flares in disease. Early in the pandemic, dermatology providers engaged in difficult risk/benefit discussions with their patients given the limited available data and the novel nature of the virus. It was not until mid-April that organizations such as the American Academy of Dermatology and the National Psoriasis Foundation released formal statements as it related to the use of biologic medications in patients with psoriasis in the setting of COVID-19.

Patients awaiting surgical treatment for cutaneous malignancies, patients with cutaneous T-cell lymphoma requiring photopheresis, and patients with psoriasis treated with phototherapy are a few examples of dermatologic patients who experienced immediate disruptions in their care because of widespread COVID-19-related practice closures. Organ transplant recipients, known to have high rates of skin cancer, and patients with melanoma in need of frequent skin checks experienced care delays. Clinical trial participants were also met with care disruptions. According to Collier et al. (2020), a query done in March 2020 estimated that there were 891 active trials for “skin” conditions, leaving many research institutions and staff challenged to maintain research activities amidst shutdowns and new regulations. Understandably, these delays and disruptions left many patients anxious and concerned about when and how their care would resume.

As the pandemic continued, practices were forced to provide care through a hybrid model consisting of teledermatology and limited in-person clinics. In areas where COVID-19 cases declined and hospitalizations reduced, modest increases in in-person visits supplemented by telemedicine became commonplace. Through implementation of teledermatology services, many practices were able to begin to address the backlog of patients who were canceled during the initial shutdown, as well as provide care to patients with new dermatologic concerns. Throughout the pandemic, dermatology medical assistants, nurses, and nurse practitioners skillfully employed their triage abilities to identify at-risk populations and coordinate much needed visits. As practices cautiously reopened, priority was given to resuming critical aspects of dermatologic care for high-risk populations such as Mohs micrographic surgery for high-risk skin malignancies and photopheresis for patients with cutaneous

T-cell lymphoma. Some practices chose to implement urgent biopsy clinics staffed by a single provider, allowing an opportunity for tissue diagnosis of suspicious lesions identified via teledermatology visits while maintaining safe social distancing requirements.

Although rarely life threatening, many dermatologic diseases have a significant negative impact on quality of life, comparable with chronic conditions such as depression, heart disease, and arthritis (Nagpal et al., 2019). A 2018 survey noted that more than half of patients (54%) reported anxiety while waiting for an appointment and nearly 60% had concerns that their skin condition would worsen while waiting for a dermatology appointment (Greater Access for Patients Partnership, 2018). The most significant impact on patient care during the pandemic was delay in treatment. We learned as a specialty how to limit these delays through accurate triage of patient concerns and employing technology, through the use of telemedicine services. We further realized the importance of patient education and thoughtful communication as we aided patients through this rapidly evolving public health crisis.

EDUCATIONAL IMPLICATIONS

To date, there are no guidelines for the education or preparation of healthcare providers redeployed to aid in the pandemic. Refresher courses, intensive training sessions, brief precepting or shadowing, and online education are some of the resources that have been made available. However, not all organizations or agencies recognized the vital importance of the education and training necessary for providers to feel competent and safe.

Education is critical for our healthcare workforce during a global pandemic. Programs and resources should be broadly launched, easily accessible, and standardized. Care should be taken not to overburden providers, nurses, and medical assistants who are already being tasked with extraordinary roles and responsibilities. Educational updates should address the science of COVID-19, epidemiology, infection control, public and personal safety, acquisition of new knowledge and procedures for appropriate redeployment, communication, and mental health. Additional resources may be necessary as professional nursing roles expand in response to the need for clinical, research, academic, and leadership roles during a global pandemic.

The delivery of education has been forever altered as a result of the COVID-19 pandemic. Harnessing the same innovative technology used to transform patient care into virtual visits can also be used to deliver education to the healthcare workforce, patients, and community. Digital and online platforms have been pivotal in enabling providers, nurses, and medical assistants to access education while being isolated in quarantine, maintaining social distancing, or burdened by extended work hours. Virtual technology not only has allowed us to maintain a nursing presence with patients

but also allows us to engage with colleagues and continue our professional networking.

FUTURE CONSIDERATIONS

We have learned a great deal over the past several months, but uncertainty still remains as we plan for the future of dermatologic patient care during the era of COVID-19. Some argue that care delivery will be forever altered. In many practices, stop-gap measures that were initiated out of necessity may become permanent fixtures in healthcare delivery. However, uncertainty and challenges can spark innovation, and reflection on difficult circumstances can foster growth and healing.

Moving forward, dermatology practices will be challenged to reflect on the changes that were implemented during this pandemic as they prepare for the challenges that will continue to arise. Practices will need to identify how they choose to move forward by answering a number of questions that exist. Will telemedicine remain a permanent feature of patient care? Can some subsets of patients be managed remotely without affecting quality? How do patients feel about this abrupt change in care delivery? What is the best way to safely resume seeing patients that can no longer be delayed? How can providers and staff be better prepared to handle future stresses on our health system? How do we ensure a virtual nursing presence as we provide care from a distance? All of these questions must be answered as we create our new models of care. Proudly, dermatology practices have shown resilience during this global pandemic. The challenges presented have driven innovation, fostered teamwork, and highlighted the commitment to our patients.

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