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Recommendations to Optimize Patient Care in Hidradenitis Suppurativa Clinics: Our Experience

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Dear Editor,

Hidradenitis suppurativa (HS) is a systemic inflammatory disease that has genetic heterogeneity and often requires a multimodal approach [1–3]. Given the recent increase in HS awareness, more providers are recognizing this entity and referring patients to dermatologists. As a result, the number of HS specialty clinics has been increasing in the USA during recent years [4]. Information about existing HS specialty clinics can be found at www.hs-foundation.org/hs-specialty-clinics. Currently, there is a gap in academic literature regarding recommendations to efficiently manage HS patients. One method is to start or improve existing HS specialty clinics via quality improvement (QI) initiatives that expand organizational capabilities. After implementing multiple QI initiatives over a 2-year period, we now serve approximately 750 patients annually across five clinic sites more efficiently and effectively than before. Here, we describe our experience with three QI initiatives focused on shortening appointment lead-time delays, improving clinical documentation via patient intake forms and note templates, and creating educational videos explaining HS-specific procedures.

Our first initiative focused on shortening lead-time delays, or the time to when new and returning HS patients are seen in clinic. To improve lead-time delay, most HS patients were first seen in the general dermatology clinics. Patients with mild to moderate HS were managed here over time, while patients with severe, refractory HS were referred to our HS clinic. However, patients referred from outside dermatologists or traveling a distance greater than 50 miles were immediately seen in our HS clinic. We created an internal set of HS treatment guidelines to be available at our institution's general dermatology clinics to assist providers and residents in managing mild or moderate HS cases and to route severe cases to our HS clinic. These guidelines were based upon the North American HS guidelines, and Henry Ford clinicians experienced in HS management [5]. The QI team coordinated Grand Rounds lectures to ensure all faculty and residents were educated on the internal guidelines, acute HS management, and the referral process. For example, patients with multiple comorbidities, disease recalcitrant

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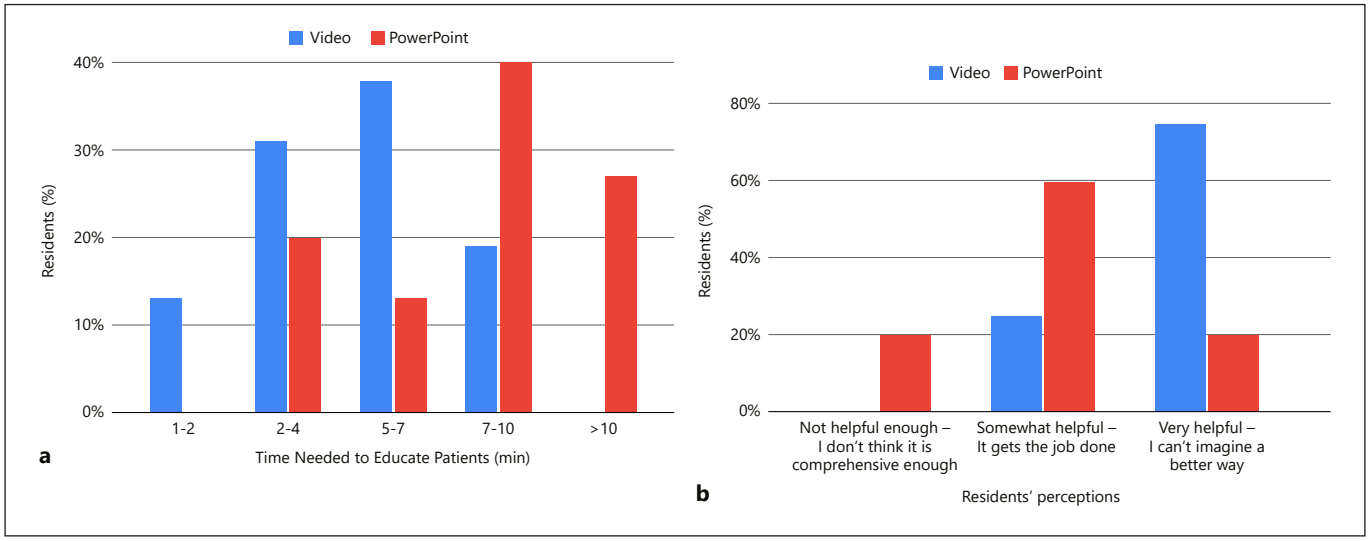

Fig. 1. Resident survey results on the utility of different educational modalities. **a** Time needed by residents to counsel patients on the HS CO_2 laser procedure. **b** Resident perceptions on the utility of different presentation methods to educate patients.

to conventional therapies, or Hurley Stage III HS requiring CO_2 laser excision – a procedure that focuses on tissue debulking through vaporization and excision of affected HS lesions – are immediately referred to our HS clinic and are managed in-house over time [6]. For less emergent referrals, we created a treatment plan that the referring provider can follow. We also increased the number of providers in our HS clinic as patient demand increased and a single provider clinic became inefficient. Now, two providers alternate between seeing patients, with one provider performing a CO_2 excision toward the end of clinic. Clinic appointments are double to triple booked, with resident and nurse/medical assistant support being instrumental in maintaining clinic flow. By instituting these measures over 2 years, lead-time delays decreased by 30%, from 52.7 days to 36.5 days for new patients, and decreased by 26% from 54.8 days to 40.6 days for returning patients. The overall clinic workflow and staff wellness improved significantly as providers could spend an adequate amount of time with patients without running behind in clinic.

Another recommendation to improve HS clinic efficiency focused on using patient intake forms and electronic medical record (EMR) templates to facilitate history-taking and documentation. At our institution, patients complete intake forms describing their recent HS history and treatment, which decrease time spent taking histories and allow providers to spend more time counseling patients. Specifically, our intake form asks questions related to severity and frequency of pain; location of current and previous flares; topical, oral, and IV medications used and side effects; surgical or laser treatment; associated medical symptoms, quality of life impact, and lifestyle factors. Given that patients may struggle to complete the forms due to inadequate time or health literacy, our support staff help patients complete these forms prior to being roomed. Our providers also use dedicated note templates to assist with EMR documentation. Note templates have the added benefit of helping providers determine whether CO_2 laser excision and other HS procedures are indicated in more severe or recalcitrant HS cases. While institutional guidelines for CO_2 laser procedures may vary, we promoted our internal guidelines for direct CO_2 laser patient referrals through sharing a referral criteria documentation template in the EMR to all providers to assist with this process.

Lastly, we created educational videos on specific HS procedures and postsurgical wound care to assist in answering commonly asked questions. Patients are provided with access to informational videos on CO_2 laser excision performed under tumescent anesthesia and the deroofing procedure. Previously, residents would sit with patients and go through PowerPoint presentations, which took a significant amount of time. With the development of educational videos, residents can complete patient orders and discharge paperwork, while patients watch the videos and

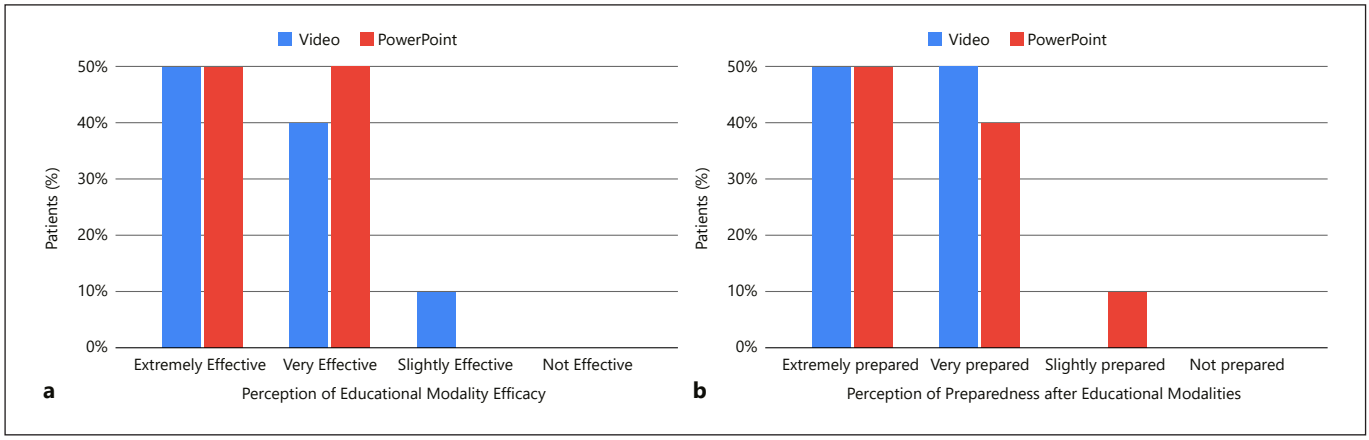

Fig. 2. Patient survey results on the utility of different educational modalities. **a** Patient perceptions of educational modality efficacy in learning about an HS CO_2 laser procedure. **b** Patient perceptions of their preparedness for the HS CO_2 laser procedure after different educational modalities.

ask any questions afterward. We conducted a survey to assess residents' perceptions of using the CO_2 laser excision video compared to the traditional PowerPoint presentation method. The survey was administered to 31 residents after an approximately 3-month implementation period. Our analysis revealed that 82% of residents were able to educate patients on the procedure in less than 7 min using the video, while 67% of residents needed more than 7 min to educate patients using the PowerPoint (Fig. 1). Furthermore, 75% of residents thought the video was an extremely helpful tool and could not think of a better way to educate patients, while only 20% of residents felt the same way about the PowerPoint (Fig. 1). We also surveyed 20 patients at the end of their visit to assess perceptions of their level of preparedness for the HS CO_2 procedure and perceived effectiveness in explaining the HS CO_2 procedure (Fig. 2). All of the video group patients (10/10) reported feeling extremely or very prepared for the procedure compared to 9/10 patients feeling extremely or very prepared in the PowerPoint group, with 1 patient from the PowerPoint group reporting feeling slightly prepared. When asked perceived efficacy in learning about the CO_2 procedure, all of the PowerPoint group patients (10/10) reported this modality to be extremely or very effective, compared to 9/10 patients in the video group providing ratings of extremely or very effective, with 1 patient rating the video as slightly effective. Given these comparable findings, video presentations may be another useful tool to help save providers' time in their HS clinic. An overview of the recommendations to improve HS clinic efficiency can be found in Table 1.

Table 1. Overview of recommendations to improve efficiency in HS clinics

Recommendations
Build a QI team composed of both general dermatologists and dermatologists focused in HS care, residents, nurses, medical assistants, and research staff
Staff multiple providers in the HS clinic to improve clinic workflow and personnel wellness
Create an HS management ladder to educate non-HS clinic faculty on how to manage milder HS cases in general dermatology clinics and refer more severe HS patients to the HS clinic
Use intake forms to improve the accuracy and thoroughness of patient histories and decrease the time spent on history-taking in the clinic
Provide adequate time for patients to complete the intake forms prior to being roomed
Have nursing staff and medical assistants help patients complete the intake form if needed to improve completion rates
Use note templates to ensure the complete history is documented, decrease charting time, and assist decision-making for CO_2 laser excision and other HS procedures in moderately complex patients
Provide patients with educational videos to help save time in answering frequently asked questions about HS-specific procedures and necessary wound care

We have provided some recommendations to assist institutions in serving HS patients more efficiently in HS clinics. By sharing our experiences, we hope to encourage other HS clinics to share their best practices in order to foster a culture that ultimately promotes higher quality, accessible healthcare for HS patients.

Key Message

Quality improvement initiatives for hidradenitis suppurativa clinics can improve time to evaluation for patients.

Conflict of Interest Statement

IH serves on the advisory board for AbbVie; is a principal investigator for Pfizer, LENICURA, Jansen, and Incyte; is a consultant for Incyte, Pfizer, UCB, and Boehringer Ingelheim; and serves as the president of the Hidradenitis Suppurativa Foundation. Iltefat Hamzavi is an investigator for PCORI, Incyte Corporation, L'Oréal, Beiersdorf, Estee Lauder, Unigen Inc., Ferndale Healthcare Inc., Pfizer, Allergan, and Johnson & Johnson and has served as a consultant for Pfizer, Johnson & Johnson, and Beiersdorf. None of the remaining authors have any conflict of interest to disclose. Richard H. Huggins is an investigator for Pfizer, Incyte, Arcutis, and the Immune Tolerance Network. Tasneem Mohammad is an investigator for Clinuvel, Incyte Corporation, Pfizer, Avita, Arcutis, Pierre Fabre, Estee Lauder, Unigen Inc., Ferndale Healthcare Inc., and Allergan.

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Author Contributions

Wyatt Boothby-Shoemaker, Rafey Rehman, Iltefat Hamzavi, Richard Huggins, and Tasneem Mohammad all contributed to the generation of the manuscript.

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