

Research Article

An Approach to Skin Conditions Assessment in a Family Medicine Residency Health Center

Yaritza Serrano Gomez* and Farideh Zonlouzi Zadeh

Department of Family Medicine, Northwell Health Glen Cove Hospital, Glen Cove, NY 317, Avenue E apt B411 Bayonne, NJ 07002, USA

***Corresponding author**

Yaritza Serrano Gomez, Department of Family Medicine, Northwell Health Glen Cove Hospital, Glen Cove, NY 317, Avenue E apt B411 Bayonne, NJ 07002, USA

Submitted: 09 June, 2025

Accepted: 01 July, 2025

Published: 04 July, 2025

ISSN: 2379-0547

Copyright

© 2025 Gomez YS, et al.

OPEN ACCESS**Keywords**

• Skin Conditions; Primary Care; Skin Assessments; Dermatology; Family Medicine

Abstract

Skin problems affect 20-33% of the population and are a growing reason patients seek treatment. A literature review suggests that while dermatologic conditions can be effectively managed in the primary care setting, more than 68% of initial evaluations are referred to a dermatologist, increasing care costs. In this study, we implemented a skin conditions assessment in annual physical examinations performed at our family medicine residency clinic to improve our residents' exposure to skin issues and to measure their confidence in diagnosing and treating skin disorders.

During this study, we collected data from all the annual physical visits from January to March 2022, searched for how often we performed a skin examination, and compared this data with the months during the study implementation, April to June 2022. We found that during the months before the implementation of the study, January to March 2022, there was an average percentage of 7.93% skin assessment in physical examination. Otherwise, from April to June 2022, when the study was implemented, there was an average percentage of 25.47% skin assessments, with an increase of 17.54% from the three months before the study.

This study showed an increase in the diagnosis of common skin conditions at our clinic after implementing a skin assessment in the annual physical examinations. This study shows that incorporating skin assessments can be a potential tool during residency training to increase the exposition of future primary care physicians regarding skin diseases and treatment and further improve the care PCPs provide to our community.

INTRODUCTION

Skin problems affect 20-33% of the population and have become a growing reason for why patients seek treatment. In 2010, a diagnostic skin assessment occurred or was ordered in over 167 million office visits [1]. Among those, 11 million patients were diagnosed with benign neoplasm [2]. At the same time, acne was the most common skin disorder in the U.S., affecting 40 to 50 million Americans [3]. A literature review suggests that while dermatologic conditions can be effectively managed in the primary care setting, more than 68% of initial evaluations are referred to a dermatologist, increasing care costs [1]. Several studies have evaluated how Primary Care Physicians (PCPs) compare with specialists in diagnosing and treating diseases. Although primary care may be comparable to specialists for specific disorders (e.g., hypertension and type 2 diabetes mellitus), this is not the case for skin diseases [4]. Researchers have demonstrated that dermatologists provide greater accuracy in diagnosing and treating skin disorders more appropriately than PCPs [4].

This could be secondary to a PCP's lack of confidence

in diagnosing and treating common skin conditions effectively. This could be partly due to inadequate medical school and residency training, as many have no or limited requirements for a formal clinical rotation in a dermatology service [1]. Although there is a concern of a global deficiency of knowledge of dermatology field in primary care, there is not enough evidence of possible solution to address this issue. Developing methods that aim to increase the exposition and education regarding dermatology disease in residency can have a positive impact in the way further PCP are shape and que quality of care they can offer to the community. In this study, we implemented a skin conditions assessment in annual physical examinations performed at our family medicine residency clinic with the aim of increasing the exposition of our residents to skin issues and to measure confidence at the time in diagnosing and treating skin disorders.

MATERIAL AND POPULATION

This study was conducted at the Northwell Health Glen Cove Hospital Family Medicine Residency Clinic. We provided a skin condition assessment form for patients

that had an annual physical examination. The skin assessment form consisted of general questions directed to the providers where the skin examination was described and measured the confidence at the time in treating and diagnosing the skin conditions. The questions were as follows:

- Does the patient have any concerns about his/her skin? If yes, please provide more information.
- Is the patient interested in having a dermatological evaluation?
- Describe the skin physical examination findings (define skin lesions).
- Provide the diagnosis of the suspected lesions.
- How confident do you feel about your presumptive diagnosis?
- How confident do you feel about treating this skin condition?
- Will the patient be referred to a dermatology physician?

The skin assessment form was accompanied by a supplemental guide that included dermatology terminology of primary and secondary skin lesion with respective images, shape of skin lesions, potency of steroids, example of a skin physical, and more. Also, during the study, we performed a series of lectures with dermatological topics during our didactics. The residents were responsible for identifying skin lesions found in the physical examination and documenting them on the “skin conditions assessment form” and the Electronic Medical Record (EMR).

During the study we recollected data from all the annual physical visits from January to March 2022 and searched for how often we performed a skin examination and compared this data with the months during the study implementation, April to June 2022. We identified the rates of skin conditions assessment and dermatology referrals before and after the study implementation. We evaluated our residents’ level of knowledge and confidence in diagnosing and treating skin conditions. We also analyzed the most common skin conditions in our population and the treatment and skin procedure performed (if applicable).

RESULTS

During the months of January to March 2022 before the implementation of the study there was a total of 227 annual physical examinations performed in our clinic, with a distribution of 54 during the month of January, 76 in

February and 97 in March. The monthly percentage of skin assessments were 9.25% in January, 7.89% in February and 7.2% in March (Figure 1). The total percentage of documented skin assessments during this timeframe were 7.93%. The number of referrals to a dermatology physician during these three months were two at 0.88%.

During the months of April to June 2022 when the study was implemented there was a total of 161 annual physical examinations performed in our clinic, with a distribution of 69 in April, 49 in May and 43 in June. The monthly percent of skin assessments were 28.98% in April, 24.49% in May and 20.9% in June (Figure 1). The total percentage of documented skin assessments during the time of the study was 25.47%, with an increase of 17.54% from the three-months before the study. The number of referrals to a dermatology physician during the study was seven at 4.35%.

We also measured the confidence of the physician residents at the time in diagnosing and treating the skin conditions. We found that in 41.46% of the cases the physician residents stipulated that they felt very confident about the presumptive diagnosis and 36.59% of the time were very confident in treating the presumptive skin condition (Figure 2). Also, we found that in 14.63% of the cases the physician residents stipulated that they felt

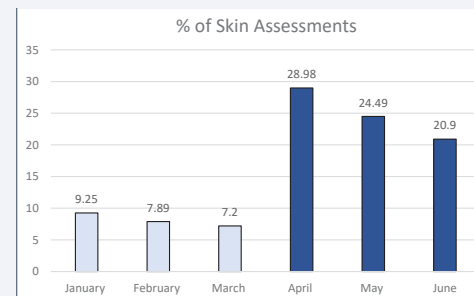


Figure 1 Percentage of monthly skin assessments before the implementation of the study (January to March) and after the implementation of the study (April to June).

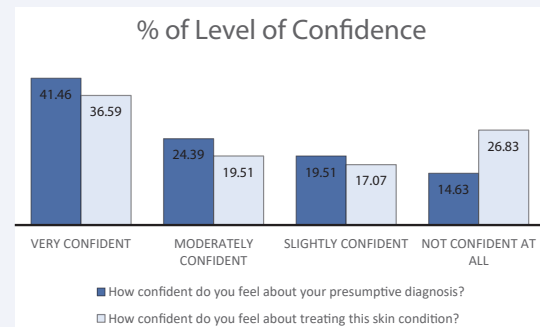


Figure 2 Level of confidence of our providers diagnosing and treating skin conditions during the implementation of the study.

slightly confident about the presumptive diagnosis and 26.83% of the time were slightly confident in treating the presumptive skin condition (Figure 2). The most common skin conditions diagnosed during the study were: contact dermatitis, lipomas, acne, benign nevi, suspected malignant lesions, onychomycosis, rosacea, epidermoid cyst, warts, and seborrheic dermatitis.

DISCUSSION

Patients with skin disorders are extremely common, compassing approximately 6% of visits to all physicians; however, about less than 40% of these patients are seen by dermatologists [4]. In primary care settings, the proportion of patient visits involving dermatologic complaints is even higher, where up to one of four visits involve a patient with skin disorders [4]. Since more than 60% of all patients with dermatological problems only consult their PCPs, therefore must triage their patients and decide on referral. To do this, they must be able to diagnose and treat the most common skin conditions [5]. Of all skin conditions, atopic dermatitis, acne vulgaris, cellulitis/abscess, verruca vulgaris, and benign skin lesions are typically the most common in the primary care setting [6]. For all these reasons PCPs must be well-educated on these topics and confident in their diagnostic and management skills [6].

The results of this study can suggest that the diagnostic approach used by PCPs when dealing with skin problems is not a linear but a complex process with a broad range of determining factors, such as experience in dealing with skin diseases, the individual level of knowledge and the accessibility of dermatologists [5]. It can be stipulated that the mean reason why there is diagnostic uncertainty regarding skin conditions can be due to missing dermatological knowledge. This lack of knowledge results from insufficient teaching during medical training and residency [5]. This can be supported by multiple studies, including the IMPACT study on psoriasis, which showed a significant lack of knowledge among participating PCPs about this common dermatological disease [7]. On the other hand, a study on secondary prevention of skin cancer showed that primary care residents failed 50% of the time to diagnose correctly nonmelanoma skin cancer and malignant melanomas, and 33% of the time they failed to recommend biopsies for cancerous lesions [8]. It was shown that even short rotations in dermatology significantly improved the diagnostic abilities of primary care residents [8].

This study showed an increase in the diagnosis of common skin conditions in our residency clinic after implementing a skin assessment in the annual physical

examination. We also found that the level of confidence of our residents in diagnosing and treating skin issues was lower than expected. While only in 41.46% of the cases the physician residents stipulated that they felt very confident about the presumptive diagnosis and 36.59% of the time were very confident in treating the hypothetical skin condition, the rest fell in a category from moderate to slightly confident (Figure 2). This was concerning when we evaluated the type of skin conditions in our community which are relatively common. This corroborates with recent research data indicating that PCPs don't feel confident treating skin conditions. We also suggest the mean reason why the resident physicians had uncertainty regarding the diagnosis and treatment of common skin conditions in our clinic is the same stipulated in other researches, the lack of knowledge in skin conditions. As our residency didn't count with a specific rotation in the dermatology service, we introduced dermatology lectures in our didactics with the aim to improve the teaching experience of our residents in the long term. This study also shows that reinforcing skin assessments in residency training can be a challenging tool to enhance the knowledge and education regarding skin conditions in primary care.

CONCLUSION

Primary Care Physicians (PCPs) must be able to diagnose skin conditions and determine their impact and must therefore incorporate the relevant knowledge and skills into their education. This study shows that the incorporation of skin assessments can be a potential tool during residency training to increase the exposition of future primary care physicians in regard to skin diseases and treatment and to further improve the care provided by PCPs to our community. Although USPSTF found inadequate evidence that screening for skin cancer through visual skin examination reduces morbidity or mortality [9], general skin assessments, not only limited to skin cancer screenings, can provide necessary information about potentially serious diseases and thus are valuable in vulnerable populations.

REFERENCES

1. AAFP FMX Needs Assessment - American Academy of Family Physicians. (n.d.). 2019.
2. Centers for Disease Control and Prevention (CDC). National Ambulatory Medical Care Survey. In: Ambulatory and Hospital Care Statistics Branch. 2010.
3. Dermatology (AAD). Stats and facts: Acne. 2014.
4. Federman DG, Reid M, Feldman SR, Greenhoe J, Kirsner RS. The primary care provider and the care of skin disease: the patient's perspective. *Arch Dermatol*. 2001; 137: 25-29.
5. Rübsam ML, Esch M, Baum E, Bösner S. Diagnosing skin disease in

- primary care: a qualitative study of GPs' approaches. *Fam Pract.* 2015; 32: 591-595.
6. Etcheverria E. Recognizing and treating five common dermatologic conditions seen in primary care. *JAAPA.* 2020; 33: 33-37.
 7. Nelson PA, Chew-Graham CA, Griffiths CE, Cordingley L; IMPACT Team. Recognition of need in health care consultations: a qualitative study of people with psoriasis. *Br J Dermatol.* 2013; 168: 354-361.
 8. Gerbert B, Maurer T, Berger T, Pantilat S, McPhee SJ, Wolff M, Bronstone A, Caspers N. Primary care physicians as gatekeepers in managed care. Primary care physicians' and dermatologists' skills at secondary prevention of skin cancer. *Arch Dermatol.* 1996; 1030-1038.
 9. US Preventive Services Task Force; Mangione CM, Barry MJ, Nicholson WK, Chelmow D, Coker TR, Davis EM, Donahue KE, et al. Screening for Skin Cancer: US Preventive Services Task Force Recommendation Statement. *JAMA.* 2023; 329: 1290-1291.