Austin Journal of Dermatology

Open Access

Austin Publishing Group

Rapid Communication

Improving Dermatological Care in Primary Care: Consideration of the Collaborative Care Model

Joslyn S Kirby[1]*, Abigail Boduch[2], Lorraine Rosamilia[3] and Jeffrey J Miller[1]

[1]Department of Dermatology, Penn State Milton S, Hershey Medical Center, Pennsylvania, USA

[2]Penn State College of Medicine, Hershey, Pennsylvania, USA

[3]Department of Dermatology, Geisinger Health System, Pennsylvania, USA

***Corresponding author:** Joslyn S Kirby, Department of Dermatology, Penn State Milton S, Hershey Medical Center, Hershey, Pennsylvania, USA

Received: January 29, 2016; **Accepted:** March 30, 2016; **Published:** April 01, 2016

Abstract

Background: Patient referral to dermatologists has been challenging due to poor access and high demand, despite an increased number of non-physician dermatology providers. In addition, alternative models of patient care such as the accountable care organization are expanding. These models encourage Primary Care Physicians (PCPs) to manage conditions to their maximum capacity and comfort.

Objective: To explore PCPs' experiences and attitudes with dermatologic care in traditional and alternative healthcare models.

Methods: Qualitative research study comprised of semi-structured interviews, were conducted between June 2014 and March 2015 with PCPs in academic and community practice. Two coders independently performed content analysis using a grounded theory approach.

Results: The findings indicate (1) dermatologic conditions are common in primary care and PCPs value more dermatologic knowledge, (2) better communication would facilitate dermatologic care by PCPs, and (3) they supported collaborative care with cooperative clinics and co-management via teledermatology.

Limitations: Limited sample size and result not yet implemented and studied.

Conclusions: This study describes opportunities to change the methods used to deliver dermatological care in the health care system, especially as population-based models of health care expand.

Keywords: Population health; Collaborative care; Primary care; Dermatology; Access; Alternative care models

Abbreviations

PCMH-Patient-Centered Medical Home; ACO-Accountable Care Organization; PCP-Primary Care Physician

Introduction

Skin conditions affect a substantial portion, 21 to 36%, of patients in primary care practices [1,2]. The pattern of referral to a specialist in departments and disciplines for organ-specific conditions remains mostly unchanged [3,4]. Patient referral to dermatologists has been challenging due to poor access and high demand, despite an increased number of non-physician dermatology providers [5-7]. In addition, Primary Care Physicians (PCPs), who are integral to the function of the Patient-Centered Medical Home (PCMH) and Accountable Care Organizations (ACO) models, demonstrate low diagnostic accuracy for skin conditions compared to dermatologists [8,9]. Alternative models of healthcare delivery are being investigated to improve patient outcomes, reduce errors, and improve efficiency. These models encourage a team-based approach to patient care with collaboration among PCPs and specialists, so PCPs are empowered to manage conditions to their maximum capacity and comfort [10]. Collaborative methods to provide high-quality care for patients with dermatologic conditions, need to be explored including integrating specialists into primary care practices, condition-specific guidelines for PCPs, and systematic monitoring. Thus, the objective of this study was to explore PCPs' experiences and needs to provide dermatologic care and potential changes toward collaborative health care models. A qualitative method was used to explore the multifaceted, complex phenomenon of health care [11,12].

Materials and Methods

Study participants

Faculty from the Departments of Family and Community Medicine or Internal Medicine at the Hershey Medical Center and Geisinger Medical Center or physicians in the surrounding community, who spoke fluent English were eligible. Participants were recruited using email invitations and network sampling [13]. Eligible PCPs were informed of the study goals and gave verbal consent. This study was approved by the institutional review board of the Penn State College of Medicine.

Interview procedures

Semi-structured interviews were performed using an interview guide, which ensured some similarity of content but also flexibility [13]. Interviews were conducted from June 2014 to March 2015. Each interview lasted 60 to 90 minutes. All interviews were conducted in

Citation: Kirby JS, Boduch A, Rosamilia L and Miller JJ. Improving Dermatological Care in Primary Care: Consideration of the Collaborative Care Model. Austin J Dermatolog. 2016; 3(2): 1050.

Table 1: Characteristics of the study participants.

Participant	Gender	Specialty, Practice Site	Years in Practice*	Dermatologic education		
				Medical School	Residency	Continuing Medical Education
1	Female	FP HMC	2 years	2 weeks	4 weeks	Unknown
2	Male	FP HMC	3 years	2 weeks	15 4-hour sessions	4 hours every 3 years
3	Male	FP HMC	6 months	0	Not dedicated	Occasional
4	Male	FP Suburban community practice	36 years	1-2 weeks	4 weeks	20 hours every 10years
5	Female	FP GMC	5 years	4 weeks	4-6 weeks	2-3 days every 6 years
6	Female	FP HMC	6 years	2 weeks	4 week block and 4 hours per month for 3 years	Unknown
7	Male	FP HMC	17 years	<1 week	2 months	Unknown
8	Male	IM GMC	26 years	0	2 months	Unknown
9	Male	FP Suburban community practice	35 years	4 weeks	4 weeks	5-10 hours every year
10	Male	FP HMC	19 years	0	2 weeks	Unknown
11	Male	IM GMC	19 years	2 weeks	0	Unknown
12	Male	FP GMC	10 years	2 weeks	2 weeks	Unknown
13	Male	FP Urban community practice	24 years	1 day	1 day per month	1-2 hours per year
14	Male	IM Urban community practice	26 years	1-2 days	None	3 hours every 3 years
15	Male	IM Urban community practice	26 years	1-2 days	None	Unknown
16	Female	FP Urban community practice	5 years	1 week	4 weeks	Unknown

*Years since completion of residency training, FP = Family Practitioner, GMC = Geisinger Medical Center, HMC = Hershey Medical Center, IM = Internal Medicine

person by two of three researchers (A.B., J.K., L.R.) and audio recorded then transcribed verbatim. Participants received no compensation.

Each participant was asked about his or her experiences providing dermatologic care for patients, including the approximate number of patients and common dermatologic, and the referral of patients. Each participant was also asked to describe his/her understanding of the PCMH, the role of dermatologists and suggestions to deliver dermatologic care. Participants completed a brief survey after the interview that assessed demographic information.

Analysis

One investigator (J.K.) read the transcript line by line after each interview and identified words, phrases and passages related to the provision of dermatological care, or open coding. These codes were used to inform subsequent interviews. Two investigators (J.K. and A.B.) reviewed the preliminary codes and developed the final analytical codes. The analytical codes were independently applied by two coders (J.K. and A.B.) to all of the transcripts [14]. The Spearman correlation for agreement between the coders was 0.83. Differences in coding were discussed until consensus was reached. Data related to the final codes were thematically examined. Thematic saturation was reached by the tenth interview [13,15].

Results and Discussion

Sixteen PCPs participated in the study (Table 1); 12 trained in family and community medicine and four trained in internal medicine. Ten practiced in an academic health system and six practiced in a community practice. The majority (9/16) of the participants completed their training before 2000 and most had some type of dermatology education during medical school or residency. However, six of the participants did not receive dermatologic training in either medical school or residency. Table 2 shows the major themes, sub-themes and representative quotations.

"Everyone's got skin": Dermatologic conditions in primary care are frequent and diverse

Participants reported dermatologic conditions were common in primary care, as one participant stated: "Everybody with skin has dermatology issues." Five of the participants reported that approximately 10-20% of patients had a stated dermatologic concern. However, the participants also felt that as many as 50% of their patients had an incidental skin concern that arose during the visit. Another participant commented that managing incidental concerns can be difficult, saying "It's hard to predict when we are going to be faced with a skin issue. People don't often schedule for skin reasons. You know it's a lot of 'oh by the ways'." This element of surprise requires a quick, unplanned application of dermatologic knowledge. Several of the participants reported managing 75-80% of the dermatologic conditions they diagnose, but there were various degrees of comfort managing the frequent dermatologic conditions. All participants reported using a limited number of dermatologic prescriptions with most being familiar with one or two topical steroids and topical treatments for acne.

Table 2: Themes, Sub-Themes and data from interviews.

Major Themes	Sub-themes	Supporting data
"Everyone's got skin": Dermatologic conditions in primary care are frequent	• Many patients have a concern about a skin condition • Common conditions but management is limited	• Five of the participants concurred that 10-20% of patients per day have a stated dermatologic concern; "Everybody with skin has dermatology issues. But, they are not always primary." • "I use a lot of triamcinolone in various strengths for a lot of the itchy rashes." Only a few providers were also comfortable performing shave and punch biopsies. • "I think the hard thing is when you see something that you can't quite classify and there is some diagnostic uncertainty…you know that's when it really I think collaborating with dermatology helps"
Coordinated Care	• Communication and Collaboration • Support with System Infrastructure	• "So, in a [patient-centered medical] neighborhood, where you can facilitate communication between your family docs, your internal medicine docs and your specialists, it just decreases barriers to providing optimal patient care for what the patient needs." • "if I say, "Would you do anything different for this patient's rash?" and he says, "No," he gets nothing. If the patient comes to the office and he says, "No," he gets to bill for that visit and gets paid. On both ends, there's no incentive to try to consolidate appointments and stuff."
Supporting Collaborative Dermatologic Care	• Collaborate in Clinic • Teledermatology for Co-management	• The presence of a dermatologist collaborator was supported several times, often as a resource to give feedback on the PCP's diagnostic or management plan. "If I can have a dermatologist in the office one day a week or half day a week, it's truly like dying and going to heaven…to have somebody immediately available is just wonderful." • "I think having a visual specialty like dermatology, having photography would be really, really useful…the ability to send secure photographs to somebody."

Coordinated care

All participants discussed the importance of coordination among multiple types of clinicians. All participants reported communication and coordination as critical factors to improving the provision of dermatological care. For example, participants said: "We all need to be doing it together. If I send somebody to you it's not I'm not unloading this problem but I'm asking for your input" and "I think opening up the communication, so we can discuss a patient easily." All participants were able to identify communication barriers. One participant said, "You have to page somebody, wait on hold, and then you're interrupting them."Several participants felt the current payment structure does not support collaboration. For example, one participant described that getting a quick opinion from the dermatologist is not rewarded in the predominant fee-for-service model. "If the patient comes to the office he gets to bill for that visit. There's no incentive to try to consolidate appointments."

Supporting collaborative dermatologic care

Participants suggested increasing proximity of dermatologists and PCPs and the use of photography to facilitate high-quality, collaborative dermatologic care. Multiple participants desire a dermatologist at his or her locale. One said "if I can have a dermatologist in the office one day a week or half day a week, it's truly like dying and going to heaven…to have somebody immediately available is just wonderful." One participant said "it might be nice to have a dermatologist in the office to take a look at something…that person can come in and reinforce that you were right…rather than just doing the direct patient care" All participants endorsed the use of teledermatology as a way to deliver more efficient patient care. Most participants preferred to manage the patient, but wanted advice, with teledermatology as the conduit for this. One participant explained "I have sent photos to a dermatologist for review, for review of my choices."

Discussion

As recently as 2008, there was a dearth of dermatologists (0 per 100,000 people) in a large portion of the country [16]. In addition, even with an increased number of non-physician providers, dermatology access has continued to be insufficient to meet demand [5-7]. This study highlights the frequency and breadth of dermatologic conditions in primary care and the opportunities to influence the delivery of dermatologic care. Participants reported that dermatologic conditions arose during 10 to 50% of their patient visits, either as a voiced concern when the patient made the appointment or as an incidental concern, similar to prior studies [7]. Thus, dermatologic conditions are common, yet PCPs in this study reported diagnostic uncertainty. Prior studies showed PCPs have low diagnostic accuracy compared to dermatologists [8,9]. This may arise from multiple sources including insufficient dermatologic education. Dermatology is a required subject in the US medical school curriculum and in family medicine and internal medicine residency training; however, this has not always been the case and the extent of this education, such as topics, number of hours, or clinical versus classroom exposure, is not specified [17,18]. McCleskey et al. found that 71% of medical schools provided nine or fewer hours of instruction in the first two years and more than a third did not require clinical experience [19]. Multiple methods to deliver dermatologic education have been studied; however, none of these has been shown to improve diagnostic accuracy and patient care over the long-term [20-22].

Multiple participants favored a different model of dermatology care, a multidisciplinary approach that included collaborative clinics with PCPs and dermatologists in the same clinical space. Collaborative clinics with PCPs and psychiatrists have been pioneered and shown to increase depression screening, reduce admission and increased quality of life [23,24]. Collaborative clinics for mental health care were investigated because multiple reports showed these conditions were common, but only 25% of patients were adequately treated and access to a mental health specialist was difficult [25]. These challenges are similar to those encountered with dermatologic care, namely high prevalence, inadequate treatment by other providers, and difficult access to dermatologists. Collaborative clinics with dermatologists and PCPs have not been described, and little is known about how this model would impact care of dermatologic conditions [26-30].

The collaborative model may serve to educate PCPs in the workplace about dermatologic conditions and increase their capability to manage common and straightforward conditions. This may improve access for all patients, since some patients will get care in the PCP's office rather than be referred and this decrease in referrals could improve access to dermatologists for patients with more complex conditions. Teledermatology could also complement collaborative dermatologic care [31,32].Teledermatology is a reliable, accurate, and timely method to triage PCP-referred patients. Two studies showed that about 50% of the cases referred by a PCP for a concerning growth did not need to be seen in the dermatology clinic [33,34].The challenges to implementing teledermatology include state licensure requirements and lack of reimbursement; however, progress to support tele-health services is being made [31]. Lastly, collaborative clinics may concurrently improve the care directed by the dermatologist, as collaborat in with the PCP may improve management of adverse effects or improve preventative care. This has been demonstrated in collaborative care between PCPs and oncologists [35].

Conclusion

There are an insufficient number of dermatologists in a large portion of the country. Even with an increase in non-physician providers, access to dermatologic care is limited. This study suggests that PCPs want to manage skin conditions but favor a multidisciplinary approach that includes collaborative clinics with PCPs and dermatologists. Collaborative clinics with PCPs and psychiatrists have shown improved screening, treatment and quality of life. The collaborative model may also improve PCPs' dermatology knowledge and capability, since research has shown that clinical education is associated with better comfort recognizing and treating skin conditions [36]. We feel it is necessary to disrupt our traditional models of dermatology care delivery in order to meet the needs of our patients and so we are developing a collaborative care pilot at our institution.

References

1. Fien S, Berman B, Magrane B. Skin disease in a primary care practice. Skinmed. 2005; 4: 350-353.
2. Lowell BA, Froelich CW, Federman DG, Kirsner RS. Dermatology in primary care: Prevalence and patient disposition. Journal of the American Academy of Dermatology. 2001; 45: 250-255.
3. Ruddy G, Rhee K. Transdisciplinary teams in primary care for the underserved: a literature review. J Health Care Poor Underserved. 2005; 16: 248-256.
4. Greiner AC, Knebel E, editors. Health Professions Education: A Bridge to Quality. Washington, DC: The National Academies Press; 2003.
5. Wilson MC, Hayward RS, Tunis SR, Bass EB, Guyatt G. Users' guides to the Medical Literature. VIII. How to use clinical practice guidelines. B. what are the recommendations and will they help you in caring for your patients? The Evidence-Based Medicine Working Group. JAMA: the journal of the American Medical Association. 1995; 274: 1630-1632.
6. Hayward RS, Wilson MC, Tunis SR, Bass EB, Guyatt G. Users' guides to the medical literature. VIII. How to use clinical practice guidelines. A. Are the recommendations valid? The Evidence-Based Medicine Working Group. JAMA: the journal of the American Medical Association. 1995; 274: 570-574.
7. Fleischer AB Jr, Herbert CR, Feldman SR, O'Brien F. Diagnosis of skin disease by nondermatologists. The American journal of managed care. 2000; 6: 1149-1156.
8. Federman DG, Concato J, Kirsner RS. Comparison of dermatologic diagnoses by primary care practitioners and dermatologists. A review of the literature. Archives of family medicine. 1999; 8: 170-172.
9. Moreno G, Tran H, Chia AL, Lim A, Shumack S. Prospective study to assess general practitioners' dermatological diagnostic skills in a referral setting. The Australasian journal of dermatology. 2007; 48: 77-82.
10. American College of Physicians. The Patient-Centered Medical Home Neighbor. The Interface of the Patient-Centered Medical Home with Specialty/ Subspecialty Practices. Philadelphia: American College of Physicians. 2010.
11. Polit D, Beck C. Nursing research: Generating and assessing evidence for nursing practice. 8th edn. Philadelphia: Wolter Kluwer. 2006.
12. Denzin NK, Lincoln Y. The SAGE Handbook of Qualitative Research. 4th edition. Washington DC: SAGE. 2005.
13. Merriam S. Qualitative research: A guide to design and implementation. San Francisco, CA Jossey-Bass; 2009.
14. Morse JM, Field P. Qualitative research methods for health professionals. 2nd edition. Thousand Oaks: SAGE Publications. 1995.
15. Werner CA, Papic MJ, Ferris LK, Lee JK, Borrero S, Prevost N, et al. Women's experiences with isotretinoin risk reduction counseling. JAMA Dermatology. 2014; 150: 366-371.
16. Aneja S, Aneja S, Bordeaux JS. Association of increased dermatologist density with lower melanoma mortality. Archives of dermatology. 2012; 148: 174-178.
17. Stockfleth E, Kerl H. Guidelines for the management of actinic keratoses. Eur J Dermatol. 2006; 16: 599-606.
18. Lebwohl M. Actinic keratosis: epidemiology and progression to squamous cell carcinoma. The British journal of dermatology. 2003; 149: 31-33.
19. McCleskey PE, Gilson RT, DeVillez RL. Medical Student Core Curriculum in Dermatology Survey. Journal of the American Academy of Dermatology. 2009; 61: 30-35.
20. Kaliyadan F, Manoj J, Dharmaratnam AD, Sreekanth G. Self-learning digital modules in dermatology: a pilot study. J Eur Acad Dermatol Venereol. 2009; 24: 655-660.
21. Raasch BA, Hays R, Buettner PG. An educational intervention to improve diagnosis and management of suspicious skin lesions. The Journal of continuing education in the health professions. 2000; 20: 39-51.
22. Lam TP, Yeung CK, Lam KF. What are the learning outcomes of a short postgraduate training course in dermatology for primary care doctors? BMC medical education. 2011; 11: 20.
23. Reilly S, Planner C, Gask L, Hann M, Knowles S, Druss B, et al. Collaborative care approaches for people with severe mental illness. The Cochrane database of systematic reviews. 2013; 11: CD009531.
24. Phillips RL Jr, Miller BF, Petterson SM, Teevan B. Better integration of mental health care improves depression screening and treatment in primary care. American family physician. 2011; 84: 980.
25. Unutzer J, Harbin H, Schoenbaum M, Druss B. The Collaborative Care Model: An Approach for Integrating Physical and Mental Health Care in Medicaid Health Homes. Centers for Medicare and Medicaid Services. 2013.
26. Pearson SD. Principles of generalist-specialist relationships. Journal of general internal medicine. 1999; 14: 13-20.
27. Rosstad T, Garasen H, Steinsbekk A, Sletvold O, Grimsmo A. Development of a patient-centred care pathway across healthcare providers: a qualitative study. BMC health services research. 2013; 13: 121.
28. Sargeant J, Loney E, Murphy G. Effective interprofessional teams: "contact is not enough" to build a team. The Journal of continuing education in the health professions. 2008; 28: 228-234.
29. Schwann NM, Nester BA, McLoughlin TM Jr. Commentary: Sense and sensibility: the role of specialists in health care reform. Academic medicine: journal of the Association of American Medical Colleges. 2012; 87: 258-260.
30. Casalino LP, Rittenhouse DR, Gillies RR, Shortell SM. Specialist physician practices as patient-centered medical homes. The New England journal of medicine. 2010; 362: 1555-1558.

31. Giambrone D, Rao BK, Esfahani A, Rao S. Obstacles hindering the mainstream practice of teledermatopathology. J Am Acad Dermatol. 2014; 71: 772-780.

32. Coates SJ, Kvedar J, Granstein RD. Teledermatology: from historical perspective to emerging techniques of the modern era: part I: History, rationale, and current practice. J Am Acad Dermatol. 2015; 72: 563-574.

33. Shapiro M, James WD, Kessler R, Lazorik FC, Katz KA, Tam J, et al. Comparison of skin biopsy triage decisions in 49 patients with pigmented lesions and skin neoplasms: store-and-forward teledermatology vs face-to-face dermatology. Archives of dermatology. 2004; 140: 525-528.

34. Moreno-Ramirez D, Ferrandiz L, Nieto-Garcia A, Carrasco R, Moreno-Alvarez P, Galdeano R, et al. Store-and-forward teledermatology in skin cancer triage: experience and evaluation of 2009 teleconsultations. Archives of dermatology. 2007; 143: 479-484.

35. Snyder C, Frick K, Kantsiper M, Peairs K, Herbert R, Blackford A, et al. Prevention, screening, and surveillance care for breast cancer survivors compared with controls: changes from 1998 to 2002. J Clin Oncol. 2009; 27: 1054-1061.

36. Hansra NK, O'Sullivan P, Chen CL, Berger TG. Medical school dermatology curriculum: are we adequately preparing primary care physicians? J Am Acad Dermatol. 2009; 61: 23-29.

Austin J Dermatolog - Volume 3 Issue 2 - 2016
ISSN : 2381-9197 | www.austinpublishinggroup.com

Citation: Kirby JS, Boduch A, Rosamilia L and Miller JJ. Improving Dermatological Care in Primary Care: Consideration of the Collaborative Care Model. Austin J Dermatolog. 2016; 3(2): 1050.