RESEARCH LETTER

Teledermatology Perception Differences Between Urban Primary Care Physicians and Dermatologists

The implementation of the Patient Protection and Affordable Care Act has renewed interest in the appropriate use and delivery of specialty services. Telemedicine has been touted as a potential solution to improve access, particularly in the context of the impending dermatology workforce shortage. While studies have demonstrated that teledermatology may reduce disparities, enhance access in geographically isolated populations, and improve efficiency in integrated health systems, evidence for its use in urban underserved populations is limited. Urban underserved communities have a high prevalence of chronic dermatologic conditions yet have limited access to dermatologists secondary to insurance scarcity. Often, urban underserved patients are seen by academic medical center dermatologists and face lengthy wait times and access challenges. While teledermatology implementation has been studied in various settings, no studies, to our knowledge, have provided a description of the practical needs of primary care physicians (PCPs) in independent community health centers (CHCs) that serve urban underserved patients and of academic dermatologists in such communities.

We evaluated perceived access to dermatologic care reported by urban CHC PCPs. Furthermore, we assessed PCPs' and academic dermatologists' receptiveness to incorporating teledermatology into their clinical practice to enhance dermatology access for urban underserved populations.

Methods | Boston-area CHC PCPs (board-certified in internal medicine, family medicine, or pediatrics) and academic dermatologists completed a 19-question survey from November 19, 2013, through April 30, 2014, using 2 standardized questionnaires collected via Research Electronic Data Capture, a secure electronic survey tool. The study and survey questionnaires were approved by the Partners Healthcare Institutional Review Board. Statistical analyses were performed using GraphPad Prism, version 5.0c (GraphPad Software).

Results | Ninety-seven PCPs and 48 dermatologists completed the survey. Seventy-eight PCP and 45 dermatologist respondents fit the predefined physician and practice location eligibility requirements (Table).

Community health center PCPs reported that urban underserved individuals comprised significantly greater percentages of their patient population compared with academic dermatologists ($P < .001$). Primary care providers were significantly more likely to indicate that their patients had difficulty obtaining or had long wait times for dermatology appointments ($P < .001$). Most PCPs were “not familiar” or “somewhat familiar” with teledermatology at study initiation. After a brief explanation, 69 PCPs (88%) indicated an interest in using teledermatology, similar to 35 academic dermatologists (78%; $P = .19$). All PCPs who had used teledermatology reported a willingness to reuse these services, significantly more than the comparable proportion of academic dermatologists ($P = .04$).

Specific concerns regarding teledermatology implementation differed substantially between groups. Primary care provider respondents were most concerned about equipment cost, equipment management, and staff training, while dermatologists cited legal liability, financial reimbursement, and diagnostic reliability as their primary concerns (Figure). Both PCPs and dermatologists expressed concerns regarding reimbursement for teledermatology.

Table. Dermatologist and Primary Care Physician Perceptions Regarding Urban Teledermatology

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Community Health Primary Care Physicians</th>
<th>Boston Academic Dermatologists</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents, No.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potentiala</td>
<td>225</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td>97</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>Eligibleb</td>
<td>78</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Response rate, %</td>
<td>35</td>
<td>38</td>
<td>.60</td>
</tr>
<tr>
<td>Survey responses, %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient panel comprising urban poor and underserved, mean (SD)c</td>
<td>74 (24)</td>
<td>20 (18)</td>
<td>&lt;.001*</td>
</tr>
<tr>
<td>My urban poor and at-risk patients have difficulty getting dermatology appointments or have long wait times for a dermatology appointmentd</td>
<td>77</td>
<td>11</td>
<td>&lt;.001*</td>
</tr>
<tr>
<td>“Not familiar” or “somewhat familiar” with teledermatologyf</td>
<td>87</td>
<td>58</td>
<td>&lt;.001*</td>
</tr>
<tr>
<td>Interested in using or investing in teledermatology after brief explanationg</td>
<td>88</td>
<td>78</td>
<td>.19</td>
</tr>
<tr>
<td>Prior use of teledermatologyh</td>
<td>9</td>
<td>36</td>
<td>&lt;.001*</td>
</tr>
<tr>
<td>Prior use of teledermatology and interested in reusing teledermatologyi</td>
<td>100</td>
<td>56</td>
<td>.04*</td>
</tr>
</tbody>
</table>

a Number of staff physicians in the academic hospitals and community health centers as of November 1, 2013.
b Respondents who self-identified as board-certified physicians in internal medicine, family medicine, pediatrics (primary care physicians), or dermatology (dermatologists).
c Two-tailed t test.
dχ2 (Two-tailed test).
eχ2 (Two-tailed test).

Letters
Primary care providers and academic dermatologists demonstrated significant differences in their perceived challenges to successful implementation of teledermatology for urban underserved populations. Responses between community health clinic (CHC) primary care providers (PCPs) and academic dermatologists were compared using a χ² 2-tailed test. *P < .001. **P < .01. ***P = .50.

Discussion | Consistent with existing studies, lack of access to appropriate dermatologic care persists among urban underserved individuals. Most Boston-area CHC PCPs were unfamiliar with teledermatology but showed a strong willingness to invest in and use this technology. While all prior PCP users of teledermatology would reuse it, academic dermatologists reported significantly less willingness to do so. However, more than half of academic dermatologists reported a willingness to reuse teledermatology, representing a group of providers who are potentially able to address dermatologic needs in this population.

The considerable divergence in the primary concerns of CHC PCPs and academic dermatologists may influence teledermatology adoption and implementation.5 Because new health care delivery models that emphasize accountable care focus on PCP management choices, establishing and addressing both the obstacles that independent CHCs will encounter with teledermatology alongside the concerns of dermatologists will be important to engage with this modality. Successful models for the integration of teledermatology may engage all dermatologists who treat the underserved, including nonacademic practitioners. Further studies are needed to explore the benefits and challenges of broadly implementing teledermatology, as a triage or treatment tool, in independent CHCs, the practice setting for many urban underserved patients.

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Accepted for Publication: August 26, 2014.

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Author Contributions: Drs Nambudiri and Vleugels had full access to all the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. Drs Nambudiri and Vleugels contributed equally to the study and represent co-last authors.

Study concept and design: All authors.
Acquisition, analysis, or interpretation of data: Ogbechie, Nambudiri.
Drafting the manuscript: Ogbechie, Nambudiri.
Statistical analysis: Ogbechie, Nambudiri.
Obtained funding: Ogbechie.
Administrative, technical, or material support: Nambudiri.
Study Supervision: Nambudiri, Vleugels.

Conflict of Interest Disclosures: None reported.

Funding/Support: This study was supported in part by the Harvard Medical School Center for Primary Care.

Role of the Funder/Sponsor: The Harvard Medical School Center for Primary Care had no role in the design and conduct of the study: collection, management, analysis, and interpretation of data; or preparation, review, decision to submit for publication, or approval of the manuscript.

Additional Contributions: We are indebted to Joseph Kvedar, MD, Department of Dermatology, Massachusetts General Hospital, for his feedback on the study design. Dr Kvedar was not financially compensated.


Standardized Patient-Based Assessment of Dermatology Resident Communication and Interpersonal Skills

Effective physician-patient communication is essential for the delivery of quality dermatologic care. The Accreditation Council for Graduate Medical Education recognizes the importance of physician communication and interpersonal skills (CIS) as proficiency in these skills is identified as a core competency in the Program Requirements for Graduate Medical Education in Dermatology.1 We developed