Barriers and Facilitators to Use of a Clinical Evidence Technology for Management of Skin Problems in Primary Care: Insights from Mixed Methods

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Barriers and Facilitators to Use of a Clinical Evidence Technology for Management of Skin Problems in Primary Care: Insights from Mixed Methods

Marianne Burke PhD; Alan Rubin MD; Liliane Savard DPT; Benjamin Littenberg MD, Ctr. for Clinical and Translational Science

Background
Primary care providers (PCPs) must diagnose and treat a wide variety of acute and chronic conditions including skin problems. Skin problems represent a significant proportion of diseases presented in primary care.

A 2016 cluster-randomized trial tested the effectiveness of a clinical evidence technology (CET), VisualDx, to improve the resolution of patient skin problems and reduce the number of return appointments [1]. There was no difference between groups in the outcomes measured in that trial.

Question: Why did the CET fail to make a difference in the outcomes tested?

Objectives
1) Learn why use of VisualDx did not make a difference in skin problem resolution or return appointments from the perspective of participating PCPs.
2) Identify facilitators and barriers at each behavioral step as experienced by the PCPs.

Model: Steps to Acquire, Appraise and Apply Evidence

Methods
Mixed Methods study design
Survey of 21 PCPs – 13 Active, 8 Control Interviews of 11 Active arm PCPs

Qualitative Interview Results: Steps 1–4

**Step 1: Recognize Uncertainty**

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Facilitator</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>Confidence</td>
<td>&quot;There were a lot of patients where I felt comfortable with what the problem was.&quot; PCP11 (24 yrs.)</td>
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<tr>
<td>Uncertainty</td>
<td>&quot;(Dermatology) is way harder because we just don't have the exposure, and so much of it is how it looks rather than a description of symptoms, so something like VisualDx helps. PCP07 (3 yrs.)</td>
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**Step 2: Seek Evidence in CET (VisualDx)**

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Facilitator</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Time</td>
<td>&quot;When you are already 45 minutes behind schedule and someone comes in with an [odd] rash, it’s easy to say, “Try this, if it doesn’t work call me back.” PCP10 (22 yrs.)</td>
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<td>Intention</td>
<td>&quot;I used it close to every time I saw a skin problem, unless it was super obvious…but even then, I would use it to get treatment recommendations. PCP08 (3 yrs.)</td>
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<tr>
<td>Other sources</td>
<td>&quot;I was next to a skilled older practitioner so my first recourse might be to go to him. So that may have decreased my use.” PCP10 (22 yrs.)</td>
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**Step 3: Navigate Access Technology**

<table>
<thead>
<tr>
<th>Facilitator</th>
<th>Notes</th>
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<tbody>
<tr>
<td>EHR access</td>
<td>&quot;If I'm seeing patients, I'm already in the EHR, and VisualDx is there, it's easy to find. 99% of the time that's what I'd do.” PCP11 (24 yrs.)</td>
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<tr>
<td>Access failure</td>
<td>&quot;(Instead) I was moderately useful in the beginning but then, I couldn't access it...and I didn't use it again.&quot; PCP05 (6 yrs.)</td>
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**Step 4: Search/Acquire Evidence Using CET**

<table>
<thead>
<tr>
<th>Facilitator</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ease of use</td>
<td>&quot;Once I knew what I was doing, it wasn't hard to use.” PCP06 (4 yrs.)</td>
</tr>
<tr>
<td>CET interface</td>
<td>&quot;I remember staring at it saying, &quot;Where do I put the information in?&quot; So it wasn't as user friendly for data input”. PCP10 (22 yrs.)</td>
</tr>
</tbody>
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Mixed Methods Results Summary

**Facilitators:**
1. Easy to access
2. Benefit to diagnosis and treatment
3. Patient communication

**Barriers:**
1. Irrelevant search results
2. Other sources preferred
3. Limited application to patients.

Conclusions
PCPs did not use VisualDx frequently or exclusively enough to make a difference in patient level outcomes.

VisualDx may support trainee education and PCP life-long learning in management of skin disease

References: