Telephone Follow-Up in Primary Care: Can Interactive Voice Response Calls Work?

Eta S. Berner, EdD

Professor and Director,
Center for Health Informatics for Patient Safety and Quality,
Department of Health Services Administration,
School of Health Professions
University of Alabama at Birmingham
Birmingham, AL, USA

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Co-Authors/Research Team

- Shannon H. Houser, PhD
- Midge N. Ray, MSN
- Richard Maisiak, PhD
- Anantachai Panjamapirom, PhD
- James Willig, MD
- Gordon D. Schiff, MD
- Thomas English, PhD
- Christa Nevin, MS
- Eta S. Berner, EdD
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Feedback is Important/Occurs Rarely

- Initial stimulus for study was a concern with diagnostic errors
  - Feedback needed to inform diagnosis and treatment
- Patient follow-up important in new models of care
- Monitoring and follow-up of ambulatory care patients rarely done
Need Methods to Improve Follow-up

- Interactive voice response system (IVRS) could be efficient method for follow-up in ambulatory care
- Little information of receptivity of patients to follow-up and feedback and especially in regard to IVRS
- Purpose of present study
  - Assess patient perception of follow-up
  - Explore if there are differences in perception of human and IVRS
  - Examine association of follow-up calls with perceptions of quality of care
Larger Study Aimed to Close Follow-up and Feedback Loop

• Part of larger study
  ▪ Extract patient data from EHRs (3 sites)
  ▪ Contact patients for follow-up
  ▪ Provide feedback on outcomes to physicians
### Example of Scripting and Branching Used for IVRS Calls

<table>
<thead>
<tr>
<th>Excerpt from IVRS script</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <em>Patient is authenticated and study is explained prior to the rest of the script.</em></td>
<td></td>
</tr>
<tr>
<td>2. Now that we have explained the study, are you still willing to participate in the phone survey?</td>
<td>If no, patients are routed to item 8. If yes, interview continues with either item 3 or 4.</td>
</tr>
<tr>
<td>3. You had a visit at our sick call clinic last week.</td>
<td>For HIV clinic patients only. Routed to item 5.</td>
</tr>
<tr>
<td>4. You had a visit at our UAB Family Medicine clinic last week.</td>
<td>For Family Medicine clinic patients only. Routed to item 5.</td>
</tr>
</tbody>
</table>
## Example of Scripting and Branching Used for IVRS Calls

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<th>Excerpt from IVRS script</th>
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<tr>
<td>5. We want to find out how you are doing now. If your problem is much better, say “much better,” if it is somewhat better, say “somewhat better,” if it is about the same or has not changed, say “no change.” If it is somewhat worse, say “somewhat worse” and if it is much worse, say “much worse.”</td>
<td>If patient says much better or somewhat better, they are routed to item 7; otherwise they are routed to item 6.</td>
</tr>
<tr>
<td>6. We will transfer you to someone that can help to address this problem, but first I need to ask you about your medicines.</td>
<td>If patients are not improved, they are told this prior to continuing with item 7. At the end of the call (item 8), these patients are connected to their physician’s office.</td>
</tr>
<tr>
<td>7. <em>Patient is asked questions about the medicine prescribed, whether they have seen anyone else for the problem, and general medication compliance.</em></td>
<td></td>
</tr>
<tr>
<td>8. <em>Patient is thanked and interview is ended.</em></td>
<td></td>
</tr>
</tbody>
</table>
• Technical Design

• Outcomes—under review

• Cost issues—in preparation

• Patient Perception of Follow-up and Quality—presented today
Methods for Assessing Patient Perception of Follow-up and Quality

- Part of routine patient satisfaction data collection from all patients
- Data collection after human and IVRS follow-up calls
  - Two different patient cohorts at each of two sites
  - Some, but not all, had received the calls
- Written questionnaire
  - Interest in follow-up (Yes/No)
  - Assessment of general satisfaction with care (1-4)
    - Communication with office—5 items
    - General satisfaction with care—4 items
  - Satisfaction with the follow-up calls (1-5)
    - Only those who received calls—4 items
## Patient Perceptions of Follow-up Calls

**Question:** Please indicate your degree of agreement with the following statements about the follow-up telephone call.

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean (Standard Deviation)</th>
<th>Human calls n=43</th>
<th>IVRS calls n=19</th>
<th>Total n=62</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>The follow-up telephone call from our clinic regarding your illness was helpful.</td>
<td>4.14 (1.30)</td>
<td>4.17 (0.99)</td>
<td>4.15 (1.21)</td>
<td>.94</td>
<td></td>
</tr>
<tr>
<td>About one week after your visit is a good time to call you from our clinic.</td>
<td>4.10 (1.26)</td>
<td>4.11 (0.66)</td>
<td>4.10 (1.10)</td>
<td>.98</td>
<td></td>
</tr>
<tr>
<td>If you were having a problem when we called, the assistance that you received was helpful.</td>
<td>4.08 (1.23)</td>
<td>4.19 (1.05)</td>
<td>4.12 (1.17)</td>
<td>.77</td>
<td></td>
</tr>
<tr>
<td>Overall, I am satisfied with the follow-up telephone call(s) from our clinic.</td>
<td>4.30 (1.14)</td>
<td>4.16 (1.07)</td>
<td>4.25 (1.11)</td>
<td>.65</td>
<td></td>
</tr>
</tbody>
</table>
Mean Overall Satisfaction Scores of Patients Reporting That They Received or Did Not Receive Follow-up Calls

<table>
<thead>
<tr>
<th>Call Type</th>
<th>Received Call</th>
<th>Did Not Receive Call</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Patient</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>Satisfaction</td>
<td>(Standard</td>
</tr>
<tr>
<td></td>
<td>Mean (Standard</td>
<td>Deviation)</td>
</tr>
<tr>
<td></td>
<td>Deviation)</td>
<td></td>
</tr>
<tr>
<td>Human calls</td>
<td>3.83 (0.38)</td>
<td>42</td>
</tr>
<tr>
<td>IVRS calls</td>
<td>3.94 (0.18)</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>3.87 (0.33)</td>
<td>61</td>
</tr>
</tbody>
</table>
Results Summary

- Patients appreciate the idea of follow-up
- Patients are equally receptive to human and IVRS follow-up
- Receiving a follow-up call was associated with perceptions of higher quality of care
Limitations

- Anonymous questionnaires precluded getting demographics
- Few respondents received the call
Conclusions

- IVRS can be useful for monitoring patient outcomes in ambulatory care
- Patients value the follow-up calls
- Follow-up related to patient perception of quality of care
Questions?

Eta S. Berner, EdD
Shannon Houser, PhD

eberner@uab.edu
shouuser@uab.edu