



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

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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



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

Example of Scripting and Branching Used for IVRS Calls



Excerpt from IVRS script	Notes
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."	If patient says much better or somewhat better, they are routed to item 7; otherwise they are routed to item 6.
6. We will transfer you to someone that can help to address this problem, but first I need to ask you about your medicines.	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.
<i>7. *Patient is asked questions about the medicine prescribed, whether they have seen anyone else for the problem, and general medication compliance.</i>	
<i>8. Patient is thanked and interview is ended.</i>	

Other Publications from Study



- Technical Design
 - Willig JH, Krawitz M, Panjamapirom A, Ray MN, Nevin CR, English TM, Cohen MP, Berner ES. Closing the Feedback Loop: An Interactive Voice Response System to Provide Follow-up and Feedback in Primary Care Settings. J Med Syst. 2013 Apr;37(2):9905.
- 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

Items	Mean (Standard Deviation)			p-value
	Human calls n=43	IVRS calls n=19	Total n=62	
The follow-up telephone call from our clinic regarding your illness was helpful.	4.14 (1.30)	4.17 (0.99)	4.15 (1.21)	.94
About one week after your visit is a good time to call you from our clinic.	4.10 (1.26)	4.11 (0.66)	4.10 (1.10)	.98
If you were having a problem when we called, the assistance that you received was helpful.	4.08 (1.23)	4.19 (1.05)	4.12 (1.17)	.77
Overall, I am satisfied with the follow-up telephone call(s) from our clinic.	4.30 (1.14)	4.16 (1.07)	4.25 (1.11)	.65

Mean Overall Satisfaction Scores of Patients Reporting That They Received or Did Not Receive Follow-up Calls



Received Call			Did Not Receive Call		
Call Type	Patient Satisfaction Mean (Standard Deviation)	N	Patient Satisfaction Mean (Standard Deviation)	N	<i>p</i> -value
Human calls	3.83 (0.38)	42	3.62 (0.57)	235	.024
IVRS calls	3.94 (0.18)	19	3.65 (0.56)	192	.023
Total	3.87 (0.33)	61	3.64 (0.57)	427	.002

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?



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