Assessing the Knowledge and Perceptions of Healthcare Providers on Motivational Interviewing and the Impact on Patient Adherence in Rare Disease Management

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Background

Motivational interviewing (MI) is a style of counseling where an individual acts as a facilitator by utilizing the patient's own beliefs and goals to guide them toward wanting to elicit a change.[1] Since its development, MI has been extensively utilized in various areas of healthcare, but has not been studied in rare diseases, where the need is critical.

In studies, telephonic motivational interviewing has shown to be beneficial when executed effectively and has the potential to change a patient's behavior toward improved medication adherence.[2] MI is commonly evaluated from a third-party perspective that reviews the communication between the clinician and the patient, using the Behavior Change Clinical Index (BECCI). In a study by DiRosa, L, et al., physicians assessed their personal MI skills and found MI enhanced patient communication to foster positive health outcomes for the patient.[4]

Individuals living with rare diseases are a subset of patients who are at an increased risk for medication non-adherence and would likely benefit from targeted MI conversations with clinicians.[3] These patients face complex treatment regimens, high-cost therapies, and debilitating adverse events and typically do not have physical access to clinicians at their specialty pharmacy. Challenging clinicians at a specialty pharmacy to assess their MI skills will offer insight on their ability to effectively communicate with their patients telephonically to improve patient outcomes.

Objective

The purpose of this study was to evaluate the knowledge and perceptions of MI held by pharmacists and nurses, while assessing their ability to use MI during calls with patients or their caregivers both before and after the completion of a thorough training program at a specialty pharmacy with a focus in rare and chronic conditions.

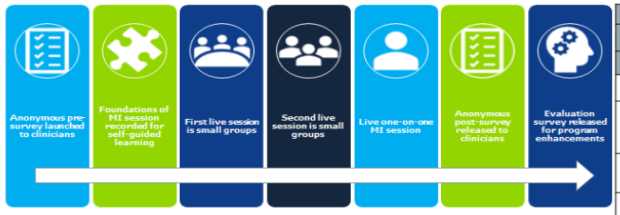
Methods

This quasi-experimental pretest-posttest study consisted of both a pre-survey and post-survey for pharmacists and nurses to assess their knowledge and perceptions of MI training and graded on their MI skillset with the BECCI assessment, a 7 or 11 question validated assessment tool (7 questions for self-evaluation; 11 questions for trainer evaluation).

The participants of the study completed four comprehensive, interactive training sessions over four weeks, where they learned and practiced MI skills and techniques. The initial session was an internally developed, pre-recorded, computer-based training that provided foundational information on MI. The second training was a small group session focused on the review of patient cases to assess the use of key words and phrases to foster relationships and acknowledge the challenges patients face. The third session focused on improving telephonic outreach at a rare specialty pharmacy through an interactive review of clinician calls with a small group of participants. This session provided the opportunity for group discussion and role playing to practice MI skills. The fourth session consisted of one-on-one training to evaluate the clinician's MI skills by replicating a patient phone call and providing immediate feedback.

The results of the pre-survey and post-survey were compared to assess the change in knowledge and perceptions of the clinicians on MI. The full BECCI was utilized by the trainer to evaluate a sampling of clinician calls prior to and post training. The pre-survey and post-survey data and call assessments were evaluated for statistical significance utilizing the Wilcoxon Sign-Rank Test. Surveys were distributed and managed by the HR training department within the company.

Results



BECCI
0 -Not at all; 1-Minimally; 2-To some extent; 3-A good deal; 4-A great extent
Questions
1. The practitioner (I*) listened attentively to the patient.
2. The practitioner (I*) showed empathy to the patient by acknowledging their emotions, concerns or point view related to making lifestyle changes.
3. The practitioner (I*) asked the patient quality open-ended questions that encouraged them to share what they value in terms of health.
4. The practitioner (I*) showed respect for the patient's right to make his/her own choice, even if I didn't agree with the choice.
5. The advice the practitioner (I*) offered the patient was aligned with what they shared with me in terms of their readiness to make a lifestyle change.
6. The practitioner (I*) used an approach that was supportive and encouraging for the patient to make positive lifestyle changes.
7. The patient will take positive steps to address his/her health risks after this encounter.
8. The practitioner invites the patient to talk about behavior change.
9. The practitioner encourages the patient to talk about current behavior or status quo.
10. The practitioner encourages the patient to talk about change.
11. The practitioner uses summaries to bring together what the patient says about the topic.

Questions 8-11 were trainer evaluated only

The MI training program included 30 clinicians comprised of, 8 supervisors (7 clinical pharmacists, 1 nurse), 16 clinical pharmacists, and 6 nurses. 2 supervisors and 1 nurse did not complete the training program and post-survey due to being on leave at the end of the study period. The study consisted of 23.3% male clinicians and 76.7% female clinicians.

In the 7 question BECCI Self-Assessment **(Table 1)**, questions 3 and 7, which focused on the clinicians improving their abilities to ask open-ended questions and helping the patient take positive steps toward improving their health, showed statistically significant improvement between the pre-survey and the post-survey ($p<0.05$). Questions 4 and 5, which focusing on patient respect and autonomy, also improved, but were not statistically significant. Questions 1, 2, and 6, which focused on the clinicians' view on their approach to the patient and their empathetic listening skills, saw minimal change between assessments.

Of the 27 clinicians that completed the self-assessments, 24 were included in the call analysis. The trainer reviewed four random calls for each of the 24 clinicians, two calls prior to the training and two calls after. All 11 questions on the BECCI assessment **(Table 2)** resulted in a statistically significant improvement ($p<0.05$) when comparing the calls before and after the completion of the MI training.

Table 1 Pre-Survey and Post-Survey Self-Reported Modified BECCI Scores (n=27)

Question	1		2		3		4		5		6		7	
Test	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
Median	4	4	4	4	3	3	4	4	3	4	3	3	3	3
Min Score	3	3	2	2	1	2	2	3	2	3	2	2	2	2
Max Score	4	4	4	4	4	4	4	4	4	4	4	4	4	4
0 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 (%)	0	0	0	0	4	0	0	0	0	0	0	0	0	0
2 (%)	0	0	4	4	22	11	4	0	7	0	7	4	26	7
3 (%)	37	33	41	37	67	59	33	22	56	48	48	48	67	67
4 (%)	63	67	56	59	7	30	63	78	37	52	44	48	7	26
p-value	0.77		0.80		0.03		0.22		0.19		0.70		0.02	

Table 2 Pre-training and Post-training-BECCI Scores (n=24)

Question	1		2		3		4		5		6		7		8		9		10		11	
Test	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Median	3	4	3	3	3	3	3	3	4	2	4	3	3	3	3	3	3	3	3	3	3	3
Min Score	1	3	1	2	1	2	2	3	2	2	1	2	2	3	2	2	1	2	2	2	1	2
Max Score	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4	4	4	4
0 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 (%)	2	0	4	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	2	0
2 (%)	24	0	35	4	33	4	13	0	9	2	50	4	13	0	11	2	33	4	44	2	35	2
3 (%)	59	43	57	65	61	55	80	74	57	35	39	39	30	52	52	54	63	65	54	54	46	52
4 (%)	15	57	4	30	4	41	7	26	6	61	9	57	0	39	2	37	2	31	2	44	17	46
N/A (%)	0	0	0	0	0	0	0	0	28	2	0	0	57	9	35	7	0	0	0	0	0	0
p-value	<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01	

N/A- Not applicable to the phone call

P-value<0.05 is considered statistically significant based on a CI of 95%

Discussion/Conclusion

The development of a comprehensive MI training program in a rare specialty pharmacy can produce beneficial effects for both clinicians and patients. These patients have inherent challenges and take more complex therapies. In addition, some MI techniques need to be modified when managing patients telephonically.

While the self-assessment scores did not show statistical significance with all questions, it was encouraging to see a positive change in the ability of clinicians to acquire information from patients and motivate change. This was a short study and some of the other targeted areas may require additional time and practice to develop confidence. It was also noted when comparing the clinical self-assessment to the trainer's assessment, scoring for questions 1-7 were slightly higher in the clinician self-assessment. This higher scoring may also account for the smaller difference seen from pre to post study. When calls were reviewed by the trainer, a difference in pre and post intervention was observed in all target areas showing the effectiveness of the internal training program.

There were some study limitations identified. This was a small, single institution study and the training was completed over a short period of time. The trainer assessment included a total of 4 calls, which may not have accurately captured the improvement of the MI skills by the clinicians. Additionally, the clinicians' previous MI training or years in practice were not captured. Lastly, due to the current remote work environment, all clinicians were asked to join the trainings remotely. This was a new training style and learning environment for both the trainer and the clinicians.

Future Decision

Following the conclusion of the study, a follow-up survey to elicit feedback was administered to the clinicians. Most clinicians expressed interest in participating in additional MI programs to assist with telephonic outreaches to patients. Clinicians recommended -a thorough training program similar to the study program during the onboarding phase for new hires, followed by subsequent computer-based trainings every 6-12 months. -In addition, development of training aids and targeted outreach to clinicians, based on call reviews, are planned.

Many of these clinicians also provided insight on how their conversations have improved with their patients living with complex, rare diseases since the initial MI training program. This signaled that in a specialty pharmacy, MI training can create impactful changes to the relationships between a clinician and a patient, even without face-to-face contact.

References

1. Center for Substance Abuse Treatment. Enhancing Motivation for Change in Substance Abuse Treatment. Rockville (MD): Substance Abuse and Mental Health Services Administration (US); 1999. (Treatment Improvement Protocol (TIP) Series, No. 35.) Chapter 3—Motivational Interviewing as a Counseling Style.
2. Teeter B, Kavookjian J. Telephone-based motivational interviewing for medication adherence: a systemic review. Translational Behavioral Medicine. 2014;4(4):372-81.
3. V Cooper, J Clatworthy. Unique patient challenges and support solutions in rare disease. Atlantis Healthcare, 2014.
4. DiRosa L, Gupta A, DeBonis S, and Spenser L. Effectiveness of a Clinically Oriented Motivational Interviewing Training Program in Increasing Skills & Changing Perceptions. Osteopathic Family Physician. 2017;9(3):10-17.
5. Miller W, Rose G. Toward a Theory of Motivational Interviewing. American Psychologist. 2009;64(6):527-537.

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