National Quality Improvement Conference

Impact of Patient–Reported Outcome Measures on Medication Adherence and Drug-Related Problems

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Problem Statement

Many patients with multimorbidities are taking multiple medications and encounter frequent medication changes. Despite best effort at medication counseling at Pharmacy, medication nonadherence (both intentional and unintentional) is still a problem locally and contributes to poor health outcomes and increased healthcare costs.

There is no easy-to-administer tool to identify patients at risk of drug-related problems (DRPs) and to coach them into self-efficacy of medication management.

Project Aim

Patient-Reported Outcome Measures (PROMs) tool was developed and tested on patients that pharmacists see in a patient-centred medication therapy management clinic (PopMed).

We aimed to improve PROMs scores after pharmacist's coaching and explore its utility as a screening tool for patients at risk of medication nonadherence.

Lessons Learnt

1. In the journey to improve medication adherence, our initial plan was to revise what we already knew and were doing but it did not produce significant outcomes.
   - It is prudent to **invest more time and effort in examining the root cause and possible strategies** available in literature, and not be fixated only on what we were doing.

2. Some tools to measure adherence were tedious and time-consuming to administer
   - It was **teamwork and constant engagement** that we managed to develop and test this PROM tool that is sustainable in clinic with potential utility in identifying in-need patients in the future.

Potential Solutions

Patients self-administered PROMs prior to each session from December 2020 to December 2022. The responses guided the focus of PopMed session. Pharmacists also identified Medication Adherence-related DRPs (MA-DRPs) during the interview.

1. DOSE: Measure of Medication Adherence		
Questions	**Options**	**Numerical Score**
Qn 1. I missed my medicine by accident	Every time	1
Qn 2. I skipped a dose of my medicine on purpose	Most of the time	2
	Some of the time	3
Qn 3. I did not take a dose of my medicine	A little of the time	4
	None of the time	5

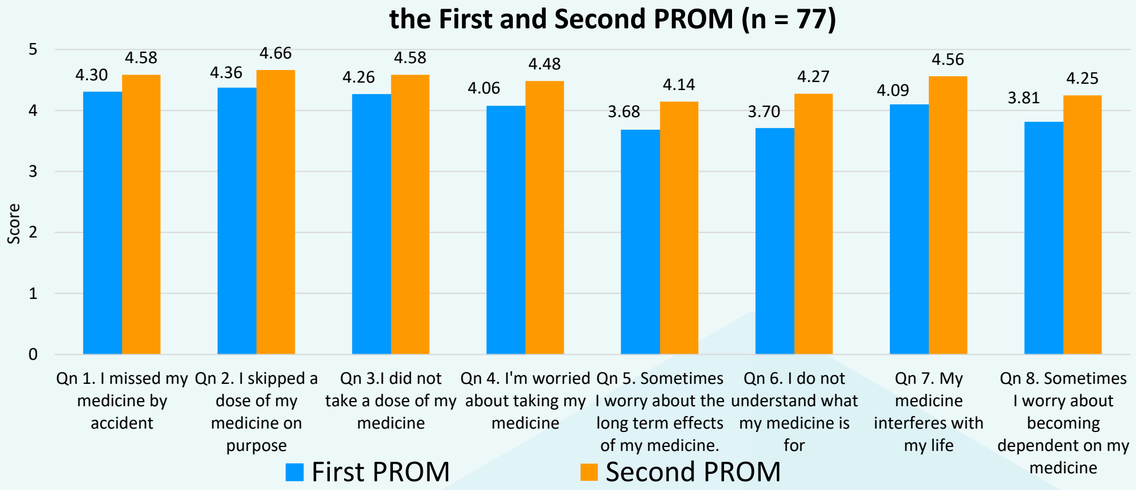
2. BMQ Subscale of DART: Measure of concerns with medicine use		
Questions	**Options**	**Numerical Score**
Qn 4. I'm worried about taking my medicine	Yes	1
Qn 5. Sometimes I worry about the long-term effects of my medicine		
Qn 6. I do not understand what my medicine is for	Partial	3
Qn 7. My medicine interferes with my life		
Qn 8. Sometimes I worry about becoming dependent on my medicine	No	5

Patients scored 4.0 and above were defined as having good medication adherence and minimal concerns with medications.

Outcomes & Impacts

77 patients completed at least 2 PROMS over an average of 90 ±38 days. All the questions have shown an improvement between the first and second PROM.

Table 1. The Mean Scores of Individual Questions for DOSE and BMQ at the First and Second PROM (n = 77)



Adherence level based on PROMs at baseline	No. of MA-DRPs identified by pharmacist
Good adherence (70%)	0.75 MA-DRPs per patient
Poor adherence (30%)	2 MA-DRPs per patient

Patients with good adherence had significantly lower MA-DRPs per patient compared to those with poor adherence. Median (range), 1 (0-2) vs. 2 (0-5), P <0.05.

Impact

PROMs supported person-centred care model as demonstrated by the improvements in scores.

The association between adherence and the number of MA-DRPs can be further explored for DOSE to be a tool to identify who have more MA-DRPs.