



Patient feedback identifies “Rheum” to improve clinic visit preparedness

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Abstract

Healthcare providers and administrators are incorporating patient feedback to drive local health system improvement. Improvement interventions, including patient feedback, guided a novel approach for rheumatology patient appointment preparedness. We tested the interventions in a single rheumatology clinic. A comprehensive patient questionnaire was developed by assessing patients’ clinic access using patient journey mapping. The questionnaire was administered to a random cohort of 125 rheumatology patients about their feedback on pre-clinic practices. From the responses, modifications were made to existing administrative practices within the clinic. The modified practices were tested with an additional cohort of 10 patients aligned to one rheumatologist, assessing overall patients’ preparedness and clinic visit cycle time. It was identified from the questionnaire that during appointment booking, inconsistent pre-clinic planning information was communicated to patients and the appointment package did not support patient preparedness, resulting in extending clinic visits. Standardization of the appointment phone call script, updating the appointment package, and inclusion of a clinic visit preparation checklist, reduced the clinic visit cycle time by 10 minutes for new patients, and 5 minutes for existing patients. The participating clinic rheumatologist also perceived improved patient preparedness and clinic visit flow based on the modified practices. In this study, patient feedback was used to identify patient-centred interventions to improve patient preparedness at clinic visits. The interventions developed were simple and easy to incorporate into practice. Systematic collection of and strategies based on patient feedback was determined to be a valid, meaningful method for incorporating clinical quality improvement.

Key Points

- Structured patient feedback can inform quality improvement practices in a rheumatological clinic setting.
- A patient journey map outlining healthcare clinic access can help to understand patient experiences and needs.
- Simple, patient-centred interventions, such as an appointment package and a consistent telephone reminder script, improved patient preparedness and reduced average clinic cycle time.

Keywords Pre-clinic visit planning · Patient preparedness · Patient experience journey mapping · Quality improvement · Clinic cycle time · Patient-reported feedback

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Introduction

The majority of patients seen in outpatient rheumatology (RA) clinics have multi-system chronic diseases requiring complex care and frequent clinic visits [1–3]. Within this patient population, patient self-care and engagement are paramount to ensuring effective management of rheumatologic conditions. In the last decade, healthcare providers, administrators, and policy-makers are increasingly turning to patient-reported feedback to support health system quality improvement (QI) [4, 5]. There have been an increasing number of patient-

centred clinical improvement interventions for rheumatology clinic patients.

Pre-clinic visit planning and preparation has been proposed as a patient engagement strategy for improving patient knowledge, “no-show” rates, and completion of recommended tests and treatments [6, 7]. The use of well-designed pre-clinic planning techniques, such as phone calls, e-journals, questionnaires, and checklists, was previously shown to improve management in patients with chronic diseases such as diabetes and hypertension [6, 8, 9]. None of the aforementioned interventions has been studied in the context of an outpatient rheumatology clinic, but may serve to improve patient preparedness, communication, clinic efficiency, and ultimately the outcomes for this patient population. Obtaining RA patients’ perspectives about clinic functioning, including appointment letter receipt, clinic visit, and follow-up, is essential to provide quality, efficient, and safe person-centred care.

In this study, we collected feedback from RA patients with the aim to develop patient-centred interventions to improve pre-clinic planning practices in a RA clinic as a way to heighten patient preparedness. To determine intervention effectiveness, we examined patient-reported experience, clinic visit patient preparedness, and clinic visit duration.

Materials and methods

This QI project was conducted at an urban outpatient RA clinic located in Western Canada. A study team included a rheumatologist, clinic manager, nurse, receptionist, administrative assistants, medical students, patient engagement consultant, and a QI specialist. We completed the ARECCI (A pRoject Ethics Community Consensus Initiative) screening tool and, as this study was classified as a QI project with minimal risk to participants, a full ethics board review was not required as per our organizational policies. All participants gave their informed consent prior to their inclusion in the study.

An Ishikawa diagram and a patient journey map were developed to determine key insights and process steps where the pre-clinic patient experience could be impacted. (Figure 1)

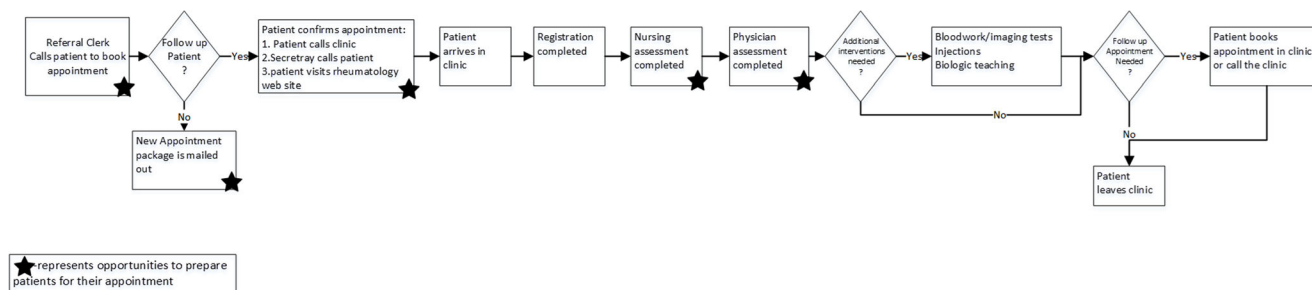


Fig. 1 Patient experience journey map used to inform the questionnaire design. Grey stars represent opportunities to prepare patients for their appointment.

This information supported the design of a paper-based baseline questionnaire about patients’ experiences and perceptions of the following components related to pre-visit planning: the content of the appointment booking phone call, the mailed appointment package, and the clinic website. The initial questionnaire was pilot tested with 10 randomly selected RA patients representative of all rheumatologists from the study RA clinic, which led to revisions to the questions, wording, and answer options, before the questionnaire was finalized (see [supplemental file](#)).

Potential participants were any patients attending the RA outpatient clinic supported by 11 rheumatologists from May 1, 2017, to June 30, 2017. The primary patient inclusion criteria were English-speaking and a minimum age of 18 years. After providing consent, a random cohort of 125 patients (45 new, 80 follow-up) voluntarily completed the questionnaire in the RA clinic waiting room. The questionnaire was independently completed by the patient or facilitated by a researcher (XS) who read the questions and documented the answers on the paper questionnaire. No identifiable patient demographic data was collected.

The results of the questionnaire were used to develop interventions to improve pre-visit planning. After review of the patient feedback, it was determined that the following may improve patient preparedness: a standardized script for use by medical assistants during phone calls to patients for booking pre-clinic visits, an updated appointment package (i.e., a reformatted appointment letter with the key points bolded for emphasis and a clinic visit preparation checklist), and posters placed in the main clinic reception area and nursing rooms alerting patients to pre-appointment “know-hows” and informing patients of the RA clinic website. Important information, such as what to bring to appointments, were communicated twice, once via the mailed appointment package and via the reminder phone call. The appointment package was mailed 3 months in advance of the appointment, and the patient reminder phone call was made 1 week in advance of the appointment.

These interventions were trialed from September 1, 2017, to October 1, 2017, with one rheumatologist (EY) and 10 patients (5 new, 5 follow-up) that the medical assistant

randomly selected over a 4-week period. The patients' preparedness was evaluated by the rheumatologist using a paper-based tracking tool, which tracked whether a health history questionnaire was completed, whether a medications list was provided, and the cycle time. A "prepared patient" was defined as one who attends their appointment, completes a health history questionnaire, and submits it online or in-person, brings an updated medication list, and prepares a list of questions for their RA appointment.

Clinic cycle time data collection

For the baseline cohort ($n=125$) and intervention cohort ($n=10$), the clinic visit cycle time was tracked manually on paper by the clinic nurse and rheumatologist. The clinic cycle time began when the nurse first assessed the patient and ended when the physician completed the visit.

Results

Pre-intervention

The baseline questionnaire indicated that patients were not provided with consistent information about what to bring and what to expect prior to their clinic appointment.

(Figure 2) Approximately 30% of patients (38/125) surveyed were not aware to bring proper identification, their healthcare card, a list of medications, and any questions that they may have to the clinic appointments, and the remaining 70% (87/125) received various inconsistent information about what to bring to their appointment. Of the patients surveyed, less than half knew where they could obtain their personal medication list. Approximately 50% of patients did not come to their appointment with a prepared list of questions or knew that they should bring questions. New and follow-up patients seldom used the clinic website to confirm their appointments (12/45 [27%]; 11/80 [45%] respectively). For the patients who chose not to use the website, lack of computer access (40%) and lack of awareness of the website (44%) were cited as the main reasons for not using the online system.

Clinic cycle time Clinic visit cycle time for unprepared new patients was, on average, extended by 25 minutes, and for unprepared follow-up patients, it was extended by approximately 10 minutes. The average clinic cycle time for new patients is 30 minutes, and 15 minutes for follow-up patients.

Post-intervention

Overall, the 10 patients receiving the intervention indicated that the appointment package assisted with remembering what to



Fig. 2 Results of baseline patient questionnaire. A total of 125 patients were surveyed. (A) Questionnaire results for new patients ($n=45$) and (B) questionnaire results for existing patients ($n=80$).

bring to their appointments (6/10). All new patients ($n=5$) and three of five follow-up patients confirmed having received a reminder phone call. Of those who received a call, two of new patients and three of follow-up patients were told to bring a list of questions. The RA website usage continued to be low and many patients were not aware of the website even though information about it was included in the updated appointment package. The posters in the main reception area and nursing assessment rooms were not consistently noticed by the patients.

Clinic cycle time The 10 patients who received the new standardized script and updated appointment package (intervention) exhibited a reduced average visit cycle time (an average reduction of 10 minutes for new patients and 5 minutes for follow-up patients) (Table 1). Even though the cycle time reduction was minimal, the rheumatologist thought these patients were better prepared as compared to patients who did not receive the intervention. These same 10 patients confirmed their appointments and the clinic check-in clerk confirmed there were no “no-shows” for appointments. The nurses noticed that these patients consistently brought in a medication list and they felt that the updated appointment letter was of benefit for improving patient clinic preparedness.

Discussion

In this QI project, we used patient feedback to inform improvements to pre-clinic visit processes in a RA clinic. Patient feedback from questionnaires was used to assess existing practices and that influence on patient preparedness. In a pre-intervention questionnaire, it was found that failure to inform patients to bring the necessary documentation to the appointment contributes to clinic delays and longer wait times, as more nursing time was spent completing the medical assessment. The trial of a new standardized telephone script for appointment reminders and an updated appointment package ensured that consistent information was communicated to the patients verbally and in writing prior to their clinic appointment. Although it was a small sample, the patients involved in the intervention experienced reduced clinic appointment times. Positive patient feedback about updated appointment package was also received from the rheumatologist, nurses, and medical assistants.

While the implementation of a new appointment script and upgraded patient package proved to be effective, we found posters to be ineffective interventions. Anecdotal feedback from patients and clinic staff indicated that patients rarely looked at the new posters while in clinic. Another method of patient engagement could be used to replace posters; the authors suggest using text reminders that include preparation details.

Of all the interventions, the updated appointment package was most effective in communicating pre-clinic requirements. For other RA clinics wanting to improve patient preparedness for clinic appointments, we suggest they reformat their appointment package to include emphasized text, visual infographics, and a one-page appointment checklist. Furthermore, they may wish to consider integrating a simple online booking system with an electronic medical record (EMR), as this may also improve clinic scheduling, patient planning, and experience. Finally, in this study, it was also determined that extension to clinic visit time is highly complex; therefore, tracking the reasons why visits are extended may help identify important opportunities for future improvement interventions.

Limitations

Our QI project was about the use of patient feedback to develop patient-centred interventions to improve patient preparedness in RA clinics. It was designed specifically for this context, and with a practical, pragmatic approach in an effort to ensure sustainability. This may, however, be perceived as limiting beyond this setting. Furthermore, the small sample size of 10 randomly selected patients for a single rheumatologist makes it difficult to ascertain that any changes observed were statistically significant. Additionally, a non-validated questionnaire was required given the need to align with this context. Despite these limitations, we believe this work adds value in several important ways. It models a way for systematically gathering and using patient feedback for pre-visit appointment practices. By methodically collecting and incorporating patient feedback to support intervention design, we were able to improve administrative practices and increase clinical efficiency. Importantly, the clinic has adopted the patient-centred interventions as a result of this work. Currently, to advancing it further, we are developing a robust

Table 1 Comparison of average clinic visit cycle time pre-intervention and post-intervention

Appointment type	Average clinic visit cycle time	Average clinic visit cycle time extension	
		Pre-intervention	Post-intervention
Follow-up	15 minutes	Additional 10 minutes	Additional 5 minutes
New	30 minutes	Additional 25 minutes	Additional 15 minutes

evaluation plan for the following variables: medication list provided, questions provided, “no show” rate, appointment confirmation rate, and clinic visit extension reasons.

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s10067-021-05873-7>.

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Author contribution EY is the corresponding author and EY, PM, XS, and LD are credited for the conception, design, and data collection. ML, XS, and PM conducted the data analysis and interpretation and created the manuscript. NK critically revised the manuscript and oversaw the design of the study and data collection. All authors edited and approved the final manuscript.

Data availability Not applicable.

Code availability Not applicable.

Declarations

Ethics approval A full ethics board review was not required as this study was classified as a QI project with minimal risk to participants, as per our organizational policies. The manuscript does not contain clinical studies or patient data.

Consent to participate Applicable written and verbal consent was obtained from all participants. Furthermore, the project was also fully explained in detail to all participants with all questions/concerns answered.

Consent for publication

Participants of this project are aware of the intention to publish and have given their consent.

Disclosures None.

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