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Physician Use of the RAPID3 to Guide Rheumatology Follow-Up: A Retrospective Examination

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Executive Summary

Intro

There is a shortage of rheumatologists across the nation (Dejaco et al., 2016). The imbalance between patient demand and provider availability requires rheumatologists to prioritize their patient visits to improve outcomes with the available resources. The quality improvement (QI) team of a local rheumatology clinic was investigating causes and possible solutions to deal with the long wait times for appointments. In a previous QI project a variety of possible solutions were suggested, one being the use of standardized follow-up appointment scheduling. The current method for determining follow-up timing was based on provider preference, which can be subjectively based on provider preference rather than being an objective or evidence-based decision. This project examined the use of a standardized disease assessment tool, as recommended by the American College of Rheumatology (ACR), to determine if the availability of the score can assist the physician in prioritizing patient appointments (England et al., 2019). Using the score as a basis for follow up can potentially eliminate unnecessary visits, reduce costs, and improve patient care and satisfaction.

Providers are often resistant to using standardized disease assessment tools. Research shows that 35% of rheumatologists don't employ any of the ACR recommended tools despite the overwhelming evidence of validity and time efficiency (Curtis et al., 2018, Muñoz et al., 2017; Pincus, Yazici, & Bergman, 2009; Berthelot, 2014). The providers at the local clinic involved in this project employed some standardized assessment tools, but each provider used a different tool and collection and utilization at time of appointment was not routine. Only one provider of this clinic was collecting a standardized tool, the Routine Assessment of Patient Index Data 3 (RAPID3), at every appointment to facilitate her treatment decision making. In this retrospective

study, I examined the impact of one physician's use of the RAPID3 disease assessment tool to make decisions about follow-up timing and how this decision may have influenced the RAPID3 score at the patient's return appointment.

Literature Review

The American College of Rheumatology recommends the use of any one of five disease assessment tools combined with a treat-to-target approach to aid patients in reaching the lowest possible disease state in a variety of rheumatological conditions (England et al., 2019). Research has shown that with this approach nearly 60% of patients achieved remission or low disease state within a year and maintain their improvement over time (Versteeg et al., 2018). The recommended treat-to-target approach uses four elements: the presence of a disease activity score, use of the disease activity score in treatment decisions, the presence of a treatment target (i.e., remission), and the shared decision-making between physician and patient (Desai et al, 2020).

Overall, the five ACR recommended tools are found to be comparable in the assessment of disease state (Muñoz et al., 2017; Pincus, Yazici, & Bergman, 2009; Berthelot, 2014). However, the RAPID3 is one of the quickest, taking just 10 seconds to score (Berthelot, 2014). The ACR research panel has also given the RAPID3 its highest possible rating for content validity, structural validity, hypothesis testing, and feasibility when it compared the five approved tools (England et al., 2019).

In addition to assessing current disease state, the RAPID3 score can also be used to facilitate provider to patient conversations, monitor progress, and recommend follow-up. After one year of routine use of the RAPID3 as the basis for treatment decisions, research has demonstrated better radiographic outcomes, slowed disease progressions, the ability to better

maintain disease remission, significantly higher adherence to treatment, and less dropout due to intolerability of antirheumatic treatment (Katayama et al., 2016, El Miedany, 2016). Based on the score, unnecessary visits can be eliminated for those doing well, increasing the availability of appointment times for those not yet at low severity or remission scores. The ACR best practice guidelines recommended a follow-up period of 1 to 2 months for high severity, 3 months for moderate severity, 4 months for low severity, and 6 months for those near remission (Smolen et al., 2015).

The largest drawback cited by those who disagree with the use of the RAPID3 tool is its strong reliance on subjective patient reporting rather than objective lab values or provider exam. Critics note that patient reporting can be influenced by non-rheumatological factors such as mental health status and other co-morbidities (Shah, Kini, & Londhey, 2019).

Methods

After obtaining IRB approval, a quantitative evaluation of retrospective data was completed on the deidentified information of 30 randomly selected adult patients from one rheumatology practitioner. The deidentified data for each patient included the initial appointment date, the initial RAPID3 score, the date of follow-up appointment, and the follow-up RAPID3 score. These 30 random adult patients were seen for their initial appointment and at least one follow-up appointment between June 2020 and September 2021 and completed a RAPID3 at each of these appointments.

The site for this project employs a Lean Six Sigma format to define, measure, analyze, improve, and control its quality improvement projects (American Society for Quality, 2021). Through this process, the clinic's QI team previously defined a concern of long wait times for rheumatology appointments. This project is part of the analyze phase of this larger Lean Six

Sigma project to gather data to support a change. The outcome of this project includes recommendations on how to improve the current process causing long wait times through standardization of collection and use of the RAPID3. The control phase of this Larger Lean Six Sigma project will take place after my project is completed and will consist of implementing my recommendations.

Evaluation

From the retrospective patient data provided by the QI team I compared the actual interval between appointments to the ACR recommended interval for the reported RAPID3 score to determine how closely the next appointment aligned with ACR recommendations. Of the 30 patients analyzed, nearly half had higher RAPID3 scores at follow-up, indicating an increased severity of symptoms. Of these patients with increased RAPID3 scores at follow-up, over three quarters had appointments that fell outside the recommended time frame. Analysis showed that those patients who were later than the recommended ACR follow-up period were less likely to have improvement in their RAPID3 score at their follow-up appointment. Surprisingly, patients who were seen sooner than the recommended time frame were also less likely to have improvement in their RAPID3 scores. This suggests that follow-up that happens too soon may lead to premature changes in treatment regimens that could have been effective for the patient if given adequate time.

There are limitations to these results. The information provided by the QI team is for only one provider and only for 30 patients. The information provided also only tells us the actual follow-up interval, not provider recommended interval. It is possible that for some of these patients, the recommendation of the provider of when to return was not heeded. The dates of this project fall firmly withing the COVID-19 pandemic and could have delayed follow-up for some

patients. We did not have access to these patients' records, so we are unable to analyze if comorbidities, transportation, or other outside influences were a factor.

Impact on Practice

Validity of the RAPID3 as a tool to measure disease state has been firmly and repeatedly established by previous research (England et al., 2019). This retrospective analysis demonstrates that mere knowledge of the score is not enough to ensure an appropriate follow-up interval, a more formal protocol is needed. The provider in this project knew the RAPID3 score and still had 80% of patients seen outside the recommended timeframe. Not surprisingly, most of these patients reported worsening symptoms reflected by a higher RAPID3 score. I believe this demonstrates that not using an evidence-based protocol to direct follow-up is a significant contributing factor to declining patient outcomes as evidenced by increasing RAPID3 scores. This is a contributing factor that can be changed

Suggestions to implement this change includes a standardized method of collection for the RAPID3 on all rheumatology patients via the clinic pilot project that enables the patient to complete forms electronically before their appointment. This is expected to be rolled out to the rheumatology department within the next year. This gets the information into the hands of the provider before the appointment to facilitate conversations and assist in decisions about treatment and follow-up. Secondly, I recommend a protocol for follow-up be put in place and readily available for staff and providers to guide follow-up recommendations to reduce unneeded visits and free up time slots, reducing wait times. This is not a substitute of physician decision, but a guide to facilitate conversation with patients on when to return for follow-up. The guideline suggested by the ACR could be adapted and changed if desired by the providers. Finally, as mentioned previously, many rheumatologists do not use standardized tools as recommended by

the ACR. To increase the awareness of the validity, ease of use, and increasing use as a requirement for insurance drug approval, I created a short PowerPoint for use by providers and staff about the RAPID3 that was disseminated to each provider via email. Feedback on the PowerPoint was positive, and I believe was a major step in getting approval to incorporate the RAPID3 in the electronic pre-appointment paperwork roll out.

Conclusion

The RAPID3 is just one of several tools suggested by the ACR. Its benefits include being fast, valid, and easily completed independently by the patient. The goal put forth by the QI team of this clinic was to find a way to reduce the wait times for a rheumatology appointment, but much more was accomplished with this project. As a result of this project, the rheumatology clinic was accelerated into being the first specialty clinic with the new process for electronic pre-appointment paperwork. It will now be feasible for the RAPID3 to be available to each provider before the appointment, facilitating provider-patient conversations and empowering patients to have an opportunity to discuss their quality of life with their provider. If a follow-up protocol is adopted as suggested in this project, then not only will it reduce the patient wait time for appointments, but it will also have reduced costs for the patients by eliminating unneeded visits. This will also decrease demand on staff by reducing daily patient load. Helping physicians have a better understanding of the usability of validity of the RAPID3 could aid them in using this tool in the treat-to-target manner suggested by the ACR. All these result in better outcomes for the clinic, the providers, and the patient.