

“The Rheumatologist Can See You Now”: Successful Implementation of an Advanced Access Model in a Rheumatology Practice

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Objective. To provide rheumatologic care to patients in a timely and patient-centered manner.

Methods. We developed and implemented processes to measure and help eliminate backlog, created access time for same-day patients, and retooled the appointments process to be more efficient and patient focused. In addition, we developed a protocol to be used by our primary care colleagues to care for osteoarthritis of the knee in a standardized manner.

Results. The third available rheumatology appointment fell from about 60 days to <2 days. Cancellations fell from 40% to <20%. Patient satisfaction measures (composite score, physician score, and accessibility score) improved significantly. The number of new patients seen for knee osteoarthritis decreased by 6.7%, whereas the number of new rheumatoid arthritis referrals increased by 50.4%. Financial performance improved as well.

Conclusions. This advanced access model in a busy academic rheumatology practice demonstrated considerable improvement in access, patient satisfaction, and finances. Using a team approach, we are now able to give the patient the rheumatologic care they want and need at a time they want and need it.

KEY WORDS. Rheumatology; Advanced; Access; Model; IDCOP.

INTRODUCTION

These past few years we have been part of a revolution in the care of patients with rheumatic diseases (1). New medications, new treatment paradigms, and an ever-increasing number of patients have made this the most exciting of times to be a rheumatologist. However, there remain significant challenges in the care of patients with rheumatic diseases. Several studies have demonstrated that the highest quality of care and an improved outcome are best achieved by early referral to a rheumatologist (2–4). Yet an insufficient number of rheumatologists, long waiting periods (5), and scheduling systems that center around the physician may lead to a care process that hinders getting the right patient to the rheumatologist at the right time.

Our Department of Rheumatology is part of a large multispecialty group practice that forms the major hub for the Geisinger Health Care System in central Pennsylvania. That system includes 50 primary care sites, all of which are connected to us by a shared electronic medical record system. The Department of Rheumatology is a busy academic department with 6 staff rheumatologists (3.6 full-time equivalent clinical positions), 2 fellows, an advanced-practice nurse specialist, and a research coordinator. Our daily activities include a combination of clinical care, education, and research, and we perform about 11,000 patient visits per year. In 2000, our department had an average wait time of 60–70 days for the third available appointment.

In an effort to optimize access and care, we embarked on a lengthy and intensive initiative based on the philosophy of the Institute for Healthcare Improvement's IDCOP program (6,7). IDCOP stands for Idealized Design of the Clinical Office Practice and focuses on 4 themes: access, interaction, reliability, and vitality. These themes translate into the IDCOP mantra of giving patients the care they want and need exactly when they want and need it. A rapid cycle process (plan–do–study–act [PDSA]) was employed as the tool for improvement (8–10). The purpose of this article is to review the processes involved in implement-

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ing an advanced access model and the improvements achieved.

METHODS

Our advanced access program development and implementation began in early 2001. The strategies we utilized included measuring and eliminating backlog, creating "carve-out" access (allocated time for same-day patients), reworking our entire appointments process to center around the patient, and developing protocols to be used by our primary care colleagues so that more routine and basic rheumatic complaints could first be cared for by them in a standardized manner. Each of these changes was performed using a series of PDSA rapid change cycles. The rapid PDSA model utilizes a trial and learning approach that allows one to define the problem, implement a change, analyze the results of that change, modify the process, and repeat the cycle within a short timeframe (10).

Backlog. Backlog refers to a group of patients who should be seen. It can be further divided into bad backlog and good backlog. Bad backlog represents all return patients who by this point in time should have already been seen. Good backlog represents all patients, both new and return, who need to be seen now and in the future.

First we eliminated bad backlog using several approaches. We systematically lengthened the followup interval when appropriate. For example, patients with stable rheumatoid disease taking medications requiring laboratory monitoring could be moved from a 6-week laboratory/12-week appointment to an 8-week laboratory/16-week appointment at the physician's discretion. In addition, we hired another rheumatology provider, which brought our provider fulltime equivalent count from 3.2 to 3.6. That provider was immediately started on full advanced access (see "carve-out access" below). We also more effectively utilized our rheumatology advanced-practice nurse to function as a coprovider for select patients in whom patient education, coping skills, and monitoring were deemed more important.

Finally, we expanded, simplified, and streamlined our templates. All templates were broken into 10-minute increments, which were utilized to form injection-only visits (10 minutes), returns (20 minutes), check times for the fellows' and resident's new patients (30 minutes), and new patients or consultations (60 minutes). Complex rules and regulations imparted by years of physician-directed control were dismantled and replaced by a simpler, straightforward approach. In essence, within the confines of a limited set of rules, the schedulers were empowered to fill the schedules on their own. The concept of triaging based on specialty physician perception of severity was eliminated over time—the goal was to provide access to a broad range of problems in a timely fashion and meet or exceed the patient's and physician's expectations of access. By eliminating bad backlog using the approaches outlined, we were able to create increased capacity and thereby improve access for good backlog.

Second, we measured and analyzed good backlog over a several-month sample period to understand our template capacity versus the demand for our services. The average daily demand for services helped estimate the amount of carve-out access time needed in the schedules to maintain equilibrium.

Carve-out access. Carve-out access refers to keeping available a predetermined interval of time in the schedule to accommodate the usual calls to be seen the same day, both new and return patients, based on the capacity/demand analysis. The slots are prebuilt into the schedules and opened automatically for use 72 hours ahead of time. For the process to work, it is absolutely crucial that these slots not be utilized for any other purposes, and remain unavailable until they are released.

Two hours per physician per day were allocated for carve-out access: 11:00 AM–12:00 PM and 3:30 PM–4:30 PM. In addition, 1 physician was assigned each week as the on-call consultant. The responsibilities of the on-call consultant included answering calls from referring physicians and answering patient calls if their own physician was not available. The on-call physician and the appointments scheduler were empowered to add patients into any rheumatology provider's open access slot available within the next 72 hours. If a referring physician's office staff called to have a patient seen, they could speak to the appointments personnel directly and the patient would be scheduled in a timeframe that matched or exceeded the referring physician's expectations, regardless of what might be perceived as the urgency of the problem. If the referring physician's expectations could not be met, the physician could speak directly with the on-call consultant. With this process, physician triaging was nearly eliminated.

Appointment scheduling. After the carve-out access times were built, the appointments process was completely reconfigured to help decrease cancellations and rework. The 2 goals were to have every appointment made with a human-to-human encounter, and to eliminate pre-scheduling of distant returns until closer to their expected return date. To accomplish the first goal, all patients with a followup appointment of ≤ 3 months were given a convenient followup appointment by the front office staff before leaving the clinic.

For the second goal, patients with a longer followup visit interval instead left with a card, instructing them the week and month they are due to be seen, and to call us at that time to get a convenient appointment that day or that week. Simultaneously, they were placed on a computerized wait list. If they failed to call in the week they were due, the appointments designate would call them the following week. If they could not be reached after a minimum of 4 daytime calls and 2 evening calls, a letter would automatically be generated instructing them to call in for a followup visit. When their appointment was made or a letter was generated they would be removed from the computerized wait list—effectively completing the appointment process for that patient. Finally, all staff, support staff, and patients were educated on the new process.

Referral effectiveness. Our department noted a significant increase in referrals for knee osteoarthritis in 1999 and 2000. Initially, this was for consideration of hyaluronic acid injections, but over time this generalized to seeing patients where very little was attempted therapeutically prior to referral. To assist our primary care colleagues in providing the basic steps to caring for osteoarthritis, thereby opening access slots for more complex osteoarthritis or other rheumatic diseases, we developed an osteoarthritis referral effectiveness program.

Utilizing the electronic medical record system, this protocol would be automatically invoked whenever a rheumatology referral was made for knee osteoarthritis. The protocol consisted of a basic written overview of the diagnosis and treatment of knee osteoarthritis along with Web-based hotlinks giving the physician additional detail. From there, the physician would be taken to a smartset, which consisted of a series of orders that could be placed simply by checking boxes. These orders dealt with patient education printouts, nutrition, assistive devices, physical therapy, radiographs, and various medication choices. The primary care physician could then pick and choose the orders most important in his/her given patient. However, they also were given the option of proceeding directly to a rheumatology consult.

Outcome measures. To monitor the results, we chose several health care industry standard outcome measures to follow our progress with the advanced access model. The third available appointment was used to determine access in general. Measuring the third available appointment, as opposed to the first available, gives a more realistic sense of when the schedule truly begins to open up. As an example, in a clinic that has a 3-month backlog, if a patient cancels at the last minute, the first available appointment would be the same day. However, the third available appointment might be in 90 days.

Percent cancellations (which includes physician cancellations and patient cancellations) was chosen to reflect efforts directed at giving the patient a convenient and timely followup appointment and testing the success of the card system. Patient satisfaction scores were chosen to reflect the patient's perception of their encounter in our department. Our institution used the Parkside survey (Parkside Associates, Chicago, IL) as a standardized measure of patient satisfaction for 2001, and then changed to Press-Ganey (Press-Ganey Associates, South Bend, IN) in 2002.

For referral effectiveness, we compared the number of new knee osteoarthritis consultations, new rheumatoid arthritis/inflammatory arthritis consultations, and total new consultations seen in the rheumatology department in fiscal year 2001 versus fiscal year 2002. The goal was to increase the number of new patients with inflammatory arthritis while decreasing the volume of new patients with simple knee osteoarthritis. Consultations were defined as knee osteoarthritis or rheumatoid arthritis based on the International Classification of Diseases, Ninth Revision code applied by the rheumatologist at that new patient encounter.

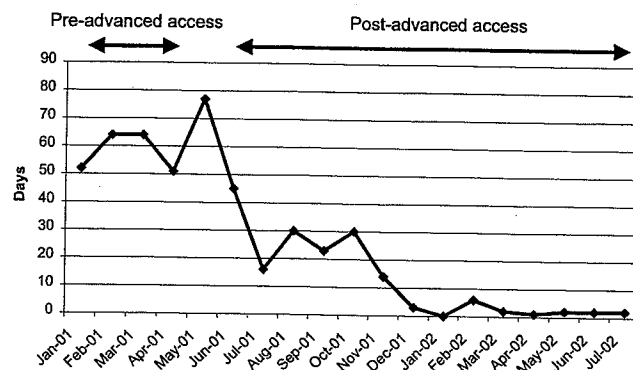


Figure 1. Third available appointment time before and after initiation of the advanced access program.

Finally, financial performance was measured using the revenue versus expense analysis, as is standard in our institution.

RESULTS

Appointment availability. Prior to beginning the advanced access initiative, our average number of days to the third available appointment was ~60. Within several months, this fell to about 25 days. With the hiring of 1 additional staff person, the institution of the referral effectiveness protocol, and an additional 9 months of continued advanced access improvement cycles, the third available appointment time fell to 2 days or less, and has stayed in that range (Figure 1).

Prior to beginning the advanced access initiative, cancellations averaged ~40%. As the long-interval followup appointment card system was instituted, cancellations fell below 20% (13% patient cancellations, 5% physician cancellations; Figure 2). The decrease in cancellations became apparent about 9 months into the card system. This delay in improvement was to be expected. By its very design, the rework that was eliminated or reduced with the card system would take time to be observed: The cards given out today would represent patients to be seen in 3 months, 6 months, or even 12 months. Analysis of the card system 9 months after implementation showed that 50% of patients remembered to call in for their appointment, and the remainder needed to be called from the computerized wait

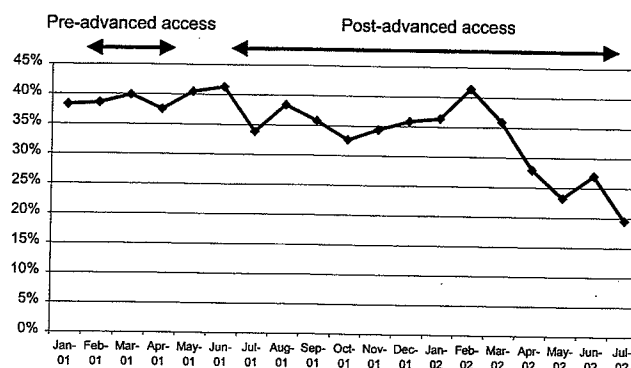


Figure 2. Percent cancellations before and after initiation of the advanced access program.

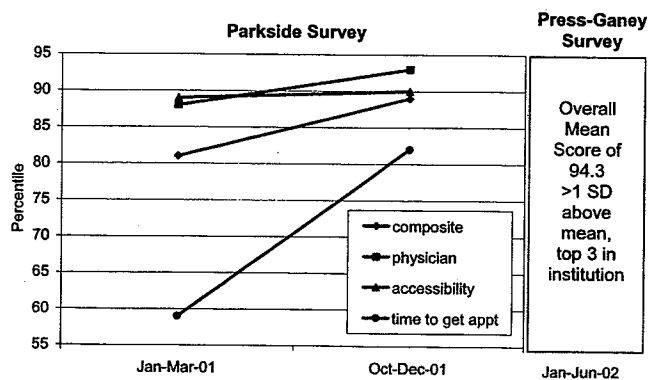


Figure 3. Patient satisfaction scores using Parkside and Press-Ganey surveys. appt = appointment.

list 1 week later. There is a clear learning curve for the patients. The percentage of patients calling in for their followup appointment based on the card system increased steadily over that period.

Patient satisfaction. Comparing patient satisfaction before and after the initiative, Parkside survey scores rose significantly in the areas of total composite score, physician score, accessibility score, and a subscale question "time to get appointment" (Figure 3). All measures were at least 1 SD above the Parkside mean for specialists at the second time point. As mentioned in the Methods section, our institution changed to a different scoring tool, Press-Ganey, in 2002. Thus, the results are not directly comparable. However, of note is that our department had an overall mean Press-Ganey score of 94.3. This placed the Department of Rheumatology as 1 of the 3 highest-scoring departments in the institution for patient satisfaction, despite caring for patients with chronic debilitating diseases.

Referrals. Comparing 2001 with 2002, there was a decrease in new knee osteoarthritis referrals of 6.7%, while we experienced a simultaneous increase in total new referrals of 49.8%. Importantly, there was an increase in new rheumatoid arthritis referrals of 50.4% (Table 1).

Financial performance. One of the concerns in the department was that if we had ostensibly blocked our schedules (via carve-out access time), we might decrease our financial performance by decreasing the overall number of patients seen. What was seen instead was that the outside physicians who typically had not referred to us because of access issues began referring their new patients. This led to an overall shift toward new patients with an improved payer mix. The end result was a more profitable fiscal-year performance, in great part due to this initiative.

DISCUSSION

There are many issues that surround the quality of care in patients with rheumatic conditions, best documented for rheumatoid arthritis. Recognition of the disease, its severity, and its potentially life-threatening complications may be low in nonrheumatologists (5,11). Nonrheumatologists are less likely than rheumatologists to start second-line antirheumatic medications (12). In addition, several studies have suggested that early and more aggressive intervention is met with an improved outcome (3,4,13). Work by Mottonen et al demonstrates that a delay in drug treatment as short as a few months is associated with a decreased ability to induce disease remission (2). Finally, it is intuitive that most patients referred to a rheumatologist are in pain at the time of the referral. From the patient's perspective, a delay in care is simply a longer period of pain, regardless of the severity of the problem as perceived by the physician.

Unfortunately, the current state of rheumatology specialty care compounds the problem. There is a severe shortage of rheumatologists in the United States. Consequently, waiting periods of 3 or more months to see a rheumatologist are common (5). These prolonged waits for new and established appointments are both common and incompatible with optimal care.

In an effort to improve access, patient satisfaction, and quality in our practice, we embarked on the development of an advanced access model. While embodying the philosophy of the Institute for Healthcare Improvement's IDCOP model ("doing today's work today" and "providing the patient the care they want and need at a time they want and need it") (6,7), the actual initiative development and implementation was accomplished locally. This illustrates a third Institute for Healthcare Improvement principle, that all health care delivery is local.

This process required a complete change in mindset for the physicians involved. First, we needed to streamline and simplify the rules for seeing a patient. Second, we needed to be willing to give up the scheduling power and decision making to the appointment scheduler. Physicians have traditionally valued individuality and underappreciated the negative impacts of unnecessary process variation. Third, we needed to be willing to consider that a patient with a simple rheumatologic process has the same needs from the patient's perspective as one with a more complex process—the concept was to attempt to provide timely access to all patients in need. Fourth, we needed to accept that some projects might not work, and others would need to be adjusted over time. This is the basic tenet of the PDSA cycle: Plan it as best you can, put it in place, observe the successes and failures, and adjust accordingly. Flexibility, material participation in the process, and

Table 1. New referrals for knee osteoarthritis (OA), rheumatoid arthritis (RA), and total new referrals

	2001 cases	2002 cases	Change, no.	Change, %
Knee OA new referrals	163	152	-11	-6.7
Total new referrals	1,337	2,003	666	49.8
RA new referrals	129	194	65	50.4

teaming were the key elements involved. This new mindset, which has proven critical in industrial process improvement, is different from the clinical research mindset in which physicians are schooled and is antithetical to static traditional health care delivery.

One of the goals of advanced access on the specialty side is to meet or exceed the expectations of the referring provider and the patient. A potential concern is that providing easier access would result in an overwhelming number of referrals, including conditions not usually germane to that specialty practice. We did not find this to be the case. Instead, we noted referrals were placed with more realistic expectations: Instead of labeling every referral as emergent, we found that physicians instead placed referrals at intervals that would meet their patient's expectations for the problem at hand. The knee osteoarthritis referral excess was a preexisting problem, not one generated by advanced access.

Because there is a physical limit to availability once all efficiency issues are addressed, it was also important to engage our primary care colleagues so that patients with less complex rheumatic complaints could first be handled by them in a standardized way. This was accomplished by utilizing the electronic medical record system as a tool for education, process flow, and engagement. Our knee osteoarthritis referral effectiveness program is an example of new patient pre-appointment management, similar in principle to that described previously by Harrington and Walsh (14). Broadening this approach might further improve manpower and patient care efficiency in our group practice.

The use of a computerized medical record system, while not essential for advanced access, allowed more creativity in program design. The appointment reminder card system for scheduling long-term followup visits, which is essential for maintaining care and minimizing no-shows, worked seamlessly with the computerized wait list to provide certainty that patients would not be lost to followup. In addition, the computer medical record system allowed the creation of an easy-to-navigate osteoarthritis protocol for primary care physicians. Thus, in addition to allowing for improved patient scheduling, the use of computerized systems can also significantly enhance the ability to provide standardized care protocols (15).

The end result of this process was a significant improvement in patient care. Access, satisfaction, and finances all improved dramatically. Physicians spent less time in non-patient activities (triaging, phone calls with support staff and outside offices) and more time caring for patients. Patients with complex rheumatic diseases who were previously cared for at the primary care level could now be seen earlier in their disease course by the rheumatologist.

In conclusion, this advanced access model in a busy academic rheumatology practice required a significant investment in time, a philosophical commitment to the tenets of the IDCOF model, and a team of individuals working together to provide optimal access to care. We are now truly able to give the patient the rheumatologic care they want and need at a time they want and need it.

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