## Practice Management

# Implementation of an Open Access Scheduling System in a Residency Training Program

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Background and Objectives: *Open access is one method of improving the quality of clinical practice. Leaving the majority of appointments open to be scheduled the same day allows patients to have control of their access to care. These appointments can be used for all visit types, including physical exams. Our objective was to implement this system to improve efficiency, and patient/provider satisfaction, while maintaining financial profitability.* Methods: *We implemented open access at our academic practice on January 2, 2002. Clinical teams are essential for continuity, and implementation required extensive patient, provider, and staff education. We prebook the first three patient appointments for patients requiring language interpretation, prearranged transportation, and procedures. A phone triage system is still necessary for clinical questions or hesitancy about the system.* Results: *Charges and revenues have increased since implementing the new system, as have patient satisfaction, visits per full-time equivalent, and total monthly volumes. Patient satisfaction is improved, as measured by the percent of abandoned phone calls, average time to make appointments, and the number of no-shows. Nursing work, as measured by triage, nursing callbacks, and bumped appointments, has declined markedly.* Conclusions: *Open access has improved revenue, simplified office processes, decreased nursing work, and improved patient satisfaction without any increase in provider time or clinic expansion.*

Open access is an approach developed to meet the current demand for clinical best practice models. Open access is a patient-centered approach to appointment scheduling that allows patients to control when they are seen in a clinician's office. Simply defined, open access means leaving the vast majority of appointments open and unscheduled until the day they are used, so that patients can obtain same-day appointments.

Best practice models and the redesign of medical practices as proposed by the Institute for Health Care Improvement through the Idealized Design of Clinical Office Practices initiative and others are gaining popularity.[1-3] These models merit study and implementation in varying environments. The Institute of medicine (IOM) report, "Crossing the Quality Chasm: A New Health System for the 21st Century," cites advanced access models, such as open access, as important tools for improving patient-centered care and improving ef-

ficiency.[4] Much has been written about the open access models of scheduling patient care in the past few years, but there are no reports of using the system in a residency training practice.[5-7]

We elected to initiate the open access model to try to solve several problems. These problems included various performance concerns, such as poor phone access, appointment delays or cancellations, inefficiency, patient and provider dissatisfaction with clinic schedules, and poor continuity. It was our expectation that the open access approach could be implemented while maintaining or improving financial outcomes.

### Open Access Model

Open access has been variously defined as "advanced access," "doing today's work today," or "same-day scheduling." Most busy practices suffer from an inability to see all the patients who want to be seen on a given day. The most common scheduling approach in the past has been to schedule all chronic patients and physical exams and hope that a few appointments left open would be sufficient for acute care visits. Being ineffi-

cient, the system does not always match the patients' needs with available appointments. The approach makes it difficult to see the scheduled patient visits and creates a backlog of unfinished work involved in seeing acute care patients. The result is frustrated patients and unhappy staff.

An open access system provides adequate appointment availability for any patient who wishes to be seen. Open access is not urgent or walk-in care, since it involves same-day scheduling with the patient's regular provider of choice. The system accommodates chronic revisits, physical exams, and acute visits, giving the patient the responsibility to decide when care should be given.

## Methods
### Setting

AF Williams Family Medicine Center (AFW) is an academic family practice that was facing many common practice problems. As an integrated resident and faculty office, we have approximately 24,000 visits annually. At the time of this study, there were about 12.8 full-time equivalent (FTE) providers (4.3 nonphysician [physician assistant and nurse practitioner] providers, 3.3 faculty physicians, and 5.2 FTE residents). At most times, there are 9.5 FTE providers available to see patients on any given day. The majority of our faculty see patients between 2 and 6 half days per week. Nonphysician FTEs vary between 3 and 9 half days a week. First-year residents are in the office 2 half days, second-year residents 3 half days, and third-year residents 5 half days.

The clinic is organized into four teams composed of residents from all these years of training, along with faculty and nonphysician providers. Providers attempt to maintain continuity, but the team often forms the unit for patient care continuity.

The office operates 8 am–5 pm, 5 days a week, with after-hours coverage provided by the residents. Our IDX scheduling system allows the collection of data for total visit volume, no-shows, cancellations, appointments "bumped" for provider reasons, and time to next available appointments. All phone calls in the system are tracked through a phone system that records length of calls, time to answer calls, number of calls per operator, and abandonment (patients hanging up or disconnected) rate. At AFW, these data are used as a surrogate measure of patient satisfaction, and quality and poor performance in these areas has mirrored the results of surveys done by the institution. We were performing poorly on these measures, and patient access to appointments was the biggest source of provider and patient complaints.

### Implementation of Open Access

Most studies of open access suggest lengthy preplanning to estimate and decrease the backlog of work that is waiting to be completed. This backlog of future appointments would usually require calculating demand and capacity and working to relieve the backups over time. Since our computer system allowed us to create provider schedules only 3 months in advance, we had an opportunity to move to open access without the "suggested" delay. In November 2001, we decided to institute the change on January 2, 2002. Although this gave us little time for educating our staff and patients, we had no functional backlog to work through. All patients waiting for a follow-up or a health maintenance visit had to call to obtain a new appointment in our system anyway.

Intense provider and staff education was instituted. Handouts outlining the plan and provider team calendars were given to patients beginning in December. Starting January 2, all patients who called for an appointment were offered same-day appointments, and attempts were made to identify each patient's preferred provider. If there was no provider identified, we allowed them to choose one. Additional provider education and training was done via handouts, article distribution, and group education at faculty and resident meetings. Patient education was instituted at every opportunity, including by phone and at each visit. We guaranteed access for worried patients.

Although some open-access models use up to 50% prebooked appointments, it was our desire to maximize the number of same-day appointments, and we thus severely limited the number and type of prebooked appointments that can be made. We only prebook the first three appointments (18%) of each half-day session, and these are used only for certain types of visits. These appointments are reserved primarily for patients requiring language interpretation, prearranged transportation, and procedures. Prebooking these early appointments is efficient, since the patients arrive while the first phone calls for the day's appointments are being answered. We continue to use a triage system for patients who are unsure if they need to be seen and to accommodate patients when the schedule fills up. Full scheduling has been an infrequent event, and the number of double and triple bookings has been minimal.

### How Does This Model Look to Patients?

The following example provides a description of how the open access system operates.

Mr Smith is seeing Dr Jones for a follow-up appointment to assess his diabetes and hypertension. At the conclusion of the visit, Dr Jones recommends another appointment next month. Instead of asking Mr Smith to schedule the visit at the front desk on his way out, Dr Jones hands him a calendar for the next month with

his schedule, and the schedule of his clinical team, listed on it. "I would like to see you back in about a month. Here are the days I'm in clinic. Please call on the day you want to see me, and we will get you in. If there are any problems, please ask to speak to one of our nurses, and they will get you in to see me that day." Mr Smith leaves, happy and confident that he will see his chosen provider in about a month, based on his (Mr Smith's) preferred schedule.

## Results

Figures 1–5 show the data for the last 11 months. We started in January 2002. The first 6 are the baseline months, with the last 5 months shown on the figures representing the new open-access system.

### Visit Volumes and Phone Calls

Figure 1 shows that our 2002 visit volume increased from December to January, with a small decline in May. This decline is likely due to a smaller number of providers that month. Comparison with 2001 visit volume does show an overall increase from the same time the previous year. Phone call volume has remained constant; however, due to the more efficient use of phone time, the average call length has decreased by 2 minutes.
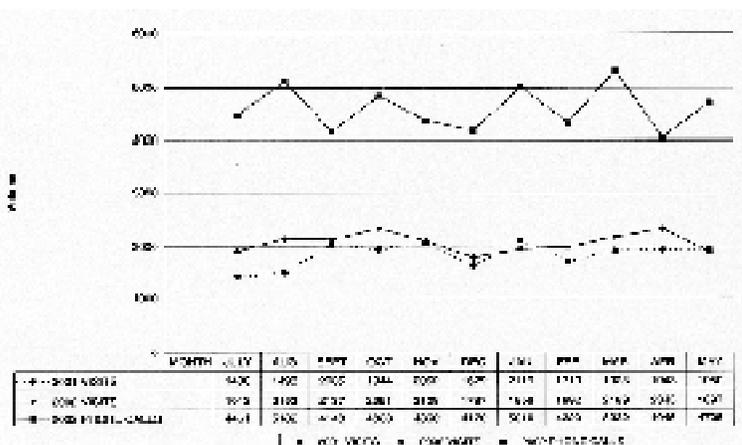
### Financial Results

The financial data shows that our visit charges and revenues have increased in the months following initiation of the new system. The apparent initial decrease in revenue is a product of provider capacity. Visit volumes per FTE also increased. We believe this is due to the fewer no-shows, more consistent scheduling, and better use of appointments. Figure 2 shows the overall improvement in charges/FTE and revenue/FTE after implementation of the new system.

### Patient Satisfaction Results

We use the data presented in Figure 3 as a surrogate for patient satisfaction. The biggest issues revealed in hospital satisfaction surveys were related to phone access, repeated bumping of appointments for provider reasons, and no-shows that interfered with access for other patients. Improvement in the time to book appointments due to immediate scheduling has created a marked improvement in phone abandonment and no-show rates. We have found that patients who schedule their appointment on the same day are much less likely to no-show

and require less phone time, leading to improved phone abandonment rates. Also, open-access scheduling has decreased the number of bumped patients since there are fewer prescheduled patients to be bumped. When patients do need to be bumped, we have usually been able to accommodate them by shifting them to open slots in other providers' schedules.

### Nursing Work

Nursing work was tracked by using periodic 2-week sampling of all calls handled by the nursing staff. Figure 4 reveals a striking decrease in the nursing work

Figure 1

Visit Volumes and Phone Calls

Figure 2
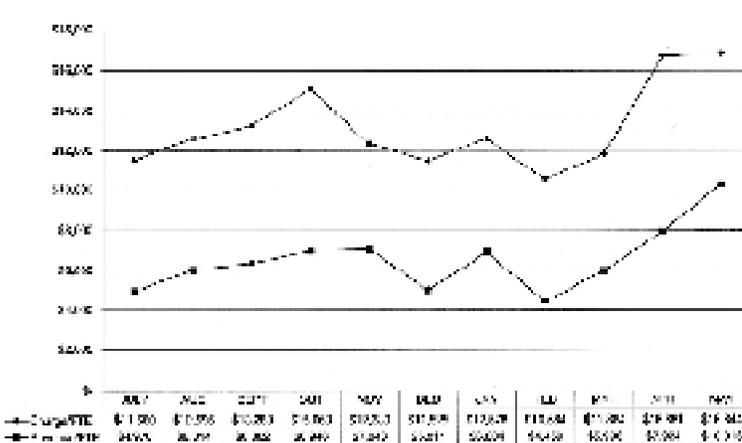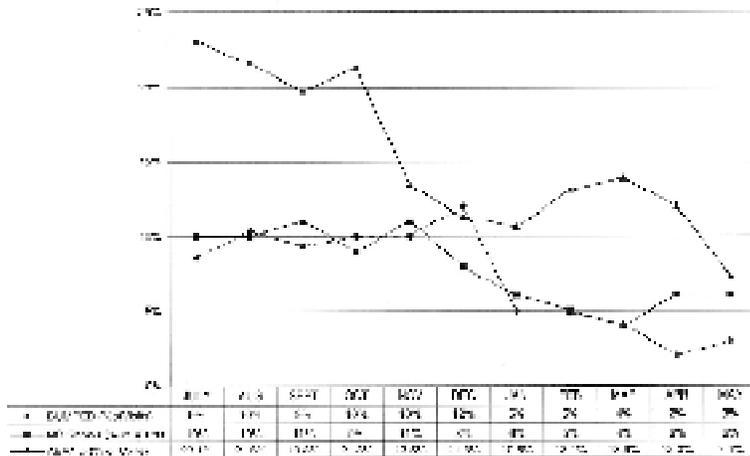
Charges and Revenue by Full-time Equivalent

Figure 3

Measures of Satisfaction



required, as measured by the percentage of triage calls, callbacks, and nurse visits.

### Patient Satisfaction

The only direct patient satisfaction data we have come from our hospital rapid response survey. This is collected by quarter and contains five questions. The data are collected on a 5-point Likert scale, with 5 being outstanding. Patient satisfaction scores have increased somewhat, but the full evaluation of this data are not available since data are processed by the hospital and take several months for completion. In general, however, the "rapid surveys" have been uniformly favorable. In fact, patients are thrilled with the results.

### Payer Mix

Figure 5 shows that our payer mix has stayed relatively constant during this transition time.

### Conclusions

In general, results have been better than we had hoped for. Our charges and revenue per provider have increased without increases in provider time or clinic hours. Open access has simplified our office processes and made the phone system much more efficient, effective, and patient friendly. We are now getting compliments on the speed of answering the phones and the ease of mak-

ing appointments. Our patient satisfaction data are improved, particularly around the use of phone contact, scheduling, and access to providers. Nursing staff is now doing real nursing work, rather than callbacks, and patient flow is improved. Patients are seen on time with little overbooking.

### Pitfalls and Benefits of Implementation

The many pitfalls of implementation have been explored elsewhere.[8] We found that most are valid and need attention. The most important are the following:

The first is lack of education. Provider education is paramount. Providers' fear of loss of control of their schedules and limited experience with the system could jeopardize implementation of an open access. Daily problem-solving sessions with staff were often necessary to be sure the system works for everyone. Any individual in our clinic could create errors in the system.

The second pitfall is matching provider panels with clinical time. This is especially important for part-time clinicians, as we would typically see a greater backlog of patients waiting to be seen in a limited number of appointments.

The third potential pitfall is lack of trust by patients. Patient education can temper the fear that they will not be served. Fearful that the "new way" would not work for them, patients could experience anxiety and create stress for the staff. We solved this problem by providing a "guarantee" for an appointment for those patients calling on the same day as we instructed. This occa-

Figure 4

Nursing Work
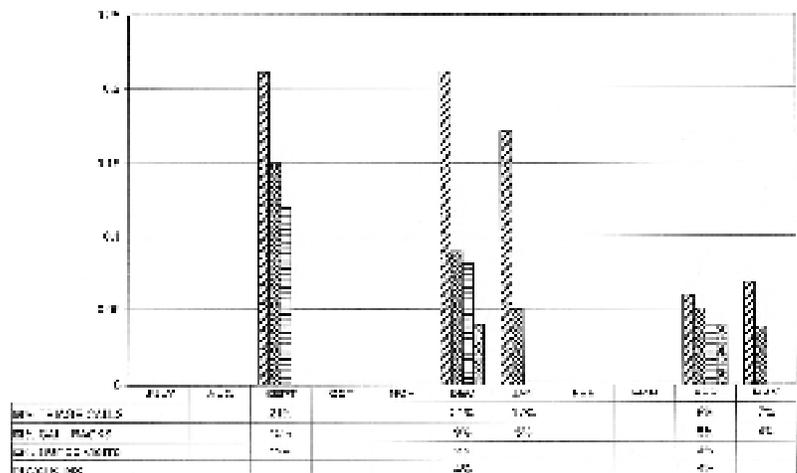
sionally required overbooking, but there were many fewer overbookings than under the old system.

In contrast to the potential pitfalls, the benefits have been substantial. First, we have had improved financial revenue. Scheduled appointments per provider have not increased, but the completed visit volume is higher, resulting in more charges and more collections. This is likely due to fewer no-shows, better use of the appointment system, and visits that were "inappropriate" nursing visits being scheduled.

The second benefit has been improved morale. Nurses are now doing clinical nursing work rather than triage and callbacks. They provide closer supervision of medical assistants. This creates a better working environment. The front office staff have a better relationship with patients who are served quicker and reward them with kind comments.

Finally, provider morale has improved. Feedback suggests that continuity and provider satisfaction is higher.
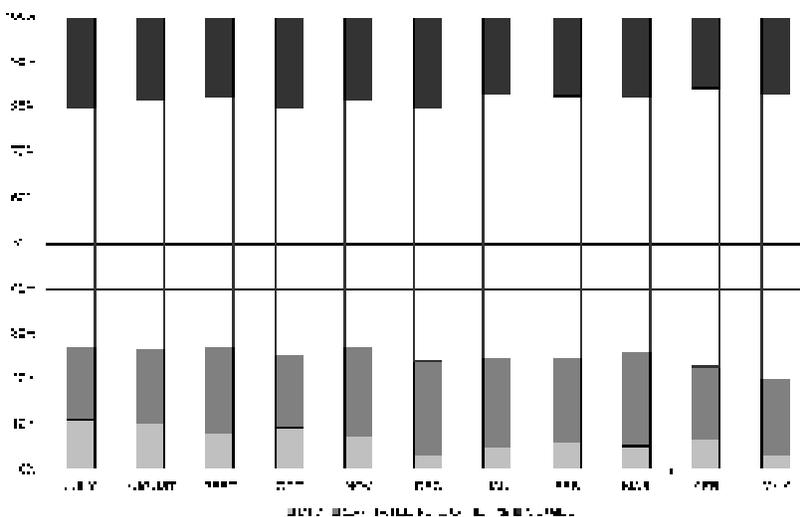


Figure 5

Payer Mix

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Program goal. A Residency in Dermatovenerology is designed to prepare qualified, trained medical specialists in dermatology. They will have the ability to work autonomously in a specialized area of medicine, including high-technology medical care. The education will provide trainees with an excellent and broad background in fundamental medical science and with the professional, technical and clinical skills necessary in their field. The trainees will also acquire in-depth knowledge of related disciplines. Duration of study.