To Improve Clinic Performance, Rethink Scheduling

By the Leadership Team at Kairoi Health

SUMMARY

Clinics and large medical practices struggle in today's healthcare environment to achieve efficient workflow, increase revenue, keep providers happy, and serve patients optimally. Managing patient flow and scheduling is often the key factor impacting clinic performance. Clinic directors and managers know this, but they need to think about the problem differently in at least three ways: **1)** identifying simple, low-cost ways to maximize ROI; **2)** shifting their efforts from modifying patient behavior to improving availability of appointments; and **3)** mining their unique data for scheduling insights and efficiencies.

INTRODUCTION

"Improving processing and scheduling requires systems-level transformation. . . Such transformation can uncover previously unrecognized resources and improve all aspects of care delivery."

– Lisa Brandenburg et al.,
Innovation and Best Practices in Health Care Scheduling
Institute of Medicine of the National Academies

The number of Americans aged 65 and older is predicted to more than double by 2060. Along with other social and demographic patterns, this shift will intensify stress on medical services. With demand increasing and providers retiring, medical professionals will be spread thin. These impacts are already being felt, with healthcare organizations struggling to balance operational efficiency, provider workloads, and patient satisfaction.

The sea change in care from small, physician-owned practices to large medical practices and clinics has been underway for more than a decade, bringing its own challenges. Other momentous shifts include payment reforms aimed at keeping more people healthy, new quality and safety compliance standards, and layers of information technology. The result: Whether in a fee-for-service or capitated payment system, healthcare decision makers are challenged as never before to evaluate and optimize productivity, for the benefit of their staff, patients, and financial well-being.

Among the top challenges for clinics in the current care environment:

- Staying profitable — even viable — amid static or shrinking reimbursement rates and cuts to government programs
- Fully integrating the use of mandated electronic record-keeping
- Attracting and retaining skilled, dedicated providers, who must do their work in stressful circumstances (see above)
- Meeting patient needs and expectations in an age of accountability and "patient-centered care," yet with many patients challenged to access and effectively use healthcare services
- Certain clinic types, like federally qualified health centers, face special challenges because of how they are reimbursed, and the patient mix they serve.

Running all through this matrix of issues is the conundrum of scheduling. It's no secret that managing patient flow is a problem for nearly all inpatient and outpatient clinics. At its root is the mismatch between the limited supply of clinic resources (physicians, non-physician staff, number of exam rooms, available clinic hours) and the demand for services by patients. From a clinic manager's point of view, optimal patient flow usually means that the total number of patients seen in a day reflects an acceptable volume per clinician, whether a physician or nurse practitioner. For the patient, optimal flow usually means getting an appointment quickly and being seen by a physician at the scheduled appointment time (that is, no waiting).

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Current reality falls far short of these optimal goals. For patients, long wait times to get appointments and an unsatisfying in-office experience may contribute to negative health outcomes and lead to missed or canceled appointments in future. For providers, unsystematic scheduling has a whole constellation of impacts: rushed patient encounters, more take-home work, loss of professional self-esteem, even burnout. For the clinic as a whole, the effects are pervasive: from a general atmosphere of workplace dissatisfaction or of failing in the mission of care, to high rates of turnover, to a bad bottom line. From the C-suite to clinic and information managers to providers and staff, everyone is affected and everyone is responsible.

WHY IS SCHEDULING SO RESISTANT TO IMPROVEMENT?

Not surprisingly, healthcare thought leaders are trying to identify the factors that intersect in the scheduling puzzle:

- Limited resources: facility space and layout, number of rooms, staff size
- Provider variation – in skills, time management, temperament, and receptivity to innovation (understandably, the mindset of medical professionals has been slow to adapt to newer models of care)
- Patient behavior: rising rates of no-shows, late cancellations, rescheduling, late arrivals; variations in perceived need for provider time; and the dynamic nature of acuity
- Inefficient clinic systems and processes, including visit targets that are driven by the subjective preferences of doctors and administrators rather than by data, and lack of standardized benchmarks and visit types
- Huge gaps in managers' understanding and use of clinic patterns and historical data

The pain point is so often the providers, who have whiplash from the pace of change in the care universe and the gap between their expectations and today's reality. Trained to be professionals, often individual entrepreneurs, they now feel like employees. The burden of EHR has fallen largely on their shoulders, too, degrading the patient relationship and creating hours of at-home work. Understandably, their common reaction to being invited to try a new tool is to flinch. As one doctor said to our CEO, "I'm a galley slave, and you're trying to beat the drum faster!"

As one study concludes: "The science of optimizing access and wait times is still evolving, with little comprehensive measurement of wait times for appointments, and with targets that are often pragmatic... as opposed to evidence based." Our own experience as clinical consultants and healthcare system managers supports this broad analysis. Comprehensive solutions will require further study, specialized personnel training, systems-thinking strategies, technologies yet to be developed, and most likely some market manipulation by government.

WHAT CAN CLINIC LEADERS DO TODAY?

But how can clinical leaders act on what we already know, right now, with time and financial resources stretched thin? We at Kairoi Health propose that three actionable shifts in thinking on the part of clinic leaders can make an immediate and significant impact on scheduling and thus on clinic performance.

1. Raise ROI without adding resources.

"The positive return on investment that might be anticipated from a redesign of scheduling processes could be substantial for the patient and the health care system."

– Brandenburg et al.,
Innovation and Best Practices in Health Care Scheduling

Increasing the number of visits per provider by even a small amount can have a big impact on a clinic's bottom line. With a slight tweak in scheduling, it's easy to achieve, and can serve patients better, too.

A brief example illustrates how much room for improvement exists. When Kairoi Health's consulting experts analyzed scheduling and productivity at a large primary-care clinic (in 2014), they found that clinic use patterns were way out of sync with management targets. For example, provider targets were set at 18 visits per day or 2.25 visits per hour, with a 6-hour day. Yet one provider (on a bad day) spent just 2 hours and 30 minutes seeing 10 patients, for a utilization rate of 42 percent. Much of the explanation lies in another number: this provider's effective no-show rate on that day was 19.2 percent, the highest during the period evaluated.

This was an extreme case, but the discrepancy between targets and the reality of use patterns was clinic-wide.

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Now take a hypothetical case: a clinic of 50 providers and an average reimbursement rate of $100 per patient visit. If you could adjust scheduling to add just one visit per provider, per week, the result would be:

200 added visits per month (1 visit x 50 providers x 4 weeks)

$20,000 in revenue added per month ($100 per visit x 200 visits)

$240,000 in revenue added annually

If you could do this without adding staff or facilities, and as a bonus actually make the providers' days more coherent and satisfying…why wouldn't you?

When asked to consider this scenario, clinic leaders typically raise two objections. The first is simply to doubt whether it's possible. In reply we offer evidence from our studies that, if anything, they can expect much more than this modest increase in productivity. As we continue to publish on these topics, we'll delve further into the details.

The second objection arises from a mostly unconscious mindset of medical professionals: that patient care will inevitably suffer from any increase in visits per provider. We take this concern seriously, of course, but believe it to be misplaced. Other features of the patient's in-office experience have much more impact on the quality of the visit and care. (Again, we'll unpack them in future reports.) What can't be argued is that a clinic can serve more patients sooner by adding visits. And while it may sound counterintuitive, more efficient scheduling can be shown to directly improve overall patient satisfaction and outcomes.

2. Manage supply rather than demand.

"[We have] a health care system that deploys its most valuable resource—highly trained personnel—inefficiently, leading to an unnecessary imbalance between the demand for appointments and the supply of open appointments."

— Gary Kaplan et al.,
Transforming Health Care Scheduling and Access
Institute of Medicine of the National Academies

Put another way: *Shift your focus from trying to modify patient behavior to the proven model of managing appointment slots.*

Our most skeptical audiences are often the CIOs, the information managers. These days, their main job is ensuring the implementation of government-mandated electronic health records (EHR) systems, and it can be a full-time job. Suggesting that they add another layer of software tends to provoke a knee-jerk response.

But that's partly because clinics and practices, trying to mitigate the impact of no-shows, cancellations, and so on, are already investing too much time and money in solutions for modifying patients' behavior. Everyone who's been a patient has experienced them: repeated robo-calls, reminder emails and texts, online patient portals. Yet another cohort of software aims to streamline check-in and check-out, or tracks patients throughout their appointment.

While we don't quite agree with the clinic manager who said, "It's folly to think we can change the behavior of patients," such solutions do have limited utility in the big picture of scheduling. Patient populations and urgency of need are a constantly moving target, especially for clinics that serve the underserved. The chronically ill (a growing section in an aging society) are especially prone to canceling, changing, or forgetting appointments.

In locating the paths of least resistance to improvement, clinics are well advised to think about what they can control: their own supply of resources, in the form of appointment slots. It's not a completely novel idea: Brandenberg et al. report that, "The methods developed by operations research and systems engineering to match supply and demand has led to substantial improvements in cost, efficiency, and patient satisfaction in select hospitals . . . and clinics."

By all means, continue to do what you can to improve patient compliance. Just keep in mind that effectively managing supply will help you see more patients sooner.

Compared to hospitals, clinics are less equipped to undertake big systems studies, so they need proven methods. For example, strategic double-booking, backed by sophisticated data analytics, has long been used by airlines with resounding success. Clinics are sometimes reluctant to consider this step because, again, it doesn't sound patient-friendly. But it simply assumes and accounts for the reality of no-shows and other variations from the ideal of appointments made and kept on time. Rather than a global approach, it should be a well-placed dart, not a cannon. The critical factor is customizing supply management to your clinic location, providers, patients, and history. Highly developed data analytics make this eminently doable.

The discoveries can be startling. In an OB/GYN clinic we worked with, a talented nurse-manager was "bunching" patients efficiently, which enabled her to see more in a given time period than her practice required. Management had allowed 20 minutes per visit, but she knew that much time wasn't usually needed. When we looked back at this history, we saw that she averaged 22 patients seen daily, all from

9:00 am to 2:30 or 3 pm. She had met her goal: the doctors could go home early. Patients, too, were happy if they could come earlier in the day. The lessons of this provider were translated in revised clinic-wide practice.

So by all means, continue to do what you can to improve patient compliance and your overall focus on patients. Just keep in mind that effectively managing supply will help you see more patients sooner.

3. Mine productivity gold from your clinic data.

"Most clinical settings do not take a broad enough view of the various options for either increasing supply or reducing demand, nor do they maintain the analytic capacity to observe and understand the dynamics involved."

— Kaplan et al, from Transforming Health Care Scheduling and Access

In tallying their scheduling resources, clinics normally consider their providers and other staff, physical resources like appointment rooms, and the technological tools they rely on. They tend to overlook a unique and infinitely valuable resource in the form of accumulated scheduling records: patient appointment histories, provider visits and timing, room utilization, and more. Even if they realize this information has value, time-challenged clinic leaders lack an easy-to-use framework and tools for evaluating the data and putting it to work.

Yet a clinic can't afford to ignore its own singular history of productivity and scheduling performance. Insights and data points can be a feature of clinic location, patient population, provider mix and preferences, urgency of care need, and appointment availability. With the right framework, all can be readily discovered and integrated on scheduling templates.

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A clinic where Kairoi Health conducted a pilot project needed to trouble-shoot its very high no-show rate—overall close to 35% and a staggering 50% for new-patient appointments. We know that new-patient appointments are longer and more demanding of providers, who typically prefer a maximum of two per day; but this can mean a wait of 6–8 weeks for new patients to be seen. And some of those patients, rather than just shopping for a primary provider, are really calling out of an urgent need—so they take the far-out appointment as insurance, but often cancel or don't show. We discovered this problem by analyzing the time elapsed between the date of calling and actual appointment, then correlating between the type of appointment (based on length) and no-shows. Once the clinic recognized the connection between their no-show rate and patients calling for first-time appointments, it became actionable.

Using data analytics in scheduling can be a way to get more value from your investment in EHR. Our pilot studies have shown, however, that the "garbage in/garbage out" rule holds true for scheduling data. Clinics must learn to keep records in disciplined, consistent, and accurate ways. Just as important, the data captured must be effectively cleansed to minimize potentially wide margins of errors. When raw data is used, we can predict about a 16% rate of error in the correlations observed

By analyzing sets of robust, squeaky-clean data, a clinic can arrive at a nuanced approach to determining optimal schedules, customized according to the specific clinic, service lines, patient populations, and the goals and preferences of individual providers.

A WIN-WIN FOR CLINICS AND PROVIDERS

We don't mean to minimize the scheduling conundrum or suggest that any single approach or software solution is a magic bullet. Systemic improvement takes sustained attention on many levels: clinics must articulate clear practice goals, account for critical variables, effectively track and use historical data and current metrics, understand utilization patterns, identify and deploy the technology best suited to them. And, of course, build a culture around the principle that what works best for the clinic serves everyone who works there.

> *"What would happen if all physicians were supported and able to reach a schedule density of 90% or 95%?"*
> — McKinsey, *The Productivity Imperative for Healthcare Delivery in the United States*

A 2019 McKinsey report, *The Productivity Imperative for Healthcare Delivery in the United States*, identifies as a core issue the need to access providers' "additional existing capacity." It found that clinical physician schedules average 78–82% filled, with primary care at the low end. But in high-performing practices, the target schedule density was 90 to 95% "to ensure that the time of their physicians—their most valuable workers—is adequately focused on patient care . . . ." Other benefits of increasing a physician's schedule density might include shortening wait times for patients, the report notes. It also suggests that raising provider capacity to 90–95% would be highly effective in addressing the looming "provider shortage."

To effect any kind of profound improvement in scheduling and flow, it has to be a win-win for both clinics and providers. This is why we urge starting with the steps above, which need not require any new commitment of time from providers, put them on a new learning curve, or diminish their interaction with patients. Rather, these ways of "thinking different" about scheduling can relieve pressure and uncertainty, restore clarity and coherence to their time-planning, and help renew their sense of commitment to the mission of patient care. A clinic operating in a smooth state of flow lifts the spirits of providers, staff, and patients. And, not incidentally, clinic revenues.

KAIROI HEALTH EXECUTIVE ADVISORS FOR THIS WHITE PAPER

Jed Weissberg, MD, FACP

A nationally recognized leader in quality of healthcare, Dr. Jed Weissberg held a variety of executive positions over his 30-year career at Kaiser Permanente from 1984–2014, most recently as Medical Director of Medicare Advantage, Cost and Prescription Drug Plans, as well as Senior Vice President of Hospitals, Quality and Care Delivery Excellence. Following his KP career, Dr. Weissberg was a Senior Fellow at the Institute for Clinical and Economic Review. He continues to consult for a variety of life science organizations and healthcare start-ups. Dr. Weissberg is a graduate of the Albert Einstein College of Medicine and the University of Pennsylvania. He trained in internal medicine at Boston City Hospital (now Boston Medical Center).

Alide Chase, MS

Alide Chase served as Senior Vice President of Quality and Service for the national Kaiser Permanente program. During her nearly 20-year career at Kaiser, she held various operations positions and directed key clinical initiatives designed to support the organization's goal to transform healthcare, including its groundbreaking Care Management Institute. Chase is also an internationally recognized consultant and speaker, frequently addressing international audiences on health care dynamics and global trends. As a Senior Fellow with the Institute for Healthcare Improvement, she works in the areas of population health and community well-being. Her consulting focuses on optimizing health system performance.

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