

A KAIROI HEALTH WHITE PAPER

FQHCs:

Smart Scheduling to Raise Productivity
and Improve Patient Access

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“[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

SUMMARY

With rising patient demand and finite resources, medical clinics of all types are bedeviled by scheduling issues. Because of their structure, staffing, and patient populations served, FQHCs are especially vulnerable to flawed scheduling practices that impact productivity and revenue (reimbursements) — not to mention provider morale and patient satisfaction. Along with encouraging patient compliance to reduce high rates of no-shows, these public-facing health centers now can capitalize on a major technological breakthrough: the availability of deep analytics to prospectively optimize scheduling — for the good of patients, providers, and clinic performance.

WHY FQHCs SHOULD FOCUS ON SCHEDULING

“As the largest Federally Qualified Health Center in Michigan, Cherry Health experiences the challenges typical of FQHCs nationwide: sustaining productivity, reaching revenue goals, nurturing and retaining top providers, and making our wide range of health services available to as many patients as possible.”

JULIE TATKO
COO, Cherry Health

Federally Qualified Health Centers (FQHCs) are cornerstones of the ongoing effort to expand access to primary care, caring for millions of underserved patients nationwide, and they play a vital role in helping to corral healthcare costs. Like any healthcare provider, an FQHC must serve patients while operating in a fiscally sound way. That can be a high bar for these organizations. As a Sage Growth Partners study found in 2017, **“Rooted in a mission to serve our nation’s poor and uninsured populations, many FQHCs evolved as organizations well-equipped to deliver quality care but ill-equipped to operate financially sustainable businesses.”**

FQHCs face productivity challenges that are intrinsic to their nature. Because of their patient demographics, missed appointment rates are higher than average. Patients often present with multiple needs, sometimes causing a visit to exceed the allotted appointment time. Providers are often newly minted professionals who need training in care management skills; those more ambitious and/or highly qualified may turn over quickly; or the stress of working in a busy public health clinic can lead to burnout. Support staffing can be inadequate, and IT resources stretched thin or outdated.

Some of the challenges to productivity are baked into the FQHC system. But in one problem area — scheduling — clinics have a new opportunity to realize big improvements in performance. At the heart of the scheduling puzzle are missed appointments, which hurt productivity goals and disrupt provider work rhythms, as do appointments that run over their time slot. Both are endemic to FQHCs.



Among other scheduling pitfalls are:

- » Clustering too many new-patient appointments.
- » Failing to optimize room usage and open times in the schedule, or to account for seasonal shifts.
- » Failing to use provider time strategically.
- » “Blind” double-booking that creates long wait times and frustrates providers.



AT THE HEART OF THE SCHEDULING PUZZLE ARE MISSED APPOINTMENTS, WHICH HURT PRODUCTIVITY GOALS AND DISRUPT PROVIDER WORK RHYTHMS.

Estimates vary, but a 2016 study suggests that the average nationwide rate for no-shows across all types of clinics is nearly 19 percent. And there’s ample reason to believe that missed-appointment rates at FQHCs exceed this average. This represents a huge loss in productivity, higher administrative costs, and time wasted in a provider’s day. Patients pay a price in health, too, when they miss vital tests or necessary treatment is delayed.

When they do try to address scheduling, clinics tend to focus on modifying patient behavior, employing systems and tech solutions that promise to bring more patients to their scheduled appointments, on time. This tactic feels intuitive, yet the real impact is typically minimal. The same study found that a centralized phone reminder reduced no-show rates by less than a percentage point.

Both **experience and research convince us that clinic leaders can significantly improve productivity by focusing their efforts on the supply side of the equation: improving availability of appointments.** The forces that affect availability — an inevitable percentage of no-shows, uneven appointment lengths, patient and provider variables, lack of standardization, and simple human error — are present in all FQHCs. But each has its own story and data set. Just as in the corporate world, clinics now have tools to crunch this data with powerful analytics and start using it strategically.

MINE ACTIONABLE INSIGHTS FROM YOUR EHR

“The financial health of the FQHC is always part of the strategic plan and why we work so hard at quality data reporting and meaningful use.”

LAURIE KANE-LEWIS
CEO of DFD Russell Medical Center in Leeds, Maine

Every clinic has its distinct patterns of use and performance, including scheduling. Those patterns can be discerned by closely examining the clinic’s historical ERH data — an untapped source of actionable scheduling insights. According to a 2014 Commonwealth Fund study, 93 percent of FQHCs had an EHR system, a 133 percent increase from 2009 — and the percentage has surely grown.



WHAT KINDS OF DATA SHOULD BE SCRUTINIZED?

Among the Variables:

01. WHAT KIND OF PATIENT

New-patient appointments are the most subject to cancellation, and typically take longer than ones for established patients. (A double whammy: because they occupy longer slots, unkept new-patient appointments are extra-disruptive of provider schedules.) Patients with multiple issues make for longer visits.

02. THE PRESENTING PROBLEM

Category and acuity of disease affect appointment length. Mental and behavioral health issues can impact not just length but likelihood of keeping an appointment. Sometimes a “single visit” can result in the patient seeing more than one provider.

03. TIME OF DAY, WEEK OR YEAR

Clinics experience higher rates of unkept appointments on certain days and times of day, depending on location and other factors. Flu season can mean a big increase in appointment demand (but typically appointments of short duration). Proximate civic or sporting events can affect whether patients keep appointments.

04. PROVIDER PREFERENCES AND SPECIALTY

Some providers prefer a schedule with short breaks at a few points in the workday. Others are happier making a sprint through the whole morning or afternoon session, followed by a longer period to catch up with charting. Since new-patient appointments are taxing, most providers prefer to limit their frequency in a given day. Shorter appointments are preferred (and suitable) for routine flu season visits, for example, or by pediatricians to qualify patients for athletic programs. Balancing providers' time-off requests with predicted visit need is vital to ensure enough provider presence (and appointments!).

05. APPOINTMENT LEAD TIME

Appointments scheduled far in advance are highly prone to cancellation or no-shows. Especially in the FQHC realm, these patients are often calling for an urgent need rather than seeking a primary provider — so they accept the far-out appointment as insurance, but then find quicker care elsewhere.

Many of these factors contribute to missed (or fewer) appointments; all of them can influence scheduling decisions. Until fairly recently, an experienced clinic manager would draw up provider schedules, calling on the knowledge carried in his or her memory and responding to conditions day to day. But now, **with sophisticated analytics, the extensive data stored in EHR records become strategic assets.** Using these tools, clinic leaders can discover correlations and patterns that help or hinder performance, and take appropriate action.

Any data analysis is only as good as the data going in. So we advise clients on best practices in using their EHR to improve clinical workflow.



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These include:

- » Detailed and accurate recording of appointment status; carefully differentiating among appointments kept, cancelled, rescheduled, or simply missed. (“Cancelled” does not equal “rescheduled.”)
- » Clearly identifying individual provider block times; not comingling these with no-shows or cancelled appointments
- » Diligently recording provider time-in and time-out of an exam room



WITH TODAY'S SOPHISTICATED ANALYTICS, THE DATA STORED IN EHR RECORDS BECOME STRATEGIC ASSETS. USING ANALYTICS, CLINIC LEADERS CAN DISCOVER CORRELATIONS AND PATTERNS THAT HELP OR HINDER PERFORMANCE, AND TAKE APPROPRIATE ACTION.

Before analysis is performed, appointment errors and artifacts need to be filtered out to avoid skewing the output. A data-cleansing engine can be built into the analytics process.

PUTTING ACTIONS INTO INSIGHTS

Any scheduling solution should offer a range of options generated by data analysis and tailored to the parameters of the individual FQHC and provider. The analysis will suggest specific tactics for modifying schedule templates. Sharing those templates with providers and key staff should be seamless.

The schedule template below depicts two partial days in the life of an individual provider. This example is designed to show the most important scheduling options available, as presented by data analytics for this clinic and provider:





COMPRESSION

If an appointment is booked for 15 minutes, rarely is the provider in the room with the patient for more than half of that time. Typically a nurse or other clinician rooms the patient, takes information, sets up the chart on a screen, and follow up with the patient after the provider and patient interact. So the appointments are scheduled to overlap, as shown by offset blocks on the template. Rather than being left with small scraps of unused time, the provider in this way moves smoothly from one room and patient to another – and the extra minutes accumulate over the course of the morning, thus freeing up a solid 30 to 45 minutes at the end of the session for charting, research, or recovery.

PRECISION DOUBLE-BOOKING

Or what we call “strategic capacity loading.” These appointments are shown side by side, in the same time slot. Many clinic leaders have tried to do “blind” (uninformed) double-booking as a way to increase kept appointments, only to find that it caused traffic jams in the waiting room, irate patients, and frustrated providers. Any actual increase in revenue is minimal, and no-shows increase as patients come to dread a long wait. In contrast, strategic capacity loading is a laser-focused approach, fully informed by data analytics. (You could also call it “surgical scheduling,” in the sense that it cuts sharply and accurately!) It can pinpoint which appointment slots, based on analyzing the clinic’s records, have the highest probability of a no-show – and thus where double booking will improve the odds of a kept appointment. The capability to predict and act on the likelihood of a no-show is the most powerful tool in scheduling. In a clinic, the worst consequence is longer wait times – but data analytics can virtually ensure that a historical no-show means a slot waiting to be filled.

STRUCTURING BY PROVIDER PREFERENCE

There are many ways to do this in the template. For example, providers can request that their longer appointments – which are often designated for new patients – be placed early in the day or week, or late in the day, according to their preference.

Clinic decision makers also need the capability to dial in varying levels of sensitivity to historical patterns – adjusting the decision threshold as they modify the schedule template. They may set a specific goal: for example, recovering one additional kept appointment per provider per day. If an action unduly impacts patient wait times or provider rhythms, they may dial things back. Over time, as clinic leaders perform and constantly refine data analysis for their patient population and their entire team of providers, the big picture of potential productivity gains becomes clearer.



THE CAPABILITY TO PREDICT
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IN CONCLUSION

It’s abundantly clear that FQHCs need to increase productivity (numbers of patients seen effectively in a given clinic day). A 2019 McKinsey report, “[The Productivity Imperative for Healthcare Delivery in the United States](#),” zeroes in on the need to access providers’ “additional existing capacity.” FQHCs also need to account more accurately for their work in order to increase revenue, maintain and enhance provider morale in order to recruit and retain providers, and keep patients happy enough to keep coming for care.

Finally, to remain financially sustainable in the current and coming marketplace, they need to expand their business, offering their primary care services to new patient populations. However, workflow issues are among the most-cited



obstacles to serving more mainstream patients. As FQHC leaders seek ways to redesign clinic workflow and improve productivity, they will increasingly need to employ analytics that target the supply of appointments.

“FQHCs are more important to their communities than ever before, but success today demands a different, multi-faceted, and much more strategic approach,” says a recent Sage Growth Partners survey. We couldn’t agree more. Our company, Kairoi Health, has developed a SaaS solution, KairoiOptimize, designed from the ground up to perform state-of-the-art schedule optimization as described in this paper. It’s time for healthcare organizations to do what corporate America did years ago — make smart use of the data residing in their information systems.

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Dr. John Golenski cofounded Kairoi Health in 2014 and has guided its growth and evolution from a services group to a company creating products that target the most urgent issues in healthcare. His depth of experience spans clinical services management, health policy, physician leader training, and primary care redesign. Over his long career of industry leadership, he has worked in 49 of the 50 United States, in widely varied regional medical cultures and both inpatient and outpatient settings, on key issues from benefits design to personnel management, and from patient bed-sides to forums of national and international health policy. [Read full bio](#)



SOURCES

American Association of Health Centers. *America's Health Centers* (fact sheet).
http://www.nachc.org/wp-content/uploads/2018/08/AmericasHealthCenters_FINAL.pdf

Brandenburg, Lisa, with Patricia Gabow, Glenn Steele, John Toussaint, and Bernard J. Tyson.
"Innovation and Best Practices in Health Care Scheduling. Discussion Paper," Institute of Medicine, National Academy of Sciences (February 2015).
<https://nam.edu/perspectives-2015-innovation-and-best-practices-in-health-care-scheduling/>

DeMarco, Christopher. "The High Performing FQHC of Tomorrow: Expanding the Mission through Margin." Sage Growth Partners, white paper (2015).
sage-growth.com/index.php/the-high-performing-fqhc-of-tomorrow-expanding-mission-through-margin/

Health Resources & Services Administration.
About the Health Center Program.
<https://bphc.hrsa.gov/about/index.html>

Hospital IQ. "Using Analytics, Machine Learning, and Simulation Technology to Better Manage Patient Flow." (white paper)
https://www.hospitaliq.com/downloads/HIQ_PatientFlow_white_paper.pdf

Kaplan, Gary, with Marianne Hamilton Lopez, and J. Michael McGinnis, editors.
"Transforming Health Care Scheduling and Access: Getting to Now." Committee on Optimizing Scheduling in Health Care; Institute of Medicine; Washington (DC): *National Academies Press* (US); 2015 Aug 24.
<https://www.ncbi.nlm.nih.gov/books/NBK316141/>

Kheirkhah, Parviz, with Qianmei Feng, Lauren M. Travis, Shahriar Tavakoli-Tabasi, and Amir Sharahane.
"Prevalence, predictors and economic consequences of no-shows." *BMC Health Services Research* (BioMed Central),
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4714455/>

Pasupathy, R., with S.-H. Kim, A. Tolk, R. Hill, and M. E. Kuhl, eds.
"Managing Patient Flow at a New York City Federally Qualified Health Center." *Proceedings of the 2013 Winter Simulation Conference*
<https://informatics-sim.org/wsc13papers/includes/files/390.pdf>

Ryan, Jamie, with Michelle M. Doty, Melinda K. Abrams, and Pamela Riley. "The Adoption and Use of Health Information Technology by Community Health Centers," 2009–2013. *The Commonwealth Fund pub. 1746, Vol. 10*.
At https://www.commonwealthfund.org/sites/default/files/documents/___media_files_publications_issue_brief_2014_may_1746_ryan_adoption_use_hlt_it_chcs_rb.pdf

Sage Growth Partners. State of the FQHC 2017,
A Sage Growth Partners Research Report.
<http://go.sage-growth.com/fqhc-survey-2017>

Sahni, Nikhil; Pooja Kumar, MD; Edward Levine; and Shubham Singhal.
"The productivity imperative for healthcare in the United States." McKinsey & Company.
<https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/the-productivity-imperative-for-health-care-delivery-in-the-united-states>