Three ways to manage the future using appointment data

By Nate Moore, CPA, MBA, FACMPE, MGMA member

ACMPE Fellow

Think of all the brick-and-mortar businesses you interact with each week. How would your favorite lunch stop or grocery store be different if management knew how many people would come in tomorrow and what those people would buy? Would those businesses staff differently, decrease inventory levels or change operating hours? Think of the cost savings available to businesses that knew what tomorrow would look like.

Now consider the ways your favorite shops could serve you better if they knew exactly what you needed, when you needed it. Those "farm fresh" tomatoes you buy tomorrow could have been picked an hour before you bought them, not a week before. Your favorite restaurant would have your order piping hot at your table as you sat down. No lines, no waiting — what a way to delight customers.

As hard as internet businesses try to know everything they can about their customers, even they do not know everything a medical practice knows about its patients. Customers do not need an appointment to buy a book from Amazon or stream a movie on Netflix, but medical practices know when their patients are coming and why. Certainly, medical practices should not use patients' health information to inappropriately market to them, but there is plenty of available information to anticipate needs, promote health and better serve patients. Here are three ways practices can use patient appointments to see and manage the future.

> Appointment data can have a uniquely powerful role in learning from the past and planning for the future in medical practices.

Catch and fix future appointments

Consider creating a list of problems that could affect the patient experience, all of which are identifiable from patient appointments. Rather than searching through each appointment manually, an automated routine could test every future appointment against this list of rules. Any appointment exceptions could be delivered via email each morning, sorted by the closest appointment date. Some of the rules your practice might test for include:

- Patients whose insurance appears to be out-of-network
- Patient appointments missing appropriate authorization
- Patients whose labs or pathology have not been received or reviewed
- Patients who have not paid a required deposit
- Patients who should not be seen by a specific provider or at a specific location
- Patients who owe a balance
- Patients who are in collections
- Patients whose appointment is in a global period
- Patients scheduled as a new patient who have been seen by a practice provider in the same specialty in the past three years
- Patients with a significant no-show history

Imagine the reduction in patient and clinic frustration if rules such as these identified problems in time to fix them before the patient arrives. Think of the cost savings from a more-efficient front-desk experience and the increased revenue from better upfront collections. What rules would make the biggest difference in your practice?

Reduce unsold appointments

The local grocery store can stay open a little too late or survive slow business in the late morning hours because it is not staffed with neurosurgeons. Any time a provider could see patients but does not is a lost revenue opportunity. Like a plane taking off with empty seats, unsold appointments represent revenue that can never be recovered. Clinics should consider using a pivot table — a data summarization tool found in spreadsheet programs to sort, count or average data — to analyze unsold appointments by date, appointment type, provider, provider category and location.

Figure 1. No-show and unsold appointments pivot table[1]

Providers	Canceled	No show/ short notice	Unsold	Grand total
Providers and other appointment resources listed here	263	47	1,259	1,569
	74	3	1,374	1,451
			1,313	1,313
			1,264	1,264
	85	7	1,149	1,241
	380	66	551	997
	238	31	586	855
			831	831
			799	799
	305	45	404	754
	241	43	430	714
	258	47	406	711
	330	47	274	651
	277	42	282	601
	163	44	388	595
	216	23	304	543
	188	42	300	530

Airlines are lucky. Passengers purchase airfare in advance, and most tickets are nonrefundable if the passenger does not fly. Medical practices are not so fortunate. If a patient does not show for the appointment, that slot goes unfilled. Even if the practice has a monetary penalty for no-shows and the penalty is enforced, the appointment slot is still lost to other patients who may wait for weeks to see that provider. Figure 1 is an example of a practice that uses a pivot table to analyze no-shows in conjunction with unsold appointments.

Note that the first column of data is canceled appointments. An appointment that was canceled with enough notice should have been filled with another patient in a busy practice. Canceled appointments that are not resold may be one way revenue is leaking from your practice. The next column tracks no-shows and appointments canceled so close to the appointment time that they are effectively no-show appointments. Those revenue opportunities are lost.

The unsold column represents appointment slots that were never sold. Drill down on these slots. Is a certain time or location consistently hard to fill with appointments? Is this a template issue? For example, are established patient slots in demand while new patient slots go unfilled? Does the templating logic have too many rules and types that prevent patients from being seen? How can schedules and templates be optimized to leverage a practice's most important resource: provider time?

Consider measuring unsold appointments as a percentage of total appointments. You also might develop a system to report appointments quickly that were canceled yesterday where the appointment date is in the next couple of weeks. A daily email could report all unsold appointments today and tomorrow to focus on and fill those slots. Find ways to give visibility and priority to filling unsold appointment slots in your practice.

Online: Patient access and scheduling

Maximizing Patient Access and Scheduling, a new MGMA research and analysis report, combines MGMA data and resources for practices to identify the biggest challenges and implement best practices for patient engagement, appointment wait times, no-show policies and appointment reminders.

Access the full report: **mgma.org/patient-access.**

Increase provider availability

Another patient satisfier and revenue enhancer is to consider how hard it is to get an appointment with your providers, either as a new patient or as an established patient. Patients who are concerned about a medical issue will be much more satisfied waiting days — not weeks or months — to see a provider. From a revenue perspective, patients who wait too long to see a provider may book an appointment with your competition instead. A dermatology group in the Southwest discovered that its no-show rate doubled if a patient could not see a provider in two or three days. Patients would make an appointment and then immediately look for a dermatologist who could see them sooner.

The practice example in Figure 2 (page 45) is from a pivot table calculating days-to-third-next-available appointment. The practice excludes the first and second available appointment to filter out sudden appointment cancellations and other anomalies that add noise to the data.

Notice the pivot table has six years of history and is categorized by appointment type (new or established) and physician subspecialty. Categories can be expanded to trend each physician's data separately. As the days-to-third metric increases, providers become harder to see, patients may be less satisfied, and revenue opportunities decrease.

The downside of the days-to-third calculation is that with all the appointment changes in a practice, days-to-third is very difficult to calculate retroactively. Another challenge is that days-to-third is labor-intensive and time-consuming to

»

HCA®

Leadership *thrives* here.

Exceptional capabilities create exceptional career opportunities

HCA Healthcare is a leader in providing expert, patient-focused care in communities across America. With more than 170 hospitals, 119 ambulatory surgery centers, and countless physician practices across all specialties, we provide exceptional care in more than 27 million patient encounters and 8.5 million emergency department visits annually.

Our scale creates opportunities for professionals in all disciplines to grow their careers. Through our Leadership Institute, we provide executive transition support to help leaders thrive in new responsibilities, along with focused leadership development programs for physicians and C-Suite roles. And we're committed to foster a work experience where all colleagues can deliver exceptional care, together, to patients, families, communities – and each other.

Learn more at CareersAtHCA.com/Executives

Figure 2. A days-to-third-next-available appointment pivot table[1]

	New						New total	Established						Recheck total
Specialty	2012	2013	2014	2015	2016	2017		2012	2013	2014	2015	2016	2017	
Foot and ankle	5.38	5.78	10.87	11.32	11.43	10.13	8.86	5.85	7.40	10.40	10.23	9.19	16.20	8.62
General	2.75	2.51	3.30	3.94	3.91	4.60	3.26	2.98	2.61	2.98	3.02	2.67	4.30	2.68
Hand	4.68	3.17	4.86	6.10	6.79	27.70	5.14	4.20	4.20	5.19	5.78	5.62	9.80	4.99
Pain	16.13	14.82	9.98	11.49	15.01	19.20	13.45	11.54	11.90	3.96	4.71	6.39	13.90	7.78
Spine	8.56	6.12	4.29	8.86	14.41	11.87	8.29	7.65	6.92	4.40	6.79	8.36	8.07	6.70
Sport	10.80	10.28	10.81	11.28	11.61	16.55	10.98	11.02	9.65	10.51	10.75	11.15	21.75	10.64
Total	7.30	6.81	5.34	9.82	9.82	15.10	7.76	16.65	9.59	9.95	13.93	15.58	22.80	12.90
Trauma	18.28	14.92	16.09	16.38	20.77	14.50	17.14	9.29	9.95	12.81	14.05	18.12	11.00	12.62

compute manually. Your practice management data should have all the information you need. Find a way to automate the process, then track and start storing days-to-third calculations for trending over time.

In the meantime, your practice management system likely tracks when each appointment was created in the system. Find a report or, if it does not exist, have a report built to analyze this data. Calculate the average number of days between the date an appointment was created in the system and the actual appointment date. This average-days-to-schedule metric can be very insightful, because it includes data from all appointments. The days-to-third metric only tracks one appointment (or perhaps one new patient and one established patient appointment) per day.

The average-days-to-schedule metric can introduce some incongruities in your data, so be careful. For example, appointments scheduled months in advance, such as an annual physical, should be excluded from the calculation. Another disadvantage of the average-days-to-schedule calculation relates to future appointments. If today is Sept. 1 and you analyze the average days to schedule appointments in November, the only appointments currently scheduled in November are at least 60 days out. Even if there are only two or three appointments scheduled so far for November, the average will report that it is getting significantly harder to schedule appointments. It might make sense to exclude all future appointments from an average-days-to-schedule analysis.

An advantage of the average-days-to-schedule metric compared with the days-to-third calculation is that average-days-to-schedule has much more data. For example, you can calculate the average days to schedule a Medicare patient, a patient at another location, or a patient with a specific appointment type, such as a workers' compensation patient. An example days-to-schedule pivot table is shown in Figure 3.

A practice in the Southeast found this information so valuable that it is summarized on a managerial

Figure 3. A days-to-schedule pivot table[1]

	New				New total	Established				Established total	Grand total
Month	2014	2015	2016	2017		2014	2015	2016	2017		
Jan	11.9	19.8	26.6	15.9	18.4	40.4	41.5	38.0	42.2	40.5	34.4
Feb	8.5	17.6	21.0	11.6	15.4	36.4	37.1	34.8	36.9	36.2	30.3
Mar	10.2	17.3	20.5	9.8	14.9	32.4	36.5	34.2	34.5	34.4	28.8
Apr	11.1	17.8	20.4	10.3	15.2	34.3	36.7	36.1	37.6	36.1	30.4
May	12.4	19.4	18.9	11.9	15.7	35.3	36.3	35.7	36.3	35.9	30.4
Jun	13.3	21.2	20.0	13.8	17.4	36.3	39.1	37.5	38.6	37.8	32.3
Jul	12.9	22.1	21.6	13.8	17.6	39.1	38.3	36.7	38.7	38.2	32.7
Aug	15.1	22.9	22.6	14.3	19.0	35.4	36.6	37.1	37.9	36.8	32.1
Sep	17.1	24.8	22.9	14.6	20.0	36.7	35.9	37.3	39.4	37.2	32.2
Oct	17.6	25.5	24.5	12.2	19.9	34.9	36.1	39.9	36.2	36.8	31.8
Nov	18.4	23.6	38.4	10.6	20.3	35.6	37.0	57.9	36.4	40.2	34.7
Dec	21.0	25.8	70.6	12.1	20.6	39.3	38.0	79.4	38.7	42.0	36.2
Grand total	14.2	21.5	22.5	12.6	17.7	36.4	37.5	38.5	37.8	37.5	32.0

dashboard with metrics comparing the current month to the prior month and the prior year. Use days-to-third and average-days-to-schedule to increase patient access and improve profitability in your organization.

Conclusion

Appointment data can have a uniquely powerful role in learning from the past and planning for the future in medical practices. While traditional businesses and internet-based businesses work diligently to accumulate actionable customer data, too many medical practices leave this valuable resource untapped. What could a savvy practice manager learn from your practice's appointment data? Start accumulating and analyzing your appointments with these tools to find out. ■

Contact Nate Moore at nmoore@mooresolutionsinc.com.

Note:

1. Moore N. *Better Data, Better Decisions - the SQL: Business Intelligence for Medical Practices*. 2017 MGMA. Available from: mgma.org/9059.

Nate Moore shares more insights into how medical practices can leverage patient and appointment data to avoid lost revenue opportunities in his new book, *Better Data, Better Decisions - the SQL: Business Intelligence for Medical Practices*: mgma.org/store, Item #9059.

Nate Moore will lead an interactive discussion on using appointment data to increase opportunities in your practice during his session, "Seeing Past Tomorrow: Using Appointment Data to Thrive in the Future," at the MGMA 2017 Annual Conference in Anaheim, Calif. To register or learn more, visit mgma.org/annual-conference.