VALUABLE PATIENT DATA:
TRICKS TO TRANSFORM DATA INTO KNOWLEDGE

Our society has certainly built a love-hate relationship with data. We intuitively know that information is good, and that carefully analyzing information can help us make better decisions, but we also fear becoming so overwhelmed by data that it will one day take complete control over our lives.

We are weighed down with Orwellian visions of Big Brother, warned about "future shock" by futurists Alvin and Heidi Toffler, and have been suspicious of technology's takeover ever since HAL 9000 said, "I'm sorry, Dave. I'm afraid I can't do that," in 2001: A Space Odyssey. General Colin Powell once stated that, "Experts often possess more data than judgment."

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On the other hand, though, we have been taught to gather data when answering questions, studying behavior, or contemplating changes. Even as we were moving into the 20th century Sir Arthur Conan Doyle, author of Sherlock Holmes and inspiration for the android Data in Star Trek: The Next Generation opined, "It is a capital mistake to theorize before one has data."

So where does that leave those in the medical field? Although there is plenty of room for data in the research end of medicine, surely someone does not become a family practitioner or obstetrician because he or she wants to spend more time dealing with data! Yet deal with data we must.

According to a quote from Mandi Clossey, CPA in Modern Medicine, "Data has been around for a long time. The [issue] a lot of practices face, specifically some of the small to medium size ones, is that they've had this data, yet no one has paid much attention to it. Or they take a snapshot view of it and are caught up in day-to-day practice management and don't really utilize the data or react upon it."

More and more physicians in private medical practice, or those in a small group environment, find they are being faced with the need for increasing amounts of patient data. When used properly, data can lead to increased office efficiency, higher levels of patient care, and more profitability. But when gathered inefficiently, or not analyzed accurately, the data becomes just one more item on the physician's already too-full plate. The challenge is to implement a reporting system that gathers just the right amount of the most pertinent data, and then to carry out an analysis which makes sense of the information so that it can be transformed into actionable knowledge.

One benefit of data analytics in the medical environment is that it can be used as an integral tool in benchmarking. Information can be used to place a focus on existing best practices while highlighting areas where improvements can be made. In an era when there is an increased need for chronic care management and patient engagement, data reporting can be used to bring out healthcare gaps which are in need of action. All of this is increasingly important in the move to a value-based healthcare system.

So, it can be seen that data has an increasing role in healthcare…the question now is, how does your practice measure up?

To answer that question, this Knowledge Drop will explore some of the ways that data can be used to increase productivity and patient care in the medical environment, and discuss technology tricks that can help transform data into knowledge.

MAKING EFFECTIVE USE OF DATA IN THE MEDICAL PRACTICE ENVIRONMENT

So what is the difference between data and information? Data is the raw information: patient visits, staffing hours, office revenue. Analysis of that data provides information about what is currently happening in the medical practice. These analytics then provide knowledge and insights which can be used to improve functioning on both the administrative and patient care sides.

USING DATA TO IMPROVE PATIENT CARE

Improved Diagnostics

Data mining and data analysis can be used as an adjunct to the interview and examination to aid in an accurate diagnosis and identification of the cause of the patient's illness.

Patient Records

In the move from paper to Electronic Health Records, or EHRs, each patient now has a digital record with a significant amount of available data. This should cut down on time dealing with forms, understanding medical history, and obtaining test results and allow more time for patient interactions. An EHR can also be used to trigger reminders to help keep patient care on track with prescriptions and lab tests.

Patient Engagement

Many patients are already actively engaged in recording and improving their health care results, but this data needs to be incorporated into the patient's digital health record as well in order to provide a complete picture of the current state of health.

Prevention Through Predictive Analytics

Doctors and medical providers can access information databases and correlate that information with patient records to made data-driven decisions about patient care. This can be used to predict patients who are at higher risk for certain types of diseases or medical events, so that precautionary actions or increased screening can be put in place.

Interoperability

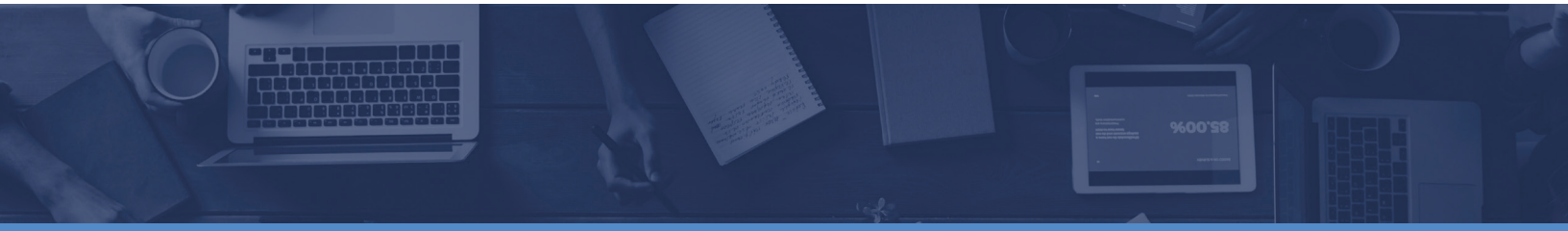
Data analytics can be used to integrate information from multiple providers and facilities to highlight indicators of disease and better coordinate care.

Population Health

With EHRs, providers can quickly and easily access patient data to identify patient patterns more quickly and effectively. This may help increase preventative care as well as reduce ER visits by directing medical attention to patients with the most chronic conditions and providing corrective treatment plans.

Chronic Care Management

With an elderly or high-risk patient population, providers can receive additional compensation for communicating with patients through the patient portal or making sure that routine tests and blood work are completed. This requires an extensive amount of data analysis to point out gaps in patient care and implement procedures to improve chronic care management.



USING DATA TO IMPROVE ADMINISTRATIVE FUNCTIONING

The administrative side of the practice environment can be analyzed and improved in order to minimize overhead and maintain office efficiency. Administrative areas where data can be helpful include:

Revenue Cycle Management

One of the most important pieces of information for the provider to determine is whether the practice is turning a profit. To perform this analysis the provider needs to look at how quickly claims are submitted after care is provided, determine how many claims are paid on the first submission, and understand exactly how long it takes to get paid. These are important factors in maintaining a healthy practice cash flow and increasing profitability because more claims are being paid in a timely manner.

Appointment Management

A terrible time and resource waster is the missed appointment and the patient who fails to reschedule, and the patients who do not schedule time for regular appointments. These analytics come from the overall practice calendar as well as the individual patient records. If too many appointments are missed without a follow-up procedure in place, there is no opportunity to earn revenue from a visit and staff members become engaged in non-revenue producing activities.

Practice Staffing

The practice needs to have an adequate level of staffing to provide appropriate patient care, while not having too many people on payroll during times when the patient load is lighter. Analysis of patient and staff schedules can pinpoint high traffic times where staffing needs to be increased, and slower times where staffing can be decreased.

Efficient Charting

Take a look at how much time is spent in inefficient charting procedures, and implement systems and technologies to make this vital function as efficient as possible.

Keeping patients healthy and preventing disease are always the primary concerns of the medical office, but it is also important to keep administrative and profit goals in mind. Taking advantage of valuable patient data in a coordinated and concerted manner helps to achieve all goals, while enabling the physician to maintain a better work-life balance.

TECHNOLOGY TRICKS TO TRANSFORM DATA INTO KNOWLEDGE

While there is no secret recipe that can be used to efficiently transform data into knowledge, it is not simply a matter of guessing either. Modern technology has yielded an abundant variety of technology tools and tricks to help make the transformation so much easier for today's small medical practices. Some of the most effective opportunities include:

Electronic Health Records

Find an EHR that works with your practice instead of against it. Make charting easier using templates that encourage you to enter information into your patient database. Then query the database to find all patients meeting certain criteria so you can move on to the next step in population health management.

Population Health

An EMR may be able to analyze data on a single patient but Population Health can provide analytics on the practice as a whole. Use a data tool that helps you to aggregate, analyze, and achieve results such as better patient care, reduced patient costs, and increased practice productivity.

Manage Revenue

Access your data to view unpaid claims to make sure they are followed-up on promptly, and that issues are resolved before they can become problems. If you are the kind of person who has trouble assessing facts and figures in numerical formats, look for a system that can translate complex data into visually rich presentations that you can use to help make decisions.

Care Gaps

Drill down on individual patient data to look for care gaps that need to be addressed, prior to the patient coming in for an appointment.

Data Reporting Tool

Smart Analytics, powered by Tableau, takes practice data and turns it into easy to visualize tables and graphs that help you determine the way you want to measure your practice. You can measure against your own goals, against peers in the area or even against national benchmarks.

Scheduling

Use your EHR to book, reschedule, and document missed and no-show appointments. Set appointment types and duration and quickly rebook appointments to keep patients on track, and manage clinician schedules to maintain efficient staffing levels.

Clinical Quality Measures

CQMs are the data points that CMS utilizes to measure and track the quality of health care services provided to patients. Use an EHR that helps to aggregate and submit this data in order to earn available incentives based on healthcare results.

There are three stages involved in transforming patient data into meaningful analytics: data, information and knowledge. Step one is data capture, step two is taking that data and aggregating it in some manner to withdraw information, and the final step is data analysis to uncover trends, gaps and areas in need of improvement. Medical practices which engage in these actions will be able provide a higher level of patient care, while still maintaining practice profitability.