Perspectives and Updates on
Health Care Information Technology

HIT Perspectives

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About the Newsletter

HIT Perspectives is published by Point-of-Care Partners. Individuals at the leading management consulting firm assist healthcare organizations in the evaluation, development and implementation of winning health information management strategies in a rapidly evolving electronic world. The team of accomplished healthcare consultants, core services and methodologies are focused on positioning organizations for success in the integrated, data-driven world of value-based care.

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1 Innovations in Formulary, Benefit and Eligibility to Transform the Point of Care Experience

By Michael Burger, Practice Lead, EHRs and EDI

When thinking about innovation in healthcare technology, AI, Blockchain and FHIR® come to mind. We don't generally think about ePrescribing transactions such as eligibility or formulary and benefit. Yet, new approaches to maintaining eligibility, formulary and benefit information to better support these transactions could and should be happening and is critical to getting and keeping a patient on the right drug.

This innovation is leading to increased patient and prescriber satisfaction; improved pharmacy efficiency; cost-savings for PBMs, health plans and patients and improved safety and outcomes for patients. With the right focus and continued attention, the value proposition of ePrescribing transactions will continue to improve over time.

How we got where we are. Arguably, the inception of the electronic health record (EHR) age was the introduction of electronic prescribing (ePrescribing) with integrated formulary and benefit information. Using a computer to write prescriptions, validate formulary compliance and send them to the pharmacy in practices where the clinical workflow was not otherwise computerized paved the way for the introduction of the full EHR that we know today.

In those heady days in the early 2000's, now-defunct companies like ePhysician and iScribe and some that are still around today, like Allscripts and DrFirst, marketed and distributed ePrescribing technology to physicians that needed to be convinced of the value.

The value was (and still is) compelling. Enabling providers to validate formulary compliance at the point of care and ePrescribe has dramatically impacted patient care in several ways:

- **Patient Safety**
  - Eliminating pharmacy transposition errors
  - Reducing adverse drug events (ADE) by validating drug interactions at the point of care
- **Patient Satisfaction**
  - Having the prescription ready at the pharmacy
  - Reducing delays at the pharmacy counter due to formulary coverage restrictions and prior authorization
  - Avoiding unexpected costs and out-of-pocket expenses at the pharmacy

Enabling providers to validate formulary compliance at the point of care and ePrescribe has dramatically impacted patient care in several ways.

- **Care Quality**
  - Increasing medication adherence because ePrescribed and formulary compliant prescriptions are picked up more often than paper prescriptions
- **Cost Savings**
  - Reducing care related to ADE's
  - Surfacing availability of mail order benefits
  - Driving formulary-preferred product selection using point-of-care formulary information

A **review** of the literature drives home those value propositions over time. A 2005 study showed a 17.5 percent decrease in ePrescriptions for high-cost drugs, in favor of lower cost brand or generic alternatives. Another study revealed that between 2008 and 2010, there was a 10 percent increase in the number of prescriptions picked up at the pharmacy when ePrescribed compared to written prescriptions. Yet another study documented the value of providers taking less time resolving issues with formulary switches and prior authorization.

These factors, plus federal programs such as the Medicare Modernization Act (MMA) and the Medicare Improvements for Patients and Providers Act (MIPPA), caused adoption of ePrescribing to dramatically increase. Some 80% of all retail and mail service prescriptions were ePrescribed in **2019, according to Surescripts**.

As with any new technology, ePrescribing and point-of-care formulary validation began with a few handicaps. Many amounted to growing pains and have smoothed out as the process has matured. A few, though, have hampered satisfaction with the ePrescribing experience even as adoption has grown. One such area is the quality of the eligibility, formulary and benefit data available to the prescriber at the point of care. This is where innovation is happening.

How eligibility, formulary and benefits work.

The above-mentioned study from 2005 talks about a reduction in prescriptions for high-cost drugs using ePrescribing. This was accomplished by tools embedded within EHR prescribing workflow capable of accurately matching the patient to the correct pharmacy benefits provider and their associated formulary. This enables display of formulary data in the EHR at the point-of-care, so the prescriber can see what is covered by the patient's formulary. A recent **article** by CoverMyMeds describes drug formularies and the role they have played in helping to lower insurer and patient out-of-pocket costs.

In addition to giving providers access to information about patients' benefit coverage, formulary and benefit also gives

a provider insight into whether there are less expensive alternatives. In cases where the prescriber considers the alternative appropriate, it is simple to switch the order in the EHR. When the downstream repercussions of the more expensive choice are considered – a phone call from the pharmacist asking for a formulary switch or the patient not picking up the drug because it's too expensive — it's easy to see why this feature of ePrescribing is beneficial. According to an **analysis** conducted by BenMedica, all mid- to large-sized PBMs have the capability to provide drug alternative information to providers within their EHRs. The benefits are obvious, yet the presentation of formulary and benefit information is not without challenges.

Two other facets of the ePrescribing process are supported by formulary and benefit information — drug price transparency and electronic prior authorization (ePA). As conveyed by the American Medical Association in its **"Prior Authorization and Utilization Management Reform Principles"**:

> ***Principle #9:*** *Utilization review entities should provide — and vendors should display — accurate, patient-specific, and up-to-date formularies that include prior authorization and step therapy requirements in electronic health record (EHR) systems for purposes that include e-prescribing.*

The Prior Authorization indicator in the Formulary and Benefit information is the basis by which the ePA process is initiated. While the ePA process itself is a more recent innovation, its' effectiveness is predicated upon the formulary and benefit information. Our CEO, Tony Schueth **wrote** about the importance of formulary and benefit supporting the evolving real-time benefit check (RTBC) back in 2018.

Our report, **"Real-Time Pharmacy Benefit Check: The Payer Value Proposition"** posits that one of the

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foundational values of real-time benefit check for payers is to help improve core ePrescribing performance indicators including increased formulary and compliance, and reducing the administrative costs of prior authorization. Traditional formulary and benefit information is not replaced by RTPBC, rather it provides the basis for RTPBC processes. This interplay between formulary, benefit and RTPBC can apply across both pharmacy and medical benefits, can provide improved transparency, support for specialty medications and ideally positively impact on adherence.

Formulary and Benefit challenges. As exciting as RTPBC is, formulary and benefit is a foundational element to many of the current day ePrescribing transactions and has been adopted by nearly every physician in the country. It shouldn't be taken lightly. Despite the maturity of the formulary and benefit transactions and their wide adoption over the years, three formulary-related challenges have emerged.

First is the challenge of identifying the patient's pharmacy benefits manager, enabling the link to their associated formulary. A patient's coverage changes fluidly, and the structure of formulary coverage with carve-outs and tiers is complex. Ensuring that the coverage information that is displayed in the EHR is the correct plan information for the patient requires complex technologies that have evolved over the years. Formulary identification is accomplished using an eligibility transaction, comprehensive master patient indexes and sophisticated matching technology. The eligibility data is maintained by each PBM. Variation in the completeness of the data, accuracy of the linkages to formulary and frequency of update add to the inconsistency of the eligibility process.

Second is the display of the data. Formulary and Benefit information is complex. EHR software developers realized that for the formulary data to be useful at the point of care, it needed to be easy to understand at a glance, and quick to display. To address the complexity and their customers' need for understandable-at-a-glance information, EHRs simplify formulary display by using smiley face icons, red, yellow and green indicators, plus/minus or dollar signs, or least-to-most-expensive ranked lists. In some cases, EHRs decided not to display some information at all. While making the information easier to read, these displays over-simplify or even omit some clinically relevant insights. Worse, they can be misleading or just plain wrong.

The **third** challenge is the quantity and quality of the data. Each PBM manages hundreds or even thousands of different formularies. And each PBM uses its own process to manage the data and updates it on its own timetables. Even though there is a data standard for transferring formulary data to health information networks such as Surescripts, many of the fields within the standard are not required and can be interpreted differently, depending on a PBM's benefit strategies or implementation of the standard. The result is that the formulary data displayed in the EHR is inconsistent. For example, if there is a chance a drug could require a prior authorization, some PBMs elect to flag for prior authorization within formulary, other PBMs elect not to and trust the requirement will be noticed downstream at a dispensing pharmacy. As another example, there are varying interpretations

of how to reflect a drug's formulary status with the standard's 0-99 ranking system. As a result of these two examples, the formulary data displayed in the EHR can be inconsistent from patient to patient, and from PBM to PBM.

The trust factor. The data quantity/quality issue has had a detrimental effect on trust in the data. When a prescriber writes a prescription, and the formulary information in the EHR indicates that there are no restrictions for a medication for their patient, is it because there really aren't any restrictions? Or is it because that payer has not provided the full formulary information? Or, if the patient arrives at the pharmacy counter, does the pharmacist tell the patient they have to contact the doctor because the prescribed drug is not on-formulary? After a few of these snafus and second guesses, prescribers begin not to trust the formulary data. Evidence of this lack of trust is outlined in an early 2019 CoverMyMeds **study** which showed that "on average, providers scored trust in formulary and benefit data a problematic 5.7 out of 10, indicating they often don't rely on the information to make decisions or inform patients." Anecdotally, in working with practices, some providers have turned off formulary validation in their EHRs. Some neglect (either intentionally or unintentionally) to update the formulary files in their EHR.

The time is right for improving data quality. Given the benefits borne of point-of-care formulary validation to all participants — patients, providers, PBMs, pharmacies — more complete and accurate data will certainly yield added value to a mature process like ePrescribing. Investments in improving the quality and quantity of formulary data available in EHRs will yield significant returns.

There are a number of interrelated moving parts to the formulary validation process, including eligibility and the formulary files themselves. Each part represents an opportunity.

Focus on the eligibility verification process and beefed-up quality assurance on eligibility responses will provide a higher rate of eligibility matches. This improvement is key, because the EHR formulary process is predicated upon a successful eligibility transaction, which matches the patient to the correct formulary.

Another area of focus must be on the quality of formulary data itself. Addressing inconsistencies across PBM's multiple formulary files and closing data gaps will increase the

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completeness of the data. More complete information will engender providers trust of the data.

The value of completeness of the data can't be stressed enough — it infiltrates every segment of the delivery of healthcare. A great example is a single field of data in the formulary file — the Prior Authorization indicator. This one-byte field influences every stakeholder. When aware of a prior authorization requirement for a medication at the point of care:

- The **prescriber** can ensure that the patient meets all of the requirements and use the electronic prior authorization feature of the EHR to submit the information to the payer.
- The **PBM** ensures that the patient meets all of the requirements, receives necessary information electronically for approval, and can quickly authorize the prescription.
- The **pharmacy** receives a clean, already authorized prescription and can dispense without delay
- The **EHR's** customers use the electronic prior authorization feature which was added to the ePrescribing function of the EHR.
- The **patient** avoids being in prior authorization inertia, while the pharmacy, doctor and PBM inefficiently gather the information needed for approval.

Improving completeness of this single field of data has wide implications across every stakeholder — it's a quintuple win. Patient outcomes improve when the patient gets on therapy without delay. Patient satisfaction improves because they pay the lowest co-payment. EHR vendors benefit by having clients use the ePA feature they built and are satisfied that the software is working as it should. Pharmacies benefit from receiving clean prescriptions to dispense and not having to make clarifying calls to the prescribers. PBMs benefit by reimbursing for an efficacious and cost-effective therapy. Prescribers benefit by not having to field those clarifying phone calls from the pharmacy.

Even small percentage changes, across billions of transactions, will be hugely impactful. For example, a slight percentage increase in the number of prescriptions for formulary-preferred medications, switched from prescriptions that are on-formulary but not preferred translates into millions of dollars of cost savings. These savings accrue not only to the PBMs, providers and pharmacies, but also to patients in the form of lower co-payments and ultimately, lower insurance premiums.

With a strong focus on the quantity and quality of the eligibility, formulary and benefit data made available in the EHR, there is more value that can be squeezed from point-of-care formulary validation and ePrescribing. Initially, the value of ePrescribing was achieved by moving from a paper to an electronic process. Now that virtually all prescriptions are electronically written, the pendulum has swung towards expanding the value proposition for continued investment. Examples of continued investment include: optimizing patient matching capabilities, refreshing underlying data transfer technologies, more clearly communicating multiple coverage scenarios and aligning on a common interpretation of the formulary technology standard.

Continued investment is necessary on the part of each stakeholder to keep up the momentum of change. PBMs should continue to dedicate time and resources to improve the quality, accuracy and completeness of formulary & benefit and eligibility data. EHRs should evaluate and improve their display of formulary data to be more concise and meaningful. As the quality and completeness of the data continues to improve, we can achieve the quintuple win, with benefits for every stakeholder.

If you need help implementing these emerging innovations in formulary, benefit and eligibility or simply want to better understand the landscape, contact me at **michael.burger@pocp.com**. •

2 Four Factors Driving the Momentum of Telehealth Adoption That Will Continue After the COVID-19 Crisis

By Michael Solomon, PhD, MBA, Practice Lead, eCare Management and Tricia Lee (Wilkins) Rolle, PharmD, PhD, MS, Government Affairs and Health IT Strategist

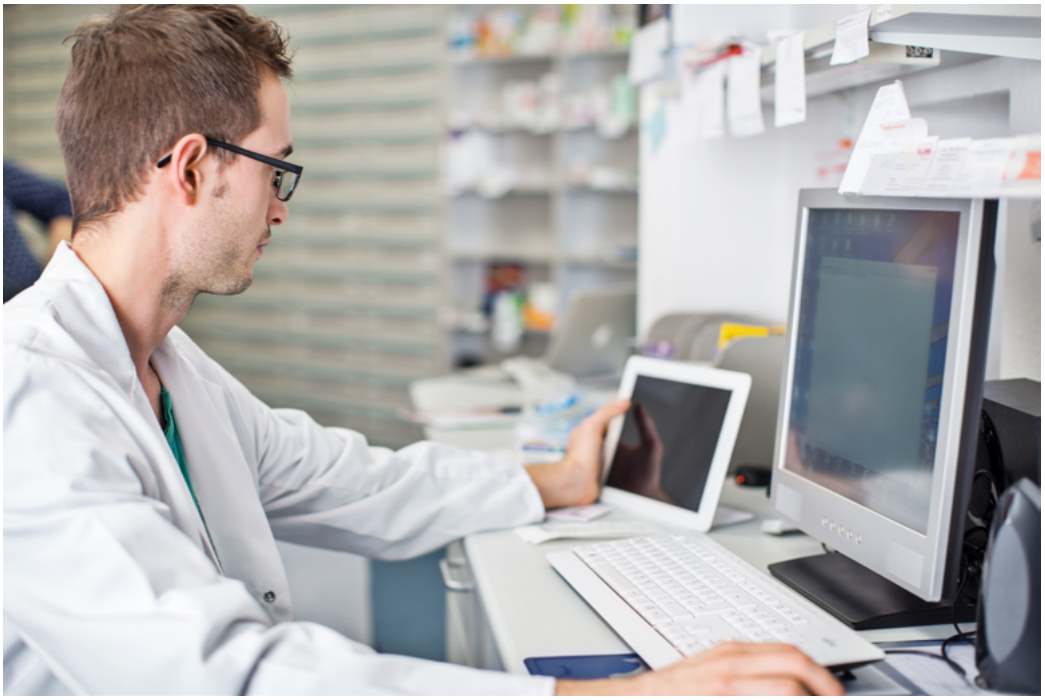
Telehealth embodies the old saying, "It's old wine in a new bottle." To be sure, telehealth has been around for decades in one form or another. It was rapidly gaining traction in the years leading up to the crisis caused by the novel coronavirus disease—2019 (COVID-19). But the technology took on a new, enhanced importance with COVID-19 as a necessity to providing care and keeping patients and providers safe.

While it's too soon to know the full dimensions of telehealth adoption in the era of COVID-19, some revealing statistics are emerging. Blue Cross-Blue Shield of Massachusetts **announced** it processed 250,000 new claims for telephone and virtual visits in March, along with 50,000 new claims for COVID-19 testing and treatment. Telehealth **visits** at the Dartmouth-Hitchcock Medical Center jumped from 3 per week to 2,000 each day — and climbing. Investors are betting heavily on current and future adoption. American Well **raised** almost $200 million in the middle of the pandemic. There are **estimates** that telehealth could grow to a $250 billion revenue opportunity post-COVID-19. This is just the tip of the iceberg.

The question going forward is how to keep telehealth sustainable, building on the momentum that had been growing before and during the COVID-19 crisis. Here are four factors that will affect telehealth's continued adoption and staying power in the post-COVID-19 world: use cases, payer barriers, regulatory changes and technology.

1. Use Cases. Use cases drive adoption. The costs and benefits of telehealth were recognized before the pandemic, and are expected to continue and serve to propel the technology forward when the crisis subsides.

- **Cost savings.** There is a growing body of evidence that suggests telehealth can result in considerable cost savings for patients and payers. For example, **virtual visits** typically cost $45, compared with $100 for an in-person visit at a doctor's office or $160 at an urgent care clinic. This is helpful for patients with high-deductible plans. A **March 2017 report** by The Rural Broadband Association estimates telehealth use could result in annual savings of $20,841 per rural hospital. Telehealth created substantial **efficiencies and savings** for the Department of Veterans Affairs (VA), which has a huge telehealth footprint. The annual cost to deploy its telehealth program in 2012 was $1,600 per patient per year, compared to over $13,000 for traditional home-based care and over $77,000 for nursing home care. Telehealth also saves patients time and money in travel. A regional **analysis** in California found that telehealth visits saved individual patients four hours of driving time, 278 miles and $156 in direct travel costs.
- **Improved access to care.** Telehealth expanded access to care for nearly all patients due to COVID-19. It created the means to reach vulnerable populations at risk for COVID-19, including the elderly, chronically ill and minorities. This could be a game changer for those with mobility and transportation issues. Telehealth became a lifeline to behavioral health patients. Not only will these use cases carry over into the post-COVID-19 world, they indicate how telehealth will become an essential tool for patient engagement and population health management going forward.
- **Improved quality.** Evidence was building before COVID 19 that telehealth provides quality care. **Studies** indicate that telehealth promotes continuity of care, decreases the cost of care, reduces readmissions and improves patient self-management and overall clinical outcomes. This is **seconded** by the American Medical Association. Another **study** found that telehealth services provided by physicians during off hours — specifically weeknights and weekend days — could result in 15 fewer rehospitalizations annually for individual nursing homes, which could save Medicare some $151,000 per facility each year. Such quality metrics are central to reimbursement under Medicare and accountable care organizations.
- **Medication management.** Telepharmacy services had been making inroads prior to the COVID-19 crisis, primarily for patients and veterans in rural areas and in **long-term care** facilities. For example, remote pharmacists typically cover for hospital pharmacists during storm outages, vacations and off hours, providing **substantial** savings in labor costs. COVID-19 kicked it up a notch, with relaxed restrictions by federal and state agencies. This allowed pharmacists to practice top-of-license with face-to-face communication for hospital discharge management and medication management counseling. Expanded roles for



With telehealth promising to become ubiquitous, hospitals could become virtual centers. It's already happening today.

telehealth pharmacists and lower costs will help drive post-COVID-19 adoption.

- **Changes in care models.** Changes in telehealth care models will have staying power in the future. An example is using telehealth to provide care outside of hospitals. That trend had already started with the advent of lower-cost ambulatory surgery centers and off-campus urgent care in drugstores and strip malls. With telehealth promising to become ubiquitous, hospitals could become virtual centers. It's already happening today. One example is the **Mercy Virtual Care Center** in St. Louis, which was designed specifically to support a range of telehealth services, from intensive care to telestroke and physician consultations. Some **experts** predict that telehealth could impact brick-and-mortar facilities "formerly known as hospitals." While telehealth can't replace all in-person care, it could change the need for large hospital campuses in another decade or so —in much the same way that online purchasing caused a downturn of retail purchasing in malls.

There also will be **changes in the care team** resulting from telehealth. This includes an expanded list of care team members who can provide telehealth, many at lower costs. Many trained professionals can provide counseling, triage and care delivery, such as nurse practitioners, physician assistants, pharmacists, nurse midwives, and occupational, speech and physical therapists. At the same time, primary care could include a subspecialty ("virtualists") and many primary care physicians will be working in newly formed virtual care practices. Physician assistants and pharmacists will be working top-of-license in virtual care settings. Moreover, Telehealth could become a **lifeline** for solo practitioners or rural providers who may be unable to weather the drop in in-person visits and related revenues caused by the COVID-19 crisis.

2. Reducing payer barriers. Making telehealth sustainable moving forward means changes by payers. Before the pandemic, payers limited telehealth adoption through usage and reimbursement restrictions. They include administrative barriers requiring the use of prior authorization, referrals and medical necessity reviews. At the same time, payers' telehealth coverage and reimbursement were far below the going rate for in-person diagnosis and treatment, although some of that was due to regulation.

Once the crisis has been tamped down, payers will be pushed to revisit their reimbursement rationales, methodologies and rates.

Patient cost sharing may become an issue, which could affect telehealth sustainability.

Then there's utilization, which influences payers' coverage and reimbursement decisions. There is some **evidence** that telehealth may increase utilization. Is this because patients are now seeking care for minor illnesses due to convenience? Is it because telehealth visits uncover conditions and medication adherence problems that previously were unknown and require additional treatment? Another point to consider is that as settings of care reopen, could a steady state be reached in which a person's visits increase but use of telehealth services never goes away? This issue and its dimensions will need further exploration as payers weigh telehealth's cost and benefits.

3. Regulatory changes. Many federal **regulations** and state **parity laws** have limited reimbursement by Medicare, Medicaid and private insurers, curbed allowable sites of care, and placed licensure restrictions on who can provide telehealth services. Some of that has changed with bipartisan **support** recognizing the benefits of telehealth. For example, telehealth became a standard benefit in Medicare Advantage plans as of January 1, 2020. Similar changes were being made by states. Then COVID-19 hit. Both the federal government and states relaxed or waived many remaining telehealth restrictions, which went a long way to promote its use. The Drug Enforcement Administration (DEA) is temporarily giving providers the ability to prescribe controlled substances via telehealth for behavioral health patients. Will these relaxed requirements be scrapped after the crisis diminishes or can they be baked into federal and state regulatory frameworks in a timely fashion to support enhanced telehealth sustainability? Many agencies, like the DEA, will have to take specific action for this to happen. The Centers for Medicare and Medicare Services already is working on **regulations** to make permanent some of the relaxed restrictions.

Another issue is compatibility with the Health Insurance Portability and Accountability Act (HIPAA), which will be vital to sustainability. Myriad telehealth platforms were stood up or expanded in a hurry during the COVID-19 crisis. The government waived potential enforcement actions concerning HIPAA compliance. Many, like Facetime and Skype, are not necessarily HIPAA compliant. **Zoom** appears to be, as long as business associate agreements are in place, but security breaches have been a concern. Will the government now be pushed to revisit its HIPAA guidance and address telehealth compliance? If so, how fast will that happen?

4. Technologic Innovation. Telehealth platforms have exploded in response to the COVID-19 crisis. This variation is akin to the early days of electronic health records. There were hundreds in the marketplace with varying degrees of interoperability and sophistication, but the number has significantly decreased due to market consolidation. There is likely to be a similar a winnowing of the telehealth market. But what will be needed to ensure sustainability? Standards and interoperability will head the list. Added to those will be workflow integration. Currently, many platforms require manual entry of patient data, both pre- and postvisit. This opens the door to errors and creates provider frustration by adding more "clicks" to the care process, which can serve as a barrier to adoption.

5. Integration of artificial intelligence (AI) also will add value and promote telehealth sustainability. AI paired with telehealth had been on the rise before the pandemic, creating increased clinical and administrative capacity as well as facilitating diagnosis and remote patient monitoring. It then gained ground in telehealth use with COVID-19 by identifying patients at risk for the disease and candidates for clinical trials.

Conclusion. It is clear that telehealth is here to stay now that the "genie is out of the bottle," as a UnitedHealthcare **executive** so aptly stated. Now that providers and their patients have experienced the benefits of telehealth (time savings, better access for patients with transportation challenges, more productive clinicians), it's going to be difficult for payers to dial back. Pressure on regulators to catch up to the technology with licensure requirements will intensify. Point-of-Care Partners (POCP) can help your organization understand the impact of telehealth, both now and in the future. Reach out to us at **michael.solomon@pocp.com** and **tricialee.rolle@pocp.com**. POCP also is monitoring telehealth legislation and implementations. For information on legislation, please contact our regulatory team at **keith.fisher@pocp.com** and **michelle.soble@pocp.com**. •

3 Post-COVID-19: Five Things That Will Come Roaring Back With a *Twist*

By Tony Schueth, CEO and Managing Partner

Now that the world is starting to open back up, we are beginning to think about what it will look like following the coronavirus disease-2019 (COVID-19). Many priorities seemed to be, well, deprioritized as the focus was solely on flattening the curve. In reality, not everything stopped dead in its tracks. Work was getting done, just in the background. Going forward, the questions are: What priorities will reemerge in the post-COVID-19 world? In what form?

I conceptualize these as waves that crest, crash and reemerge in a transformed state. I learned this paradigm from my graduate school professor, Ray Ewing. In his book, ***Managing the New Bottom Line***, he viewed them as waves. (It's still available and I highly recommend it.)

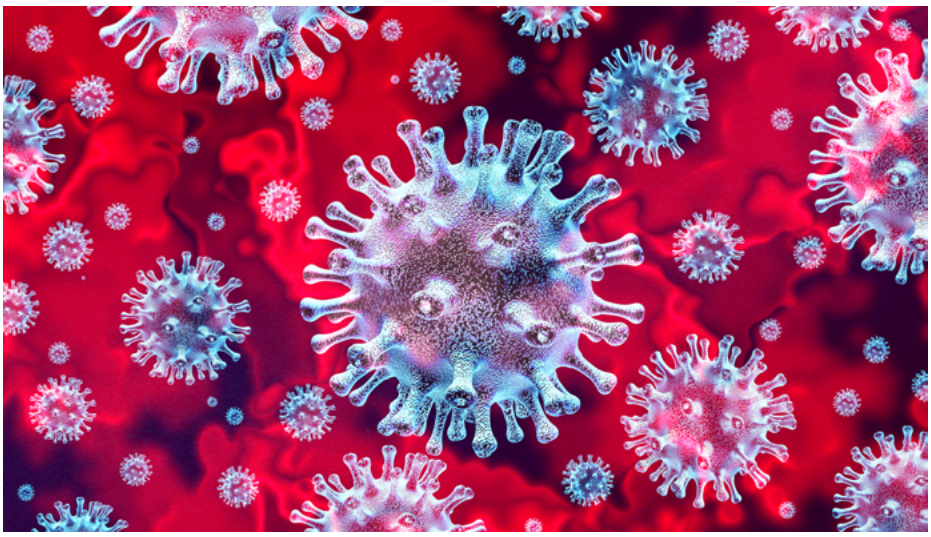
Here are five "waves" we believe will come roaring back, though with a twist:

1. Value-based care (VBC). Whereas before COVID-19 VBC was the rage, during it, it's been more about preventing people from getting the virus and treating those who did. Requirements for coverage and reimbursement, among others, were waived or relaxed by insurers. Several things are clear for the immediate term. There won't be any meaningful numbers on costs and outcomes anytime soon that VBC organizations can use for quality and reimbursement. They are likely to eat the downside risk this year and perhaps into 2021. Many will want to revisit contracts in light of their COVID-19 experience.

Prediction: Revenues and patient volumes will inevitably recover. *The twist:* Much of the rebound will be due to a renewed reliance on telehealth. It will redefine VBC business models to cut costs and revamp care models.

To be sure, telehealth had a growing foothold in the pre-COVID-19 world. Now, it has become, of necessity, the major treatment modality for keeping patients and providers safe. Moreover, telehealth is here to stay in an even bigger way, providing an enduring impact on efficiencies as well as reimbursement and care models. Going forward, VBC organizations will revisit reimbursement rates and cost sharing in light of telehealth adoption and impacts. Quality metrics

will need to be revamped. Care models will change. Nonphysicians (such as nurse practitioners and pharmacists) will be have a larger role due to telehealth. They will be working top-of-license and providing much more care and at lower costs.



Telehealth will allow care to be provided outside of hospitals at a lower cost in virtual care settings. Increased access to care for minorities, the elderly and the chronically ill — made possible by telehealth — will create renewed emphasis on preventive care and patient monitoring. Keeping healthy patients healthy will become as important as making sick patients well. This, in turn, will improve quality and help drive down costs. In short, telehealth will help VBC organizations move from denying payment to guiding quality, cost-effective care.

2. Population health. Population health also has been around for a while, but it never attained the prominence some thought it deserved. However, it was reasserted when the COVID-19 pandemic hit. As the virus swept the country, data were needed to identify vulnerable individuals and better understand infection and mortality among various population groups. It became clear that the economically disadvantaged and minorities were disproportionally affected.

Prediction: Population health will crest with COVID-19 and then wane as we begin to experience a new normal. However, it will prominently reemerge when payers, policymakers and providers get back into high gear. They will require data collection on vulnerable populations — including minorities, the elderly and chronically ill — to assess risk, save money and develop more effective health interventions for certain populations as never before. *The twist:* The scope of needed information will expand beyond demographic and clinical data and require advanced analytics for analysis.

Going forward, population health management will become top-of-mind for payers and providers in the value-based care world to improve access to care and reduce costs to vulnerable populations. In the past, it has relied on the clinical and demographic information residing in claims data and electronic health records (EHRs). Going forward, population health management will require information on social determinants of health (SDOH), including employment, education, and access to food, housing and transportation. In fact, some believe that SDOH may be more important to patients' overall wellness than their clinical care. This is especially true for minorities and those experiencing socioeconomic disadvantages.

But which SDOH data should be retrieved? From where will they derive? First, payers and providers will need to figure out exactly what problems they want to solve and the data they will require. It sounds easy, but they will have to rethink their business and care processes in order to know which populations they want to reach out to and why. To be sure, geography and market share will play big roles in new decision making.

As for where to acquire the data, there's already a lot out there. Marketers, political campaigns and others amass tons of socioeconomic information about us every day. While it may not be targeted to the individual level, it often is partitioned to neighborhoods, which will go a long way toward addressing SDOH issues. Which ones are close to transportation or are in the middle of food deserts are already known, for example. Payers and providers don't necessarily have to begin de novo. They can

find ways to access and leverage extent data sets related to SDOH. New apps will be created to collect and share the information among various end points.

Artificial intelligence and machine learning-based algorithms will be key to understanding the complex data related to SDOH, and necessary for providing additional depth and specificity about the volumes of data that will be pouring in. Trending analytics still will be useful but won't be enough.

3. Public health. The COVID-19 crisis catapulted public health back to the forefront. Its importance seems to be dependent on the crisis at hand, whether it is in response to a pandemic like COVID-19 or more issues like tracking and tracing measles outbreaks that affect people in their normal lives.

Prediction: Public health will come roaring back after the immediate COVID-19 crisis dies down. It will be high on policymakers' radar so new resources and funding will be made available to modernize public health systems. *The twist:* Health information technology (health IT) will be vital for those efforts.

Health information exchanges play an expanded role. They will increase their connections to various data sources, but also will be adapting their networks to carry nonmedical information, such as information on SDOH that will be used for improved public health surveillance.

EHR capabilities will be expanded for surveillance related to chronic diseases. Not only can EHRs help identify patients at risk, their data can be leveraged to trace patients and staff for follow-up if they have been in contact with providers who test positive for the virus. EHRs also will become a useful tool for electronic case reporting by automatically generating reportable conditions directly to public agencies for review.

New apps will arise to collect and share public health data. For example, wireless tracking tools, such as real-time location systems linked to smartphones, will expand their capabilities to track and deploy strategic medical supply reserves and personnel. Also, apps will create easier ways to track and trace infection contacts and patterns within a community.

4. APIs. Application programming interfaces (APIs) were all the buzz before COVID-19 hit, primarily due to regulatory and statutory requirements. [Click **here** to read our insights on the latest regulations concerning APIs and interoperability. These regulations were finalized just as the pandemic was starting — the same week as the cancelled annual meeting of the Healthcare Information and Management Systems Society, which was to have been the regulations' coming out party.] Emphasis was placed on using the Health Level 7 International (HL7) Fast Healthcare Interoperability Resources (FHIR) standard to facilitate patient data exchange.

Prediction: APIs will continue their emphasis on data exchange using FHIR. *The twist:* The buzz will be around APIs using the standard for new public health, patient safety and to research use cases.

FHIR only relatively recently burst on the health care scene as the standard of choice for clinical and coverage-related data exchange. FHIR accelerators — including the **FHIR at Scale Taskforce** and the HL7 **Da Vinci Project** — continued their work throughout the COVID-19 crisis to identify scalability gaps and enhance FHIR adoption throughout the health care community and value-based care.

Moving forward, FHIR-based APIs will play a huge role in collecting and exchanging data that will be vital in surveillance and other public health activities. For example, APIs will be used to track and trace contacts for future disease outbreaks, not just pandemics. They will follow the lead of two new APIs. One is a new FHIR-based application called **eCR Now**, which aims to give public health officials a more detailed and real-time view of the spread of COVID-19. Also, a new **partnership** between Apple and Google will allow development of FHIR-based APIs for contact tracing through smartphones.

FHIR-based APIs will roar back to address patient safety through access to and sharing of data in EHRs, including patient demographic and clinical information. They will provide insights on adverse reactions and issues with new therapies, existing therapies and vaccines for all kinds of diseases. APIs will facilitate the sharing of this information among providers, payers, public health officials, drug manufacturers and regulatory agencies, such as the Food and Drug Administration.

Additionally, APIs will facilitate research. For example, they can help identify and enroll patients in clinical trials for diseases that had taken a backseat during the COVID-19 crisis.

5. Transparency. Before COVID-19, transparency meant price transparency. There's still a lot going on in that arena. An example is the real-time benefit check (click **here** to read more about it).

Prediction: There will be enhanced transparency in terms of who gets what care, at what cost and with what outcomes in the post-COVID-19 world. *The twist:* The definition of transparency will be transformed based on the TRUST (Transparency, Robust Screening, Strict Control, Treatment) model.

The TRUST model arose from South Korea's response paradigm during the short-lived SARS (Severe Acute Respiratory Syndrome) pandemic in 2008. Having this in place gave South Korea a jump on its COVID-19 response. As a result, the country had fewer infections and deaths compared with other countries.

Going forward, the TRUST model will inspire new modalities for transparency in terms of screening capabilities, treatments, quality measurements and outcomes. This surely means there will be better communication of the controls on both people and the health care system that will be put in place by federal, state and local governments in normal times *and* during disease-based crisis.

There also will be a new emphasis on transparency beyond price. An example is prior authorization (PA) for drugs, devices and services covered under the patient's medical benefit. Electronic medical prior authorization (mPA) is in its early phases, but work will continue to accelerate. Payers will ramp up efforts to assess how pharmacy and medical claims are processed, as well as increase the ***accuracy*** and ***availability*** of PA requirements and benefit details in workflow in ***real time***. EHRs will begin work on supporting mPA, such as their ability to handle attachments.

COVID-19 has changed the world in innumerable ways and created many twists on how and where health IT is used. Need more information? Point-of-Care Partners is here to help. We're tracking these and myriad other developments related to COVID-19 and beyond. •

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