



COVERING CASE MANAGEMENT ACROSS THE ENTIRE CARE CONTINUUM

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## COVID-19 Devastates At-Risk Populations

*Telemedicine could be new normal*

The COVID-19 pandemic appears to have a devastating effect on people with chronic diseases — especially lung conditions — or who are immunosuppressed, are older, or obese. In other words, the people most at risk of serious illness from the disease are the same people case managers help each day.

Case managers should focus more on remote case management, taking the pandemic into account as they contact and monitor patients, says **Kathleen Fraser**, MSN, MHA, RN-BC, fellow at the American Academy of Nursing and executive director of the Case Management Society of America (CMSA).

A major shift to telemedicine is one of the likely long-term outcomes. These will include remote monitoring that is not synchronous, meaning it

is not monitored in real time, says **Steve Davis**, PhD, associate professor in the department of health policy, management, and leadership at West Virginia University School of Public Health in Morgantown, WV.

Davis is the lead author of a paper on the use of a multifaceted telehealth intervention for a rural population. The study

included an adaptive pilot intervention that targeted home- and community-based Medicaid Waiver Program participants. The goal was to prevent reinstitutionalization.<sup>1</sup>

CASE MANAGERS SHOULD FOCUS MORE ON REMOTE CASE MANAGEMENT, TAKING THE PANDEMIC INTO ACCOUNT AS THEY CONTACT AND MONITOR PATIENTS.

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**AUTHOR:** Melinda Young  
**EDITOR:** Jill Drachenberg  
**EDITOR:** Jonathan Springston  
**EDITORIAL GROUP MANAGER:** Leslie Coplin  
**ACCREDITATIONS DIRECTOR:** Amy M. Johnson, MSN, RN, CPN

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“During the COVID-19 pandemic, many people [monitored by case managers] are in a high-risk category — diseased, disabled, or have conditions with compromised immune systems,” Davis says. “If they don’t come into the healthcare setting, that’s probably a good thing. That’s one aspect of having telehealth like our program.”

Healthcare institutions are doing their best to catch up with these unprecedented times, Davis notes. “The telehealth model we designed is intended to be sustainable and replicable by other health systems,” he says.

Other healthcare institutions could do the same thing, but it would require investment in equipment that patients can set up at home.

“It might depend on purchasing policies of a healthcare system and their interactions with a particular vendor,” Davis explains. “But once those agreements are in place and everything is ready to go, you can have equipment sent to a person’s home relatively quickly.”

For instance, case managers can assess patients’ mental health and pain via phone, he adds. (*See story on telehealth intervention, page 52.*)

Other than shifting more patient time to telehealth, case managers will carry on during the pandemic, Fraser says.

“We will have some patients who are on isolation for some type of infection, and the case manager has to coordinate things for that patient,” she adds.

CMSA offers a resource page about COVID-19, containing information case managers can provide to patients. It is available at: <https://bit.ly/2Jb9ghM>. The CMSA resource list reviews the evolution of coronaviruses, beginning with SARS-

CoV, identified in Asia in 2003.

## ‘We’re Vulnerable in Our Society’

The COVID-19 pandemic is particularly hard on America’s 4 in 10 adults who have the risk factors of age, diabetes, heart disease, renal disease, other comorbid illnesses, or who do not have health insurance, said **Diane E. Meier**, MD, FACP, FAAHPM, director of the Center to Advance Palliative Care (CAPC), co-director of Patty and Jay Baker National Palliative Care Center, and professor in the department of geriatrics and palliative medicine, Catherine Gaisman professor and chair, Brookdale department of geriatrics and palliative medicine at Icahn School of Medicine at Mount Sinai in New York City.

Meier and other palliative care experts spoke about COVID-19 on March 18 at a CAPC webinar focused on the need for greater palliative care capacity in the pandemic era. (*See story on palliative care and COVID-19, page 54.*)

Americans are particularly susceptible to serious illness with COVID-19 because the nation is largely unhealthy, according to **Greg Poland**, MD, professor of medicine and infectious diseases at the Mayo Clinic. Poland also is the director of the Mayo Vaccine Research Group.

“We’re vulnerable in our society in that we tend to be increasingly obese, unfit, smoking, elderly, and an immune-compromised population,” Poland explained. “You put that together and that’s fuel for the fire of severe illness.”

Saying he gained new appreciation for weather forecasters, Poland noted it is difficult to predict how long this pandemic will continue. But, based

on available models, it appears that the most important thing the United States could do to end the virus' rampage is to go into suspend mode.

"What we have seen in other cities that have not done this is devastation," Poland said. "What we have seen in countries that have gone into suspend mode is it almost right away dampens down cases."

## Flatten the Curve

The key is to reduce the reproductive number of the virus to one or less. This means that at a population level, each person who is infected would spread the virus to one or no other people.

"How many people do you infect when you become infected?" Poland asked. "If it's one or less, the pandemic will die; if it's more than one, it will continue on."

Depending on how many people are infected by each person with the disease, the pandemic could continue to spread like wildfire. "The best thing you can do is suppress that viral reproductive number down to one or less, and the only way to do it is through social distancing and handwashing," Poland said. "If you do not breathe in the virus and do not touch a contaminated surface, it is impossible to get the infection."

As of April 3, there is an almost 4% mortality rate in the United States, based on people who tested positive for COVID-19, Poland noted.

"That's an overestimate because we don't know the denominator," he explained. "It's a devastating number, while people are still going on in their lives like nothing is happening."

Social distancing and suppression measures are designed to spread out demand for critical care services in

hospitals and prevent a peak outbreak that sends many more people to the ED than the hospital can handle at one time.

"It's widely reported that a peak demand in the outbreak, potentially, we would need 900,000 ventilators in the United States," said **Paul Biddinger**, MD, MGH, endowed chair in emergency preparedness, director of the Center for Disaster Medicine, and vice chairman for emergency preparedness in the

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department of emergency medicine at Massachusetts General Hospital in Boston. Biddinger spoke to journalists and others at an Accumen/WIRB-Copernicus Group web conference on March 13. "The most optimistic estimate is we have 100,000 ventilators, which is a nine-fold lack of resources. We look at severe supply and demand mismatches."

When a city's hospitals, as was seen in New York City in late March, experience a greater demand than availability for ventilators, personal protective equipment (PPE), and other necessary supplies, the community moves into crisis mode, he explained. "We need protocols that are fair, transparent, evidence-based,

and shared across healthcare systems so no one system will do something different than another system," Biddinger said.

## Once in a Generation

COVID-19 is a once-in-a-generation pathogen, noted **Scott Gottlieb**, MD, former Food and Drug Administration commissioner and current member of the boards of Pfizer and Illumina. Gottlieb also spoke at the March 13 web conference.

"All emerging evidence is this is a dangerous virus that straddles that terrifying area of being contagious enough to spread quickly and widely, and virulent enough to kill people," Gottlieb said.

Estimates are that the death rate is 1% globally, and the viral transmission rate is between two and three people per infected person. "A lot of discussion is about how this is affecting older Americans," Gottlieb said. "But, a lot of people in their 30s, 40s, and 50s still are getting very sick from this virus. The case mortality rate for the 40 to 50 age group is about 0.25 to 0.4%, meaning one in 500 people who get it are going to die from it. That's an enormous figure for a virus of this kind."

The death rate is dramatically higher from COVID-19 than it is for the flu, which has a death rate of 0.02%, overall, but kills as many as 14% of people over age 80, he explained.

Case managers and other healthcare professionals also should keep in mind that younger people who become seriously ill from COVID-19 might develop acute respiratory distress syndrome (ARDS), which can be deadly. Damaged lungs can cause ARDS survivors to develop a long-

term comorbidity. (For more information, visit: <https://cle.clinical2JdkQch>.)

When case managers monitor their elderly patients with diabetes and other chronic illnesses, they should bear in mind that the most commonly reported COVID-19 symptoms — cough, fever, shortness of breath — could look different in this older cohort. For example, geriatric patients might not have as high of a fever than younger adults and children with the illness, said **XinQi Dong**, MD, a researcher in epidemiology at Rutgers

University in New Brunswick, NJ. Dong spoke at a March 12 video conference. (A recording is available at: <http://bit.ly/2Ql7b6U>.)

If a patient reports a mild fever, cough, and shortness of breath, case managers should consider the possibility that the person is infected with COVID-19 and make appropriate referrals.

Dong also suggested case managers follow the recommended social distancing measures to ensure their own safety. “Wash your hands, and

we recommend staying one-and-one-half arm’s lengths away from people,” he said.

When visiting an elderly person’s home, case managers should wash their hands, with gloves, he added. ■

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# Telehealth Intervention Provides Solutions for Era of Social Distancing

*Vital signs checked remotely*

A recent study revealed how healthcare organizations can design a telehealth pilot program for elderly and at-risk populations with long-term health conditions.<sup>1</sup>

Researchers found that using the Model for Developing Complex Interventions in Nursing (MDCN), healthcare providers could design a multifaceted telehealth intervention to minimize reinstitutionalization of people with multiple chronic conditions. The intervention includes remote patient monitoring and assessment of pain, mental health, and care coordination.

The study focused on the overall design of the project. Now, researchers are working with the state bureau of medical services, which administers Medicaid, to pilot a study that tests whether the telehealth intervention can help people in long-term care facilities go home, says **Steve Davis**, PhD, associate professor in the department of health policy, management, and leadership at West Virginia University School of Public Health.

“We’re setting people up with telehealth with the goal of seeing if we can effectively manage their chronic conditions and ultimately help them live in their homes,” Davis explains.

Some patients who transition home after staying in a long-term care facility will exacerbate their chronic illness. This can cascade into events that end up with the person back in the long-term care facility. “We want to keep them safe at home,” Davis adds.

The telehealth intervention uses these methods:

- **Asynchronous.** These are telehealth interventions that include remote patient monitoring. A device is collecting patients’ data, such as vital signs, but these are not monitored in real time. Instead, a case manager can review the data on a regular basis, and send the information to a nurse if there are problems, such as a diabetic patient with a high glucose reading.

- **Synchronous.** A case manager or nurse calls patients to assess their

health and condition over the phone, including their pain and mental health status.

- **Care coordination.** Care coordination also is synchronous and can include live video conferencing, Davis says.

“If you have a participant on 10 to 15 medications, and you’re worried about medication errors or interactions, then you can interact via live video, asking the patient to hold up the pill bottle,” Davis says. “If there are worsening conditions, we can facilitate getting the patient connected with a primary care provider.”

Davis’ research had been underway before the COVID-19 pandemic began, but its tactics and interventions are particularly meaningful at a time when healthcare providers across the globe are finding ways to monitor patients without exposing them to the virus.

“That’s the beauty of the technology,” Davis says. “It could be used by different types of providers.”

For this study, a project nurse and project team are the clinician experts. They contact primary care providers as needed and work with care management personnel, Davis says. When nurses call people, they follow a script, explaining that they're calling on behalf of West Virginia University.

"A lot of those discussions will be about the transmission of vital signs and whether the equipment is working," Davis says.

The technology depends on each person's needs. "That's the beauty of the model," Davis explains. "We start planning and working with participants before they go home, and we customize their actual course or plan."

Each person uses some type of remote monitor. These could be for blood pressure, glucose monitoring, checking a person's temperature to watch for a new infection, pulse oximetry, and tracking a patient's weight, Davis explains.

"Those are the main five we're looking at with remote patient monitoring," he says. "In addition to that, every patient will receive a phone call every two weeks for a standard assessment of mental health issues and pain."

Some of the challenges of telehealth include broadband issues that make live video conferences difficult.

"There may be some participants who live so far back in the country that they don't have good coverage. For those participants, we won't do live video," Davis says. "But we can do remote patient monitoring of vitals and good, old-fashioned telephone calls."

The telehealth study was set up in a way that did not require changes when the pandemic began to shut down much of American life. "We don't have to change anything because the participants will be in their homes," Davis says. "They have equipment that is mailed to them, and the equipment is designed in a way that they can set it up on their own in their homes and troubleshoot any problems."

It is easier to set up than cable, he adds. "From a COVID-19 standpoint, that is a real plus. We don't have to change anything with our particular program," Davis says. "We're going to monitor people's temperature, and see if anyone develops a dry cough and other things related to COVID-19."

Participants who report symptoms suggesting the viral infection would be told to stay in their homes if they are safe there. But if they struggle to breathe, they would be advised to go to the hospital, he adds.

"I think the telehealth program is quite powerful because it provides a direct mechanism for achieving the advice we've all been given: Unless you're having a true emergency, try to limit and avoid contact with the healthcare system, especially those who are at high risk," Davis says.

"Telehealth is a mechanism for accomplishing that goal," he adds. "It enables participants to be linked with healthcare resources without the requirement to present in person and be exposed to viral carriers who may be asymptomatic and shedding virus."

Telehealth will continue beyond the pandemic, Davis says. "Viral illnesses will always be around, and there will always be disease processes for which it is important to provide social distancing, especially if people are immunocompromised," he says.

"Telehealth is going to be the wave of the future as a way to promote health, catch things in real time, and keep us all safe," Davis adds. "Healthcare workers minimize their exposure, too." ■

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# Palliative Care Professionals Say Capacity Must Be Expanded

*COVID-19 pandemic creates need*

Thousands of people with serious illness from COVID-19 need palliative care at a time when this typically scarce resource is stretched thinner than ever before.

Palliative care professionals held a webinar in the early days of the outbreak in New York City to discuss how their knowledge and resources could be used to help the many people in need.

“How do we deploy expertise for the long haul?” asked **Diane E. Meier**, MD, FACP, FAAHPM, director of the Center to Advance Palliative Care (CAPC), co-director of Patty and Jay Baker National Palliative Care Center, professor in the department of geriatrics and palliative medicine, Catherine Gaisman professor and chair, Brookdale department of geriatrics and palliative medicine at Icahn School of Medicine at Mount Sinai in New York City. Meier spoke about COVID-19 on March 18 at a CAPC webinar.

## Flexibility Is Crucial

Flexibility is crucial during a pandemic that is unprecedented in modern times, said **R. Sean Morrison**, MD, co-director of the Patty and Jay Baker National Palliative Care Center, Ellen and Howard C. Katz professor, and chair of the Brookdale department of geriatrics and palliative medicine at Icahn School of Medicine. Morrison also spoke at the CAPC webinar.

“We need to be prepared and recognize that we could be wrong, and at times the things we were told

or thought are wrong, and we need to move to the next step,” Morrison said.

The nation and communities need to put in place the right public health measures to limit COVID-19’s effect and to prevent worst-case scenarios, he added. But healthcare

“WE MAY BE HAVING VERY DIFFERENT CONVERSATIONS THAN WE’VE EVER HAD BEFORE BECAUSE THE CHALLENGE IS WE DON’T HAVE ENOUGH VENTILATORS TO CARE FOR EVERYONE IN NEED.”

professionals also must be prepared for a surge in COVID-19 cases.

“We need to be there to support frontline clinicians and provide them with symptom management,” Morrison says. “We may be having very different conversations than we’ve ever had before because the challenge is we don’t have enough ventilators to care for everyone in need.”

Palliative care is not ready for the tens of millions of people who will turn to health systems because of the pandemic, Meier noted.

“Whatever expectation or cognitive frame people have about palliative care will be greatly reinforced by this epidemic.”

One major challenge is that conversations with family members of COVID-19 patients will occur by phone because of hospitals closing their doors to visitors. “We need to prepare for those conversations and do symptom management,” Morrison said.

It is important that palliative care and case management professionals understand they are not the ones to make decisions about allocation of resources.

“In communities that have more patients than available resources, decisions will need to be made about who should get those resources, and we should not be making those decisions,” Morrison said. “There should be a clear triage, established by experts in critical care and emergency medicine, and we should adhere to those standards.”

The goal is to support patients who are suffering and their families as much as possible. “We won’t have face-to-face time with our families,” he explains. “We’ll be doing this by telephone or video conference.”

Even as a community recovers from the pandemic’s worst phase, case managers and palliative care professionals will be needed to provide support to their usual patient population.

“Just because we have COVID-19, it doesn’t mean that serious illness will go away,” Morrison says. “All those families still will need us.” ■

# CMSA Launches New Guidelines for Case Management Adherence

*Focus on engaging patients*

The Case Management Society of America (CMSA) is releasing its 2020 Case Management Adherence Guidelines (CMAG) to provide case managers with tactics for improving population health.

The guidelines, similar to past CMAGs, are designed to assist case managers and case management leaders in all practice settings. (*The 2020 CMAG is available at: <https://www.cmsa.org/cmagl/>*)

Over the years, CMSA has produced pharmaceutical support adherence guidelines through corporate support, and produced disease-specific adherence guides through grant funding from pharmaceutical companies, says **Rebecca Perez**, MSN, RN, CCM, CMSA director of education and product development, and executive director of CMSA Foundation. When that funding ended, CMSA stopped publishing adherence guidelines until this year.

“The CMAGs were very popular with our members, who valued the guides as a tool,” Perez says. “We decided to do another guide ourselves and produce it as a product that’s available to our members at a nominal cost and to nonmembers at a higher cost.”

The 2020 CMAG focuses on adherence in general. “It takes the holistic approach to patients under care and what that involves, including hearing a patient’s voice and involving them in shared decision-making, engagement, and retention,” Perez explains.

The CMAG includes information on listening to a patient’s voice because of research that defines how

to do that and why it is important, she says.

“Listening to a patient’s voice actually will improve patient outcomes,” Perez adds.

The guidelines also provide information on preventing readmissions, care transitions, coordinated care, and medication adherence. “It’s a much more extensive guide for a case manager, to give them multiple strategies on how to engage a client and support them through the continuity of care,” Perez says. “It has information on how to help them self-manage their care and to adhere to whatever their treatment plan is.”

The guidelines, expected to be published in June 2020, will be under 75 pages, including references, resources, and appendices. Members can download a PDF of CMAG for \$25 (\$100 for nonmembers).

Every guideline is based on evidence, Perez notes. “It will be available for download on our website, and I am finishing it as we speak [in March 2020]. It will be much bigger than the last CMAG we published.”

The 2020 CMAG’s chapters will include:

- What is adherence;
- Engaging patients;
- Shared decision-making;
- How to access care;
- Barriers to care.

“There are details in the adherence chapter on being holistic and what it takes sometimes to engage a patient,” Perez says. “There also is information on emotional intelligence, motivational interviewing, and other communication techniques.”

The objective is to find methods

for adherence. “We’re looking at things that interfere with adherence and strategies to improve adherence,” Perez says. “The guidelines have information on what to do when someone doesn’t have insurance support, and discusses the typical barriers that prevent someone from adhering to care.”

The new guidelines provide tools that case managers can use, and they focus on the importance of the patient’s experience and social determinants of health. “It’s primarily a narrative with highlighted tools that are repeated in appendices,” Perez says. “We have call-outs in the narrative to important points that are highlighted.”

The CMAG includes graphs, tables, bullet points, and highlighted information that is called out through separate text boxes. “The text boxes are meant to hit home with a specific point that we think is important to be recognized,” Perez says. “In one section on engagement, we highlight the patient activation measure [PAM],” she adds. “It requires licensing, but it’s an important tool. We tell people how to access it.”

The call-out box says that using a tool like PAM can help support the goal of patient-centered care. “The goal is to provide case managers with additional tools to support what they are doing and to make sure they can access information in their various places of work,” Perez explains. “It can support new case managers who may not have a lot of resources at their fingertips, as well as providing additional tools and resources to experienced case managers who might need additional support.” ■

# Rapid Assessment Zone Re-Engineers Patient Intake Process, Expedites Care

In the continuing quest to minimize wait times and enhance operational efficiency, clinicians and administrators have developed many patient flow models, most of which tend to work best in EDs with specific characteristics or patient populations.

Sometimes, a unique model emerges that is worth considering for ED leaders who suspect there is more they could do to optimize their resources and serve patients more efficiently. For instance, recent research suggests the development and implementation of a rapid assessment zone (RAZ) model has produced positive benefits for the ED at St. Luke's Hospital in New Bedford, MA, a busy, community ED that averaged about 90,000 patients a year as of 2017, the period during which the RAZ model was first implemented.

In a retrospective before-and-after study, investigators found the RAZ approach enabled the ED to cut the average arrival-to-provider time in half, trim overall length of stay (LOS) by 32 minutes, and reduce the leave-without-being-seen rate by 84%.<sup>1</sup>

It is an ongoing journey for the St. Luke's ED, but the results suggest the RAZ model may be an approach that other similar departments may find useful as they examine their own operational metrics and pressure points.

The St. Luke's development team members did not start from scratch when designing their own approach. They borrowed elements from other front end optimization models, but also looked closely at their own data to devise a solution best suited to facilitating throughput, given their

environment, staff, and patient population.

**Jennifer Pope**, MD, a co-author of the study and an emergency medicine physician affiliated with both St. Luke's and Beth Israel Deaconess Medical Center in Boston, explains there are two main components to the RAZ model: an up-front triage decision and the RAZ space itself.

"[A] rapid split was developed in response to an analysis of [the ED's] old process, which found there was a lot of time lost performing a detailed triage process up front," she notes. "The ED had been trying to compensate by using a lot of nursing-driven triage protocols, which can be very helpful when short on clinical space, but also [can] lead to overtesting."

Consequently, the RAZ model essentially eliminates traditional triage from the intake process and employs a "pivot nurse" to quickly determine whether patients can remain ambulatory or likely will require more intensive resources. This determination is based on the nurse's clinical judgment, a patient's age, and primary complaint. The decision is made before any vital signs are taken or an Emergency Severity Index Score designated.

The pivot nurse's determination is used to split the flow of patients between the main ED, a 49-bed area that receives patients who will likely require more resources, and the RAZ, a space that includes 18 rooms equipped to manage the patients who can remain ambulatory.

"The RAZ space and its function [have] both planned and organic components," Pope observes. "St. Luke's is a relatively large-volume ED, but has a low volume of true [lower

acuity] patients." Further, Pope notes the large waiting room in the original ED offered an opportune space from which to carve out additional ED care spaces.

"We created one large patient care space as opposed to multiple small ones, which meant [the area] would need to care for a broader acuity of patients than a fast track [typically would]," she says.

Once patients are placed in the main ED or RAZ, they will undergo a provider assessment, vital signs will be taken, and a full nursing triage assessment will take place. The idea is for these actions to occur as concurrently as possible to remove unneeded extra steps and minimize serial assessments, according to investigators. Further, bedside registration is completed when it does not conflict with patient care.

In most cases, patients sent to the RAZ will be diagnosed and treated while ambulatory. Patients sent to the RAZ who are identified as requiring more resources than originally determined may be transferred to the main ED, although their care can begin in the RAZ.

When space is not available in the main ED, the RAZ can be flexed to include some acute care space. Typically, the pivot nurse, in concert with the ED lead nurse, makes such determinations.

During the intervention study period, which began in June 2017, the RAZ was operational every day between 9 a.m. and 11 p.m. and staffed by four nurses, three clinical technicians, a physician, and two advanced practice providers. Notably, the approach did not require the onboarding of any additional staff.

To assess the impact of the model, investigators compared data from the six months before the intervention began with data compiled for six months following implementation of the RAZ. Both the pre- and post-intervention periods included more than 43,000 patient visits to the ED. Investigators reported the RAZ model produced improved outcomes on all metrics studied. This included an overall median ED LOS decline from 203 minutes to 171 minutes, a decline in the median arrival-to-provider time from 28 minutes to 13 minutes, a decline in the leave-before-treatment-completed rate from 1.0% to 0.8%, and a decline in the leave-before-being-seen rate from 3.1% to 0.5%.

While the intervention proved successful, one early hurdle concerned creating a “greeter” position. The person fulfilling this nonclinical role is responsible for managing a quick preregistration and recording each patient’s primary complaint upon presentation to the ED.

“A major challenge was getting the greeter team comfortable with the role,” shares Pope, explaining that the greeter and an ED tech are the first employees to see incoming patients. “The pivot nurse is often able to make the decision [regarding] patient flow without seeing many of these patients.”

To assist with this task, Pope notes that the development team created a ‘trigger’ mechanism that the greeter can use for patients who require immediate attention. For instance, the greeter would call “trigger” for any patient in obvious distress, someone who is unresponsive, or someone who has been stabbed.

The authors stated the model includes flexibility for patients who present with certain complaints such as chest pain. In that instance, for example, a patient will receive an ECG before the pivot nurse’s decision regarding placement in the RAZ or main ED. Also, they noted plans are in place to adapt the RAZ model in the event of patient volume surges.

Considering the pivot nurse plays a key role in the RAZ, the individuals chosen to serve in this position initially were experienced nurses who were well-versed in rapid triage, Pope explains.

“Some had been part of the RAZ development team,” she says. “Over time, we have seen the role performed successfully by a broad cross-section of nurses who have rotated into the role and who have received training from nurses experienced with the model.”

Pope adds the RAZ team continues to examine the model for new iterative changes that might further enhance performance. “[This includes] taking a closer look at the

pivot [nurse] role and improving the process for moving patients out of the RAZ when they are more complex/sick, and main department beds are limited,” she shares. “Any major change should be accompanied by a regular examination of data, discussion with front-line staff regarding challenges and barriers, and the understanding that healthcare demands flexibility and agility in navigating a field that changes constantly.”

For other ED leaders who face similar throughput challenges, Pope cautions that a front-end improvement will produce few dividends if the process happens in isolation. “There was a lot of work done prior to [implementation of] the RAZ focusing on internal and back-end ED operational processes and metrics,” Pope explains.

These improvements focused on things such as lab and radiology turnaround times and streamlining the admission process. “These other processes need to be examined and optimized thoroughly to best understand what front-end process a department needs,” Pope adds. ■

## REFERENCE

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# Global Standards Help Improve Patient Safety and Outcomes

A Louisiana health system is improving safety and patient outcomes by expanding its use of barcodes and other tracking under the commonly used GS1 standards. The effort also is yielding better inventory management. Along the way, the health system developed a GS1 implementation program that other organizations can use.

The Franciscan Missionaries of Our Lady Health System (FMOLHS) is a nonprofit healthcare system in Prairieville, LA, that serves more than half of Louisiana's population. It includes eight large hospitals and 350 physician clinics.

Its recent implementation of the global GS1 standards means operating room (OR) nurses can scan product barcodes to capture product data, such as expiration dates and recall information, while also entering product-related information into the patient's electronic medical record (EMR).

The system also could help improve patient outcomes by allowing the chief medical officer to access detailed information about the variability of items used in procedures and the impact on care, notes **Sandi Michel**, system director of supply chain strategy at FMOLHS.

## Standardizing Across System

GS1 is a not-for-profit organization that maintains global standards for business communication, including the well-known barcode on retail products. GS1 standards are designed to improve the efficiency, safety, and

visibility of supply chains in many industries.

To fully adopt GS1, FMOLHS began by reviewing its standardization vision and strategy with about 80 suppliers and group purchasing organizations, Michel reports.

The health system asked them to start using the GS1 Global Trade

SCANNING THE BARCODE ENSURES THE CORRECT DEVICE NUMBER IS ENTERED IN THE PATIENT'S MEDICAL RECORD, WHICH CAN BE VITAL IN THE EVENT OF A RECALL FOR AN IMPLANTABLE DEVICE.

Item Number (GTIN) in barcodes to uniquely identify each of their products, Michel says.

FMOLHS plans to standardize the use of the GTIN for all items used in the health system. Manufacturers now are required to use them when selling to the health system, Michel notes.

About 85% of implantables in the system now have unique GTINs, Michel adds. FMOLHS also adopted the GS1 Global Location Number (GLN), which identifies each location within the FMOLHS health system.

The use of barcode scanners improves efficiency and accuracy, Michel observes. Even when part numbers or other identifiers were available, numbers and letters could be mistyped into a patient's record. Scanning the barcode ensures the correct device number is entered in the patient's medical record, which can be vital in the event of a recall for an implantable device, for instance.

The effort began in 2012. Michel and other FMOLHS leaders attended conferences and consulted other resources to learn about the potential improvements for safety, outcomes, and inventory management. Once the potential benefits became apparent, they looked for a sort of master plan for how to implement GS1 standards in a large organization, but they could not find one.

So, leaders decided to create their own.

## Opening Their Own Warehouse

FMOLHS worked with seven vendors in developing a GS1 implementation plan, with the intention of making it available to other health systems afterward. FMOLHS started by establishing an Office of Data Standards and Interoperability. Divisions within the office addressed particular areas of GS1 implementation, such as the GLN, pharmacy, and interoperability.

FMOLHS opened its own warehouse in 2015, allowing the organization to better control its inventory and provide "just in time" delivery of products throughout the health system. The GS1 program

tracks the products, and the GLNs indicate exactly where the item is at any moment, Michel explains.

The inventory system also allows FMOLHS to provide the “best unit of measure” for any product to any location identified by a GLN, Michel says.

If a particular clinic needs only two pieces of an item from a case of 24, the GS1 program allows the warehouse to properly divide the case and deliver only what is needed rather than sending an entire case because that is the only unit available.

“Typically, this would mean that surgery will request the specific products and quantities they need, transmit that to us, and our warehouse has already broken down that case into the individual items. We will put together what they need in a tote and have that delivered directly to the location using the GSN,” Michel says. “We went a little further and used the GSN to create a hierarchy tree, all the way down from the top of the health system to each facility location, to each storage location. It could be a closet, a shelf, a bin. The tote with what they need is delivered directly to that location, just in time for the procedure.”

In 2017, FMOLHS started scanning into the EMR any supplies or product that were used on a patient, Michel says. Not every supplier uses GS1, but the outliers are minimal now, she adds. “We started four years ago telling suppliers that this was the expectation. Eventually, we will get to the point that we will make buying decisions based on whether you use the GS1 standard for your product so that it can fit in seamlessly with our system,” Michel notes. “Recently, we changed our group purchasing organization and realized this was a chance to get all of our suppliers using GS1.”

The health system determined that when considering vendor options, any company using the GS1 standard would be its first priority. Companies moving to adopt GS1 might be considered, but those with no GS1 plans would be considered last.

## Educating Nurses About Scanning

Implementing the system required educating nurses about which barcode to scan when several are on an item.

Michel says nurses have embraced the program because the scanners reduce their workload and improve accuracy. Sometimes, nurses will hold onto a package that did not scan properly so FMOLHS can notify the vendor and fix the problem.

FMOLHS also provides feedback to vendors on how they use barcodes, suggesting better ways to label the products. In one case, the health system reported the labels on small tubes were not scanning properly. The manufacturer switched to a different type of barcode more suitable to the small tube size. In another case, the health system reported barcodes on reflective material were difficult to scan properly. “We want a device that can be scanned so the OR nurse doesn’t have to manually type in a lengthy number, which can include a serial number, a manufacturer number, and an expiration date,” Michel says. “We’ve been consistent over the years and communicated well with our suppliers, so we can

record accurate information provided by the supplier themselves into that patient record. It helps us with recalls, decreases errors, improves efficiency, and it allows us to feel confident that this isn’t a counterfeit product that was just brought in off the street.”

The program has improved patient safety through both the increase in information put in the patient record and the reduction in errors with that information, Michel says. The GS1 implementation also can be useful if The Joint Commission conducts an audit, Michel says. In an audit, FMOLHS can provide an accurate assessment of inventory throughout the system.

FMOLHS makes all of its GS1 implementation plans available for use by any healthcare organization. “There is a myth out there that this is very difficult to do, but it’s really not that difficult to do because we’ve done all that early discovery and design,” Michel says.

More details about the FMOLHS model are available at the link in the resource list below. “That is available to anyone who wants it,” Michel adds. “It will provide a framework for implementing GS1 as effectively as we have at FMOLHS.” ■

## RESOURCES

- GS1. What we do. Available at: <http://bit.ly/2Tzo5zv>
- GS1, Franciscan Missionaries of Our Lady Health System. FMOLHS-GS1 US Data Standards Master Process Implementation Plan. Available at: <http://bit.ly/32KW6AY>

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## CE QUESTIONS

- 1. According to Greg Poland, MD, Americans are particularly susceptible to serious illness with COVID-19 because of which risk factors?**
  - a. Significant percentage of population avoided childhood vaccines
  - b. The pandemic hits people between 25 and 40 hardest, and more Americans are in that age group than any other
  - c. Obesity, smoking, elderly, immunocompromised
  - d. Highly mobile, social touchers, and lack of good hand hygiene
- 2. The Case Management Society of America is releasing its 2020 Case Management Adherence Guidelines to provide case managers with methods for improving population health. Which is a topic?**
  - a. How to care for patients during the pandemic
  - b. Shared decision-making
  - c. Tips on case managers becoming certified
  - d. Telehealth
- 3. According to palliative care expert R. Sean Morrison, MD, what is one of the biggest challenges for palliative care professionals and case managers during the COVID-19 pandemic?**
  - a. They have to provide support to patients' families by phone or video conferencing, instead of face to face.
  - b. They have to make triage decisions about who will get a ventilator when demand outstrips supply.
  - c. They have to visit homes in full infectious disease protective suits.
  - d. They have to provide grief counseling to frontline healthcare staff.
- 4. Which telehealth intervention includes patient monitoring with a device that collects patients' vital signs that a case manager reviews daily and sends to clinicians when there appears to be a problem?**
  - a. Synchronous
  - b. Care coordination
  - c. Asynchronous
  - d. Artificial intelligence monitoring