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Improve Clinical Decision Support to Alleviate Frustration

Clinical decision support (CDS) is meant to improve care quality by providing helpful alerts and advice to the electronic health record (EHR) user. However, too often the result is an annoying proliferation of pop-ups that only frustrate clinicians.

When the CDS system interrupts too much with alerts that are not useful, the result can be counterproductive. Clinicians routinely dismiss alerts. In the process, they may ignore those alerts that are useful, say researchers and hospital leaders.

The detrimental effects of poorly managed CDS are clear, says **Ivana Jankovic**, MD, an endocrinology fellow at Stanford University and lead author of a study concluding that CDS can contribute to clinician frustration and burnout.¹ But CDS can be a valuable tool when managed

properly. Jankovic and her co-author determined the negative effects can be mitigated by improving relevance, soliciting feedback, customizing, and measuring outcomes and metrics.

“From the research and from my own personal experience in working

on these problems,

it is clear that you want to get the end users, the clinicians, involved early in the planning process for an EHR with decision support. They’re going to be positioned to understand the workflow, how clinical decision

support actually affects

patients, and how it affects their day,” Jankovic says. “Once you have your decision support tool in place, you’re not done. You need to think about whether it’s doing what you think it’s doing and continuously solicit feedback to make sure it’s having the effects you’re hoping for, and not having any

CLINICIANS ROUTINELY DISMISS ALERTS. IN THE PROCESS, THEY MAY IGNORE THOSE ALERTS THAT ARE USEFUL.

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unintended consequences.” Jankovic cautions administrators might not know how frustrated clinicians are with CDS. Clinicians may be aware of the problems and talk among themselves, but they may not feel they have a mechanism for reporting or helping address the problems. That was Jankovic’s experience with house staff. She helped establish a physician council to provide feedback to administrators.

“There is so much going on in the hospital that physicians just accept, like our frustration with electronic health records and decision support. But there is a great need from administration and EHR analysts to have that perspective,” Jankovic says. “You just need to build the [opportunities] for those groups to interact.”

Correcting the problems with CDS might require working with the EHR vendor to adjust the product. Jankovic says hospital leaders also can make significant improvements on their own. Some CDS issues involve integrating it properly into the hospital’s workflow. That is something that can be addressed in-house.

Sometimes, clinicians assume any problems with CDS are just baked into the EHR and cannot be fixed, so they routinely ignore alerts or develop workarounds, Jankovic notes. Hospital leaders should educate clinicians about the ability to change CDS and require ongoing training. Such education should go beyond more than just the initial few hours of training when the system is introduced.

Relevancy Key for Alerts

One of the biggest complaints is the CDS alert is not relevant to the patient, Jankovic says. For example,

providers receive sepsis alerts for patients with a low predictive value for sepsis. Some alerts have override rates of 95% because the data behind the alert has not been updated to reflect current thinking.

“As an endocrinologist, sometimes when I’m ordering insulin appropriately with both long-acting and short-acting, I’ll get a duplicate medication order that pops up and I have to acknowledge,” Jankovic says. “The alerts are not doing what they’re intended to do. You’re getting a lot of alerts that are not relevant to your patient and you have to override them, which contributes to your alert fatigue.”

The relative scale of alerts also can be an issue. For a serious issue like prescribing a medication to which a patient is allergic, it is appropriate to include a full-stop, highly visible alert that must be acknowledged.

“But for an alert over a relatively minor issue, after the fourth alert that day, it starts getting really frustrating,” Jankovic says.

“It’s a balance of how much you’re willing to frustrate physicians to help patients. I think we’re all willing to take on a little frustration if it helps patients,” Jankovic continues. “But we’re not seeing the research that all of these alerts actually improve patient care. That’s a big reason for the disconnect.”

In other cases, the alert might be appropriate but it comes at the wrong time in the workflow. Jankovic recalls working in a patient’s prechart section of the EHR, before seeing the patient, and seeing an alert suggest recommending a flu shot to the patient.

“The patient is not here yet, but I can’t do anything else in the chart until I click on ‘order flu shot’ or

‘patient declined,’” she says. “It’s a helpful alert, and I’d be happy to use it at the right time, but it’s coming up at the wrong time and distracting me from the work I’m trying to do.”

Look for Little-Used Alerts

Assessing a CDS for potential problems can take different forms. Some hospitals conduct their own internal analyses, and others use automatic monitoring tools for the assessment, Jankovic notes.

No matter how one analyzes the CDS, the goals are the same. Look for what order sets are never used, what alerts are always overridden, any changes in the use of certain CDS tools after an EHR upgrade, or a change in the workflow, Jankovic suggests.

“If you’re noticing that certain alerts are being overridden 90% of the time or more, you can go to the users and the pharmacy or clinical leaders to do more of the feedback sessions that will tell you why,” she says. “That initial look at the raw data will tell you where the problems are, rather than having to do a lot of one-on-one interviews with the end users to have them tell you what alerts are problematic.”

In her research, Jankovic found patient outcomes are not factored

in appropriately when assessing CDS. Some assessments may consider whether clinicians respond to alerts and carry out exactly what was suggested. If many users respond affirmatively, the alert is valid. But the analysis also should consider how that affected patient outcomes.

“We can see that they ordered the blood pressure medication in response to the prompt, but we should be looking further down the line to see if that improved blood pressure, and the next step to see if it reduced heart attacks, kidney disease, and stroke,” Jankovic says.

Contributes to Burnout

Frustration with CDS can contribute to burnout, says **Richard Cohan**, president of provider solutions with DrFirst, a healthcare software and IT company headquartered in Rockville, MD.

Aside from too many alerts that interfere with care, Cohan notes sometimes-useful CDS functions are not fully integrated into the EHR and workflow. These might be siloed, many clicks away from the way the clinician typically interacts with the system.

“Vendors sometimes forget the S part of CDS — the support. CDS should not tell them how to practice medicine but give them the support and full context around

the information they need,” Cohan says. “Anything that is outside the workflow and not integrated causes context switching by the physician. Tools that are several clicks away from the workflow are a real irritant and a real demotivator.”

CDS also can integrate issues such as price transparency and prior authorizations, which are increasingly important to patients and government regulators. “That can be beneficial to providers, patients, payers, the health system. Patients have improved satisfaction, which is important to these health systems that are focused on Net Promoter Scores and quality measures,” Cohan says. “Everyone benefits by taking that friction out of the system, especially now that the effects of COVID-19 have made patients more sensitive to pricing issues.”

Cohan says a good CDS system will make data actionable, rather than just throwing up a lot of data for the clinician to wade through and determine how to use. The information also must be concise, visible, and intuitive. Screens are crowded, so important CDS guidance should be prominent and suggest the proper action to take.

Vendors should be pushed to adapt CDS to real-world conditions, making them more useful and less frustrating for clinicians, Cohan says.

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Many large vendors will respond to their client requests to improve their products. “By doing so, we improve everyone’s satisfaction with the process and the encounter,” Cohan says. “Hopefully, that impacts quality of care, improves stars and HEDIS measures, and outcomes for patients.”

CDS Systems Are ‘Tired’

KLAS Research, a healthcare IT data and insights company based in Orem, UT, recently issued a report that assessed CDS in seven different products.² The co-authors say their research revealed a lot of room for improvement in CDS.

Joe Van De Graaff, vice president of digital health and security for KLAS, says traditional CDS is “a little tired.” That stems from good intentions but often unwise use of alerts.

“If my alarm clock goes off six times every morning before I need to get up, I eventually just don’t listen to the alarm clock anymore,” he says. “Having the right information at the right time, or even half of the information at the right time, is far more impactful than having all of the information at the wrong time.”

In addition, some elements of CDS can be too cumbersome to use in the moment. For instance, static lookup of information needed for diagnoses may be helpful but not as much as a prompt that is tailored to the patient information in the EHR.

Clinicians report they want that kind of information to pop up in useful ways derived from the specific patient’s data, says **Jennifer Despain**, director of market analysis for KLAS. They do not want to have to input data again to use the CDS resource.

With any CDS input, clinicians dislike jumping from window to window or input data that are in the record already. Truly useful CDS prompts will act on the patient’s specific data and provide meaningful options or suggestions to the clinician, all in one alert window.

“There is a trend toward making progress in this area, not as much as we want or hoped for, but not necessarily for lack of trying,” Van De Graaff says. “Much of that relates to the nuanced clinical workflow and the demanding needs of caregivers, and the limits of machine learning and artificial intelligence. We’re making progress, but we haven’t broken through the ice yet. There is some reluctance to that machine learning and how you can trust that without a clear decision tree or pathway.”

Work with Vendors

Hospital leaders can work to tailor a vendor’s product to their own needs. In most cases, they will need support from the vendor, Van De Graaff says. For example, vendors can help with true integration so a clinician does not have to go from one system to another to look something up.

Van De Graaff recalls one chief medical informatics officer at a hospital saying the best thing the vendor did for him was to provide all the available alerts and let his team decide which ones were best to include.

“Often, the assumption is that the EHR is built as is and it’s just going to do its job. But I think of how the real value in your smartphone is when you personalize it,” Van De Graaff says. “An iPhone or Android is good right out of the box, but you

get really productive with it when you tailor it to your own needs and what you want from that device.”

Clinicians who are unhappy with the CDS probably will make their feelings known to hospital leaders. Van De Graaff cautions people can be satisfied with an existing system simply because they are familiar with it. They are aware of its faults and have come to accept them, using workarounds and just resigning themselves to clicking past the irrelevant alerts. That does not mean the system is working effectively and contributing to better patient outcomes.

Address Reluctance

Involving physicians and nurses in the CDS development process is key to success, says **JD Tyler**, MD, chief medical officer at Tissue Analytics, a company in Baltimore providing technology to address wound healing. He is a former hospitalist and chief medical officer for a company that provides a range of specialty EHRs, and other technologies, including CDS, to hospitals and other facilities nationwide.

“With that background, I can state unequivocally that the most important thing we can do to tailor CDS for physicians is to make sure it helps physicians work instead of adding their workload,” he says. “The philosophy of most physicians is that ‘if it’s already in the medical record, don’t make me have to input it again.’”

Another important issue is the inherent resistance of some clinicians to using CDS. There remains considerable concern among many clinicians about CDS, specifically that it takes the “art” out

of medicine, Tyler says. “I disagree. The art of medicine is how you talk to patients, gather information, interpret data. Your decision-making should be scientific and objective to drive optimal clinical decisions. That’s what CDS brings,” he says. “CDS isn’t replacing you. You are still behind the wheel, and you can disagree. When well-designed, supported, and fully utilized, CDS is an important tool for improving the quality of care for all patients and helping to ease the workload for busy physicians.” ■

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Tips for Integrating Medication into Clinical Decision Support

Medication decision support is a growing area of clinical decision support (CDS), according to **Anna Dover**, PharmD, director of product management for First Databank, a provider of drug and medical device databanks based in San Bruno, CA.

She offers these tips for making the best use of CDS without inadvertently creating a burden for clinicians:

- **Make alerts actionable.** Fit the medication decision support into the user’s workflow without interrupting them.
- **Move alerts to the time when they are relevant and to the best**

person capable of understanding and making a decision about the risk or medication.

- **Use decision support that incorporates patient characteristics.**

“We are going to see that alerts and decision support that rely only on medication lists and nothing more specific from the patient will start to fade away,” Dover says. “That traditional approach, although very sensitive, is not very specific. In other words, the alert was good at telling you about a potential risk, but not good about telling you whether this specific patient was at higher or lower risk.”

- **Use the technical capability to leverage lab results, patient age, gender, diagnosis, and other factors to fire an alert when the risk is high, or automatically suppress an alert when the risk is low.**

It is important to use this type of technology to improve care while alleviating clinician frustration.

- **Leverage analytics for better medication decision support.**

Monitoring and receiving feedback is essential for effective decision support. “By looking at the data being generated through prescribing, we can evaluate how providers interact with alerts and



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optimize as needed. Analytics can also help make predictions about how a clinician or set of clinicians will respond to alert-tuning or modification,” Dover says. “It’s possible to use analytics to simulate and make educated guesses about whether an alert will have the

intended effect and improve care, or whether it will cause additional burden to the prescriber.”

• **Monitor the effects of deployments, gather feedback, and respond to optimize.**

It is important to closely manage and maintain knowledge of the

CDS to reflect evidence and pivot as needed. ■

SOURCE

- **Anna Dover**, PharmD, Director, Product Management, First Databank, San Bruno, CA. Phone: (800) 633-3453.

Hospital Sharply Reduces CDS Alerts to Address Clinician Concerns

Like many hospitals and health systems, Indiana University (IU) Health in Indianapolis had put a robust clinical decision support (CDS) system in place at its 16 hospitals across Indiana, with expectations that it would improve quality of care and ease the burden on busy clinicians.

IU Health leaders realized its CDS system was producing the opposite effect. Too many alerts were interfering with the proper administration of care, leading to extreme frustration among clinicians.

The problem crept up over several years as IU Health strived to make its electronic health record (EHR) more useful in improving patient safety, says **Jason T. Schaffer**, MD, MBI, associate chief medical information officer at IU Health. Like many systems, IU Health responded to adverse events by identifying root causes and the ways they could be prevented.

“We would look at ways to keep that from happening again. In many cases, that resulted in a clinical decision support tool or an alert. We do that again and again, not understanding what happens across the system when we add these alerts that get in the way or frustrate our doctors,” Schaffer says.

The problem can be measured in different ways. One measure is the

number of alerts in the CDS system. Another is the number of times a rule fires an alert. Analysts also can measure the response rate, which is how many times an alert changes a clinician’s action.

TOO MANY
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Another useful measure is the “blow-by” rate, which indicates how often a clinician ignores or refuses an alert. It also is useful to measure how quickly users blow by an alert.

“It’s almost like muscle memory on some of these alerts,” Schaffer says. “An alert pops up, and the user dismisses it immediately to get on to the next step.”

After measuring those factors, IU Health determined that in May 2017, the CDS system fired 2.5 million alerts that month, an all-time high. “It was recognized that we had gone way overboard. Our blow-by

rate ... was above 90%, which means we were frustrating our physicians quite frequently with alerts that didn’t mean enough to them to actually follow what the alert was telling them to do,” Schaffer says. “We knew we had to do something about it.”

First, IU Health considered conducting a literature search on how to streamline CDS alerts or using an outside vendor who could bring in software to analyze the alerts and the rules that generated them. But Schaffer says IU leaders thought the situation was dire and demanded immediate action.

“We started pulling out alerts at a relatively fast rate. We looked at our own numbers, but didn’t do a lot of analysis,” he says.

100 Rules Deleted

IU Health immediately removed more than 100 rules that drove alerts over eight months, which quickly dropped the number of alerts to less than 800,000 per month. That still is a high number, but reasonable considering the number of patient encounters throughout the health system.

“We followed our quality and safety metrics along the way and did not note any significant increase in

the number of safety events, either events related to a specific alert that we pulled out or safety events in general throughout our system,” Schaffer reports. “As you might imagine, our quality and safety teams were nervous through this time.”

Because the health system was removing rules so quickly, it was unable to measure the effect from each one. The quality and patient safety teams watched a few rules deletions more carefully because of the potential for a severe increase in adverse events. There was no spike after any rule deletion.

There was some skepticism about removing the rules. Schaffer and his colleagues met with quality and safety leaders at IU Health to discuss specific rules and the reasoning for deleting them. Long conversations were necessary to assure them early on and along the way that the changes could be made without threatening patients.

They started out by looking at about 10 rules, and watched the effects for a month, reviewing the data with the quality and safety teams. No negative effects could be seen.

“With that confidence, we started doing more groups and larger groups of alerts. The most we removed at one time was about 30,” Schaffer recalls.

An example of a retired alert is “72 Hour Enteral/Parenteral

Nutrition,” indicating a patient had not received a diet order within the past 72 hours. IU Health retired this alert at the request of the risk management department because those staffers said the alert was not working as designed.

IU Health kept some alerts but turned them into passive messages that do not interrupt workflow. Instead, those now appear as sidebar messages when the clinician opens the chart.

One of those is “Department of Child Services (IN 310 — State Form) Alert.” This instructs the clinician not to discharge the patient until such action is indicated to be safe. Another is “Care Contract Alert,” which alerts the clinician to review the patient’s existing care contract in the EMR.

As the number of alerts decreased, so did the blow-by rate. From the beginning, when clinicians were ignoring 90% of alerts, that figure fell to about 75% with the first culling of the unnecessary notices. That lower figure is better, but still not great, Schaffer says. A figure of about 60% would be closer to ideal, he adds.

“If the alerts were perfect, you wouldn’t need doctors and nurses,” Schaffer says. “Alerts are there to drive some actions, but there has to be an interaction with a clinician who is taking care of the patient. We still have work to do, but our data

are much better than it used to be. It speaks to frustrating doctors less.”

Schaffer also is an emergency physician. Currently, he is researching an alert his colleagues brought to his attention. It has a blow-by rate of 95% and is causing frustration in the ED. Schaffer is assessing the validity of the underlying rule.

The fact his colleagues brought it to his attention is a good development, Schaffer says. Previously, clinicians might be annoyed by an alert but never bring it to the attention of leadership because they did not think anything would happen. Or, if they did complain about an alert, clinicians would do so in a different way, complaining about the volume of alerts rather than isolating one in particular.

“Now, they focus on this one alert because it stands out to them. The electronic record feels different than it did before we started this improvement,” Schaffer says. “Instead of being overwhelmed by so many unnecessary alerts, they can recognize that this one alert keeps coming up. It used to be that there were so many alerts you would just click past them all the time. Now, they’re rare enough that our clinicians pay attention to them and either find them useful, or in this case, they can recognize that this one needs to be reassessed.”

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Clinicians also spend more time reading alerts. Because the notices are more meaningful, users stop to consider them instead of automatically dismissing them.

Still Some New Rules

The improvements did not mean IU Health could stop adding alerts to its CDS system. As new issues develop and best practices change, there will be a need to introduce alerts. However, IU Health takes a much more considered approach today, evaluating a proposed new alert with the help of a vendor to ensure it is introduced in the most helpful way, Schaffer says.

Much of that work is based on a campaign created by American Board of Internal Medicine (ABIM) Foundation called Choosing Wisely, which seeks to avoid unnecessary medical tests, treatments, and procedures.¹ For example, an alert might discourage ordering plain film X-rays for back pain or head CT scans for syncope, Schaffer explains.

IU Health entered 25 new rules based on this campaign guidance

to avoid routine orders that might be outdated or unnecessary. They increased the total number of alerts in the system by only about 5,000 per month.

“We entered those at the same time that we removed some other alerts,” Schaffer reports. “We found that you can actually do alerting in a smart way and not create the frustration that we had in the past by basing it on a single event.”

Rules Are Not Panacea

Schaffer says an important lesson from this experience is avoid basing rules on single events. IU Health, like many others, had gotten in the habit of conducting a root cause analysis for adverse events and introducing a new CDS rule to keep it from happening again.

“We rely sometimes too much on the technology to put a rule in place so that this never happens again. We think that is finishing the job when actually we didn’t follow up with any education, and just created another alert that clinicians blew by,” Schaffer says.

The same applies to documentation requirements in the EHR. Administrators might identify a need for documentation and add it as a mandatory field in the EHR, thinking the clinician must fill in those data before proceeding. “You’d be amazed at the number of ways clinicians find workarounds to mandated things. With alerts, we just blow by them. With mandated documentation, we just put a dot in the field, and the field is then satisfied so we can move on to the next thing,” Schaffer says. “While the EHR is a great tool to help with quality, safety, and documentation, it’s not the complete answer. Education is still necessary so that clinicians understand why the alert is there or what you’re trying to achieve with that documentation.” ■

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Hospital Reduces High Cesarean Delivery Rate to Below Average

When leaders at Virginia Hospital Center in Arlington realized the nulliparous, term, singleton, vertex (NTSV) cesarean delivery rate was too high, they decided to act. Today, the Virginia Hospital Center rate is below the national average and lower than what professional organizations prescribe.

The American College of Obstetricians and Gynecologists (ACOG) and the Society for

Maternal-Fetal Medicine both recognize cesarean deliveries can save lives, but they advise vaginal deliveries for most pregnancies because the risk is lower than that of cesarean deliveries.^{1,2} A hospital’s NTSV cesarean rate is considered a key indicator of quality and patient safety. Leapfrog reported the average cesarean rate nationwide in 2018 was 26.1%, although the organization set a target of 23.9%.³

At 33%, the Virginia Hospital Center board recognized the cesarean rate was far too high and set a goal to reduce it significantly, says **Marian Savage**, MSN, RN, NEA-BC, CPHQ, PMP, associate vice president of quality and patient safety.

“I think the most important part was the transparency, which was different from other organizations I’ve worked with,” Savage says.

“First, we cleaned the data and made sure it was correct. The OB department put on display in the physicians’ lounge all of the physicians’ C-section rates. I’ve seen that done with groups or with aggregate numbers for a department, but I’ve never seen it done with individual physicians.”

That did not please some physicians, but it did produce the desired effect. Every physician with a high cesarean delivery rate wanted to lower it, and fast.

“It changed the culture on that unit. It was kind of a shock at first, but the rates began dropping,” Savage says. “Everyone wanted to be better than the person next to them.”

Physicians started looking at why they were performing cesarean deliveries and eliminated procedures that were performed out of convenience, says **Jeff DiLisi**, MD, senior vice president and chief medical officer.

“Generally, the physicians took it well, but there are always a couple who don’t see the value right away,” DiLisi says. “We had a lot of highly educated business professionals coming into our practices and saying they want to go on maternity leave on Sept. 30. That’s when they want to have the baby. Part of the physicians’ concern was that they would have to learn to communicate in a different way with their patients to show them that is not in the best interest of their baby.”

One tactic was communicating to expectant mothers that another name for a cesarean delivery is “surgery,” with all the concomitant risks and downsides, DiLisi says.

The hospital also appointed one of its OB/GYNs to be the medical director of labor and delivery. In that position, the person held a monthly quality meeting during

which a group of obstetricians reviewed every cesarean delivery performed at the hospital. Making one person accountable for that was helpful in gaining traction on the issue, DiLisi says. He also notes the decline in cesarean deliveries has been accompanied by a drop in admissions to the neonatal ICU.

THE RATE
DECLINED 12
POINTS TO
20.9%. SOME
PHYSICIANS
HAVE LOWERED
THEIR RATES TO
AS LOW AS 15%.

“Hospitals get paid more for a C-section than a vaginal delivery, but we did this anyway because felt strongly it was the right thing for our patients,” DiLisi adds.

Nurses Play Major Role

Credit also goes to the interdisciplinary team that worked on the problem, Savage says. Nurses and other clinicians worked with physicians to identify ways to reduce the cesarean delivery rate. Nurses took the lead in working closely with patients, particularly first-time mothers, keeping them calm and progressing well to a vaginal delivery.

Physicians changed the ways they decided to order a cesarean delivery. Previously, that decision might be made rather quickly if the mother had been in labor for many hours — or if the physician’s shift was ending.

“Now, we’re giving much more time. That came from a review of

literature that showed a mother can labor longer than we thought,” Savage says. “Safety is always a priority. We will take a mother for a C-section when it is warranted, but we allow the mother to labor longer than before. It might take two or three days, but we allow the mother to go through that natural process.”

Safety Huddles Help

Another obstacle to adoption was everyone sincerely believed they were doing the best they could. Savage and the rest of the team had to overcome that initial resistance to criticism.

The breakthrough was posting the individual physician cesarean delivery rates. The numbers were a shock to some physicians, especially when they could see their patient populations were similar to those with better scores.

“People think they are doing their best and that they’re on par with their peers, so the numbers can jolt them,” Savage says. “But that’s where you get the change. They see those numbers and don’t like them.”

Another component of the success was the use of safety huddles, one in the morning throughout the entire hospital, and another department safety huddle.

Every day in the OB, all clinicians gather to discuss high-risk mothers and other safety issues. Clinicians are encouraged to speak up and offer advice on how to handle a particular patient, based on their experience.

The team addressing the cesarean delivery rates initially hoped they might lower their rate to below 30%. Eventually, the rate declined 12 points to 20.9%. Some physicians have lowered their rates to as low as 15%. “The big lesson is that it’s doable. We’re still seeing hospitals in

our area with rates in the 30% and 40% range,” but achieving lower rates is possible, Savage says. ■

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- **Jeff DiLisi**, MD, MBA, Senior Vice President, Chief Medical Officer, Virginia Hospital Center, Arlington. Phone: (703) 558-5000.
- **Marian Savage**, MSN, RN, NEA-BC, CPHQ, PMP, Associate Vice President, Quality and Patient Safety, Virginia Hospital Center, Arlington. Phone: (703) 558-5000.

Improved ICU Physician Staffing Leads to Better Safety Grade

When Doylestown Hospital in Pennsylvania received a C on the Spring 2016 Leapfrog Hospital Safety Grade, leaders launched a campaign to improve patient safety. A central tactic was adapting its staffing model to meet Leapfrog’s ICU Physician Staffing criteria.¹

Less than a year later, the hospital improved its safety grade to an A. The hospital has now earned an A for eight consecutive periods.

Leapfrog’s standard requires that all critical care patients in the ICU be managed or co-managed by physicians who are board-certified in critical care medicine and who are present in the ICU at least eight hours a day, seven days a week. They also must respond to 95% of texts or calls within five minutes.

Previously, the hospital restricted what physicians could practice in the ICU and offered no formal intensivist program, says **Scott Levy**, MD, vice president and chief medical officer of Doylestown Health. With the effort to improve the Leapfrog score, hospital leaders committed to developing an intensivist program.

Levy thought the existing coverage only needed to be

formalized, but he found a specific intensivist program brought benefits.

“The place to find our intensivists was easy because we already had an extremely strong group of physicians here. All of them [were] board-certified pulmonary doctors and intensivists who were doing that kind of work without the formal program in place and the official man-hours covered,” Levy explains. “They were covering what was needed, but without the hours required for a formal program that Leapfrog would recognize. I was not expecting a lot of cultural change, but the intensivist program brought multidisciplinary rounds, teaching, and an enthusiasm that was really shocking.”

Multidisciplinary Rounds

The program now includes five intensivists who rotate through the unit, says **Les Szekely**, MD, intensivist and pulmonologist. The day’s first intensivist usually arrives around 6 a.m. and relieves the nighttime intensivist, conducting multidisciplinary rounds at 9 a.m., Szekely says. The rounds may last two hours, depending on the patients. Such rounds are used as educational

opportunities for all the disciplines involved with the ICU, Szekely says. That may include pharmacists, nutritionists, physical therapists, nurses and nurse managers, and respiratory therapists.

“We have people watch for Foleys, pneumonias, DVT prophylaxis, lots of things. We involve patients’ family members also,” Szekely says. “We’ve seen significant improvements in patient satisfaction and workforce satisfaction because it is a collaborative effort with each patient. The staff are happy, and the patients are happy.”

Data Show Improvements

Over a four-year period, ICU admissions increased significantly through 2018 and then leveled off again in 2020, with most metrics remaining the same. The average DRG weight went from 2.25 in 2016 to 2.39 in 2020. The average ICU length of stay went from 2.67 days in 2016 to 1.75 days in 2020. The average ventilator days decreased from 4.43 days in 2016 to 3.62 days in 2020. (Based on fiscal year 2020

data collected between July 1, 2019 and June 30, 2020.)

The biggest challenge has been recruiting intensivists for night shifts, Szekely says. Levy notes there also is a cost to keeping the ICU fully staffed with intensivists even when it is relatively quiet. Nevertheless, the hospital has decided the benefits outweigh the financial commitment. “We’re very proud of the program.

It’s been tremendously successful,” Szekely offers. “I think it’s the standard of care now. Anyone who does short of that is shortchanging their community to some degree. You can still provide good care, but this brings it to a new level.” ■

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- **Les Szekely**, MD, Intensivist, Pulmonologist, Doylestown Health. Phone: (215) 345-2200.

COVID-19 May Be Affecting Nursing Discipline, But No Data Yet

There is some concern about whether the healthcare industry’s response to COVID-19 will affect the way it addresses concerns about nursing performance, similar to recent concerns about an apparent drop in physician discipline since the pandemic began. So far, data related to nursing discipline are not showing any decline.

That may be because the data have not caught up with any possible drop in discipline, says **Dawn Kappel**, director of marketing and communications for the National Council of State Boards of Nursing (NCSBN), an independent, not-for-profit organization based in Chicago that collaborates with nursing regulatory bodies.

Kappel explains there is no evidence showing a drop or a rise in discipline by nursing boards across the country in the period since the pandemic began. The reason could be there has been no change, or there has been a change, but the data do not reflect it yet.

For physicians, there appears to be some evidence suggesting a decline in disciplinary actions. Data from the Health Resources

and Services Administration, which oversees the National Practitioner Data Bank (NPDB), shows that compared to the previous year, emergency actions against physician licenses dropped 59% in April through June 2020.

Data from the Federation of State Medical Boards’ Physician Data Center (PDC) shows a 14% decline in disciplinary actions from January to June 2020.

Kappel does note there are more nurses than doctors, and that nurses provide care around the clock, so more patient encounters during the COVID-19 response could result in an increase in reports requiring discipline. But those actions typically take a long time to generate national data.

“If a nurse were to start the discipline process, for everything to

be adjudicated and put in the system for aggregate data, it’s too soon,” Kappel says. “None of our boards has reported that they’re overwhelmed with discipline problems. There may be a board out there that is experiencing problems, or even a board that is seeing a dramatic drop in discipline, but we’re not hearing either one of those responses right now.”

(Editor’s Note: For more on this topic, please see the story that was published in the November 2020 issue of Hospital Peer Review, online at: <https://bit.ly/2HUSjuD>.) ■

SOURCE

- **Dawn Kappel**, Director, Marketing and Communications, National Council of State Boards of Nursing, Chicago. Phone: (312) 525-3600. Email: dkappel@ncsbn.org.

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CE QUESTIONS

- 1. What was the most influential part of Virginia Hospital's effort to reduce cesarean section rates?**
 - a. Providing research to justify a reduction
 - b. Transparency in physician cesarean section rates
 - c. Financial penalties for high cesarean section rates
 - d. Denying privileges to physicians with high cesarean section rates
- 2. When Doylestown Hospital in Pennsylvania formalized its ICU intensivist program, what was one of the biggest challenges?**
 - a. Recruiting physicians for the night shift
 - b. Identifying physicians who could act as intensivists
 - c. Finding clinicians from other disciplines to work with intensivists
 - d. Establishing a sufficient patient census to support intensivists
- 3. What is an important way to improve the effectiveness of a clinical decision support (CDS) system?**
 - a. Involve clinicians early in the development and use their feedback.
 - b. Use the vendor with the most sales saturation in your geographic area.
 - c. Restrict input to only a small team of clinical experts.
 - d. Establish a maximum number of rules.
- 4. What is true of a good alert in CDS?**
 - a. It is brief.
 - b. It is actionable.
 - c. It is linked to corresponding research supporting its recommendation.
 - d. It is presented in the form of a yes/no question.

CE OBJECTIVES

After completing this activity, participants will be able to:

1. Identify a particular clinical, legal, or educational issue related to quality improvement and performance outcomes;
2. Describe how clinical, legal, or educational issues related to quality improvement and performance outcomes affect nurses, healthcare workers, hospitals, or the healthcare industry in general;
3. Cite solutions to the problems associated with quality improvement and performance outcomes based on guidelines from relevant authorities and/or independent recommendations from clinicians at individual institutions.