EXECUTIVE INSIGHTS

RESILIENCY + RECOVERY

TACKLING THE SURGICAL BACKLOG

Optimizing perioperative performance in today's resource-constrained environment

American Hospital Association™

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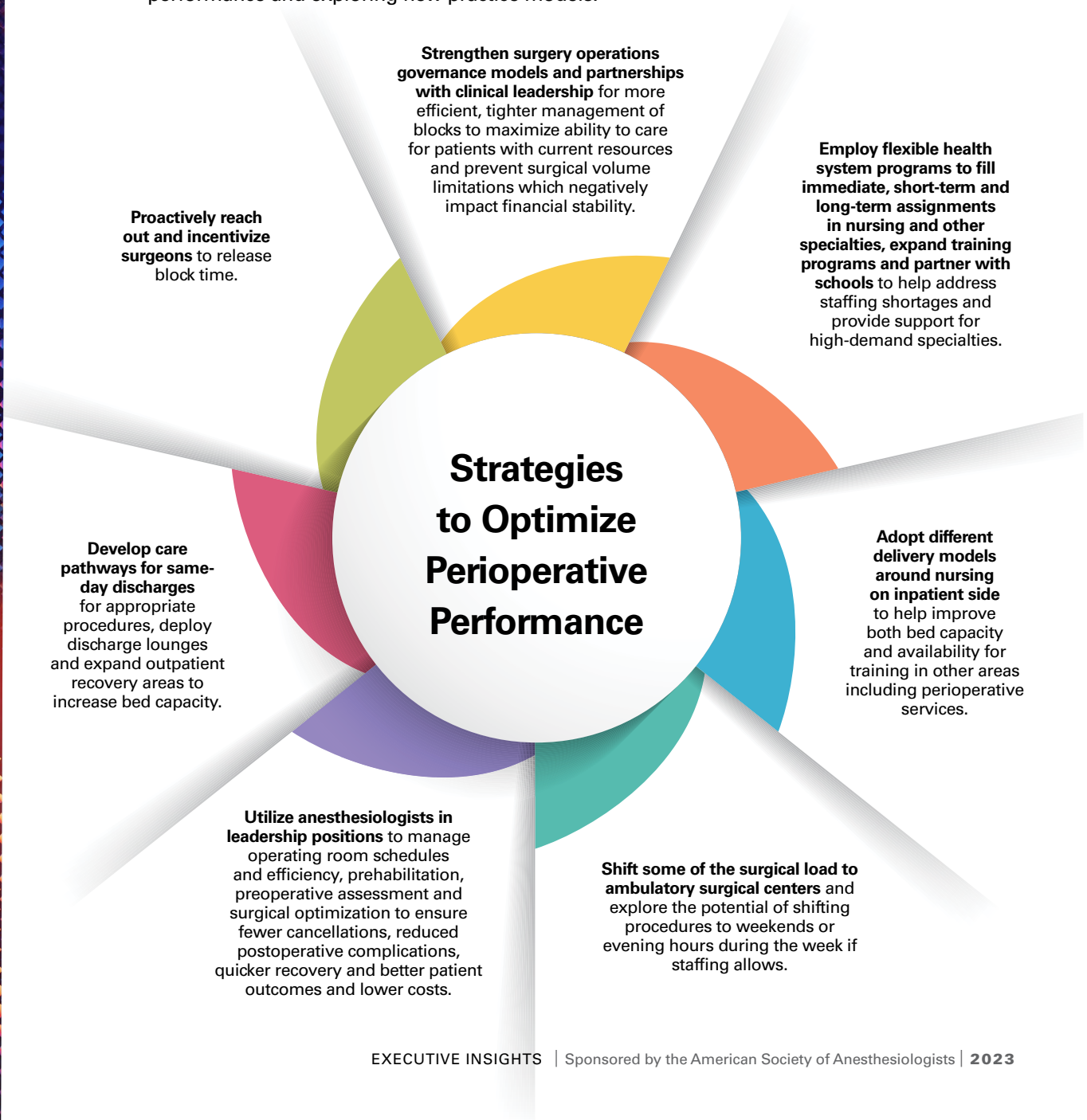
Tackling the Surgical Backlog

Optimizing Perioperative Performance in Today's Resource-constrained Environment

Millions of elective surgeries and other nonurgent procedures were delayed during the pandemic. Many hospitals are struggling amid staffing shortages, inpatient bed availability and operating room (OR) capacity to expand patients' access to surgical care and clear the backlog in cases. And these delayed surgeries have had a significant financial impact. Hospitals and health systems are striving to optimize OR efficiency and care coordination while also accomplishing the Institute for Healthcare Improvement's Triple Aim of enhancing the patient experience, reducing costs and improving outcomes.

This executive dialogue looks at how health leaders are expanding and monitoring the use of existing OR capacity, using anesthesiologists and surgical teams to improve perioperative performance and exploring new practice models.



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Optimizing perioperative performance in today's resource-constrained environment

MODERATOR *(Suzanna Hoppszallern, American Hospital Association):* **What are the biggest issues/challenges your organization faces in addressing the surgical backlog and demand? How are workforce shortages and inpatient bed capacity affecting the optimization of perioperative performance, financial outcomes and stability?**

KIM POST *(HonorHealth):* Our Number 1 limiter is the lack of robust anesthesia resources. We have plenty of surgical volume and the opportunity to grow. Last month we performed 12% better than budget. We've been able to rebuild and stabilize the workforce.

Anesthesiologists have left the workforce. Two large private-equity groups made their play five years ago. Arizona doesn't have many practicing certified registered nurse anesthetists (CRNAs).

JILL MUIR *(Penn Highlands Dubois and Brookville):* In central Pennsylvania, anesthesia is not as dire as in Arizona; we've pretty much stabilized our CRNAs. It's really our OR nurses and surgical technologists. We would love to open all our ORs, but the agency wages keep increasing every 13 weeks. I have nurses in the OR, but then I don't have them on the floor to take care of the postoperative patients.

AMY McCOMBS *(Renown Health):* We're fortunate in our anesthesia coverage, but still struggle with a shortage of surgical technologists and we have a significant number of travelers.

MODERATOR: **How is this affecting the organization's stability since surgery contributes so much to the bottom line in health care organizations?**

CYNTHIA KELLEHER *(University of Maryland Rehabilitation & Orthopaedic Institute):* We're OK on physicians, but the CRNAs are continually moving from one health system to another based on salary and that does impact the bottom line. Maryland is exempt from Medicare; we're on GBR (Global Budget Revenue). Our income is fixed. We aren't paid more for more volume, but must maintain a certain level of volume. We've taken a hard look at the staffing of OR nurses and surgical technologists and we've improved in that area.

One thing we see that hasn't been mentioned is delayed authorization from insurance companies on conditions that are somewhat urgent. For example, fractures take 14 days to get approval. If we move forward and do the case, we will get denied.

JOANNE CONROY *(Dartmouth Health):* We hear some differences across the country. At Dartmouth Health, we have adequate physician providers, and we're doing reasonably well on CRNAs. Our challenge is perioperative staffing: 50% of the people in perioperative are travelers in the OR. We went through a process where we decided to try to keep every single bed open in the facility. We discovered that when we were closing beds because we didn't want to go over a certain number of CRNAs, we started backing up in the ORs, in the post-anesthesia care unit (PACU), then in the emergency department (ED). We're seeing that play out again with all the respiratory viruses being transmitted right now, even though we're fully staffing all our beds. We're all experiencing this complex interaction between the OR and our inpatient beds that, historically, we didn't feel as acutely, but I think COVID-19 has made that dramatically different.

ANGELA BECK *(Michigan Medicine):* We see some of the same challenges with perioperative staff. We have a 40% vacancy rate with our surgical technologists. I'm interested in how others are managing surgical technologist shortages.

As we continue to have small blips and flares of COVID-19 and now flu, our organization chooses to pull the lever around limiting surgical volume to ensure capacity for medical patients. I'm wondering if anyone else is still limiting surgical volumes to manage capacity.

MARY DALE PETERSON *(Driscoll Children's Hospital):* On the children's hospital side, we've really been swamped with what I call the viral soup. Many children's hospitals across the nation, from what I'm hearing from CHA (Children's Hospital Association), are limiting by service line or gating. I've tried not to do that. We're fully staffed with all our beds. We have a large service area and it's a challenge when patients start backing up in the ED or the PACU because you don't have floor beds. My biggest issue is ICU beds. A lot of the adult facilities have abandoned pediatric care in our region. We're in the process of building more beds, but it will be another year and a half before they're online. Trying to make do with high-acuity patients is challenging.

CONROY: I work closely with our chief operations officer and team to stop deploying surgical bed caps and instead focus on increasing access for high-acuity patients. Decreasing your high-acuity surgical activity is a death spiral financially. There is constant tension when the transfer demand exceeds that bed supply. Our chief medical officers are making tough decisions daily about who gets which bed.

JOHN KEOGH *(Hospital of the University of Pennsylvania):* We have shortages of both intraoperative nurses and the anesthesia team. We were capacity-constrained before we moved into and opened a new 504-bed hospital with 47 operating rooms. When we ran the numbers, we needed an additional 20 block days a week, or four ORs five days a week. The departments and divisions budgeted that way. Because of the shortages, we've only been able to open about six of those 20. Everyone is on a low simmer, where surgeons say, 'I can't put my cases on because you don't have the room, so I'm not hitting budget.' Then they start looking to perioperative services to say, 'We need to be more efficient.'

Meanwhile, 50% of our nurses are either travelers or have less than a year and a half of experience. We're in this swirl right now of trying to get rooms open and not having cases go into the evening, and we're without an experienced workforce to gain the efficiency and create a place to work where people want to stay. There are a lot of challenges right now in Philadelphia.

MODERATOR: How is your organization changing practice models due to the surgical demand and workforce shortages? What are some specific strategies you're using to deal with surgical and procedural staff dissatisfaction, burnout and the shortages?

MIGUEL BENET *(Community Health Systems):* We operate surgical services across about 17 states. Our various sites have experienced many of the things that have been shared so far — definitely a strong theme about anesthesia services.

We've seen some of the surgical technologist shortages. Part of our strategy has been to expand the number of surgical technologist training programs across the company, which have been successful.

What's interesting is that we can't open up slots fast enough. Right now, I'm seeing about a 12:1 ratio in some programs of applicants to spots as we keep trying to grow and expand the program. The question is: Can we train to populate the pipeline appropriately? Finally, in response to all the challenges, we've made a recommitment, doubling down on our efforts to strengthen and mature our surgery operations governance models across the institution. Partnering with clinical leaders around better, more efficient, tighter management of our blocks is key to maximizing our ability to take care of patients with the resources we have.

JOSHUA KOOISTRA (*Corewell Health):* Bed shortages are probably the biggest barrier for addressing the surgical backlog. Because of that, we've shifted much of our volume to ASCs and kept those full. With that comes the challenge of decreased reimbursement rates by our payers for those procedures

performed at ASCs and having to renegotiate those contracts so that it's a win-win for the payer and for the system.

The other thing we are starting to do is look at level-loading our surgical schedule. We had to replace total joints this past weekend so that the inpatient census is not at a peak every Tuesday and Wednesday after all the joints are done. This was a first for us.

We incent our surgeons a little bit, and it helps with the perioperative staffing as well. We're trying to be innovative in those ways and to support our staff. Where we see difficulties is in competition for our highly technical staff — our perfusionists, our RN First Assistants, especially the experienced ones.

KIELLY: In addition to anesthesia providers (against the background of a 12K-15K national shortage) and changes to the No Surprises Act impacting surgical-assistant availability, we are struggling to find enough general radiology technologists to support our growing orthopedic and spine intraoperative imaging needs. Despite partnering with radiology schools in providing clinical hours for radiology technology students, job availability in the outpatient space (with no call and after-hour work requirements) make hospitals a tough sell for these groups. Managing all resources needed for the surgical/procedural schedule requires strong oversight on a daily and look forward basis.

"Bed shortages are probably the biggest barrier for addressing the surgical backlog. Because of that, we've shifted much of our volume to ambulatory surgical centers (ASCs) and kept those full."

— Joshua Kooistra — Corewell Health

BENJAMIN CARTER *(Trinity Health):* Regarding workforce shortages, we've been successful in deploying our First Choice Nursing Program across the system, which has helped us reduce our reliance on external contract labor. Despite this, we continue to struggle with a shortage of surgical technologists in many of our markets and are seeing higher cost related to that. Our anesthesiology and other hospital-based physician groups are also struggling with the shortage of physicians and CRNAs, requiring us to balance load schedules on weekends and shift to our ASCs where we have them. The reimbursement differential is significant between the ASC and the hospital, whether it's in- or outpatient, adding to financial pressures.

As to bed availability and bed capacity, we have successfully piloted a virtual nurse program at one of our hospitals, which allows us to leverage a nurse along with a partner in care, a nurse assistant or a licensed practical nurse. The virtual nurses work out of a hub in the hospital and we have cameras in the patient room to allow the virtual nurse to interact with the patient. We're on Epic and the virtual nurses have the ability to access the chart as well, and they alert a nurse or a nurse assistant to address the patient's needs. Our patient satisfaction and satisfaction of our colleagues is high, so we're implementing it more aggressively across the organization.

Additionally, to move patients out faster and free up beds, we're deploying discharge lounges in our hospitals and creating areas on the outpatient side for recovery if patients need to stay beyond 12 or 24 hours.

MATTHEW GRIFFIN *(St. Mary Mercy Hospital):* We have some of all these issues. At St. Mary, we are OK regarding our anesthesia services, but have shortages of surgical technologists and RNs. To deal with overcrowding and capacity, we have to level the surgical load. We're changing the culture from the previous model where everyone wants to do surgery Monday through Wednesday and getting the teams to agree to do surgery on Saturday and Sunday for half a day or two-thirds of a day without

affecting their work-life balance and wellness.

BENET: In the other procedural areas like cardiology or interventional radiology, we've also stepped up our efforts to develop the care pathways and have same-day discharges for appropriate procedures. That has provided additional bed capacity.

MODERATOR: Does your organization use anesthesiologists in leadership positions in your perioperative environment?

BRYNDA COLLINS *(Keck Medicine of USC):* We come together with our anesthesiologists and surgeons using a collaborative triad partnership. As chief, surgical and procedural operations, I work closely with an anesthesia leader in the main OR, as well as interventional radiology, cardiac catheterization laboratory, outpatient ORs and the Center for Advanced Endoscopy. With four sites, there is constant communication to effectively work together. There is also an anesthesia leader to partner with on the inpatient side regarding the transfer center. We are unique in that we don't have an ED, but we have about 35% of our patients transfer from other hospitals and require a higher level of care. Our acuity is high. The anesthesia leader partners help me have conversations to enable coordination of care with surgeons so that we all understand each other's language and can work together more collaboratively, resulting in providing the best care to our patients.

"To move patients out faster and free up beds, we're deploying discharge lounges in our hospitals and creating areas on the outpatient side for recovery if patients need to stay beyond 12 or 24 hours."

— Benjamin Carter —
Trinity Health

PETERSON: In addition to the whole perioperative space, where anesthesiologists are managing the day-to-day schedules and trying to increase the efficiency of the OR, anesthesiologists have taken on many leadership roles. In the perioperative environment, anesthesiologists are looking at prehabilitation and an earlier type of preoperative assessment, especially for fragile patients who must undergo complex procedures. There's quite a bit of literature on the cost savings, especially in the bundled-payment models where the anesthesiologists are running an anemia clinic or making sure the nutrition and the cardiac workup is appropriate, along with counseling to patients. Studies show fewer cancellations and postoperative complications along with quicker recovery times and better patient outcomes.

In the pain-management programs, anesthesiologists may administer regional blocks in the OR for faster pain relief and discharge process with fewer complications. Some of our anesthesiologists are heading up the intensive care units. During COVID-19, anesthesiologists went back into ICU care for a while, and we converted ORs to ICUs where necessary.

CONROY: Anesthesiologists have become the air-traffic controllers, and the charge nurse is their partner. There will be conflicts between surgeons and anesthesiologists over case times, prioritization and after-hours resources. Selecting the right person with the right management skills is incredibly important. Many of our providers have RVU (relative value unit)-based compensation. If they're not able to get their cases into the OR, they start to get anxious. When we put an anesthesiologist in the front line with a charge nurse, they can figure out how to accommodate everybody's cases so they get done. At the same time, they're managing throughput in a PACU that may have 10 or 15 borders.

MODERATOR: Let's move on to value-based care arrangements. Has your organization examined new perioperative practice models or protocols based on pre- and postsurgery selection criteria to determine sites of care or eligibility for hospital-at-home services?

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JOSEPH MOFFA *(Hospital of the University of Pennsylvania):* In terms of virtual visits, we do more telemedicine than we used to, especially for our own employees. It's been helpful for continuing to both keep and grow our volumes. We see some problems in that we're seeing patients come in for surgical procedures who may not have been vetted in terms of history and background as well from a surgical standpoint. We also run into different concerns with medications not being stopped. It's a slippery slope when we talk about virtual visits and how often we utilize them.

KOOISTRA: We have a large integrated payer, Priority Health, and we are at risk for all those patients within the Medicare, Medicaid and commercial insurance products they offer. For our patients who have a Corewell Health Medical Group primary care physician and are going to undergo a major procedure with a Corewell Health Medical Group surgeon, we require them to go through our surgical optimization center, which is run by an anesthesiologist. We've seen cost savings for joints of $1,500 per patient compared with a nonoptimized cohort. It was significant. That clinic is supported both virtually and in person and has clear protocols, guidelines and hard stops that we adhere to regarding glycemic control, obesity and smoking cessation. They appropriate testing before the procedures — A1C control and everything that you would expect to be optimized for the best surgical outcome. They also recommend site of service. If they think somebody should be in an inpatient setting, they will recommend that. It's worked well.

PETERSON: Even if you're not in a bundled payment or an at-risk contract, anything you can do to prevent last-minute cancellations of OR time is a cost savings for the organization when you have staff scheduled.

LISA RISSER *(Scripps Health):* In terms of backlog, we're focusing on how we can maximize our current resources and assets — improving our room utilization and our block-time utilization by tracking them closely and having discussions with our physicians about how we can make sure that we're using that time efficiently. We're being proactive by saying to surgeons, 'We still have open time in your block time. Can you release that time?' rather than waiting for that automatic release when we might not be able to schedule more cases.

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— Joanne Conroy—
Dartmouth Health

We've seen both our block-time and our room-time utilization increase because we are being proactive. We've received positive feedback from our surgeons, whether they have block time; it's increased access during prime time. When we already have staffing there, it's a significant improvement to minimize idle time so that we're not increasing our labor cost.

KOOISTRA: We're early in our journey, but instead of putting every low-back pain patient in front of a neurosurgeon as the first point of contact or every knee pain in front of a joint surgeon, we're utilizing other specialties for our Priority Health patients. Whether it's physical medicine and rehabilitation or physical therapy, they work with patients to give them the most appropriate therapy; it may not be a surgical intervention from the start, but a more conservative approach. We're creating protocols and pathways.

MODERATOR: Are there any new key performance indicators (KPIs) that you're using to analyze volume, utilization and performance efficiency?

KEOGH: At Penn, we've standardized to have on-time starts. There are delays in getting the patient in the room, while the prep is going on, and in getting the surgical incision done. We're just starting to agree that an on-time start should really be an incision about 30 minutes after the patient is brought into the room. It requires more teamwork by nurses, surgeons and the entire team to make the time in the room as efficient as possible. Instead of just hitting one metric, how do we keep all those important milestones going throughout the day?

LOREN RUFINO *(Inova Health System):* In terms of KPIs, we're looking at standard OR performance metrics. We're looking at first case on-time starts, block utilization, OR turnover time, and total minutes and minutes at a case level which we are using as a proxy for acuity.

BECK: On the KPIs, we are really trying to gain some focus on our same-day case cancellation rates. They used to be tracked intently pre-COVID-19. We're finding that's such an important metric because as that rate goes up, you lose the ability to backfill that spot. We're trying to focus on that, as well as utilization and creative ways to incentivize surgeons to voluntarily release time when they know they're not going to be using it. We're trying to strengthen our ability to get a case back in a spot.

RISSER: We are tracking and reporting scheduling accuracy by surgeon and type of case, and then following up with them. We track it according to their last 10 cases, similar type cases and accuracy. Then we work with them to modify the schedule so that we're more accurate in our scheduling and can fill up that time. We also have surgeon dashboards for comparison. We start by comparing the clinical outcomes, especially when we talk about infections and surgical-site infections.

We also meet with physicians across the system and review some of the high-cost supplies. We work with them to develop clinical criteria to be used across the entire organization. Then we modify the physician preference cards and track those. We also have a compliance dashboard. For every site it pulls up, you can drill down by surgeon and for every outlier that didn't match the approved clinical criteria. Each site monitors and reports that out daily. The medical director will have a conversation with a surgeon and say, 'I see you've got a case scheduled tomorrow, and this is falling outside of our clinical criteria.' There's a discussion around that and also follow-up. We have specific percentages of compliance that are expected for each of those initiatives.

MODERATOR: What are some of the best practices that organizations are implementing to optimize perioperative performance?

PETERSON: The American Society of Anesthesiologists has a task force that looks at workforce issues and we should have another paper out sometime in the spring that looks at the supply-and-demand issues, specifically how we increase the supply. With COVID-19, we've seen significant attrition, especially in older anesthesiologists. How do we retain and prevent that kind of attrition while we're trying to build up more supply? On the demand side, we're seeing some challenges with the NORA, the nonoperating room anesthesia locations. It creates inefficiencies for OR staffing personnel or NORA staffing, We're looking at different sedation models of care that may not necessarily need an anesthesia provider, but could be taught to other physicians and supported with specialized trained nurses. This may free up some of the anesthesia staffing needed in the higher-intensity type of environments or cases.

CONROY: The OR is not an island unto itself. It's an integral part of all systems. When you back up in your inpatient beds, it affects your OR. When we look at the KPIs, they're not just the things we think we can control, but the things that are owned by the entire organization.

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To learn more about how anesthesiologists and physician-led anesthesia care makes a difference in ensuring patient safety, visit **asahq.org/MadeforThisMoment**.

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