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INSIDE

Doc accreditor refuses demands to stop controversial work trials

OHRP says it is reviewing allegations of unethical research

By Gary Evans, Senior Staff Writer

Refuting that it gave a green light to "highly unethical" research, the Accreditation Council for Graduate Medical Education (ACGME) will not rescind waivers of 2011 duty-hour requirements for physician training that allowed controversial clinical trials to test the effect of doctors working 28 consecutive hours — almost double the 16-hour current limit, *IRB Advisor* has learned.

Facing a similar call for action due to the lack of informed consent to patients in the trials, the Office of Human Research Protections (OHRP) is taking a more cautious tack. "OHRP is reviewing the allegations," the agency said in response to requests for comment on the highly charged accusations by the watchdog group Public Citizen and the American Medical Student Association (AMSA).

The two advocacy groups jointly issued a series of complaints and allegations in strongly worded letters to OHRP and ACGME on Nov. 19. They demanded ACGME immediately rescind the organization's waivers of its 2011 duty-hour standards (16 hours) for internal medicine and general surgery training for the ongoing Comparative Effectiveness of Models Optimizing Patient Safety and Resident Education (iCOMPARE) trial, and the recently completed Flexibility in Duty Hour Requirements for Surgical Trainees Trial (FIRST). Overall, the trials have involved some 220 hospitals and thousands of patients.

> "THE ACGME DOES NOT CONSIDER EITHER THE FIRST OR THE ICOMPARE TRIALS TO BE UNETHICAL, AND HAS NO PLANS TO RESCIND THE WAIVERS."

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EDITOR: Melinda Young.
MANAGING EDITOR: Jill Drachenberg, (404) 262-5508 (jill.drachenberg@ahcmedia.com).
ASSOCIATE MANAGING EDITOR: Dana Spector
DIRECTOR OF CONTINUING EDUCATION AND EDITORIAL: Lee Landenberger.

EDITORIAL QUESTIONS
Questions or comments?
Call **Jill Drachenberg**,
(404) 262-5508.

"Neither of these unethical trials could have proceeded without the ACGME's waivers," the advocacy groups charged.

Not guilty

ACGME CEO **Thomas J. Nasca**, MD, strongly refuted both the premise of the allegations and some of the basic facts cited in the publicly made demands.

"The ACGME does not consider either the FIRST or the iCOMPARE trials to be unethical, and has no plans to rescind the waivers," he tells *IRB Advisor*. "Both study protocols were reviewed and approved by the applicable institutional review boards, and the iCOMPARE trial was reviewed and funded by the National Institutes of Health [NIH]."

Among the research issues is whether longer, flexible duty hours (28 hours) for first-year medical residents have more negative or positive effects on patient outcomes compared to the 16-hour work shift regulations. Public Citizen and the AMSA argue that the negative effects of longer hours on patient and physician safety are well established — and were the very reason the accreditation council scaled back duty hours in 2011. "Substantial evidence shows that sleep deprivation due to excessively long work shifts increases the risk of motor vehicle accidents, needlestick injuries and exposure to blood-borne pathogens, and depression in medical residents," they stated in the complaint letter. "It also exposes their patients to an increased risk of medical errors, sometimes leading to patient injuries and deaths."

A member of the editorial board of *IRB Advisor* also questioned the rationale for the research.

"I can't imagine this is being done at all — the literature on sleep deprivation is already voluminous and clear, especially in high-risk jobs such as pilots, doctors, and residents," says **Susan L. Rose**, PhD, executive director of the Office for the Protection of Human Subjects at the University of Southern California Los Angeles, in reaction to initial reports on the trials. "Instead, there should have been a study seeing if fewer hours result in better performance all around — that would make sense."

Is it safe?

New research is raising questions about duty hours and whether the issue is as clear-cut as perceived. Some studies are finding little significant difference in patient outcomes related to sleep deprivation of physicians. For example, a recently published study looking at 38,978 daytime elective surgical patients treated by 1,448 physicians found no significant difference in patient outcomes whether the physician had just come in that day or had been working since 12 a.m. the night before.[1]

"While the [current 16-hour requirements] were built on the best available evidence at the time, in the intervening years various studies have been conducted comparing the 2011 to the 2003 ACGME [24 consecutive hours on-site; six additional for other activities] duty hour requirements," Nasca says. "The preponderance of this new research evidence suggests that the 2011 requirements have not improved patient safety from the 2003 levels, and that there might be negative impacts on the quality

of physician training."

Thus, the ACGME granted the waivers to allow for the collection of data to ensure that the current duty hour requirements are achieving "the highest possible standards" for both patient and physician safety and the education and training needs of residents and fellows, he says. Moreover, the Institute of Medicine's (IOM's) *Resident Duty Hours* report[2] — which formed the basis of the 2011 requirements — said prospective studies were needed so that any future changes to duty hours could be based on more comprehensive research, Nasca says.

The 2009 IOM report cited a growing body of research linking clinician fatigue and errors in recommending eliminating extended-duration shifts of more than 16 hours. In addition, the IOM recommended increasing days off, reducing night duty and providing more scheduled sleep breaks. The IOM recommendations were considered a compromise between the competing priorities of improving patient safety, reducing resident workload and fatigue, and maintaining the quality of resident education.[3] The IOM also estimated that approximately $1.7 billion would be required to hire additional staff to allow residency programs to adhere to the recommendations. Some skeptics say this is the real issue — the sticking point with hospitals that cannot or will not fully fund the recommendations by hiring additional staff.

"Concern about costs almost certainly has been a motivating factor for those people who seek to roll back the resident work hour restrictions that were put into place by the ACGME in 2011," says **Michael A. Carome**, MD, director of Public Citizen's Health Research Group and former associate director for regulatory affairs at OHRP.

Another looming factor is a projected physician shortage, which could eventually make it difficult to limit hours even if funding is available. The Association of American Medical Colleges estimates that by 2025 demand for physicians will exceed supply by a range of 46,000 to 90,000 — depending on what interventions are taken. *(See more at http://bit.ly/1PRhgDJ.)*

A 'shocking' move

Public Citizen and AMSA said the council's decision to grant the waivers is "shocking and deeply disappointing. Particularly disturbing is the ACGME's apparent disregard of the evidence that justified its appropriate decision in 2011 to increase the restrictions on resident physicians' duty time, including limiting duty periods for PGY-1 residents to a maximum of 16 hours."

In addition to citing new research since the 2011 requirements in granting the waivers, Nasca emphasized that some fundamental requirements were not waived for the clinical trials.

"The statement [in the letter] reflects a misunderstanding of the requirements for first PGY-1 residents," Nasca says. "The fundamental ACGME duty hour requirements were not waived. Those requirements limiting the total number of hours worked per week remain in effect, and PGY-1 residents are all required to have on-site, direct supervision, in which a more experienced clinician bears the ultimate responsibility for patient care. The type of clinical trials underway represent the 'gold standard' for evaluating outcomes, and will be used to assist in the calibration of duty hour requirements as recommended by the IOM."

Informed consent

The lack of informed consent — not telling patients their physician is working long consecutive hours as part of a clinical trial — is a volatile issue that could easily become politicized in the wake of the allegations. A single, highly publicized case of a patient death linked to "overworked" physician trainees in 1984 shaped the tenure and text of current work duty requirements. The death of 18-year-old Libby Zion within 24 hours of emergency admission to a New York City hospital set off a national debate on doctors being overworked in understaffed hospitals.

A 2010 public survey[4] found that 81% of the 1,200 respondents believe that patients should be informed if a treating resident physician has been working for more than 24 hours, and 80% percent would then want a different doctor caring for them. The researchers found that 81% of respondents believed reducing resident physician work hours would be very or somewhat effective in reducing medical errors. In addition, 68% favored an IOM proposal that resident physicians not work more than 16 consecutive hours over an alternative IOM proposal permitting 30-hour shifts with at least five hours protected sleep time.

"The American public overwhelmingly favors discontinuation of the 30-hour shifts without protected sleep routinely worked by U.S. resident physicians,"

the authors noted. "Strong support exists to restrict resident physicians' work to 16 or fewer consecutive hours, similar to limits in New Zealand, the U.K. and the rest of Europe," they concluded.

Given this background, the public will be "outraged" when they fully understand the nature of this research, Carome says. In addition, he maintains that physicians have also not given informed consent, though published comments suggest that at least some of the doctors know they are in the trial.

"The fact that the residents may know they are in these trials does not mean their legally effective, voluntary informed consent was obtained," Carome tells *IRB Advisor*. "Under federal regulations and basic ethical principles related to human research, researchers must obtain the voluntary informed consent of human subjects enrolled in research like the iCOMPARE and FIRST trials."

In obtaining such consent, the researchers must provide subjects with several basic elements of information, including descriptions of the purpose of the research, the procedures involved, and the reasonably foreseeable risks to the subjects, he explains. "There should be a statement that participation is voluntary and refusal to participate will involve no penalty or loss of benefits to which the subject is otherwise entitled," he says.

Thus, Public Citizen and AMSA call for OHRP to suspend all research and investigate the trials. In particular, exposing one study group to residents working longer hours violates basic ethical principles by putting subjects at a serious risk that has been previously established, they contend.

The IRB at Northwestern University in Chicago — the lead institution of the FIRST trial — reviewed the proposal and granted an informed consent waiver for the study because they did not consider the trial to be human subjects research, according to the NU website (http://bit.ly/1NRbFwL). Additional IRB applications will be filed at the time of the data analyses, according to the FIRST trials website.

"This study was found to be exempt as it is not human subjects research, the intervention is at the hospital level, no resident or patient identifiable information is collected, and the data being analyzed are already being collected by the institutions for ACS NSQIP (retrospective analysis of pre-existing data)," the Northwestern researchers stated. "Thus, we do not believe that local IRB approvals are needed, but we leave that up to each individual site to decide."

Similarly, the IRB at the University of Pennsylvania in Philadelphia — one of the lead sites in the iCOMPARE study (http://bit.ly/1Cs5LIp) — said the research poses minimal risk and waived informed consent requirements. In a statement to *IRB Advisor*, a U. Penn official said the research is in part addressing concerns that limiting hours may hamper physician education.

"The goal of iCOMPARE is to determine if the current limitations on work hours for physicians in training should be changed," says **Susan E. Phillips**, senior vice president for public affairs at the Penn Health System. "This NIH-funded study began because there is considerable concern among experts in the field that the current duty hour system of residency education may limit the nation's ability to train physicians effectively."

The study results will provide much-needed evidence to make "informed decisions" on these important clinical and educational issues, she says.

"The study was designed and vetted by regulatory bodies, research review boards, and established ethics panels," Phillips says. "Importantly, at the study sites there are no changes to the existing and exhaustive supervision requirements for physicians in training."

In any case, it is not clear at this writing whether other IRBs at participating hospitals revisited the issue of informed consent given that two of the lead institutions had deemed it unnecessary. The responsibility of local IRBs to do their own evaluation of such research may be addressed in the OHRP response to the allegations, but for now Carome's contention is that most did not address the waiver of informed consent and allowed the research to proceed.

"To the best of our knowledge, for both the iCOMPARE and FIRST trials, the researchers have failed to obtain the voluntary informed consent of the residents or the patients at all research sites," he says.

In addition to all this point-counterpoint, there are some complex and counterintuitive issues related to physicians' engrained work culture and the old-school mindset that it is better to stay with patients longer than risk the possible errors and miscommunication of more frequent "handoffs" to the next doctor on duty. In this respect, some question whether medicine has essentially traded one hazard for another, shortening shifts but increasing handoffs. A third-year internal medicine resident posting a comment to a *Washington Post*

article[5] on the issue recalled that doing night coverage for multiple day shifts as an intern required "dangerous" handoffs. *(See related story below.)*

"I think the study is necessary to evaluate what is the lesser of two evils," the commenter said. "Yes, studies clearly show sleep deprivation makes decision making difficult. But are handoffs worse? We don't know."

Carome is not buying it.

"Such a tradeoff argument — that we must either have residents work excessively long shifts that lead to sleep deprivation, increased patient harms from medical errors, and resident harms, or have more handoffs leading to increased patient harms — represents a false dilemma," he says. "Measures can be taken to ensure effective handoffs, such as standardized communication practices and decreased resident workload so the number of patients being handed off is limited. Going back to longer shifts, for which there is substantial evidence of harm to both residents and patients, is not an acceptable approach. Moreover, the argument about increased handoffs ignores the health risks that sleep deprivation has for the residents themselves."

Physicians have a culture that honors working long hours as a commitment to patients and coworkers. "Those who trained before duty hour regulations often dismiss current physicians in training as lifestyle oriented and not committed to the profession," researchers report.[6] This pressure is such that residents will underreport hours and continue following patients at home, they warned.

Editor's note: The letters of complaint and other documents on the two clinical trials are available at the Public Citizen website: https://www.citizen.org/icompare.

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In their own words: Docs describe extended hours

Some question how trials got past IRBs

How do physicians on the frontlines feel about the ongoing debate about their working hours? Here are some of the comments to a recent *Washington Post* article[1] on the issue by people identifying themselves as physicians. While we cannot confirm that they are, the comments appear to be well informed and made in good faith. We list a few here that *IRB Advisor* readers can consider on their own merits:

• **A third-year internal medicine resident:** "We have 30-hour call every 6 days on the wards and every 4 days in ICU settings. Intern year — first year residents — work a max of 16 hours per shift. I think the study is necessary to evaluate what is the lesser of two evils. Yes, studies clearly show sleep deprivation makes decision making difficult. But are hand offs worse? We don't know. That's why it needs to be studied. When I was an intern and had to be the night time coverage (night float), I would cover multiple day teams, which meant I was in charge of 60-90 patients each night. There's no way to completely relay all that information to the covering person, hence why handoffs — at least in internal medicine — are dangerous. I personally don't mind 30-hour calls, so I am interested to see what this study shows. [I] definitely think this is more than minimal

risk — don't know how that got through IRB the way it did."

• **Fourth-year medical student:** "You have to consider the risks to physicians and medical students in addition to the risk to patients. After three weeks of 30-hour shifts every 4 days, my smoldering depression grew into full-blown suicidal ideation. I recognized that I needed help when I walked past the cleaning supplies cart in the hospital and fantasized about drinking the bleach. Previously, I was working 80-hour workweeks without issue. Such severe disruption of sleep cycles can have a serious effect on students and physicians with pre-existing mental health conditions, and if the patient outcomes from sleep deprived physicians are similar to those from multiple handoffs — and I admit I don't know the data on this — we should opt for multiple handoffs in order to preserve the health of the physicians as well."

• **Internal medicine resident:** "I am currently in a system involved in this trial, and so have done a year without this type of system and am now on 30-hour calls for my medicine wards months. And for some hospitals, it's better for the physicians and patients. A lot of commenters here seem to think that this is a draconian system imposed down from above with little regard to resident quality of life, patient safety, etc — which could not be further from the truth. I was intimately involved in the design of our call system for this year and for some wards it works really well. It is absolutely true that most of the important medicine for a patient happens in the first 12-24 hours after admission, and it better trains physicians to be able to stay in the hospital to see a patient through that time. It's better for the patient if the doctor taking care of them is the one who knows them the best.

The reason why handoffs produce mistakes is that it necessitates one or two residents take the patient load of many teams — generally 40 or more patients — overnight. Even if the handoff is excellent there is no way to give that resident all of the information that you — as the patient's primary doctor — have at your disposal. Even when I am awoken in the middle of the night with a page from a nurse who is concerned about a patient, I am better equipped to understand what to do than someone who has never met my patient.

> "YES, STUDIES CLEARLY SHOW SLEEP DEPRIVATION MAKES DECISION MAKING DIFFICULT. BUT ARE HANDOFFS WORSE? WE DON'T KNOW. THAT'S WHY IT NEEDS TO BE STUDIED."

The point really is that when a tragedy happened, in the Libby Zion case, the entire American residency system changed its work hours restrictions without really asking the question, 'is there real evidence that this will reduce errors?' Or will we just substitute one type of error — an exhausted resident — for another type of error — handoffs. A lot of people in the profession think that this is exactly what has happened. Certainly there need to be restrictions on work hours to protect residents and protect patients (like the 80 hour per week max). But you do lose something when you don't stay in the hospital, and that is experience and knowledge that down the line is incredibly valuable."

• **ICU physician:** "I'm not an internist, but I disagree that this is minimal risk. Every single institution participating in this trial should clearly make all of their patients aware so that care can be obtained elsewhere if desired. I've reviewed many medication errors, most of which fortunately do not cause harm, but they usually involve an overworked, distracted member of the medical care team who is trying to multitask in a chaotic environment. An intern who hasn't slept in 28 hours, six weeks out of med school has very little to add or to take away from this kind of situation. At best, he/she's just in the way, at worst, he/she's a danger when trying to order pressors or anticoagulation or take care of a critical patient. I think the primary driver of academic internists wanting residents to work more is that they don't want to have to do more work themselves — they'd rather be at home or in their labs. I wouldn't get on a plane piloted by someone who hasn't slept in 30 hours, and you or your parents shouldn't be admitted to a hospital by that person, either."

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Lean thinking can be well-suited for IRB office

Right time, right place, right fix

The philosophy of Lean thinking and processes has branched from manufacturing and business into healthcare over the years, and now some IRB offices are finding that these types of continuous improvement processes work well when used to create greater efficiencies in the human research protection world.

"Lean is about finding efficient ways to operate our organization," says **Ross Hickey**, JD, CIP, CPIA, assistant provost for research integrity in the Office of Research Integrity and Outreach (ORIO) and director of the Maine Regulatory Training and Ethics Center at the University of Southern Maine in Portland.

Technology, including electronic IRB submission and record systems, have made it easier to follow Lean principles in recent years, says **Liz Tioupine**, CIP, senior system and process specialist in the human research protection program at the University of California, San Francisco (UCSF). Tioupine and Hickey spoke about Lean thinking and IRBs at the PRIM&R Advancing Ethical Research conference in Boston in November 2015.

"Having an electronic review system provides so much functionality and data, including time stamps and a robust workflow engine with tracking," Tioupine says.

A main rationale for focusing on continuous quality improvement is the evolving nature of the IRB world: IRB office employees come and go; new researchers appear, and regulations and requirements annually are modified and changed.

"When you demonstrate a form and it worked four years ago, now those researchers are gone, and it may not work," Hickey says. "So you have to go back to it."

Another reason for Lean thinking is that IRB offices increasingly need to focus on efficiency and cutting waste, he adds.

"You look at the overall process and say, 'Where's the waste?'" Hickey explains. "Cutting waste is a key concept in Lean, but make sure what you've done isn't just push waste upstream or downstream to people who will touch those projects either before or after."

To think in terms of Lean, one has to think organizationally, he says.

"Organizations are like Jell-O: if you push one way someplace, it will squirm somewhere else," Hickey says.

Any IRB that has engaged in process improvement projects has probably used some Lean strategies — if they knew it or not. The key is for the project to use robust data, to be continuous, and to be thoughtful in considering the effect of changes, Hickey and Tioupine suggest.

"Lean is about trying to get it right the first time," Tioupine says. "It's a data-driven improvement process."

Hickey and Tioupine offer the following tips on improving processes through Lean:

• **Drill down in data.** Collecting turnaround time on IRB review submissions is a standard metric for IRBs. What an IRB director needs is to know how to interpret the data, Hickey says.

"You need to collect data to show over a period of a year whether or not most of the waste was during the time it was in our office or in the time it was in our customers' hands," he says. "The problem is that metrics can hide what the real waste is in a process."

For example, if an IRB collects submission to decision turnaround time metrics and learns that the average turnaround time is longer than desired, then this suggests IRB processes need to be revamped. But if one were to dig deeper into data and measure time between various steps in the process, an IRB might learn that the submission is only sitting in the IRB office for a day or two and the real time drag is when the protocol is sent back to the researcher for requested revisions, Hickey explains.

"So is the problem really that your office is inefficient, or is it that researchers are not — for whatever reason — returning their protocols in a timely way?" he says. "We tried to find the metrics of each step of the process, looking at how long it was in our office and how much time it was with the researcher."

This data drilling process resulted in the discovery that certain departments tended to slow down the process, he adds.

"So we came up with solutions to help those departments and improve their turnaround time," Hickey says. "The data suggested the problem was in all of the back-and-forth: They miss some requested changes and amendments, and you have to send it back to them."

Further investigation showed that some graduate students in the departments with slower turnaround times were confused about the IRB

process, he adds.

"Their faculty advisors might not have been as familiar with the IRB process as they should have been," Hickey says.

The solution was to show faculty members about which kind of projects take longer when they don't have all of the necessary information and to provide IRB submission education to graduate students before they submitted studies to the IRB, he says.

"You want to take the right action at the right time and the right amount," Hickey says. "You can overwhelm stakeholders if you give too much information or if you give them information too early or too late."

• Make value-added changes. UCSF's human research protection program studied the time to approval rate from 2010-2013 and found it was 45 days. "There were 45 days of lead time, and all of that time is pre-review corrections," Tioupine says.

When applying Lean principles, they found that the pre-review correction time wasn't value-added, she says.

"It's not value-added to send back submissions for pre-review corrections because it was not changing the outcome of the committee review," Tioupine says. "It didn't lead to more approvals — we only approve 2% of studies at the meeting."

The IRB's culture is to respect all members' opinions, and this led to addressing any and all issues raised by members. As a result, the IRB might find issues with submissions that were not directly tied to the criteria for approval, she explains.

"We're working toward a culture of approval, of good enough," Tioupine says. "It doesn't have to be perfect because perfect is not a criteria for approval."

Also, an analysis of pre-review corrections found that often these corrections involved design consultation and advice that investigators needed because the submissions were so undeveloped and poorly prepared that the IRB office had to help them prepare the application, she says.

"There was great variability between the types of corrections they were requesting," Tioupine says.

A Lean analysis also identified quality issues, including the following:

- **Poorly structured questions:** There were certain questions that had a much higher incidence of needing corrections or requests for additional information, she explains.

That kind of finding can be used to revise the application, making it more user friendly, and to provide better guidance to investigators so they will complete it correctly the first time, she adds.

- **Submission quality:** A high percentage of submissions needed extensive work on the front end, Tioupine says.

"We'd had a rigorous screening process for a number of years," Tioupine says. "We'd trained researchers to prepare something halfway, knowing we'd help them fix it. This might have been a self-fulfilling prophecy: The more effort we took in correcting things, the less they worried about it, thinking we'd tell them what to do."

From an IRB workflow perspective, this was a major problem: IRB staff spent so much time working with certain investigators on their poorly-prepared submissions that investigators who had well-prepared applications were being short-changed, she adds.

One solution is to create submission standards and return submissions that fail to meet those standards. For example, these standards could require submissions to be complete and to have achieved scientific or feasibility approval.

"If something is missing, we send it back as incomplete," Tioupine says.

After making changes, the percentage of submissions that went straight to the agenda rose from 15% to 40%, and the percentage of necessary corrections declined from 85% to 40%. After the intervention, 15% of submissions were incomplete and 5% did not meet submission standards, she says.

With 20% of submissions still not meeting minimum submission standards, more process improvements were needed.

"We received feedback from principal investigators and study staff, and we said, 'What can we do to help you get it back faster?'" Tioupine recalls. "They said, 'Ask for fewer changes: If you ask for three changes, I can do that right now; if you send a list with 22 changes, then I can't do that now and will probably have to do it over several days in little time chunks.'"

Addressing this feedback, the solution was to ask only for big corrections, saving most for post-review, she adds.

The general idea of Lean processes from an IRB's perspective is to create an effective, efficient review of protocols, protecting human subjects without creating undue burden for researchers, Hickey says.

"We have to think about not just what we do in our office, but how our actions impact others systemwide," he adds. "That's critical in Lean because if you're focused on your one small spot in the stream, you'll never get to the ultimate goal." ■

Strategies for establishing collaborative IRB review

First, make a template

Some research institutions are not waiting for the changes to IRB review suggested by the Notice of Proposed Rulemaking (NPRM) and have already been developing consistent, structured models for collaborative review.

These existing collaborative review models might serve as best practices for other IRBs if and when every research institution uses the single IRB of record model as proposed in the NPRM.

"Ever since the Advance Notice [of Proposed Rulemaking] came out, people are confident the single IRB of record will be required or strongly recommended," says **Tracy A. Ziolek**, MS, CIP, director of human research protection at the University of Pennsylvania in Philadelphia.

The University of Pennsylvania has proactively designed a collaborative review process that outlines responsibilities of the IRB of record, as well as relying IRBs and investigators.

Collaborative review makes sense from a practical standpoint: "People have been forced to recognize the fact that IRBs all do the same thing," Ziolek says. "If somebody has done that job and done it well — and there are a lot of well-run IRBs in the country — then why reinvent the wheel at your own site?"

Developing a collaborative review process is a work in progress, Ziolek notes.

"It's been a trial and error process," she says. "If something works we try it again, and if it doesn't work we scrap it."

Most of the IRBs with which they've worked have been willing to be flexible and creative in preparing for this, Ziolek says.

"We've learned some useful lessons, such as there will be technical barriers," she adds. "Every IRB has its own submission system database and giving outsiders access will be a struggle."

Ziolek offers the following suggestions on how to facilitate collaborative IRB review:

1. Develop a collaborative review template.

"I encourage people to develop a template that is as close to one-size-fits-all as possible and to get the legal department to agree to its text," Ziolek says. "Then, if it doesn't work, go back to legal and revise it."

The template should be brief — maybe three pages — and limited to high-priority items in the authorization agreement process, she suggests.

"The big ticket items are in there: reportable events, reportable noncompliance, and who's responsible for research staff," she adds. "Most of the time the template will work and the template drives the procedure."

A division of responsibilities document will outline for each type of submission what the IRB of record, the relying IRB, and the study team are doing, Ziolek says.

2. IRB of record reviews protocol and initiates authorization agreement.

Once the protocol is approved and the sites all have received materials and are ready to rely on the IRB of record, then it's time for the authorization agreement to be signed. The IRB Authorization Agreement (IAA) designates a single IRB of record that is responsible for the initial review and continuing oversight of the research. It describes the roles and responsibilities of each institution.

The University of Pennsylvania's three-page IAA lists each institution's name, address, phone number, and fax. It has a checkbox for the relying IRB and provides space for the IRB to list the specific protocol's name, the principal investigator's name, the IRB protocol number, the sponsor or funding agency, and the award number.

The IAA also states that the university will be responsible for appropriate execution of the contract and any corresponding consent form revisions, local content review of the consent form, and assessment of reported financial conflicts.

There are additional links for a principal investigator assurance form and a list of additional terms and responsibilities. The IAA's final section is for notification requirements, stating that the relying institution must disclose all material pertinent to the agreement to the IRB of record, including any unanticipated problems, serious or continuing noncompliance, suspension or termination of research by the sponsor, and reports that require forwarding to federal agencies.

3. Establish roles for

continuing review.

Once the study is underway, the role of relying IRBs generally is minimal, Ziolek says.

Usually the IRB of record doesn't hear from the relying IRBs at this stage unless they have a question, their personnel has changed, or something has gone wrong, she adds.

"For the continuing review, if there is any concern about the progress note from an individual site, we'd ask for clarification about what's going on," Ziolek says.

The IRB of record continues to follow the same practice as for the initial review in the event of any changes or modified materials, she notes.

"We utilize progress note reporting to do a brief analysis if a site is struggling," she says.

Also, the IRB of record should have a mechanism for providing auditing for a study and to make sure everything is done compliantly, Ziolek says.

"There is opportunity to utilize self-reporting at the continuing review," she adds. "The continuing review is an opportunity to use self-assessments of the conduct of researchers at relying institutions." ■

Sample items from an IRB authorization agreement

Responsibilities spelled out

The University of Pennsylvania in Philadelphia has developed an IRB of record relying site division of responsibility form that outlines what each IRB involved in the collaboration and authorization agreement will do.

The following are some sample items from the spreadsheet form:

• Responsibilities of IRB of record for initial review:

- Determination that approval criteria are met or required revisions to meet approval criteria.

- Informed consent form is assessed for required elements, necessary optional elements, and any revisions needed to improve subject understanding or remove inappropriate language.

• Responsibilities of relying IRB for initial review:

- Receives the approved version of the application/protocol; facilitated review may occur as needed.

- Receives approved version of the consent form(s) with revisions as needed per the local site (i.e. contact information, voluntary participation language, HIPAA, injury language, etc.).

• Responsibilities of local investigator/research team for initial review:

- Verifies that the research team is suitable to conduct the research.

- Receives approved consent form from the cIRB and uses this version for consenting subjects.

• Responsibilities of IRB of record for continuing review:

- Conducted on the required annual basis with a request to the local IRB of record's research team to provide an annual progress report and self-assessment related to conduct of the research from each of the relying sites.

• Responsibilities of relying IRB for continuing review:

- Can be notified by local PI/research team that continuing review application is underway and be notified when approval is granted or if additional information is needed (sites can decide if they want this information shared).

• Responsibilities of local investigator/research team for continuing review:

- Provides annual progress report (template will be provided) and completes self-assessment for inclusion with continuing review application to the cIRB. ■

IRB turns pediatric assent into video game

Keep assent short, simple

A children's hospital's human research protection program has found that obtaining pediatric assent can be as fun for children and teens as a video game. At one research hospital, it is a video game.

"Kids enjoy apps and games and play, and this is one way to incorporate them and help children understand the research process and assent," says **Rebecca Dahl**, PhD, CIP, director of the human subjects

protection program at Children's Hospital Los Angeles.

Research involving children and youth requires assent, but research sites can be flexible in how they achieve this.

"Assent is a wonderful tool, and sometimes people go overboard," Dahl says. "I'm seeing now longer and longer assent forms."

Assent forms as long as six pages and with language that talks about potential death in a study are pointless, she notes.

"Why would you tell a child there's potential for death?" Dahl says. "Parents should be aware of [the potential for death] and have information about what will happen to their child and what the risks and benefits are, but is this necessary for assent?"

Instead, IRBs and researchers should keep the language, content, and process simple, she adds.

An assent form should be one page, and if the child's signature is requested, then that could be an additional quarter page, Dahl suggests.

"We use illustrations with a picture at top, and there could be even more illustrations, so there's really no need to have a lot of language in it," she adds.

Fun fonts make the text more interesting to children, and paper assent also should have ample white space so children won't think it looks like a textbook.

"There are a variety of ways to interact with kids other than saying, 'Read this,'" Dahl says. "There are lots of things we don't even think about that could make assent much more child-friendly."

For example, an IRB could create a board game or an electronic app/video game that educates children about research through play. The idea for the video game assent evolved out of concern about children not understanding what assent is and what their participation meant, Dahl explains.

"In a staff meeting a couple of years ago, we came up with the idea of a board game and had it printed with pieces and cards, just as you might buy it off the shelf," she says. "But when I approached our tech transfer office, they said, 'That's great, but what you really need is an app.'"

So the app was created with a robot head disk, and children play against the computer when they go through the game. There is audio and artistic videos as well, she adds.

"The video game is not cheap to develop," Dahl notes. "It was a shock to see the cost: $14,000."

And even that price was a bargain because the hospital already had consultants working on a different app, and the pediatric assent video game was an add-on price, she explains.

"Over the long run it will be cheaper than the board game because we printed the first game for $100," she adds.

The game includes the following sample items:

• you want to be a scientist when you grow up and figure that being in an experiment would be cool,

• to be in the study means you won't have as much time to play video games,

• you've tried all of the regular treatments and they didn't work,

• you learn that if you decide to be in the study, you'll need to keep a diary every day of how you are feeling and when you take your medication,

• you can ask as many questions as you want about the study, and

• being in the study means you'll have to stay in the hospital for a week and you'll get to watch all the TV you want.

While the board game prototype was interesting and would have worked, the video game app has a number of advantages over the board game, Dahl says.

For instance, video game apps can be put in electronic systems and easily made available to patients and subjects. They also can be shared hundreds of times at no additional development cost.

"Something electronic can be downloaded to an iPhone," Dahl adds. "And they can be very innovative and revised quickly."

The true goal of the video game was to help children better understand whether they wanted to participate in research, Dahl says.

"Kids still get pushed aside sometimes in terms of their needs and their level of understanding of the process, their illness, and care," Dahl says. "This will make a difference." ■

COMING IN FUTURE MONTHS

- Develop effective staff training tools
- Take systematic approach to QI/QA processes
- Create a study initiation program
- Try "approval parties" for exempt/expedited determinations

IRB ADVISOR

CNE/CME INSTRUCTIONS

To earn credit for this activity, please follow these instructions:
1. Read and study the activity, using the provided references for further research.

2. Scan the QR code to the right or log on to AHCMedia.com, then select "MyAHC" to take a post-test.

3. Pass the online tests with a score of 100%; you will be allowed to answer the questions as many times as needed to achieve a score of 100%.

4. After successfully completing the test, your browser will be automatically directed to the activity evaluation form, which you will submit online.

5. Once the completed evaluation is received, a credit letter will be e-mailed to you instantly.

CNE/CME QUESTIONS

1. Two advocacy groups demanded the Accreditation Council for Graduate Medical Education (ACGME) immediately rescind waivers of its 2011 duty-hour standards that restrict training for internal medicine and general surgery to how many consecutive hours?

A. 18
B. 28
C. 16
D. 24

2. Advocacy groups are concerned about the conduct of the FIRST and iCOMPARE studies because:

A. The studies were conducted without IRB review
B. They believe there was already sufficient evidence to show that one duty schedule was better than the other
C. The ACGME was not allowed to issue duty schedule waivers
D. The study has been conducted before

3. What's the best way to characterize a Lean process in human subjects research and other industries, according to Liz Tioupine?

A. It's a strategy for making financial cuts to a program
B. It's an exhaustive and detailed template for improving operations
C. It's a data-driven improvement process
D. It's a principal related to making bureaucracy smaller and more fluid

4. In a collaborative IRB model involving an authorization agreement between two or more IRBs, which of the following is the responsibility of the IRB of record for initial review, according to Tracy Ziolek?

A. Receives the approved version of the application/protocol, facilitated review may occur as needed
B. Determination that approval criteria are met or required revisions to meet approval criteria
C. Verifies that the research team is suitable to conduct the research
D. All of the above

2015 SALARY SURVEY RESULTS

IRB ADVISOR

Staffing remains a big issue for IRBs in 2016

Limited career ladder opportunities

The job market for experienced and credentialed IRB directors and staff remains high as 2016 begins, but IRB offices continue to cope with increasing workloads and understaffing, according to IRB professionals and the 2015 *IRB Advisor* Salary Survey.

"Not enough staff" and "keeping capable folks" are common issues raised by readers responding to the survey.

Readers' experiences mirror what longtime IRB professionals have witnessed in the past year: "The universal question is, 'How do you keep good people?'" says **Susan Rose**, PhD, executive director in the Office for the Protection of Research Subjects (OPRS) at the University of Southern California, Los Angeles. Rose is also a member of the *IRB Advisor* editorial advisory board.

When IRBs need to hire people with experience, they often will resort to searching nationally as well as looking within the local community, notes **Nancy Moody**, JD, MA, director of the Research Integrity Office at the University of Nevada, Reno.

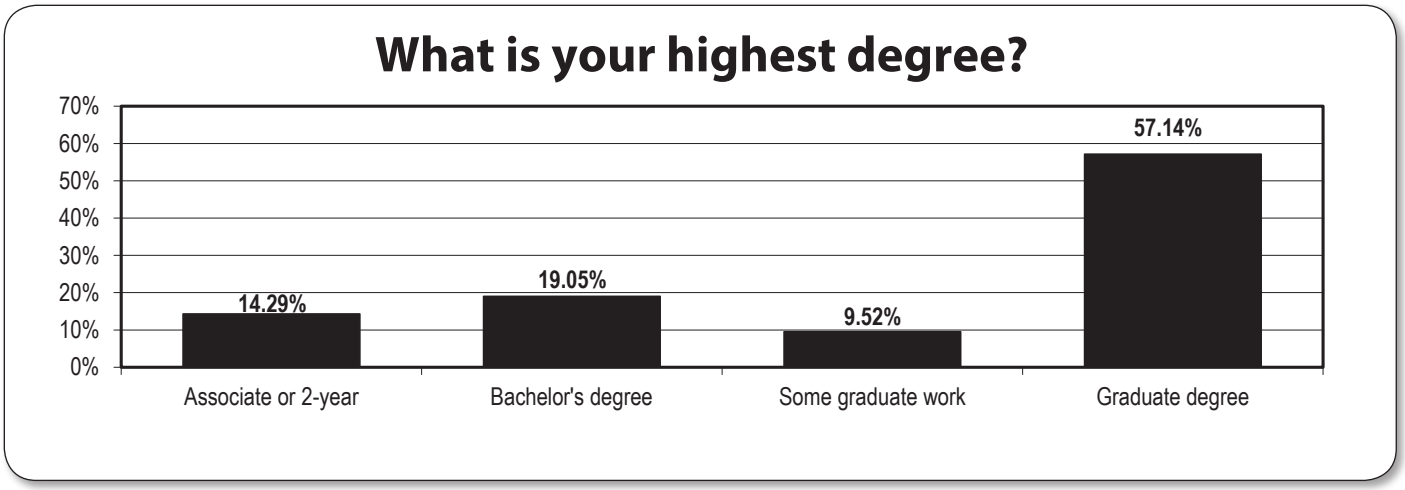
Particularly when it comes to finding IRB directors or leaders, it takes a national search, notes **Elizabeth E. Hill**, PhD, RN, associate chief of staff, research at the VA Sierra Nevada Health Care System in Reno. Hill is also on the *IRB Advisor* editorial advisory board.

IRB Advisor's 2015 Salary Survey suggests that salaries, raises, and aging leadership are continuing issues for IRBs.

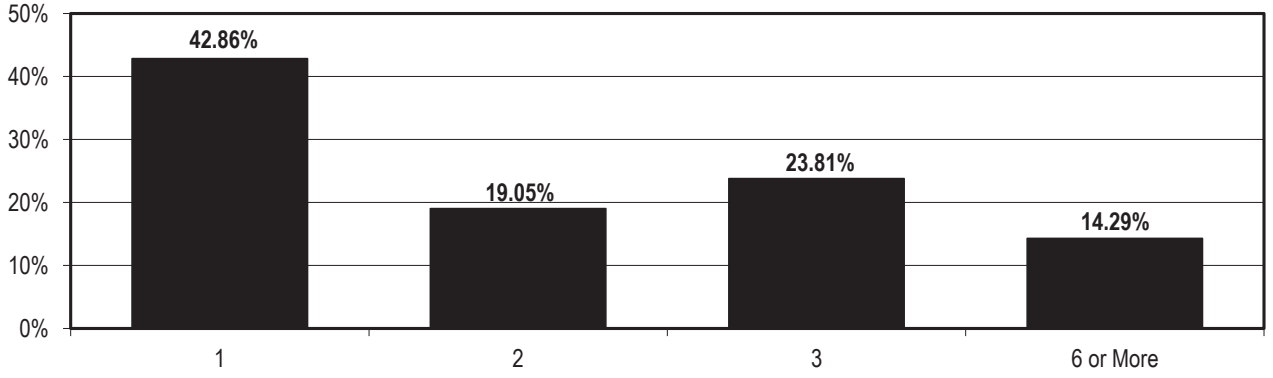
The median age of respondents to the 2015 Salary Survey was 51-55 years, with no respondents in their 20s and the greatest numbers of respondents in their late 50s and early 60s.

This corresponds with anecdotal evidence that IRB leadership is aging nationwide, and within the next decade there will be a generation of human research protection experts retiring. This poses a particular challenge for IRBs that are unable to keep their most promising leaders on staff in the interim, waiting for that one big leadership job to open up, Rose notes.

"I think that it's going to be a problem, filling



How many people work in your department (IRB administrative side)?



director roles," she says. "The IRB can't hire someone with a huge salary to wait until I leave."

One possibility is to elevate leaders-in-waiting to program leadership roles, Rose adds.

And IRBs in need of a new director can always go to national IRB conferences and meet with IRB directors who might be interested in moving up or somewhere else, Rose suggests.

Moody, who is 58, says that she plans to stay in her current role as director of a research integrity office until she retires, and she does wonder about succession planning.

"I just don't know that we're letting the next generation come up," Moody says.

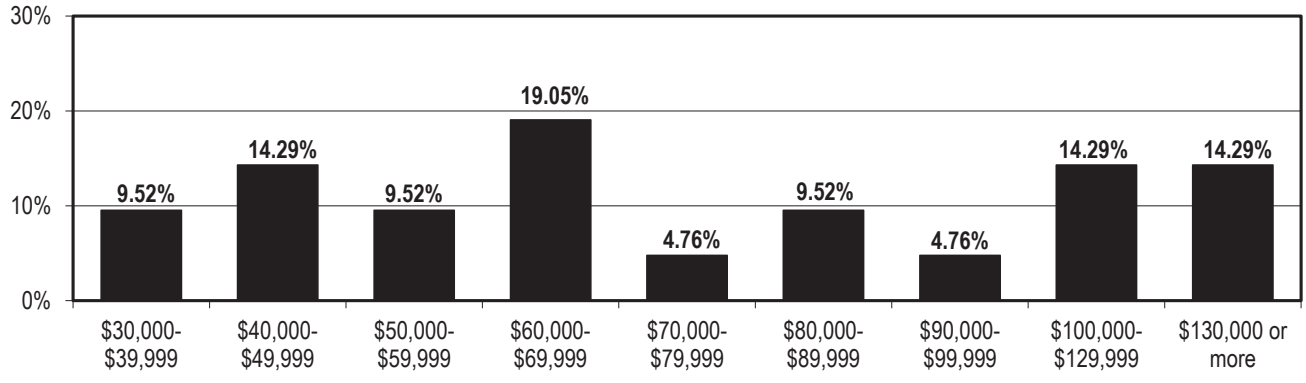
One solution is to look for employees or new job applicants with work ethics and leadership potential — even if they do not have the textbook human research protection career experience and credentials, she suggests.

"I'm very proud that in our office, the person who has no [prior] experience is such an asset to our office," Moody says. "He's very service-oriented, and I just don't know if the requirement of having someone take the CIP exam and having people with so many years of experience has merit if you have an office with enough experienced people."

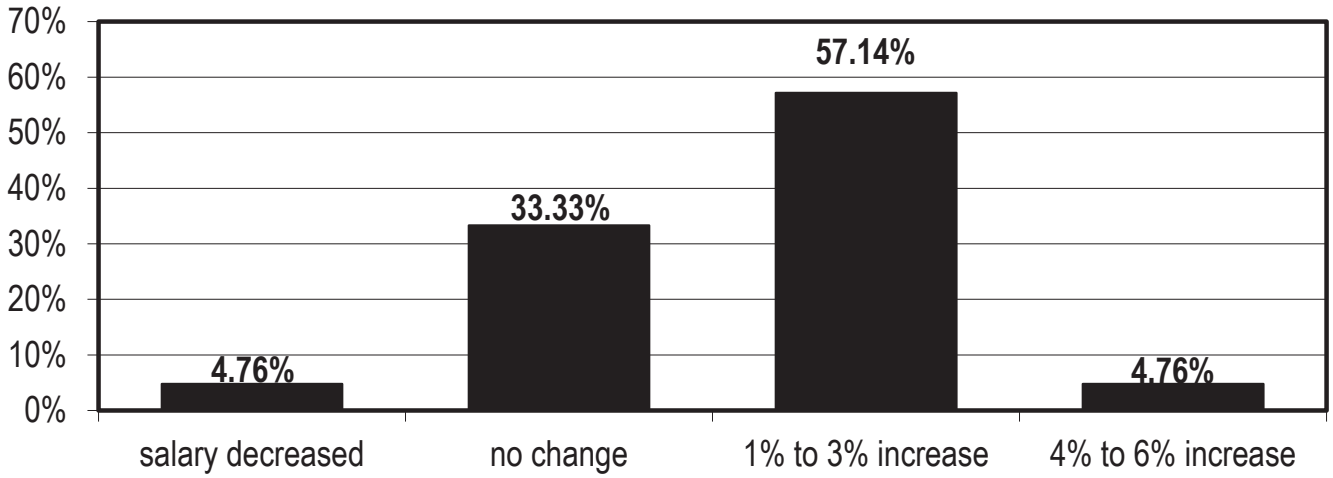
IRB directors can always train good employees and even groom them for future leadership roles, so they probably shouldn't be tied to checking the box on certain job application requirements, she adds.

The Salary Survey showed that most respondents have a graduate degree. About 30% had a bachelor's degree or a bachelor's and some graduate work, and about 15% had only an associate's degree. Also, the median number of years respondents worked in their current field was 13-15 years.

What is your annual gross income from your primary position?



In the last year, how has your salary changed?



Yet despite having both higher education and long experience, salaries were fairly low: Almost all reported having no change in salary or a salary increase of 1% to 3%.

And the median salary was $70,000 to $79,999. There was a fairly even distribution of annual gross income from $30,000 to $130,000-plus, with most people listing $60,000-$69,999 as their salary range.

For lower-level IRB staff, the problem often is retaining them at a job where there is little opportunity for growth, Hill adds. "There isn't a lot of room for growth unless somebody leaves."

The professional growth issue is problem, Rose says.

"When you have four people in your office and each are doing the same thing, how do you build a career ladder with four people?" she adds.

Even with these career growth limitations, many IRBs have fairly low staff turnover.

"Our turnover is primarily caused by people leaving town and accompanying a spouse to a new city," Rose notes.

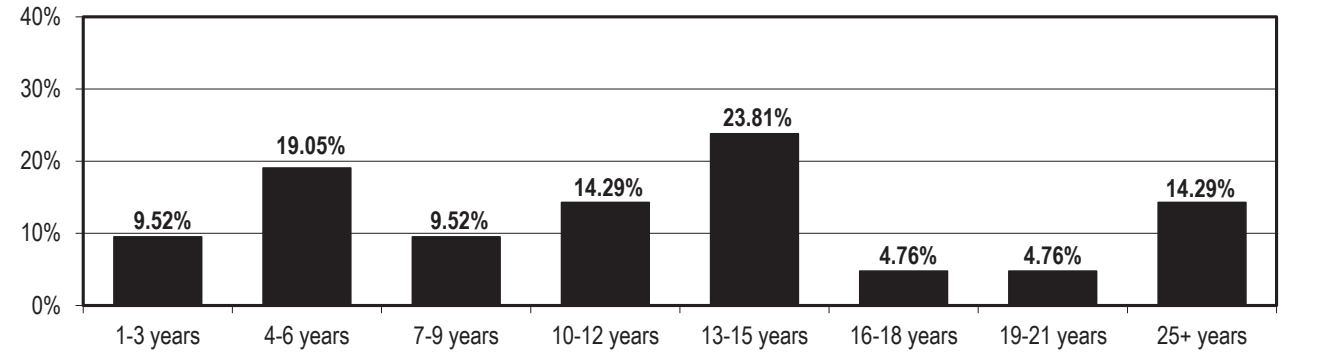
However, nearly 24% of respondents to the salary survey reported having lost staff in their department in the last year, and the vast majority of the others reported no change.

Although finding their replacements is difficult, IRBs can search for research coordinators who are eager to try something new. They also can attend PRIM&R and other meetings and talk with IRB directors, Rose suggests.

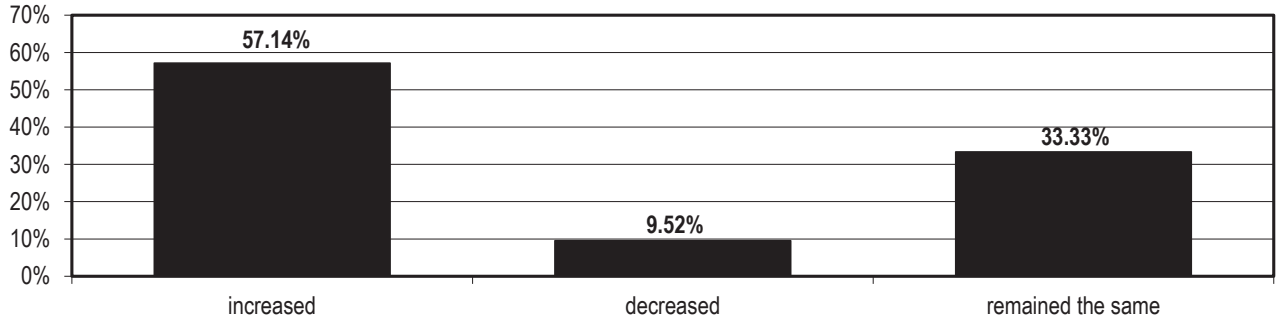
"That's a natural place to find new staff," Rose says.

A bigger issue that many IRB directors might relate

How long have you worked in your present field?



How has your workload changed in the last year?



to involves IRB office workloads, she says.

"We're so short-staffed," Rose says. "If someone is leaving, the time lag in hiring is a huge problem."

The Salary Survey also found that workloads have become an issue: About 57% of respondents said they have seen an increase in their workload in the past year, while fewer than 10% saw a decrease. The rest — 33% — said it remained the same.

While the median number of hours worked was in the 31-40 hour range, more than 40% of respondents said they work more than 40 hours a week. Nearly 10% said they work 56-60 hours per week.

Since the publication last fall of the Notice of Proposed Rulemaking (NPRM), some IRB leaders have suggested the new rules will affect workloads at IRBs. When the rules are made final, they might result in less work for some IRB offices because they appear to be designed to eliminate duplication and lessen the workload.

"The concept is to streamline and deliver ethical review, but not to duplicate," Moody says. "In that sense, [the NPRM] would make less work."

However, anytime there is a major regulatory change, IRBs must shoulder — at least in the short term — a heavy workload burden, Rose notes.

"IRBs will be redoing all policies and procedures, re-educating everybody, redoing all of their forms, dealing with all the issues with consent and all the issues now instituting limited IRB review," Rose says. "Continuing review will be eliminated; there will be more exclusions/exceptions, and all of these changes require follow-up in a way that I believe will be [staffing] intense." ■

In the last year, has your department lost or gained staff?