Lab leaders on hires, wages, scanners, and storage

April 2023—*How is the demand for biomarker tests linked to new oncology drugs playing out in your health system? It is one of several questions laboratory leaders answered in a March 7 Compass Group call led by Stan Schofield, VP and managing principal of the Compass Group and formerly of NorDx/MaineHealth. That and digital pathology and the cost of storage, staffing and wages, the release of results, and the financial implications of the end of the public health emergency were the topics of the day.*

The Compass Group is an organization of not-for-profit IDN system laboratory leaders who collaborate to identify and share best practices and strategies.

The 21st Century Cures Act required that laboratory results be made available to patients without delay. Most laboratories were already releasing results to electronic health records and those became available in patient portals, but patients having access before clinicians could talk with patients raised concern. How is it working? What problems, if any, have come up?
Steven Carroll, MD, PhD, chair, Department of Pathology and Laboratory Medicine, Medical University of South Carolina: It is going reasonably smooth for us. There was angst early on, particularly among our clinicians. We occasionally have problems with a patient receiving bad news before the physician has had a chance to talk with them. It has not happened often, so it's been a relatively moderate concern thus far.

Terese

Sam Terese, how has it been working for Alverno?
Sam Terese, president and CEO, Alverno Laboratories, Indiana and Illinois: We haven't had many challenges since we started to release the records. Ours is a little complex in that both our health systems release through their portal, and we had to create our own portal for the reference lab for patients who aren't part of our health systems' EHRs. We have a partnership with LuminateHealth to do that; it's been rather seamless.

Mike Eller, what has been the experience at Northwell?
Mike Eller, assistant vice president of business development, Northwell Health Laboratories: We saw the same issue with portals and some physicians becoming upset that patients can see the results before them. We just integrated the lab patient portal into our LabFly app, so patients will be able to view not only results from a LabFly visit but also any results within Northwell Health. If they went to a patient service center or were in a hospital, they can find everything in one place.

Dr. Martinez-Torres

How is the demand for biomarker tests that are linked to new cancer drugs playing out in your system?

Guillermo Martinez-Torres, MD, president and chief physician executive, NorDx, MaineHealth: Biomarker testing usually triggers a specific therapy since the biomarker result will tell you about the biology of the tumor, which usually falls into specific treatment protocols. Those protocols are easy to put into practice and operationalize with standing orders from the oncology team.

The companion diagnostic space is a little like the Wild West at the moment, because usually for those therapies, you either have a small number or a single laboratory providing the specific companion diagnostic test, and it's often a proprietary environment where they want you to send everything to them. Sometimes those laboratories are not in the United States, which is even more challenging.

Lauren Anthony, can you comment on this?
Lauren Anthony, MD, system laboratory medical director, Allina Health, Minneapolis: ASCP is talking about the role of a cancer biomarker testing navigator for newly diagnosed tumors to improve communication, test ordering, tracking tissue samples sent to reference laboratories for biomarker testing, and results follow-up. It's a feasibility pilot.

I echo the comments Guillermo made. It is a logistics management challenge having to route tests to different places. It also affects decisions about what tests to bring in-house, since it seems like oncologists are more often pushing for the several-hundred gene panels that can be used to identify these different mutations. It's complex. We have a department that takes care of specimen management and they're busier and busier because as a new drug comes out, old cases for patients still living with the disease have to be pulled to see if the patients are now eligible for the drug. They also have to manage the send-out of all those specimens from the past, as well as for newly diagnosed cases.

Lee Bridges, what has been your experience?
C. Lee Bridges, MD, regional medical director, Bon Secours Mercy Health, Richmond, Va.: We have worked with our oncologists to have a protocol for non-small cell lung cancer, colon cancer, et cetera. For the companion diagnostics, the biggest challenge is that it seems like there's a new laboratory on the block every month, and an oncologist will request a new test because they've met with a sales rep or seen something in a meeting. And very little is known about the test. Some of these tests cost $5,000 or $6,000 and don't have a long track record.

Autumn Farmer, how does your system handle it?
Autumn Farmer, MHA, chief laboratory officer, Bon Secours Mercy Health, Cincinnati: We're getting our oncology network to work together to decide that for non-small cell lung cancer, for example, we will all use this test and then interface that test to Epic. We wanted to control those interfaces through the LIS, but we've realized that if we have the data in our Epic system, then at least we can report on it and look for patterns of utilization.

There's evidence that too many patients are not getting the recommended biomarker testing that is needed to get the right targeted therapies, particularly in non-small cell lung cancer. How is your system staying on top of that?
Sam Terese (Alverno): We ended up building most of the menu internally. We had a certain baseline, and within a month we doubled the volumes, not only by capturing what was going out but also by getting testing done more appropriately. The challenge was to build a menu that was expansive enough, and we needed to provide resources for our pathologists to facilitate the communication process to the medical staff. It is a challenge to get that message out to the oncologists and other members of the medical staff in our connected health systems. We also had to navigate the reimbursement challenge with a preauthorization process. We are seeing more and more adoption of genomics as a standard of care, and I suspect that will continue as cost of testing continues to decline. I like the notion of building things into your IT platforms and EHRs.

Joseph Baker, VP of laboratory, Baylor Scott & White Health, Dallas: We're in a similar boat. We're trying to handle a lot of this through Epic and builds, as we progress through the Beaker implementation.

Baker

Is staffing in your laboratories getting any better? Is there a greater volume of applicants or perhaps more people returning to the workforce?
Joe Baker (Baylor Scott & White): We're seeing a mix, depending on the region. In our larger metropolitan areas, like Austin and Dallas/Fort Worth, more candidates are coming into the pool, most of whom no longer want to do agency and travel. In our rural areas we still have a significant deficit. We've been able to cut down our openings by about 20 percent over the past six months. We are kicking off an expanded medical laboratory scientist school in August, where we will more than double our class size, so we're hoping that will help. And we're still trying to manage the burnout with our team.

Guillermo, what are you experiencing?
Dr. Martinez-Torres (NorDx): Our experience has been similar to what Joe described—a combination of more people applying for vacant positions and travelers who have reached "traveler fatigue" and live near our hospitals and want to return to regular shiftwork. Since the beginning of the year, we've gone from over 100 open positions to about 70. In the past month we hired in excess of 20 people into NorDx.

Sam, how is staffing at Alverno?
Sam Terese (Alverno): We've created a number of programs we call "N.O.W." programs for science majors and opened a new MLS program in partnership with a local university and have seen improvement, though not in every geographic market. Our vacancy rates are down considerably. We are now struggling to find students to put into programs. Everyone is competing for STEM kids. Our program was one of the few in Indiana that was actually able to fill all available slots. It's another worry—the pipeline of students is going to shut down.

Autumn, it seems you would like to know whether anyone is using international candidates, and if they are, whether they're doing so through an agency or doing the paperwork themselves for their visas. Does anyone have experience with this?
Julie Hess, VP, laboratory services, AdventHealth, Orlando, Fla.: We have hired about 50 international candidates in the past year and a half. We have a recruiting service managing H-1B applications.

Joe Baker (Baylor Scott & White): We do our own paperwork. Our legal department contracts a lawyer to work with us for H-1B visas and others. We've done about 10 to 12 over the past year, and it takes a long time. The agencies we've looked at are expensive. Reports are that it costs around $130,000 per individual.

What countries are you working with?
Joe Baker (Baylor Scott & White): We were working with the Philippines, but that has become tougher recently, and some countries in Africa.

Wages in laboratories have gone up 10 to 20 percent over the past three years. What are you seeing in your market and what are you doing around laboratory compensation?
Autumn Farmer (Bon Secours): We took wages up on average about 15 percent. Even though we knew we had to do it and communicated we were doing it, it's still causing a budget variance. The other pressure is to eliminate use of agency employees.

Mike Eller (Northwell): One issue with the wage increase is a snowball effect to management compression, with technologist salaries starting to approach those of supervisors and managers. From a budgetary perspective, it has to be phased in, because it's a big hit when you do it all at once in a large health system.

The public health emergency will end May 11 in the United States. What do you think might happen

with laboratory testing and reimbursement after that?
Dr. Martinez-Torres (NorDx): We've received guidance from payers about what CPT codes they will use and what the reimbursement rates will be. It won't be $100 a test for COVID, like we had seen before; it's about half of that. We've received clear guidance that those will continue to be covered as long as we bill them appropriately.

I've spoken to my clinical colleagues at MaineHealth, and I anticipate that anyone presenting with respiratory symptoms will still be tested for COVID after May 11. It's ingrained into the order pattern, just like they will order influenza and RSV and tests for other potential pathogens, depending on the prevalence at that time.

Autumn Farmer (Bon Secours): We've modeled the reimbursement reduction from Medicare at about $95,000 a month. I don't think it will change our pattern of testing. On a good note, when we looked at the model for how much it was going to cost us on Medicare for COVID, we also looked at the allowable rate under Medicare for venipuncture, and it went up from $3 to almost $9. That offset the reimbursement reduction for us.
Some of the boutique labs that popped up to do COVID testing will get out of the business, which may drive up our nonacute business.

I'd like to open the discussion to anything you want to comment on about the laboratory and pathology.
Dr. Martinez-Torres (NorDx): I'd like to take the pulse of the Compass Group members in regard to where they are in their journey of digitizing pathology workflows—at the beginning, middle, or end? Are you mature or are you still thinking about it?

Sam Terese (Alverno): We've been digital for the past four or five years and have transitioned most of our workload to digital. We have a few sites left to convert, but that will occur as we transition the remaining histology processing to the central laboratory. We're scanning 1.2 to 1.3 million slides a year—H&E, specials, IHC, the whole gamut. Most of our pathologists read off computer screens.

The return on investment is not the most exciting I've seen. But for a large integrated health system, at least from the laboratory perspective, going digital makes a lot of sense versus moving glass across the geography, and it has positioned us for the adoption of AI.

Joe Baker (Baylor Scott & White): Half of our system has been using Philips for a couple of years. One of our informatic pathologists led this for the system, so all of our employed pathologist-supporting hospitals are on Philips. We have seen a nice decrease in slide movement throughout our central Texas region. We have a pathologist outside of Texas reading for us.


Dr. Sossaman

Gregory Sossaman, MD, system chairman and service line leader, pathology and laboratory medicine, Ochsner Health, New Orleans: We've had Philips scanners up and running for a couple of years. Our plan to go fully digital was delayed during COVID. We've basically restarted our validation for primary diagnosis and it's now close to complete. We've used it for teaching and IHC. It's quite an investment, and I'm a little worried, as capital has become harder to acquire recently with the focus on expense reduction, that it might become even harder. And as Sam said, the ROI is not great. We may have to make modifications in what we were planning to do and acquire additional scanners and maybe modify what we were thinking about as far as slide storage, because it gets expensive if you store a lot of slides digitally. We're planning a go-live for primary diagnosis in the third quarter.

Dr. Bridges (Bon Secours): We have been looking at it and haven't gotten far. Questions have come up regarding

the optimal number of scanners to get and which scanners. The question I have is, How do you calculate your total digital pathology need with regard to scanners and storage requirements? How many scanners do you need per number of slides, and what does that storage requirement look like? As we dug into it, it appeared that the storage requirement of approximately 250,000 slides per year at a gigabyte per slide was going to be extremely expensive.

Dr. Sossaman (Ochsner): If you're going to go primary diagnosis and your entire workflow is dependent on those scanners, you will need more than the volume itself would suggest because they have issues, they go down, they're sensitive to vibrations and all kinds of things. It takes experience with them to truly understand that. If you're using it just for IHC and education, you could probably get away with a couple of them, depending on your volume. But if your entire workflow is built on that and you get rid of the couriers moving things around the system, you will need more than you realize.

Storage gets complicated quickly. There's no requirement now to store all these images, but if you're going to use them for AI you need to retain the images. All storage is not the same cost; it depends on the type of storage. There are so many variables that you have to map out your workflow and use case for figuring out what those expenses will be.

Dr. Anthony (Allina): We're not using digital for primary diagnosis at this point. We have a scanner for specific IHC analysis, and we use nonconnected iPhones with specific adapters for consultation, if someone's at a site doing an adequacy assessment for cytology or a frozen section. Everybody's interested in it, but there are barriers.

Sam Terese (Alverno): To calculate number of scanners, we looked at our target turnaround times and figured out what a throughput of a given scanner could be in a continuous-load model. Digital storage is terribly expensive, so we've chosen not to do that as a permanent record at this time. We keep glasses that are permanent and hold the images for about a month. There is a process to tag a slide for longer-term storage.