Put It on the Board

From margins to mergers, a long list of disruptors

November 2022—Volatile, uncertain, complex, ambiguous. Stan Schofield, president of NorDx and senior VP at MaineHealth, told Compass Group members at their September meeting in Albuquerque that those words describe the state of play for labs today.

“It’s a military term,” he said of VUCA and the four words it stands for. “Sounds pretty close to me how our days go on.”

Schofield, Compass Group managing principal, gave the Ron Workman Memorial Lecture at the group’s meeting. (Dr. Workman was an early member of the group.) He began his lecture with a list of disruptors for laboratories. Here they are:

- Workforce. “Where did 20 million people go?” he asks. “They’re mobile, they’re moving around. They don’t show up.”

Schofield

Laboratories used to compete for staff against labs and hospitals. “Now you’re competing against diagnostic companies and manufacturing plants with benefits. Drugstores with benefits. Restaurants with benefits and 401(k)s. There’s not a lot of differentiation except money.” Health care wages rose 14 percent in the past year, he said.

- Automation. “Everybody’s trying to automate—no touch points, no people, faster, cheaper—because you can’t get the body.”
- Payers. There used to be 40 insurers; there are now five. “They’re buying doctors, they’re buying drugstores, they’re changing.” Fewer payers, more leverage. Government payers mean more value-based contracts. “That’s like managed care with real data. It means financing problems, consolidations, and reductions in payment,” he said.
- Lost margins owing to increased cost for labor and materials coupled with declining reimbursement. Schofield said consulting company Kaufman Hall reported that 70

percent of the hospital market is in the red. “That, if it trickles down, is going to be on us if it’s not already.” The financial inflection point of the U.S. health care market now is contract labor, Schofield said, and it’s not laboratory contract labor. “It’s nursing because they can’t do it without the nurses. They *think* they can do it without the lab.”

- More mergers and acquisitions due to lost margins and contract labor costs. National reference labs are talking to hospital and health care CEOs and other executives, and “if they’re not talking to them, they will be soon because they have a lot of money, and your health systems don’t have anything they can do to generate new revenue.” Need more surgeries? Yes, but there isn’t enough staff. Get more staff? We can’t afford them.
- Assisted intelligence and informatics. Not “artificial intelligence,” he noted. “Assisted.” Everybody wants digital pathology. “How many can really afford digital pathology, and to do it right? It would be nice to have. But I’d like to have automated microbiology too.” What he really wants, he said, is an automated phlebotomist. Informatics—what are you doing with the data? Who wants the data? How are you going to slice it and dice it? And there’s the “never-ending cost of informatics.” Health care systems are spending millions more on cybersecurity, he said. “There’s a lot of stuff moving fast, and not a lot of stuff that’s cheap enough.”
- Crisis management. “Whoever thought we’d be in a pandemic? We made it through the pandemic because we had enough staff then.” If SARS-CoV-2 cases were to surge like they did in December 2021 and January 2022, “now we don’t have a workforce.” He said he had 90 open positions in late September, compared with 30 in 2021 and the more common 10 to 15 of prior years.
- Proliferation of consumer and urgent care delivery systems.
- Supply chain constraints. A shortage of COVID-related supplies was one thing, he said, but it was another to be

> unable to get a blue-top tube in 2021. “Now you can’t get rapid spin. Then the lab is faulted for not hitting its potassium turnaround time because it takes 30 minutes to clot the tube for the emergency department. The response: ‘You’re the lab. Fix it.’”

FDA approves CDx for HER2-low metastatic breast cancer

The Food and Drug Administration approved Roche’s Pathway anti-HER2/neu (4B5) rabbit monoclonal primary antibody to identify metastatic breast cancer patients with low HER2 expression for whom Enhertu may be considered a targeted treatment. Enhertu is a specifically engineered HER2-directed antibody drug conjugate jointly developed and commercialized by AstraZeneca and Daiichi Sankyo.

The Pathway anti-HER2/neu (4B5) test now includes a scoring algorithm that helps pathologists identify low expressors of HER2. With a lower cutoff, the test is able to identify patients who may benefit from Enhertu as a treatment option.

The 4B5 test was used as part of the Destiny-Breast04 trial sponsored by AstraZeneca and Daiichi Sankyo to identify patients whose tumors expressed low levels of HER2 protein. The trial reported a 50 percent reduction in the risk of disease recurrence or death and an overall gain of six months over standard of care in patients treated with Enhertu whose tumors had low levels of HER2 expression.

AMP recommends in silico approaches for validating NGS analysis pipelines

The Association for Molecular Pathology published consensus recommendations for the use of in silico approaches for validating next-generation sequencing data analysis pipelines. The joint report of the AMP, Association for Pathology Informatics, and the CAP was published Oct. 13 online ahead of print (Duncavage EJ, et al. *J Mol Diagn*. doi:10.1016/j.jmoldx.2022.09.007).

“As more laboratories around the country use in silico data to simulate variants to help validate the performance of clinical NGS data analysis pipelines, clinical laboratory professionals may need an aid for understanding both the value these methods bring and the important nuances and limitations of these approaches,” Justin Zook, PhD, co-chair of the AMP in silico pipeline validation working group, said in a news release. He is co-leader of the biomarker and genomic sciences group at the National Institute of Standards and Technology.

The AMP convened a panel of subject matter experts from the three organizations to explore the advantages and disadvantages of these various types of in silico data. “This new *JMD* report summarizes our key findings and provides useful recommendations to help clinical laboratory professionals select the most appropriate format for their specific purpose,” Dr. Zook said.

The consensus recommendations are as follows:

- The laboratory may use in silico data files to supplement NGS analytical validation, particularly to assess analytical sensitivity or false-negative rates for specific variants. However, in silico data files cannot supplant the use of physical samples (e.g. patient samples).
- The laboratory should understand the functional limitations of the type(s) of in silico data being used.

- The laboratory should understand the limitations of most in silico data for assessing performance in particular genome contexts and variant types susceptible to systematic sequencing and mapping errors.
- The laboratory may consider using in silico samples for minor updates to clinical bioinformatics software pipelines.
- Commercial vendors and internal pipeline developers should include options in their analysis pipelines to facilitate in silico data file import and analysis by clinical laboratories.