Building a lab for the 21st century

Building a laboratory for the 21st century is no simple undertaking, especially when it’s a facility that will perform thousands of tests each day — from routine chemistry, allergy testing and prenatal screening to advanced molecular diagnostics, cytogenetics, toxicology and pathology — and house 240-plus lab professionals.

Such is the backdrop for the new Legacy Laboratory Services building, which opens in early fall. Legacy Laboratory Services staff expects to start moving into the facility in September.

“A lab isn’t one homogeneous entity,” says Don Toussaint, vice president of Legacy’s Laboratory Services, explaining one of the biggest challenges inherent in lab design. “Each lab function has its own technological needs, and the complexity is multiplied by the fact that each section can be quite different from the other.”

For example, he points out, some testing uses dangerous chemicals that require specialized storage, ventilation and drainage. Automated analyzers and people using high-power microscopes are sensitive to vibrations, so a lab must be built to exacting tolerance standards to minimize the effect of passing trucks or trains.

“Plus, with all our instrumentation and people, the lab generates a lot of heat, so appropriate air handling is vital to maintain proper room temperature and humidity,” he says. “And even though we’re in a wet, humid region, we have problems with low indoor humidity because we have heat or air-conditioning on at all times.”

The challenge of integrating these diverse design needs into a cohesive, functional whole fell to architect Kimberly Ritter, LEED AP. She is director of design at GBJ Architecture, a firm specializing in design for health care facilities in the Pacific Northwest.

“This facility is specifically designed to be a lab,” she says. This is in contrast to Legacy’s existing space, which was originally built as a hospital and used in the past as an ER, X-ray department and pharmacy. “So one of the greatest advantages of the new space is process improvement, a smoother work flow. For example, we spent a lot of time making sure that specimens — most of which come in via couriers from across the region — were handled in the most efficient way.”

To that end, one of the major technological advances of the new facility is the use of robotics technology for specimen storage and retrieval, something that the existing lab space did not accommodate.

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“Another significant design feature is the built-in flexibility to adapt to future needs.”

“We use what’s called a universal grid, and it allows for all kinds of reconfiguration to take place as needed,” Ritter explains. “The future
New building: Providing more testing types, faster, less expensively

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is ever-changing with new processes, equipment and procedures emerging on almost a weekly basis. This allows us to easily adapt for both process flow changes and new testing procedures.

“But all that is back story,” she adds. “What clients will experience is excellent turnaround time and efficiency.”

With its centralized, urban location, the new lab will be easily accessible as well, Ritter notes.

In addition, Toussaint says, “There are tremendous economies of scale and efficiencies to being in one place.” Components of the Central Laboratory are currently spread across three campuses.

From planning to design and construction, it has taken about five years to bring the new lab to fruition, says Ali Sadri, Legacy’s director of Design, Construction and Real Estate. He also guided the organization through the Randall Children’s Hospital construction.

It’s a testament to the professionalism of Toussaint’s team that, despite some longstanding brick-and-mortar challenges, Legacy Laboratory Services has been the preferred provider of laboratory services in the Pacific Northwest for the last 10 years, with industry-leading quality of service.

“The new building will enable us to do even more,” Toussaint says. “We can broaden our capabilities technologically, provide more types of testing, and do it faster and less expensively.”

New! JAK2 RGQ mutation testing

Now performed at LLS, the JAK2 RGQ PCR test is a real-time PCR assay used for the detection of the JAK2 p. Val617Phe (V617F) mutation. The Janus kinase 2 gene (JAK2) codes for a tyrosine kinase (JAK2) that is associated with the cytoplasmic portion of a variety of transmembrane cytokine and growth factor receptors important for signal transduction in hematopoietic cells. The somatic mutation JAK2 V617F is associated with BCR-ABL1-negative myeloproliferative neoplasms.

New! HIT Assay (PF4 IgG by ELISA)

The Legacy Central Laboratory has expanded its menu of special coagulation testing to include the HIT Assay (mnemonic: HIT AB) for the diagnosis of heparin-induced thrombocytopenia. Positive ELISA results are relatively non-specific for a clinical diagnosis of HIT. If ELISA result is positive, then the Serotonin Release Assay (a functional assay with greater specificity for a clinical diagnosis of HIT syndrome) is recommended. We offer a reflex option (mnemonic HIT ABR). HIT AB testing is performed daily, Monday through Friday.

2015 OMGMA Fall Conference — We’ll be there!

Legacy Laboratory Services is a proud member of the Oregon Medical Group Manager’s Association Partner’s program and has supported OMGMA for more than two decades. The 2015 Fall Conference is in Eugene, and we look forward to seeing our friends and partners there.
Laboratory Services earns prestigious ISO 15189 certification

Laboratory test results are often a key component of a patient’s diagnosis and treatment. Each phase of the testing process, from specimen collection to result communication, influences the quality of information provided to clinicians. ISO 15189:2012 is an international standard that specifies requirements for competency and quality specific to clinical laboratories. All phases of the testing process are assessed. Only 36 laboratories in the U.S. have met the standards for this certification. Legacy Laboratory Services is proud to be one of them.

Certification requires a rigorous assessment by a team from the College of American Pathologists. Experts with backgrounds in quality management and medical laboratory work examine every aspect of an organization’s quality management system. By pursuing ISO 15189 certification, we have demonstrated a commitment to systematically monitor, evaluate and improve our contributions to the high-quality health care we provide in the communities we serve. We have also earned the privilege of displaying the ISO 15189 logo.

Is your practice ready for ICD-10?

On Thursday, Oct. 1, 2015, the ICD-9 code sets used to report medical diagnoses and inpatient procedures will be replaced by ICD-10 code sets. The transition to ICD-10 is required for all organizations covered by the Health Insurance Portability Accountability Act (HIPAA).

How does this affect my practice?

• Not using ICD-10 codes as of Oct. 1, 2015, will result in reimbursement issues for your practice.
• Your office staff will have 68,000 diagnosis codes to work from instead of 3,000.

While this is a significant increase in the total number of codes, your providers and staff will only need to use those codes that are related to their day-to-day practice.

Plans for implementing ICD-10 in your office should begin immediately if they are not already underway, regardless of the size or function of your practice. ICD-10 implementation is not just a billing or information systems project. It will affect all areas of physician documentation workflow.

Medical offices should:
• Determine who in their organization will lead the ICD-10 transition.
• Establish any necessary ICD-10 committees or workgroups.
• Have their final ICD-10 training plans in place.

Where should I start?

1. Contact your EMR (electronic medical record) vendor immediately confirming your EMR application(s) is ICD-10 compliant.
2. Familiarize your practice with Centers for Medicare & Medicaid Services ICD-10 implementation guidelines:
   — www.cms.gov/Medicare/Coding/ICD10/ProviderResources.html
   — www.roadto10.org/
3. Contact the Oregon Medical Association or your professional medical organization for ICD-10 office staff training opportunities:
   — theoma.inreachce.com