

How agile laboratories enable healthcare systems to innovate new models of care

Clinical laboratories are an integral part of the healthcare continuum. Their role transcends beyond processing diagnostic tests to providing vital information to inform screening, prevention, tailored treatment, and monitoring and management of human diseases and population health.



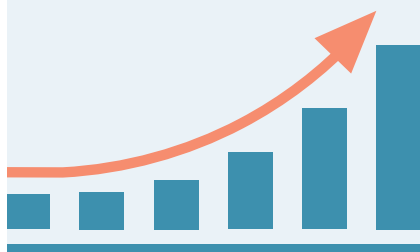
13bn tests are performed annually in the United States, driving approximately 2/3 medical decisions ¹



Less than 2.5% of the overall healthcare budget is allocated to the clinical laboratory, putting increasing pressure to produce greater volumes at lower cost ²

▶ The importance of agility in the clinical laboratory

The covid-19 pandemic has tested the adaptability and agility of clinical laboratories and exposed vulnerabilities in the current health system.³ Other forces driving the demand for laboratory services:



- ↑ Growing investment in healthcare
- ↑ Increasing pressure on cost containment and efficiency gains
- ↑ Growth in older population segments
- ↑ Increasing burden of chronic disease

- Shifting research priorities
 - Health system consolidation
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▶ The clinical laboratory is evolving to meet current health system challenges:



- Shift from measuring volume and cost per test to overall cost savings and patient outcomes ⁴
- Adoption of automated technologies and informatics supported by machine learning ⁵
- Advancements in testing capabilities from standardised medicine towards preventative and personalised care ^{6,7,8}



Preparing for the future ▶▶▶

To thrive in a rapidly changing environment, clinical laboratories need a high level of adaptability and agility

- ▶ Position laboratories as a central repository of data to enhance patient and population outcomes
- ▶ Leverage automation and informatics to mitigate shortage of laboratory professionals
- ▶ Strengthen laboratories to lead the transition to value-based care

Conclusion

The clinical laboratory can greatly assist health systems in attaining better operational efficiency and clinical outcomes. To achieve this elevated role, health systems should:

- Position the clinical laboratory to support population health
- Elevate the value of the clinical laboratory by demonstrating its benefit to the entire health system
- Invest in agile laboratory infrastructure, technology and professionals



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