



From Test to Treatment



The Value of POINT-OF-CARE Diagnostic Testing

Diagnostic tests are clinical tests that detect, diagnose or monitor disease, and guide physicians and other clinicians in determining what treatment, if any, a patient may need.

Point-of-care, or rapid diagnostic tests, are simple to use in physician offices, at the hospital bedside, clinic, or even in a patient's home, providing timely results on the spot. **#TestToTreatment**



Traditionally, diagnostic tests occur in a centralized laboratory setting, removed from the patient. However, health care is growing, becoming more decentralized, and diagnostic testing is increasingly performed, more conveniently for the patient, at the point-of-care.

Moving the test to the patient increases the likelihood that the patient, physician, and health care team will receive the results faster, resulting in timelier clinical management decisions, thereby helping the shift from curative medicine to increasingly predictive and personalized medicine.

Bringing the power of diagnostics to “POINT-OF-CARE”

Point-of-care diagnostics are a game changer for patients and clinicians. A rapid test can allow for patients to avoid trips to laboratories, long waits for test results, and longer waits for treatment decisions to be made.

Point-of-care diagnostics:

Can be used near or at the site of the patient (e.g., the hospital bedside, home, clinic, or physician office).

Enable rapid response during public health emergencies.

Are designed to be easy to use.

Deliver results fast. In many cases, in less than 30 minutes.¹

Are FDA reviewed.



Generating VALUE

By allowing for more immediate feedback to patients and providers, point-of-care diagnostics can make health care more convenient for patients, provide results and diagnosis faster, expedite therapy implementation (if needed), and facilitate monitoring. All these attributes contribute to a more engaged, patient-centered approach to diagnosis that can increase the likelihood of treatment success.



Influenza (Flu):

Point-of-care diagnostics can determine a viral or bacterial infection within 10–30 minutes enabling earlier treatment.² For flu, a clinician can prescribe an antiviral that, if administered in the **first 12 hours** of infection, can **reduce the duration by 41%** more than intervention at 48 hours.³



HIV/AIDS:

Point-of-care diagnostics that can quickly diagnose HIV are critical. One study reported that patients treated with **immediate antiretroviral therapy** on the day of diagnosis **increased viral suppression by 26%** at 10 months.⁴



Heart Attack:

Patients with heart attack symptoms receiving point-of-care diagnostics in the Emergency Department had **38% fewer intensive care admissions**, **12% fewer hospitalizations**, and a **27% reduction in length-of-stay**.^{5,6}



Group A Strep:

One randomized controlled study reported use of rapid diagnostic testing for strep throat **cut antibiotic prescribing rates by more than half—from 58% to 27%**.⁷



Respiratory Tract Infections:

Most respiratory infections don't require an antibiotic as the majority are viral infections. Use of point-of-care diagnostics in primary care has been shown to significantly **reduce antibiotic prescribing by up to 36%** for respiratory tract infections.⁸



Pneumonia:

Patients with ventilator-associated pneumonia that received a point-of-care diagnostic obtained **definitive results an average 2.8 days earlier** than those receiving the standard test and experienced significantly fewer symptoms and days on mechanical ventilation.⁹

Endnotes

- Koski, Renee R., and Michael E. Klepser. "A Systematic Review of Rapid Diagnostic Tests for Influenza: Considerations for the Community Pharmacist." *Journal of the American Pharmacists Association*, vol. 57, no. 1, 2016, doi:[10.1016/j.japh.2016.08.018](https://doi.org/10.1016/j.japh.2016.08.018).
- Ibid.
- Aoki, F. Y. "Early Administration of Oral Oseltamivir Increases the Benefits of Influenza Treatment." *Journal of Antimicrobial Chemotherapy*, vol. 51, no. 1, 2003, pp. 123–129., doi:[10.1093/jac/dkg007](https://doi.org/10.1093/jac/dkg007).
- Rosen, Sydney, et al. "Initiating Antiretroviral Therapy for HIV at a Patient's First Clinic Visit: The RapIT Randomized Controlled Trial." *PLOS Medicine*, vol. 13, no. 5, 2016, doi:[10.1371/journal.pmed.1002015](https://doi.org/10.1371/journal.pmed.1002015).
- Mueller, C, et al. "B-Type Natriuretic Peptide in the Evaluation of Acute Dyspnea." *New England Journal of Medicine*, vol. 350, no. 23, 2004, doi:[10.1056/nejm200406033502318](https://doi.org/10.1056/nejm200406033502318).
- Singer, Adam J., et al. "Point-of-Care Testing Reduces Length of Stay in Emergency Department Chest Pain Patients." *Annals of Emergency Medicine*, vol. 45, no. 6, 2005, pp. 587–591., doi:[10.1016/j.annemergmed.2004.11.020](https://doi.org/10.1016/j.annemergmed.2004.11.020).
- Worral, G, et al. "Diagnosing Streptococcal Sore Throat in Adults: Randomized Controlled Trial of in-Office Aids." *Canadian Family Physician*, June 2007.
- Cooke, Jonathan, et al. "Narrative Review of Primary Care Point-of-Care Testing (POCT) and Antibacterial Use in Respiratory Tract Infection (RTI)." *BMJ Open Respiratory Research*, vol. 2, no. 1, 2015, doi:[10.1136/bmjresp-2015-000086](https://doi.org/10.1136/bmjresp-2015-000086).
- Ruffano, L. Ferrante Di, et al. "Assessing the Value of Diagnostic Tests: a Framework for Designing and Evaluating Trials." *BMJ*, vol. 344, 21 Feb. 2012, doi:[10.1136/bmj.e686](https://doi.org/10.1136/bmj.e686).
- Koski, Renee R., and Michael E. Klepser. "A Systematic Review of Rapid Diagnostic Tests for Influenza: Considerations for the Community Pharmacist." *Journal of the American Pharmacists Association*, vol. 57, no. 1, 2016, doi:[10.1016/j.japh.2016.08.018](https://doi.org/10.1016/j.japh.2016.08.018).