Financing the infectious disease service in hospitals: A common public good

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No one loses as much money as the infectious diseases clinical service in hospitals. Infectious disease consultations have lower reimbursement rates compared to other types of consultations. The precarious financing of infectious diseases is related to infectious disease patients, physicians, and health systems.

Patients with infectious diseases have less ability to pay hospitals compared to other patients. They are more likely to have low income, be unemployed, and lack health insurance. Infectious diseases patients often have concomitant social problems (e.g., homelessness, incarceration) that make one less likely to have a bank account and be able to pay hospital bills.[1] Infectious diseases physicians are also responsible for low revenues. Infectious diseases physicians are often at the frontlines of providing clinical services at safety net hospitals, public clinics, and similar clinical settings. In addition, infectious diseases physicians do not have a procedure that generates revenue like other subspeciality physicians. The social justice mission that drives many infectious disease physicians may lose money for hospitals.

Health systems around the world have contributed to the under-funding of infectious diseases. Private equity ownership in the health sector has increased in many countries.[2] A systematic review found that private equity ownership of hospitals decreased costs and sometimes harmed patient outcomes.[3] Hospitals that evaluate physicians based on relative value units may de-prioritize clinical infectious disease services. Innovative solutions are needed to ensure financing of infectious diseases.

All three levels - patient, physician, health systems - provide potential interventions to ensure appropriate financing of infectious diseases. At the individual level, expanding evidence of the clinical impact of infectious diseases may convince hospital leadership to protect these clinical services. At the physician level, collective bargaining and policy advocacy could help protect clinical infectious diseases services. Finally, establishing innovative financing approaches that could help to ensure appropriate support for clinical infectious diseases.

At the individual level, some patients live longer because of receiving clinical care for infectious diseases. Patients with Candida fungemia, Staphylococcus aureus bacteremia, and others have a mortality benefit if they see an infectious diseases physician. Comprehensive antibiotic stewardship programs can reduce length of stay, reduce costs, and generate value for hospital systems. Evidence-based clinical management can catalyze early source control, accelerate diagnostics and therapeutics, and possibly lower health care costs.

At the physician level, many infectious disease physicians have become increasingly vocal in calling for policy changes. For example, academic medical centers have re-negotiated their clinical funding agreements with hospitals to increase compensation for infectious disease physicians. Advocacy is increasingly important to ensure adequate financing of infectious diseases.

Finally, innovative financing could be used to enhance the delivery of infectious diseases services at the system level. For example, the subscription payment model incentivizes pharmaceutical companies to develop antibiotics for resistant infections, removing the relationship between revenues and access to antibiotics.[4] Another example is pay-it-forward

where a person receives a free diagnostic or vaccine along with a community-engaged message, then asks if they would like to donate for others to receive free services.[5] Both examples are only trials and more research is needed.

While other clinical services also lose money for hospitals, infectious diseases services play a key role in terms of generating public health impact, ensuring hospital infection control, addressing antimicrobial resistance, responding to emerging infections, and managing complex cases. Ultimately, hospitals must recognize infectious diseases as a common public good for the health system. More profitable hospital services depend on infectious diseases. A paradigm shift in how we finance and value infectious diseases services is crucial. We must act now to ensure that the vital work of infectious disease physicians is no longer undervalued.

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References

1. WHO. Global Tuberculosis Report, 2022. Geneva, Switzerland. https://www.who.int/teams/global-tuberculosis-programme/tb-reports/global-tuberculosis-report-2022
2. Private Equity Stakeholder Project. Private equity's hospitals in low- and middle-income countries. 2024. https://pestakeholder.org/news/private-equity-is-buying-up-hospitals-in-low-and-middle-income-countries-with-the-help-of-development-finance-institutions/
3. Borsa A, Bejarano G, Ellen M, Bruch JD. Evaluating trends in private equity ownership and impacts on health outcomes, costs, and quality: systematic review. *BMJ* 2023; **382**: e075244.
4. Anderson M, Mossialos E. Incentivising antibiotic research and development: is the UK's subscription payment model part of the solution? *The Lancet Infectious Diseases* 2020; **20**(2): 162-3.
5. Byrne M, Tan RKJ, Wu D, et al. Prosocial Interventions and Health Outcomes: A Systematic Review and Meta-Analysis. *JAMA Netw Open* 2023; **6**(12): e2346789.