

qure.ai

TB Detection with Qure.ai

At Harriet Benson Hospital

Introduction

Since its foundation in 1940 by missionary Elizabeth Mercy Bacon, Harriet Benson Memorial Hospital has been a steadfast beacon of healthcare in Uttar Pradesh's Bundelkhand region. Specialising in maternal and child health, the hospital's 40-bed facility offers vital services including Obstetrics, Gynaecology, Paediatrics, General Medicine, Palliative Care, and Ophthalmology. Committed to its mission, the hospital also spearheads community health initiatives, providing home care services within a 50-kilometre radius of Lalitpur.

Despite its venerable history and dedicated service, Harriet Benson faced modern challenges, particularly in diagnosing and managing tuberculosis (TB) effectively—a situation that called for an innovative solution.



A glimpse of Harriet Benson Memorial Hospital

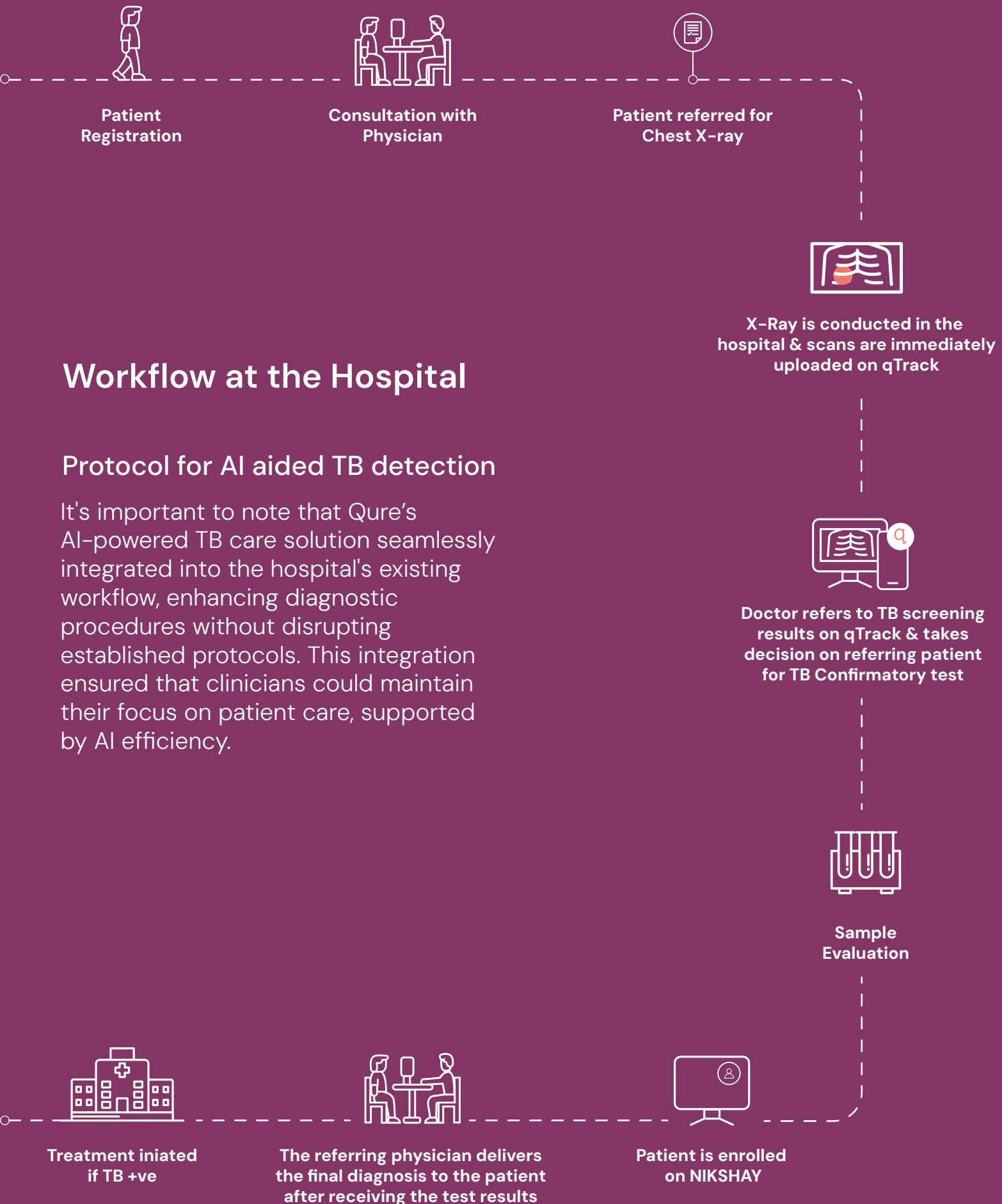
Collaboration with Qure.ai

With a pioneering grant from the India Health Fund (IHF), Qure.ai set out to revolutionise TB diagnosis through its Point of Care, Smartphone-based Chest X-ray Tuberculosis Triage for Analog CXRs, and a web-based solution for Digital CXRs. This initiative empowered Qure to enable instant screening of analog chest X-ray films via smartphone photographs, marking a significant leap in diagnostic capabilities.

In this transformative collaboration, Harriet Benson Hospital integrated Qure's qXR + qTrack system, providing AI-powered pre-read assistance for TB detection, offering a practical solution to complement the hospital's existing healthcare framework. The qTrack system delivered AI analysis results within a minute to the technicians' smartphones, significantly augmenting TB diagnosis and the subsequent initiation of treatment.

The main goal of this collaboration was to utilize Qure.ai's qXR + qTrack solution to enhance the efficiency of TB detection within the hospital's patient population. It offers a practical solution that complements the hospital's existing healthcare framework.





Workflow at the Hospital

Protocol for AI aided TB detection

It's important to note that Qure's AI-powered TB care solution seamlessly integrated into the hospital's existing workflow, enhancing diagnostic procedures without disrupting established protocols. This integration ensured that clinicians could maintain their focus on patient care, supported by AI efficiency.

The Doctor's Verdict: How qure.ai is Reshaping TB management

The implementation of qTrack has significantly improved TB management at the hospital. Quicker diagnosis timelines—now significantly reduced from days to minutes—and the immediate commencement of treatments have contributed to a notable improvement in patient outcomes.

Moreover, this technology proved particularly valuable during the challenging circumstances presented by the COVID-19 pandemic, facilitating an efficient diagnosis process amidst a surge in cases and a limited number of medical practitioners. In the context of TB, the hospital's regular caseload of approximately 3 to 4 TB cases per week has seen expedited diagnosis and intervention, ultimately leading to improved patient outcomes.

Feedback from the medical staff has led to continuous improvements in the system. A key suggestion includes making qTrack more accessible to the hospital's diverse workforce by incorporating support for Hindi and/or other regional languages. This adaptation would further empower the healthcare team and ensure seamless integration of the technology into their daily routines.

Testimonials

Since we are just two doctors, the best part of having a quire is, for me not having to worry about reporting, as the report is generated by our technician, he prints it out, I just need to look at it and I just, you know, glance at the x-ray to make sure it matches and then I don't have to worry much about it. The best part of having these reports generated is time saving and secondly, sometimes it picks up things which I have not.



Quire software was very helpful during covid. The AI really made a difference when the cases were increasing and the number of doctors very less.

Dr. Madhurita Singh,
Harriet Benson Memorial Hospital



The impact of collaboration

300

Patients Screened

46

Potential TB Cases

12

Confirmed TB

By March 28, 2023, the partnership's effect was measurable: 300 patients were screened, with Qure's AI solution suite identifying 46 as potential TB cases. Subsequent sputum tests confirmed 12 of these diagnoses. These patients promptly began Anti-Tuberculosis Treatment (ATT), showcasing the swift and impactful care facilitated by this collaboration.



Conclusion

The strategic alliance between Harriet Benson Memorial Hospital and Qure.ai has set a new standard for TB management and care. By introducing qTrack, the hospital has not only streamlined the diagnostic process but also strengthened its overall capacity to deliver prompt and precise TB treatment. This case study exemplifies the transformative potential of AI in healthcare and underscores the importance of adopting such technologies to improve patient care, even amidst global health challenges like the COVID-19 pandemic. This partnership demonstrates the positive impact of innovative solutions in healthcare, such as AI, and paves the way forward for its adoption at scale.

Funder and Supporter

The implementation of qXR at HB Hospital in Lalitpur, UP was possible due to the funding and support from India Health Fund, a Tata Trusts initiative. HB Hospital is just one of the hospitals from over 130 health facilities from 20 states where qXR for TB diagnosis was implemented as part of the Qure-IHF partnership. As of Jan 2024, over 1,20,000 individuals have been screened as a part of this collaboration of which around 24000 TB presumptive individuals were identified.



Want to know more?

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