

Supporting efficient, effective TB screening programmes

Case Study



The challenge

The Evangelical Hospital Khariar in Odisha, India, faced a similar challenge to many hospitals in remote, harder-to-reach communities – the need to share high-quality medical images rapidly to aid identification and treatment of tuberculosis (TB) among its patients.

The hospital was already working with Qure.ai, an artificial intelligence (AI) solution provider, to help identify cases of TB using its algorithm for analysing chest X-rays. But it needed a more efficient, effective way of transferring the digital images from the scanning equipment to Qure.ai and then be able to securely share, store and communicate about those images with colleagues to support the TB screening programme and move patients quickly through the diagnostic process.



Solution

Feedback Medical introduced a package of solutions to support the hospital's TB screening programme. Feedback Connect (formerly BleepaBox), a small portable workstation that connects to imaging machines, transfers the images taken from the X-ray machine and automatically pushes them to Bleepa® over a mobile network. Bleepa®, our clinical-grade imaging communications platform, then enables the hospital's clinicians to share, annotate and comment on the X-rays.

Bleepa® also connects with Qure.ai's Al platform so the images can be processed and interpreted, returning the results within a matter of minutes. This helps the radiologist to triage the scan and flag any abnormalities which would indicate a TB diagnosis.

The images are stored in Feedback Medical's secure cloud architecture – CareLocker – to enable access to the images from multiple locations. The hospital clinicians can share any scans within Bleepa® for further specialist advice and guidance, where needed, for any more complex cases.

The pilot is also delivered in partnership with Amazon Web Services, which supports the cloud services to the hospital with its technology and contributed to funding via its Diagnostic Development Initiative.

"Since we started using Feedback Connect at our hospital a few months ago, it has helped us with quicker TB screening and identification. Once the X-ray is done, it is scanned through the Allinked platform, Qure.ai, which evaluates it and sends a structured report and medical-grade images to the Bleepa clinician app on my mobile. I can check the report on my phone and give my opinion quickly. Through this technology, we have been able to save time and start early treatment for TB patients."

Dr Nibedita Paramanik Medical Director

Conclusion

The installation of the Bleepa® solutions on site has led to a more efficient, streamlined process for identifying patients that indicate positive results for TB.

Nearly 600 patients were screened in the first five months following the launch of the TB screening pilot with the Evangelical Hospital Khariar in March 2022.

Of the 587 patients scanned at the hospital from March to August 2022, 21% came back as indicating positive for signs of TB and were admitted to treatment pathways.

This means those patients identified can begin treatment pathways immediately without diagnostic delays.

With <u>data</u>¹ from the The Foundation for Medical Research, Mumbai, in 2019 suggesting an average delay of 31 days related to diagnosis for TB, cutting this process down to a matter of minutes can significantly reduce overall delays in treatment.

"Feedback Connect, which was installed at our hospital a few months ago, has helped us provide quicker identification of TB patients. The box is connected to the X-ray machine in our radiology department and a patient's chest X-ray is sent directly from here to my Bleepa clinician mobile app. I can check it immediately, provide a prompt opinion, and start the patient's treatment without wasting any time."

Dr Cynthia Sarah Mathew Hospital Director



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^{1 &#}x27;Such a long journey: What health seeking pathways of patients with drug resistant tuberculosis in Mumbai tell us', January 2019, Auth: Jamia Hamdard, The Foundation for Medical Research, Worli, Mumbai, India