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WHO Evaluated | FDA Approved | CE 0123 Cleared

Every Life Matters

Prison Health Screening

Prisons and correctional facilities worldwide are high-risk settings for TB and other infectious diseases due to overcrowding, poor ventilation, improper sanitation, and lack of resources.

Co-morbidities in this vulnerable and disadvantaged segment, along with frequent diagnosis and treatment delays and interruptions, make prisons "institutional amplifiers of TB".

11 to 81 times

Higher TB incidence rate among prisoners than general population

Why Prison Health Matters

In the journey to eliminate TB from the world, it is important to understand that no place is safe from TB, unless the last mile has been taken care of.

Qure.ai partnered with Health Through Walls (HtW) to pilot an AI-based chest X-ray solution for TB screening in prisons in Haiti, one of the world's most vulnerable countries. The program's success led to scaling up to the Central African Republic (CAR) and Mozambique.

Work with Health Through Walls (HtW)

Challenge: In 2022, the introduction of AI to interpret digital X-ray images significantly enhanced the protocols. Previously, due to limitations in engaging radiologists in Haiti, images were emailed to a retired radiologist in the United States who volunteered to interpret over ***60,000*** images since 2012. This process was unsustainable and often encountered delays, with turnaround times commonly taking several days, interrupted by various issues, creating additional work and challenges for staff.

The AI-based solution has screened 15,000 individuals across prison sites in Haiti, CAR, and Mozambique. Around 1500 individuals were identified as presumptive TB and were isolated immediately.

Qure.ai's project with HtW: In 2022, **5000+** incarcerated individuals were screened for TB across 5 Haitian prisons. 852 persons were identified by AI as having abnormal X-ray findings. The immediate availability of X-ray results allowed for further diagnostic testing and temporary patient isolation, reducing the turnaround time for identifying presumptive TB from one week to less than a minute. This focused medical professionals efforts on disease detection and case confirmation.

Out of the **852 abnormal exams, 544 (64%) were subsequently confirmed to have active tuberculosis** through sputum testing. Health Through Walls, with the prison system's endorsement, enrolled each confirmed case in a treatment plan to receive appropriate care. The remaining individuals were referred for treatment of other diagnosed lung conditions.

No. of individuals screened	*No. of individuals detected with abnormal findings*	*No. of individuals with active TB*
5000+	852 persons	544 persons

"Our partnership is a game-changer! Together, Health through Walls and Qure.ai are bringing Artificial Intelligence capability to aid the diagnosis of TB in places of detention in low resource countries. This collaboration is what technological innovation looks like when applied to new case finding in justice involved populations."

Ivan Calder
CEO,
Health through Walls

"The use of AI applications developed by Qure.ai for the automated reading of chest X-rays allows us in Haiti and the Central African Republic to detect many more cases of tuberculosis in vulnerable populations at high risk. Low-income countries would benefit from using this Artificial Intelligence solution. It's a long-term investment!"

Dr. Margaret Bury
Program Manager,
Health through Walls

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AI Implementation

CXR screening for incarcerated individuals at entry, exit and once in a year

All AI TB presumptive individuals are subject to Microbiological test confirmation (GXPert)

AI based CXR screening-qXR flags 30+ abnormalities on CXR including radiological signs of TB

All confirmed cases are isolated and put on treatment

Set up a Core Project Implementation Team: TB treatment coordinator, IT team, X-Ray machine technician and a Data Entry Operator

The CXR machines were deployed with qXR for automated CXR interpretation based on tech specifications

Training and Onboarding session with Qure.ai

Regular engagement with Qure team for customization, solving implementation challenges and performance review

CHALLENGES IN IMPLEMENTATION:
Internet connectivity issues, program disruptions, and often severe unrest and security issues in Haiti

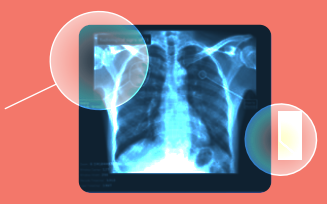
qXR, a CE MDR Class IIb certified and WHO-recommended AI tool, detects over 35 lung abnormalities, including TB and lung cancer, in under a minute, accelerating diagnosis, optimizing care pathways, and improving patient outcomes in resource-limited settings.

In incarcerated settings, qXR supports:

- TB Screening Programs: Systematic, intensified, and active screening for TB presumptive cases, including surveillance for active TB disease and sub-clinical TB.
- Integrated Lung Health Screening: Comprehensive screening for a wide array of lung abnormalities, including TB, pneumonia, lung cancer, and COPD.
- Care pathway management: Integration with the Qure app, a workflow management platform, bolsters health systems by supporting integrated disease management.

AI can help fill screening gap in prisons

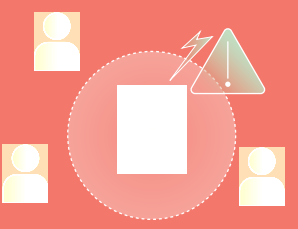
Lack of sufficient radiologists in incarcerated settings



qXR can offer faster and accurate interpretation of CXRs,

Early detection of disease

Identify, isolate and treat



Immediate isolation of those who are presumptive TB,

Reduce spread of TB within prison,

Reduce transmission from prison to communities

Qure.ai by numbers

Lives Touched
20 Million+
Overall

Present in
90+
Countries

Algorithms Trained on
8 Million+
Scans

Sites
2700+