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Biggest Healthcare Problems Facing LMICs



Complex Trauma

Limited advanced surgical expertise for complex blast injuries



Training Deficit

Limited opportunities for continuing education and skill development



Diagnostic Limitations

Lack of diagnostic modalities like pathology and advanced imaging



Multidisciplinary Gap

Lack of experts in some specialties which hinders the implementation of multidisciplinary coordinated team-based approaches to complex cases



Connectivity Issues

Internet availability limited to few hours daily with low average speeds



Device Limitations

Shortage of computing devices, solutions must work on basic smartphones



Power Restrictions

Electricity available almost only in hospitals or medical points



Data Security Concerns

Patient privacy must be maintained despite infrastructure challenges

The Solution: Bridge the global healthcare expertise gap by connecting verified specialists with clinicians in developing countries through a secure, low-bandwidth tele-mentoring platform.

Proposed Prototype for Potential Minimal Viable Product (MVP)

A mobile application is developed for low-cost hardware. Specialists are authenticated via a three-step process: GMC number retrieval, official documentation upload, and facial recognition. The platform enables three types of virtual clinics: 1) on-call emergency consultations, where available specialists are pinged until one accepts; 2) scheduled multidisciplinary team (MDT) meetings for complex cases; and 3) routine consultations. An asynchronous forum allows LMIC clinicians to post anonymised, case-relevant information to request expert opinions, accommodating minimal internet connectivity. Specialist profiles are auto-populated from the GMC register, and they manage their availability for on-call duties.

لوحة التحكم

متصل

مرحباً، Dr. Ahmad Hassan

احصل على استشارات طبية من أطباء متخصصين في المملكة المتحدة

طلب استشارة طارئة

12 الحالات النشطة

2 المتخصصون المتاحون

15m متوسط وقت الاستجابة

156 الحالات المحولة

النشاطات الأخيرة

عرض الكل

Complex cardiac case - 45yo male
cardiology 20/01/2025 3

Pediatric respiratory distress

لوحة منتدى طارى MDT ملف

Case Details

Online

Case Details

critical in progress cardiology

Case Status Management

resolved

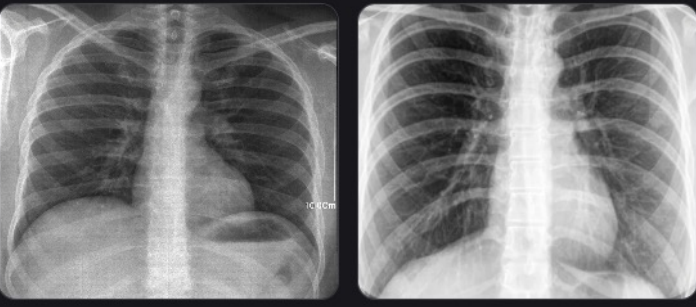
Reason for change (optional)

Explain the reason for status change...

Complex cardiac case - 45yo male

45-year-old male presenting with chest pain and elevated troponins. ECG shows ST elevation in leads II, III, aVF. Patient has history of diabetes and hypertension. Blood pressure 90/60, HR 110. Considering STEMI but limited catheterization facilities available.

Attached Images:

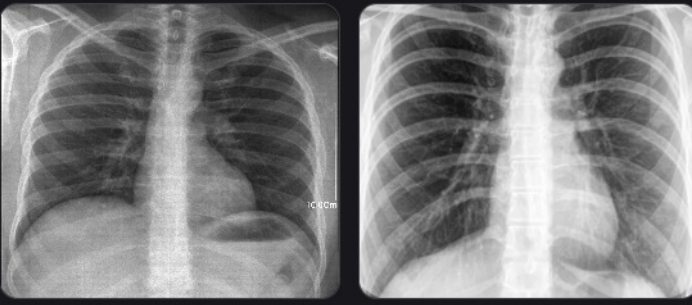


Dashboard Forum Emergency MDT Profile

Case Details

Online

Attached Images:



AI Summary

CRITICAL priority cardiology case. Patient: 45 male. Main issue: Complex cardiac case - 45yo male. Vital signs recorded. 2 test results available. Requires specialist consultation.

20/01/2025

23 5

Vital Signs

Temperature 36.8°C

Heart Rate 110 bpm

Blood Pressure 90/60

O2 Saturation 94%

Pain Scale 9/10

Test Results

Troponin I

Result: 25.6 ng/mL

Dashboard Forum Emergency MDT Profile

Simple, Secure, and Built for Impact

1

Register & Verify

Securely verify your GMC credentials in minutes.

2

Connect on Your Terms

Set your availability for on-call pings, MDTs, or forum consults.

3

Guide and Save Lives

Provide life-saving guidance through our secure, low-bandwidth platform.

Platform Features



Emergency Consultation

24/7 instant access to UK specialists for critical emergencies.



Secure Video Calls

Encrypted video and chat between LMIC clinicians and UK experts.



Medical Records

Secure patient data documentation and medical record management.



Offline Access

Works offline with limited internet - designed for connectivity challenges in LMICs.

End-to-End Encrypted HIPAA Compliant Globally Accessible Real-time Sync

Results

The output is a functional, secure telecare platform establishing a network of vetted clinical specialists. It provides LMIC clinicians with on-demand access to emergency support, collaborative case management tools, and a repository of expert advice, all tailored for resource-constrained environments. It offers bi-directional, instantaneous translation and live video conferencing. This could be further expanded to offering surgical expertise and real-time guidance in complex procedures.

Conclusion

By leveraging technology to overcome geographical and economic barriers, it democratizes access to specialist knowledge, empowers local healthcare providers, and has the potential to significantly enhance the safety and quality of healthcare in underserved regions worldwide. However, we require collaboration with healthcare professionals who are willing to assist in this initiative.

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Mr Omar Shaur Choudhry
PhD Candidate, CDT AI-Medical,
School of Computer Science,
University of Leeds, Leeds, United Kingdom
O.Choudhry@leeds.ac.uk

