

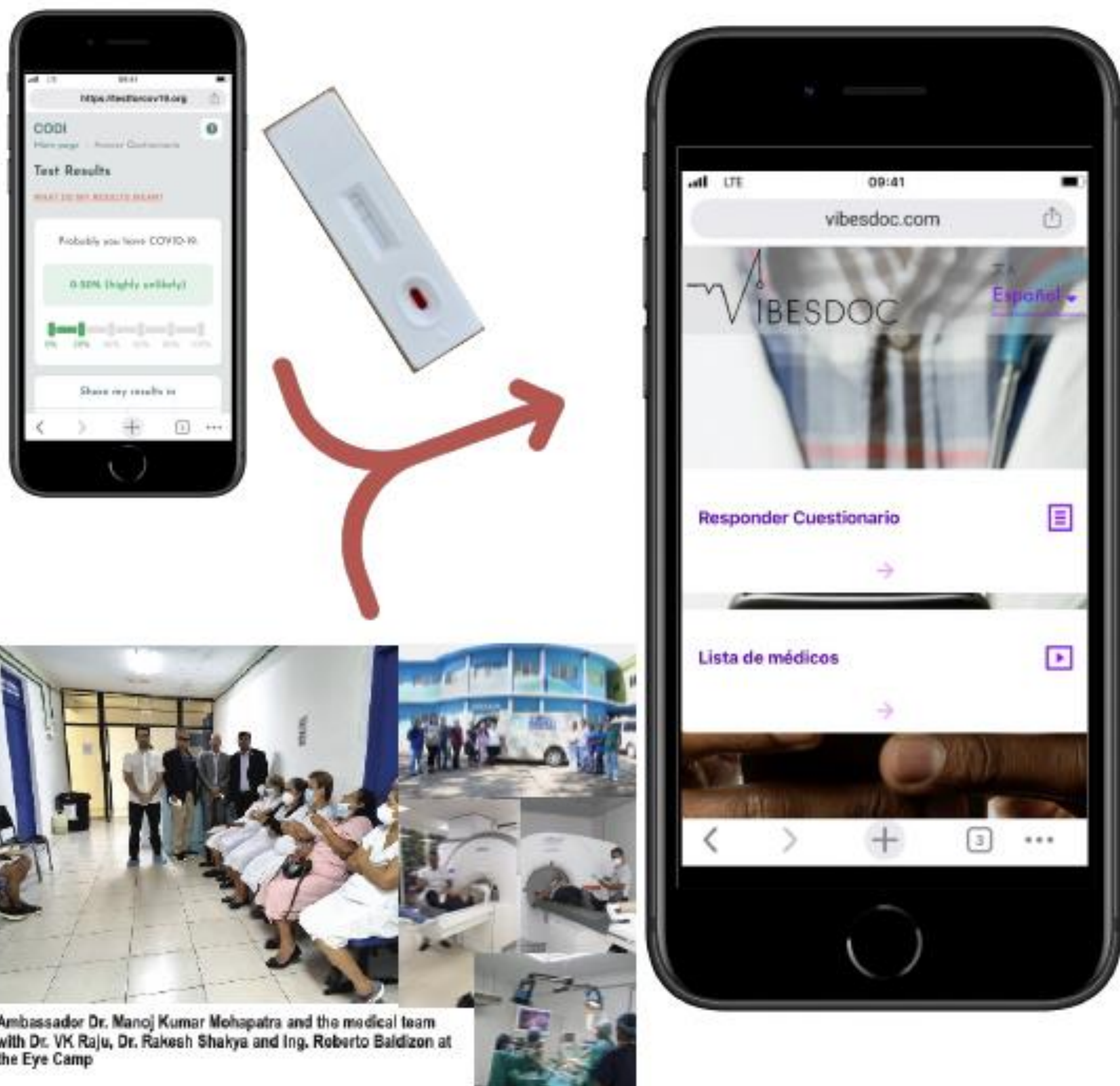
AI-Driven Triage and Antibiotic Verification to Support Equitable Access and Safer Prescriptions in LMICs

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Introduction

Antimicrobial resistance (AMR) poses a significant public health threat, with an estimated 39 million deaths projected over the next 25 years—disproportionately affecting low- and middle-income countries (LMICs). Vibesdoc is a digital health solution that empowers patients and community health workers in LMICs by offering an AI-based triage tool that provides symptom analysis, risk scoring, and an integrated antibiotic verification module. Launched initially as a COVID-19 self-assessment tool, Vibesdoc has now evolved to help address inappropriate and substandard antibiotic use at the community level.



Ambassador Dr. Manoj Kumar Mohapatra and the medical team with Dr. VK Raju, Dr. Rakesh Shukla and Ing. Roberto Baldizon at the Eye Camp

Methods

- **Triage Platform:** Users complete a structured symptom survey via mobile or web.
- **AI Analysis:** The tool generates condition probabilities using trained models based on real-world data.
- **Rapid Test Integration:** Results can be entered and used to refine predictions.
- **Antibiotic Verification (in development):** Integration with the SMART-CDSS API allows the tool to check if the prescribed antibiotic is clinically appropriate and aligns with local guidelines.
- **Deployment:** Pilots were conducted in Guatemala; expansion was planned for Mexico and India.

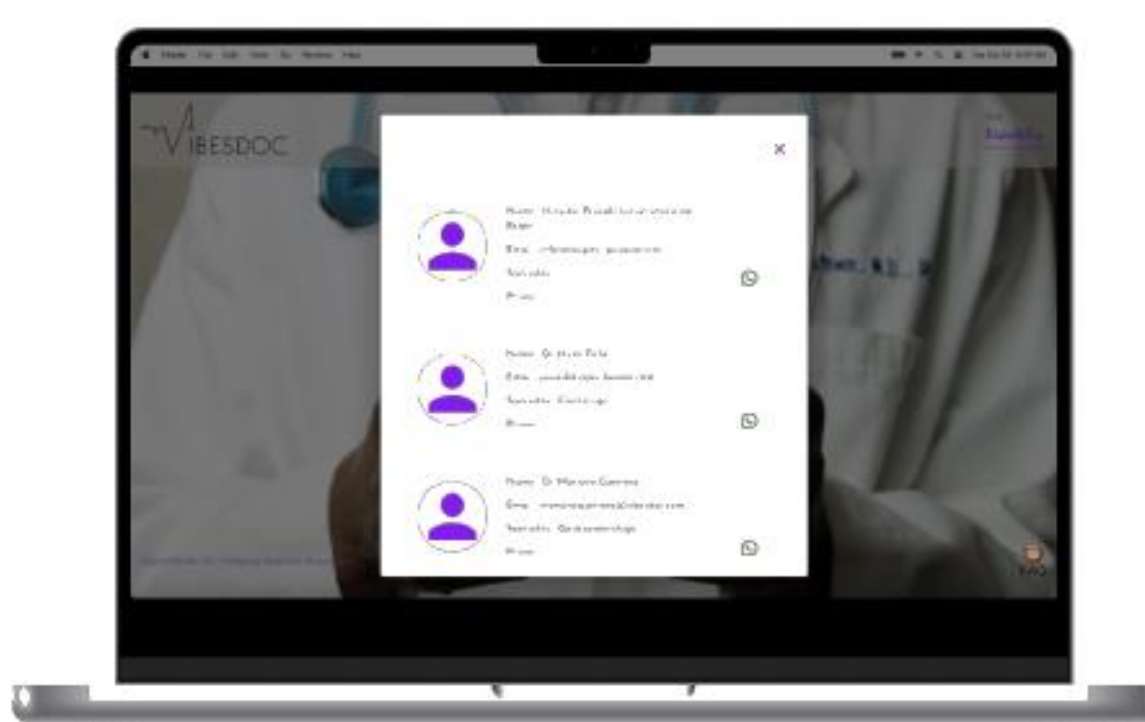
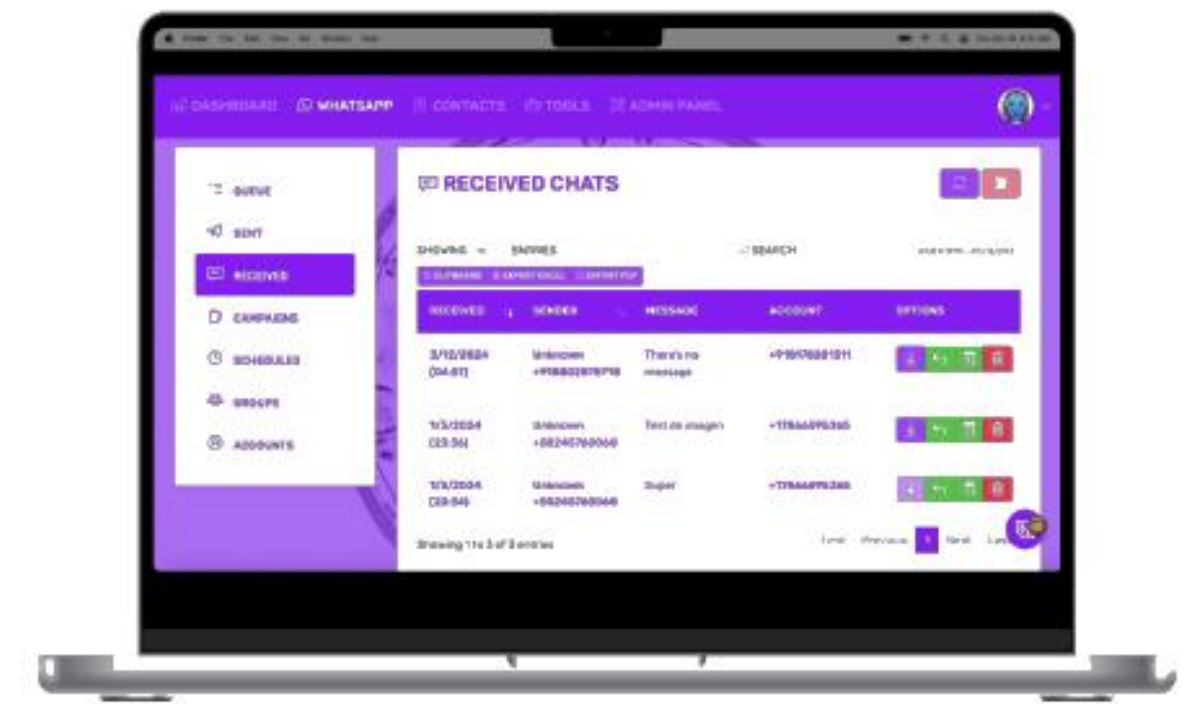
Results

- Improved accuracy of Covid Lateral Flow Assays.
- Hundreds of users accessed the triage tool during COVID-19 pilots.
- Reduction in unnecessary clinical visits reported by users.
- Early testing of the antibiotic verification module shows promise for catching mismatched prescriptions.
- User feedback indicates high acceptability among frontline health workers and patients.

IMPACT ON PATIENTS

Vibesdoc leverages data, technology, and collaboration to revolutionize healthcare access and outcomes in Low- and Middle-Income Countries (LMICs).

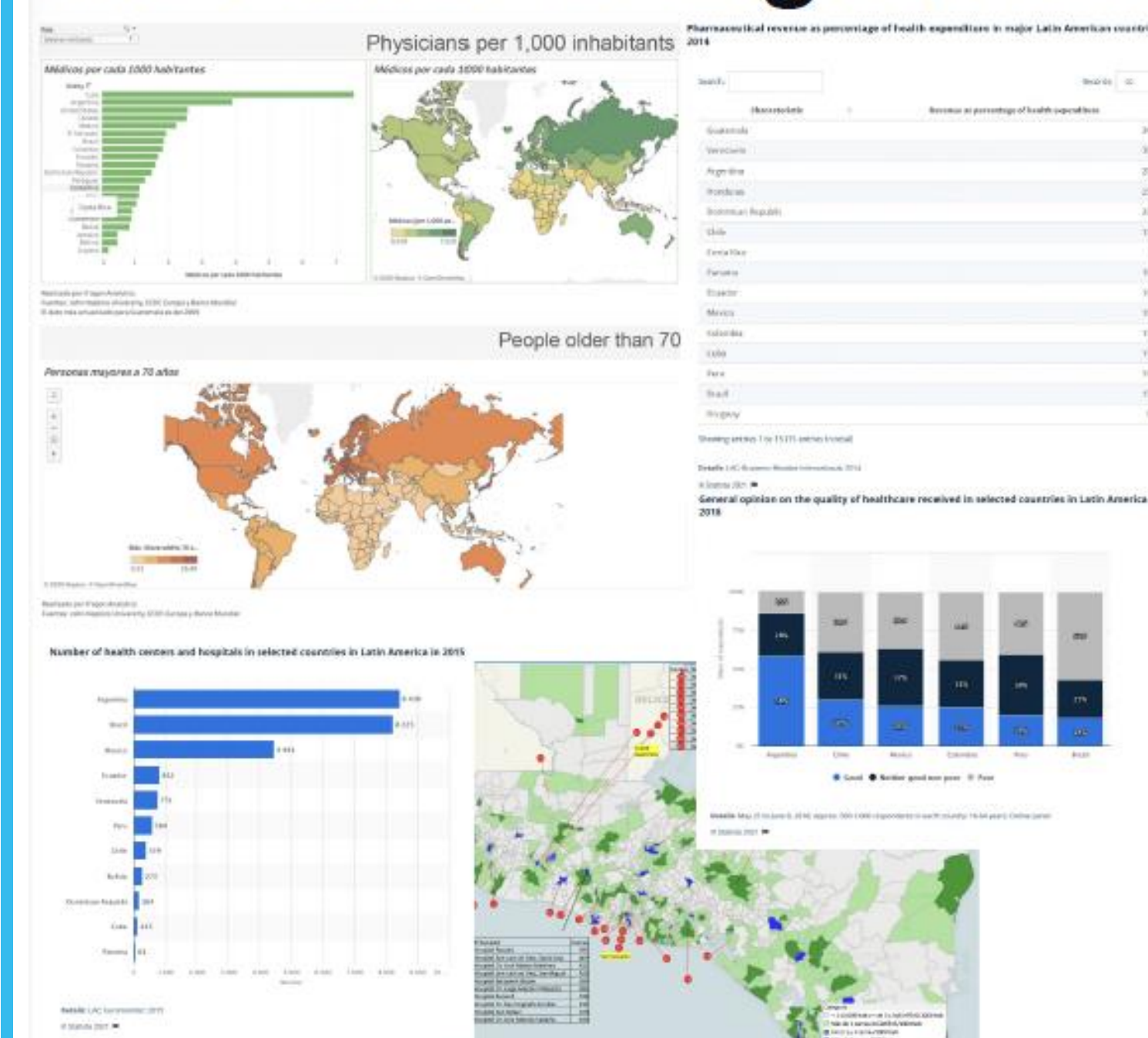
- **Improved Patient Care:** Efficiently connects patients with healthcare providers, offering timely diagnoses, personalized treatment plans, and enhanced communication for better health outcomes.
- **Bridging Healthcare Disparities:** Vibesdoc is crucial in bridging healthcare disparities in underserved LMIC communities through personalized medicine and preventive healthcare.
- **Inclusive Platform:** This platform ensures equal access to quality healthcare services for individuals in remote or marginalized areas, reducing healthcare access disparities.



IMPACT ON PRACTITIONERS
Vibesdoc empowers healthcare practitioners in LMICs to deliver quality care efficiently and effectively.

- **Streamlined Platform:** Enhances patient management, communication, and insights for prompt diagnosis and treatment.
- **Accessible Healthcare Solutions:** Vibesdoc provides tools for cost-effective care without compromising quality, focusing on underserved communities.
- **Leveraging Data and Technology:** Vibesdoc utilizes data, technology, and interdisciplinary collaboration to enhance healthcare delivery in LMICs.

Revolutionizing Healthcare in LMICs: Harnessing the Power of Digital Health



The Opportunity:

- Mobile technology can revolutionize healthcare access in low- and middle-income countries (LMICs).

The Challenges:

- Infrastructure limitations, internet access, and data privacy concerns must be addressed.
- Sustainable funding models and digital literacy are crucial for success.

The Call to Action:

- We need continued investment in digital health initiatives to bridge the healthcare gap in LMICs.
- Imagine SMS/Whatsapp health reminders and mobile chronic disease management!

Empowering Healthcare:

- Platforms like Vibesdoc empower healthcare workers and patients.
- Patients take a more active role in their health journey.

Building a Sustainable Future:

- Collaboration among stakeholders (governments, NGOs, etc.) is critical.
- Let's prioritize investment and innovation for equitable healthcare access in LMICs!

Discussion

Triage tools alone can improve patient decision-making, but clinical risk persists without verifying the following steps—especially treatment—. In LMICs, antibiotics are often dispensed without adequate diagnostics. Vibesdoc's evolving model bridges symptom-based AI triage with treatment verification to reduce AMR risks and improve trust in primary care.

Conclusions

Vibesdoc provides an innovative, scalable, community-ready model to support diagnostic triage and antibiotic reliability in LMICs. It empowers patients with tools that would otherwise be out of reach and aligns directly with One Health's goals by reducing antibiotic misuse through low-cost, data-driven approaches.



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