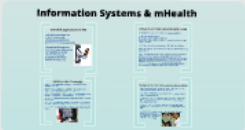


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Introduction Thecasesolutions.com

Global Health Context

Health in the Middle East

Health in the Pacific

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The Role of Technology in Disaster Relief
and Emergency Response Efforts

Information Systems & mHealth

mHealth Applications in MS

mHealth and eHealth Applications in Kenya

MSM for Life - Tanzania

The Impact of Health Information Systems (HIS)

Develop a tech solution for the following...

1. Road traffic safety intervention
2. Cardiovascular Disease in rural populations
3. HIV transmission in adolescents
4. Occupational injuries in migrant workers

http://www.pallevywhere.com/multiple_choice_polls/qs4kz7g03d2hjd

Health System Challenges to Scaling Up mHealth

Based on an unpublished qualitative case study in Bangladesh, interviewed key stakeholders in the Bangladesh both the public and private health sectors such as the Directorate General of Family Planning, DGHS, ICF, UNICEF, health workers, and the private sector. See the Scaling Up mHealth Program, 2014, USAID Bangladesh, Malaria Project - Save the Children, James M. Kiser, School of Public Health, Michigan State University.

- Infrastructure
- Usability
- Literacy
- Cultural change
- Lack of evidence
- Political Landscape

Mobile Financing

Background

Mobile Financing in the Philippines

Introduction

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Global Health Context

- Innovations in health derive mainly from the technologies applied to other fields
 - m-health
 - e-health
- Health systems in LMICs still face significant challenges in providing high-quality, affordable and equitable care
- In response, donors, programmers, and policy-makers have increasingly turned towards e-health and m-health
- LMICs, however, sometimes do not have access to the new devices to improve the health of their population

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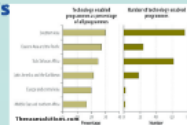
Global Health Context

- **Thecasesolutions.com**
- Despite increased interest, in some LMICs the field is still relatively young
- Few programs have been scaled-up
- Implementation has largely been fragmented and uncoordinated
- Minimal literature on the actual landscape of e-health programs
- Literature primarily consists of articles describing single uses of technology in health care delivery and recommendations for use

The Role of the WHO

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- In 2011, WHO set a "Compendium of new and emerging technologies that address global health concerns"
- Intended to encourage dialogue between the producers and the users and foster the production of technologies which can be affordable in LMICs



mHealth in the Media

Thecasesolutions.com



<http://www.colbertnation.com/the-colbert-report-videos/424776/march-26-2013/eric-topol>

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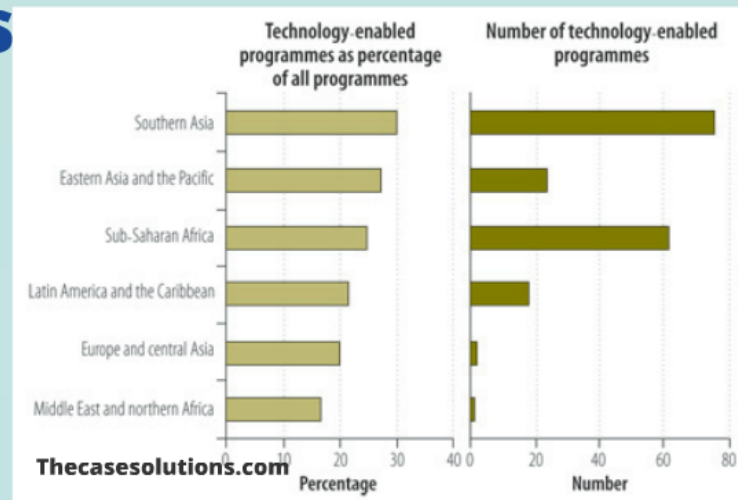
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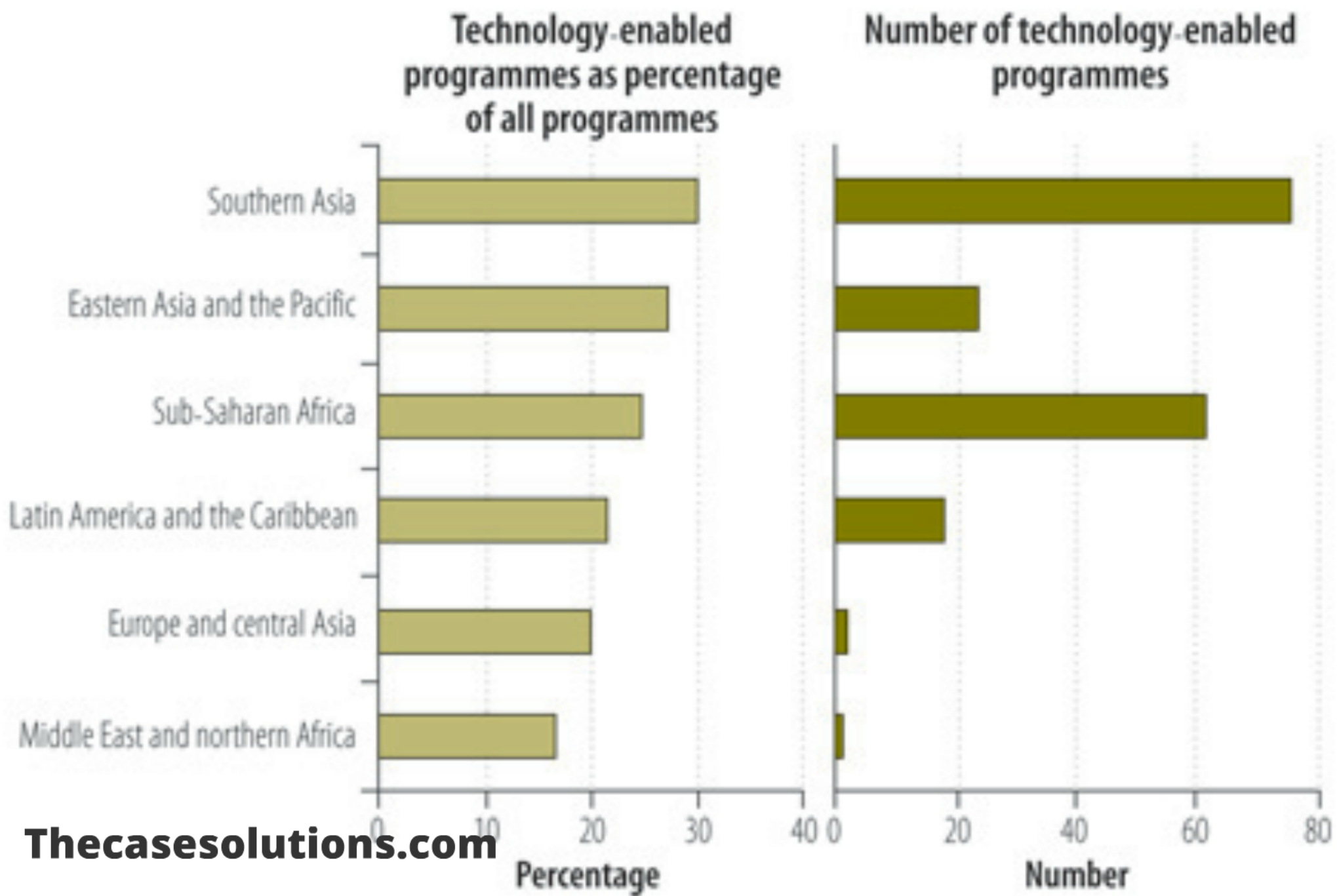
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The Role of Technology in Disaster Relief and Emergency Response Efforts

Crowd-Sourcing Crisis Information in Disaster-Affected Haiti: Ushahidi

- First used in Kenya in 2008
- Provides a way for volunteers to collect information from text messages, blog posts, videos, phone calls, and pictures, which are then mapped in real time
- The end result is a crisis map that provides humanitarian actors on the ground an overview of the situation
- Even in Haiti, where technology is sketchy at best, it proved effective

Ushahidi

- 1st time open-source platform technology used to respond to a disaster of this scale
- Set up two hours after the Jan. 2010 earthquake
- Short code created for messages and spread via local and national radio stations
- Individuals tested information based on firsthand accounts of:
 - Medical emergencies,
 - Trapped persons, and
 - Specific needs, such as food and water
- Volunteers mapped the GPS coordinates and provided the information to rescue teams on the ground
 - 4,635 volunteers translated 35,584 messages, resulting in 3,516 events mapped on Ushahidi



Crisis Mapping in Post-Earthquake Haiti

- Still remains a number of unanswered questions about the potential of Ushahidi in disaster response
- However, it undoubtedly changed the public health practice and research in disaster and humanitarian emergencies
- Specifically, it has gained a tremendous momentum among women's rights organizations in Haiti and beyond
- Example: Ayiti SMS SOS
 - In the absence of a formal centralized system for recording cases, uses Ushahidi to document and map incidents of violence
 - Reports received via text message
 - Individual receives an immediate response and incident reports are forwarded to partner organization for follow-up if necessary
 - Operational in 50 camps managed, reaching ~150,000 people

Attacks on Health Workers

- During recent uprising in Bahrain, Syria and Libya, security forces obstructed access to health facilities; harassed, arrested, and prosecuted medical personnel
- In Ciudad Juarez, Mexico, criminal organizations have killed and abducted health workers and interfered with patient-care for decades. Consequently, doctors and nurses have fled and 60% of the city's clinics have closed
- Assaults like this have long been part of the landscape of armed and civil conflict
- So, why hasn't much been done?
 - Dearth of regular reporting on the frequency and impacts of the assaults
 - Absence of accountability mechanisms for perpetrators
- This has allowed these attacks to continue without impunity

Existing Evidence

- HR organizations occasionally write reports on attacks on health care, but there is no international mechanism for systematic monitoring
- Research on intermediate and longer-term impacts on access to and quality of care is limited, because relevant data is hard to obtain
 - Connection between attacks on facilities and health worker migration?
 - Impact of infrastructure distribution of health care worker flight on access to essential services?
- In 2011, ICRC published the first study to identify incidences of violence across multiple states (16 countries, two-year period)
 - 655 discrete incidences of violence or threats leading to the death or wounding of 1,800+ people, including:
 - 463 damaged health facilities
 - 200 attacks on medical vehicles or personnel on route to a facility
- Likely a significant underestimate - compiled from Humanitarian organizations and on media accounts

Source: Human Rights Council and Human Rights Watch, "Responsibility for Protection of Health Workers and Facilities in Armed Conflict" (Geneva, 2011), p. 105 (links to other Human Rights Watch reports).

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2012 and Beyond: How Technology Plays a Role

- Began with a U.S. State Department initiative
 - Embassies instructed to seek information about attacks on or obstruction of health care services for inclusion in its annual country reports
- Important step, but insufficient to fill documentation gap, which requires systematic reporting
- In Jan. 2012, WHO Director acknowledged the problem as a "challenge to the global health community" and tasked the WHO with the responsibility of collecting and reporting data on attacks during complex humanitarian emergencies

2012 and Beyond: How Technology Plays a Role

- Current online databases exist, but none that utilize mobile technology
- Mairus: Humanitarian Rights Bulletin System
 - Enables grassroots NGOs to create a searchable and encrypted database on an off-site server
 - Easy to use as email, can run on an inexpensive computer
 - Does not require a constant connection to the internet
 - Secure - records are encrypted, stored securely at a remote site, backed up to multiple locations and protected by a unique password
- Challenges?
 - Cost
 - Installation
 - Languages
 - Ease of Uptake
 - SECURITY!

2012 and Beyond: The Role of JHSPH

The Center for Health and Human Rights is developing a mobile data collection platform to document these attacks

Team is in the process of finalizing a draft instrument

Utilizing a system like KoboToolbox or MagPI, field staff will be able to collect data on a mobile device and transfer it to a computer for rapid analysis

In partnership with Backpack Health Workers, the technology will be piloted in Burma in summer 2013



A Recent Technological Innovation to Protect Aid Workers: Smart Bracelets

- Developed by the Civil Rights Defenders
- Named after Natalia Estemirova, a human rights defender who was murdered within 24 hours of being kidnapped in 2009
- Bracelet features both GPS and cellular technology and can be activated either manually or if forcibly removed
- It then sends out an alert signal to the CRD's headquarters in Stockholm as well as nearby aid workers and law enforcement
- Includes a time stamp and the location based on mobile phone triangulation
 - Utilizes social media (Twitter, Facebook, Email) to then send out predetermined messages and recommended courses of action to those who sign on to the project
- Hope is that it will enable a quick response and draw widespread public attention and pressure
- Small-scale project: Plans to distribute 55 by 2014

