

Information Therapy and Disparities

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Bottom Line

Racial and Ethnic Disparities
are an undeniable reality

Bottom Line

There is no single cause.

Bottom Line

Disparities result from *complex interactions* of many factors that act simultaneously and often cooperatively at the individual, group and societal levels over time.

On one Hand

A comprehensive understanding of the causes will require large and complex studies that yield exceedingly large and diverse data sets.

Require enhanced reliance on computers and IT

On the other Hand

Part of the solution will be developing tools which enable us to prevent disparate care, inequitable social conditions and better address those disparities that already exist.

Solutions

Health Information Technologies and
Information & Communication Technologies
offer the promise
of helping us achieve this goal!

Bottom Line

Recent advances in the computer and information sciences have led to absolute revolutions in medicine and clinical research

NEJM 2006

Bottom Line

It could do the same for
Disparities Interventions and
Disparities research!

Barriers

Access

Ownership

Connections

Disability

Barriers

Utilization

Duration of use

Type of technology/interface

Barriers

Cultural Factors

Health Seeking Norms

Family Power Differentials

Socio-cultural Norms

Barriers

Communication

Language Dominance

Literacy and Educational Level

Provider/HC System Trust

Barriers

Privacy & Security

Ownership/Autonomy/Control
Collateral Utilization of Information

Barriers

Design

Human Factors Design

Interaction Design

User Centered Design Approach

Tip of the iceberg

Health Information Exchange
Electronic Medical Records
Clinical Physician Order Entry
Physician/Practice Profiling
Surveillance Systems
e-consultation
Telemedicine

Potential Strategies & Solutions

“Bring Technology to the people”

Interactive Health TV
Smart Phones, PDA's
Game Console
Free Public WiFi
CHTW

Potential Solutions

Community Based Information Systems

LifeGuard ®

The Future

- » RFID
- » Mesh networks
- » WiMax
- » Nanotechnology

Future

- Human to Human (H2H) connectivity will enable providers and healthcare systems to stay in audio and visual contact as needed, whoever you are, where ever you live.
 - » Hospital
 - » Home
 - » Homeless

The Future

- Human to Thing (H2T) connectivity will enable both providers and patients to know about the health status of individuals and populations at any time, in real time
 - » Heart monitors
 - » Asthma event risk monitors
 - » Gait and Stability monitors
 - » Disparity monitors

The Future

- Thing to Thing (T2T) connectivity in the absence of human involvement will mean the development of “intelligent devices” that can make decisions and do things independent of the “human element”
 - » Smart Jackets
 - » Insulin phones
 - » “CABG equalizer”

The Future

- In this world
 - » Clinicians and researchers know and understand how all social, environmental and biological factors that collectively contribute to ill health
 - » Health risks are managed before they become diseases and before patients ever need to go to the hospital

The Future

- In this world
 - » Health interventions are delivered via a variety of formats (web, game console, TV, cell phone, PDA's etc)
 - » The efficacy of traditional interventions is enhanced via technological adjuncts to Tx or care

The Future

- In this world
 - » “Clinical” interventions can be delivered anywhere and at any time as needed.
 - » A variety of intervention genres enable exquisite customization and tailoring

The Future

- In this world
 - » healthcare is proactive not reactive
 - » Patients don't delay seeking care
 - » Medical errors rarely made
 - » Health information is always accessible in both provider and patient centric forms

Ix

- The right information
- Available at the right time
- In a form that is right for the patient

To successfully address Disparities

- Think differently
- Think beyond historic assumptions

Beyond Ix Assumptions

- There are many different “Right Times”
 - Critical decisions not always made in the MD’s office
- Ix needs to be available
 - **Whenever** people are ready to make health decisions
 - **Where ever** they make the decision

Beyond Ix Assumptions

- There are many different ways to provide Information (Ix)
 - Print (not always the best way)
 - Oral/Audio
 - Web based /Computer
 - Television
 - Games
 - Video gaming
 - virtual reality gaming (second life)

Beyond Ix Assumptions

- There are many different forms of information
 - Text based information
 - Audio information
 - Video/Graphic information
- Text is not the only form of information
- Text may not always be best for everyone

Beyond Ix Assumptions

Technology may provide amazing opportunities to deliver the best information for each patient, whenever the patient is making health decisions, in the most appropriate format for each patient, using whatever devices or mechanisms are available to each patient.

The Future

- Over time, there exists real potential to make significant impact towards the goal of reducing and eliminating disparities in health care access, utilization and outcomes.
- Disparities in health status could similarly also be affected

eHealth Solutions for Healthcare Disparities

Edited by Michael Christopher Gibbons, MD, MPH

Johns Hopkins Urban Health Institute, Baltimore

Parallelizing emerging trends in cyber-health technology, concerns are mounting about racial, ethnic, disparities in health care utilization and outcomes. *eHealth Solutions for Health Care Disparities* brings these concerns together, challenging readers to use, promote, and develop new technology-based methods for closing these gaps. Edited by a leading urban health advocate and featuring 16 expert contributions, the book combines cyber-strategies with the greatest potential to reduce disease, equate care, improve service delivery and assure better outcomes for all.

Chapters go well beyond the possibilities of the Electronic Medical Record to discuss emerging roles for information technology in promoting healthier behavior changes (e.g., smoking, weight loss, smoking cessation), disease prevention (e.g., cancer, HIV), and healthcare utilization, patient education and medicine compliance. The rise of e-Patients and the transformation of the doctor-patient relationship are also discussed. Opportunities for Web based products and interventions are explored in terms of tracking disparities, improving healthcare utilization and health outcomes, reducing disparities and monitoring trends among patients, whether they have internet capabilities or not.

Among the book's highlights:

- Why health care gaps still exist: individual, provider, and systemic factors.
- What information technology can bring to health care services.
- Current strategies in health, public health informatics, and medical informatics.
- Technological disparities, and what can be done to reduce them.
- New paradigms in disparity research.
- The potential for eHealth in health care policy.

For public health professionals, health care administrators and informaticians as well as graduate students in health behavior, health promotion, and social epidemiology, *eHealth Solutions for Health Care Disparities* is a bold map for increasingly digital times.

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