

CONSUMER HEALTH INFORMATICS



Color index:

- **Important**
- ★ **Golden notes**
- **Doctors notes**

What is Consumer health informatics

It is a branch of Health informatics that:

- **Analyzes** information needs of consumers. Look into the methods to implement these needs and make information and services available
- Studies and **implements** methods of making health information and services accessible to consumers.
- **Integrates consumer preferences** into health care information systems. The most important thing is to satisfy your clients (patient, consumer and public)
- CHI does a lot of things but these THREE are the main focus. All these things aim to enable your consumer to take the right decisions by **informing and educating them**.
- In this view, informatics analyzes consumers' needs for information; studies and implements methods for making information and services accessible to consumers; and models and integrates consumers' preferences into health information systems.
- Consumer informatics stands at the crossroads of other disciplines, such as nursing informatics, public health, health promotion, health education, library science **how to make information best available for the public**, and communication science.

Consumer Health Informatics: focuses on and addresses:

- consumer or patient views.
- patient-focused informatics,
- health literacy
- consumer education.
- health information literacy,
- consumer-friendly language,
- personal health records, and Internet-based strategies and resources.
- Consumer empowerment
- Selfcare & self action

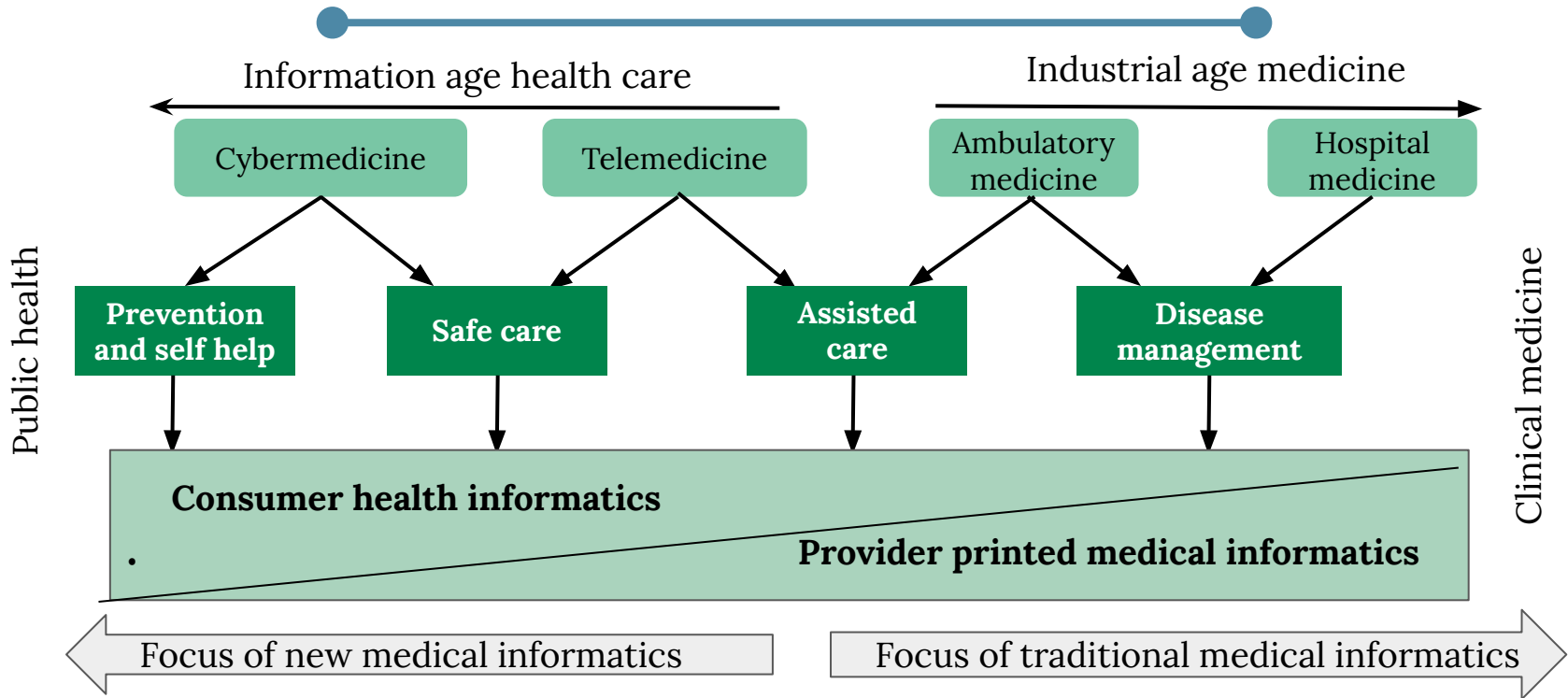
Consumer Health informatics

- Integration of consumer health information and information technology in an **environment** of shared healthcare **decision-making** that supports effective **self-health** action

Who are Consumer?

- **More broader than patient** it may include the well and **caregivers**. Because consumers have more needs while patients they only need medical care. Also, consumers could be your future 'patients'
- It is a very diverse group.

What is Consumer health informatics



- The focus of healthcare consumer health informatics is shifting from health professionals to be consumers centered

Empowered consumers

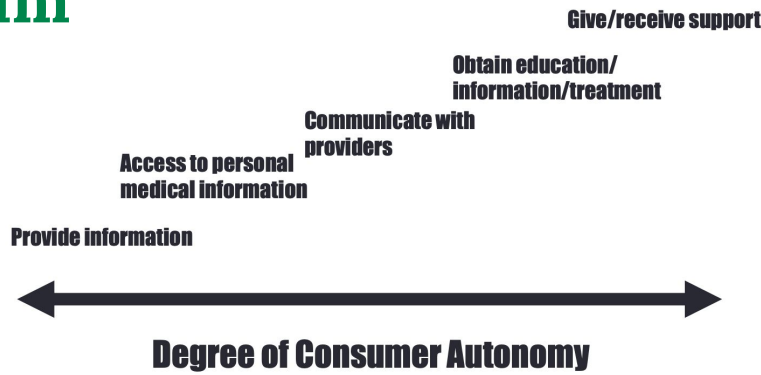
- Granting of power to a dependent group or enhancing an individual's **ability** for **self** determination. *It is a holistic approach*
- “a **social** process of recognizing, promoting and enhancing people’ abilities to meet their own **needs**, to **solve** their own problems, and **mobilize** the necessary resources in order to feel in control of their lives”. (Gibson , 1991)
- Consumers Health Informatics applications support the empowered consumers concept (a power balance in the patient–health professional relationship) by e.g:
 - Providing Informing about **health concerns**.
 - Assisting in finding others with **similar concerns**.
 - Assisting in navigating the healthcare system and services, and access clinical records, and personal care management tools. *Through patient portals.*
 - Access to clinical records and personal care management tools.

History of Consumer health informatics (CHI)

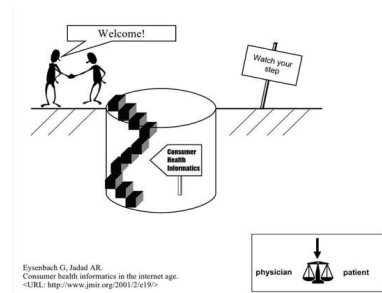
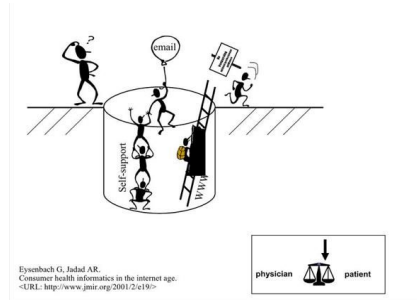
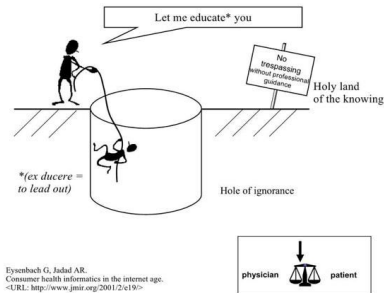
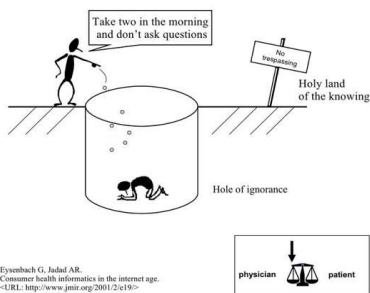
- Consumer movement of 1970s.
 - **Increased demand for information.** *consumers , public, and healthcare professionals*
 - Greater **participation** in “medical” decision making.
- Prominence of “**self-help**” phenomenon of 1980s. *Because hospitalization is not the answer*
 - Huge increase in health information for lay audience.
- Widespread use of the **Internet**.
 - Increased dramatically throughout 1990s.

History of Consumer health informatics (CHI)

CHI continuum



Degree of consumer autonomy:



in 1960s and below, the relationship was bad that there was not any balance. No education for the consumer.

There is basic education; not well established. 1980 - recognize need for educating

1990; explosion of access methods to knowledge; people have knowledge but not able to understand and put it into context.

CHI development to bridge the gap between clinician and patients.

Consumer health informatics

- Diverse and crossroads or several specialities; including:
 - Mobile health (mHealth)
 - Telehealth monitoring patient at home
 - Patient education
 - Patient health record
 - patient portal
 - Health literacy, health promotions and games for health
 - Internet-based strategies and resources

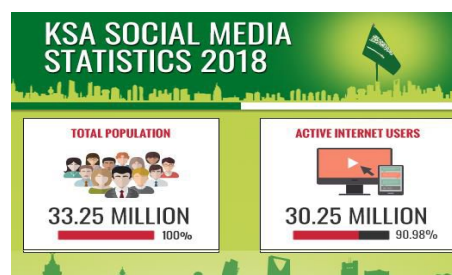
Saudi Arabia: internet growth

- More people use that internet that's why we should utilize it
- 2011= 12.5 million
- 2014= 16.5 million
- 2015= 21.5 million

YEAR	Users	Population	% Pop.	Usage Source
2000	200,000	21,624,422	0.9 %	ITU
2003	1,500,000	21,771,609	6.9 %	ITU
2005	2,540,000	23,595,634	10.8 %	C+I+A
2007	4,700,000	24,069,943	19.5 %	ITU
2009	7,761,800	28,686,633	27.1 %	ITU
2010	9,800,000	25,731,776	38.1 %	ITU

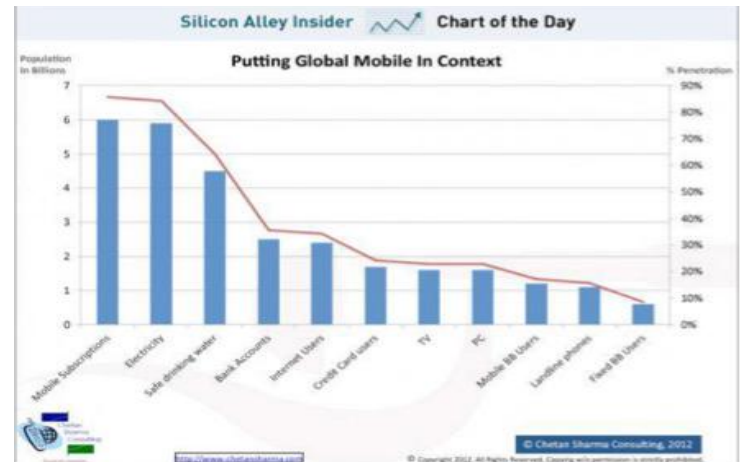
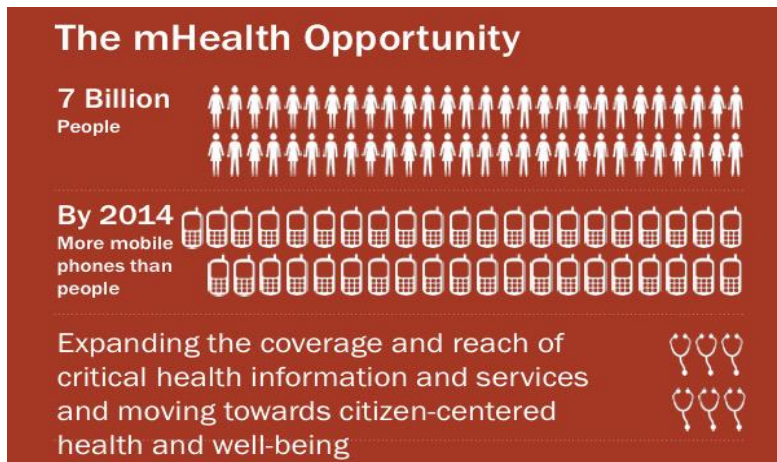
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Mobile health

- M-health or Mobile health is a term used for the practice of medicine and public health, supported by mobile devices. The term is mainly used in reference to using mobile communication devices, such as **mobile phones**, tablets and **PDA**s, for **health services** and information.
- The mobile Health is a sub-segment of **eHealth**,
- The mHealth market earned revenues of \$230 million in 2010 and is estimated to reach **\$392** million in 2015 in USA, according to a new report from research firm Frost & Sullivan.



Mobile is the most Pervasive technology ever invented

Consumer Health Informatics

Consumer health informatics can be organized into three general systems that:

- provide health information to the user (one-way communication)
 - (CD-ROM, online health articles)
- Tailor specific information to the user's unique situation (customized communication)
 - automated systems that obtain information from the consumer about his or her general health or other health-related factors (such as family disease histories and smoking habits) and, on the basis of this information, suggest a need for preventive health procedures (such as mammograms), or identify actions to curb high-risk behaviors.
- allow the user to communicate and interact with healthcare providers or other users (two-way communication)
 - electronic mail, electronic bulletin boards, online discussion groups

Roles of Health Professionals in CHI

- Professionals serve as sources of content
- Professionals provide important guidance in moderating public electronic discussion groups and responding to patients' electronic messages
- Clinicians become information **brokers** and interpreters for patients.

Consumer Health Informatics

The quality of health information on the internet rests on **four pillars**:

1. **Educating** the consumer
2. Encouraging the **self regulation** of providers of health information
3. Having **third** parties evaluate the information
4. **Enforcing** consents in cases of dissemination of fraudulent or harmful information.

Challenges & Barriers: it is very challenging i don't know why they do it

- **Privacy**; Security concerns especially where patient upload data to PHR and access information. There data and information are vulnerable to cyber risks and hacking
- **User-friendly**
- **Access to computer and internet**: not all have access, and not all have same quality of access. Having access is an assumption but not a fact
- **Physical disability**; elderly may have trouble to access PHR, internet and mobile apps without assistance. **Making it simple and support disability**
- **Access to PHR systems**;
- **Cognitive disabilities**
- **Low health literacy consumers**; **they might not understand the readings and the interpretations**
- **Terminology**; “medical jargons” could be too complex and confuse patients
- **Familiarity**; consumers are more likely to use applications that look familiar to other systems they use .
- **Ensure data accuracy** ; consumers are naturally concerned with accuracy, meaning both complete and without error
- **Legal Barrier**; prevent doctors from practicing telehealth, because of the issue of liability. The two main reported barriers are: Legislative: to remove trade barriers & Technical; to ensure security
- **Speed and connectivity**; **the system will run on different levels of connectivity**; especially for video conference used for diagnosis.
- **Cost**; costs of implementation and running and maintaining the system. It is important to provide solution tailored to budget, and work with low speed internet.
- **Resistant to change**: Patient acceptance of mobile and telehealth is also a challenge
- **Lack of physician support**
- **Lack of exciting technology**; **example is primary care centers** biggest barrier
- **Lack of support**; **for training and maintenance**
- **Reliability**; you will quickly lose trust
- **Low availability**; may not be available in the specific criteria
- **Lack of search precision**; patient might take wrong advice
- **language** : not everyone speaks english
- **Lack of patient motivation**;
- **Fast developing field, new systems**

Where clinical IS and Consumer health informatics meet?

- **Patient Portals**: Patient interface to clinical information systems. **Portal is a set of different applications.**
- **Personal Health Record**: Internet based- set of tools that allows people to access and coordinate their life-long health information and make appropriate parts of it available to those who need it.

CHI

Credibility Criteria:

- The FA4CT Algorithm: A New Model and Tool for Consumers to Assess and Filter Health Information on the Internet
- **CREDIBLE** Criterion
 - Current and frequently updated
 - Reference cited
 - Explicit purpose
 - Disclosure of sponsors
 - Interest disclosed and no conflicts found (e.g financial)
 - Balanced
 - Level of Evidence

Patient Centric Healthcare

- “care that is respectful of, and responsive to, individual patient preferences, needs, and values ‘and that ensures that patient values guide all clinical decisions.”
- This definition highlights the importance of clinicians and patients working together to produce the best outcomes possible.

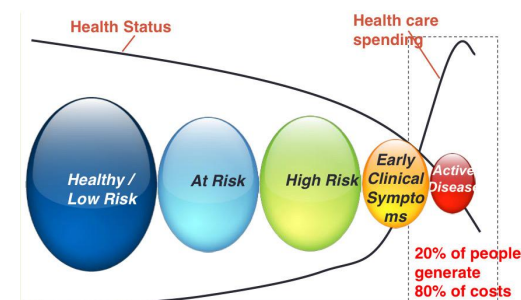
Crossing the Quality Chasm, IOM

Patient/People Engagement

- WHO defines People Centered Care as: “Care that is focused & organized around the health needs & expectations of people & communities rather than on disease”

Characteristics of Patient Centered Care

- **Respect** for patients values, preferences & needs
- **Coordinated** and integrated care
- **Information, Communication & Education**
- **Physical Comfort**
- **Emotional Support**
- **Involvement** of family & friends **social support**
- **Continuity** of care
- **Access** to care



Is At the Point of Care 'Too Late?

- Early detection of at-risk patients. Chances of being treated is less in the early clinical symptoms phase
- Provide personalized evidence to enable pro-active decision

It's a Different Ball game

In an eHealth environment, **Information Moves** rather than the Physician or the Patient

eHealth ePhysician - eConsumer

Actions

- Technology victories and chronic disease, e-Health takes a prominent role in the management of healthcare
- To aggregate rather than segregate healthcare system
- Consumer health education and empowerment
- Preventive medicine takes precedence over treating the sick
- Focus on vulnerable members of society

Questions



1. Insures that the patient has access to information resources necessary to participate fully in the health care process:

- A. Telemedicine
- B. health informatics
- C. consumer health informatics
- D. bioinformatics

2. What is the main reason influencing physician to use smart phones rather than feature phones:

- A. Available application
- B. Battery life
- C. Internet and email access
- D. Multimedia capability

3. electronic records that are owned, maintained and updated by an individual is known as which of the following:

- A. Patient Health Education Record
- B. Personal Health Record
- C. Electronic health record
- D. Electronic Medical Record

4. Consumer health informatics is as Integration of:

- A. Human Resources and information technology
- B. Human Resources and health information
- C. Consumer health information and information technology
- D. Consumer health information and financial services

5. The mobile Health is a sub-segment of:

- A. telemedicine
- B. eHealth
- C. telehealth
- D. EHR

6. Informing the patient that smoking can increase the risk of CVD is:

- A. one-way communication
- B. customized communication
- C. two-way communication
- D. three-way communication

Good Luck!

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KHALID ALKHANI

DONE BY OUR AMAZING MEMBER:
Khalid Alkhani

NOTE TAKER BY OUR SHARP MEMBER:

