

# Healthcare Innovation for managing NCD

Lutfan Lazuardi

# innovation

IT perspectives

Some stories

local initiatives

challenges

# Healthcare innovation?

- Healthcare innovation can be defined as the introduction of a new concept, idea, service, process, or product aimed at improving treatment, diagnosis, education, outreach, prevention and research, and with the long term goals of improving quality, safety, outcomes, efficiency and costs

Omachonu et al. (2010)

# Master of Healthcare Innovation

## Master of Healthcare Innovation

The Master of Healthcare Innovation (MHI) is a 34-credit master's degree now being offered online that prepares students to lead health care into the future as they focus on real-life outcomes.

View the [MHI curriculum](#) (PDF).

The MHI offers a multidisciplinary, educational approach to prepare students for a transformative role in health care.

The program is for:

- Professionals from many disciplines committed to leading innovation in health care
- Nurses, Physicians, Architects, Physical Therapists and other health care providers
- Leaders and aspiring health care leaders
- Designers of future health care systems
- Entrepreneurs and "intrapreneurs" with a risk-taking mindset

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Innovation for NCD may act on

- biological risk factors
- behavioural risk
- social determinants of NCD

# Types of innovation

- biological technology
- **information technology**
- medical devices
- changes in the workforce
- greater involvement of patients & greater involvement of civil society
- organisational innovations

# Telemedicine application in Sweden

## Remote auscultations of heart and lung

- Real-time and store-forward solution for heart murmurs

## Children with cleft palate

- First meeting with specialist and speech therapist

## Newborn with suspected heart disease

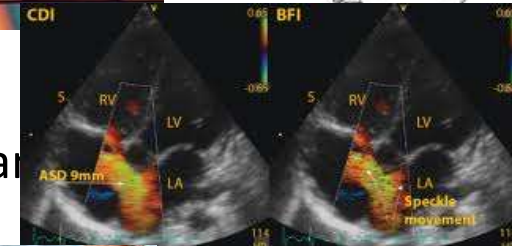
- Cardiologist in Umeå diagnoses the ultrasound examination video

## Rehabilitation after hand surgery

- Patient get treatment and rehabilitation in the nearest primary care center

## Distributed radiotherapy

- Treatment planning and education



Åsa Holmner Rocklöv (2013)

# Cochrane review

- Mobile phone messaging for facilitating self-management of long-term illnesses

de Jongh T, Gurol-Urganci I, Vodopivec-Jamsek V,  
Car J, Atun R (2012)



# Local initiatives

## Open Lecture & Demo Aplikasi Telemedicine

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Posted by [annisa](#) on Maret 11, 2013 · [Leave a Comment](#)

Minat Utama Sistem Informasi Manajemen Kesehatan, Program S2 Ilmu Kesehatan Masyarakat, Fakultas Kedokteran UGM akan mengadakan presentasi “Continuing Medical Education” pada :

Hari/tgl : Rabu, 13 Maret 2013

Pukul : 09.00 – 11.00 WIB

Tempat : Ruang Rapat Senat KPTU It.2 FK UGM

Acara : **Remote Cardiac auscultation and health parameter assessment: an example of telemedicine application in Sweden** (*Asa Holmner Rocklov, Ph.D & Kenji Claesson, M.Sc Umea University Hospital*)

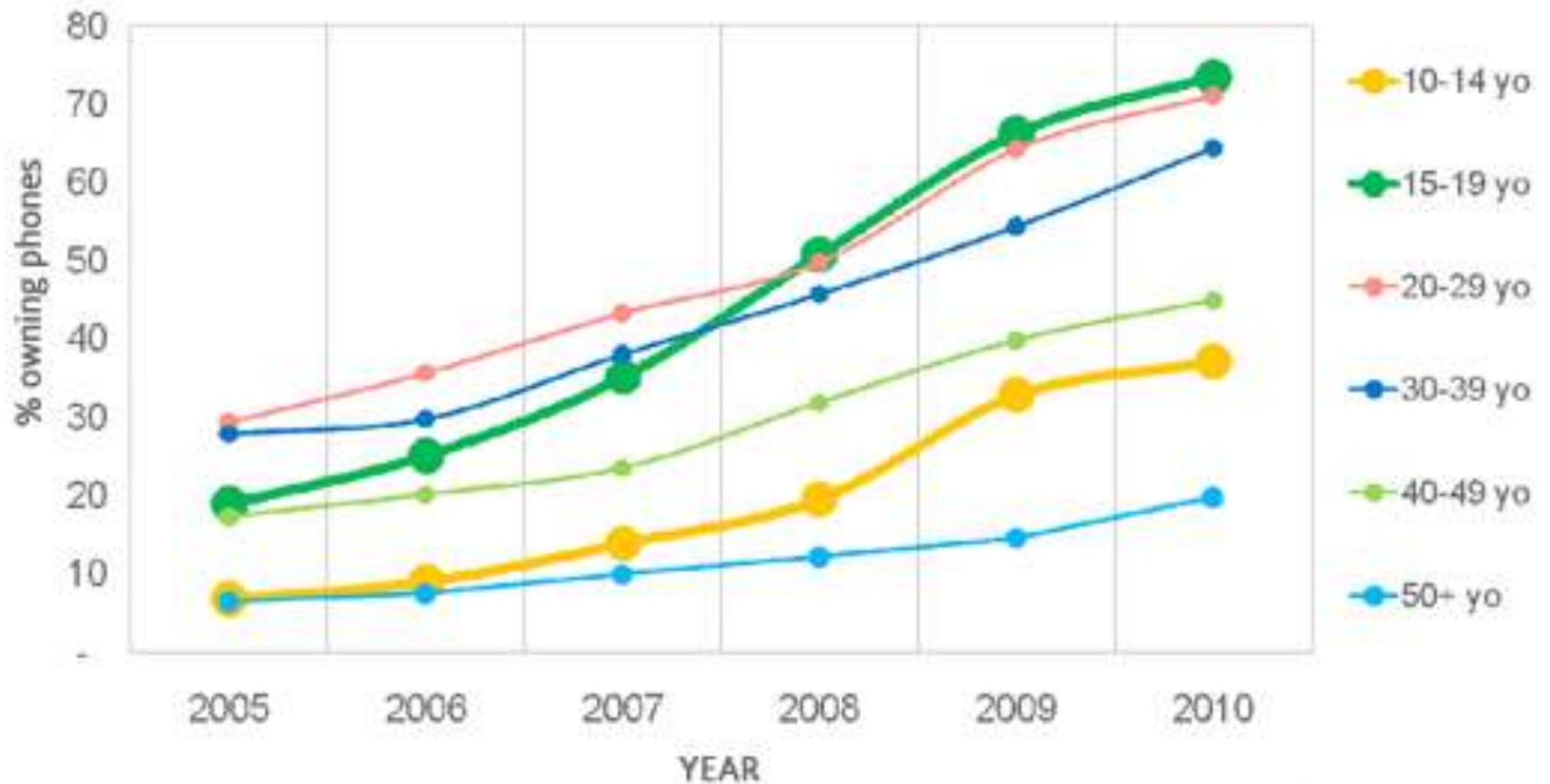
**Keterangan:** Acara ini gratis dan terbuka bagi umum/peneliti/mahasiswa/dosen/staf yang berminat.





**Remote auscultation and consultation**

# Nielsen: Mobile phone penetration in Indonesia triples in five years



# Short Message Service

- SMS based reminder for chronic diseases
  - Diabetes patient
  - Hypertension
- Drug information
- Maternal child health

No. MR : ██████████  
 Nama KK : ██████████  
 Nama Desa : ██████████

Nama Pasien : ██████████  
 Umur / Jenis Kelamin : Perempuan 42.  
 Status : JPS.

ANGGAL	ANAMNESIS / PEMERIKSAAN FISIK	DIAGNOSIS	THERAPI
05/07	Demam 3 h (+) Batuk pilek (+) Sesak (+) T <sub>102</sub> = 36,9	<del>SARI</del>	<del>- Amox 500mg - pct - Prednison - Ibuprofen - GG - OMP - Aminephilin - Salbutamol - Lument</del>
15/07	Demam (+) Batuk 2 minggu Pales Sesak	Susup - Bronkhitis.	- Cipro 500mg / 2x1 - GG 2x1/2x1 <del>OMP 2x1/2x1</del> - Prednison XII 3x1 - PCT XII 1/2x1 - Diazepam 2 / 2x1 - Bcomp 2 / 2x1
18/07	Batuk lama + batuk Sesak infeksi darah T = 120 36	Susup KP	- Cipro 500mg 2 / 2x1 - CTM XV 1/2x1 - Pred XV 1/2x1 - PCT XV 1/2x1 - GG XV 1/2x1 - OBH Symp 2 h / 1/2x1 - Bcomp XV 1/2x1

Nama = MELINGANUS HLU.  
 Umur = 12 thn.  
 J. kel = laki-laki  
 Alamat = Desa Hiligawonit.  
 Tgl Masuk = 28 - 6 - 2007 jam 09<sup>00</sup> w

Keluhan = Demam, Batuk, BAB Gumpor D  
mencret.

Therapy : - infus RL + Nb 1 amp  
 - inf. promparaan 1/2 jam.  
 - inf. Kanitidin 1/8 jam  
 - Kanitidin tab 3x1  
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 - Epedrin 3x1  
~~2 amp 2x1x~~

Jam 09<sup>00</sup> wit flus 5 Glukose  
 Jam 10<sup>00</sup> wit flus 10 Glukose  
 Jam 14<sup>00</sup> wit flus 15 Glukose, es makan  
dan makan metomid + Sun.

Jam 13<sup>15</sup> wit ny. sp 2cc 1M.

Jam 12<sup>00</sup> flus ke 8  
 29/6-07 jam 17<sup>00</sup> wit pasien pulang  
atas peruntutan keluarga.

Sisa utang pengantar/perawat  
 Mr. MELIVUS



07/11/2006



# Challenges



human

regulation

technology





# Thank you



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