eHealth: The Road Ahead

Linklaters eHealth Seminar

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Founding Chairman
Chairman

UK eHealth Association
eHealth Working Group - EHTEL
European Commission - 1999 - 2003
International Society for Telemedicine & eHealth

Group Clinical Director
Visiting Professor - eHealth

HealthSystems Group of companies
Imperial College, London

Consultant Paediatrician - practicing at:-
Great Ormond Street Hospital for Children, London
The Portland Hospital for Women & Children, London
The Child and Family Practice, 57A Wimpole Street
Princess Margaret Hospital (BMI), Windsor
HUNTER-GATHERERS
FARMING & FISHERIES
URBAN LIFE
HIGH-NOMADISM
SCIENTIFIC-INDUSTRIAL
The BioIntelligence Age

BIOLOGICAL
- Biosensors
- Biomaterials
- Biomimetic
- Genomics
- Bioinformatics
- Biocomputation

PHYSICAL
- Nanotechnology
- Biomathematics
- Cellular cyborg
- Quantum Dots
- Robotics
- HPCC/WWW
- MEMS/Nano

INFORMATION

The BioIntelligence Age
eHealth - Take Home Messages

Move to use of Mobile Devices

Individual Health – iHealth
In future – the only Healthcare Plan will be YOURS!

Transborder Healthcare
(Need for Global Convention)

Infrastructure Changes - the death of hospitals?

Prof Dick Kitney – Imperial College 2008
The eHealth Future

- General Hospitals become a thing of the past
C19th Chemistry
C20th Physics
C21st ICT
Knowledge based Healthcare
Pharmaceuticals
Imaging

Prof Yunkap Kwankam WHO 2007
We are at the dawn of the age of citizen-centric Healthcare Systems
Traditional Healthcare Delivery Model

The Patient Community - Bottom of the pile!!

Unchanged for 6000 years - circa 3000 BC!
Future Health System Transformation

The Informed Wired up Citizen Community

C-Health

Direct Access to specialists

The wellness paradigm

Primary HealthCare
The “Super” Primary Care Physician

Clusters of Specialists
global spread & universal access

eHealth & Telemedicine

Health Systems Group
Uptake of IT Solutions in Healthcare delivery

Globalisation
Healthcare Economists
Patient Power
The Medical Profession
The World Wide Web
New Technologies
e.g. Mobile Videophones
G3 mobile networks

1980
1990
When??

Technology driven
Disappointment

Healthcare Professionals:
Sit on the fence or Resist
“I told you so!”

HELP!!!!
Accept the inevitable and want control
Doctors are:

ARROGANT
BIGOTED
REFRACTORY
AVARICIOUS
CONCEITED

INHERENTLY RESISTANT TO CHANGE

(but we are not STUPID!!!!)

Richard Granger – Director General NHS Connecting for Health 2006
Health Transition - THE TIME BOMB !!

Demographic transition

- Fertility declines
- Infectious Disease Mortality declines

Epidemiological transition

- Population ages
- Chronic and non Communicable Diseases emerge

Copyright Dr Rifat Atun – Imperial College
Population ageing and health
The next 50 years! 1995 to 2045

Estimated future numbers of dependent people by age

More developed countries

Less developed countries

Least developed countries
Ageing and cost of care

Cost per head

Copyright: Dr Rifat Atun
Demographics
Ageing population - Implications

- Increased Dependency ratio
- Increased cost of long term care

Who will support the health and welfare systems in the Future?
The Paradigm Shift: The Impact

Healthcare Professionals

- Healthcare practices - changing roles
- Nurse Practitioners at Primary Care
- Healthcare training
- Financial remuneration/rewards
- Healthcare vocation

Patients - empowered with knowledge become Partners in the healthcare process
Emerging trends for telehealth solutions

Personalised and home based services:
- Self care
- home care
- sensors
- mobile
- on line advice - phone / internet

Education:
- citizen education - HIV in Africa
- eLearning

Integrated imaging
- Integrated dimensions: molecular to whole body
- Nationally networked medical equipment
- Decision support and quality algorithms

Genomics

Clinical hot spots (borne out by recent SCT survey in Scotland):
- Unscheduled care
- Diabetes and long term conditions
- Paediatrics
- Oncology
- Cardiology
- Psychiatry
eHealth .......is:-

The instrument for productivity gains in the context of existing healthcare systems

but also..............

provides the backbone for the future citizen centred healthcare environment

Jean-Claude Healy
World Health Organisation

September 2004
The Paradigm Shift

Who will be the Primary Care Team of the Future?

The ePatient
Family and friends
Patient Web Communities
eNurse Practitioners
Pharmacists

Will the family doctor become “The Community Wellness Guardian-Caretaker”?

? Split off acute services from preventative care?

Preventive Care - Wellness Guardian

Acute Care Response - Health Contact Centres - NHS Direct Plus
Who needs eHealth?
They all do!!!!
In poor Rural communities – THEY DO!
A brief history of Global Health

1960's
- Colonial arrangements
- Pioneer age/missions
- Western tech experts
- Parasitic diseases and antiviral vaccines
- Eradication campaigns

1990's
- New UN member states
- East-West geopolitical divide
- International solidarity
- Health as social construction
- Primary Health Care for all (Alma Ata to Selective PHC)

2010's
- Globalization: trade, markets, ICT
- AIDS and MDGs
- WHO joined by WB, NGOs
- New Philanthropy & Funds
- Public-private partnerships
- Health Systems neglect

Tropical Medicine
International Health
Global Health
A New World Health?
Increasing funding for health - ODA reaching 20 Bn a year
but not enough improvement in MDGs 4, 5
But 80% Aid money may disappear!
65 million people will fall below $2 per day

source: World Bank 2009
The new challenge in global health

Nearly 10 million children die every year

Most die from preventable causes because of weak health systems
What will success look like?

✓ Health Systems and Universal Coverage highlighted in the global health agenda

✓ Professional stewardship of health systems is occurring in low- and middle income countries

✓ Integrated national eHealth systems are in place in select countries

✓ Health systems are construed as actively engaging both the public and private sectors

There is better and equitable access, affordability, and quality of health services for poor people
Health systems agenda gaining momentum

- WHO’s HSS Strategy after Mexico 2004
- Atlanta meeting of UNSG & The Elders: HS a top priority
- WHO High Level consultation on HS
- G8 summit (Japan): HS WG & HLTF
- UN ECOSOC takes up health
- G8 summit (Italy)

2009

- US IOM Report on Global Health
- World Health Assembly
- Bellagio series
  - making the eHealth connection
- Bellagio sessions on Health Systems
- Pocantico II
  - The Global Challenge of Health Systems
This is what we have now!!

Historical focus of ICT has been on automation not transformation

Paper Kills !!!!!!

Richard Granger - Director General
NHS CfH
EU / WHO / Commonwealth initiatives:

- World Health Organisation - Global eHealth Strategy (193 countries)
- European Community (25 countries)
- ASEM eHealth Working Group (43 countries)
- Commonwealth eHealth Programme (53 countries)

**eHealth has become a core preoccupation of governments worldwide**

Countries are forming groups to share scarce health resources, skills and knowledge.

Public Private Partnerships are essential to achieve eHealth goals.
eHealth: Where are the challenges??
Not the technology -------------- The People
The Culpable Generation??

Pollution/Waste
- Global Warming
  - 30 years ice reduction in 3 years

Social Unrest
- Iraq, Afghanistan etc
- Weapons of Mass Destruction
- War and Conflict in 57 zones
- 300,000 child soldiers 80% boys 20% girls
- Widespread migration/abuse
- 20 million children as migrants

North South Economic Divide
- Global South

Economic Catastrophe
- The Recession
OUR GUILT?

TODAY
17th June
2009

30,000 CHILDREN WILL DIE FROM TOTALLY PREVENTABLE DISEASE

IF WE DON’T HELP THEM – WHO WILL?
The eHealth Mantra

The Fundamental Delusion of Humanity is to suppose that I am here and you are there

Yasutani Roshi
d.1973