PAST, PRESENT AND FUTURE TRENDS IN MEDICAL EDUCATION – AN INTERNATIONAL PERSPECTIVE

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OUTLINE

- The past
- The present
  - Impact of changes in medicine and Healthcare delivery
- The doctor of the future
- The way forward
THE PAST – ‘A GOLDEN AGE’

- Patients were passive and grateful
- Regulation of doctors was controlled by doctors themselves
- Public accountability was negligible
- Social prestige was high
TRAINING was long and doctors learnt from seeing many patients.

Patients stayed in one place and doctors learnt from the evolution of a patient’s condition.

Patients had limited understanding and were compliant.

Most learning was in formal face to face teaching.

Changes in medical knowledge took time to be adopted.

Treatment was largely based on traditional practice.
THE PHOG APPROACH TO TEACHING

- Prejudice
- Hunches
- Opinion
- Guesses
MOVING TO THE PRESENT

In the past medicine was simple, safe and largely ineffective.
Now it is complex, effective and highly dangerous

Cyril Chantler 2003
THE CHANGING HEALTHCARE SYSTEM

- Population changes
- Changing focus of illness
- Increase in medical knowledge
- New diseases
- The changing learning environment
- Changing focus of patient treatment
- Change in doctors working hours
- The change in public expectations
THE CHANGING COMPOSITION OF SOCIETIES

- Population movement
  - Globalisation and migration
  - Development of cultural diversity

- Changing demographics
  - 230 per 1000 people over 65
  - 850,000 suffering from dementia,
KNOWLEDGE DOUBLING TIMES

1750 - 1900: 150 years
1900 - 1950: 50 years
1960 - 1965: 5 years
2020: 73 days

Ron Harden 2005
NEW DISEASES

- HIV
- SARS
- MERS
- Ebola
THE CHANGING FOCUS OF PATIENT TREATMENT

➢ From hospital to community
THE CHANGE IN PUBLIC EXPECTATIONS

- Consumer society
- Empowerment
- Choice
- Informed public
- Increased access to information
HOW DOCTORS LEARN

- Doctors learn from interactions with patients
TECHNOLOGY SUPPORTED ‘NEAR PATIENT’ LEARNING

Student sees patient

Student designs a treatment plan

Student consults literature/guidelines

Student formulates diagnosis
AVERAGE IN-PATIENT LENGTH OF STAY
AMI LENGTH OF STAY

The image shows a bar chart comparing the length of stay for AMI (Acute Myocardial Infarction) in different countries, measured in days. The chart indicates that Korea has the highest length of stay at 11.6 days, followed by Germany and Estonia at 10.4 and 9.2 days, respectively. The OECD33 average length of stay is 6.9 days.
CHANGES IN DOCTORS WORKING HOURS
THE CHALLENGE THEN IS....

Maximise learning opportunities to cope with the demands of modern medical practice
TECHNOLOGY SUPPORTED ‘PATIENT JOURNEY’ LEARNING

Student sees patient

Student confirms or refines original diagnosis

Student has remote access to patient progress

Student formulates diagnosis

Student confirms or refines original diagnosis
CONCLUSIONS

- Medical curricula need to reflect changes and need regular review
- Students need to be trained where patients are treated
- Technology can support learning
- Students need to be prepared to work with more informed patients
THE DOCTOR OF THE FUTURE
CARDIOVASCULAR EXAMINATION
ABDOMINAL EXAMINATION
Diabetes
IS THIS THE DEATH OF COMMUNICATION SKILLS?

“What we are finding with the iPad, is that doctors are spending more time with patients. In fact, doctors are engaging patients by showing them images [and] data on the screen.”

– John Halamka, MD
The technology revolution in healthcare

- Alzheimer's: 5 million Americans. Wireless sensors can track the vital signs of patients as well as their location, activity, and balance.
- Asthma: 20 million Americans. Wireless can track the respiratory rate and peak flow so patients can use inhalers before an attack occurs.
- Breast Cancer: 3 million Americans. Women can use a wireless ultrasound device at home and send the scan to the doctor—won’t have to go in for a mammogram.
- Chronic Obstructive Pulmonary Disorder (COPD): 10 million Americans. Wireless can monitor FEV1, air quality and oximetry.
- Depression: 19 million Americans. Wireless can monitor medication compliance, activity and communication.
- Diabetes: 21 million Americans. Wireless can monitor blood glucose and hemoglobin.
- Heart Failure: 5 million Americans. Wireless can monitor cardiac pressures, fluids, weight and blood pressure.
- Hypertension: 74 million Americans. Wireless can continuously monitor blood pressure and track medication compliance.
- Obesity: 80 million Americans. Wireless scales can track weight and wireless sensors can track calories in/out and activity levels.
I'm an e-patient: equipped, enabled, empowered, engaged. I'm no clinician, but I do everything in my power to help them, to play an active role in my own care, and even in the design of care.

Dave deBronkart
THE FUTURE DOCTOR?
The future has already started and we need to embrace it.
Go boldly