



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



THE PAST

- 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

- **P**rejudice
- **H**unches
- **O**pinion
- **G**uesses



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

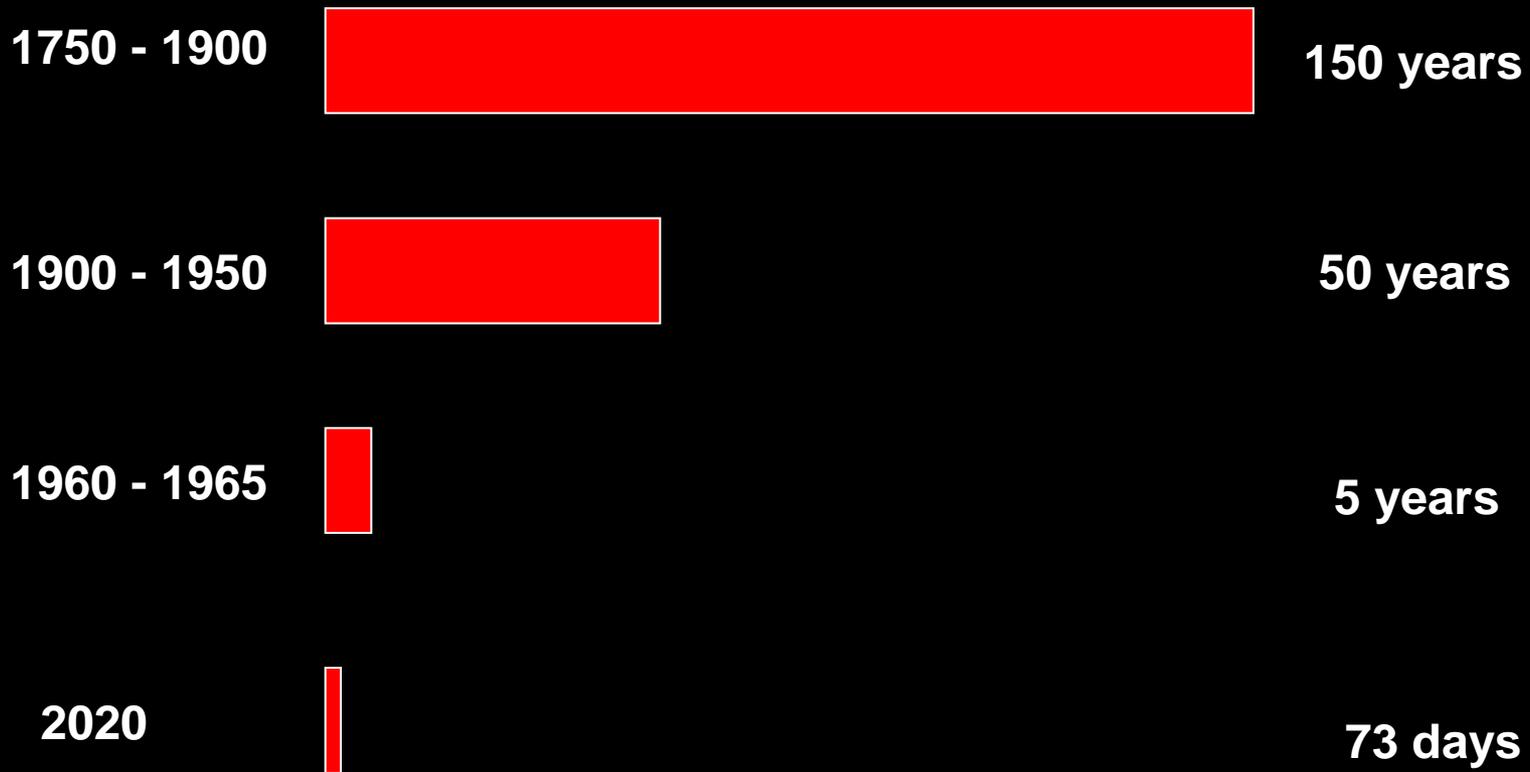


THE CHANGING COMPOSITION OF SOCIETIES

- 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



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

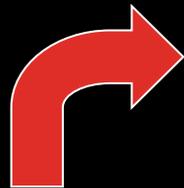


TECHNOLOGY SUPPORTED 'NEAR PATIENT' LEARNING

Student sees
patient



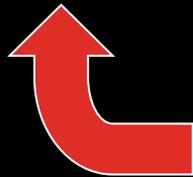
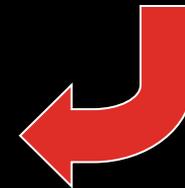
Student
formulates
diagnosis



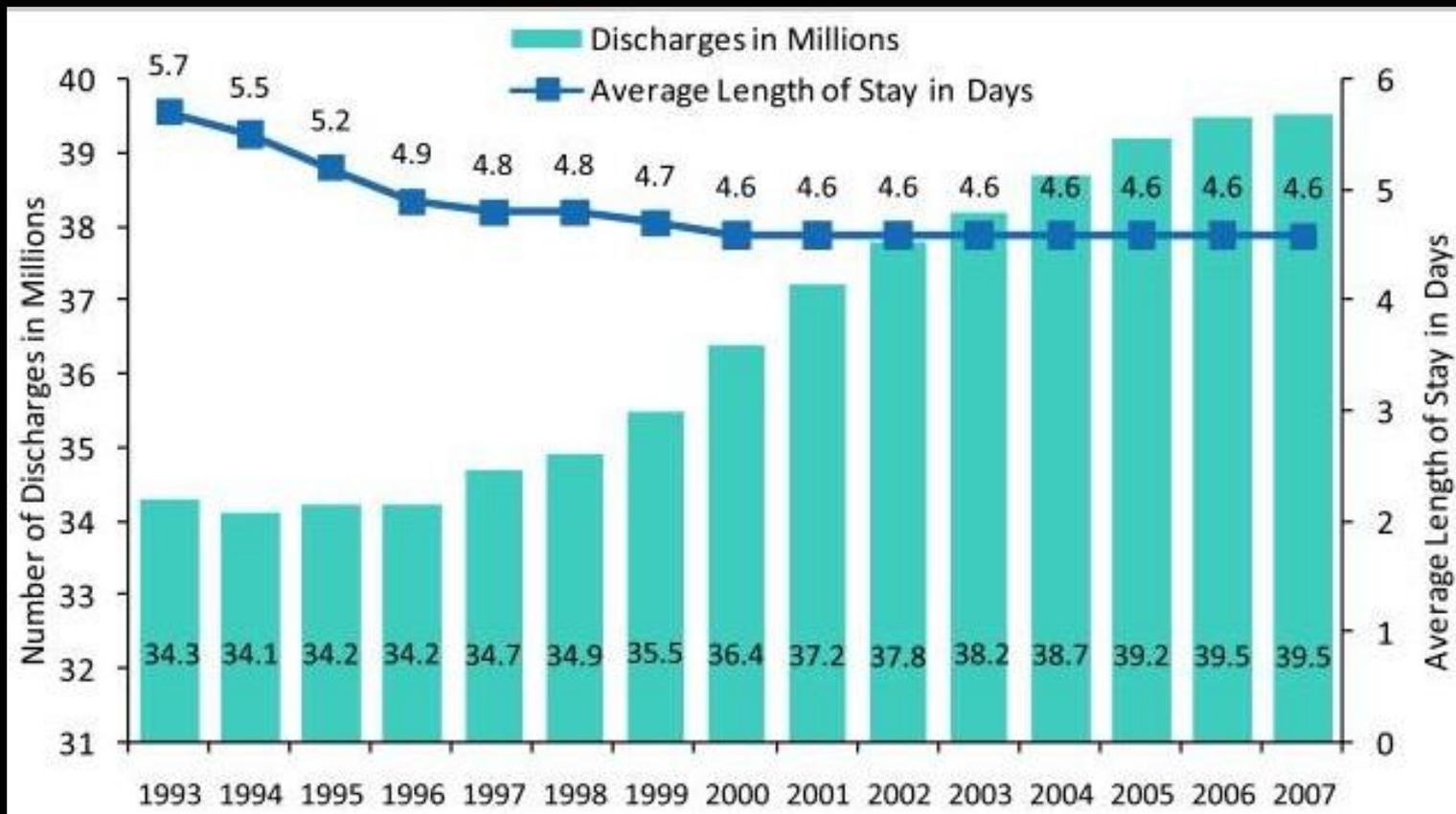
Student designs
treatment plan



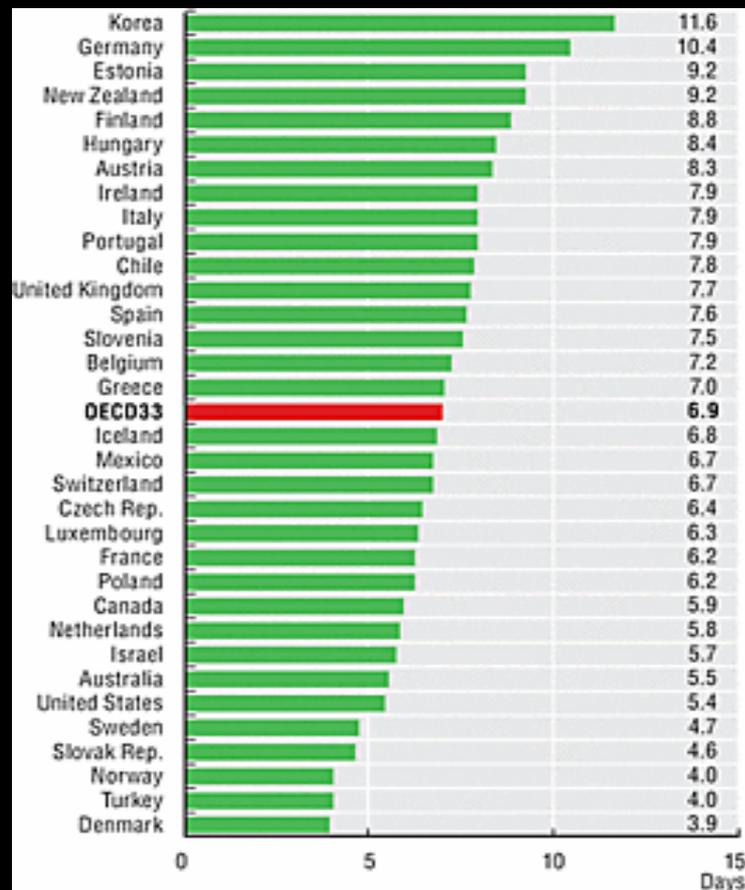
Student consults
literature/guidelines



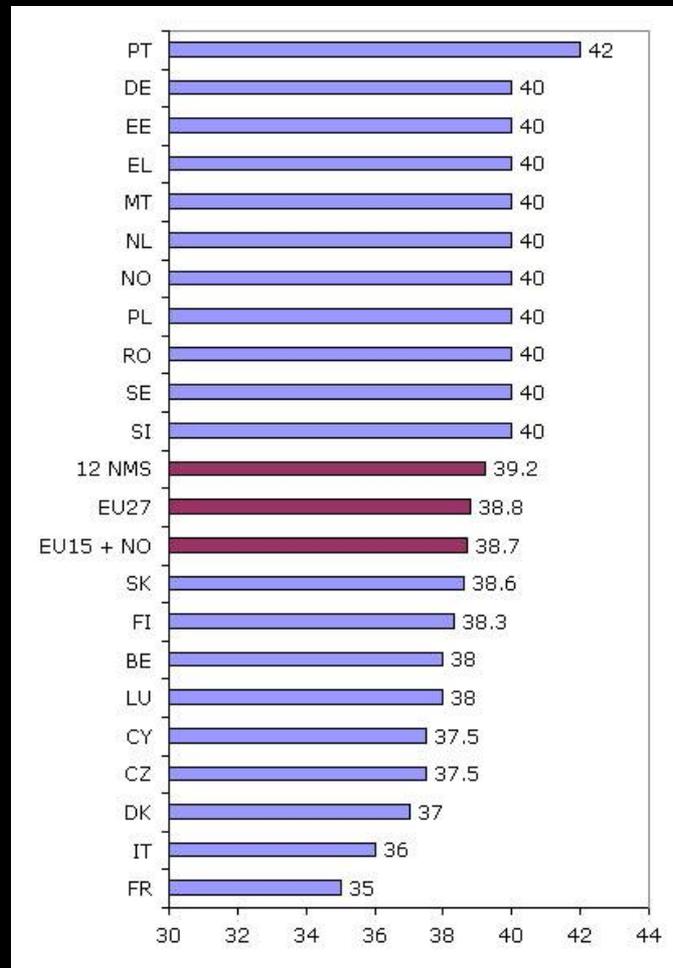
AVERAGE IN-PATIENT LENGTH OF STAY



AMI LENGTH OF STAY



CHANGES IN DOCTORS WORKING HOURS



THE CHALLENGE THEN IS....

Maximise learning opportunities to cope with the demands of modern medical practice

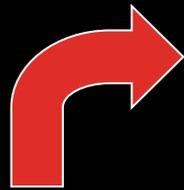


TECHNOLOGY SUPPORTED 'PATIENT JOURNEY' LEARNING

Student sees
patient



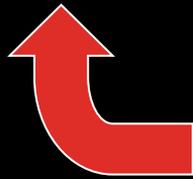
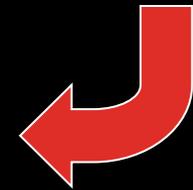
Student
formulates
diagnosis



Student confirms or
refines original
diagnosis



Student has remote
access to patient
progress



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

A large, 3D gold number '1' with a metallic sheen and a shadow cast below it, set against a white background.A large, 3D gold number '2' with a metallic sheen and a shadow cast below it, set against a white background.A large, 3D red number '3' with a metallic sheen and a shadow cast below it, set against a white background.A large, 3D red number '4' with a metallic sheen and a shadow cast below it, set against a white background.

THE DOCTOR OF THE FUTURE



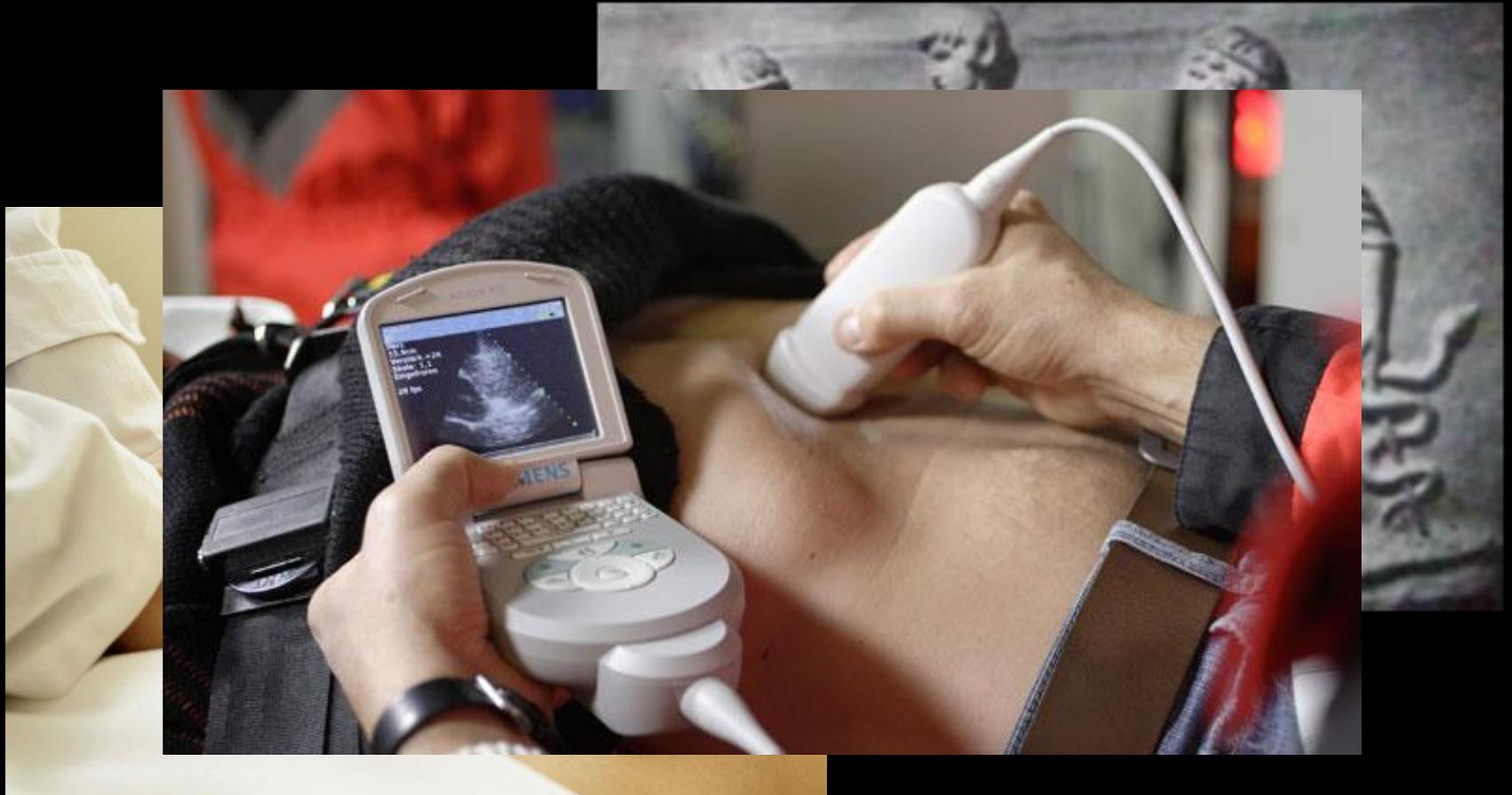
CARDIOVASCULAR EXAMINATION

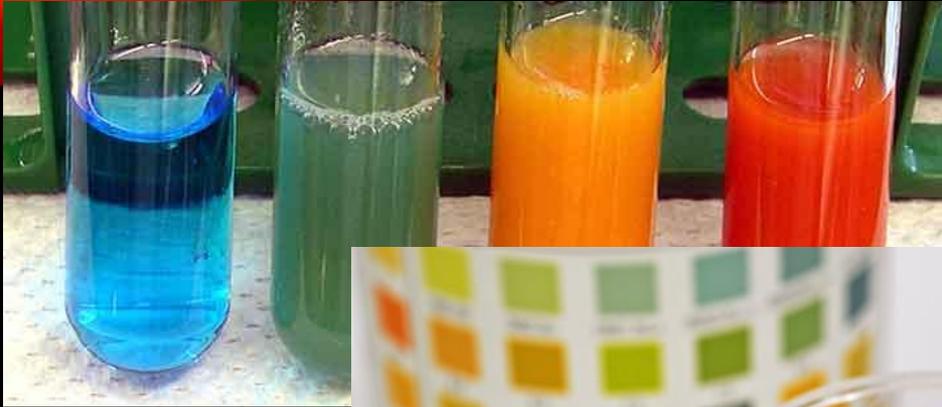






ABDOMINAL EXAMINATION





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.

E-patients



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?



FINAL CONCLUSION

- The future has already started and we need to embrace it



Go boldly

