ICT in health care by 2050

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Die Kappe besteht aus miniaturisierten Bauteilen, von denen einige auch in Digitalkameras eingesetzt werden.

1. Optischer Kupplung
2. Unterhalter
3. Linsen
4. LED
5. Kanone-Chip
6. Batterie
7. Prozessor
8. Antenne

Slide courtesy of Bernd Blobel

PHR: Individual-controlled health record

Information exchange or shared use, under mixed governance models

EHR: Healthcare provider-controlled health record
The Digital Health Continuum

Slide courtesy of Niels Boye
Some prerequisites must have been solved

• Shift focus from patient centred care to citizen directed care
• Combine bioinformatics and genomics, proteomics and metabolomics with models of disease, human individuality and environmental factors
• Minimise the impact of chronic disease on lifestyle and productivity
• Prioritise maintaining function and productivity while ageing
• Reward individuals for co-production of health
• Adopt globally standardised privacy and confidentiality practices
• Embrace a culture of innovation by better aligning the strategic interests of change-critical stakeholders
Gartner: the Nexus of Forces

- virtual social communities
- combining physical and virtual places
- intelligently pervasive
- knowing where, when and why to interrupt you
- very big data: health biology, social, environmental...
- enabling the discovery of unexpected knowledge
- harnessing the power of high performance clouds to do complex computations virtually
Gartner EHR Generations Model

Handler, TJ, Enterprise CPR system generation evaluation, Gartner Industry Research 2006, #G00137441
The vision for Health and ICT in 2050

- Person centred
  - Personalised medicine
  - Personalised care
- Predictive
- Preventive
- Pervasive
- Peer connected
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“Good morning Dipak. Is now a good moment?”
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“*I thought you'd like to know that data from the health coproduction repository for India now tips your bio-profile in favour of taking CholesterolLO rather than Lipid-ease.*

*Would you like to switch?*”
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“Given your other risk factors and current lifestyle, the change should delay your predicted time to moderate coronary narrowing by six years.

That delayed first coronary clean will discount your premium by 4%.”
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“No, you're not likely to experience any of the common side effects.”
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“Thank you, Dipak. I've moved your cardiologist appointment from tele to his office, as Professor Patterson said he'd like to see you in person if you make the change.

I've scheduled it for two hours before you lecture your students on Tuesday 17th, as it’s en route from home. Is that alright?”

Dipak Kalra
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“Good. I’ll remind you.

You’ll find your CholesterolLO infused toothpaste in your hotel room.

Do I have your permission to share the relevant records with the LipidLO tracking repository?”
Things to look forward to...

• Social pooling of record banks around the world
• Real time knowledge discovery
• Personalised profiling of new findings, matching new treatments to my biology, to my lifestyle and to my goals
• Predicting outcomes specific to me
• Health insurance rewarding my pro-health choices
• Integrating healthcare events with my schedule
• Knowing my susceptibility to particular side effects
• Seeking my consent for pooling and re-using my records
• 3D digital delivery of my medication...
• ...and I don't need to remember to take a pill every morning!
• THANKS WATSON!