

IMPLEMENTATION OF INFORMATION & COMMUNICATION TECHNOLOGIES (ICT) IN THE HEALTHCARE SECTOR: EXAMPLES FROM TWO COUNTRIES

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Thanks to

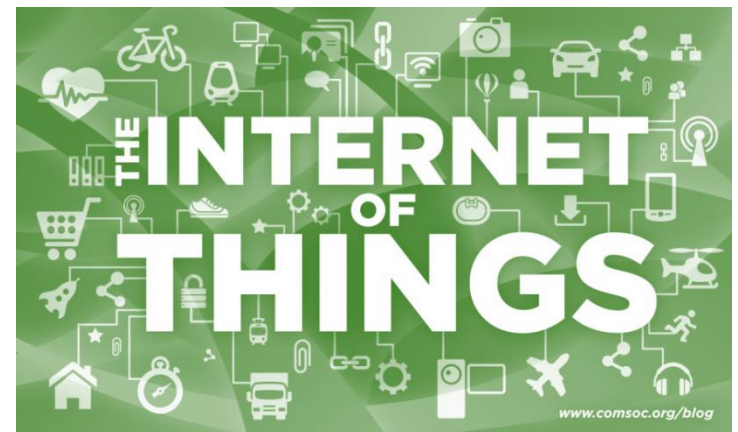
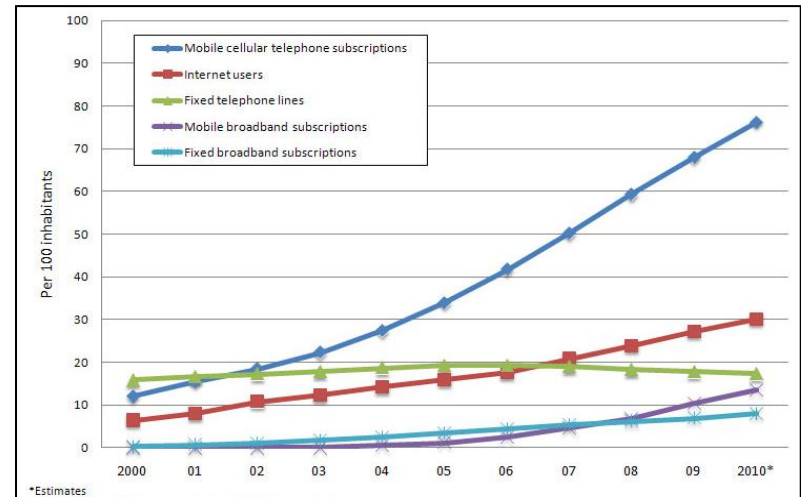


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Background

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- Increasing prevalence of Information & Communication Technology (ICT), especially via the use of mobile devices
- The enhanced capabilities of mobile platforms and well-developed infrastructures facilitate more extensive communication networks
- ICT developments benefit the healthcare sector in several important ways:
 - Offers a new way to reach patients
 - Efficient management of the healthcare system
 - Facilitates monitoring the spread, and prevention of, diseases



ICT in Healthcare

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Innovation in healthcare (Greenhalg)

Perceived as new by a proportion of key stakeholders

Linked to the provision or support of health care

Discontinuous with previous practice

Directed at improving health outcomes, administrative efficiency, cost-effectiveness or user experience

Implemented by means of planned and coordinated action by individuals, teams or organizations.

Facts about Israel and Portugal

(Source: WHO, OECD)

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	ISRAEL	PORTUGAL
Population (2012)	7,6	10,6
Area	20,770 km2	91,985 km2
GDP per capita (PPP) (2011)	27110	24440
Health Expenditure (% of GDP) 2011	7,7	10,4
Public Health Expenditure (2011)	61,5	64,1
Health Expenditure per capita (PPP int. \$) (2011)	2171,9	2624,4
Life expectancy at birth (M/F)	79,9 / 83,6	77,6 / 84
No of doctors per 10000 (2010)	36,5	38,7
No of beds per 1000 hab	3,3	3,4
Infant mortality	3,5	3,1
Cellular subscribers per 100 hab (2011)	122	115



Facts about Israel and Portugal

(Source: WHO, OECD, Research)

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	ISRAEL	PORTUGAL
ICT Development Index	6.19	5.77
ICT Development Index rank	27	32
National eGovernment Policy	Yes (2004)	Yes (before 2000)
National eHealth Policy	Yes (in process)	Yes (2008)
Regulation on eHealth	Yes	Yes
National telemedicine policy	No	Yes
mHealth initiatives are conducted in the country	Yes	Yes
Formal evaluation and/or publication of mHealth initiatives	No	No
Time of development of eHealth initiatives	1985	1990
Starter of initiatives	Health plans (bottom-up)	Government (top-down)
Interoperability	Yes (since 2014)	Yes (since 2007)
Health Portal	Yes	Yes



Motivating Question & Methodology

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- Qualitative approach
- Population of study
 - Interviewees from health plans, MOH, patient's organization, hospital, private companies, academy
- Data collection:
 - In-depth interviews
 - Secondary sources

Sector	Israel	Portugal
Government	3	2
Patient's Organizations	1	3
Academia	1	1
Private Sector	1	1
Healthcare administrators	9	-
Physicians	2	1

Results – Patient Empowerment

- Patient empowerment has increased

- The role of information
 - Risks
 - The educated consumer vs. The “too much” information syndrome

- *“the patient is more educated, **it can be really a partner** in such a treatment, should be a partner” (member of the ministry of health)*

- The role of the patient
 - *“gradually, **the attitude in the world is patient empowerment**, this is attitude, health is so expensive without the support of patient we cannot achieve anything, patient empowerment is a very important value, now we are communicating with patients through the Internet, no other way, **this is the world**” (member from an Israel research institute).*

Results – Physician behavior

- In both countries interviewees agreed about the idea of physicians being the most reluctant to changes
- Relationship physician-patient
- “...also the caregivers should feel comfortable with the technology; when we started to implement medical records you know, computerize medical records, **the physicians had a hard time, you know, they have to talk, look to the patients, talk to the patient, feel the patient-now they have to press keys...**” (Interviewee from an Israeli health plan)
- “...**you have to bring physicians to innovation, and sometimes they resist**, sometimes they don't like, but sometimes they don't like because they are used, they are not in the center of innovation, sometimes you bring innovation to tell them what to do, instead of using them to tell how innovation should be done, so there is also this kind of gap.” (Interviewee from a private Portuguese technology company).

Results – Implementation process

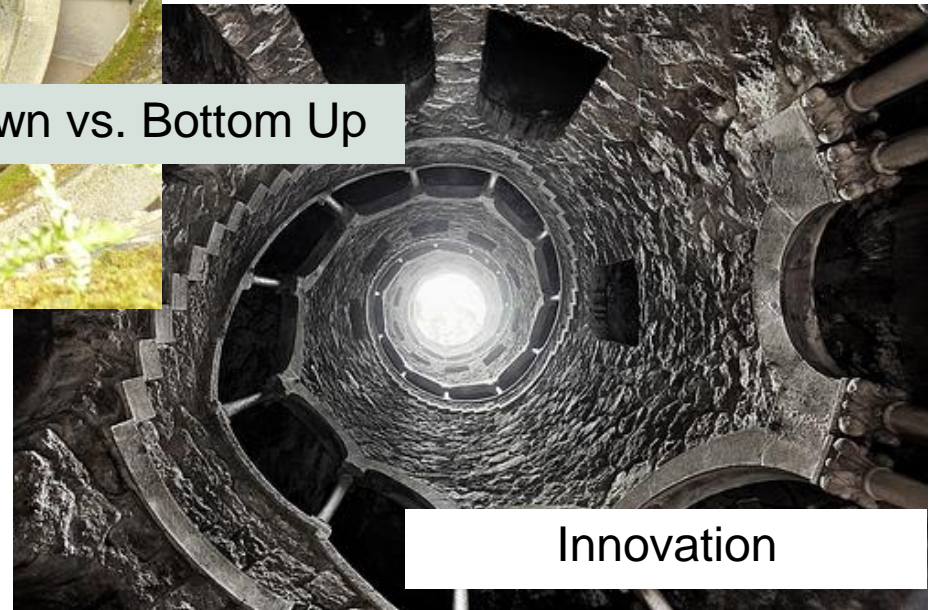
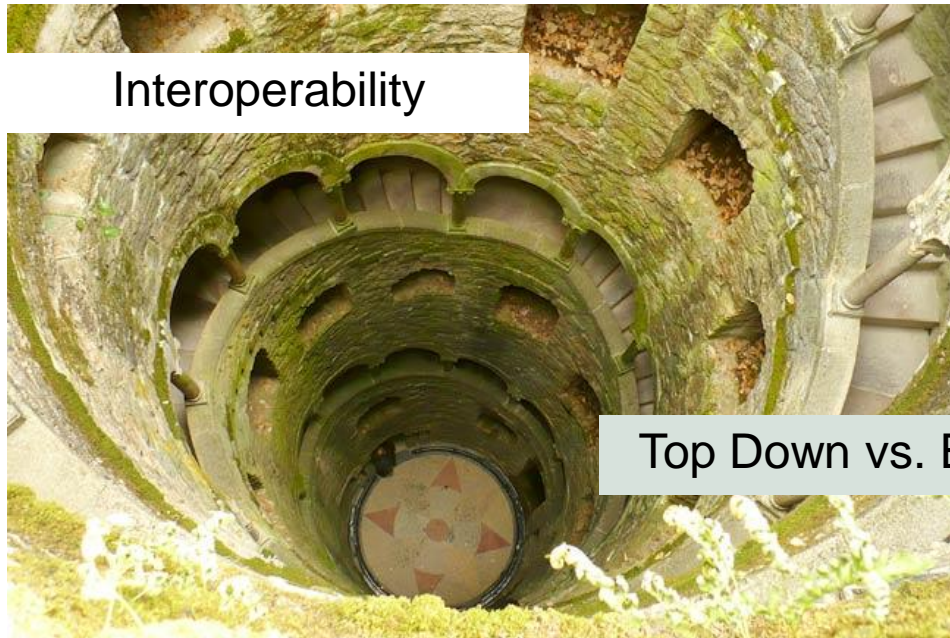


Photo: Initiation well (inverted tower) in Quinta da Regaleira, Sintra, Portugal

Main Barriers and Challenges

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	Israel	Portugal
Lack of knowledge of applications	No	No
Cost effectiveness unknown	No	No
Lack of legal policies/regulation	Yes	-
Perceived costs too high	No	Yes/No
Underdeveloped infrastructure	No	No
Lack of research	Yes	-
Lack of leadership	-	Yes
Physicians	Yes	Yes

Big Data and Information Security

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Policy Implications

- More regulation is needed
- More eHealth education
- Re-thinking of the patient-physician relationship
- National strategies



Thanks!
Muchas Gracias!
Muito Brigado!
תודה רבה!

The complete article has been published in the Israel Journal of Health
Policy Research - <http://www.ijhpr.org/content/4/1/41>