



Achieving Efficiency Improvements Through Information Technologies in the Health Sector

*Overview of main findings
from case studies in six
OECD countries*

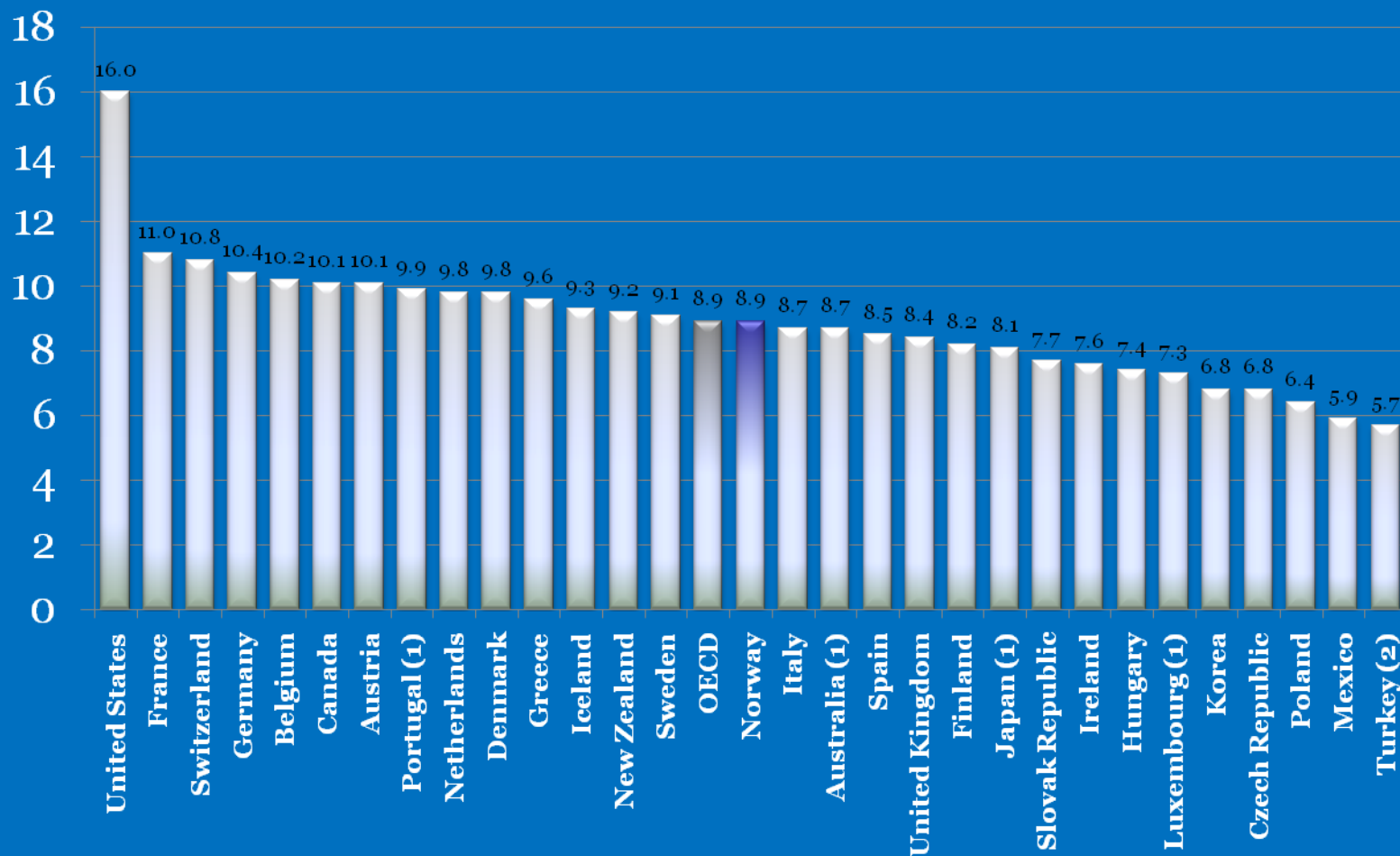
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Outline

1. Growth in health expenditure
2. Purpose of the OECD ICT Project
3. Main Findings: Supporting Innovation in Service Delivery through ICTs
4. Main Findings: Most common incentives to accelerate ICT adoption
5. Main Findings: Measures to achieve compliance with network-wide standards
6. Main Findings: Privacy and Security Concerns
7. Conclusions

Health expenditure across OECD countries (% of GDP 2007)

% GDP

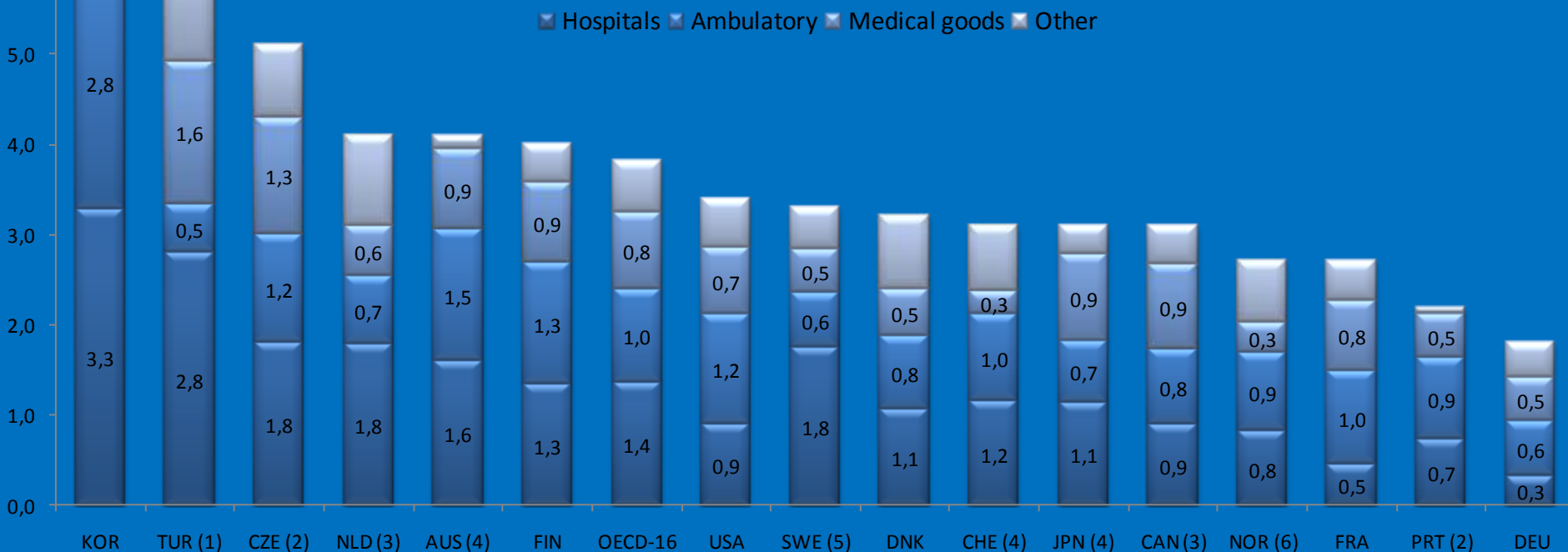


(1) 2006, (2) 2005. Source: OECD Health Data 2009.

Contributors to average annual growth rate in health expenditure per capita (1995-2006)

Average annual growth rate (%)

Although pharmaceutical spending has outpaced overall spending, the hospital and ambulatory sectors have played the more significant role

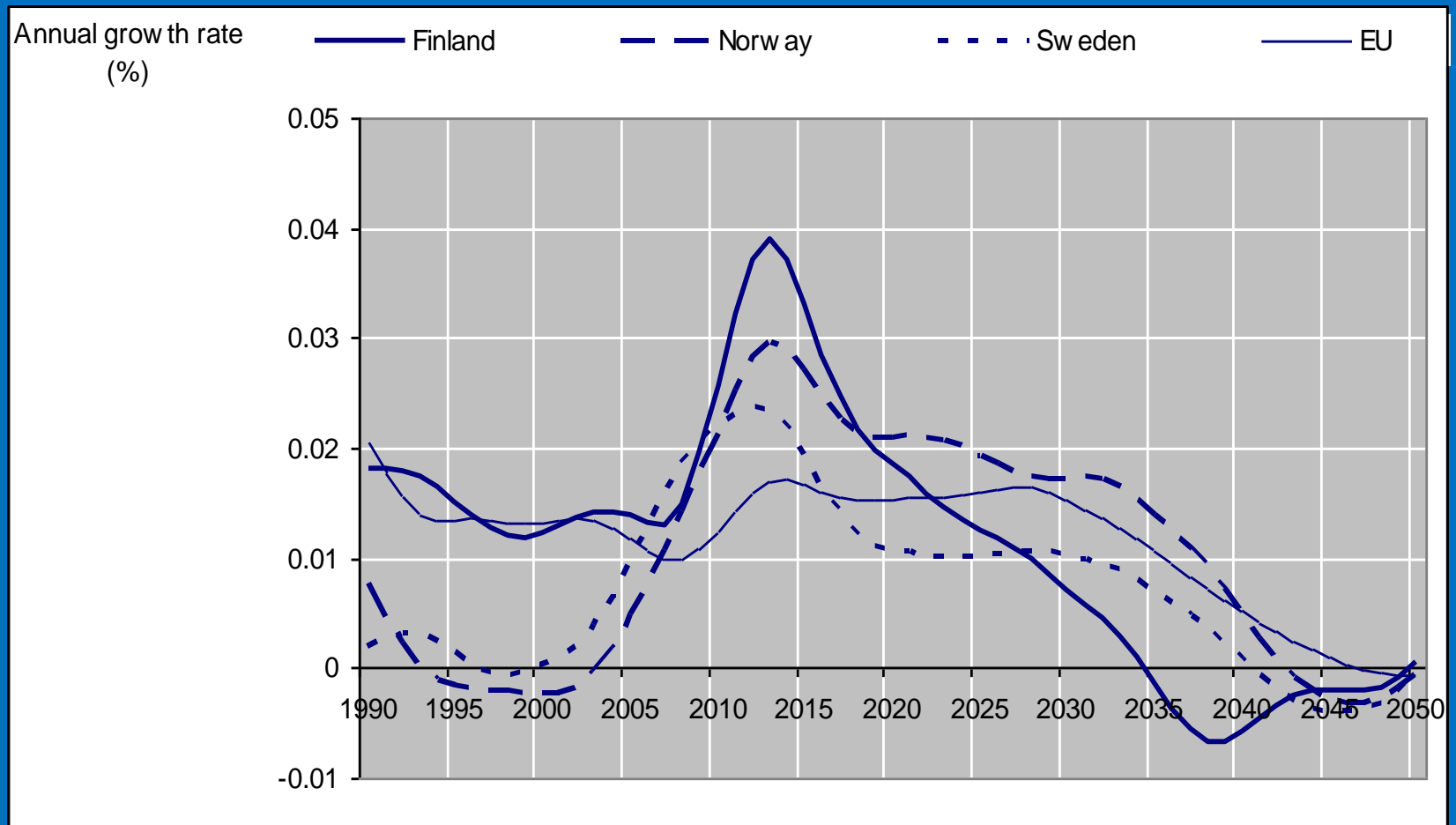


(1) 1999-2005 (2) 2000-06 (3) 1998-2006 (4) 1995-2006 (5) 2001-06 (6) 1997-2005

Source: OECD Health Data 2008

Contributors to the growth in expenditure

Annual growth rates population 65+ in Nordic countries and the EU (1990-2050)

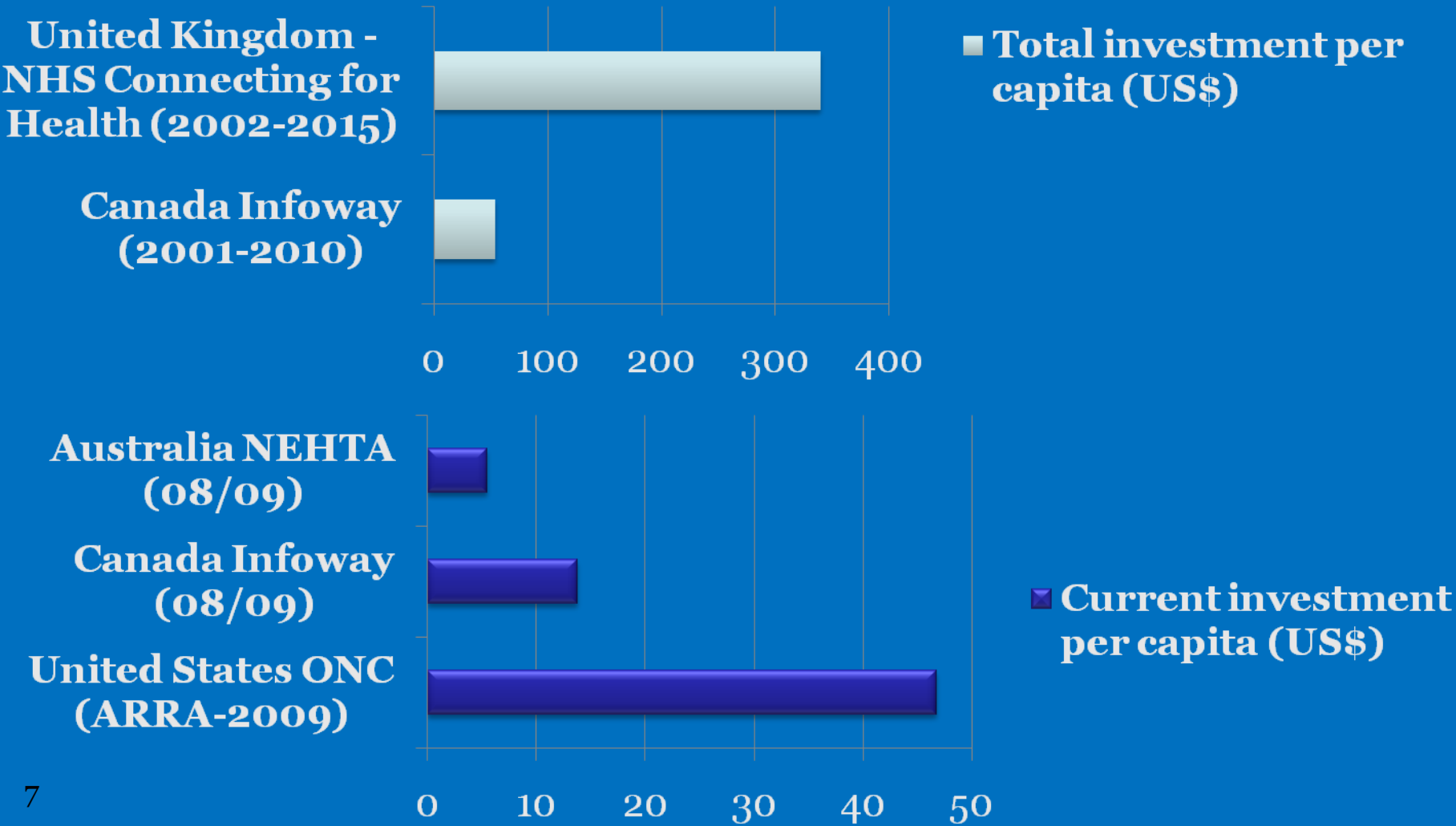




Governments expect continued cost and financing pressures in the health sector.

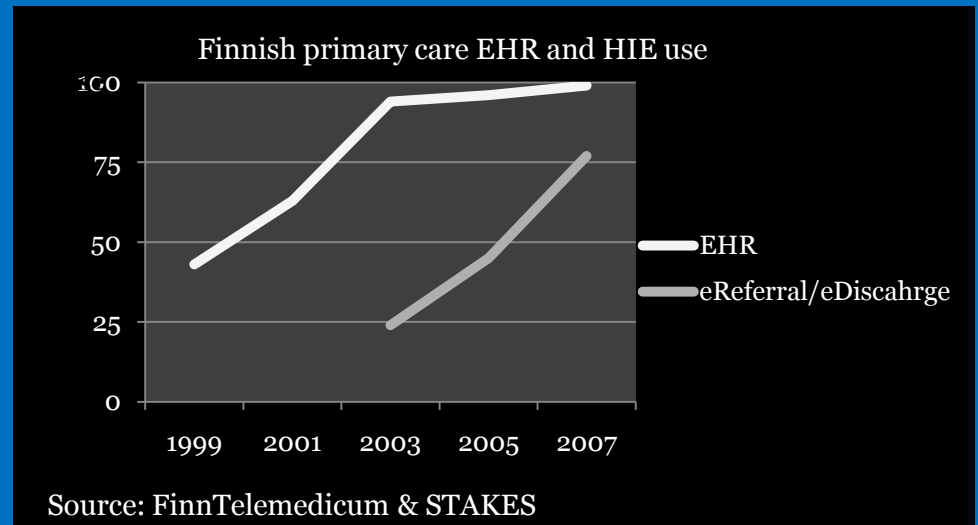
Information technologies are increasingly perceived as a substantial opportunity to reduce costs, improve the efficiency and the quality with which health care is delivered.

Implementation efforts provide a picture of significant public investment



Gaps in adoption and use of ICTs persist- even in most advanced countries

- In the United States, a 2008 survey shows an uptake of only 13% of the most basic functions of Electronic Health Records (EHRs) by primary care physicians.
- In other more advanced countries EHRs are almost ubiquitous in primary care, but exchanging health information with other parts of the system remains often largely paper-based.



Three Main Barriers To Wide-Spread Implementation

1. ***Misalignment of incentives and the need for fair allocation of benefits and costs*** - the costs associated with adoption of new technologies are not aligned equitably among stakeholders.
2. ***Lack of commonly defined and consistently implemented network-wide standards*** - in the absence of overarching 'standards-and compliance with existing rules, the providers that invest in technological infrastructure run high risks of failure and poor returns.
3. ***Concerns about privacy and confidentiality*** – because of the sensitivity of health information, privacy concerns are one of the most powerful barriers to widespread implementation.

Achieving Efficiency Improvements through ICTs

PURPOSE OF THE OECD PROJECT

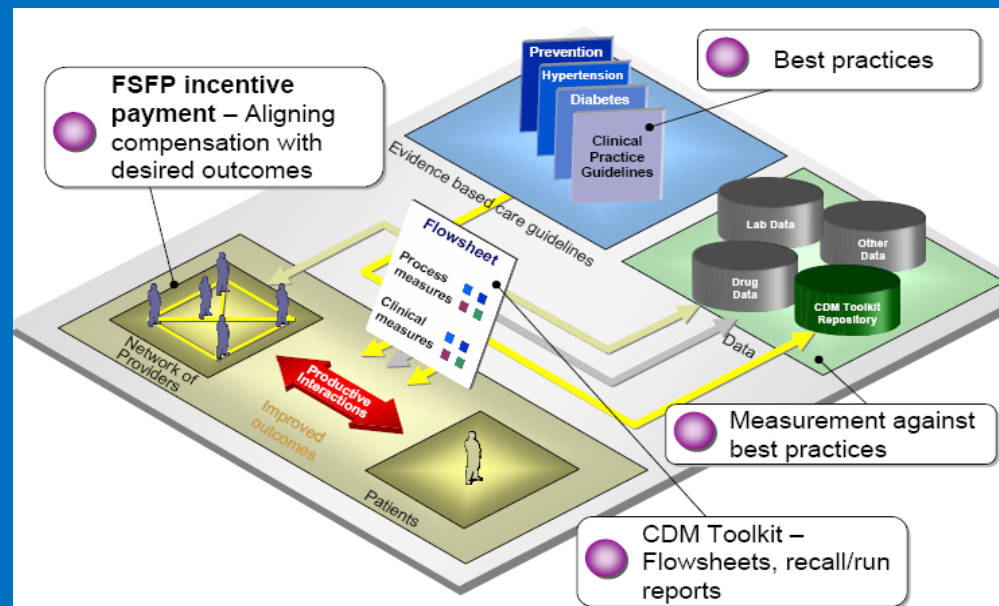
- Identify policy tools and conditions which can accelerate adoption and enhance the efficient use of health ICTs
- The project draws upon lessons learned from case studies in six OECD countries (*Australia, Canada, the Netherlands, Spain, Sweden, and the United States*)

Achieving Efficiency Improvements through ICTs

**MAIN FINDINGS: MOST INITIATIVES
ADDRESS PUBLIC HEALTH PRIORITIES
AND SUPPORT AGENDAS FOR CHANGE
THAT WOULD NOT HAVE BEEN
ACHIEVABLE WITHOUT ICTS.**

British Columbia (Canada) achieved successful improvement in chronic disease management through:

- 1-Changes in Physician Compensation (**Incentives**)
- 2-Support for targeted **ICT applications** (Chronic Disease Management Toolkit/EMR)
- 3- **Privacy Legislation**: Bill 29 (enacted March 2007)
- 4- **Guidelines** Development
- 5- **New Service Delivery** Models



In less than three years:

- The proportion of people with diabetes who had HbA1c, blood pressure and lipid tests complying with guidelines from the Canadian Diabetes Association, improved between 2001/02 and 2004/05 from 21.8% to 48.6%
- The cost of diabetes care in the province dropped over the same period from an average of CAD 4,400 (Canadian dollars) to CAD 3,966 per patient .

Western Australia is enabling integrated, multipurpose primary care through implementation of e-messaging

The Great Southern Managed Health Network- a not-for-profit association between the Great Southern Division of General Practice (GSDGP) and the University of Western Australia is delivering web-based patient management systems and secure electronic messaging solutions to clinicians, nurses and allied professionals in the vast rural expanse of Western Australia.

Use of electronic messaging and perceived intensity of related effects

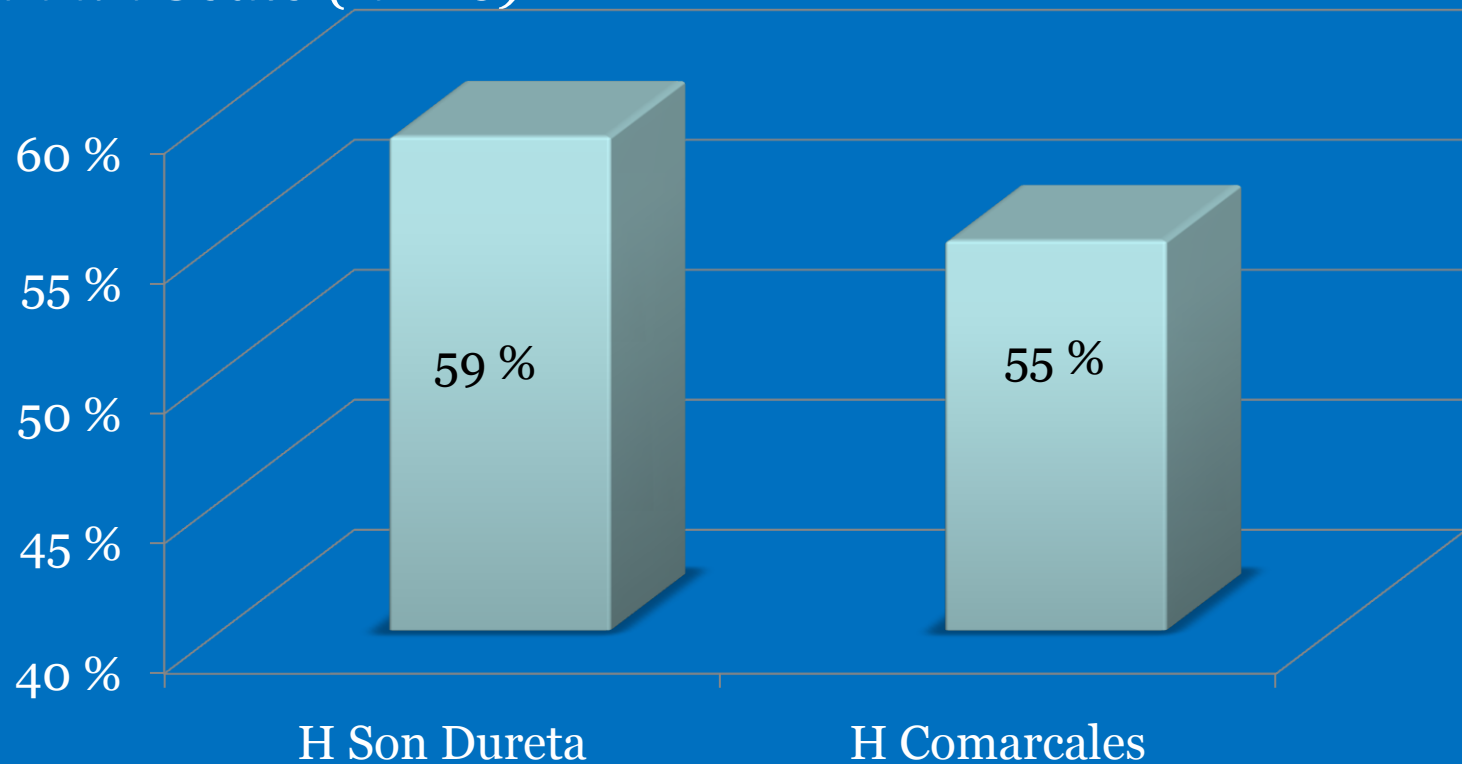
Benefits	GPs	Allied Health Professionals	Practice Managers	Health Service
Faster exchange of information	strong	strong	strong	strong
Cost savings (fewer 'phone calls, faxes and letters)	moderate	moderate	moderate	strong
Reduced workload	limited	strong	limited	moderate
Better quality of care	moderate/strong	moderate	N/A	N/A
Greater confidentiality	strong	strong	strong	strong

The Balearic Islands (Spain) have succeeded to improve access to stroke treatment through tele-health

- The Balearic health authority (Ib-Salut) established the telestroke program in 2006 in conjunction with overall health information systems modernization in the region.
- The Telestroke Program has:
 - Made patient electronic records available at the point of care regardless of location.
 - Provided real time remote patient assessment via the private Balearic network with picture archiving and communications systems (PACS) , merged audio, video, and patient management systems

The outcomes of patients treated through telestroke (Comarcales) are comparable to direct, face-to-face care (Son Dureta)

Percentage of patients fully recovering according to Rankin Scale (n=26)

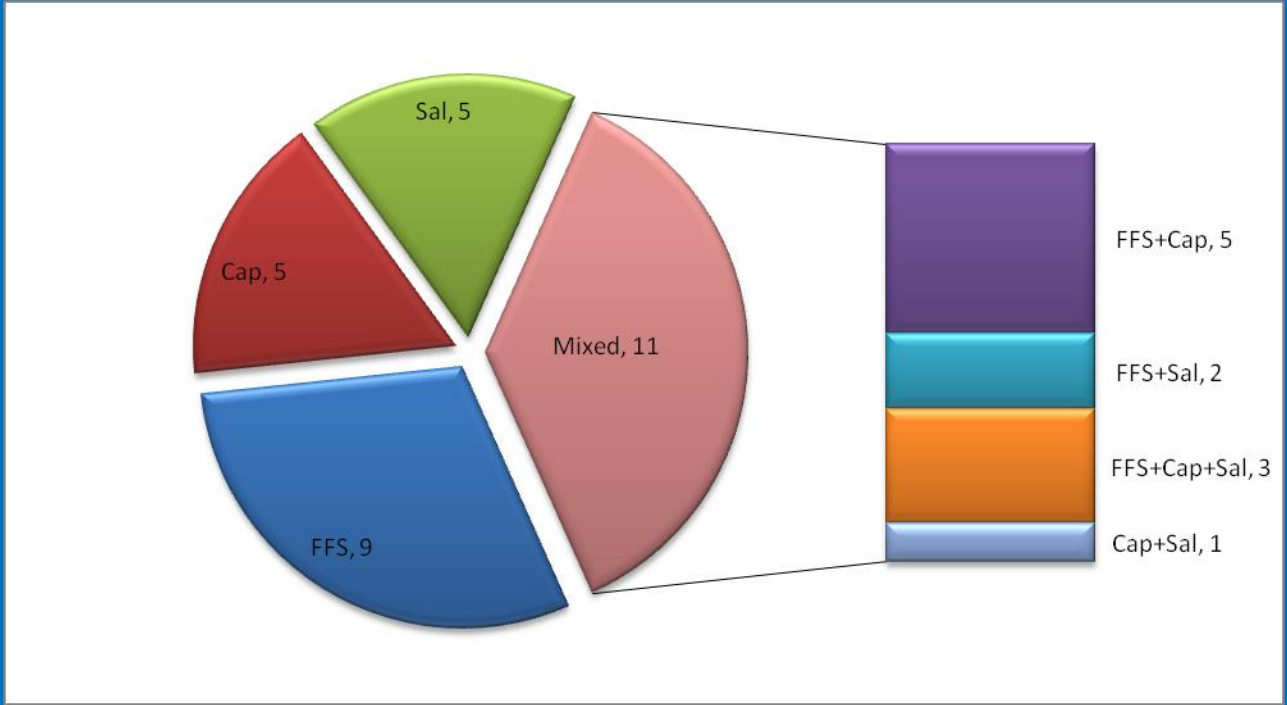


Achieving Efficiency Improvements through ICTs

**MAIN FINDINGS: A RANGE OF FINANCIAL
INCENTIVES ACTED AS KEY MOTIVATORS
AND WERE CRITICAL IN GUIDING
IMPLEMENTATION AND EFFECTIVE USE.**

- Fee-for-service (FFS) is the predominant method of compensation of physicians in Canada and Australia, as well as in many other OECD countries.
- FFS schemes do not provide the appropriate incentive environment for physicians to engage in complex cases, coordination of care or in services outside of the traditional office visit, including phone consults with patients or use of electronic media to communicate with patients.

Remuneration of Primary Care Physicians across OECD countries



FFS: Fee-For-Service
Cap: Capitation
Sal: Salary

Most common financial incentives in the six OECD case study countries

Area of Focus	Australia	Canada	Netherlands	Spain	Sweden	United States
Payment differentials (bonuses or add-on payments)	YES	YES	YES	NO	NO	YES
Grants and Subsidies	YES	YES	YES	YES	YES	YES
Direct reimbursement of e-care	NO	YES	NO	NO	NO	YES
Shared withholds (penalties)	YES (planned)	NO	YES (planned)	NO	NO	YES

British Columbia

A Range of Incentives

Since 2006, the Physician Information Technology Office (PITO) supports : (i) the transition to Electronic Medical Records (EMR); and (ii) the provision of effective tools for professional development, practice change management .

Physicians need to purchase an EMR product that conforms to specific requirements set by the Province.

Compensation to participate in Practice Support Program learning modules

Direct payments to spur use of the CDM Toolkit

The complex care e-mail and telephone follow-up management fee

The Physician Information Technology Office (PITO) incentive programme

Facility Patient Conferencing Fee

Community Patient Conferencing Fee

PITO provides reimbursement of 70% of the cost of adoption and use of an eligible EMR.

This leaves a remaining funding gap for physicians of about USD 12 085 over five years

Added-up, the basket of incentives is substantial, and can make up for most of the difference.

	United States – MAeHC (USD)	Canada – PITO (CAD)
Hardware	22,800	7,000 (≈ 6,200 USD)
Software & Implementation	17,200	10,000 (≈ 8,900 USD)
Annual Support/License	5,600	4,080 (1 st year)/6,420 (2 nd year & beyond) (≈ 3,600-5,700 USD)

Achieving Efficiency Improvements through ICTs

**MAIN FINDINGS: MEASURES TO ACHIEVE
COMPLIANCE WITH NETWORK-WIDE
STANDARDS ARE NEEDED**

- The development of and compliance with standards to enable exchange of information continues to be a political and logistical challenge.
- The problem has been now widely recognized as a market failure, *i.e.* freely functioning private markets will not fix it.
- Governments need to intervene. Indeed, the case study countries indicate that they are now doing so and in a number of ways.

Measures implemented by governments in case study countries

Area of Focus	Australia	Canada	Netherlands	Spain	Sweden	United States
Certification of products	NO	NO	YES	YES	YES	YES
Standards-setting activities	YES	YES	YES	YES	YES	YES
Vendor conformance and usability requirements	NO	YES	(YES) In proof of concept stage	NO	NO	NO

Achieving Efficiency Improvements through ICTs

**MAIN FINDINGS: PRIVACY AND SECURITY
ISSUES ARE THE BIGGEST CHALLENGE**

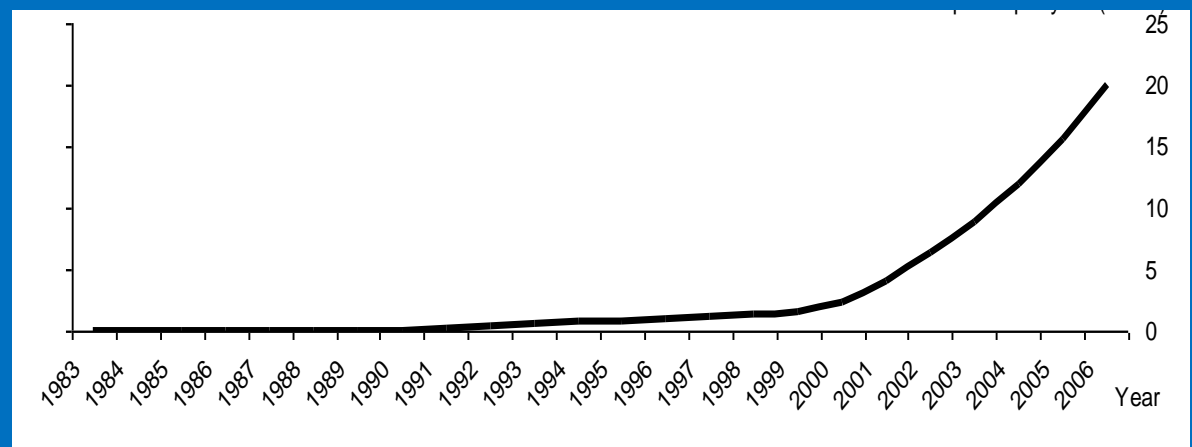
- A view held by many physicians in nearly all interviews was that sharing identifiable patient data among different providers in a network raises the questions of who should be allowed access to the file.
- There is also a generalised lack of legal certainty about the way in which data protection legislations and security requirements apply in practice to eHealth tools and services. Well-intentioned privacy laws have created barriers to data access .
- Dealing with patient consent was often described as the main “road block” to creating a coordinated information system for patient care.

In Sweden, despite the significant adoption rates there are privacy and security issues that must be addressed if the full benefits of e-prescription are to be realized.

Physicians are not allowed to view the entire prescribed medication list.

Many physicians' systems are not compliant with required privacy and security measures to allow access to certain national databases, e.g. the National Pharmacy Register

Number of E-Prescriptions/year in Sweden (millions)



Source: Bengt Åstrand, Apoteket

Conclusions

The case studies illustrate actions that governments should consider if they wish to achieve the intended efficiency gains from ICT implementation:

1. **Strengthen monitoring and evaluation**
Governments should ensure that systems for monitoring ICTs are sufficient to assist in meeting improvement goals.
2. **Align programmes and incentives with health system priorities**
Governments and payers need to set targets associated with unambiguous public health gains and better align resources, processes, and physician compensation to match the nature of the gains to be achieved.

Conclusions

- **Establish robust and coherent privacy protection to encourage widespread adoption.**
Government action is needed to help establish reliable and coherent privacy and security frameworks and accountability mechanisms that both encourage and respond to innovation.
- **Take stock of, assess and encourage current strategies used to define and uniformly implement standards** International dialogue and government leadership are necessary to accelerate and steer interoperability efforts.

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