



HEALTHCARE INNOVATIONS
FOR A BETTER TOMORROW

E-health –
The Danish Experience

Henrik Hoejlund
Healthcare Solutions Leader,
North East Europe & Middle East

STOP
TALKING.
START
CURING.



Agenda

E-health – the Danish example

Healthcare around the world face challenges which will make healthcare in the future unsustainable. EU and the U.S. act NOW

Aging population !



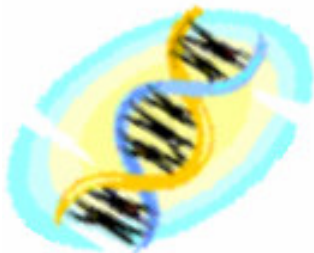
More chronic patients !



- Unsustainable economy and budgets
- Consumerism
- Political pressure

EU and the US act NOW

New treatments !



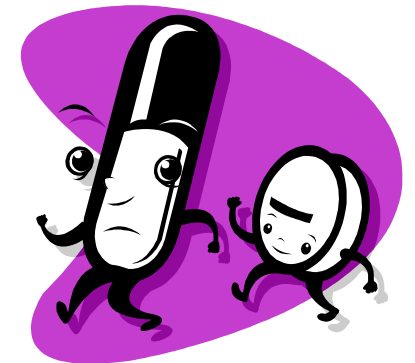
EU E-Health plan:
All countries must have e-health network and portal by 2008



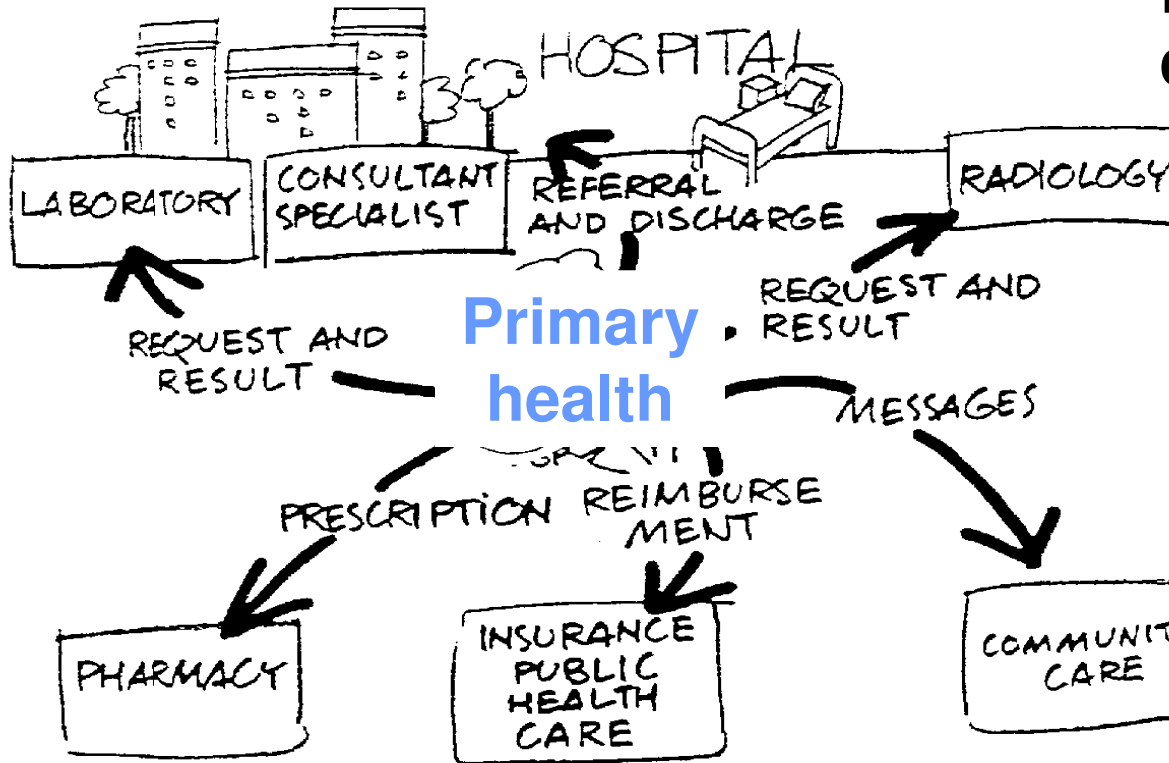
US Federal National Health Information Network:
Nationwide health network by 2010



Drug costs rising !



Benefits of communication

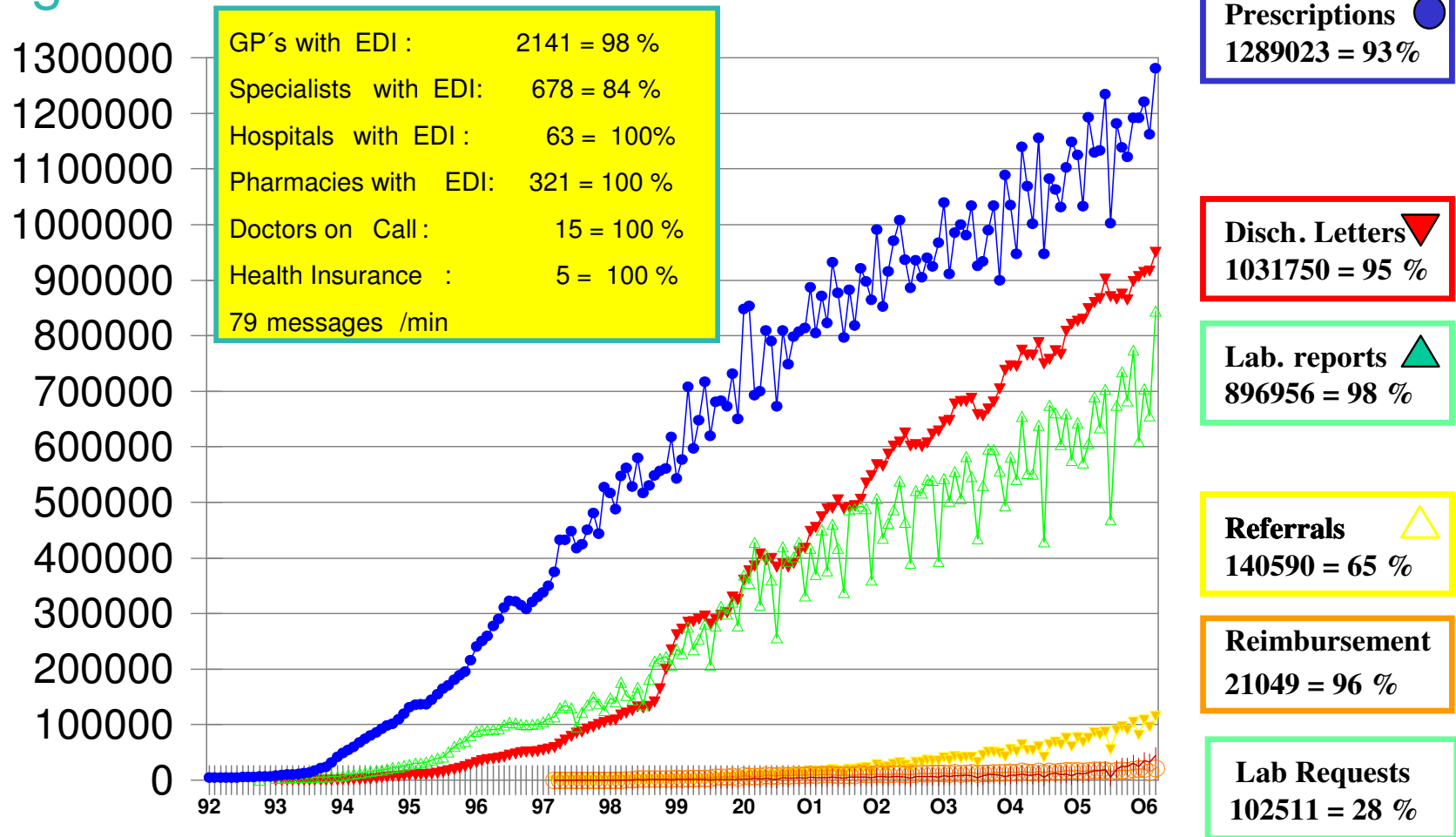


Primary Clinics - 92%
 490 Specialists - 62%
 332 Pharmacies - 100%
 63 Hospitals - 100%
 50 Multicipalities
 2,5 mill. Messages each month
 60 – 70 % of all communication

50 minutes saved per day in GP practice
 Telephone call to hospitals reduced with 66%
 2,3 € saved per message – 60 million /year



MedCom Messages/Month





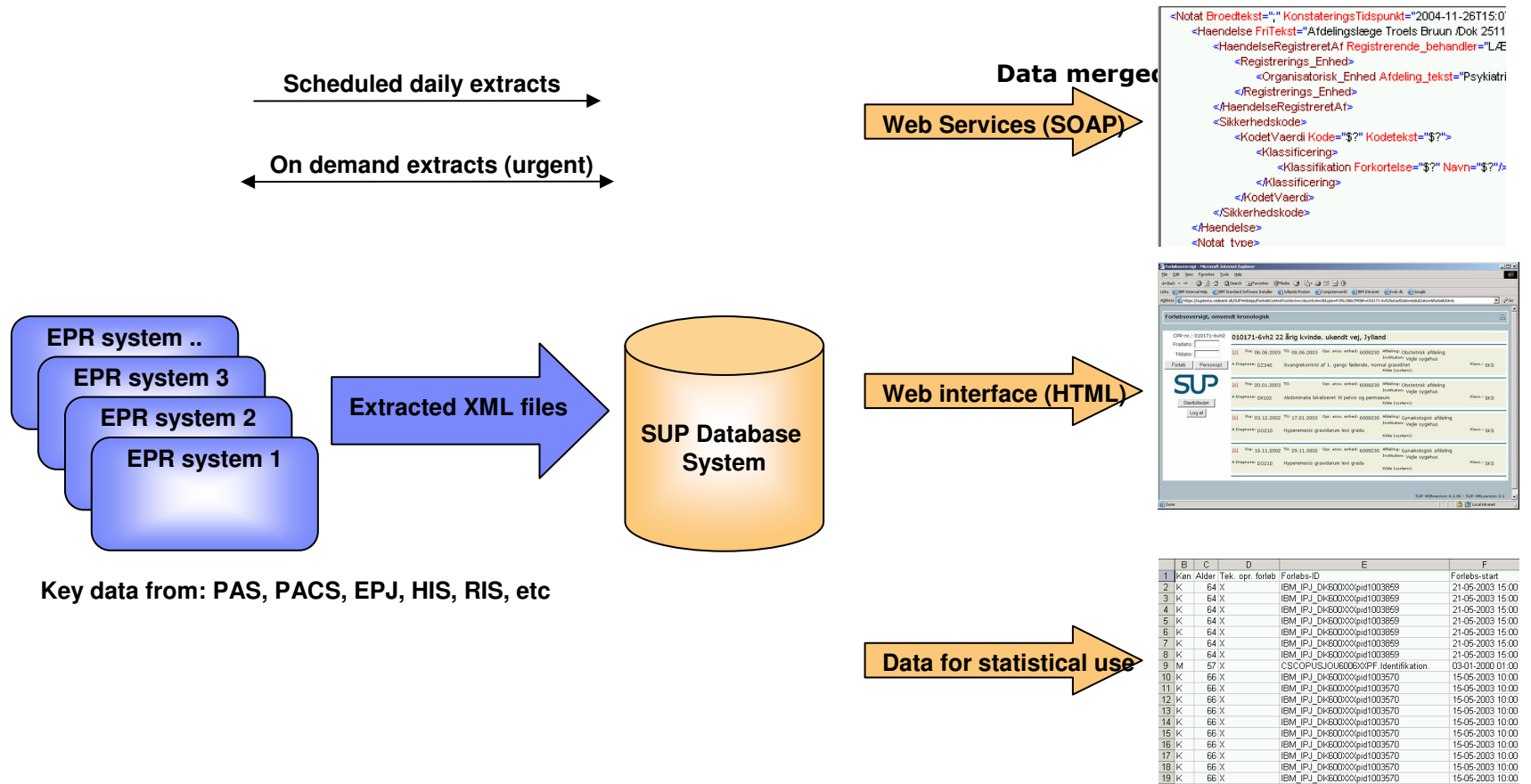
Agenda

E-health – the Danish example

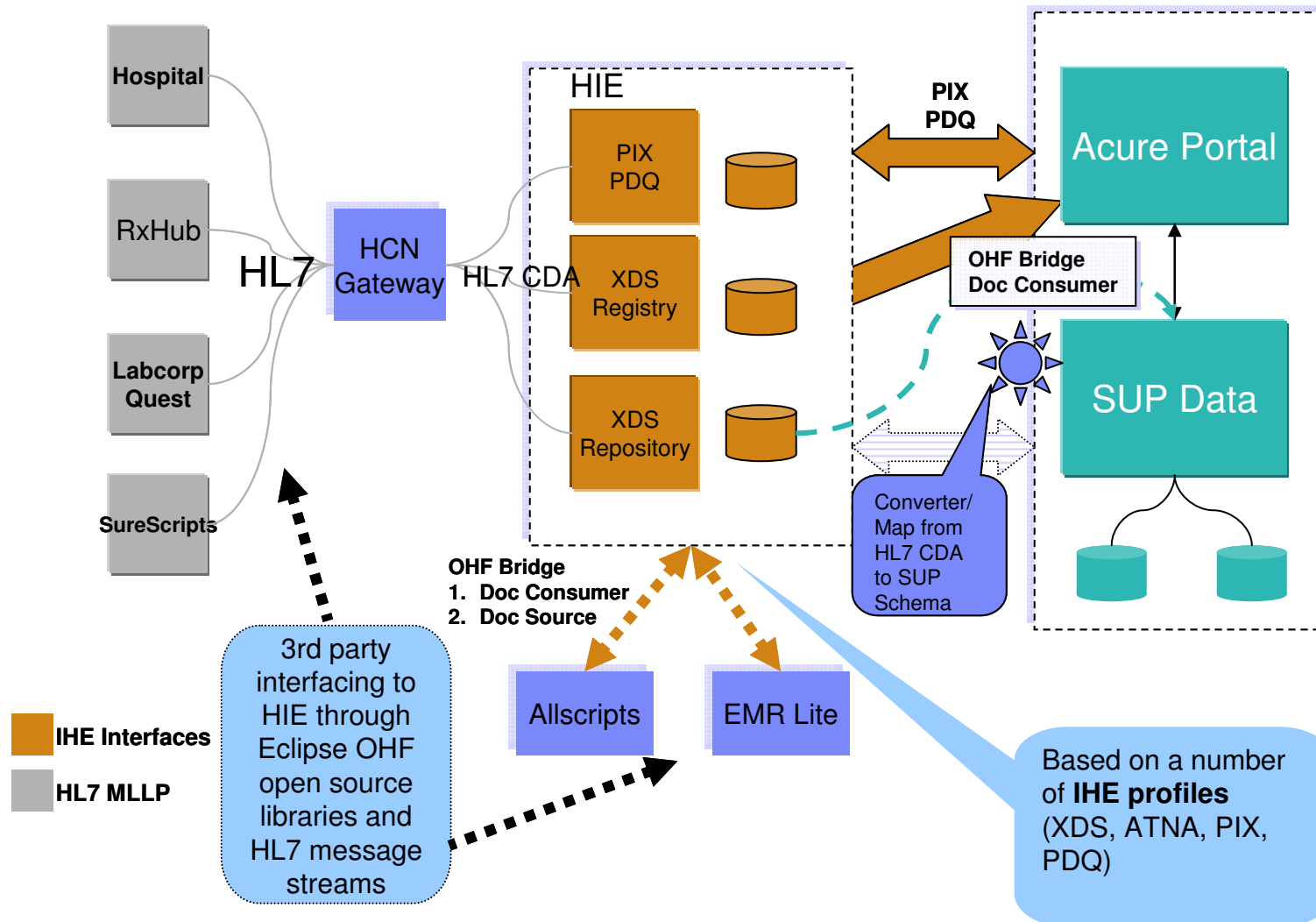
SUP (Standardised Use of Patient records)



The actual implementation of SUP is flexible and scalable



Adaption to international standards





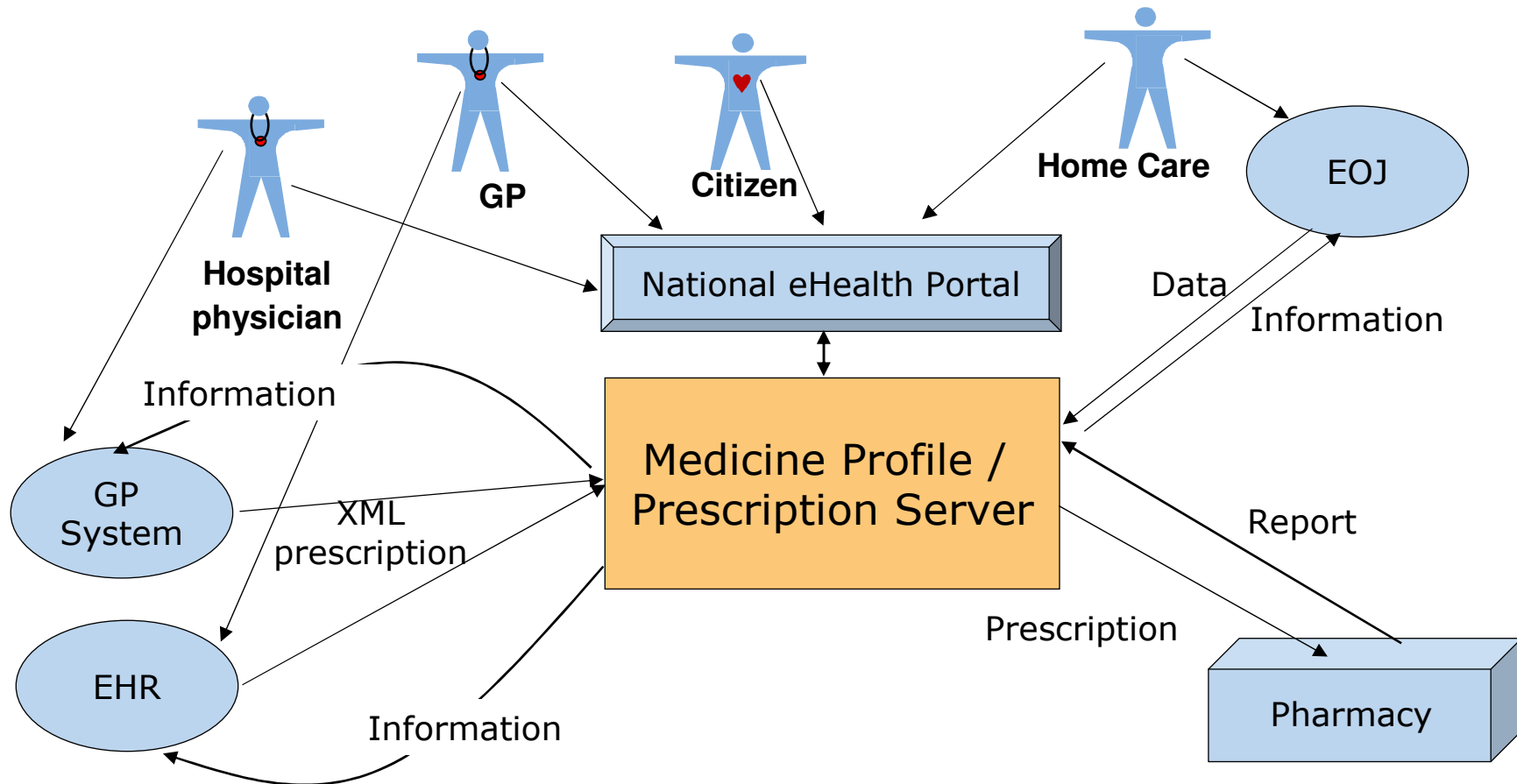
Agenda

E-health – the Danish example

SUP (Standardised Use of Patient records)

ePrescription and Personal Electronic Medicine Profile

Medicine Profile and Prescription Server





Prescription Server

Improved communication between physicians, patients and home care staff

Better and more correct medication

More precise overview of medicine use – also over time

Knowledge collection in one place

Information follows the patient

Better monitoring and follow-up

And a very positive business case:

Prescription server savings of minimum 80.000 Euro per 100.000 prescriptions

Home care savings of 20 mEuro in Denmark



Electronic Medicine Profile

Citizen's and GPs access through the internet to information regarding physician ordinated drugs given to the individual

The purpose of PEM is to increase the quality of medical treatment of patients by preventing:

- Incorrect medication

- Too high drug doses

- Combination of drugs that do not work effectively when used together

medicinprofilen.dk



Personlig Elektronisk Medicinprofil - Microsoft Internet Explorer

Log ud Restart | Vis nøgler

Hovedmenu > Medicinprofil søgning > Receptkøb > Lægemiddel > Compliance

Lægemiddel **Analoge lægemidler** **Compliance**

Person 111111-1118, Anita Andersen

Grafen viser den beregnede beholdning af dagsdoser for det købte lægemiddel. Compliance beregnes under forudsætning af, at den på recepten ordinerede dosis følges. Hver stigning på grafen markerer et lægemiddelkøb på listen nedenfor.

Hvis der er valgt visning af analoge lægemidler, vil disse optræde på grafen med forskelligt farvede kurver.

Beregnet beholdning ved ordineret dosering

Bemærk at figurens akser ændres afhængigt af filtrering.

Receptkøb

Fra dato: 10-06-2003 Til dato: 12-04-2005 ATC niveau: Niveau 5 - N06AB10 **Filtrer** **Nulstil**

Nr.	Dato	Lægemiddelnavn	Form	Styrke	Pakning	Antal pakninger	ATC gruppe	Indikation	Dosering	Dosis-dispenseret
1	11-11-2003	Cipralex	Filmovertrukne tabl.	20 mg	56 stk....	1	Escitalopram - ...	Mod depression	1/2 tablet daglig	
2	11-11-2003	Cipralex	Filmovertrukne tabl.	20 mg	28 stk....	2	Escitalopram - ...	Mod depression	1/2 tablet daglig	
3	08-11-2003	Cipralex	Filmovertrukne tabl.	20 mg	56 stk....	1	Escitalopram - ...	Mod depression	1/2 tablet daglig	
4	12-09-2003	Cipralex	Filmovertrukne tabl.	20 mg	56 stk....	1	Escitalopram - ...	Mod depression	1/2 tablet daglig	
5	30-07-2003	Cipralex	Filmovertrukne tabl.	20 mg	56 stk....	1	Escitalopram - ...	Mod depression	1/2 tablet daglig	

TILBAGE 1 2 FREM VIS ALT

Valg Antal poster 7

Lægemiddelstyrelsen er data- og registeransvarlig for Medicinprofilen. Spørgsmål til registret kan rettes til Lægemiddelstyrelsen.

Local intranet

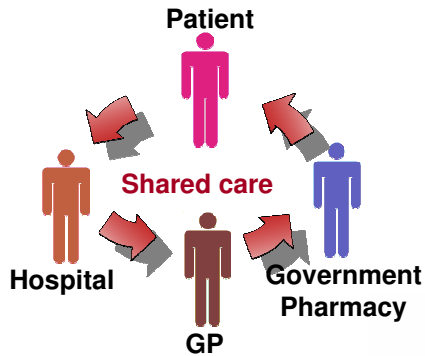


Integration via the e-health portal (sundhed.dk)



The healthcare challenge

The ehealth approach



Co-operation

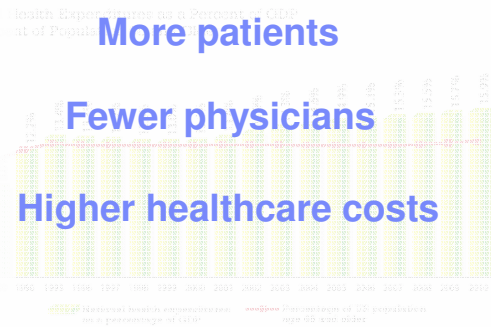
- eReferrals
- eDischarges
- Access to HR
- Work on same HR

Optimize work routines

- eBooking
- eConsultation
- Healthcare Yellow pages
- Support choice of healthcare organization
- eRenewal of medicine prescription
- Update own information

Use the patients capacity

- Shared Care
- Track own medical history
- Track own medicine use
- Treatment information



Prevent illness

- Disease Information
- Medicine information

The right treatment

- Decision support
- Medical history
- Adverse drug reaction
- CAVE Registration
- Access lab results

Take action in time

- Track medicine use
- Test yourself



Agenda

E-health – the Danish example

SUP (Standardised Use of Patient records)

ePrescription

Personal Electronic Medicine Profile

DiaLog

Danish National eHealth Portal

How to approach the project



How to get started?



A strong commitment

Building the eHealth portal – focusing on benefits

Use already implemented communication standards and organizations

Get started as soon as possible and benefit from eHealth



Strong commitment from stakeholders





Benefits for regional/national institutions

Efficient communication => reduced health care costs

Shared data => reduced health care costs

Improved treatment and quality of life for citizens

Necessary transformation of health care sector to secure potentials of personalized health care

The access to data gives the possibility to **monitor the outcome of treatments and optimize the quality of guidelines and workflows** - e.g. analyze patterns of medicine prescription to optimize guidelines and reduce costs

Access to existing data, e.g. lab results and EPR prevent **unnecessary double tests**

The possibility to implement more effective workflows and planning of treatments

The possibility to communicate on-line with specialists – e.g. on X-rays – will reduce the need to have local specialists in every hospital



Benefits for Medical Professionals

Cost reduction – no manual handling of communication

Patient **information automatically imported to their EPR**

Data entered only once

On demand access to complete patient information

Anywhere 24/7 access to the information

Improve patient service and treatment

Improved decision support

Access to updated guidelines from regional and national authorities

Communication with other healthcare professionals and researchers

Communication with patients

Reuse of existing data

Clinical pathways to support clinical treatment

Access to knowledge and researching result



Benefits for Patients (citizens)

Improved quality in treatment

Improved quality of service

Influence on and detailed knowledge of own treatment

Shared care

Coherent pathways

Improved quality of life

Knowledge of public records

Information and knowledge of treatments and medications

Support the free choice of healthcare professionals

One access point to health care sector

Secure communication and exchange of documents with entire health care community

24/7 access to the health care sector, booking, ER-doctors, home care etc.



Benefits for Researchers

Access to study data (de-identified patient data)

Push/pull for research information

Access to knowledge and researching result from other Biobanks

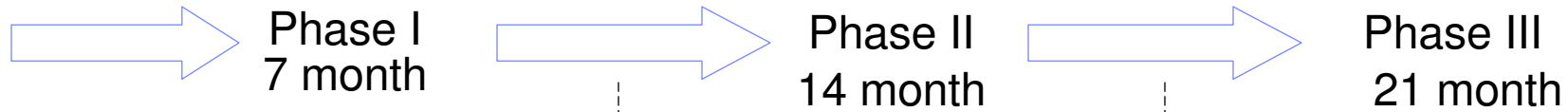
Improved opportunities for increasing time-to-market for new treatments

Secure communication

Community and Communication with other healthcare professionals and researchers

Single point of access to other parts of the health care sector

24/7 access to the information



Information Portal

**ePrescription
eReferral/Discharge**

National benefit

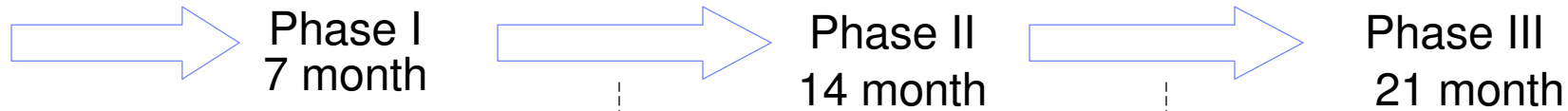
**Efficient communication
Distribution of guidelines**

Professionals benefits

**Access to guidelines
Yellow pages
Evaluate waiting time
Better service to the patient
Efficient communication**

Citizens benefits

**Access to guidelines
Yellow pages
Evaluate waiting time
Better service**



Information Portal

Collaboration Portal

**ePrescription
eReferral/Discharge**

**eBooking, Medicine Profile,
eEHR(SUP), LabResult....**

National benefit

Efficient communication
Distribution of guidelines

Professionals benefits

Access to guidelines
Yellow pages
Evaluate waiting time
Better service to the patient
Efficient communication

Citizens benefits

Access to guidelines
Yellow pages
Evaluate waiting time
Better service

National benefit

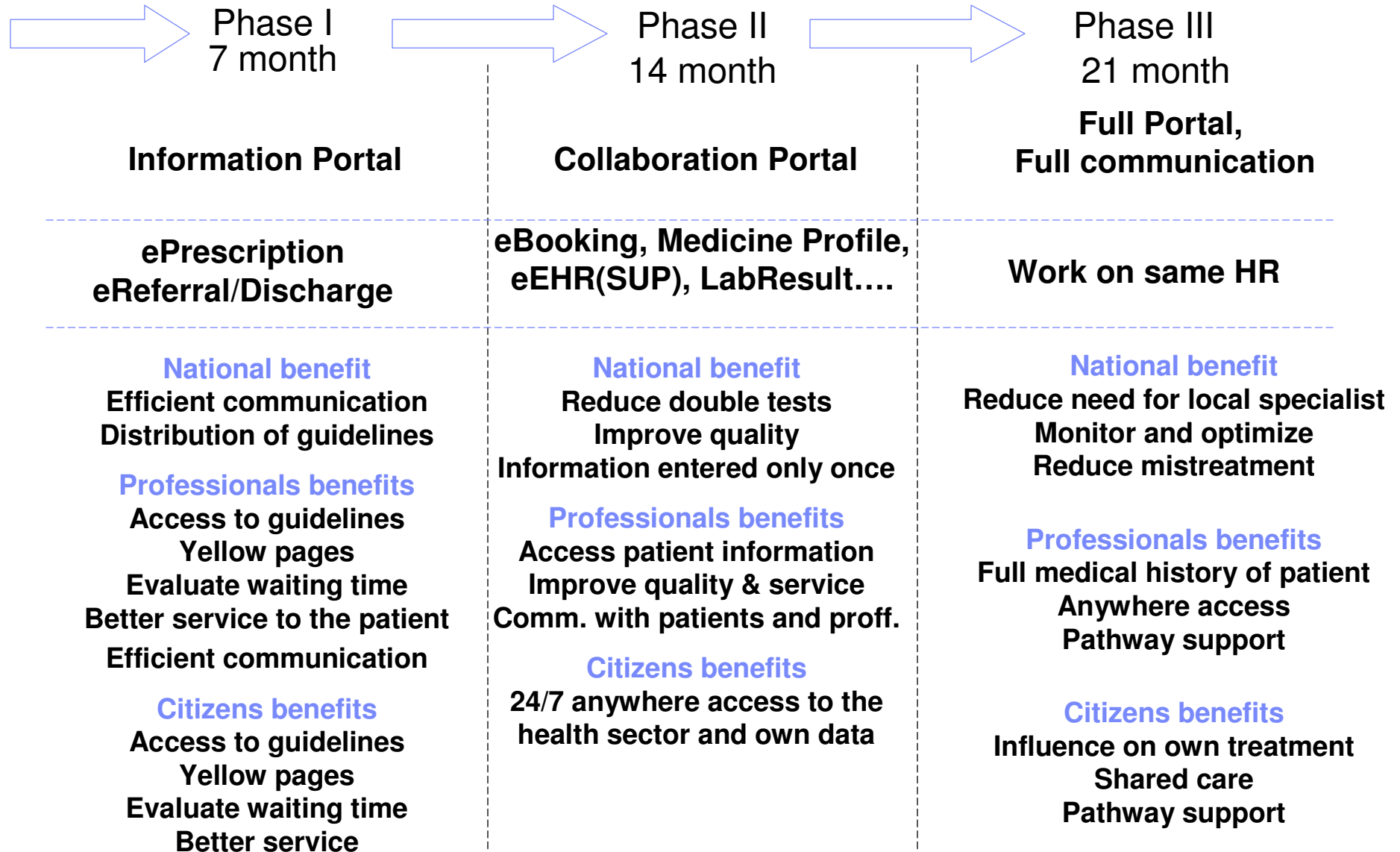
Reduce double tests
Improve quality
Information entered only once

Professionals benefits

Access patient information
Improve quality & service
Comm. with patients and proff.

Citizens benefits

24/7 anywhere access to the
health sector and own data





Questions?



Please Do Not Forget 2 Important Things 😊

1. Please Turn In Your IBM Feedback Forms
2. Visit IBM Stand CE40, Concourse Area, Outside Hall 7