Improving healthcare delivery through efficient information flows

Prague 23 June 2005

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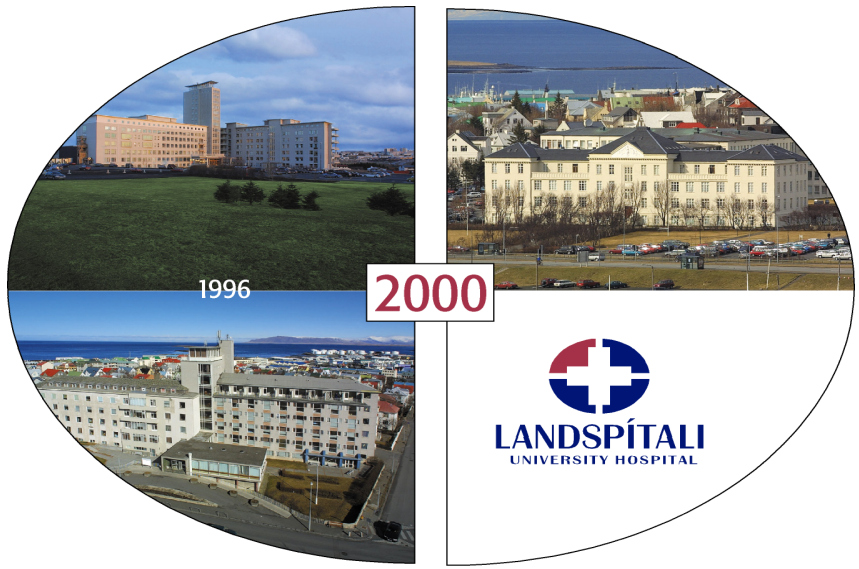
Agenda

- Areas for improvement in healthcare
- Patient Safety
- Quality of Care
- Efficiency
- Lower barriers to access

Landspítali – University Hospital

- Iceland's largest healthcare institution (the largest organizational entity in the country)
- 4800 employees
- 860 beds
- Operating expenses in excess of 300 mio EUR
- Provides all medical specialties and most subspecialties
- Operates in 25 locations



Two characteristics of the healthcare market

- Information failures
  - Customers lack the information necessary for informed choice
- Moral hazard
  - Because usually a third party pays for the service, there is an incentive for the physician to over-supply medical services

Barriers to access

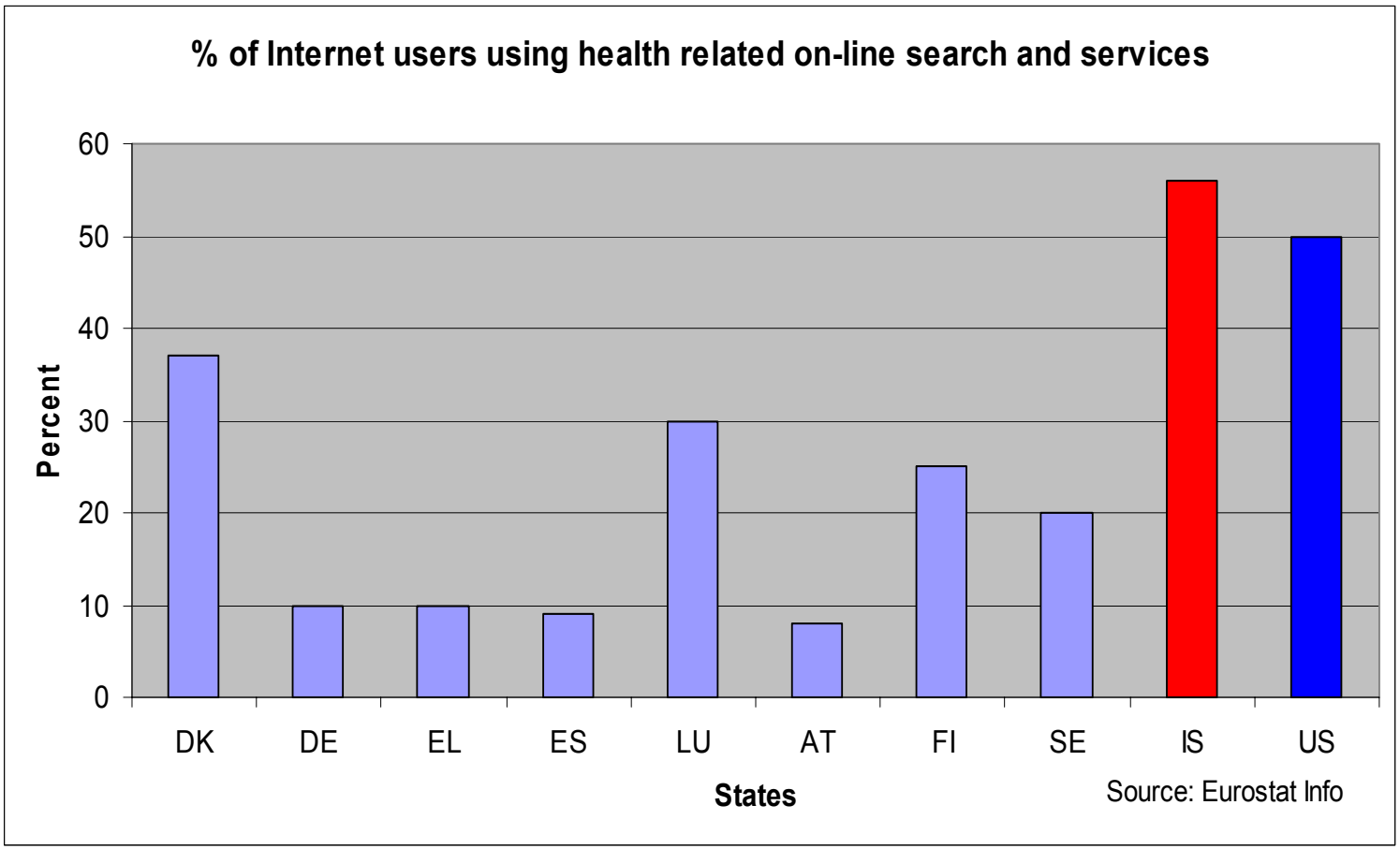
"Evidence points to a large difference in health status among population groups in the OECD countries, some groups are at a disadvantage e.g. in terms of geography".

OECD – Towards High-Performing Health Systems 2004

Efficient flow of information can provide solutions

- Information failures
  - The Internet has provided a vast amount of information to consumers about medical condition and choices
  - In the US info on health plans is #1 health content
- Moral hazards
  - Through ICT professional information such as guidelines, electronic identification of adverse drug effects etc. can help the physician to resist over-supplying medical services

Health related Internet usage in EU



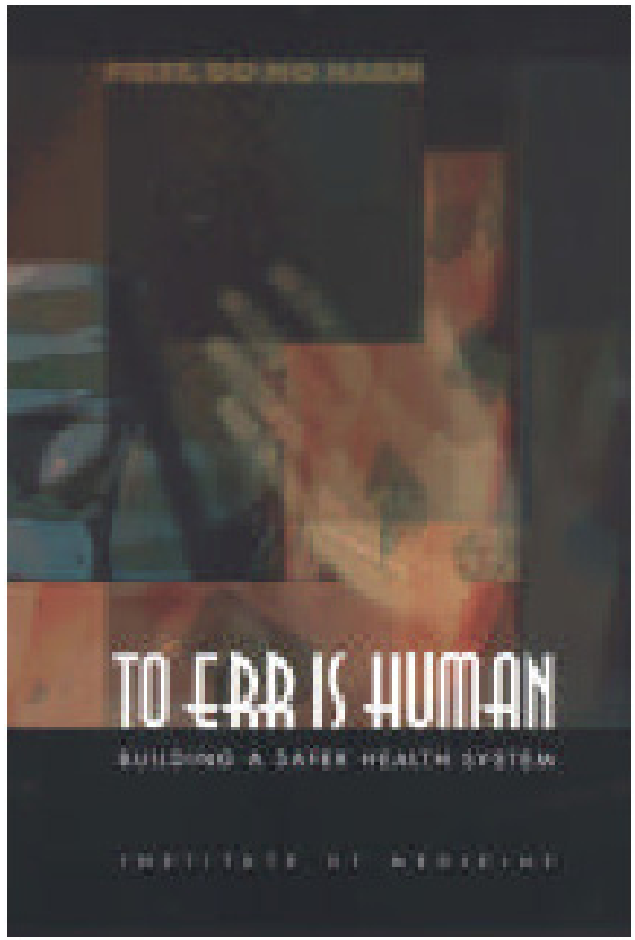
Quality of service

- Quality improvement
  (Institute of Medicine, The World Alliance for Patient Safety)
- Quality standards
  - ISO 9000
  - Six Sigma
  - EFQM
  - TQM
  - Kaizen
- Evidence Based Medicine
- Quality and the bottom line
  - UK – USD 6 Billion

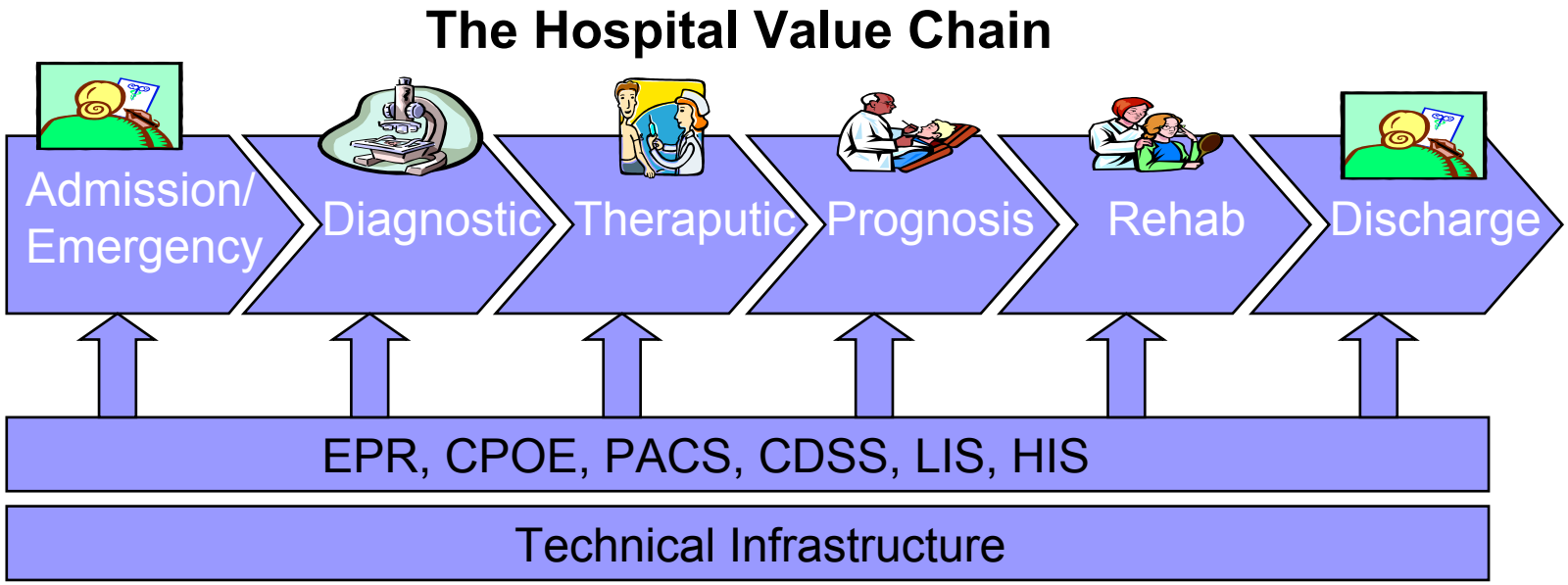
DC-10

17 years

Vioxx

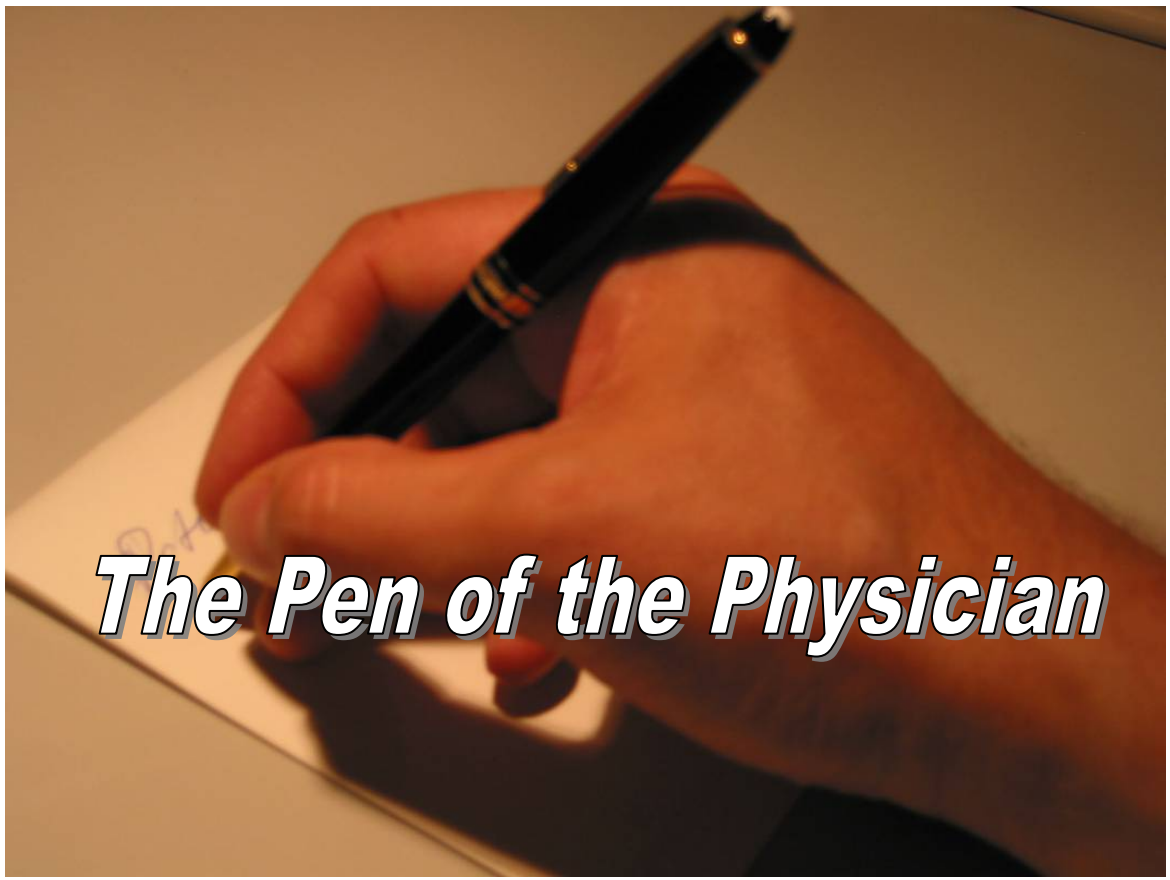


The role of information processes in healthcare

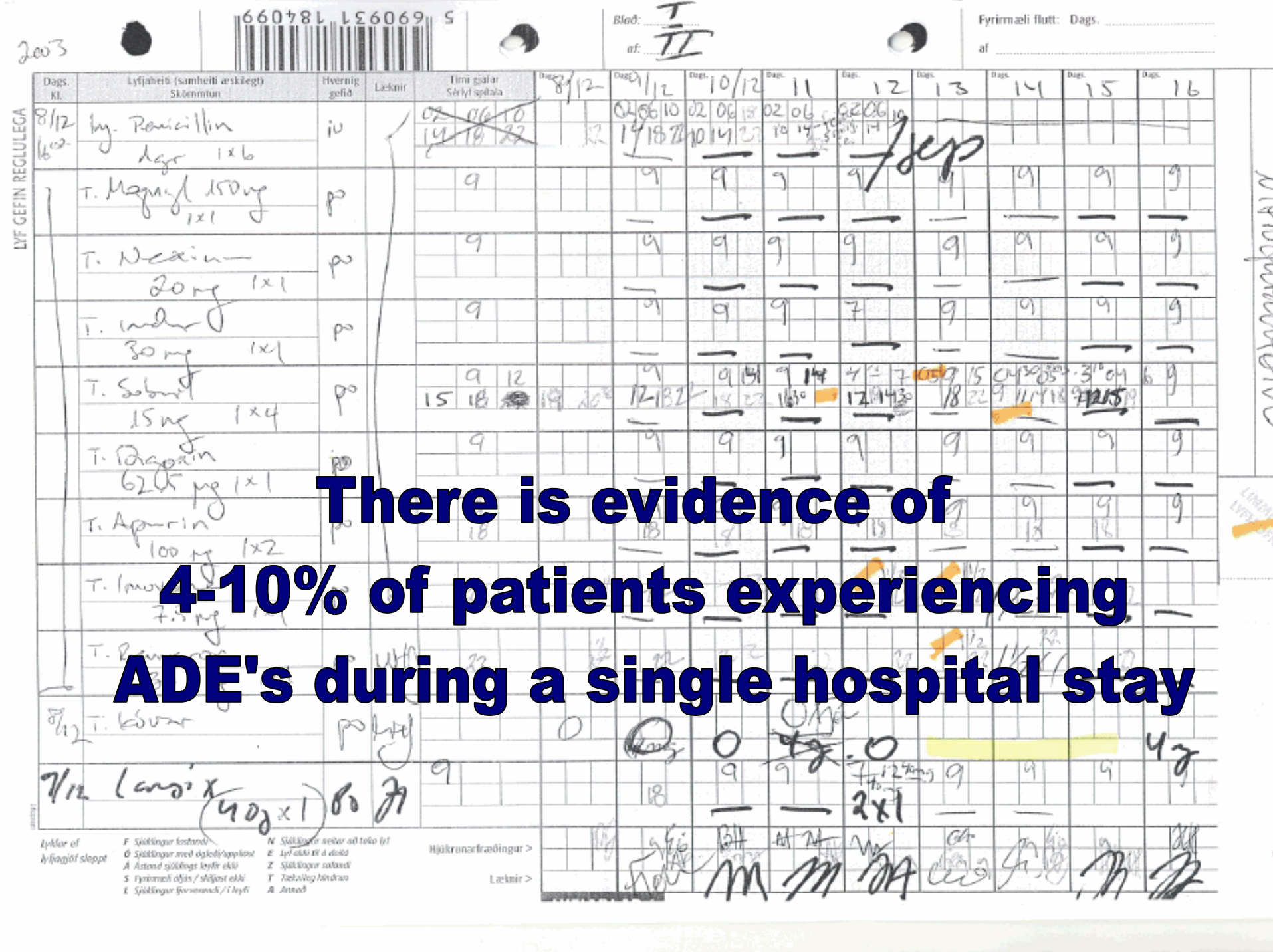


To support the healthcare value chain enabling increased patient safety, quality, efficiency and lowering barriers to access.

The most dangerous and costly device in healthcare



- Patient Safety
- Costs


There is evidence of
4-10% of patients experiencing
ADE's during a single hospital stay

Prófunar Sjúklingur

Loka

Samskipti

- Landspítali - háskólasjúkrahús
  - Lungnadeild A6 - Rautt
  - Sjúkradeild A6 TEST
    - júli test - 070707-1234
    - Júní Test - 060606-0606
    - Maí Test - 050505-0505
    - Prófunar Sjúklingur - 010
      - 30.01.04
      - Saga
    - test test2 - 010101-AAA

DAX

Sjúklingaupplýsingar

Nafn:	Prófunar Sjúklingur
Kennitala:	010101-aaa9
Þyngd:	81 kg (11:22)
BSA:	<Ekkert BSA>
Aths:	Þetta er ATH á nafn sjúklin
Fæðingard:	<Ekki þekktur>

Lyfjafyrirmæli | Lyfjagjafir | Lyfjablað | Lífsmörk | Lyfjakort | Greiningar | Innlögn

Byrjar: mið. 31.03.2004 0:00 Breikka/þrengja sýn

Lyf				31.03.2004		01.04.2004	02.04.2004		03.04.2004	04.04.2004	
	Byrjar	Lyf	PN	14	22	12	12	14	12	9	Endar
	31.03 2004	KOVAR 2mg töflur Um munn 6 dag(ar)		3 mg	3 mg	2 mg		2 mg	3 mg	4 mg	05.04 2004
	01.04 2004	MAGNYL 150mg töflur Um munn 3 dag(ar)				150 mg	150 mg		150 mg		03.04 2004
	29.03 2004	MORFIN 10mg töflur Um munn 5 dag(ar)		20 mg		20 mg		20 mg			02.04 2004

Lyf				Infusions	
	Byrjar	Lyf	PN	31.03.2004 00:00 - 04.04.2004 23:59	Endar

Improves the processes where 60% of Adverse Drug Events originate

Quality – Safety

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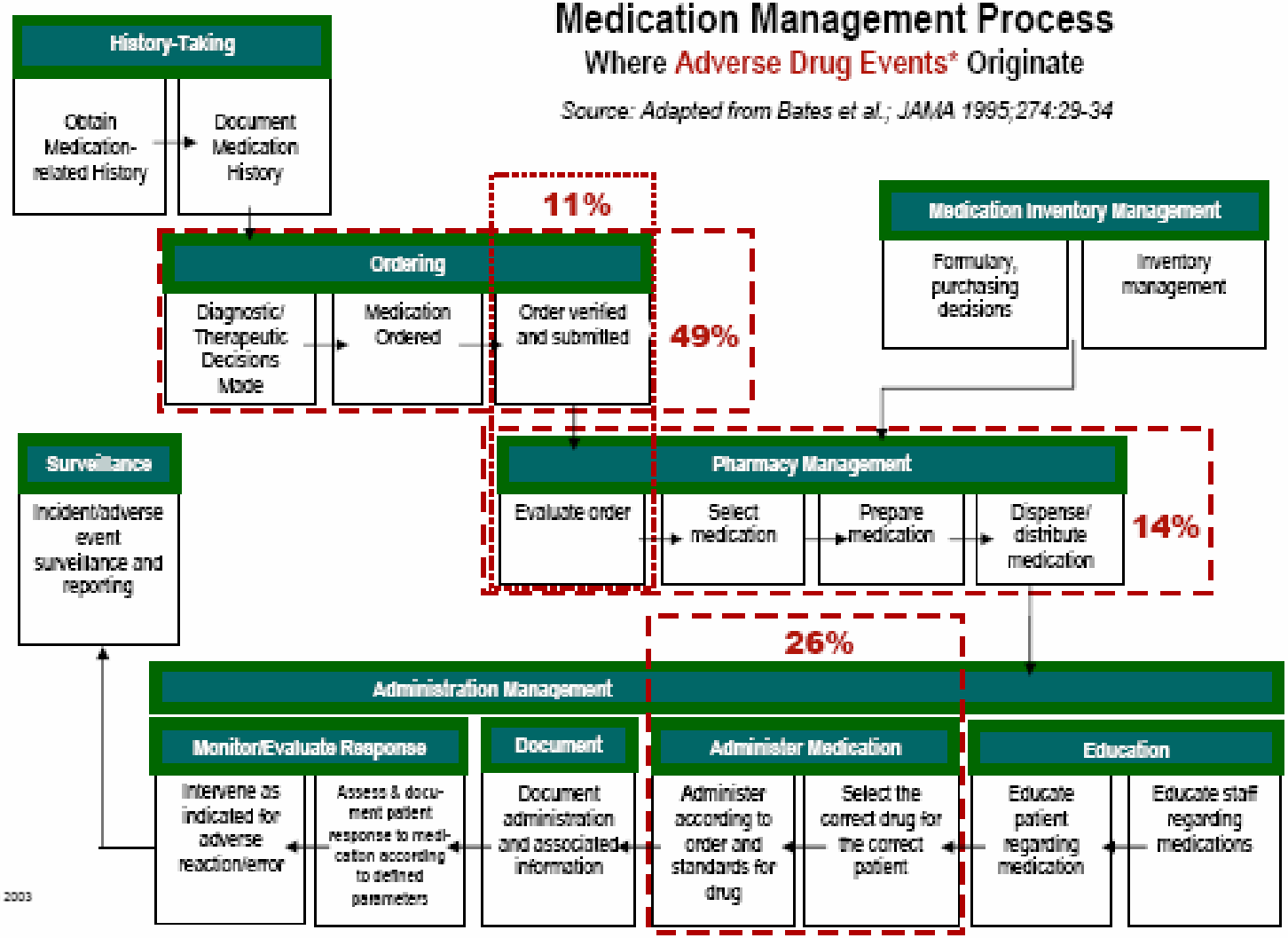
Medication Management Process

Where Adverse Drug Events* Originate

Source: Adapted from Bates et al.; JAMA 1995;274:29-34

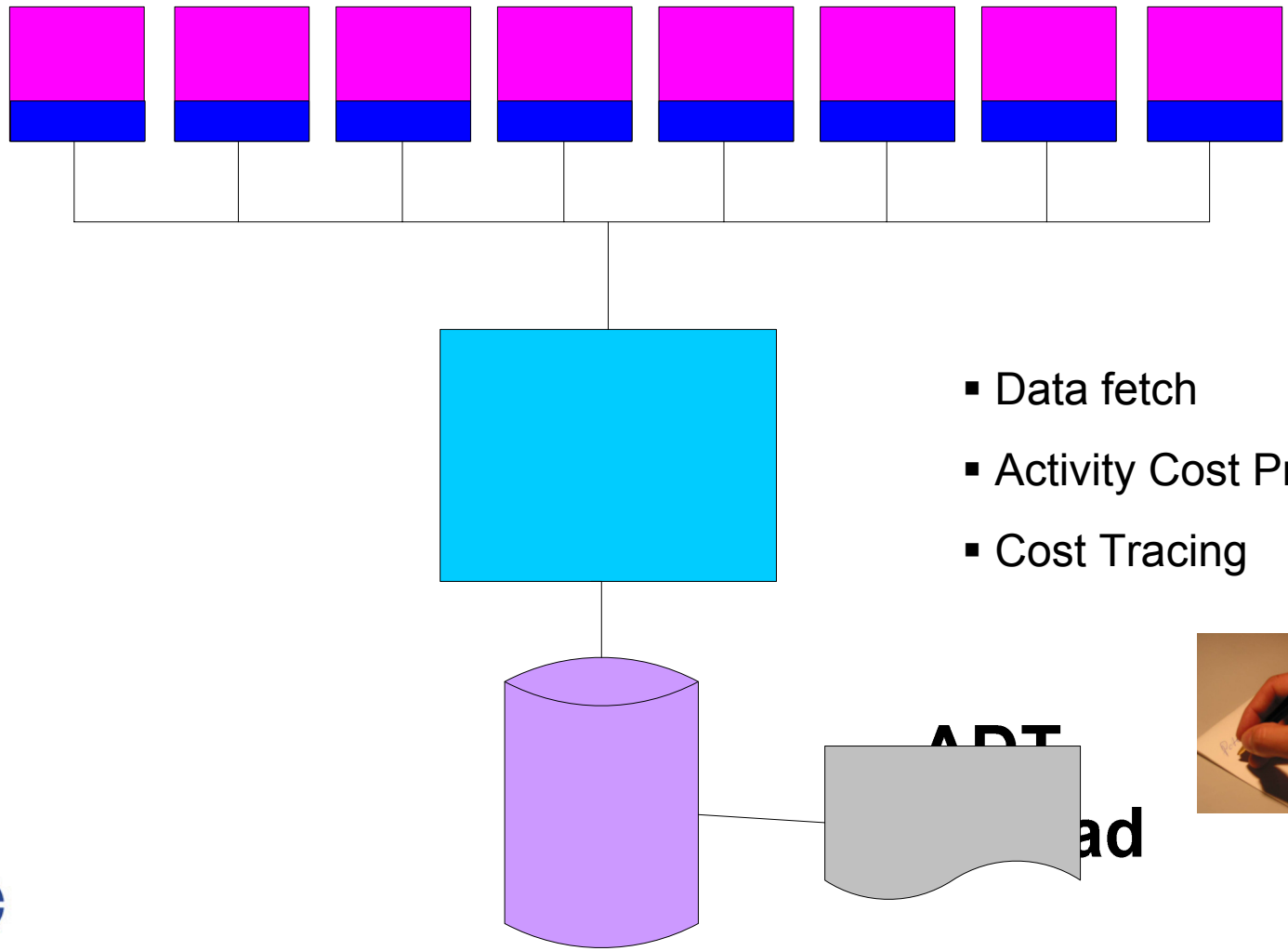


**Dotted boxes represent the percentage of errors occurring at specific points in the medication management process.*

Safety

From: CPOE Costs, Benefits and Challenges FCG 2003. Report commissioned by the AHA

Activity Based Case Costing



- Data fetch
- Activity Cost Processing
- Cost Tracing

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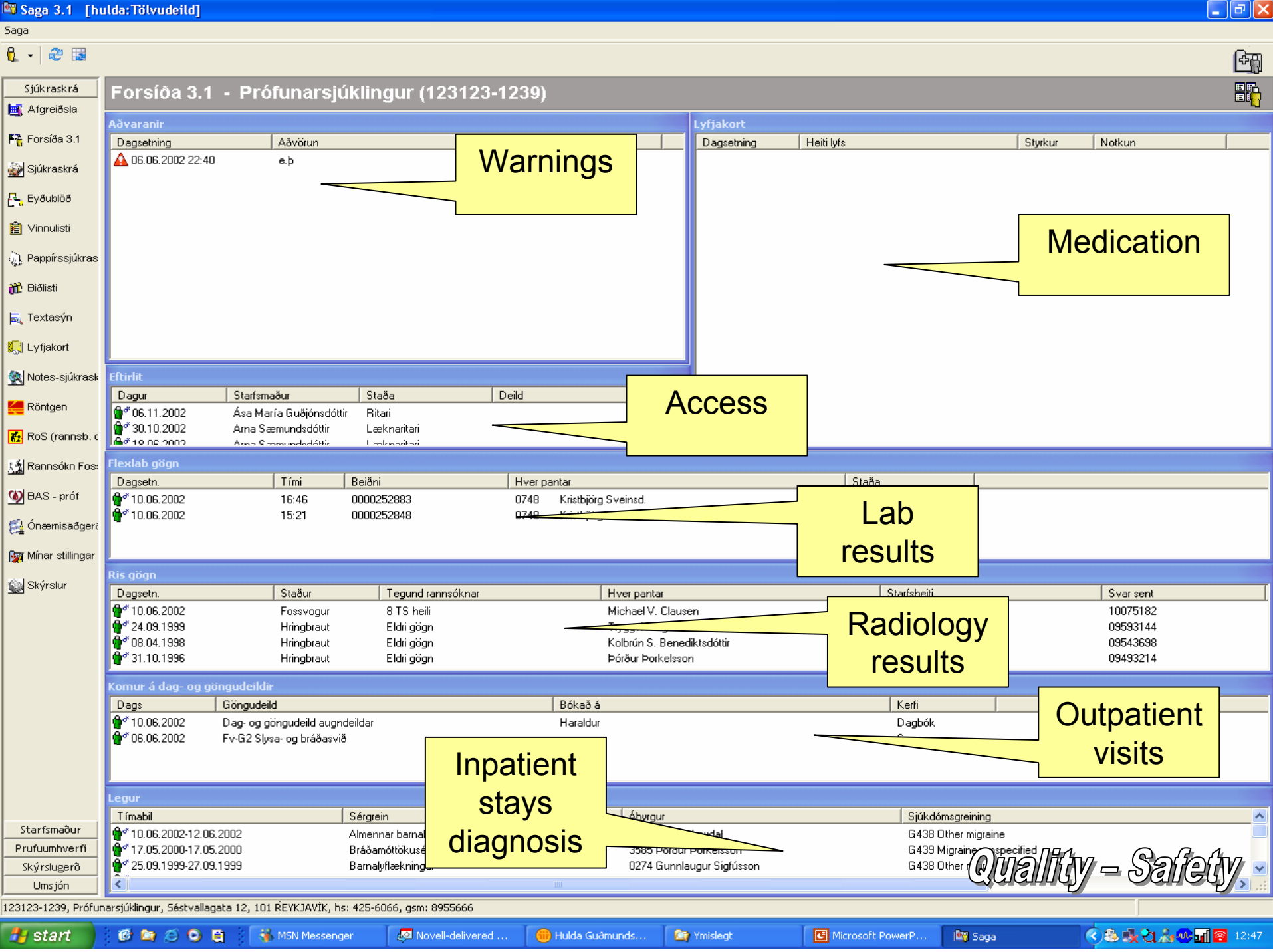
UNIVERSITY HOSPITAL

Efficiency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Sjúkraskrá
Afgreiðsla
Forsíða 3.1
Sjúkraskrá
Eyðublöð
Vinnulisti
Pappírssjúkras
Biðlisti
Textasýn
Lyfjakort
Notes-sjúkrask
Röntgen
RoS (rannsb. c
Rannsókn Fos:
BAS - próf
Ónæmisaðgerð
Mínar stillingar
Skýrslur
Starfsmaður
Þrufuumhverfi
Skýrslugerð
Umsjón
Forsíða 3.1 - Prófunarsjúklingur (123123-1239)
Aðvaranir
Dagsetning
Aðvörun
06.06.2002 22:40
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Warnings
Lyfjakort
Dagsetning
Heiti lyfs
Styrkur
Notkun
Medication
Eftirlit
Dagur
Starfsmaður
Staða
Deild
06.11.2002
Ása María Guðjónsdóttir
Ritari
30.10.2002
Arna Sæmundsdóttir
Læknaritari
Access
Flexlab gögn
Dagsetn.
Tími
Beiðni
Hver pantar
Staða
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16:46
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0748
Kristbjörg Sveinsd.
10.06.2002
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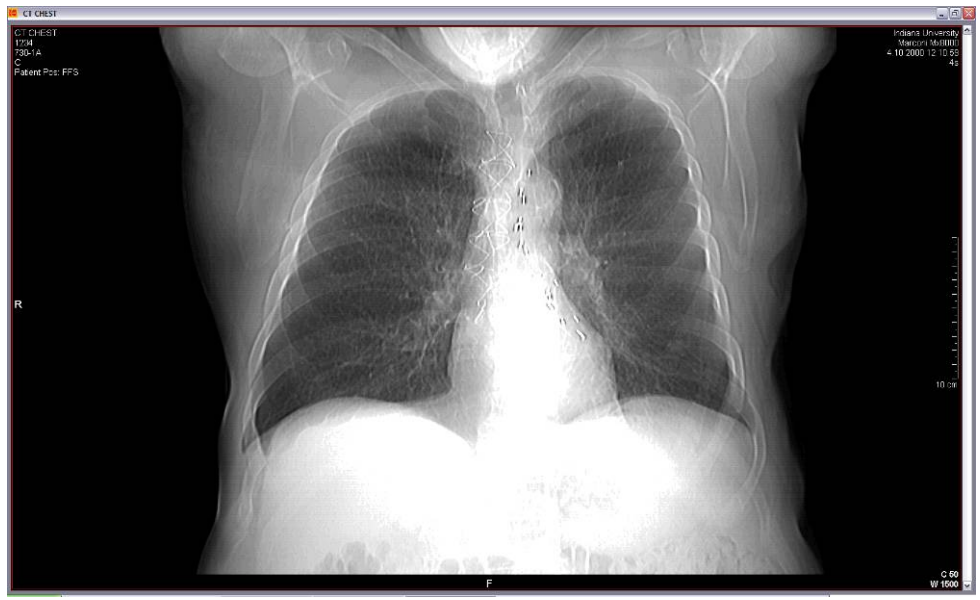
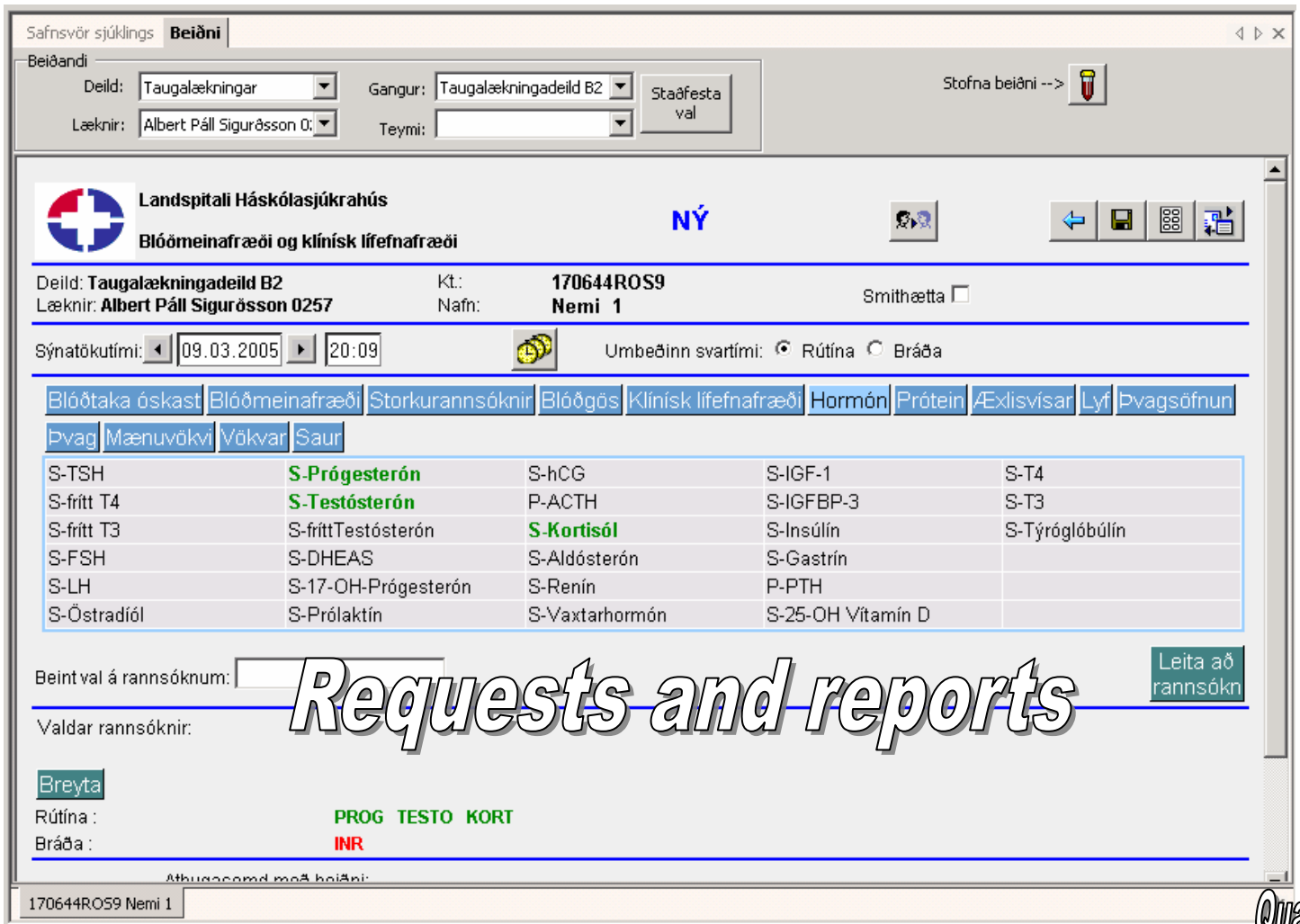
Lab results
Ris gögn
Dagsetn.
Staður
Tegund rannsóknar
Hver pantar
Starfsheiti
Svar sent
10.06.2002
Fossvogur
8 TS heili
Michael V. Clausen
10075182
24.09.1999
Hringbraut
Eldri gögn
09593144
08.04.1998
Hringbraut
Eldri gögn
Kolbrún S. Benediktsdóttir
09543698
31.10.1996
Hringbraut
Eldri gögn
Þórður Þorkelsson
09493214
Radiology results
Komur á dag- og göngudeildir
Dags
Göngudeild
Bókað á
Kerfi
10.06.2002
Dag- og göngudeild augndeildar
Haraldur
Dagbók
06.06.2002
Fv-G2 Slysa- og bráðasvið
Outpatient visits
Legur
Tímabil
Sérgrein
Ábyrgur
Sjúkdómsgreining
10.06.2002-12.06.2002
Almennar barna
G438 Other migraine
17.05.2000-17.05.2000
Bráðamóttökusé
3585 Þórður Þorkelsson
G439 Migraine, unspecified
25.09.1999-27.09.1999
Barnalyflækning
0274 Gunnlaugur Sigfússon
G438 Other
Inpatient stays diagnosis
Quality – Safety
123123-1239, Prófunarsjúklingur, Séstvallagata 12, 101 REYKJAVÍK, hs: 425-6066, gsm: 8955666
start
MSN Messenger
Novell-delivered ...
Hulda Guðmunds...
Ymislegt
Microsoft PowerP...
Saga
12:47

Digital Imageing



- Digital radiology growing fast
- Less redundancy – less waste
- Less risk for the patient
- Opportunites to streamline services
- Compelling business case – savings in films, developments, service provision
- Quality of information

Laboratory services



Requests and reports

Quality - Safety - Efficiency

The management of chronic disease

- Est. 75% of total HC costs are related to chronic conditions
- Cannot be cured
  - Keep symptoms away
  - Large behavioural factors – Life style
- Objective: Keep chronic patients out of the Hospital
- Multiple conditions: Diabetes, Hypertension, Asthma, Arthritis....
  => A strain on GP level healthcare

Objective

- To bring the service closer to the patient
- Facilitate and ease communications between patient and provider
- Monitor conditions and prevent severe episodes
- Make the hospital a player in preventive services – extending the hospital boundary

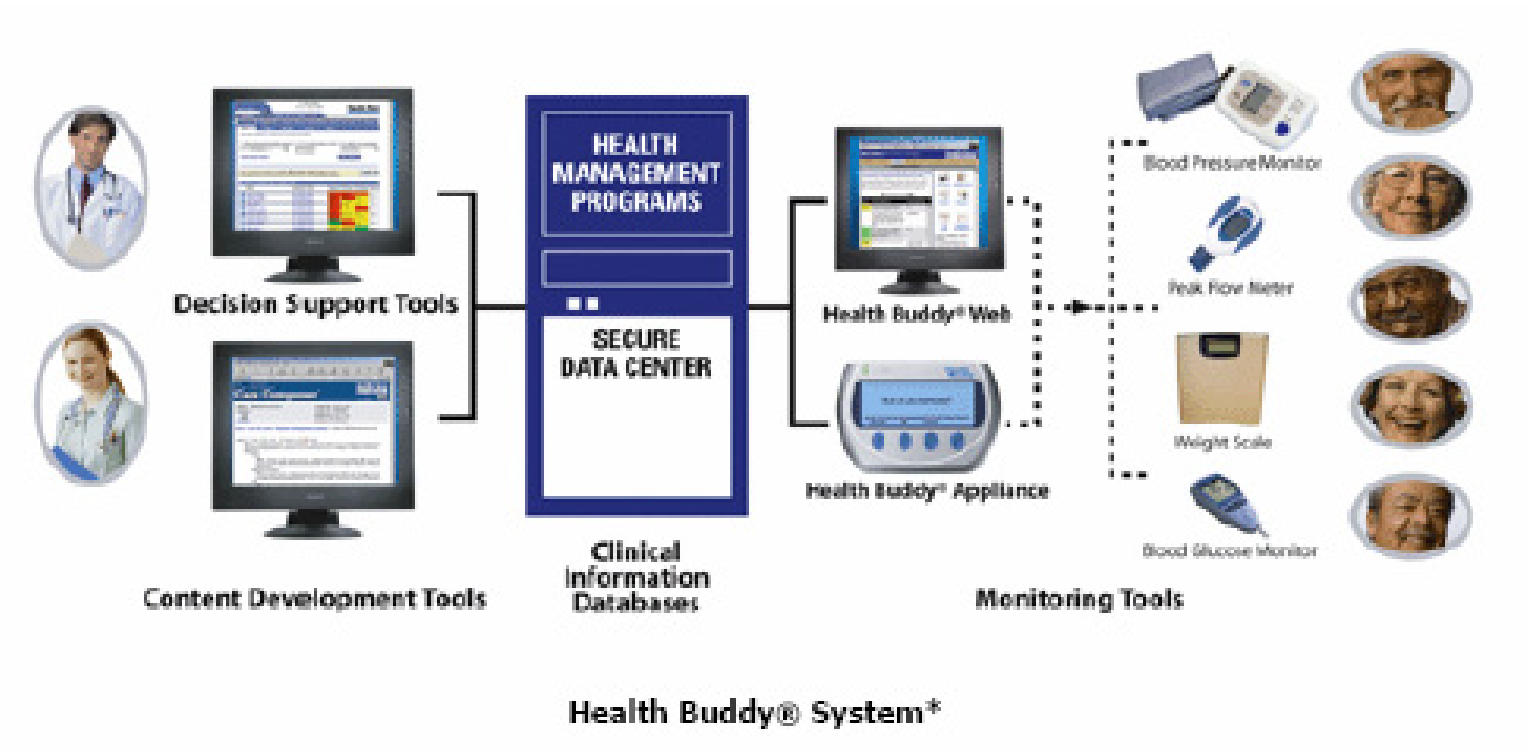
Health Buddy® 2

The Health Buddy® 2
Simple. Smart. Flexible.

- Easy-to-use, patient centric design
- Simple, intuitive four button operation
- Large, high resolution color screen
- Support for multiple languages
- Multiple medical device ports*
- Friendly tutorial preloaded on each appliance
- Uses remote configuration for patient customization
- Health Buddy System supports 45 health management programs including NCQA certified: Hypertension, Chronic Obstructive Pulmonary Disease, Diabetes and Heart Failure

Patients with chronic conditions

Daily communication between patient and case manager



Summary

- Patient Safety
- Quality of Care
- Efficiency
- Lower barriers to access

Thank you

For more information

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