

24th July 2007
HL7 Conference
London

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Dr Lester Russell

**Chief Medical Officer
NHS Account
Fujitsu Services**



“We're here to make a dent in the universe. Otherwise, why even be here?”

Steve Jobs, CEO Apple Inc

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Why are we doing this?

How are we doing?

Where are we going?

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Why are we doing this?

How are we doing?

Where are we going?

\$3.3tn

\$150bn

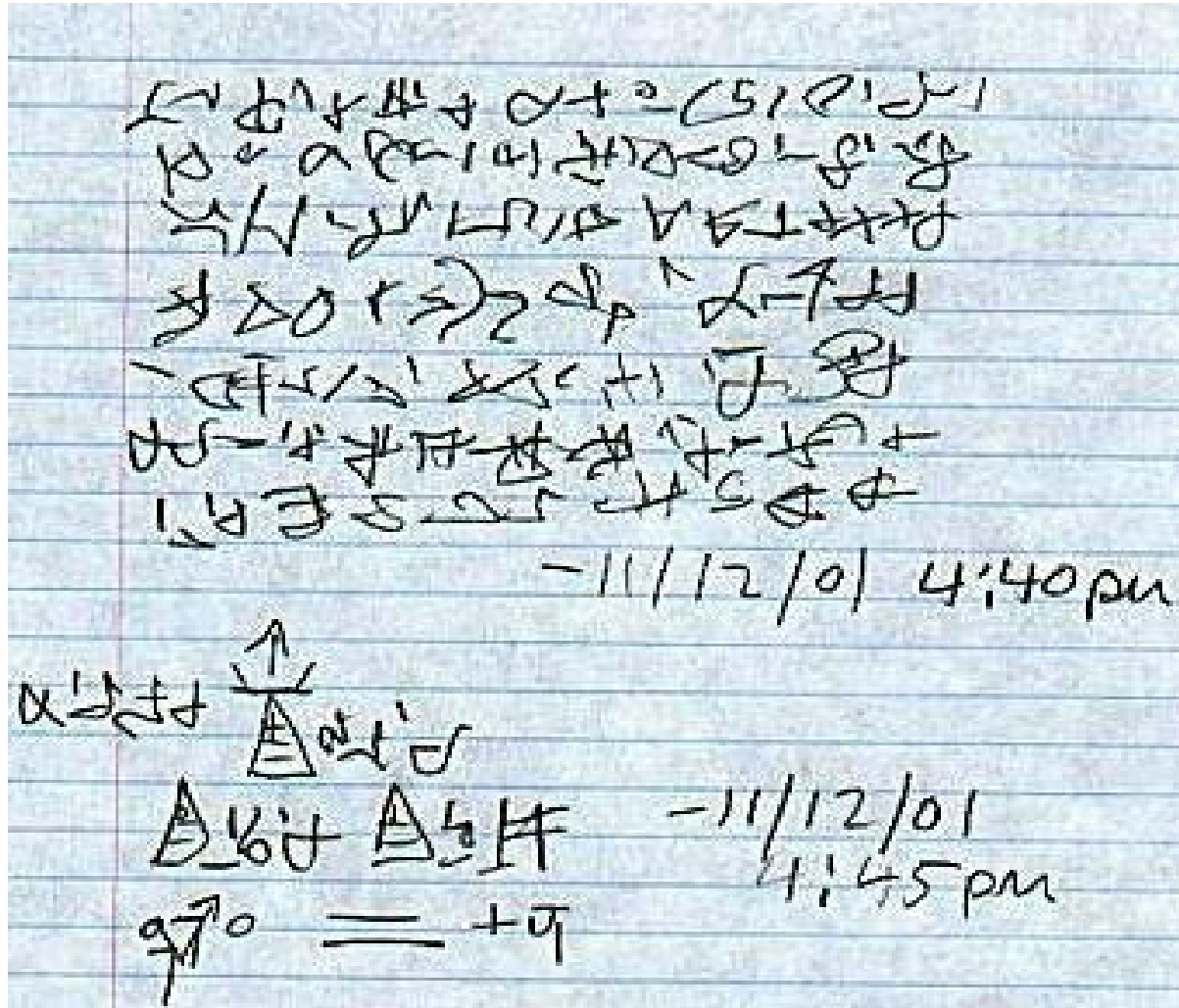
£8bn

50%

850,000



What did he say?

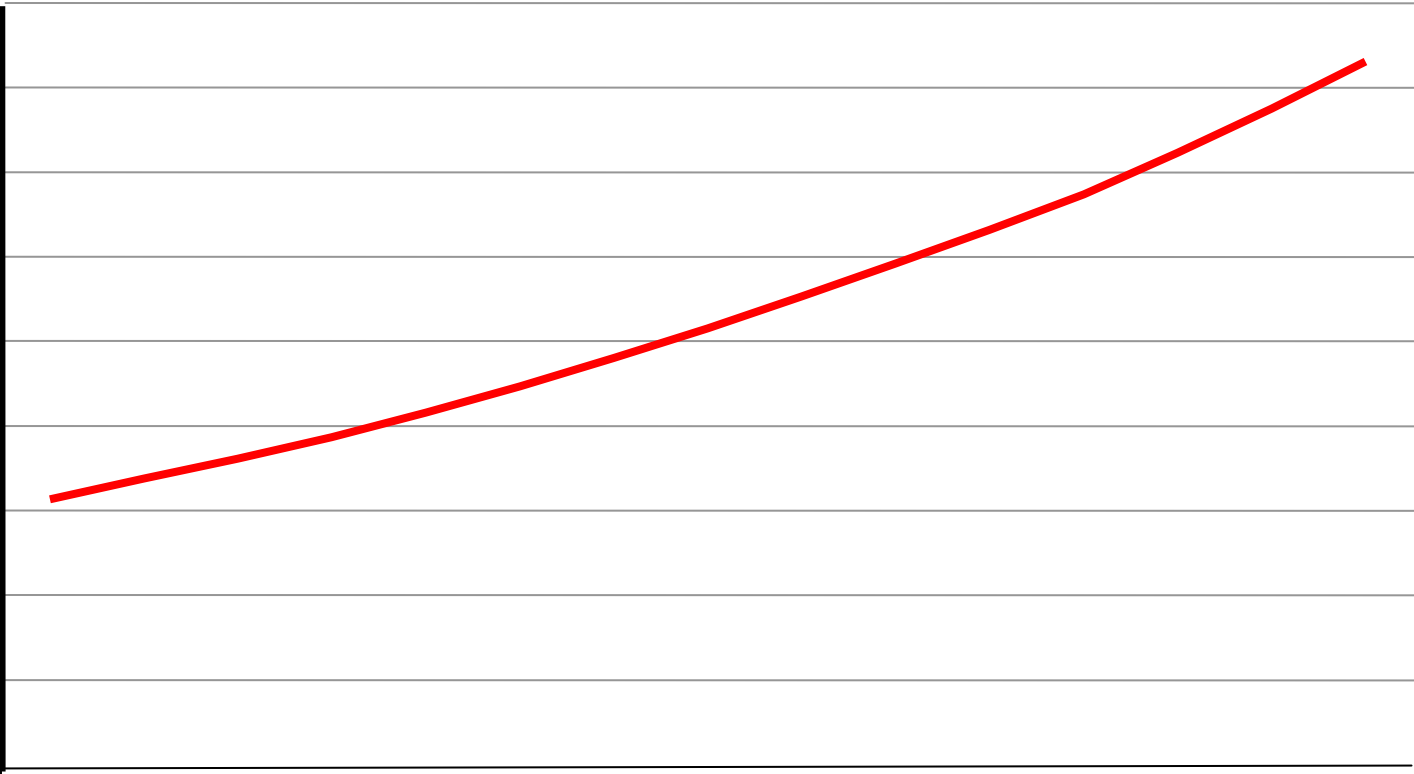


Paper mountain



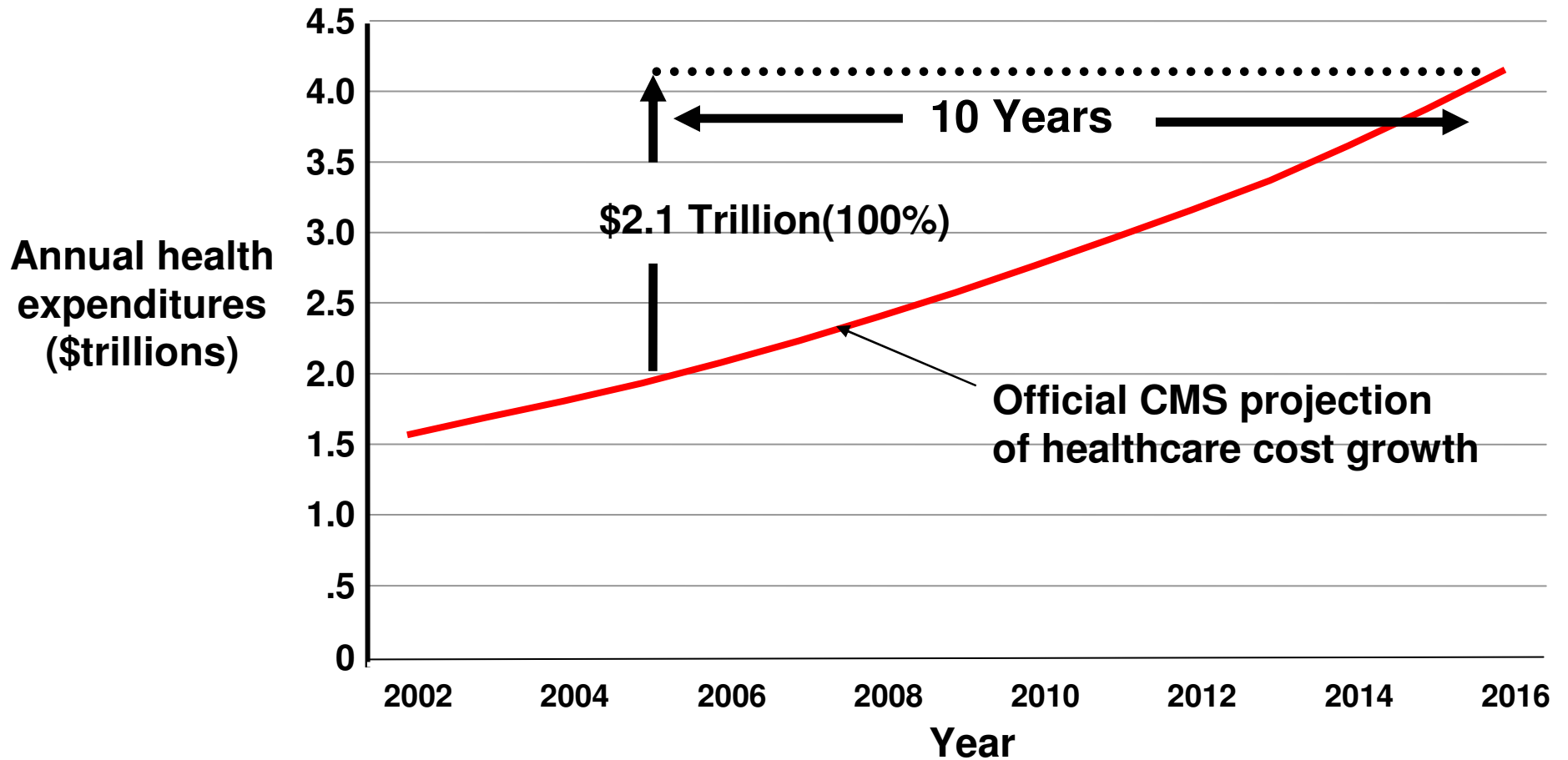


The Problem

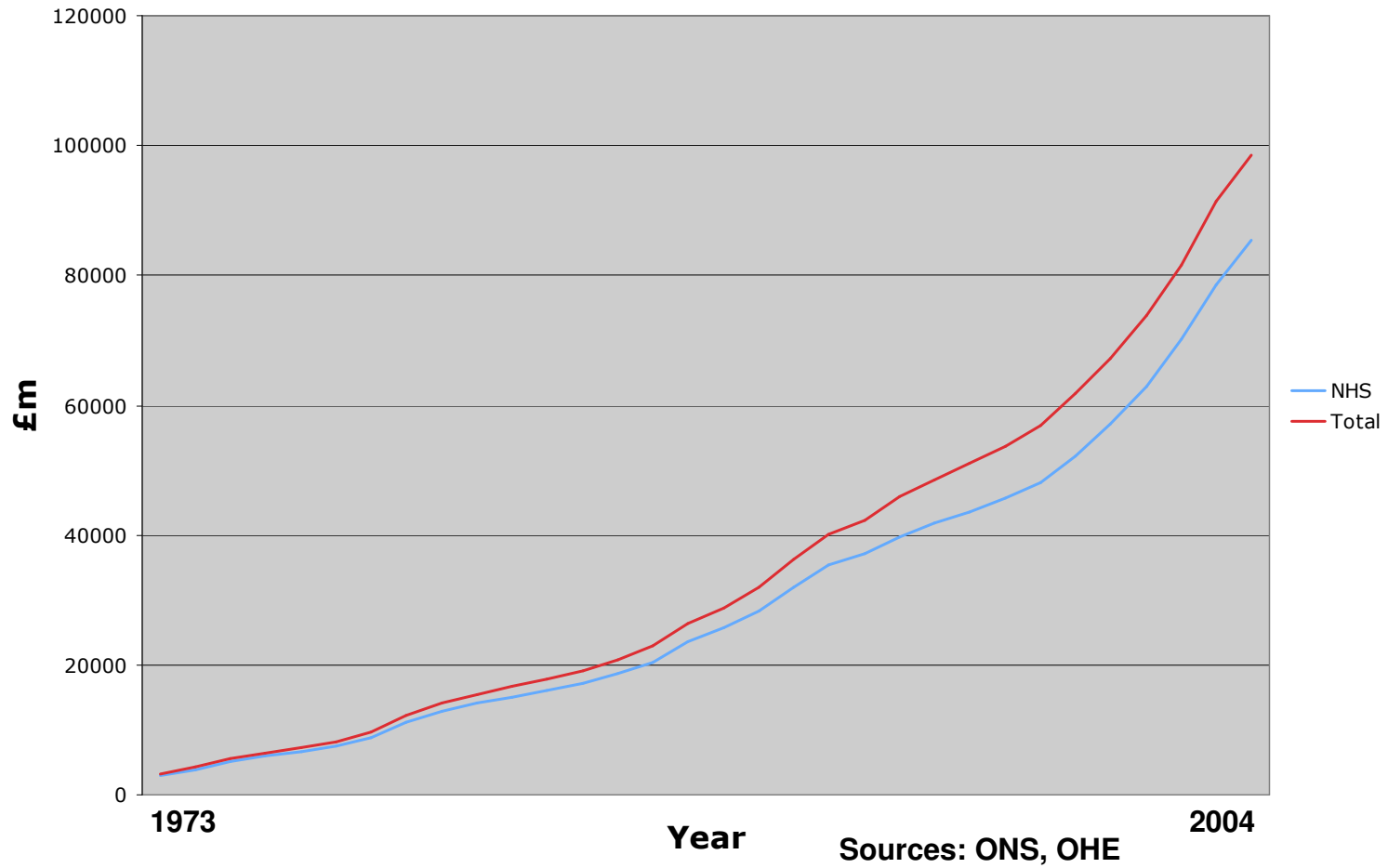


Projected Cost Growth in Healthcare in the US

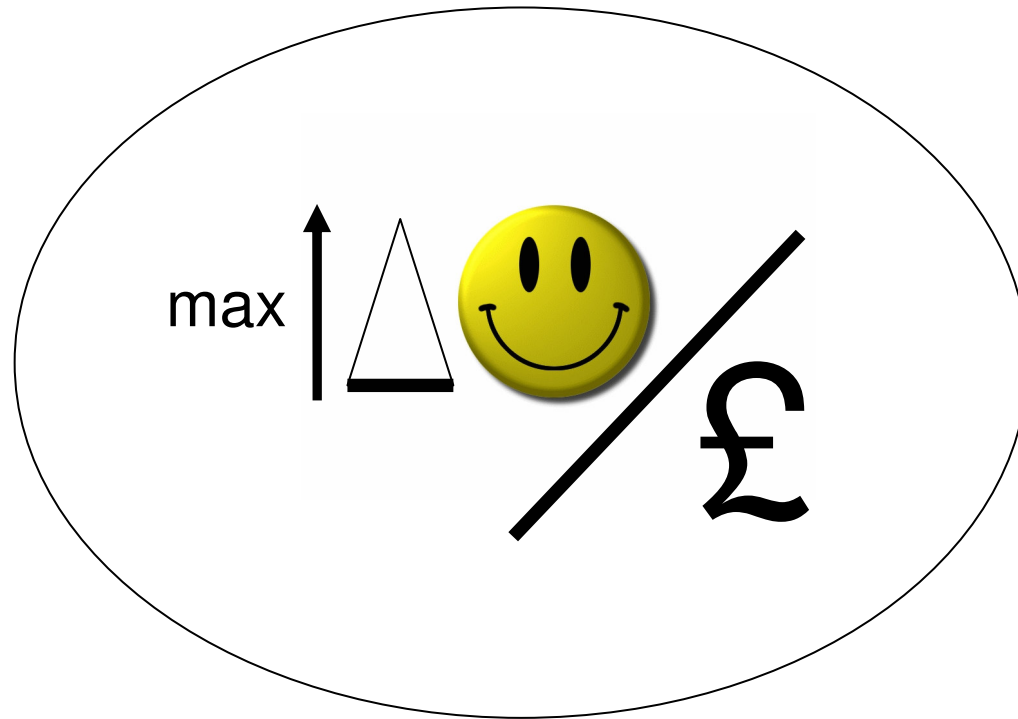
Richard Hillestad, Ph.D., RAND Corporation



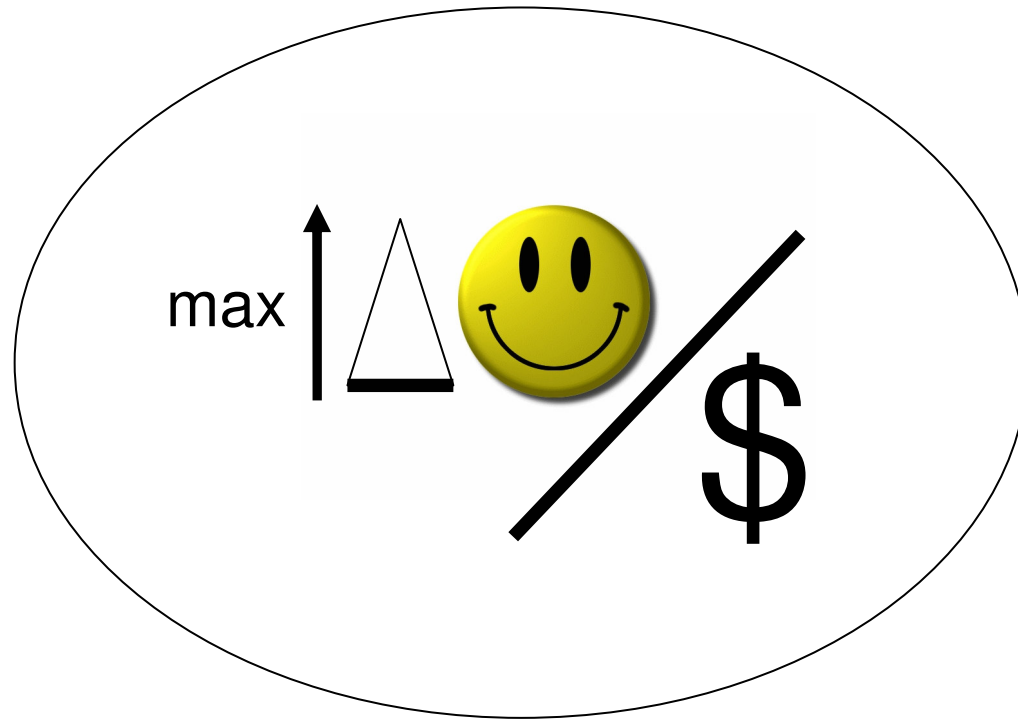
UK Health Expenditure



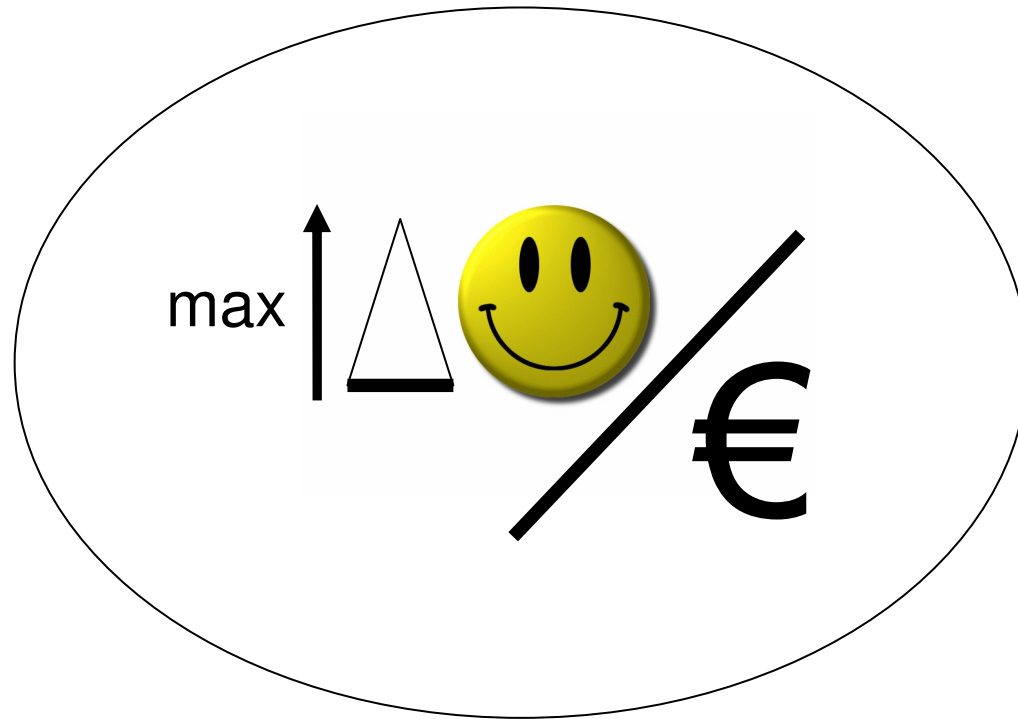
Health productivity – the critical quotient



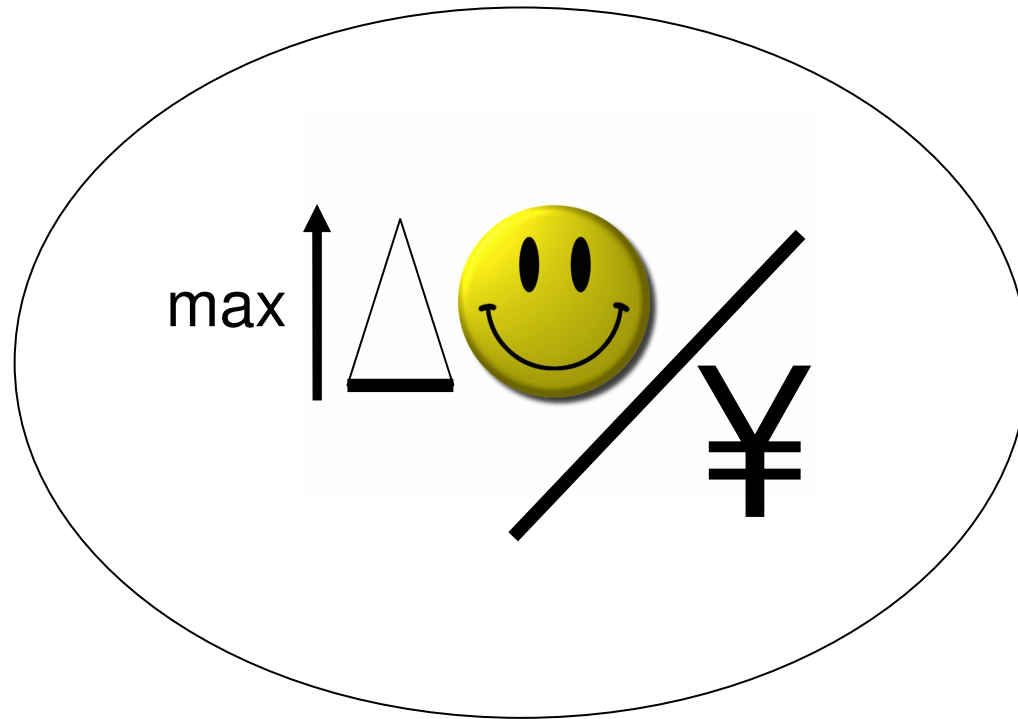
Health productivity – the critical quotient



Health productivity – the critical quotient



Health productivity – the critical quotient



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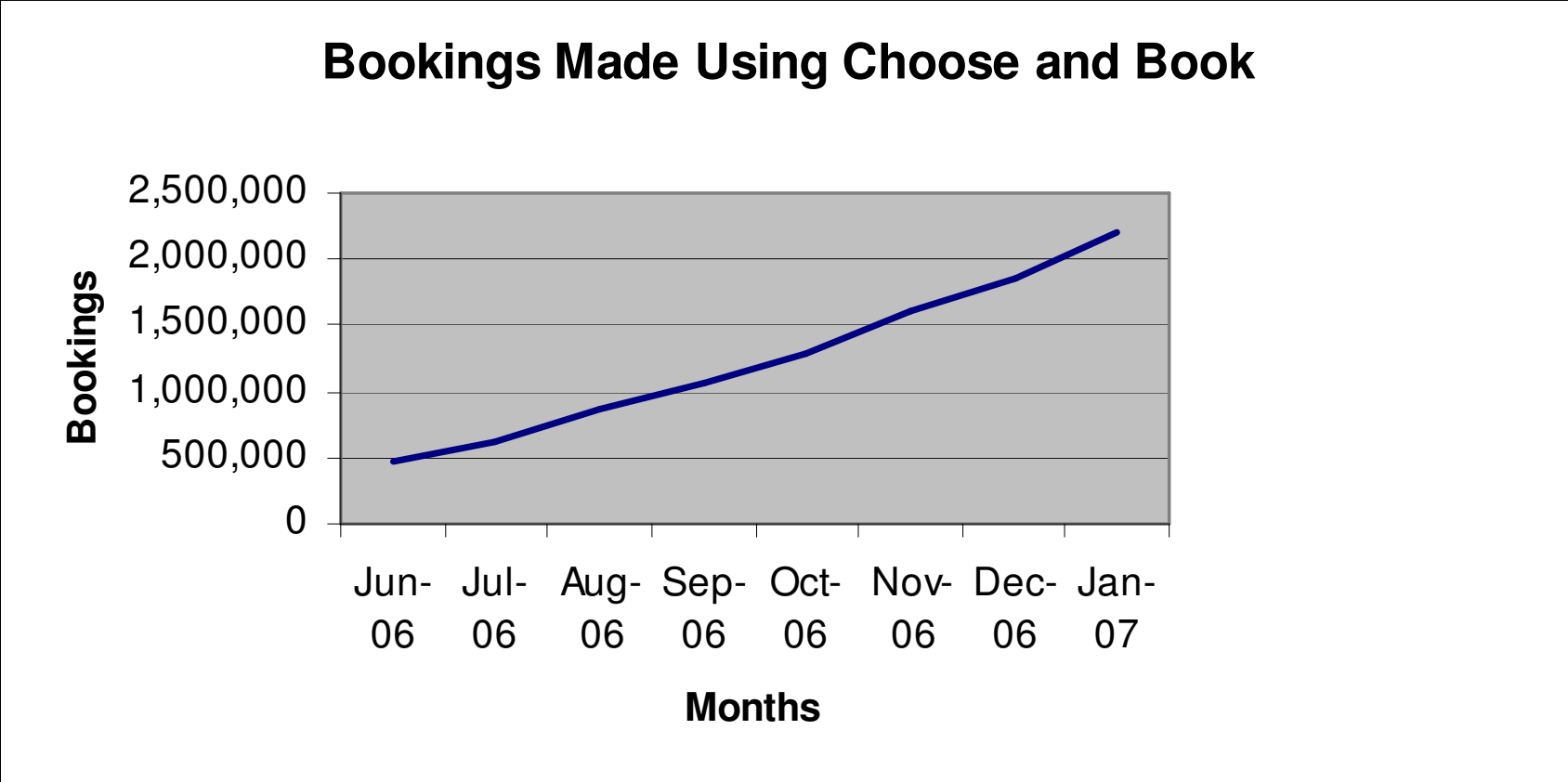
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Why are we doing this?

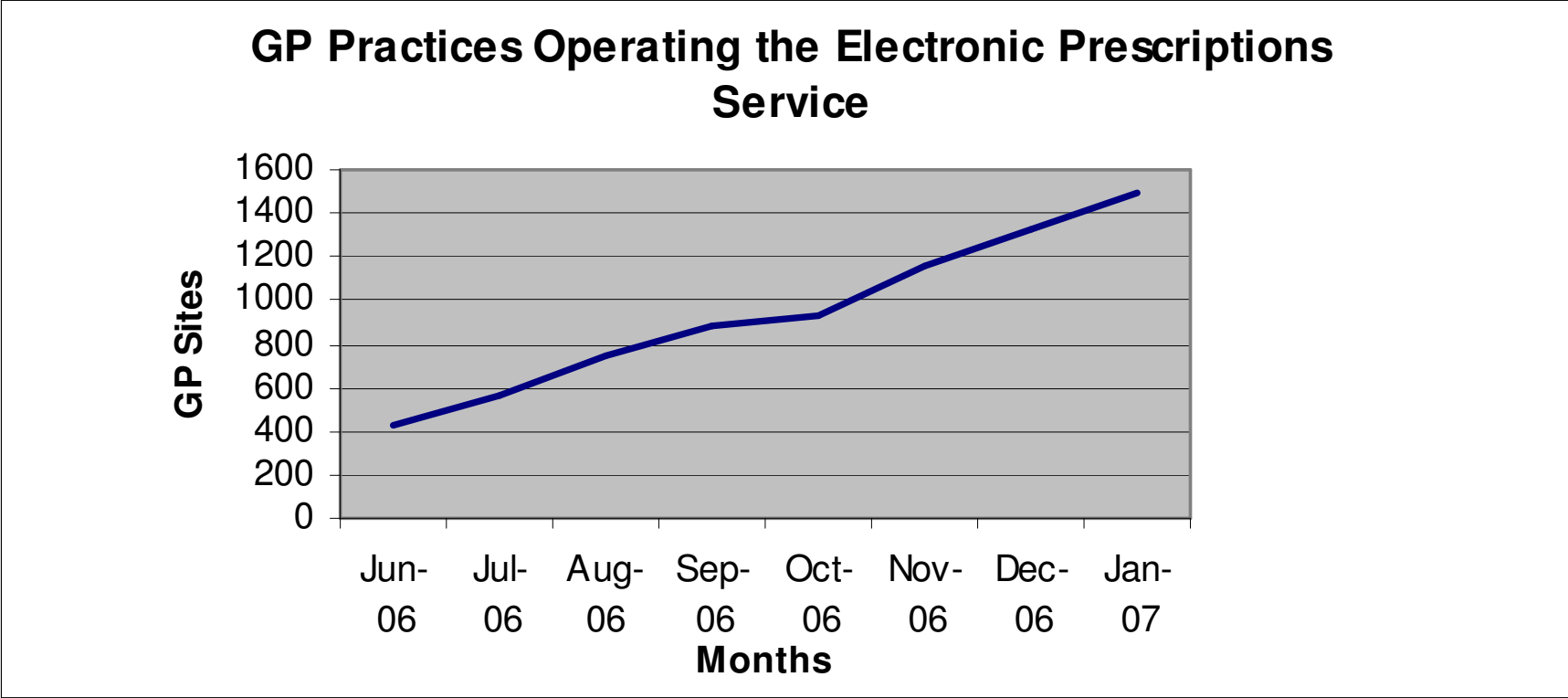
How are we doing?

Where are we going?

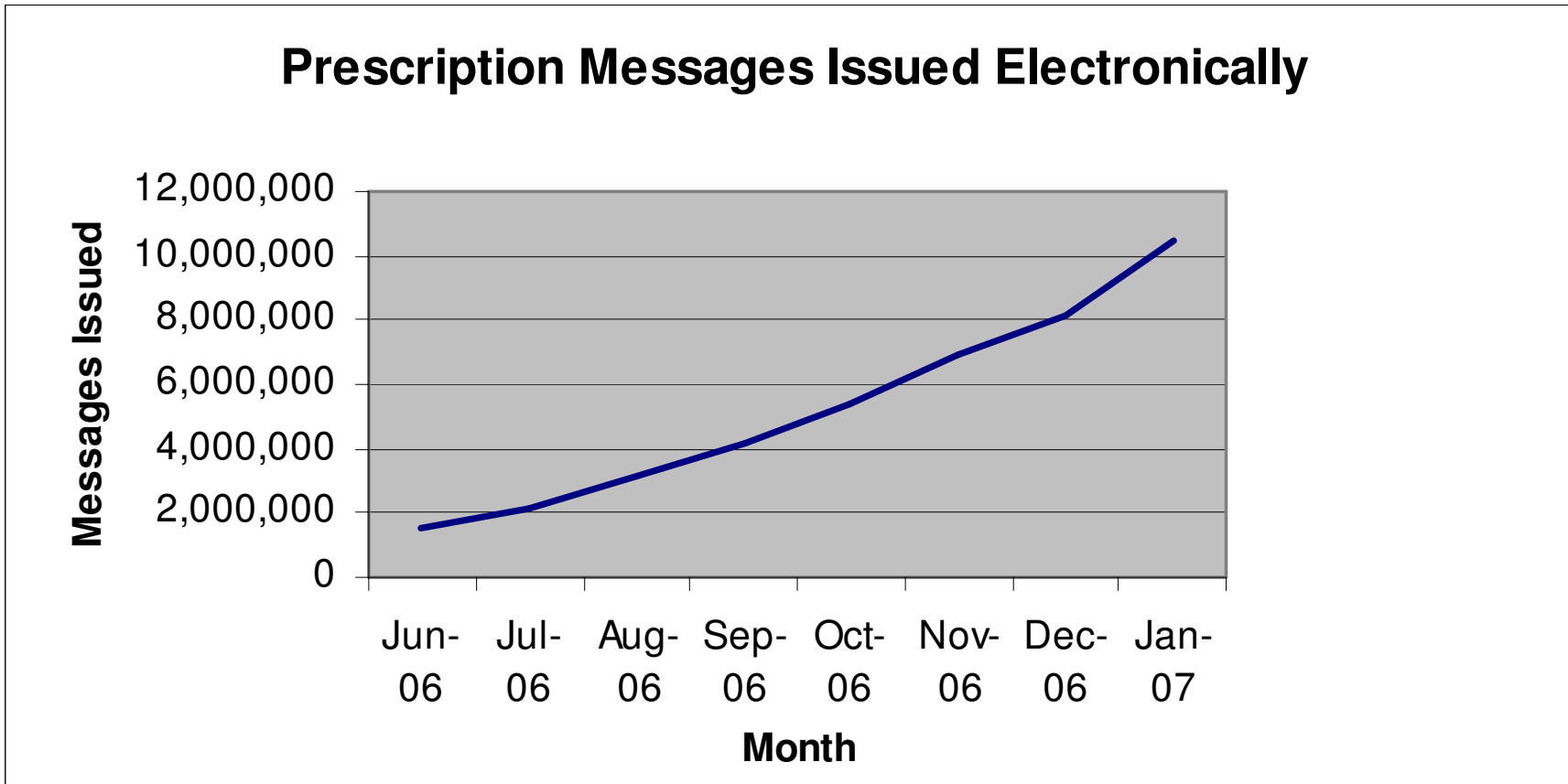
Electronic Booking



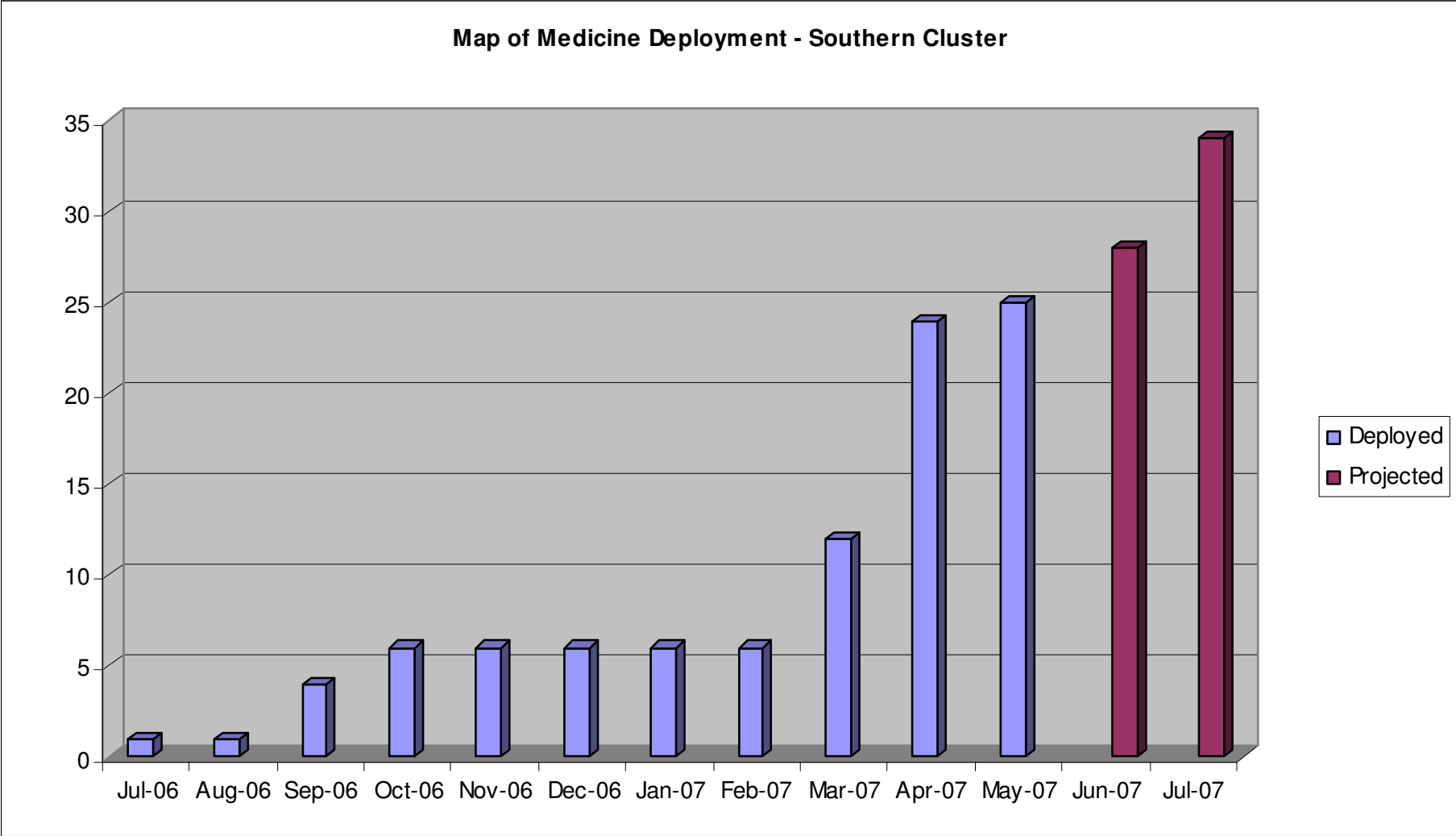
Electronic Prescriptions



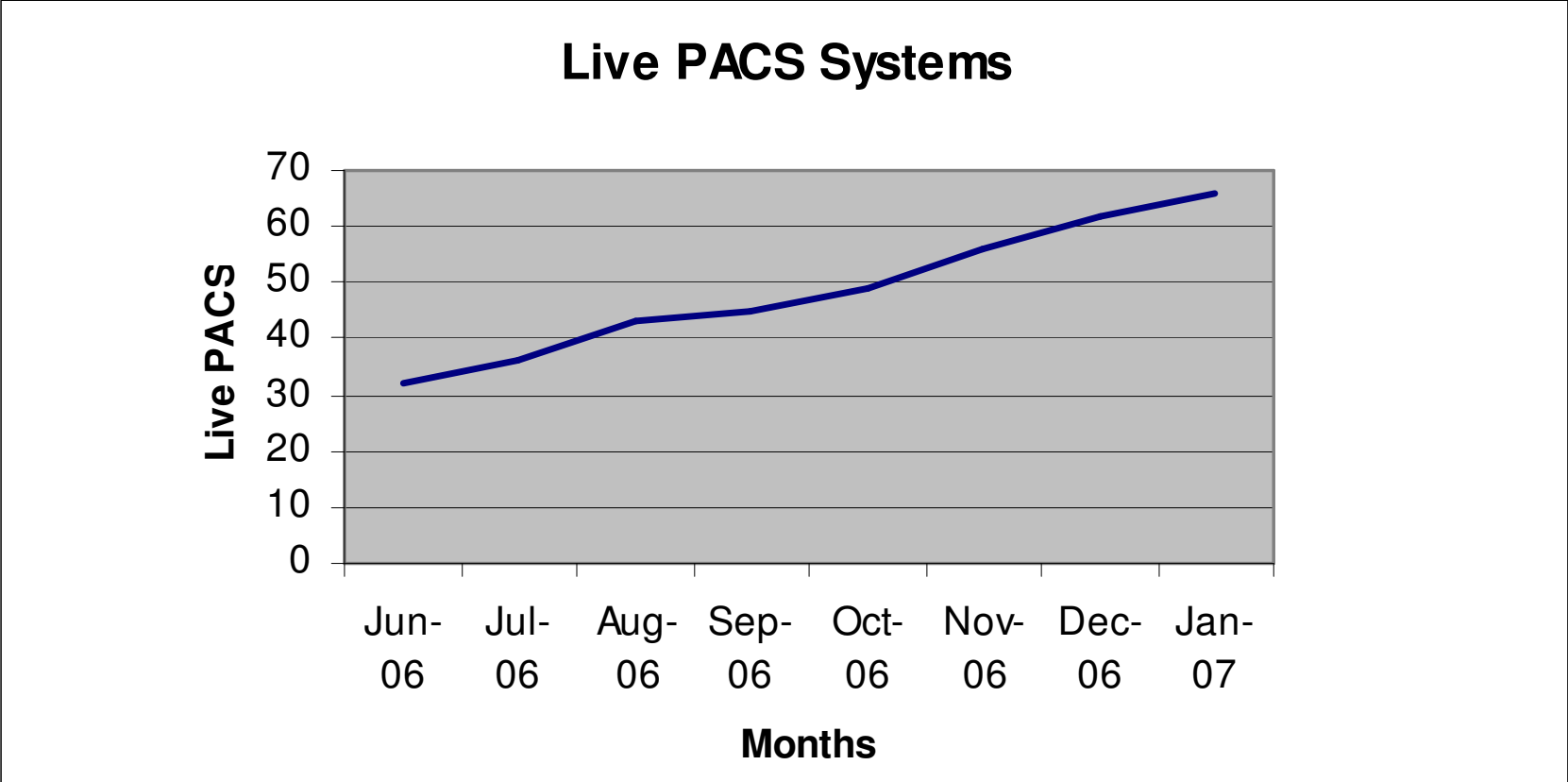
Electronic Prescriptions



Map of Medicine deployments

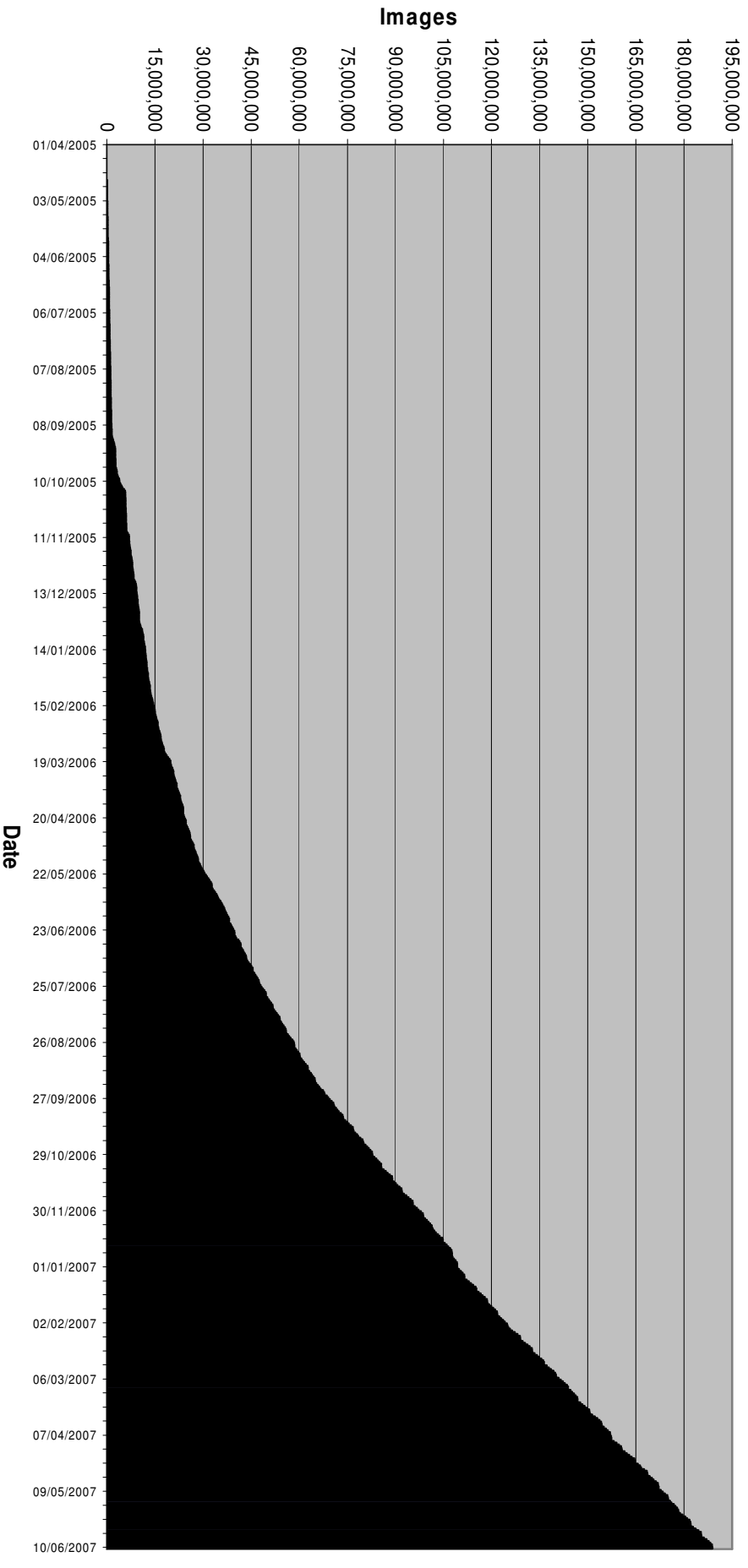


Digital X-Rays

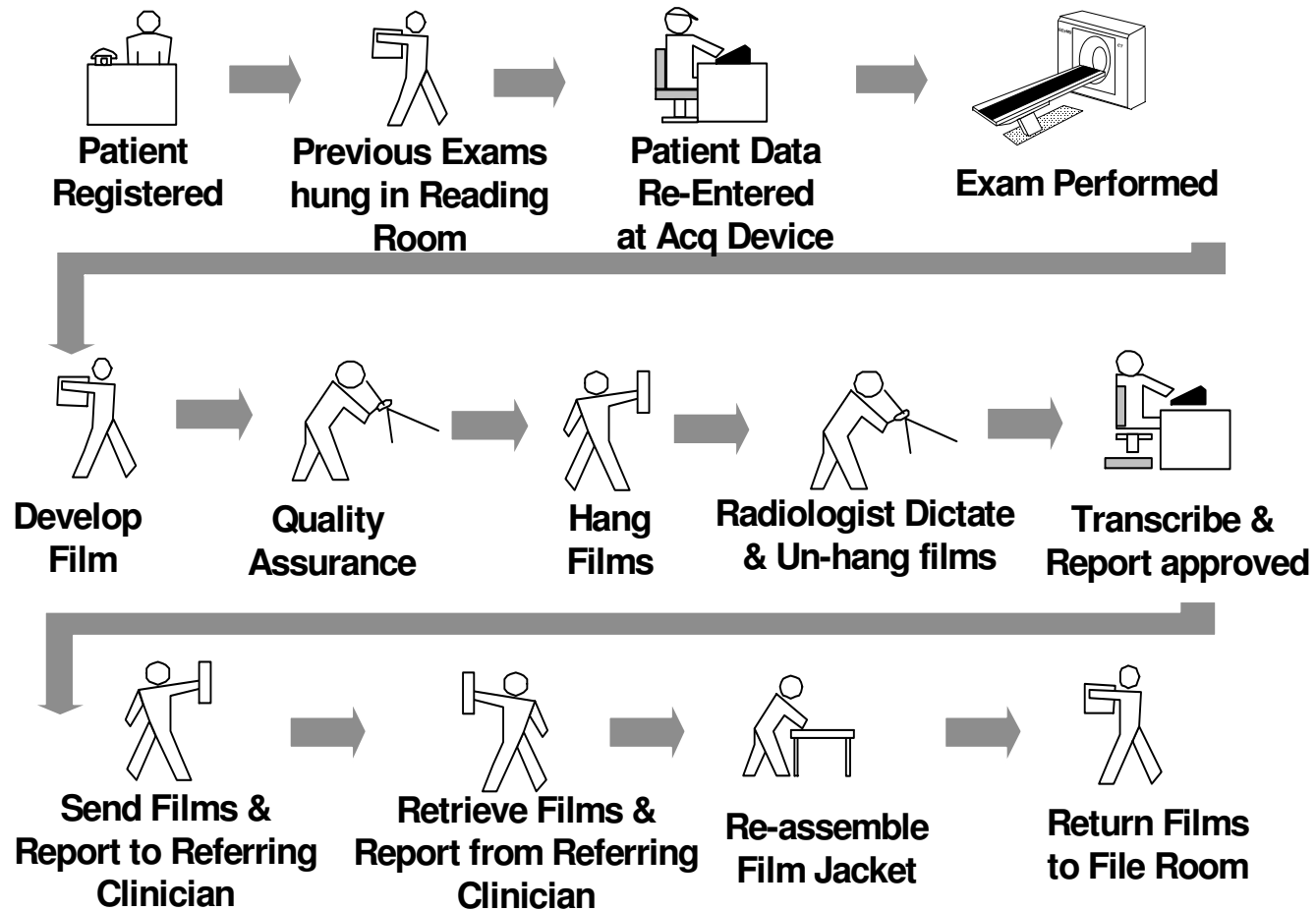


PACS Data Store – Cumulative Images June 2007

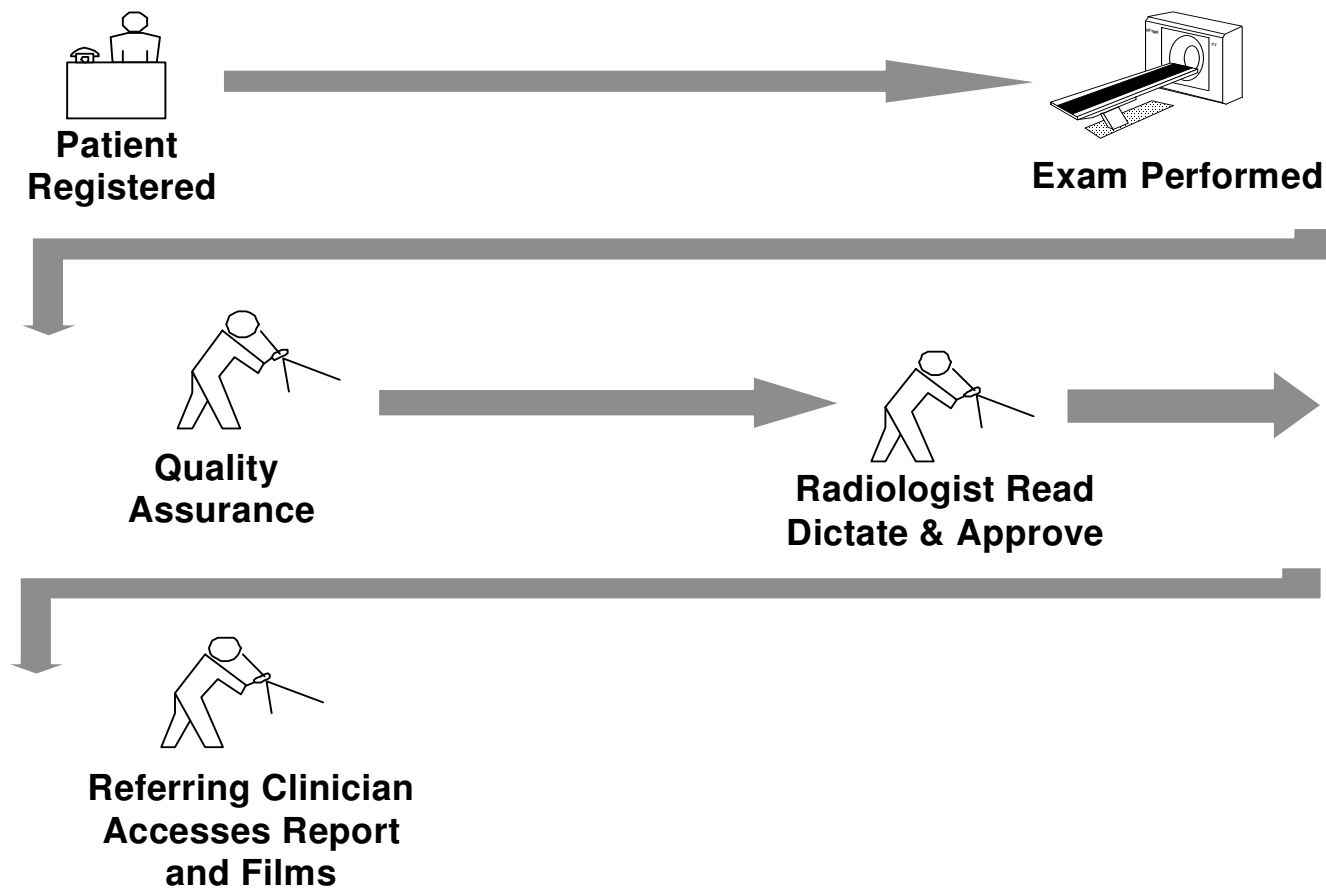
SC - Stored Images Cumulative



Typical pre – PACS workflow



Typical post – PACS workflow



PACS – What difference does it make?

“We've used PACS to completely change the way we're working.”

*Dr Michael Creagh, Lead Radiologist,
Ashford St Peter's*

NHS Account - achievements to date

- 1.2 million people benefiting from NHS CRS in the South of England SHAs
- 100% deployment milestone of PACS and RIS reached in March 2007
- Over 190 million diagnostic images stored in Fujitsu's UK data centres - increasing at over 3 million images/week
- Over 7 million patient examinations stored in Fujitsu's UK data centres
- All 5 'clusters' now running with NHS Connecting for Health Service Desk provided by Fujitsu

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Exponential advances in technology

“It took us 15 years to sequence HIV. We sequenced SARS in 31 days.”

Ray Kurzweil

“Doctors use ancient tools, memorize symptoms and solutions.....and a half-way decent search engine can leave them in the dust.”

Andrew Kessler, in The End of Medicine: How Silicon Valley (and Naked Mice) will Reboot your Doctor

Google aids doctors diagnoses

*BBC News 10th November 2006,
www.bbc.co.uk*



horner syndrome Search

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- All Results
- [H Thompson](#)
- [V Biousse](#)
- [H Pancoast](#)
- [J D'Anglejan-C...](#)
- [M Bousser](#)

[CITATION] Superior pulmonary sulcus tumor: tumor characterized by pain, **Horner's syndrome**, destruction of bone ...
 HK Pancoast - JAMA, 1932
[Cited by 61](#) - [Related Articles](#) - [Web Search](#)

[Evaluation of the causes and accuracy of pharmacologic localization in Horner's syndrome.](#)
 WF Maloney, BR Younge, NJ Moyer - Am J Ophthalmol, 1980 - ncbi.nlm.nih.gov
 Evaluation of the causes and accuracy of pharmacologic localization in **Horner's syndrome**. ... Of 450 cases of **Horner's syndrome** examined by pupillography. ...
[Cited by 36](#) - [Related Articles](#) - [Web Search](#)

[Spontaneous internal carotid dissection, hemicrania, and Horner's syndrome](#) - group of 3 »
 B Mokri, TM Sundt, OW Houser - Archives of Neurology, 1979 - Am Med Assoc
 ... Spontaneous internal carotid dissection, hemicrania, and **Horner's syndrome**.
 B. Mokri, TM Sundt Jr and OW Houser. We describe five ...
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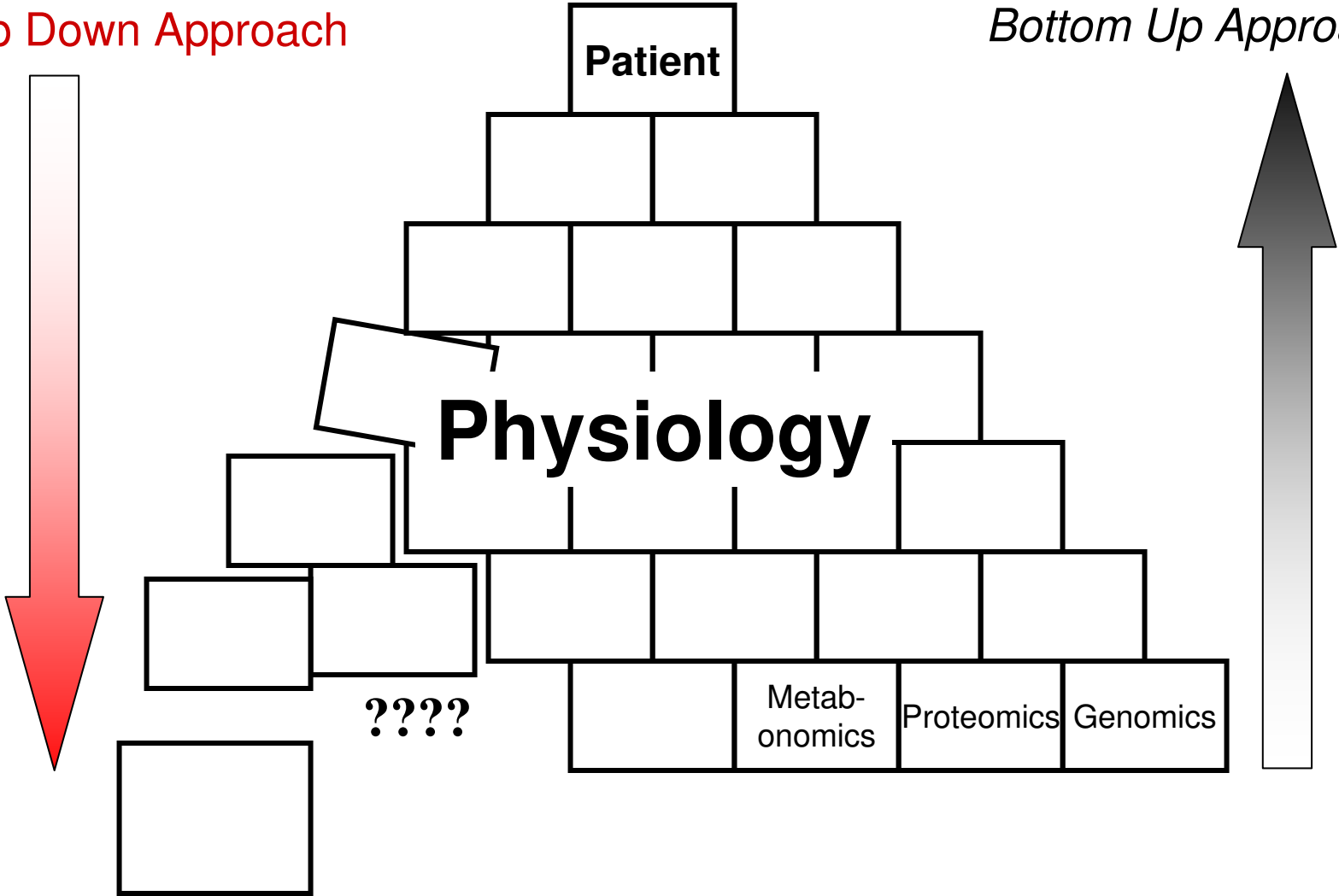
[Adrenergic mydriasis in Horner's syndrome. Hydroxyamphetamine test for diagnosis of postganglionic ...](#)
 HS Thompson, JH Mensher - Am J Ophthalmol, 1971 - ncbi.nlm.nih.gov
 Adrenergic mydriasis in **Horner's syndrome**. ... Female; **Horner Syndrome**/diagnosis*;
Horner Syndrome/physiopathology; Human; Male; Methods; ...
[Cited by 38](#) - [Related Articles](#) - [Web Search](#)

[Pediatric Horner syndrome.](#)
 AR Jeffery, FJ Ellis, MX Repka, JR Buncic - J AAPOS, 1998 - ncbi.nlm.nih.gov
 ... Pediatric **Horner syndrome**. ... INTRODUCTION: The purpose of this study was to define
 the etiologies of **Horner syndrome** in the pediatric population. ...
[Cited by 22](#) - [Related Articles](#) - [Web Search](#) - [BL Direct](#)

From Personalized Disease to *Personalised Medicine*

Top Down Approach

Bottom Up Approach



Sisters lose stomachs to avoid cancer

Radical bid to beat inherited disease

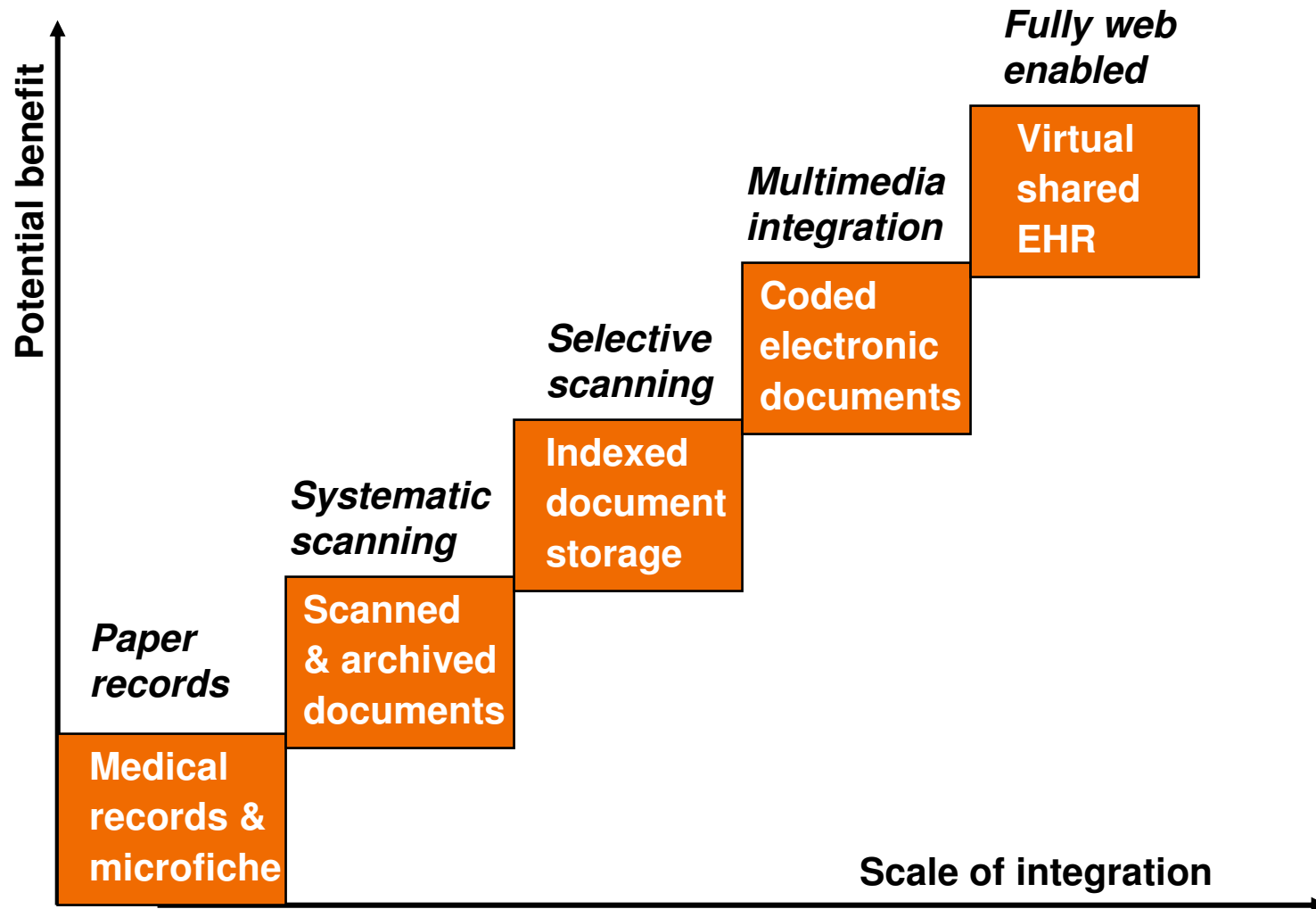
The Sunday Times, 12th November 2006

Two sisters in their early twenties have had their stomachs removed to protect themselves from a fatal inherited disease.

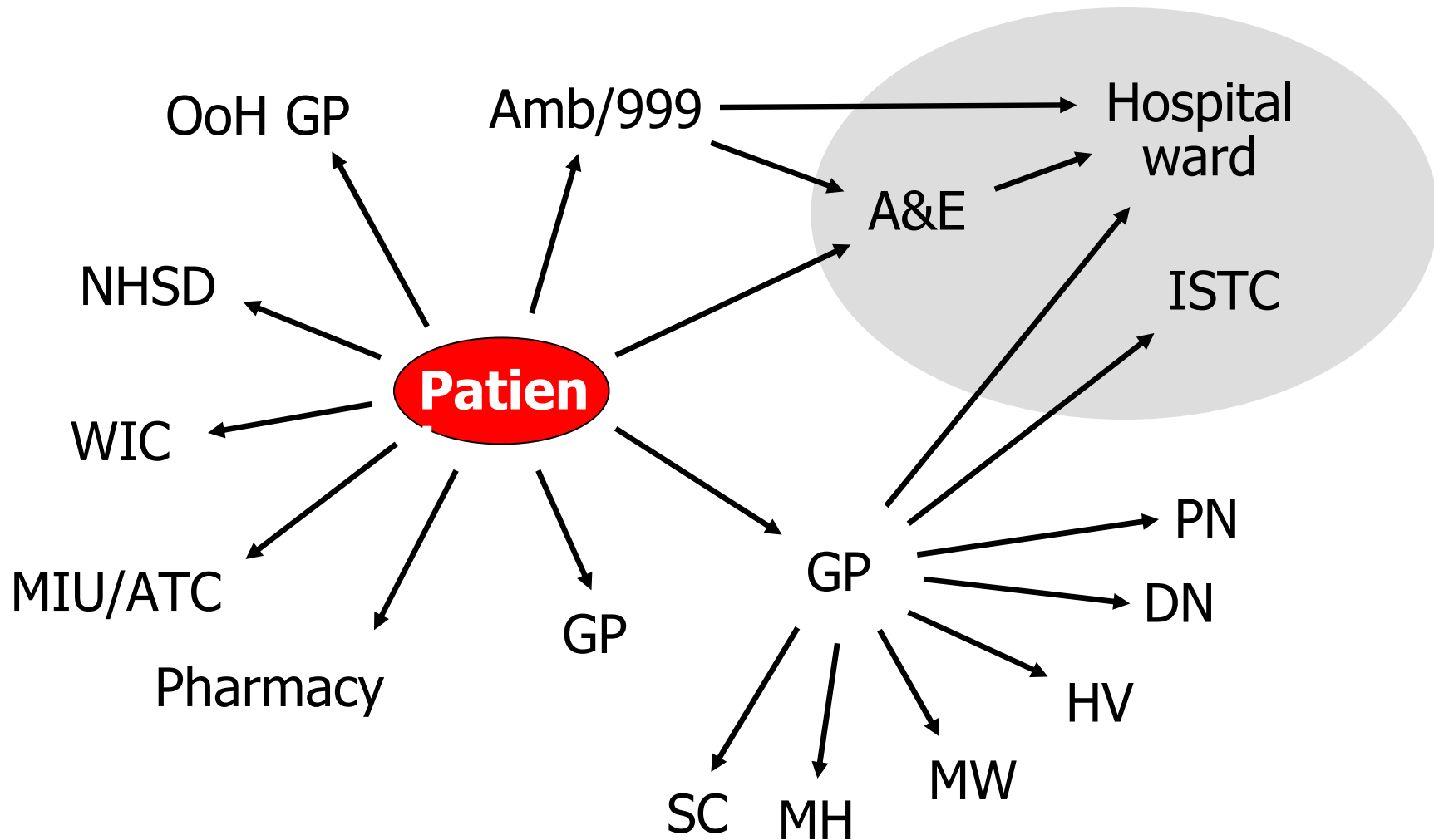
Lisa and Ruth Bendle took the decision because they carry a defective gene that caused fatal stomach cancer in their father, cousin and grandmother.

As technology to identify the risk of inherited cancer genes develops, more people will face such decisions. Doctors have already identified inherited forms of bowel, kidney and pancreatic cancer.

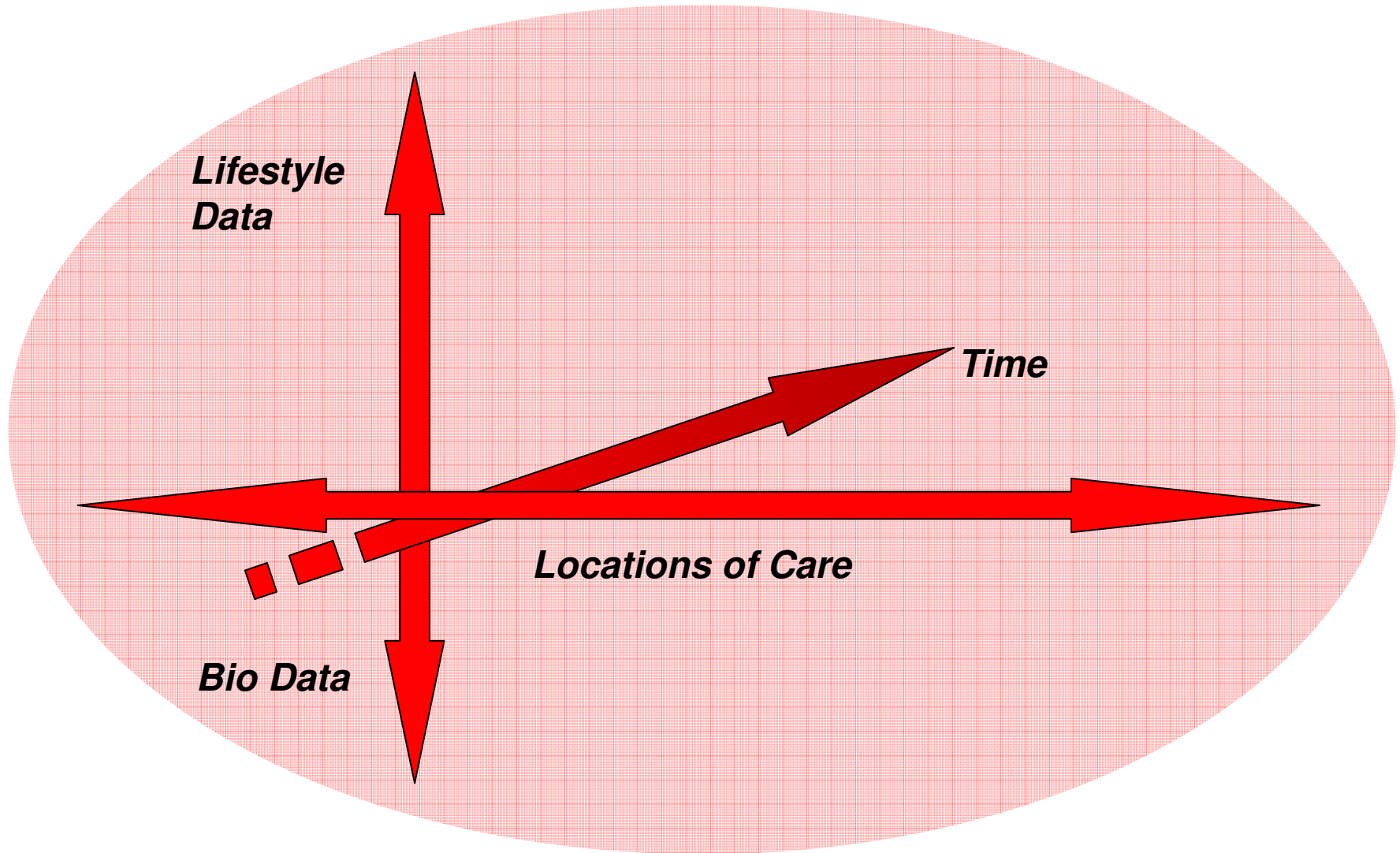
From medical records to EHR



The Continuum of Care



Broad, Deep and Longitudinal




A patient's view



“The more technology the better. Better than the old ways - definitely.”

Margaret Goodwin, Patient.



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