



HRC2009

18th – 21st October 2009

Hilton Birmingham Metropole Hotel, Birmingham, UK

*Education
Technology
Diversity*

NHS IMPROVEMENT-HEART : 20th October 2009

Cardiac Devices: Four Years of the Network Survey

Richard Charles

Emeritus Consultant Cardiologist

Liverpool Heart and Chest Hospital

UK



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Cardiac devices : Four years of the Network Survey

Richard Charles

Conflicts of Interest

Co-editor, Cont@ct HF

(Heart Failure/device e-journal supported by Boston Scientific)

Clinical Adviser (Implantable Devices) – British Standards Institution

Network Devices Survey Group

The story so far ...

Network Devices Survey Group

The story so far ...

- 2003-2005 :Single and pilot multi-Network surveys

Network Devices Survey Group

The story so far ...

- 2003-2005 :Single and pilot multi-Network surveys

Provided 'proof of concept'

- 1) UK has **low overall rates of device provision** per million population compared to Western European rates
- 2) There is **significant inequity of provision** of devices between and within Cardiac Networks

Network Devices Survey Group

The story so far ...

- 2003 - 2005: Single and pilot multi-Network surveys
- 2005 - 2008: Formal national surveys

Network Devices Survey Group

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- 2003 - 2005: Single and pilot multi-Network surveys
- 2005 - 2008: Formal national surveys
- Published Network Survey Reports

**Pacemakers and Implantable Defibrillators:
UK National Survey 2006**

**Heart Rhythm Devices:
UK National Survey 2007**

The Arrhythmia Taskforce has set a target for U.K device implant rates to reach parity with Western Europe by the year 2016.

This report looks at progress made in 2007 towards this and other targets.

www.devicesurvey.com

Network Devices Survey Group

The story so far ...

- 2003 - 2005: Single and pilot multi-Network surveys
- 2005 - 2008: Formal national surveys
- Published Network Survey Reports (www.devicesurvey.com)

**Pacemakers and Implantable Defibrillators:
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The Arrhythmia Taskforce has set a target for U.K device implant rates to reach parity with Western Europe by the year 2016.

This report looks at progress made in 2007 towards this and other targets.

- **TODAY - First 2008 data !** : 2008 National Report 11/09

Who is involved?

Network Devices Survey Group

- Richard Charles
- David Cunningham
- Morag Cunningham
- Janet McComb
- Chris Plummer

Our Partners



Methodology

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**Consistent throughout
the project**

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- Identify Networks, PCTs
and implanting centres

Methodology

Consistent throughout the project

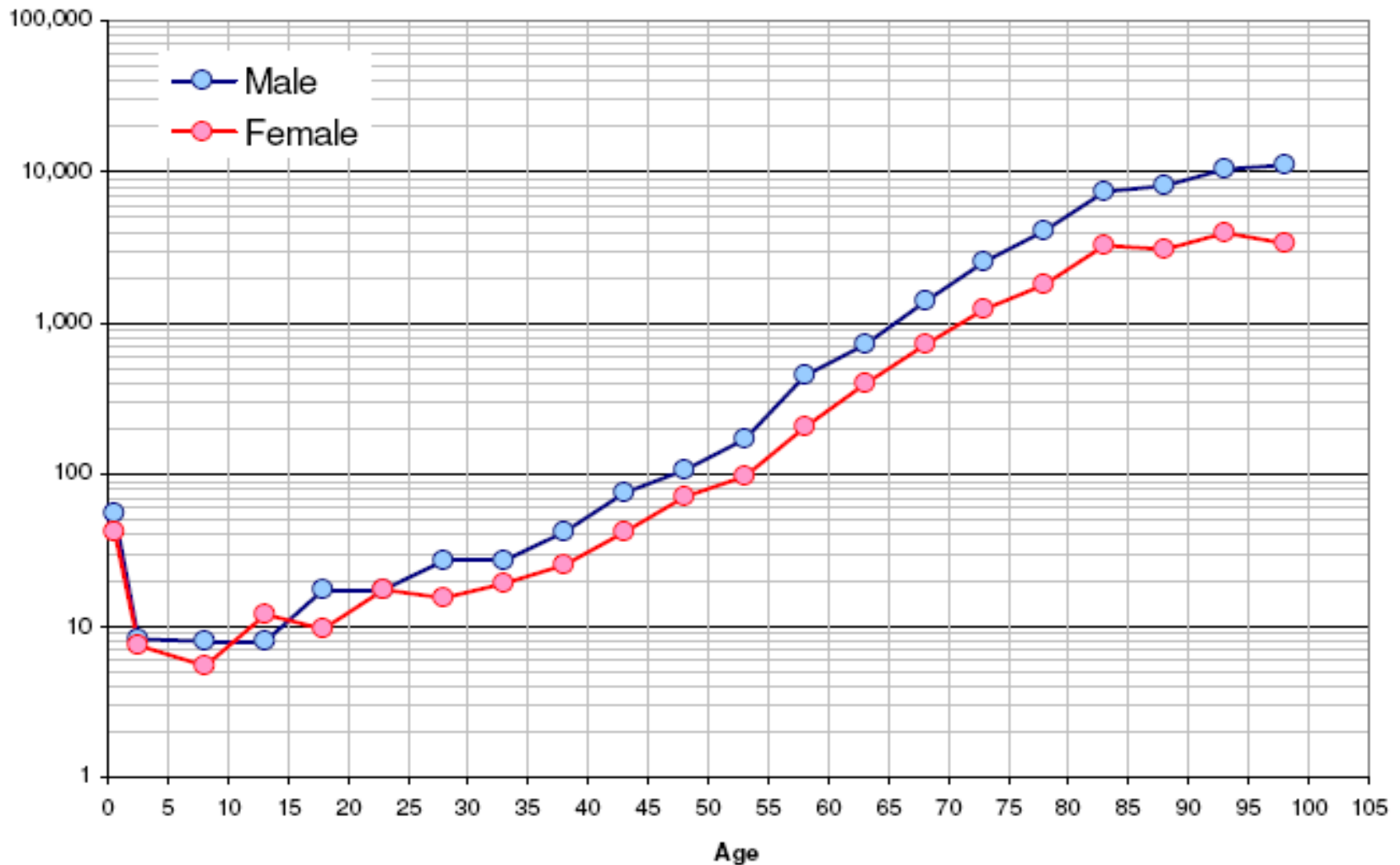
- Identify Networks, PCTs and implanting centres
- Collect/retrieve device and patient registration data

Methodology

Consistent throughout the project

- Identify Networks, PCTs and implanting centres
- Collect/retrieve device and patient registration data
- Correct for demographics

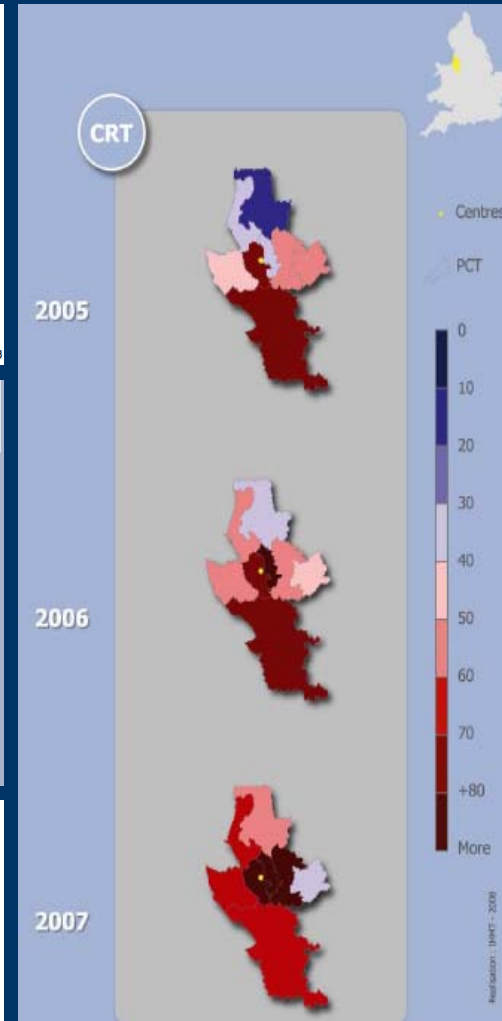
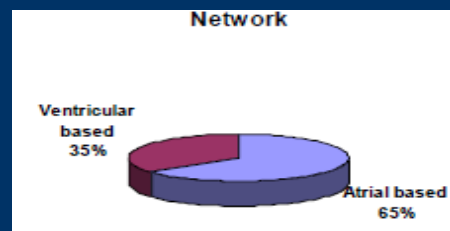
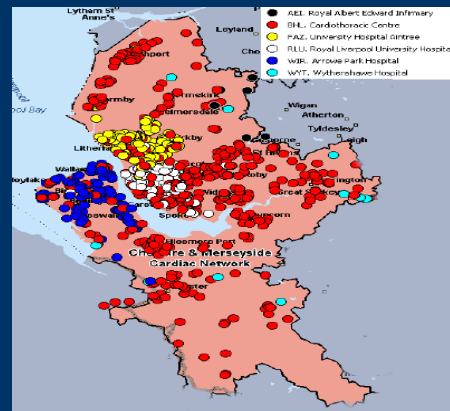
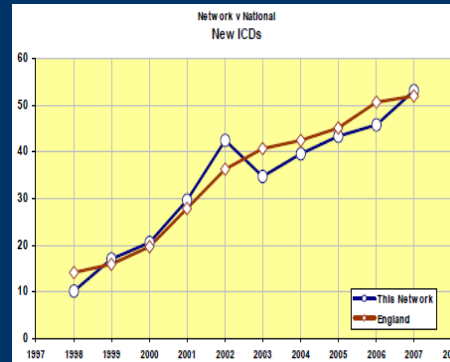
PM new implant rate versus age



Methodology

Consistent throughout the project

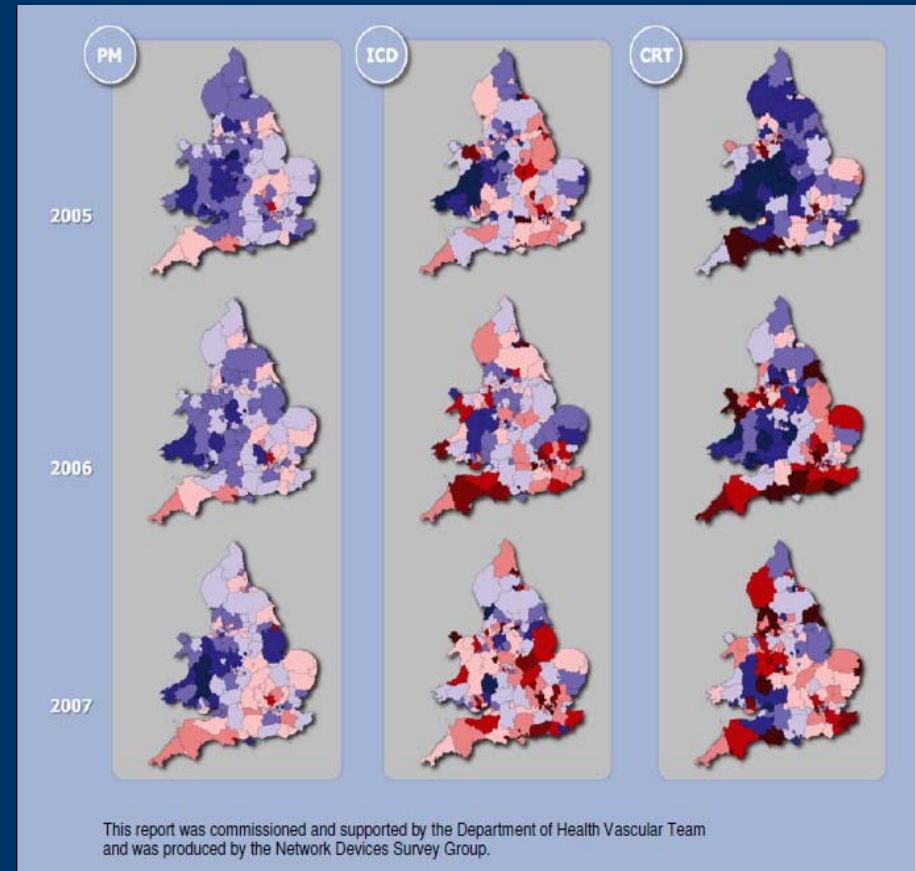
- Identify Networks, PCTs and implanting centres
- Collect/retrieve device and patient registration data
- Correct for demographics
- Construct individual Network reports



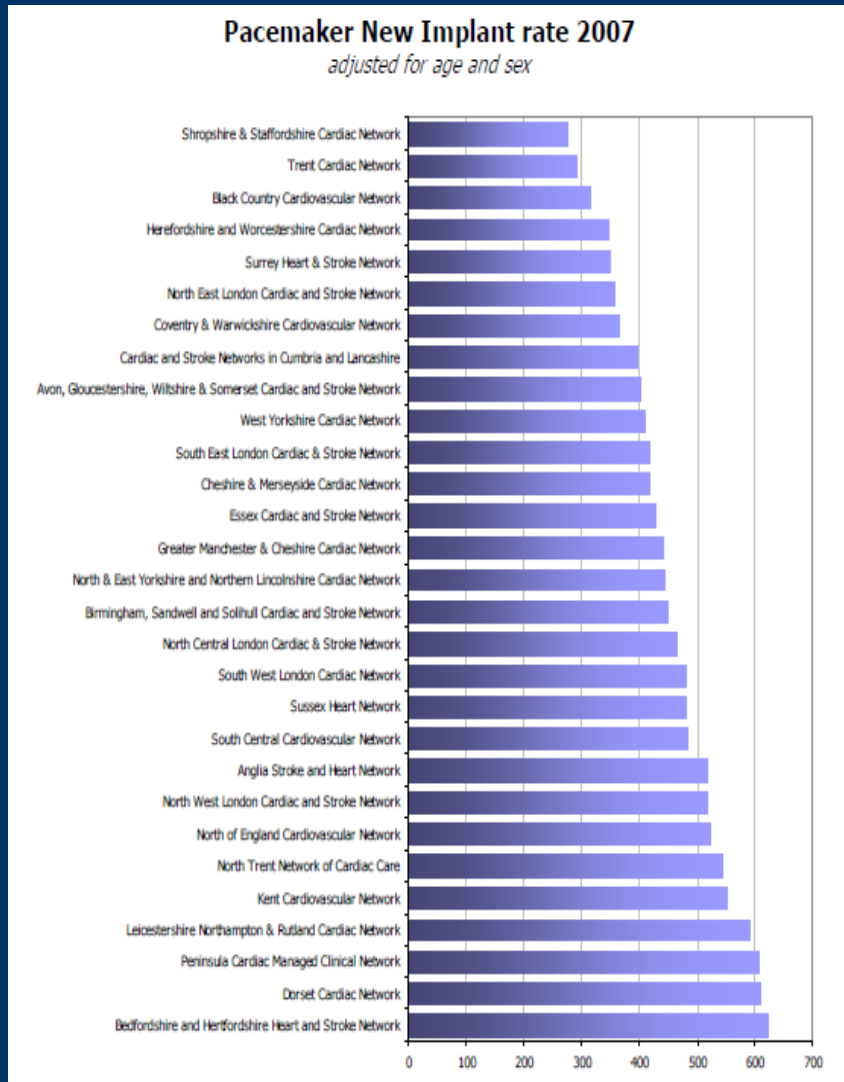
Methodology

Consistent throughout the project

- Identify Networks, PCTs and implanting centres
- Collect/retrieve device and patient registration data
- Correct for demographics
- Construct individual Network reports
- Issue National reports



Network New PM implant rate (2007)



Age/sex corrected Pacemaker Implant Rate by Cardiac Network

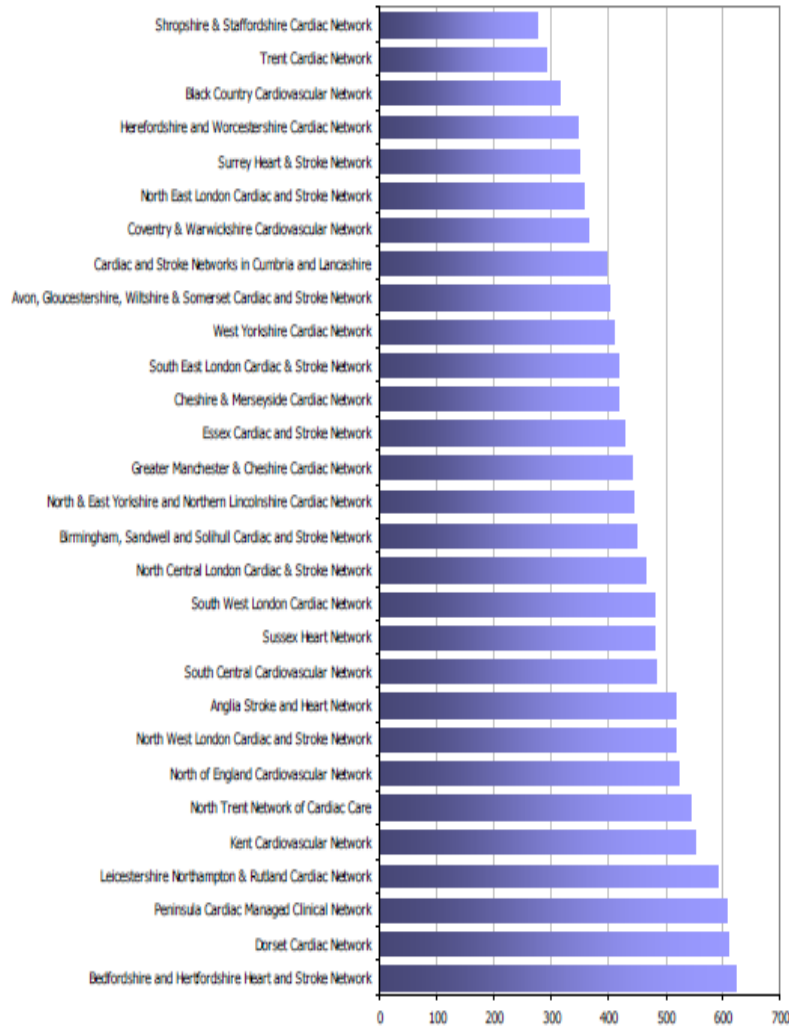
No Network reached the National
Target of 700 new
PPM/million population

130% difference between
highest and lowest implanting
Networks

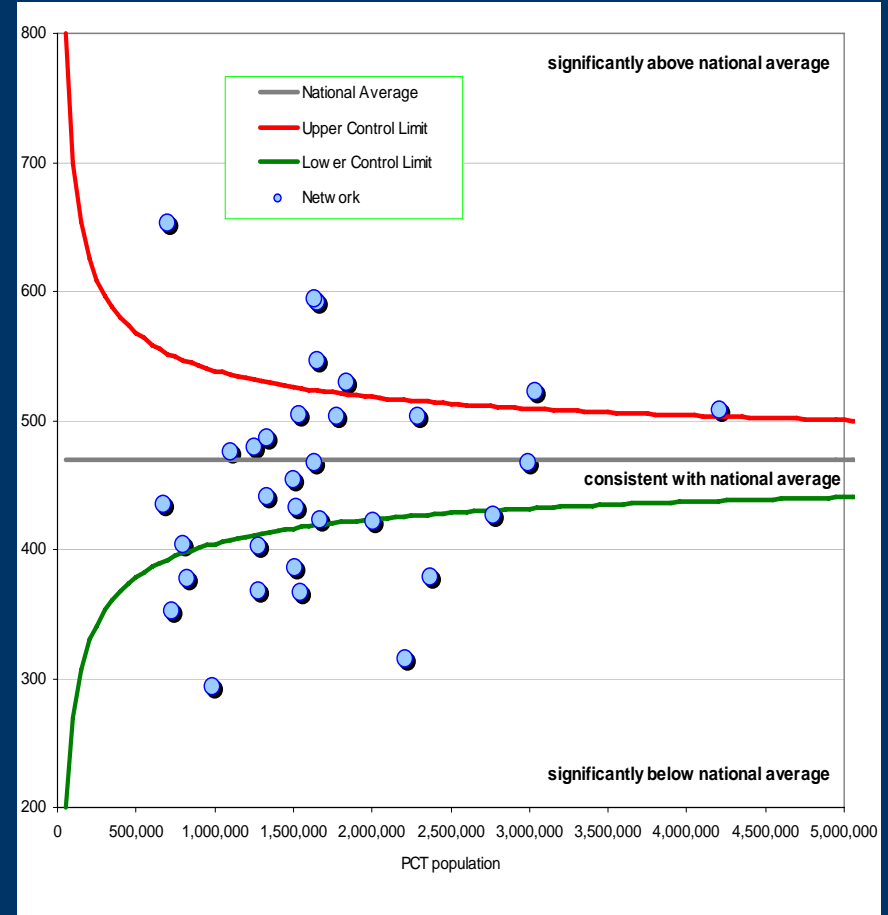
Network New PM implant rate

Pacemaker New Implant rate 2007

adjusted for age and sex



Network pacemaker new implant rate



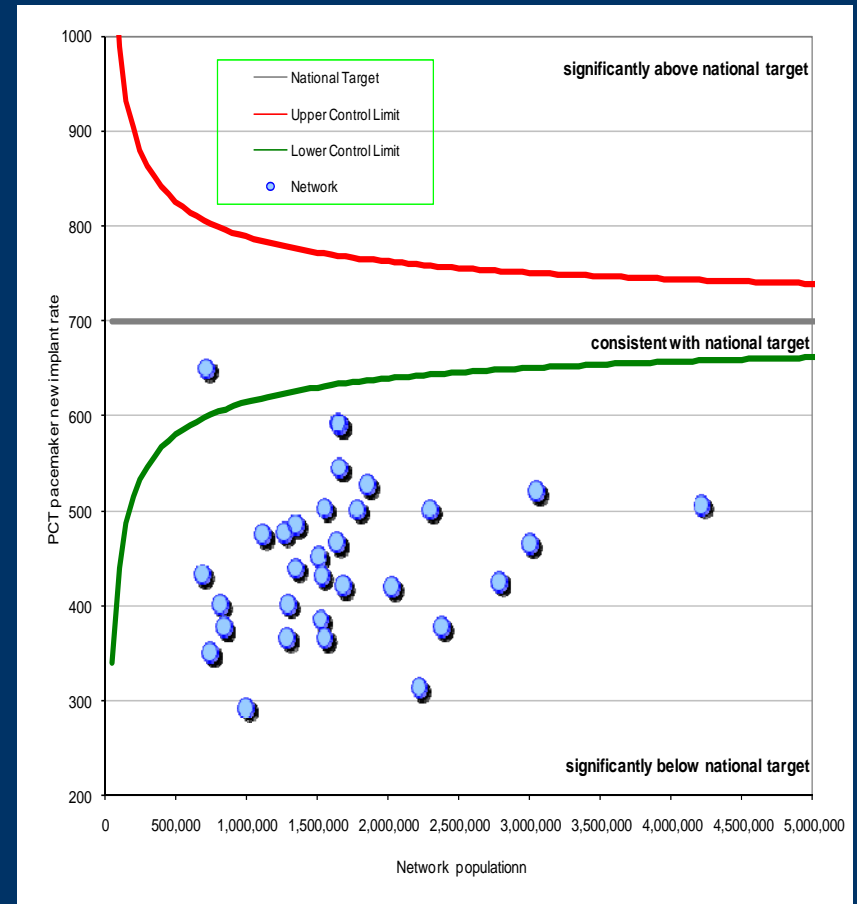
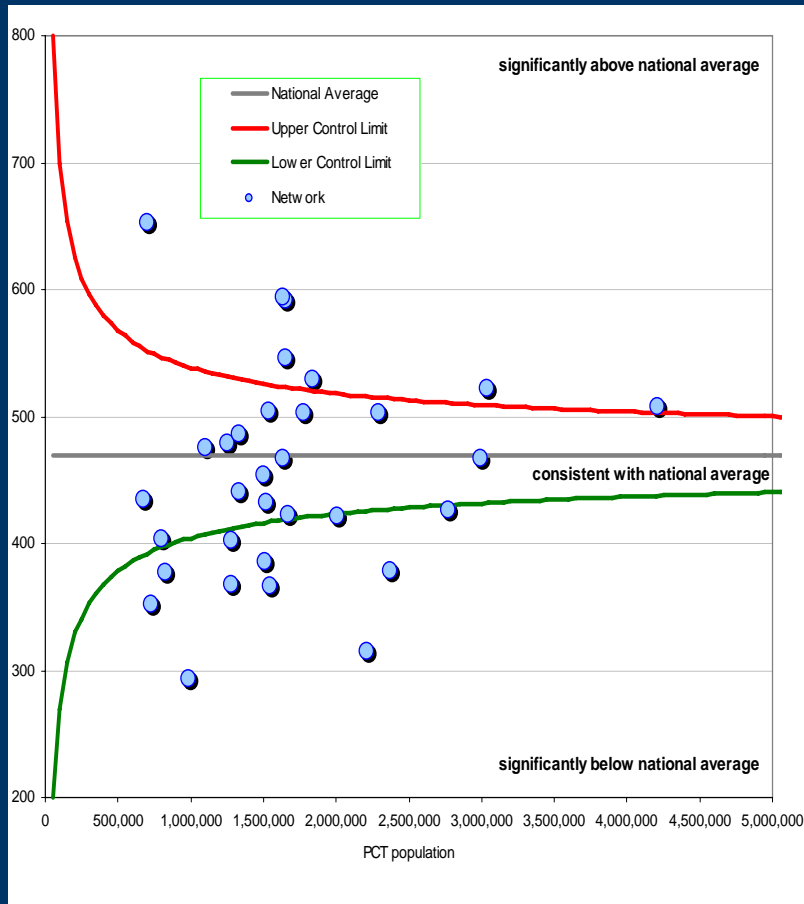
Network New PM implant rate

average of 2006 and 2007

National average (470/M)

National target (700/M)

Network pacemaker new implant rate



Network Total CRT implant rate

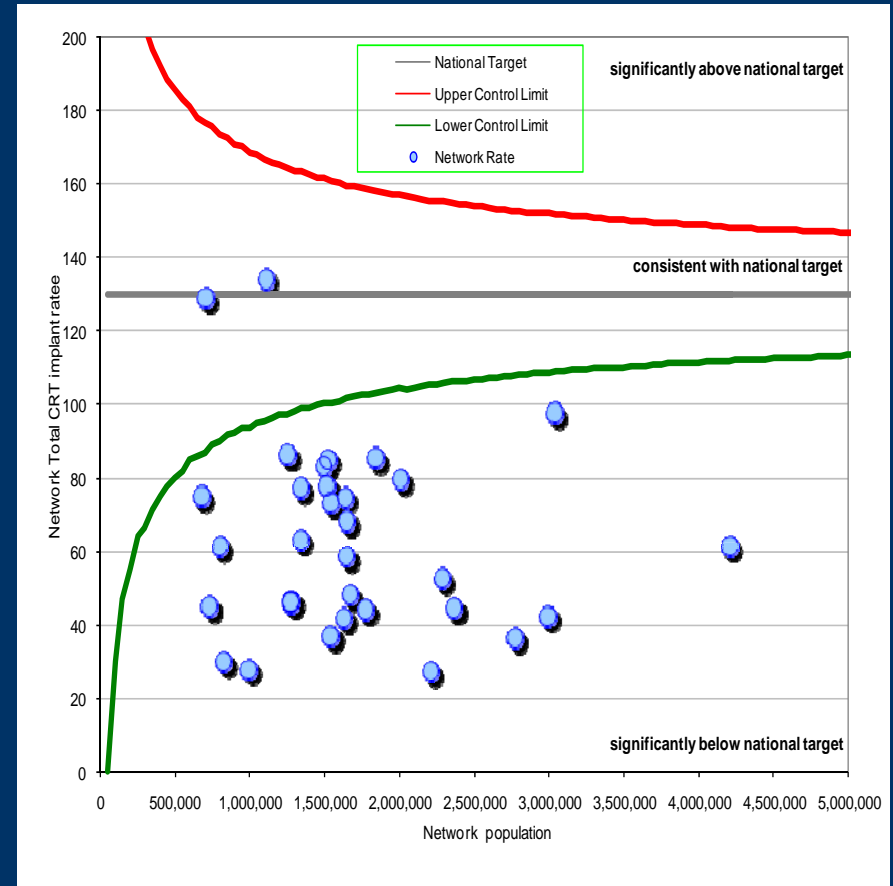
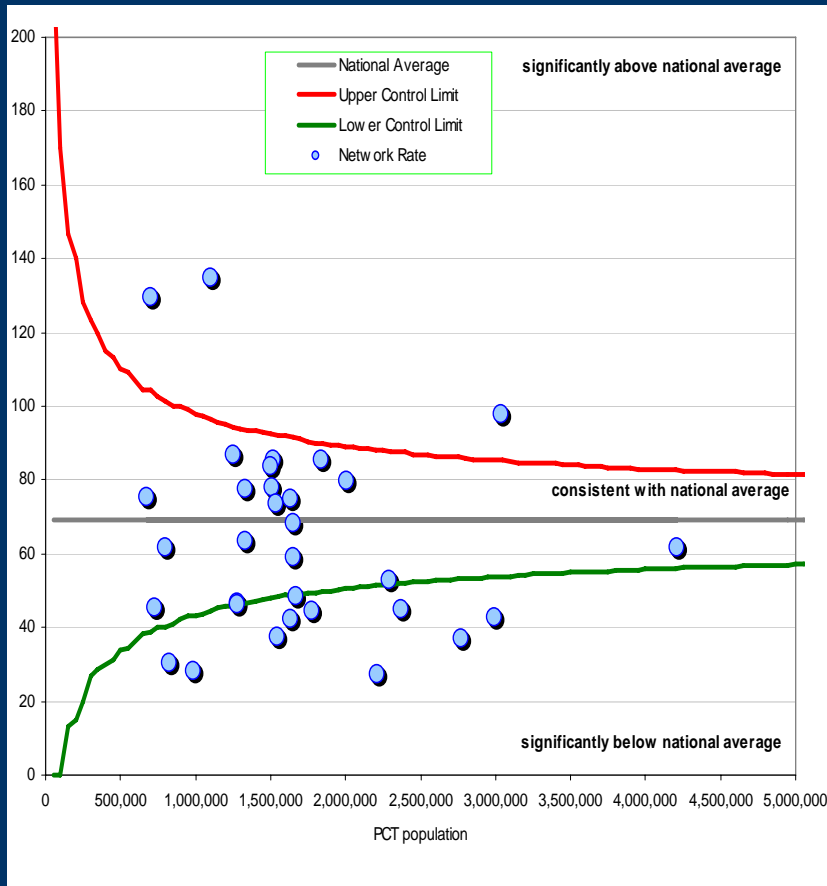
average of 2006 and 2007

National target

National average (50/M)

(proposed 130/M – HRUK/BSHF)

Network CRT total implant rate

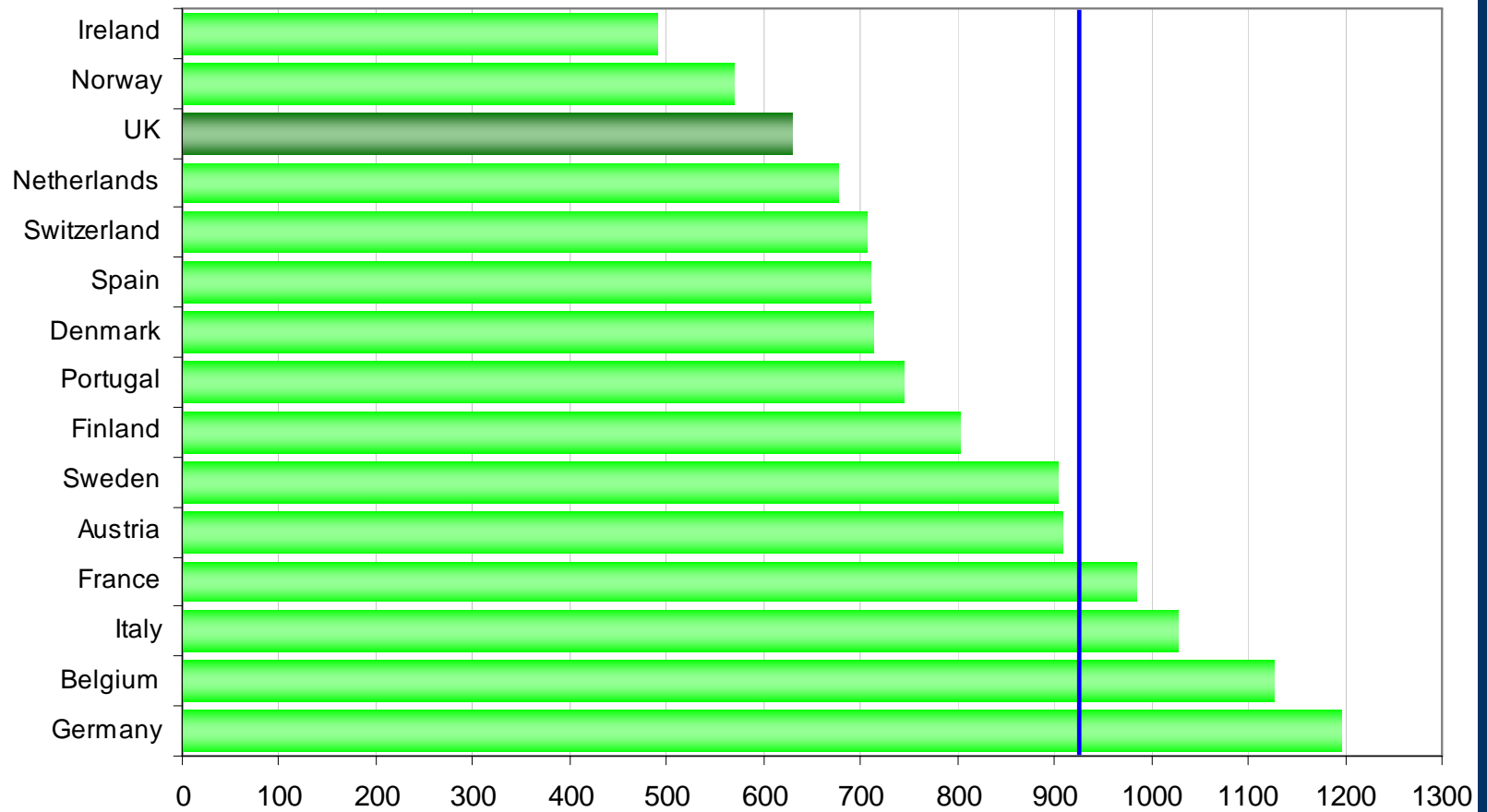


The Network Devices Survey

A FIRST LOOK AT 2008

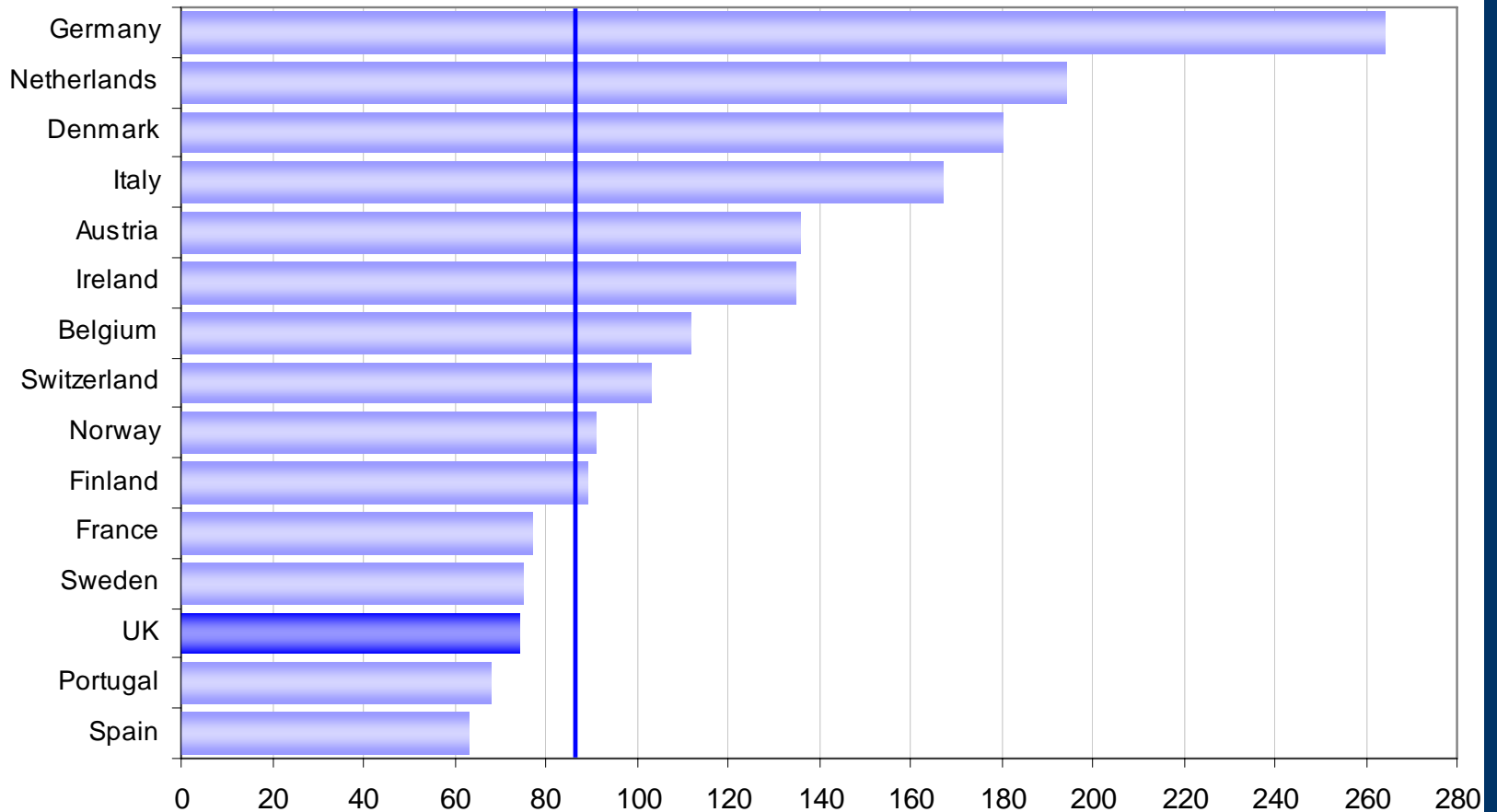
**ALL DATA PRESENTED HERE FOR 2008 IS SUBJECT TO
CONFIRMATION IN THE FINAL REPORT (BY 12/2009)**

Total PM Implant Rate 2008



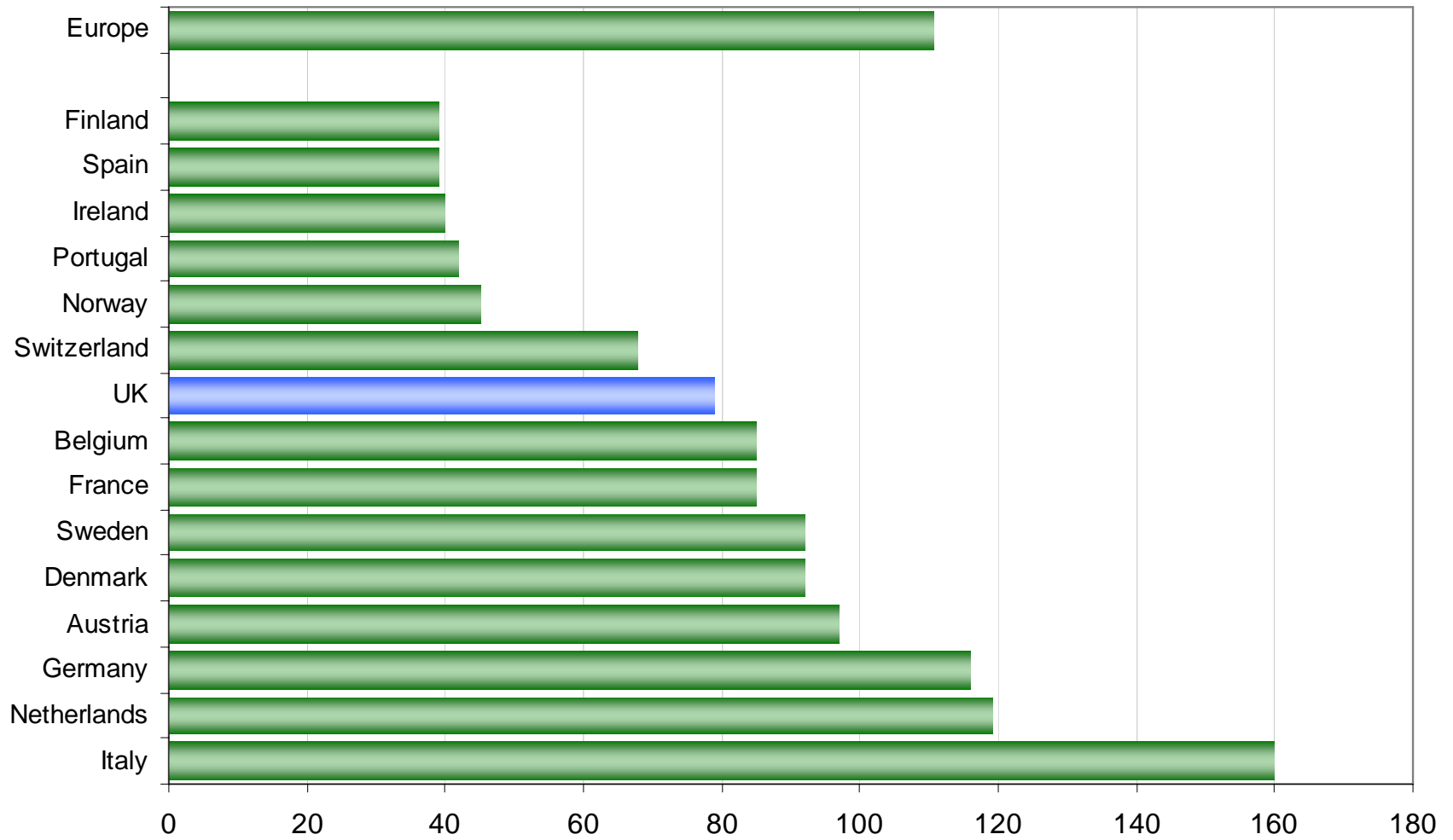
From manufacturers' pooled data

Total ICD Implant Rate 2008



From manufacturers' pooled data

2008 Total CRT Implants

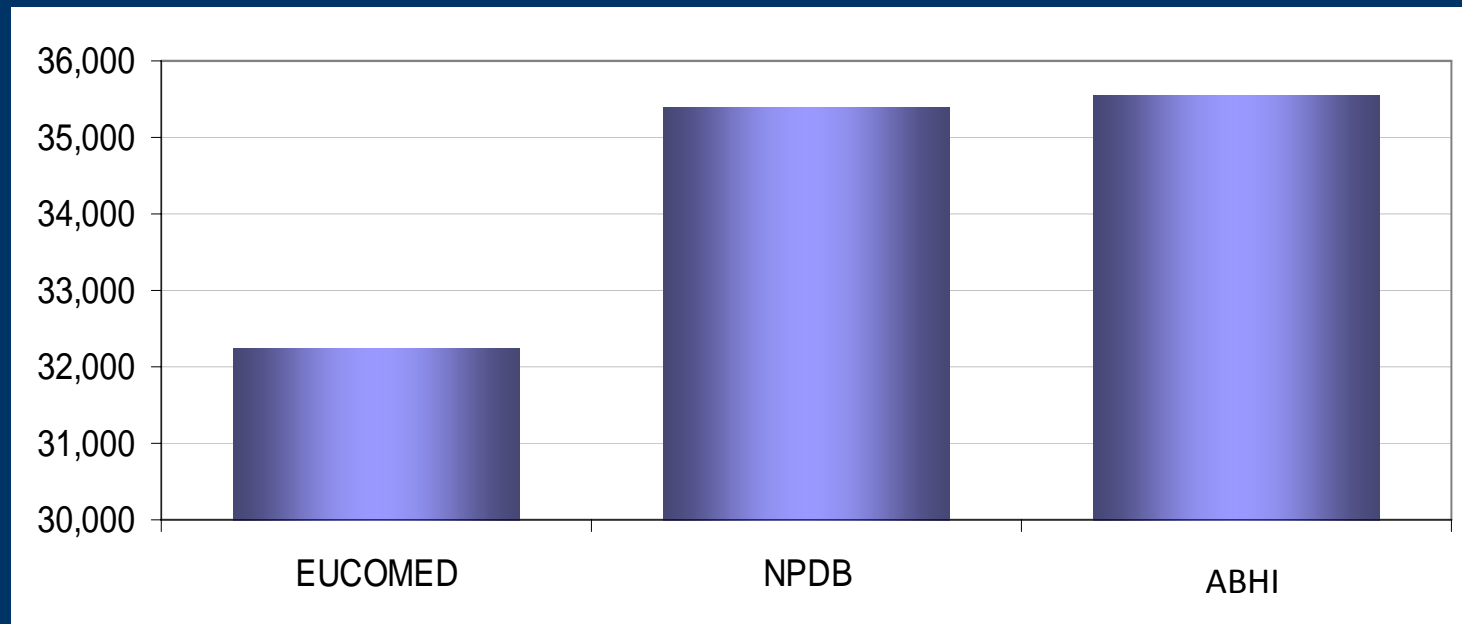


From manufacturers' pooled data

Manufacturers' Data

- There is evidence that more devices are actually implanted in UK hospitals than the pooled European manufacturers' estimate

2008 Total pacemaker registrations - England



Estimated **Total** CRM Device Implants

England and Wales

Type	2007	2008 *	Increase
All devices	40,401	45,704	13%
PM	33,419	36,285	9%
ICD	3,319	4,041	22%
CRT	3,663	4,748	30%

** Small registration deficits still to be recovered*

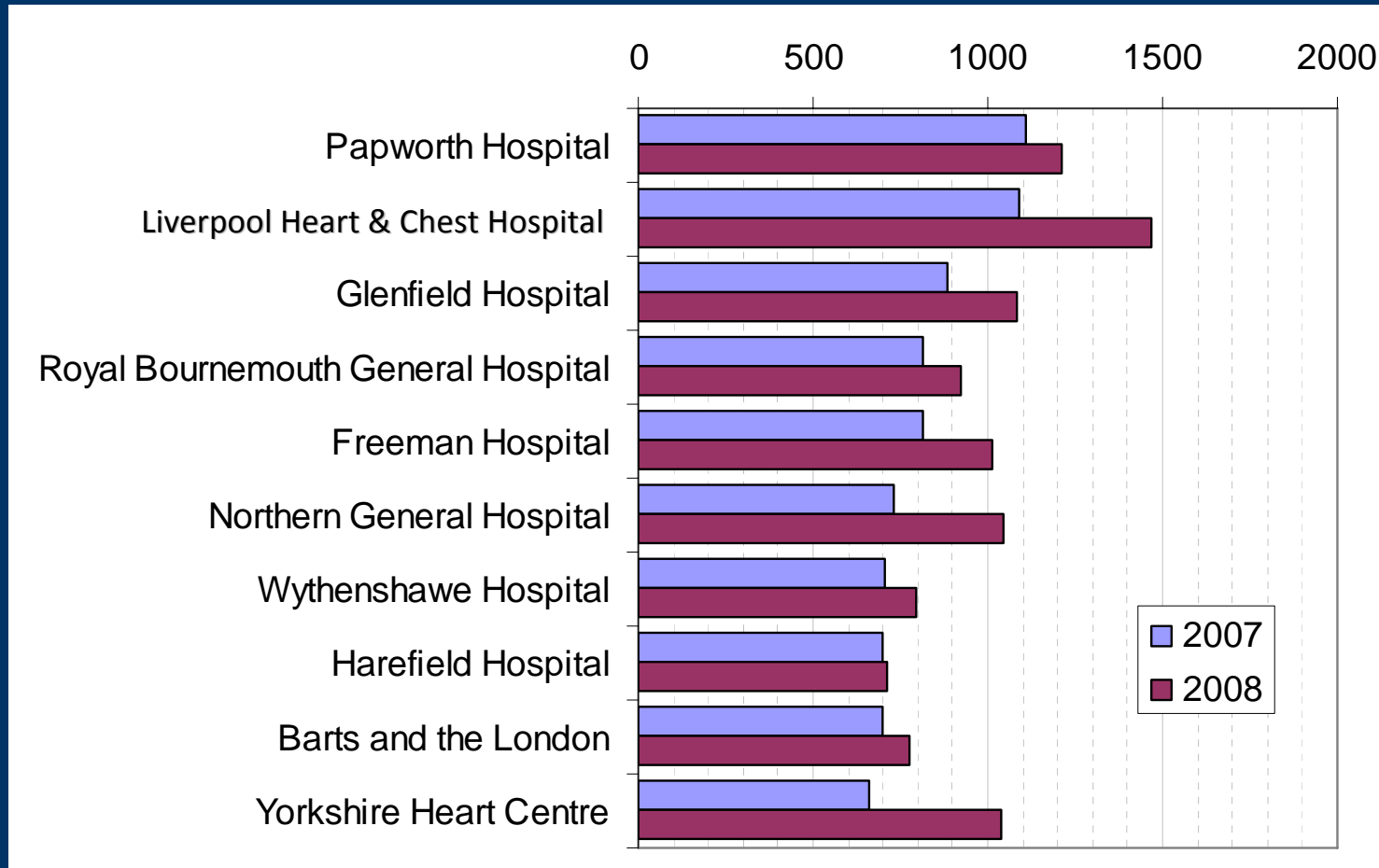
Headline **New** Implant Rates

England

	2007	2008
Pacemaker	470	488 +4%
ICD	52	60 +16%
CRT	51	62 +21%

NB: provisional only – final data in November

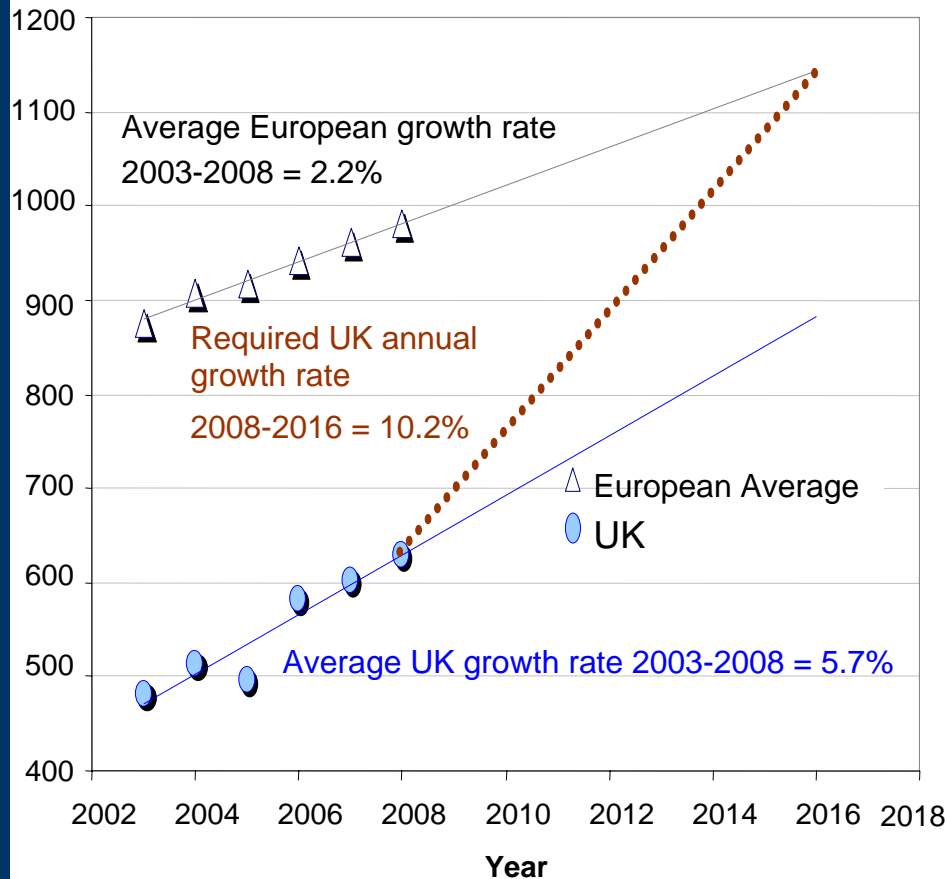
Top 10 Implanting Hospitals in 2008 All Device Implants (Total)



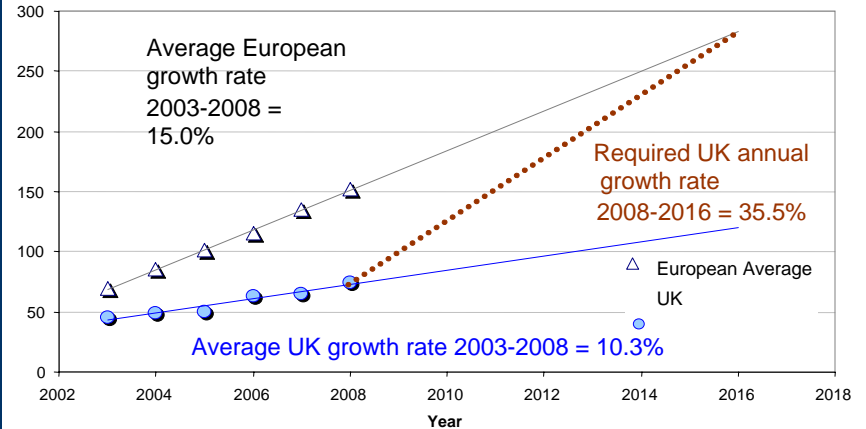
Average 22% increase in 2008

Required UK growth rates required to meet DH National HRM Device Taskforce target of achieving EU average device implant rates in the UK by 2016

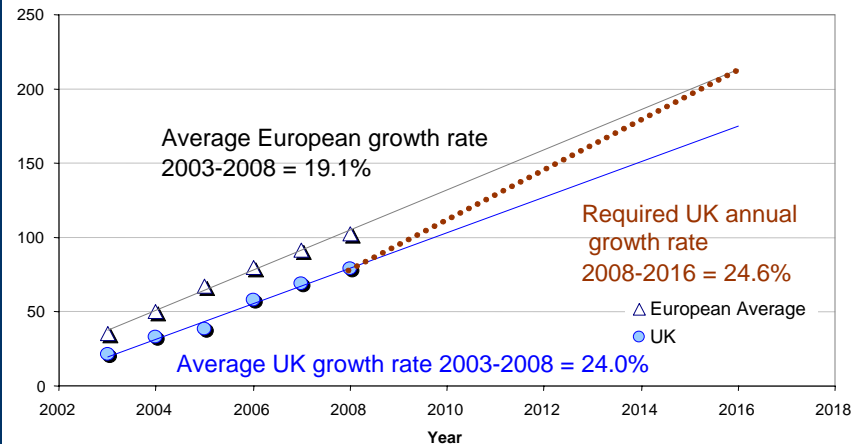
Projected Total Pacemaker Implants



Projected Total ICD Implants

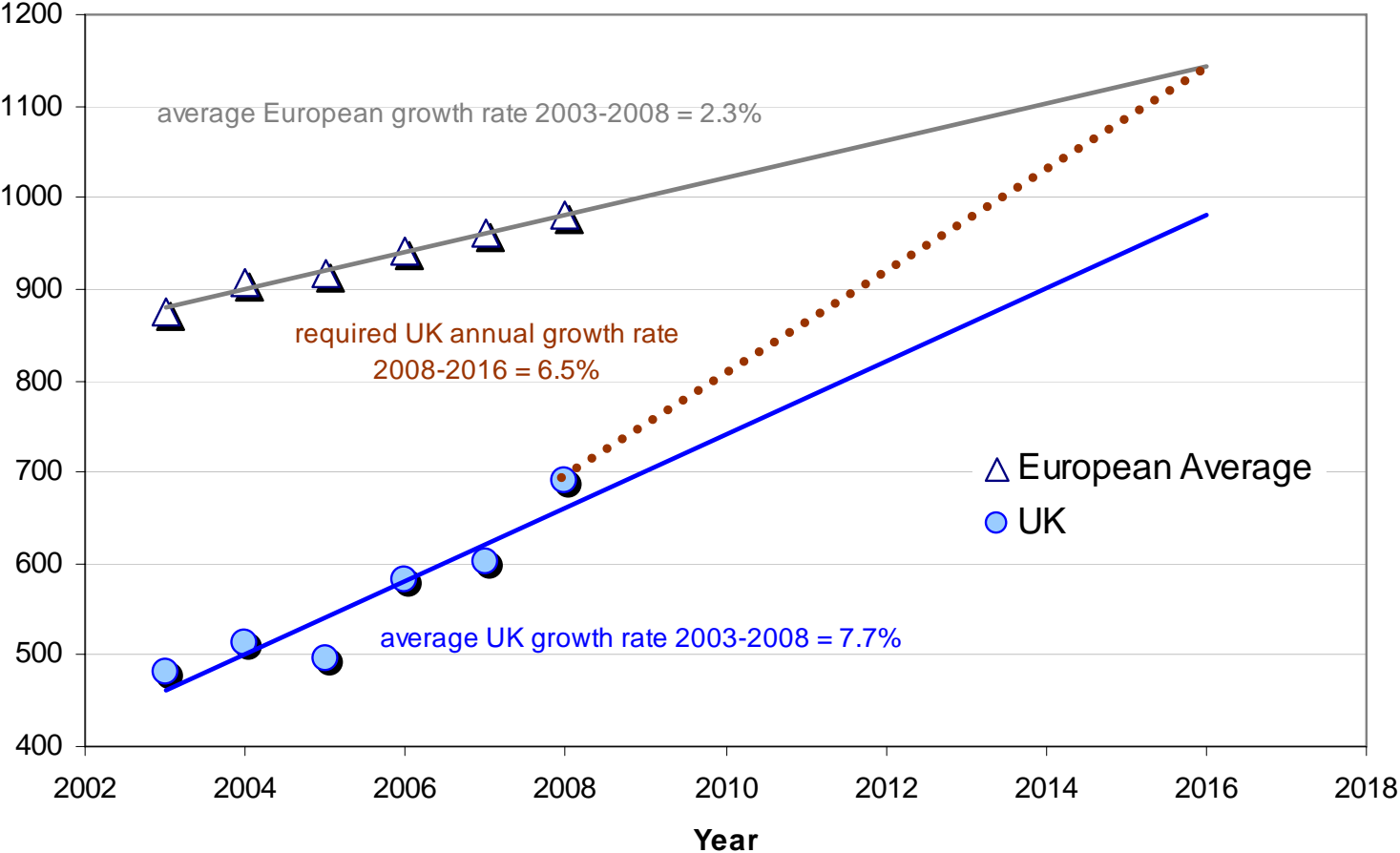


Projected Total CRT Implants



2008 Revision based on 'real' data

Revised Projected Total Pacemaker Implants



Confronting inequity and under use of PPM, ICD and CRT

- **Patient referral pathways - eradicate blocks**
 - *Patient → GP (Arrhythmia Alliance)*
 - *1° → 2° → 3° Care (Education, Care Pathways)*
- **Education programmes**
 - *Physicians: Indications, Guidelines , ‘Local Champions’*
 - *Commissioners: ‘Guidance for Commissioners’ (HRM Device Taskforce)*
- **Guidelines implementation**
 - *NICE compliance*
 - *‘Get With the Guidelines’*
- **‘Real Life’ Registries**
- **Screening programmes** *Actively seek ‘at risk’ populations*
- **Support for Cardiac Networks** *NHS Improvement / NSF Chapter 8*
- **Implanting centres and physicians** *Expansion programmes*
- **Investment by Commissioners in proven, cost effective technologies**
- **National Audit** *Networks Devices Survey*

Network Devices Survey 2009

The Way Forward

- National Report 2008 due November 2009.
- National Report 2009 centrally funded for 1 year.
- Registration reporting remains a critical factor.
- Care Quality Commission: Survey participation is a Performance Indicator.
- HRUK : work to enhance linkage of Survey results to membership and implanting centres.
- Collaboration with NHS Improvement –Heart, and Cardiac Networks is proving very effective in embedding the Survey as an essential tool for PCT/Commissioner planning, and for audit.