



# ICD IMPLANTATION IN THE DGH IS SAFE— SO WHAT'S THE FUSS ABOUT?

Ian Williams  
Consultant Cardiologist  
Norfolk and Norwich Foundation Trust

# Disclosures

The background of the slide features several detailed anatomical drawings of the human heart, showing the ventricles, atria, and associated vessels. These drawings are rendered in a classic, scientific style, likely from a historical medical text. Interspersed among the drawings are fragments of handwritten text in a cursive script, which appears to be from the same source as the illustrations. The overall color palette is muted, with various shades of brown, tan, and grey, giving it an aged, historical appearance.

- Speaking honoraria

- Medtronic Inc
- Sanofi-Aventis

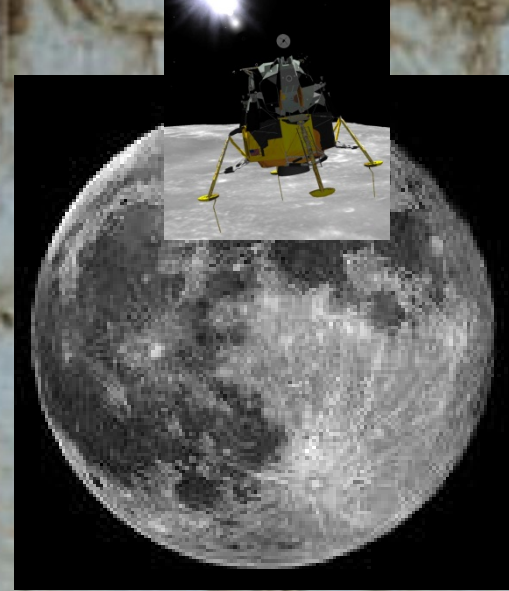
- Sponsored research studies

- Medtronic Inc
- Boston Scientific
- Sanofi-Aventis

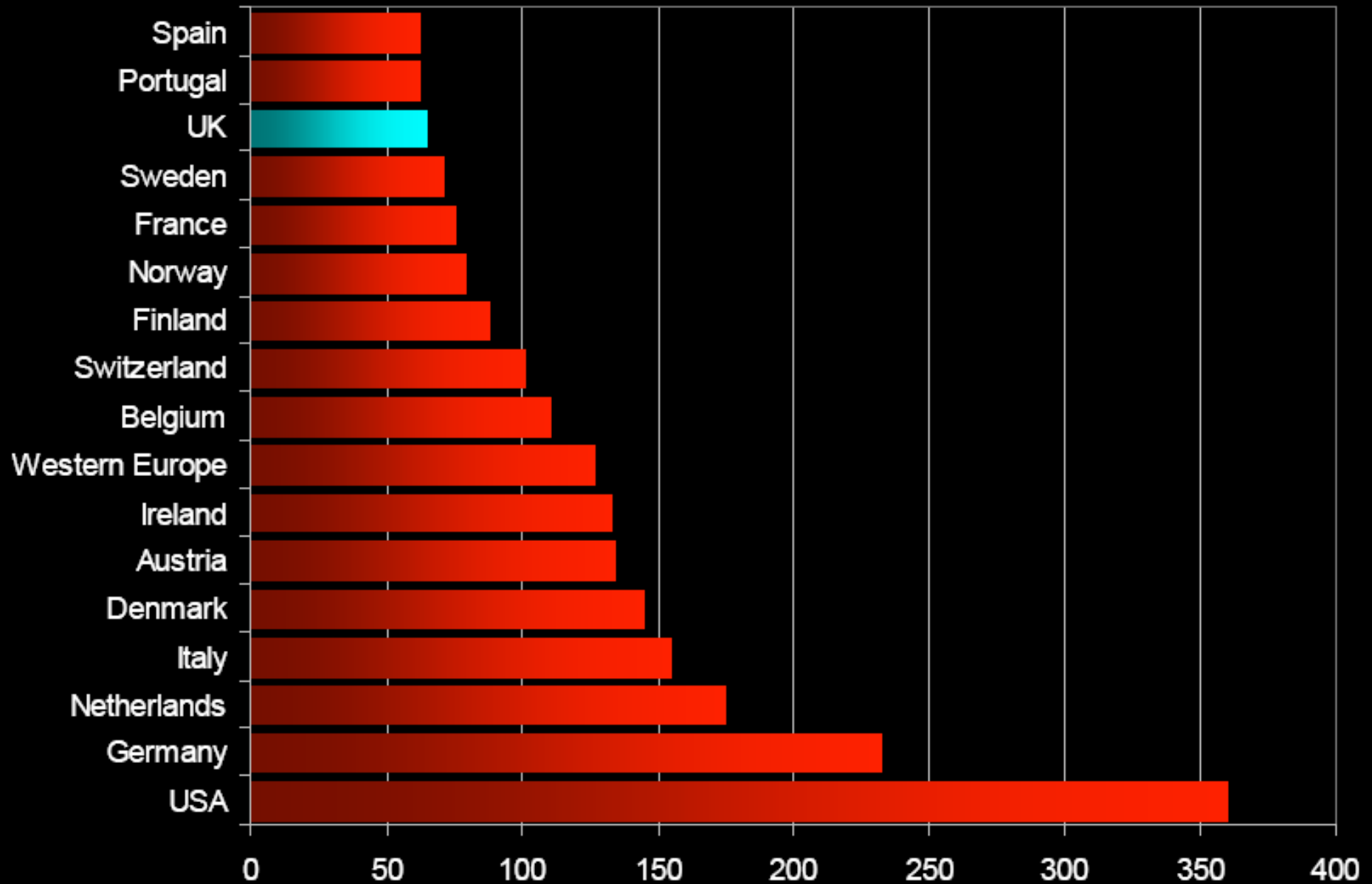
- Educational grants

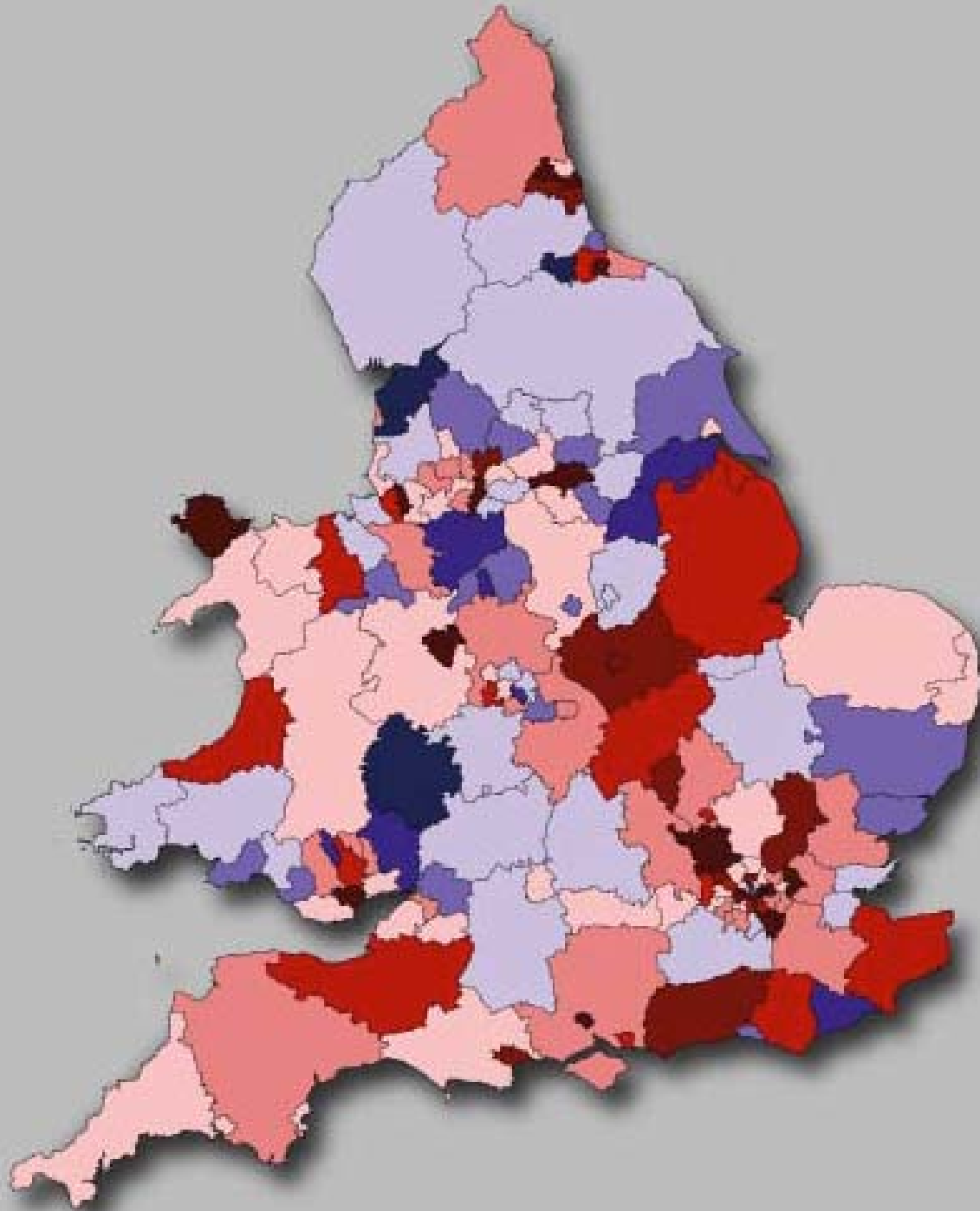
- Medtronic
- Boston Scientific
- St Jude Medical

# The imperative



## Total ICD Implants 2007





# Where's the block?

greater than the average in eastern Europe. Only Greece, Spain, and Portugal in western Europe provide a poorer service to the community in terms of pacing, and historically Britain now lags some 14 years behind the United States in rates of implantation.

A F RICKARDS

Consultant Cardiologist,  
National Heart Hospital,  
London W1M 8BA

the population served by a pacing centre and implant rate in the North American and European countries. Assessed in terms of

The profession itself must take responsibility for the training

BRITISH MEDICAL JOURNAL VOLUME 288 10 MARCH 1984

This audit suggests that if UK national criteria were fully implemented, ICD implantation would increase by a factor of seven locally, and by a factor of 10 nationally. Clearly this would have very significant implications for provision of ICD therapy in the UK and elsewhere.

### **The incidence of implantable cardioverter defibrillator indications in patients admitted to all coronary care units in a single district\***

**Christopher J. Plummer\***, R. John Irving and Janet M. McComb

Our audit suggests that implementation of the NICE criteria would result in an even higher implantation rate of 125/10<sup>6</sup>/year, four times our current rate of 29.7/10<sup>6</sup>/year.

### **An audit of the implications of implementing NICE guidance on the use of implantable cardioverter-defibrillators**

**C J Plummer**, J M McComb

By analogy with the devolution of pacemaker implantation to district hospitals, local implantation of ICDs in the district hospitals rather than in the centre may facilitate higher implantation rates.

### **The implantable cardioverter-defibrillator: postcode prescribing in the UK 1998–2002**

A D Cunningham<sup>1</sup>, **C J Plummer**<sup>2</sup>, J M McComb<sup>2</sup>, S W Lord, M W Cunningham<sup>1</sup>, J-M Toussaint<sup>3</sup>, A F Rickards<sup>1</sup>

Use of ICDs varies between English health regions, and use is not commensurate with need. Although incomplete data could be contributing, an inverse care law seems to be operating. This, along with the slow diffusion of the technology and setting of services predominantly in larger tertiary centres, is similar to the pattern previously seen for coronary revascularisation

**Planned expansion of implanting centres and resources are needed to tackle low levels of referral, geographical and social inequity, and the expected increase in demand for ICDs.**

**Inequity of use of implantable cardioverter defibrillators in England: retrospective analysis**

Julie Parkes, Deborah L Chase, Andrew Grace, David Cunningham, Paul J Roderick *BMJ* 2005;330:454–5

# Capacity

The background of the slide is a faded, historical-style anatomical drawing of the human heart. It features several detailed sketches of the heart from different perspectives, showing the major blood vessels (aorta, pulmonary artery, and pulmonary veins). Interspersed among the drawings are fragments of handwritten text in a cursive script, likely from a medical manuscript or anatomical treatise. The overall color palette is muted, with shades of blue, grey, and brown.

- Unmet demand
  - incident and prevalent population
- Demographically increasing demand
- Increasing systematic identification
- Competing demands
  - Primary PCI
  - AF ablation
  - CRT

# What are the prerequisites?

- Specialist experience and enthusiasm
- Implantation numbers / Catchment area
- Medical cross cover
- Cardiac physiology staff cover
- Patient support infrastructure
- Local debate

# Maintenance of competence ACC / HRS

**Table 2** Summary of requirements for alternate training pathway for ICD and CRT implantations

- Documentation of current experience: 35 pacemaker implantations per year and 100 implantations over the prior 3 years
- Proctored ICD implantation experience
  - 10 Implantations
  - 5 Revisions
- Proctored CRT implantation experience: 5 implantations
- Completion of didactic course and/or NASPExAM
- Monitoring of patient outcomes and complication rates
- Established patient follow-up
- Maintenance of competence
  - 10 ICD and CRT procedures per year
  - 20 patients per year in follow-up

Heart Rhythm Society  
Clinical competency statement: Training pathways for  
implantation of cardioverter defibrillators and cardiac  
resynchronization devices

*This document has been endorsed by the American College of Cardiology Foundation*

Anne B. Curtis, MD,<sup>a</sup> Kenneth A. Ellenbogen, MD,<sup>b</sup> Stephen C. Hammill, MD,<sup>c</sup>  
David L. Hayes, MD,<sup>c</sup> Dwight W. Reynolds, MD,<sup>d</sup> David J. Wilber, MD,<sup>c</sup>  
Michael E. Cain, MD<sup>f</sup>

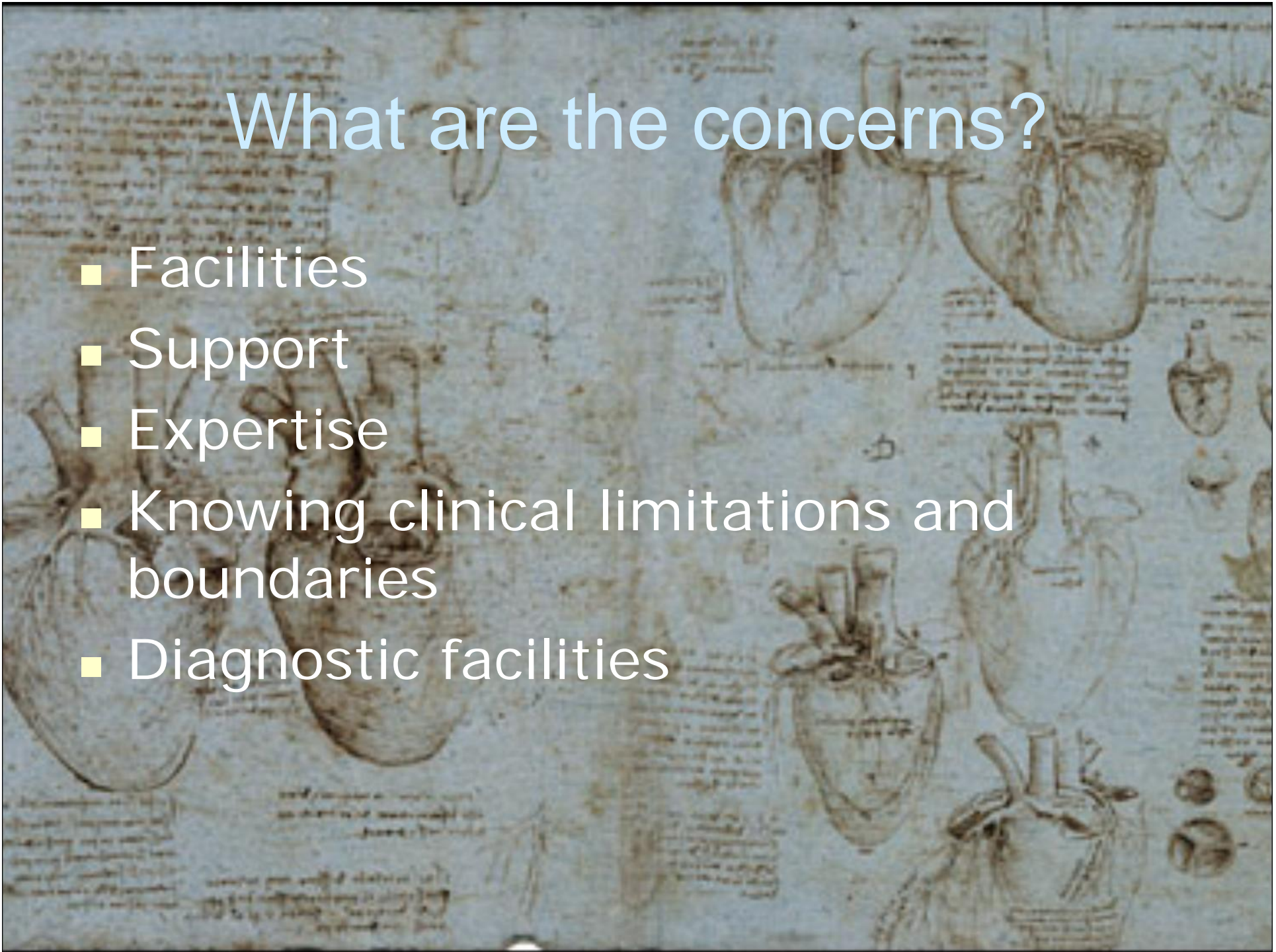
# Competance

The background of the slide is a detailed anatomical drawing by Leonardo da Vinci, showing multiple views of the human heart and its associated vessels. The sketches are rendered in a fine, brownish ink on aged, yellowed paper. The word 'Competance' is overlaid in a large, white, sans-serif font at the top center.

- Quality
- Performance
- Data
- Audit
- Numbers

# What are the concerns?

- Facilities
- Support
- Expertise
- Knowing clinical limitations and boundaries
- Diagnostic facilities



# Recognition of Limitations

- Where is further risk stratification needed
- Where is a wider expert risk assessment required
- Where is a diagnostic EP study desirable
- Specialist implantation – GUCH
- Lead extraction

# Advantages

- Access
  - Inverse care / Inverse square
  - Local recognition by local expertise
  - Local service / geography
  - Expertise at the site of emergency presentation
  - Immediate access to data
  - Responsiveness
- Continuity of care
- Familiarity – patient support
- **Implantation is not an isolated technical service**

# Conclusion

- Imperative
- Few Impediments
- Caveats
- Limitations
- Need for ongoing interaction

