Testimony of a failed reimbursement change: why it went wrong

Device implantation in Sweden

Frieder Braunschweig MD PhD FESC FACC
Professor of Cardiology, Director of Arrhythmia
Heart and Vascular Theme
Past president Swedish Society of Cardiology
Karolinska University Hospital, Stockholm, Sweden

WE ARE THE ESC

EUROPEAN Heart Rhythm ASSOCIATION
A Registered Branch of the ESC

EUROPEAN SOCIETY OF CARDIOLOGY®

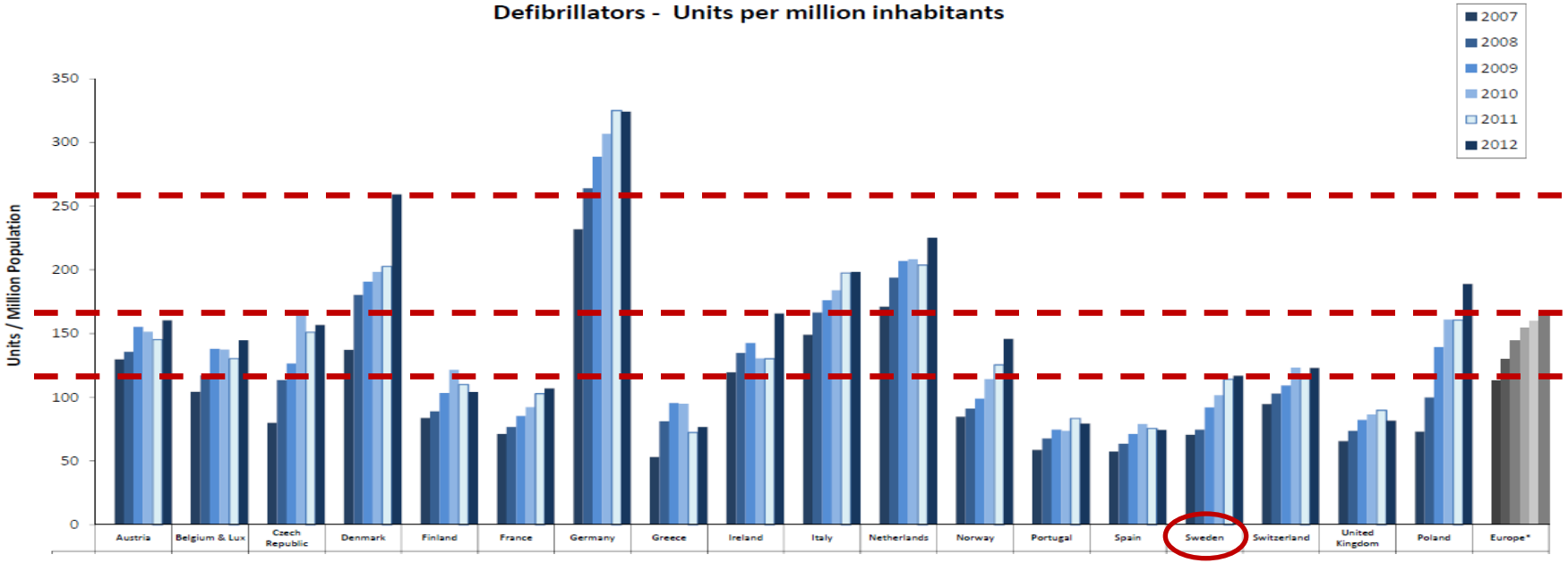
Health care organization in Sweden

- Ca: 10 000 000 inhabitants
- Public health care
- 20 county councils
- Health care expenditure 9.6% of GDP
- 2.7 hospital beds per 1000
- Cardiology outpatient clinics largely linked to hospitals
- Large GP centers

Device implantation: precondition in Sweden

- **Proud history in pacing**
- **Active research on devices in HF**
- **Rich country**
- **High tech nation**
- **High standards and quality in health care**
- **Implanting centers:**
  - Pacemaker: 44 (4/mio; Europe 3.9/mio)
  - ICD: 30 (3/mio; Europe 2.4/mio)
  - CRT: 25 (2.5/mio; Europe 1.7/mio)

ICD implantation in Europe 2007-2012



Eucomed 2014

www.escardio.org/EHRA

National guidelines 2015 (Swedish board of health and welfare)

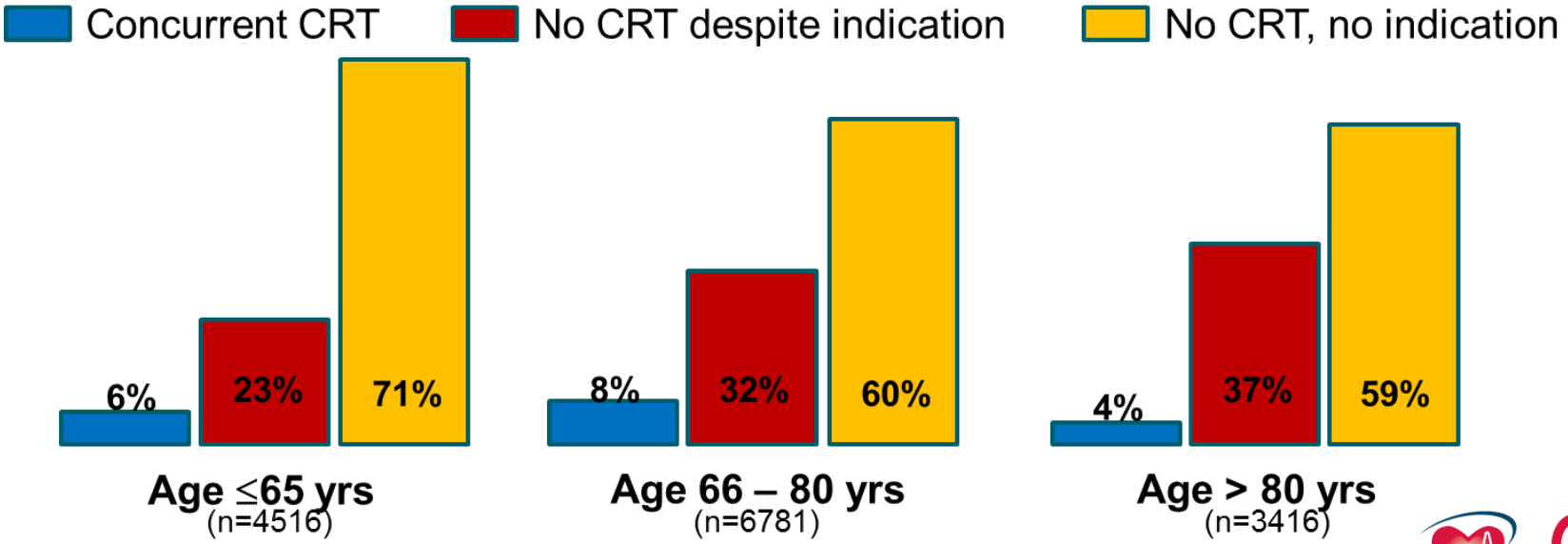
Priority: ***1-10***
Do not
Further research encouraged

CRT: **HF, NYHA III-IV, LVEF ≤35%, LBBB, SR** **prio 1**

ICD: **Primary prophylactic indication (IHD)** **prio 2**

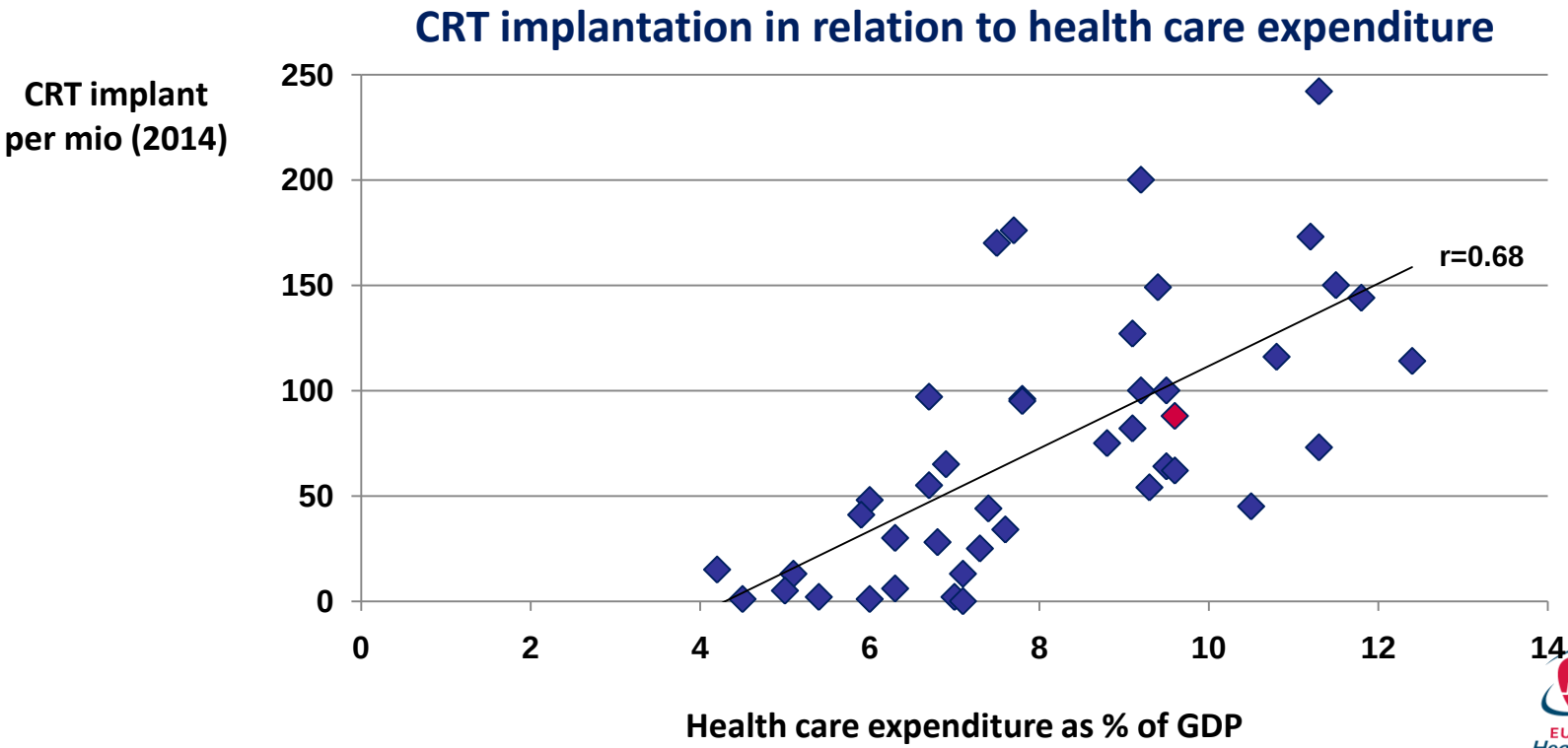
CRT utilization in Sweden

Swedish HF register, RiksSvikt (n=14.713)
CRT indication based on ESC 2013 guidelines



Lund LH, Braunschweig F et al EJHF (2014) **16**, 1073–1081

CRT in EHRA countries

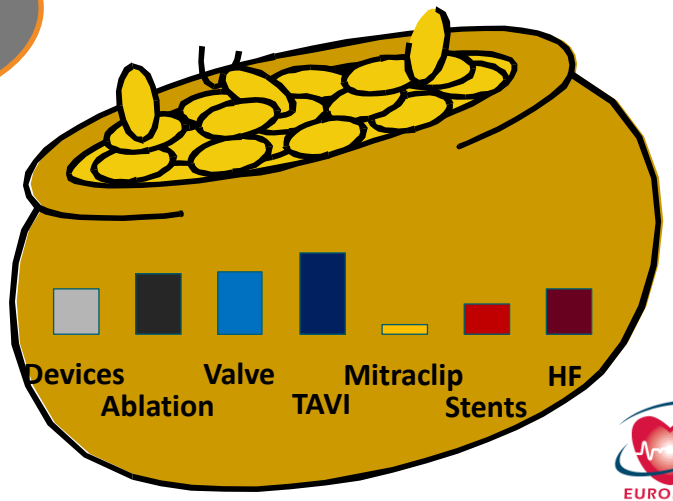


Crash course in Swedish health economics

KAROLINSKA
Universitetssjukhuset

- Cancer
- Pediatrics
- Trauma
- etc

Budget: Heart and Vascular

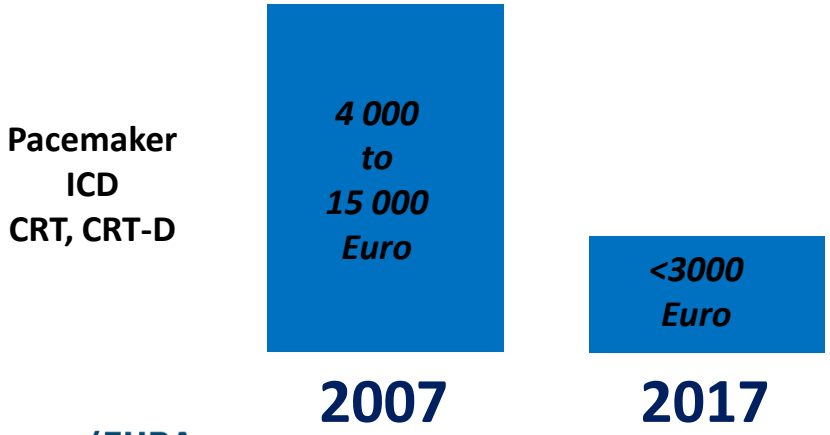


Hospital A | Hospital B | Hospital C | Primary Care | etc

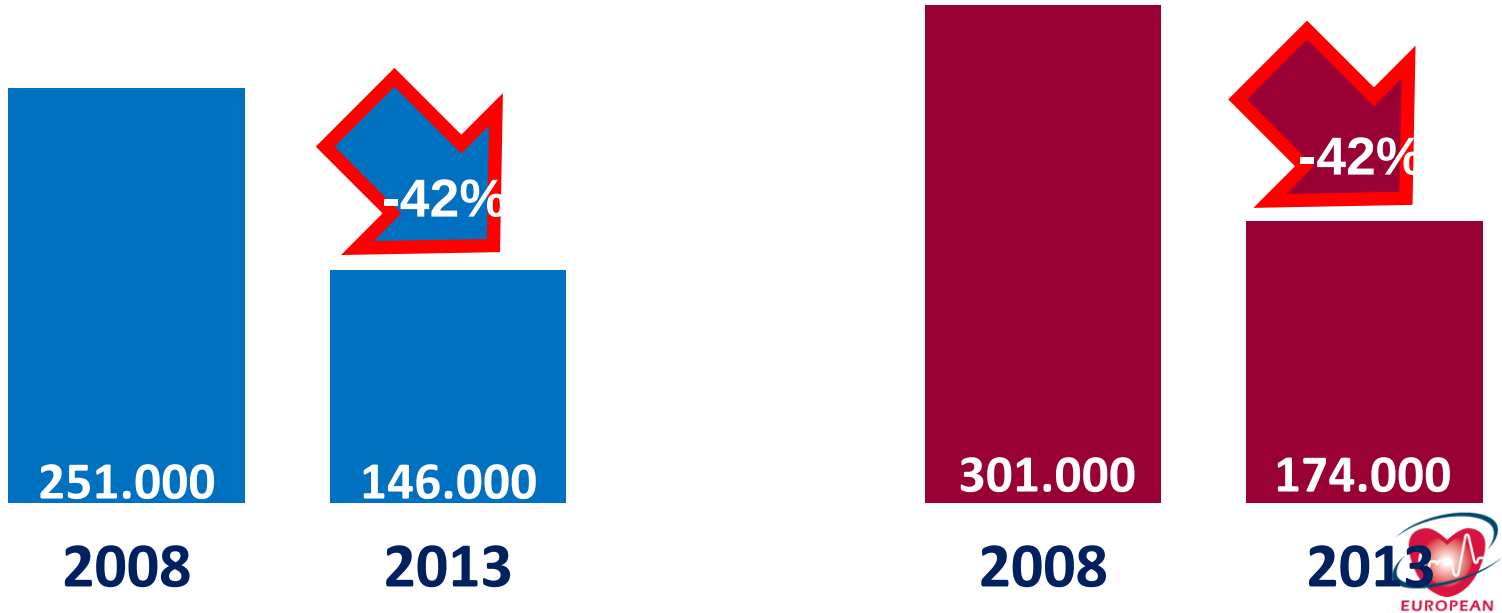
Frieder Braunschweig

Low device implantation in Sweden: possibly linked to high cost and budget limits

→ Action plan:
- increase device implantation by reducing costs
- establish lowest device costs in Europe
- countywise tender

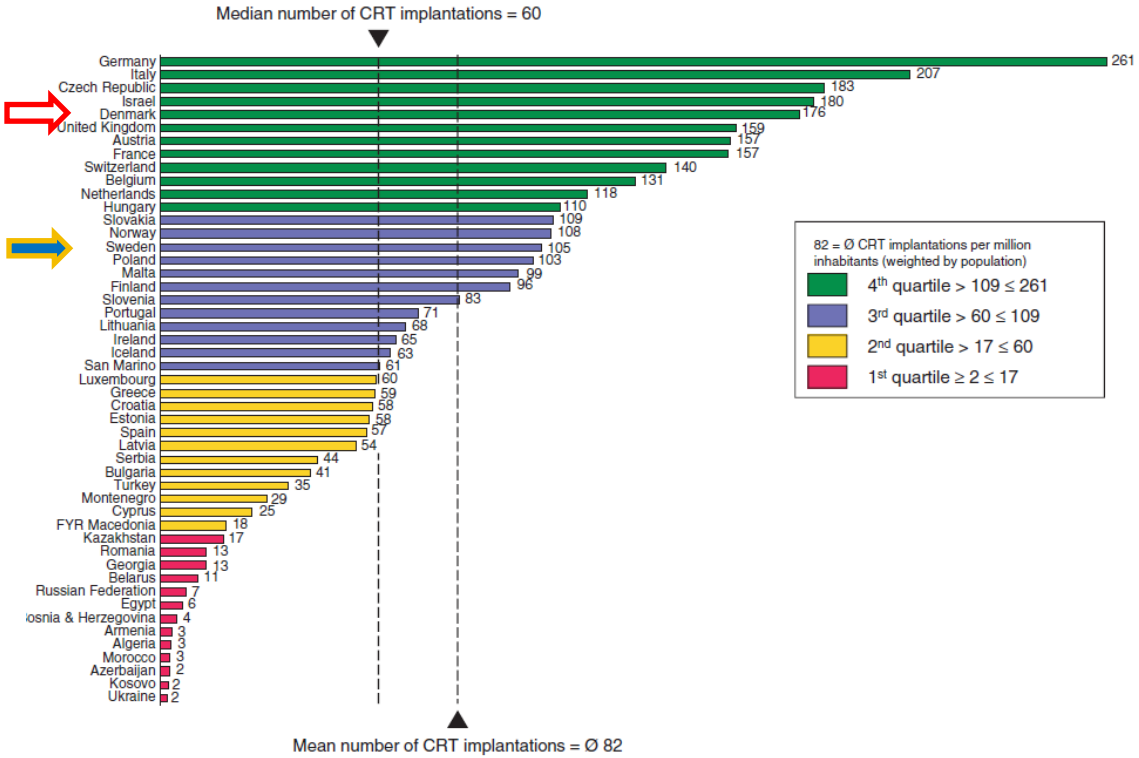


ICD cost effectiveness in Sweden



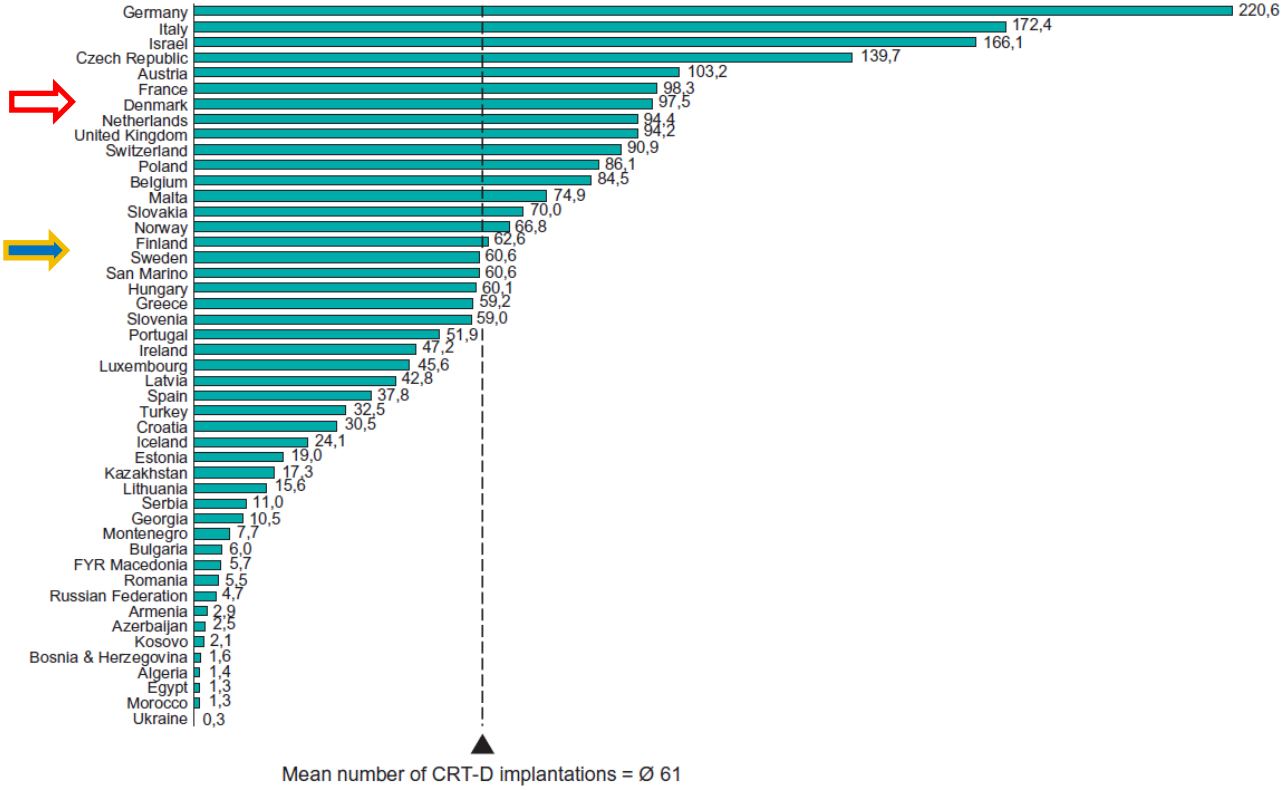
Braunschweig F et al, Cardiostim 2014

Device implantation in Sweden: CRT



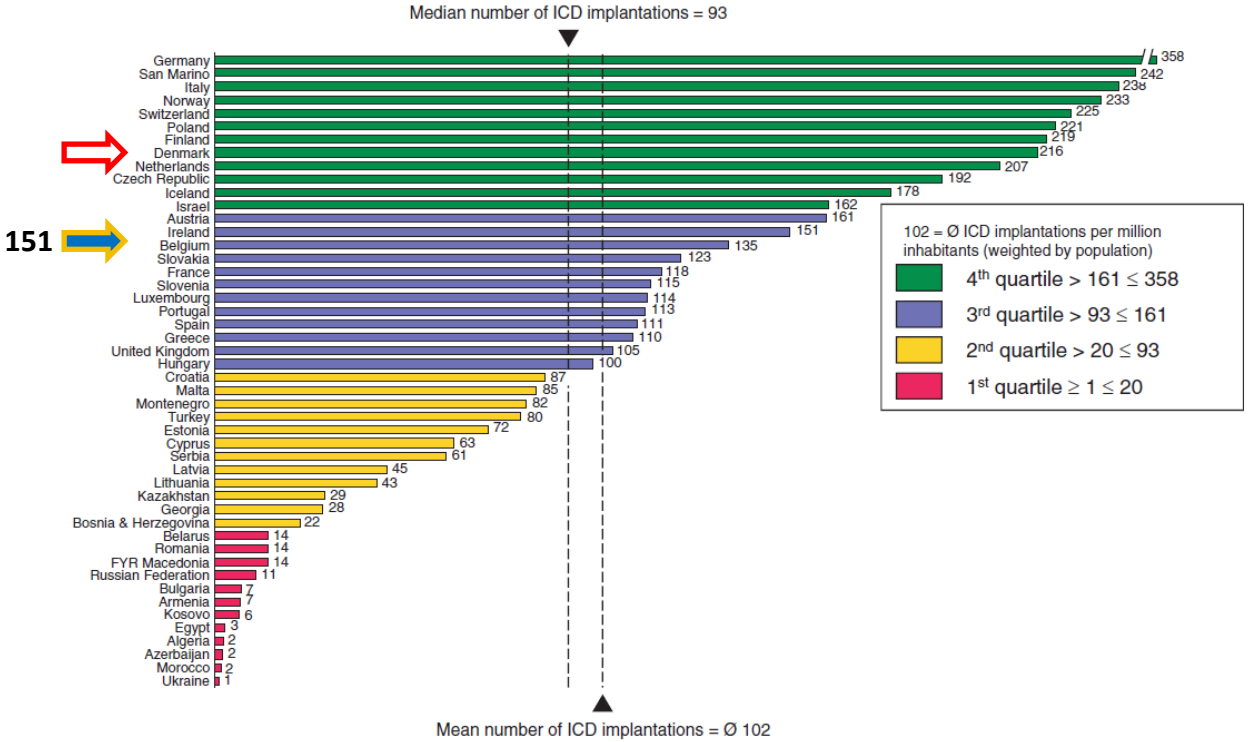
EHRA Whitebook 2016, Raatikainen et al, Europace (2016) 18, iii1–iii79

Device implantation in Sweden: CRT-D



EHRA Whitebook 2016, Raatikainen et al, Europace (2016) 18, iii1–iii79

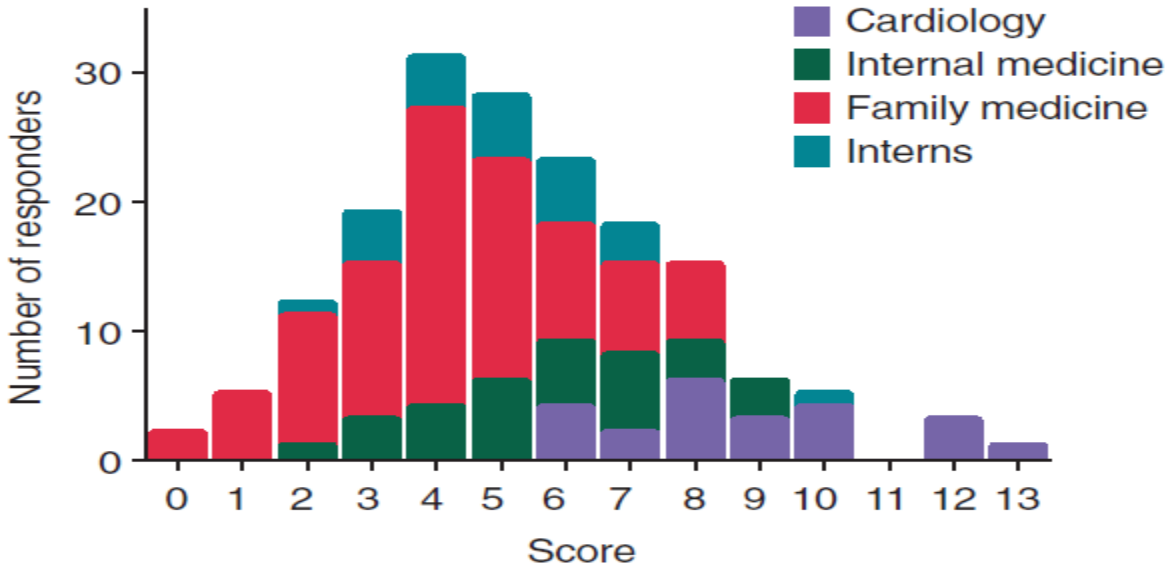
Device implantation in Sweden: ICD



EHRA Whitebook 2016, Raatikainen et al, Europace (2016) 18, iii1–iii79

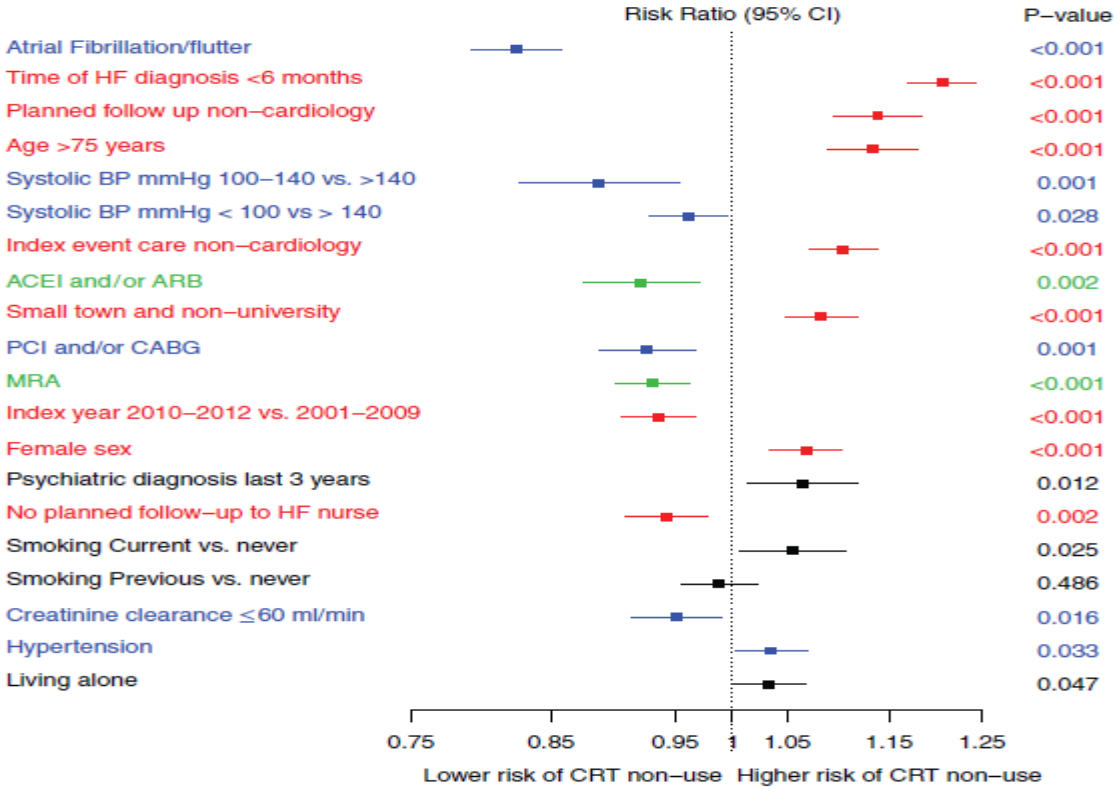
Reasons for device under-utilization

Unawareness, lack of knowledge



Hübinette et al Europace 2014 16, 1580–1586

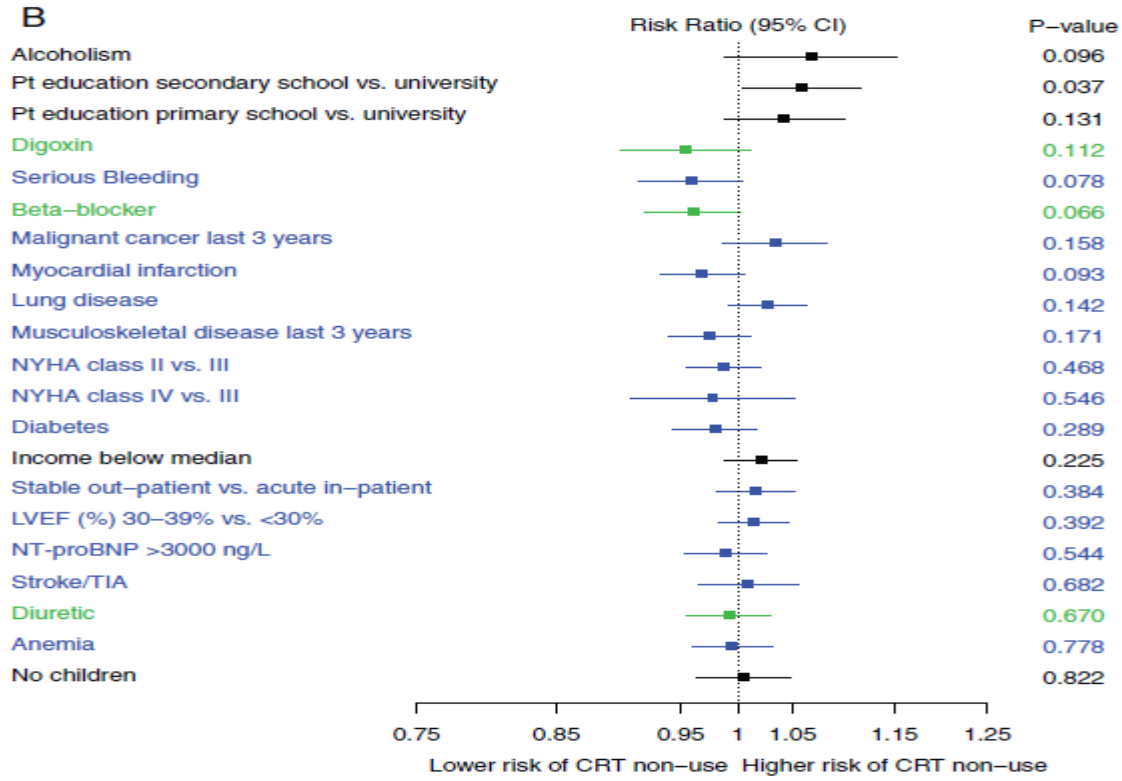
Reasons for device under-utilization



www.escardio.org/EHRA

Lund LH, Braunschweig F, Linde C et al, EJHF 2017, ahead of print

Reasons for device under-utilization



www.escardio.org/EHRA

Lund LH, Braunschweig F, Linde C et al, EJHF 2017, ahead of print

The cost of low cost devices

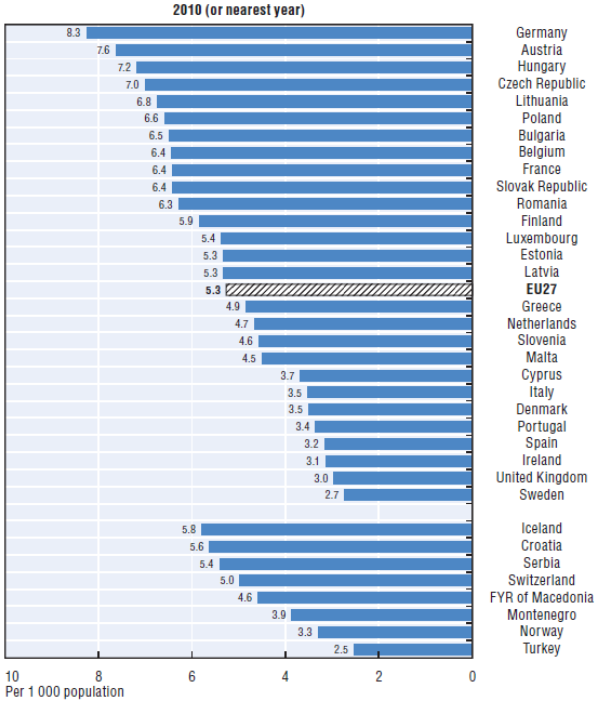
- **Service by Industry↓**
- **Education↓**
  - Information to physicians and the public
  - Education of physicians about selection, implantation, folllow-up
  - Device programming
- **Research, sponsoring↓**
  - New indications
  - Revised indications
- **Innovation↓**
  - New devices
  - New features and algorithms
- **No appropriate reimbursement of remote monitoring**

Reimbursement change: lowest device costs

- **In the public health cares setting of Sweden significant lowering of device costs had no dramatic effect on implantation rates**
- **Other factors more important for under-utilization**
  - Education
  - Access to specialized care
- **Other reimbursement models?**
  - Upfront reimbursement model still a handicap??
  - “Value based care”
- **Better networking EP/HF/GP required**
- **Informed patients**
- **“Get what you pay for”**
  - Fewer devices, worse outcome
  - Lower breaking point for reimbursement?
  - Service and education also needs to be funded…

- **Thank you**

Hospital beds per 1 000 population, 2010



CRT (all) in EHRA countries