The role of the nurse specialist in SCD treatment/prevention

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Arrhythmia CNS

Population

- SCD continues to be a major public heath challenge [1]
- Majority of SCD remains in the subclinical IHD population [2]
- Survival and longer term outcomes from CV disease is improving
- Number at risk of developing CVD is increasing
- Mass screening?

1 Wellens et al 2014

2 Priori et al 2015 2015 ESC Guidelines

Defining the problem

- All SCD
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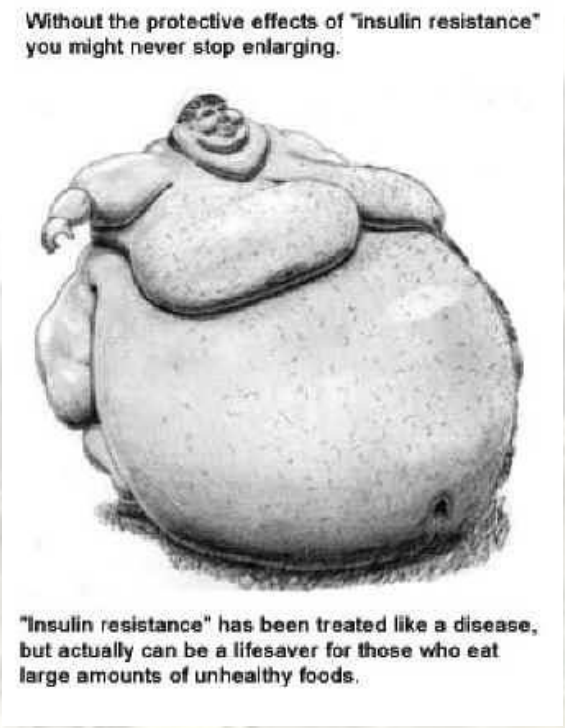
	% of all SCD	Predictability
Not diagnosed with heart disease	45	Poor
History of heart disease: LVEF >40%	40	Limited
History of heart disease: LVEF <40%	13	Possible
Genetically based arrhythmic disease	2	Limited

SCD, sudden cardiac death; LVEF, left ventricular ejection fraction.

Wellens et al; *European Heart Journal*, Volume 35, Issue 25, 1 July 2014

Do we seek to prevent



Or do we teach the public to respond

heart RHYTHM week

5 - 11 June 2017

What about the population we know?

- Risk stratification remains challenging
- Individualised risk prediction is inaccurate
- High number of SCD events still occur in groups thought to be at lower risk [1]
- Medical therapy
- Device therapy
  - Little has changed in recent years
  - The population may have changed

1 Preserve trial currently on going NCT02124018

Issues with Guidelines

- Much of the guidelines on SCD focus on ICD and or CRT selection
  - Based on RCT's that sought to take broad populations at increased risk and determine whether the device therapy can reduce overall mortality
  - May miss important groups who benefit and over treat others that do not [1]
- Sub study cohorts and registries shed light on heterogeneities within studies but are often excluded from guidelines

1. Buxton et al. International Journal of Cardiology. Vol 237. 2017

Real world ICD population

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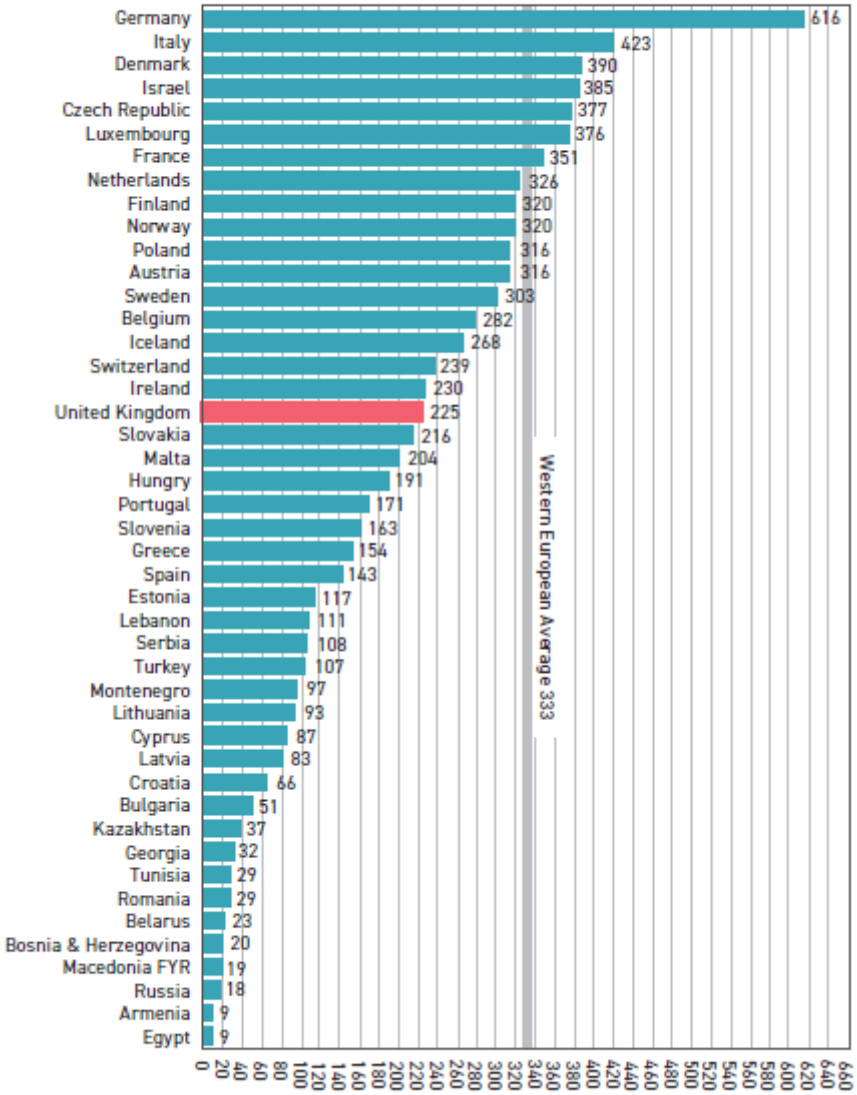
	NYHA class			
QRS interval	**I**	**II**	**III**	**IV**
<120 milliseconds	**ICD if there is a high risk of sudden cardiac death**			**ICD and CRT not clinically indicated**
120–149 milliseconds without LBBB	ICD	ICD	ICD	CRT–P
120–149 milliseconds with LBBB	ICD	CRT–D	CRT–P or CRT–D	CRT–P
≥150 milliseconds with or without LBBB	CRT–D	CRT-D	CRT–P or CRT–D	CRT–P

LBBB, left bundle branch block; NYHA, New York Heart Association

1.Bilchick et al. JACC vol.60, No 17, 2012
2. Kaura et al. Journal of interv Card Electrophysiol 49, 2017

Figure 9: High Energy Devices Total Implant Rate 201
(total ICD + total CRT-D)



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- On going

d CRT

Dedicated clinics

- Heart failure
  - CRT utilisation is high
- Syncope clinics
- Palpitation clinics
- Rapid access chest pain

Non IHD patients

- Risk stratification
- Consensus guidelines

European Heart Journal (2015) **36**, 2793–2867
doi:10.1093/eurheartj/ehv316

ESC GUIDELINES

2015 ESC Guidelines for the management of patients with ventricular arrhythmias and the prevention of sudden cardiac death

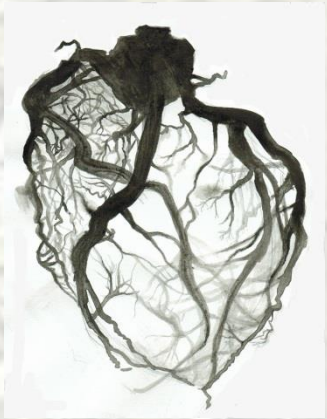
The Task Force for the Management of Patients with Ventricular Arrhythmias and the Prevention of Sudden Cardiac Death of the European Society of Cardiology (ESC)

Risk

- Difficulties with perception and interpretation
- Patient/ family/ clinician conflict
- Particularly difficult when there familial SCD
- Living with risk
- Therapeutic relationship

Interventions

- Medical therapy
  - Compliance & Adherence
  - Better pharmacological agents are needed
  - Personalised therapy
- Device therapy
  - Balance of benefit and harm



In summary

- Arrhythmia nurses have roles
  - In Societal education
  - Risk prevention through lifestyle modification
  - Diagnosis and active screening programs
  - Communicating risk
  - Treatment
  - Long term management and support
  - Contributing to research, registries and guideline refinement

Thank you

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