Faculty disclosure

First name - last name

I disclose the following financial relationships:

None relevant for this talk
Valve disease becoming more common
How often is surgery appropriate for asymptomatic valve disease?

Proportion of NYHA III/IV at surgery

Iung. Europ Heart J 2003; 24: 1231-43
Single repair for degenerative disease (n = 5,163)
Components of a “Comprehensive Heart Valve Centre”

- Heart valve clinic
- Expert imaging
- Collaborative services
- Multidisciplinary heart teams
  - Mitral
  - Aortic and aortic valve
  - Endocarditis
- Processes and data review

ESC WG on valve disease and EACTS: J Chambers, B Prendergast, B Iung, R Rosenhek, JL Zamorano, LA Piérard, T Modine, V Falk, AP Kappetein, P Lancellotti
Valve clinic
Outpatient and inpatient care

Community

Preadmission, acute medical and surgical

Referring hospitals

Within hospital (e.g. elderly care, cardiologists)

Conservative management

Training and education

Intervention
Interventional services

All centres
- Replacement valves in all 4 positions
- Root and ascending aortic replacement
- Mitral and tricuspid repair
- AF ablation
- Percutaneous: TAVI, paraprosthetic leak closure, mitral edge-to-edge repair

Some centres
- Aortic valve repair
- Ross
- Balloon mitral valvotomy
Multidisciplinary heart teams

- Surgeon, cardiologist, imager, anesthesiologist (+ others e.g. Geriatrician, microbiologist)
- Specialist competencies and experience
- Preop assignment to repair or replacement or transcatheter
- Detailed audit of results
- Adequate volumes (may reflect centre facilities, individual surgeon volumes)
# Targets for surgical outcomes in repair of mitral prolapse

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Mortality</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Major complication</td>
<td>&lt;2%</td>
</tr>
<tr>
<td>P2 repair rate</td>
<td>&gt;90%</td>
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<tr>
<td>Significant regurgitation at 5 yrs</td>
<td>&lt;5%</td>
</tr>
<tr>
<td>Reoperation for post repair p.a.</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Reoperation for anterior repair p.a.</td>
<td>&lt;2%</td>
</tr>
</tbody>
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*Bridgewater Heart 2006;92:939; Fedak Circulation 2008;117:963; David. JTCVS 2003;125:1143; Braunberger Circulation 2001;104 (SI):1-8*
### Recommended minimum annual numbers

<table>
<thead>
<tr>
<th></th>
<th>Centre</th>
<th>Operator</th>
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</thead>
<tbody>
<tr>
<td>Mitral procedures</td>
<td>100</td>
<td>40</td>
</tr>
<tr>
<td>Aortic valve replacements</td>
<td>100</td>
<td>25</td>
</tr>
<tr>
<td>Aortic root</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>TAVI</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>Mitral edge-to-edge</td>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>

Collaborative services

- ITU and step-down. ECMO
- Cardiology: e.g. heart failure, EP
- Noncardiology: vascular and general surgery, neurology, nephrology, infection, stroke and elderly care, psychiatric care
Processes

- 24/7 cover allowing sickness and leave
- Beds / ITU capacity including emergency work
- Safety checks
- Training coordinated by national societies
- Data review and audit
- Involvement with national or international trials and registries
Data for collection

- **Preoperative:** demographic, comorbidities, grade of valve disease, risk assessment
- **Early results:** repair rates, death, morbidities, time on ITU
- **Hemodynamic:** gradients and EOA, residual regurgitation or PP regurgitation, SAM
- **Follow-up:** complications, mortality at 1, 3, and 5 yrs, redo surgery
Key points

• Comprehensive heart valve centres defined by:
  – Facilities and services
  – Volume of work
  – Comprehensive results open to audit

• Demonstrating excellent results more important than volume targets: audit