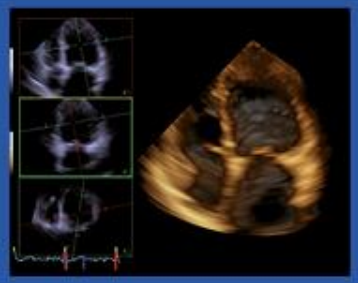


EuroValve

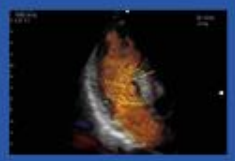
November 8-9, 2013

Heart Valve Clinic

Prof. Patrizio LANCELLOTTI , MD, PhD, FESC, FACC

Heart Valve Clinic, University of Liège, CHU Sart Tilman, BELGIUM



EACVI

www.eurovalvecongress.com

Faculty Disclosure

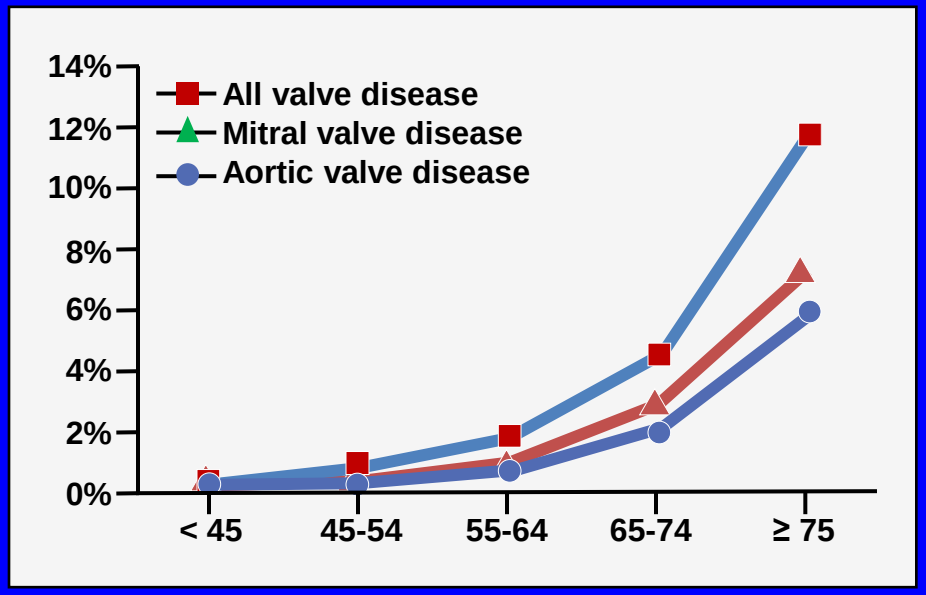
Patrizio Lancellotti

I disclose the following financial relationships:

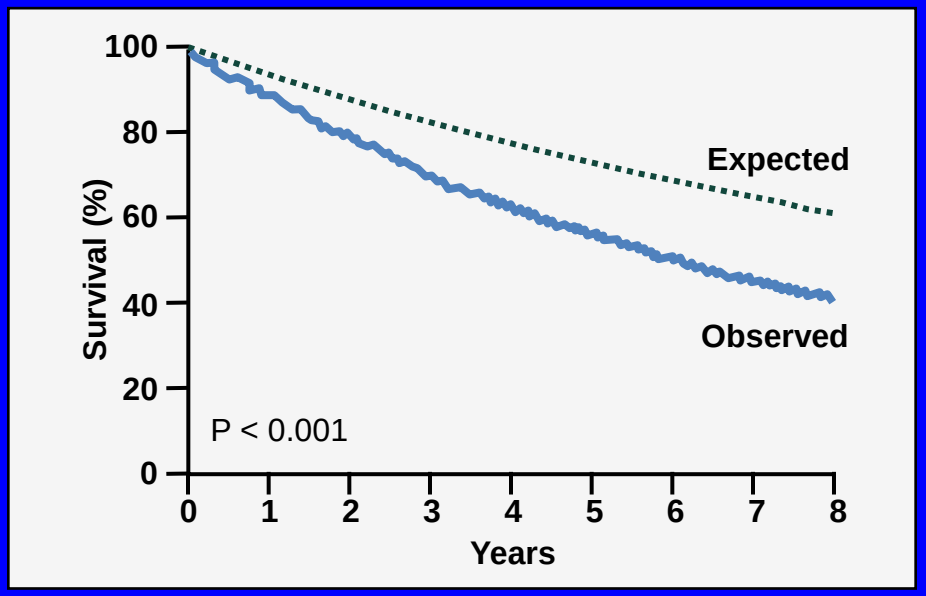
None

The Burden of Valve Disease Increases

Prevalence



Survival



Nkomo. *Lancet* 2006;368:1005–1011

Many of these patients

- **do not receive a correct diagnosis**
- **do not have optimized care according to current guidelines**

Management of VHD Shortcomings !

- Management: general cardiologists, specialists in general internal medicine, or even primary care physicians
- Country-specific variability in the degree of expertise in the management of VHD
- Education provided to patients with VHD is still limited
- If not managed appropriately, patients are more likely to develop irreversible myocardial damage

When referred in a timely manner, surgery carries a lower risk and can improve survival and decrease symptoms

Challenges in the management of VHD

- The gap between evidence (guidelines) and practice
- Assessment of Symptoms
- Understanding Implications of Measured Variables
- Technical challenges: Availability and Quality of Imaging
- Interdisciplinary Management (‘Heart Team’ Approach)

Assessment of Symptoms:

Limitations

- Symptom onset is a key factor in the indication for intervention
- Gathering information a[illegible]ymptomatic status is challengin[illegible]
- Patients may [illegible]ymptoms (Elderly patients)
- Adjustm[illegible]t of their level of physical activity
- Comorbidities (pulmonary disease, frailty)

Tailored Risk Stratification

Tailored Risk Stratification:

Predictors of Outcome in Asymptomatic MR

- **Clinical:** older age, presence of CV risk factors, atrial fibrillation
- **Echocardiography:** higher regurgitant volume, higher LV diameters, reduced LVEF, enlarged LA volume, pulmonary hypertension
- **Exercise testing:** symptoms on exercise, pulmonary hypertension, MR changes
- **Biomarkers:** markedly elevated natriuretic peptides (BNP, Nt-proBNP)

Tailored Risk Stratification:
Indications for Surgery in Asymptomatic Primary MR

		Level
Surgery is indicated in asymptomatic patients wit… (LVESD ≥ 45 mm and/or LVEF ≤ 60%).		C
Surgery should be considered in asympto… LV function and new onset of atrial fib… hypertension (systolic pulmonary…	IIa	C
Surgery should be consi… LV function, high lik… leaflet and LVF…	IIa	C
Surgery may be… LV function, high… • left atrial dilatation… index ≥ 60 ml/m² BSA) and sinus rhythm, or • pulmonary hypertension on exercise (SPAP ≥ 60 mmHg at exercise)	IIb	C

Framework for the creation of large registries and the conduct of prospective studies

Vahanian A et al. Eur Heart J 2012

Understanding Implications of Measured Variables:
Avoid inappropriate treatment strategy

Evaluation of VHD Mechanism

Assessment of VHD Severity

Evaluation of LV function

- Integrated approach (multiple parameters)
- Check for consistency between measurements
- Assess the correlation with clinical data

Technical challenges (Rational Utilization):
Availability and Quality of Imaging

Echocardiography (Cornerstone in VHD)

↓

Expert Echo Lab

Standard / TOE / 3D / Stress Echo

↓

CT | CMR | Nuclear

Heart Valve Clinic:
Definition

A HVC is composed of a group of healthcare professionals with expertise in VHD, working in a dedicated environment in order to provide specialized and centralized evaluation, care, and education to patients with VHD

The HVC represents a well-defined structure running on a permanent basis in the cardiology department

Heart Valve Clinic:
Medical objectives

- To assess patients properly
- To monitor valve disease at suitable intervals
- To determine the optimal timing of intervention
- To supervise inpatient care of VHD
- To define the appropriate type of intervention
- To refer to the most suitable surgeon
- To assess results after intervention

Heart Valve Clinic:
Education and training objectives

To educate and inform patients about valve disease both before and after surgery

To set up dedicated training courses and programmes in VHD

To organize meetings of updates knowledge in modern management of patients with VHD

To set up and disseminate protocols of contemporary and good practice in VHD

Heart Valve Clinic:
Long-term objectives

To improve patient care and quality of life

To optimize the use of proven diagnostic tests and therapies

To reduce overall VHD-related healthcare costs

To reduce hospital admissions, morbidity, mortality

To improve the level of adherence to current evidence and guidelines

Heart Valve Clinic:
Structure

Cardiologist-Nurse–Based Clinic

Standard HVC

Advanced HVC

Cardiologist/Imaging
Expert in VHD
+ Nurse ('Hub')

- Echo
- Exer
- Cath

Short waiting times appropriate to clinical need; clear communication with referrers; more efficient use of resources

Heart Valve Clinic:
Structure

Cardiologist-Nurse–Based Clinic

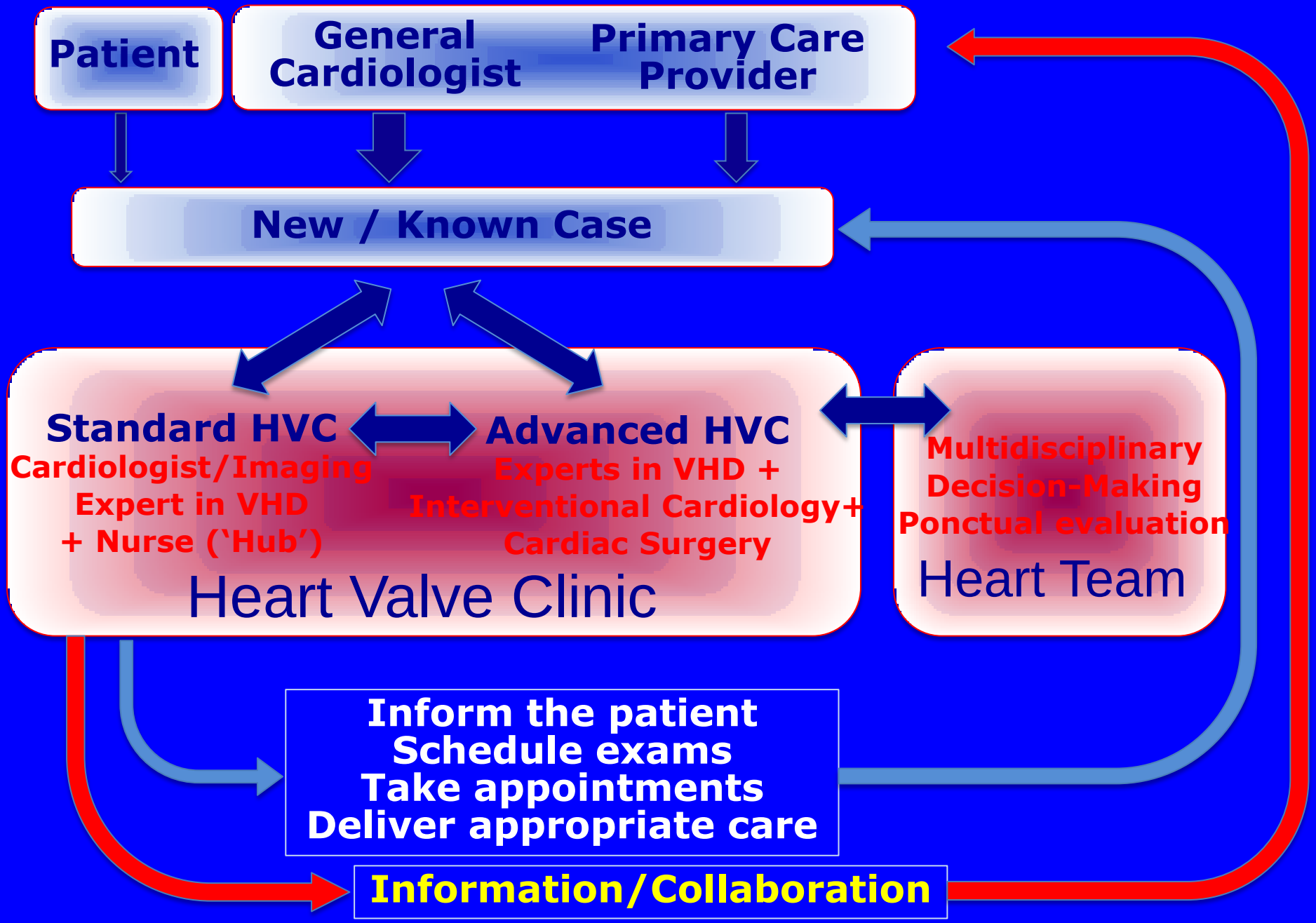
Standard HVC

Advanced HVC

Cardiologist/Imaging Expert in VHD + Nurse ('Hub')

Experts in VHD + Interventional Cardiology+ Cardiac Surgery

Short waiting times appropriate to clinical need; clear communication with referrers; more efficient use of resources


Patient
General Cardiologist
Primary Care Provider
New / Known Case
Standard HVC
Cardiologist/Imaging
Expert in VHD
+ Nurse ('Hub')
Advanced HVC
Experts in VHD +
Interventional Cardiology+
Cardiac Surgery
Heart Valve Clinic
Multidisciplinary
Decision-Making
Ponctual evaluation
Heart Team
Inform the patient
Schedule exams
Take appointments
Deliver appropriate care
Information/Collaboration

Heart Valve Clinic:
First evidence and outcome measures

The “watch for symptoms” strategy in asymptomatic patients with severe DMR can be implemented safely without increased peri-operative and post-operative morbidity and mortality

Rosenhek et al, Circulation 2006;113:2238-44.

However, the prognosis is poor when patients are not regularly followed-up, even after mitral valve repair

Enriquez-Sarano et al, N Engl J Med 2005;352:875-83

Appropriate Monitoring

Heart Valve Clinic:
First evidence and outcome measures

Recently, Chambers et al. showed that the proportion of patients followed up in the HVC who were managed according to best practice guidelines rose (from 41% to 92%), while the total number of unwarranted echocardiograms performed fell significantly

Br J Cardiol 2011;18:231–2

Recently, Zilberszac et al. showed that delayed symptom reporting is common in patients with aortic stenosis. However, in patients being regularly followed up in a HVC program, symptoms are recognized at an earlier and less severe stage

Eur J Echocardiography 2011

Studies are ongoing

Heart Valve Clinic:
Qualification and training for experts in HVC

To date, there is no established formal certification to build or work in a HVC structure

Most established HVCs have grown from individual local initiatives

Actors: specifically educated in VHD problems obtain all competencies, skills, and experience for the diagnosis, management and surveillance of patients with VHD

Heart Valve Clinic: Conclusions

- There is an unmet need for new healthcare structures specifically dedicated to VHD
- The role of the HVC is to provide
  - standardized organization of care based upon international evidence-based recommendations
  - higher quality healthcare in order to conform more precisely to best practice guidelines
- Such a structured approach will facilitate the performance of key clinical studies and the assessment of the quality of care at individual institutions (unique opportunity to construct large databases)

ESC Working Group on Valvular Heart Disease Position Paper—heart valve clinics: organization, structure, and experiences

Patrizio Lancellotti[1,2*], Raphael Rosenhek[3], Philippe Pibarot[4], Bernard Iung[5], Catherine M. Otto[6], Pilar Tornos[7], Erwan Donal[8], Bernard Prendergast[9], Julien Magne[1,2], Giovanni La Canna[10], Luc A. Piérard[1,2], and Gerald Maurer[3]

Lancellotti et al., Eur Heart J. 2013