ESC European Society of Cardiology
European Heart Journal (2017) **38**, 2696–2716
doi:10.1093/eurheartj/ehx469
CARDIOPULSE

The European Society of Cardiology Clinical Practice Guidelines

ESC Clinical Practice Guidelines in the GECEP context, introduced by Stephan Windecker

The European Society of Cardiology (ESC) regularly develops up-to-date evidence-based knowledge on the diagnosis, prevention and treatment of cardiovascular diseases. Widely known as ESC Clinical Practice Guidelines, these documents summarize essential data and formulate recommendations for the management of a wide range of cardiovascular conditions.

The first ESC Clinical Practice Guidelines were released in 1994, and over 100 ESC Guidelines have since been published in the *European Heart Journal*. Guidelines are commissioned by the Committee for Practice Guidelines (CPG) to groups of experts in the field from across Europe to write and review a document according to a structured process that extends over a 2-year period. Typically, 80–100 experts are involved in developing one set of Guidelines.

The Guidelines topics are derived from the ESC Core Curriculum covering the entire breadth of cardiology. Guidelines provide advice to practicing physicians, clarify contemporary areas of consensus but also disagreement, improve standards and guide clinical decision-making for routine clinical practice.

Over the past two decades, cardiology has witnessed a rapid evolution of novel diagnostic and therapeutic modalities in all areas together with an exponential increase of clinical trials and observational studies. In an attempt to keep up with the wealth of knowledge, ESC Guidelines undergo regular updates that inevitably become more and more extensive, challenging their translation into clinical practice. Against this background and within the framework of the **G**uidelines, **E**ducation, **C**ongress, **E**URObservational Research Programme (EORP), **P**ublications (GECEP) group, the ESC Guidelines will in the future be adapted along the following lines:

- Provision of more concise ESC Guidelines by limiting discussion of evidence-based recommendations to high-level summaries of clinical trial data leaving unchanged the well-established ESC format of Classes of Recommendations and Levels of Evidence.
- The consolidated ESC Guidelines—not exceeding 40 000 words—will be accompanied by and directly linked to a companion ESC Textbook chapter that will provide a more in-depth review of the topic for interested readers, and cover additional chapters not suited for the Guideline text.

The table below provides a summary of chapters to be found in the ESC Guidelines and Textbook, respectively.

ESC Guideline Chapters	ESC Textbook Chapters
What is new in this guideline	
Definitions	Definitions
	Epidemiology
	Disease classification
	Causes, aetiology, pathogenesis
	Pathophysiology
Prevention	Prevention
	Symptoms
	Clinical features and physical examination
Diagnosis	Diagnosis
Scores, risk and prognosis assessment	Scores, risk and prognosis assessment
Treatment, indications, outcomes	Treatment, indications, outcomes
	Complications
Specific problems	Specific problems
Performance measures	
Management strategy	
To do and not to do messages	
Gaps in Evidence	
Key Messages	

- ESC Guidelines will identify Key Messages informing the Education Committee to provide educational tools to enhance implementation of ESC Guideline recommendations into practice. Gaps in Evidence will be listed to increase user awareness and stimulate research in the field.
- ESC Guidelines will provide companion papers when suitable to illustrate and facilitate guideline implementation in real life using clinical cases format.
- ESC Guidelines will serve EURObservational Research Programme (EORP) to assess the quality and implementation of ESC Guidelines recommendations into clinical practice across Europe.

First examples of the adapted format can be discovered with two new ESC Guidelines presented for the first time at the ESC Congress

in Barcelona, namely the 2017 ESC/EACTS Guidelines for the management of Valvular Heart Disease and the 2017 ESC Guidelines on the Diagnosis and Treatment of Peripheral Arterial Diseases. More documents will follow along this pathway of development in the future.

The ESC CPG, in collaboration with the GECEP, will carefully monitor the process and implementation over the coming months. We are hopeful that these changes will enhance the knowledge and educational value along the principle of the Virtuous Cycle, outlined in the following article by Alec Vahanian, by providing both concise, state-of-the art summaries of available evidence in the adapted ESC Guideline format and in-depth reviews in the companion ESC Textbook chapters.

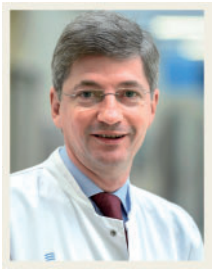
Access to the ESC Guidelines will continue to be free of charge via www.escardio.org/guidelines.

Stephan Windecker MD
on behalf of ESC Committee
for Practice Guidelines (CPG)
stephan.windecker@insel.ch

Conflict of interest: none declared.

doi:10.1093/eurheartj/ehx470

ESC Clinical Practice Guidelines on the Management of Valvular Heart Disease-2017 Update



Helmut Baumgartner MD, FACC, FESC, chair of the taskforce for the Management of Valvular Heart Disease of the European Society of Cardiology (ESC) and the European Association for Cardio-Thoracic Surgery (EACTS), talks about the changes to the updated guidelines presented in August 2017 at the ESC Congress in Barcelona. The wealth of new data accumulated during the period since 2012, particularly on percutaneous interventional techniques, has required an urgent update of the previous guidelines.

The new guidelines also represent a break with the traditional format and readers will find the published version much shorter than usual in response to demand for brevity and content. Clear presentation and a summary of key points and existing gaps in evidence at the end of each section are designed for clarity and to focus on content. For readers who are looking for more in-depth information, a free link to the updated chapter on valvular heart disease in the ESC Textbook of Cardiology is included. Both documents were written by the same group. The new format is being piloted and the ESC will evaluate how it has been received.

Essentially, the new guidelines underline the principle that valve intervention should be decided by the heart team, surgeons and cardiologists, and that these kinds of interventions, transcatheter aortic valve implantation (TAVI) in particular, should only be performed in institutions with existing surgical as well as cardiology departments. There is also a requirement for documented collaboration to be undertaken. A new and important feature comes in the general comment section which seeks to define what a heart valve centre is, and what the recommended requirements to meet this designation are.

Baumgartner anticipates that the recommendations on aortic stenosis will be keenly awaited, not least because of the development of TAVI since 2012. 'Since then we have had several randomized trials, which is unusual in valvular heart disease, comparing surgical and transcatheter treatments. We have seen not only elderly high-risk patients treated and studied, but also intermediate and even low risk patients made the subject of trials. There is much controversy right now over who should undergo surgery and who should undergo percutaneous valve implantation, and this is an area in which we have profound changes in what we recommend and have consequently dedicated a large part of the guidelines to the choice of intervention in symptomatic aortic stenosis. We are now recommending that surgical valve replacement remains the first line of therapy in low risk patients, and low risk should not only be defined by risk scores, because these have several limitations, but by the lack of frailty and other specific risks for surgery not included in risk scores such as porcelain aorta or sequelae of chest radiation. There are numerous issues that need to be considered before we speak of low risk patients'. Patients who are not deemed low risk require very close evaluation and the recommendation is that the heart team including cardiologists as well as surgeons who are experienced in the field, consider a number of aspects before deciding which modality should be recommended. The guidelines list in detail aspects to be considered including clinical characteristics, anatomical and technical aspects. In addition, local experiences with the treatment modalities and local outcome data for surgery as well as catheter intervention need to be taken into account. It is also pointed out that current experience and scientific data are mostly restricted to elderly with a small percentage of included patients being younger than 70–75 years. Younger patients differ regarding anatomy (frequently bicuspid valves with currently little data available), and the lack of durability data and potential negative impact of higher pacemaker implantations and paravalvular leak rates become more important in them. Thus, neither current data nor the recommendations can be applied to younger patients.

The other area of interest is likely to be around catheter interventions for mitral regurgitation where Baumgartner says the changes