

Top Ten Things to Know 2017 AHA/ACC Focused Update of the 2014 AHA/ACC Guideline for the Management of Patients with Valvular Heart Disease

1. **Infective Endocarditis prophylaxis** – Antibiotic prophylaxis before dental procedures now is also recommended for patients with transcatheter prosthetic valves, and for patients with prosthetic material used in valve repair (including an annuloplasty ring or artificial chords).
2. **Anticoagulation for Atrial Fibrillation** –
 - Among patients with atrial fibrillation and rheumatic mitral stenosis, anticoagulation with a vitamin K antagonist still is indicated.
 - Anticoagulation should be used among patients with atrial fibrillation and a CHA₂DS₂-VASc score ≥ 2 in the setting of native aortic valve disease, tricuspid valve disease, or mitral regurgitation (MR).
 - The use of a direct oral anticoagulant (DOAC) is reasonable among patients with native aortic valve disease, tricuspid valve disease, or MR; and atrial fibrillation with a CHA₂DS₂-VASc score ≥ 2 .
3. **Aortic Stenosis (AS)** –
 - The recommendation for either surgical aortic valve replacement (AVR) or transcatheter aortic valve replacement (TAVR) among high-risk patients with severe, symptomatic AS (stage D), after consideration by a heart valve team, was changed from Class IIa (LOE B) to Class I (LOE A).
 - After consideration by a heart valve team, TAVR is a reasonable alternative to surgical AVR for patients with severe, symptomatic AS (stage D) and intermediate surgical risk.
4. **Primary Mitral Regurgitation (MR)** – Among asymptomatic patients with severe primary MR with preserved left ventricular (LV) systolic function (LV ejection fraction [LVEF] $>60\%$, LV end-systolic dimension <40 mm [stage C1]), mitral valve surgery is reasonable in the setting of serial imaging studies that reveal a progressive increase in LV size or decrease in LVEF.
5. **Secondary MR** –
 - The definition of severe secondary MR is now the same as for severe primary MR (effective regurgitant orifice area ≥ 0.4 cm², regurgitant volume ≥ 60 ml, regurgitant fraction $\geq 50\%$).
 - It is reasonable to choose chordal-sparing mitral valve replacement over reduction annuloplasty mitral valve repair among patients operated for severe, symptomatic (New York Heart Association class III or IV) secondary MR (stage D).
 - After a randomized trial showed no clinical benefit of mitral valve repair among patients with chronic, moderate ischemic MR undergoing coronary artery bypass graft surgery (CABG), the LOE was changed from C (consensus) to B-R (moderate quality evidence from ≥ 1 randomized controlled trial [RCT] or meta-analyses of moderate-quality RCT) for the Class IIb recommendation for mitral valve repair in this population.
6. **Prosthetic Valve Choice** –
 - Shared decision-making remains a Class I indication in selecting a mechanical versus bioprosthetic valve.
 - Among patients undergoing aortic or mitral valve replacement, the age range was expanded from age 60-70 to age 50-70 for the Class IIa indication for either a mechanical or bioprosthetic valve choice.
7. **Prosthetic valve antithrombotic therapy** –
 - There are unchanged recommendations for use of a vitamin K antagonist (international normalized ratio [INR] 2.5 for bileaflet or current-generation tilting disk valves in the absence of additional thromboembolic [TE] risks, INR 3.0 for mitral mechanical prostheses or for aortic valve prostheses plus additional TE risks) plus aspirin 75-100 mg among patients with a mechanical valve prosthesis.

- There is a new consideration for a lower INR target of 1.5-2.0 for patients with an On-X bileaflet mechanical aortic valve and no additional TE risks.
- The prior recommendation for use of a vitamin K antagonist after bioprosthetic valve replacement was changed to include both aortic and mitral bioprosthesis, for 3 to 6 months after surgery, in patients at low risk for bleeding.
- A vitamin K antagonist (INR target 2.5) may be reasonable for at least 3 months after TAVR in patients at low risk for bleeding.

8. **Bioprosthetic valve thrombosis –**

- Initial treatment with a vitamin K antagonist is reasonable among hemodynamically stable patients with suspected or confirmed bioprosthetic valve thrombosis and no contraindication to anticoagulation.
- A TAVR valve-in-valve procedure is reasonable among severely symptomatic patients with bioprosthetic aortic valve thrombosis stenosis who are assessed by the heart valve team to be at high or prohibitive surgical risk.

9. **Prosthetic valve regurgitation –**

- Transcatheter valve in valve TAVR is reasonable for severely symptomatic patients with bioprosthetic aortic valve regurgitation judged by the heart valve team to be at high or prohibitive risk for surgery.

10. **Infective endocarditis –**

- Operation without delay may be considered in patients with IE and an indication for surgery who have suffered a stroke but have no evidence of intracranial hemorrhage or extensive neurological damage.
- If hemodynamically stable, delaying valve surgery for ≥ 4 weeks may be considered among patients with IE and major ischemic stroke or intracranial hemorrhage.

Nishimura RA, Otto CM, Bonow RO, Carabello BA, Erwin JP 3rd, Fleisher LA, et al. [2017 AHA/ACC focused update of the 2014 AHA/ACC guideline for the management of patients with valvular heart disease: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines](#) [published online ahead of print March 15, 2017]. *Circulation*. DOI: 10.1161/CIR.0000000000000503.