Table 3. Severe Primary MR (Class and Level of Evidence)

Symptomatic Patients
Mitral valve repair should be the preferred technique when it is expected to be durable (IC)
Surgery is indicated in symptomatic patients with LVEF >30% and LVESD <55 mm (IB)
Surgery should be considered in patients with severe LV dysfunction (LVEF <30% and/or LVESD >55 mm) refractory to medical therapy with high likelihood of durable repair and low comorbidity (IIaC)
Surgery may be considered in patients with severe LV dysfunction (LVEF <30% and/or LVESD >55 mm) refractory to medical therapy with low likelihood of durable repair and low comorbidity (IIbC)

Asymptomatic Patients
Surgery is indicated in patients with LV dysfunction (LVESD ≥45 mm and/or LVEF 60%; IC)
Surgery should be considered in patients with preserved LV function and new onset of atrial fibrillation or pulmonary hypertension (systolic pulmonary pressure at rest >50 mm Hg; IIaC)
Surgery should be considered in asymptomatic patients with preserved LV function, high likelihood of durable repair, low surgical risk, flail leaflet, and LVESD ≥40 mm (IIaC)
Surgery may be considered in patients with preserved LV function, high likelihood of durable repair, low surgical risk, and left atrial dilatation (volume index ≥60 ml/m² BSA) and sinus rhythm, OR pulmonary hypertension on exercise (SPAP ≥60 mm Hg at exercise; IIbC)

BSA=body surface area; LVEF=left ventricular ejection fraction; LVESD=left ventricular end systolic diameter; SPAP=systolic pulmonary artery pressure.

Table 4. PMC in Mitral Stenosis with Valve Area ≤1.5 cm² (Class and Level of Evidence)

PMC is indicated for symptomatic patients with favorable characteristics (IB) and those with contraindications or at high risk for surgery (IC)
PMC should be considered as initial treatment for symptomatic patients with unfavorable anatomy but without unfavorable clinical characteristics (IIaC)
PMC should be considered in asymptomatic patients without unfavorable characteristics and high thromboembolic or hemodynamic decompensation risks (IIaC)

PMC=percutaneous mitral commissurotomy.

Table 5. TAVI (Class and Level of Evidence)

TAVI should only be undertaken with a multidisciplinary 'heart team' including cardiologists and cardiac surgeons and other specialists if necessary, and should only be performed in hospitals with cardiac surgery onsite (both IC)
TAVI is indicated in patients with severe symptomatic AS who are not suitable for AVR as assessed by a 'heart team' and who are likely to gain improvement in their quality of life and to have a life expectancy of more than 1 year after consideration of their comorbidities (IB)
TAVI should be considered in high-risk patients with severe symptomatic AS who may still be suitable for surgery, but in whom TAVI is favored by a 'heart team' based on the individual risk profile and anatomic suitability (IIaB)

AS=aortic stenosis; AVR=aortic valve replacement; TAVI=transcatheter aortic valve implantation.

Full guidelines are available at: http://www.escardio.org/guidelines-surveys/esc-guidelines/GuidelinesDocuments/Guidelines_Valvular_Heart_Dis_FT.pdf

Stent for Life Initiative Improves Delivery of Primary PCI in Timely Manner

Written by **Mary Mosley**

The Stent for Life (SFL) program is a joint initiative to improve the delivery of and patient access to percutaneous coronary intervention (PCI) to reduce the morbidity and mortality of patients suffering from acute coronary syndromes (ACS). The founding partners in this program are the European Association of Percutaneous Cardiovascular Interventions (EAPCI), a registered branch of the European Society of Cardiology, and EuroPCR. Petr Kala, MD, Brno, Czech Republic, SFL Chairman, reviewed the objectives of Stent for Life and the three stages completed to date.

The objectives of Stent for Life Initiative are to define the regions and countries with an unmet medical need for optimal treatment of ACS, and to implement an action program to increase patient access to primary PCI where it is needed. In terms of patient access, the goals are to increase primary PCI to >70% among all patients with ST-segment elevation myocardial infarction (STEMI) and to provide 24/7 service for primary PCI at all invasive facilities to meet the needs of the STEMI population.

Phase 1 of Stent for Life comprised situation mapping and data collection during 2008 and 2009 to assess the current situation in 30 countries. Along with defining the rates of primary PCI, thrombolysis, and no reperfusion for STEMI, they found that the rates of primary PCI were not correlated to gross domestic product of the country [Widimsky P et al. *Eur Heart J* 2010]. On average, only 51% of STEMI patients arrive to the first hospital by emergency medical services (EMS), and 46% of STEMI patients were untreated despite a nationwide "thrombolytic strategy" program.

Phase II evaluated how to improve access to primary PCI based on the experience of best practice countries. Strategies found to reduce system delays included building an effective primary PCI network, strengthening the role of EMS, and decreasing transportation time. An awareness campaign called "ACT NOW. SAVE A LIFE" was created to educate public about heart attack symptoms and the need to act and call an emergency number to reduce patient delay in seeking medical treatment [Knot J et al. *EuroIntervention* 2009].

The implementation of Stent for Life from 2009 to 2013 comprised Phase 3. Currently there are 17 national cardiac societies and organizations actively involved in SFL in Europe and Asia. Prof. Kala reviewed the achievements attained in Romania, which joined SFL in 2010. Five STEMI

networks with 10 hospitals with cardiac catheterization labs were identified to provide 24/7 primary PCI service under this government program.

An additional eight primary PCI centers will be opened by 2015 [Kristensen SD et al. *EuroIntervention* 2012]. The Romanian national program has resulted in an increase of patients treated with primary PCI, decreases in the utilization of thrombolysis, and a decrease in the number patients with STEMI who do not undergo reperfusion therapy. The number of primary PCIs performed increased from 40 per million inhabitants in 2009, to 64 in 2010, and to 210 in 2011.

The Stent for Life program identified factors that contribute to the delay in treating STEMI patients and targets for providing intervention (Figure 1). The first factor found to delay the timing of therapy was the length of time between the onset of a patient's symptoms to the first medical contact. Public service campaigns designed to increase awareness of symptoms of myocardial infarction have been developed to reduce this potential for delay in therapy. Efforts of the Stent for Life program have focused on reducing the delays in reperfusion that can occur after patients present to the healthcare system.

Figure 1. Components That Contribute to Delayed Treatment for STEMI and Ideal Time Intervals for Intervention
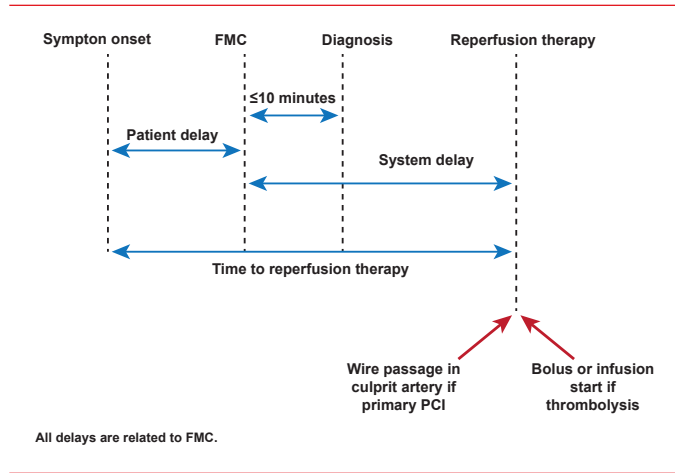
FMC=first medical contact; PCI=percutaneous coronary intervention.

Adapted from Steg G et al. *Eur Heart J* 2012.

Addressing Tobacco Use to Reduce Cardiovascular Disease

Written by Mary Mosley

The scope of the impact of tobacco on cardiovascular disease (CVD) and its mode of action, the lack of awareness of physicians about smoking cessation tactics, and smoking cessation as a treatment for CVD were reviewed by Georges A. Saade, MD, Bellevue Medical Center, Beirut, Lebanon.

Tobacco use is a risk factor for 6 of the 8 leading causes of death worldwide and is associated with nearly 6 million deaths per year (Figure 1). The use of tobacco is associated with increased CV risk and the use of tobacco is projected to be associated with 175 million deaths worldwide by the year 2030. Given the adverse effects of tobacco utilization, at its 2012 summit on Noncommunicable Diseases, the United Nations endorsed efforts to reduce tobacco abuse in an attempt to reduce premature mortality from CVD.

Cigarette smokers die ~10 years earlier than nonsmokers and at least half of chronic smokers will die of a tobacco-related disease, according to the British Male Doctors' Study [Doll R et al. *BMJ* 2004]. Smokers of waterpipes, practiced in Egypt and other countries, are also at risk for developing dependence and other adverse health-related conditions associated with smoking [Maziak W. *Addict Behav* 2011], contrary to popular opinion that waterpipes are safe. Newer interventions to help smokers quite offer the potential for reducing the smoking rates in the near future. An anonymous survey of 326 cardiologists in Spain revealed that 3 in 4 always ask their patients about smoking and recommend that they quit; 1 in 5 had cessation print materials in their office; and 2 in 5 checked patient progress. However, 73% were unfamiliar with cessation medications and 71% wanted to improve their tobacco treatment skills. [Dalmau R. Heart wire http://www.theheart.org/article/1531389.do].

Figure 1. Pathways Linking Tobacco and CVD
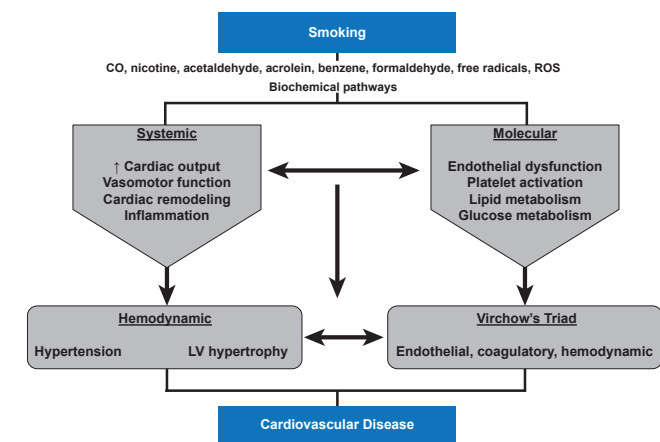
CO=carbon monoxide; CVD=cardiovascular disease; LV=left ventricular; ROS=reactive oxygen species.

Reproduced from Kitami M and Ali MK. Tobacco, Metabolic and Inflammatory Pathways, and CVD Risk . *Global Heart* 2012;2(7):121-128. With permission from Elsevier.