Top Ten Things To Know
Pharmacotherapy in Chronic Kidney Disease Patients Presenting
With Acute Coronary Syndrome

1. Chronic kidney disease (CKD) is a powerful independent predictor of cardiovascular morbidity, cardiovascular mortality, and all-cause mortality.

2. CKD is frequently encountered among patients presenting with acute coronary syndrome (ACS) and has been associated with worse outcomes, including higher rates of mortality and bleeding.

3. Recent data from the National Cardiovascular Data Registry–Acute Coronary Treatment and Intervention Outcomes Network (NCDR-ACTION) reported CKD prevalence rates of 30.5% among patients presenting with ST-segment–elevation myocardial infarction (STEMI) and 42.9% among patients presenting with non–ST-segment–elevation myocardial infarction (NSTEMI).

4. The purpose of this scientific statement is to provide a comprehensive review of the published literature and provide recommendations on the use of evidence-based pharmacotherapies in CKD patients presenting with ACS.

5. The clinical presentation of ACS among patients with CKD is distinctly different from that of patients without CKD in the general population. The prevalence of chest pain among patients with ACS is inversely related to stage of CKD. This striking difference in clinical presentation and electrocardiographic findings has implications for correct diagnosis and subsequent treatment.

6. CKD patients presenting with ACS are less likely to receive evidence-based therapies, including medications. In addition, patients with CKD have been underrepresented in randomized controlled trials of ACS pharmacotherapy.

7. Moving forward, inclusion and better representation of patients with CKD in randomized clinical trials will be necessary to accurately assess the risks and benefits of medications in this population.

8. Important considerations are necessary to provide the greatest benefit while limiting the chance for harm. These would include the following:
   - careful assessment of renal function,
   - use of a validated equation for dose adjustment of medications,
   - avoidance of medications that are contraindicated in patients with stages 4 and 5 CKD, and
   - avoidance or limiting of the use of emerging medications that have not been formally studied in patients with CKD.

9. A summary table (Table 11) provides the summary of evidence for Pharmacotherapy for ACS Patients with CKD.

10. The available data suggest that patients with CKD benefit from the evidence-based medications routinely used in all patients presenting with ACS.