Prevalence of chronic kidney disease (CKD) in people with diagnosed diabetes or cardiovascular disease (CVD) is known to be high, but little is known about CKD in CVD patients with different diabetes status (no diabetes, pre-diabetes, undiagnosed diabetes and diagnosed diabetes). We aimed to estimate CKD and the impact of diabetes status on it among patients with acute coronary syndrome (ACS). In present study, CKD prevalence and different diabetes status were determined in 2,232 patients with ACS from the China Heart Survey, from June 1st to August 31st 2005. The prevalence of CKD in ACS patient with no diabetes, pre-diabetes, undiagnosed diabetes and diagnosed diabetes was 11.6%, 17.7%, 16.7% and 28.8%, respectively. In the multivariate-adjusted model, in addition to ACS patients with diagnosed diabetes, those with pre-diabetes (OR=1.58, 1.08-2.31) and undiagnosed diabetes (OR=1.51, 1.01-2.26) also had an increased risk for CKD, relative to those with no diabetes. Stratified by ACS subtypes, CKD was only significantly associated with pre-diabetes (OR=1.92, 1.14-3.21) and undiagnosed diabetes (OR=1.91, 1.10-3.32) in those with unstable angina. In conclusion, CKD prevalence is high among ACS patients with undiagnosed diabetes and pre-diabetes and the risk of CKD was significantly elevated with advanced diabetes status, especially for those with unstable angina. These individuals might benefit from interventions aimed at preventing development and/or progression of both CKD and diabetes. Pre-diabetes might be used as a screening marker for CKD in the target population. However, large prospective studies validating our findings are warranted.