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## eGFR and the Risk of Community-Acquired Infections

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## Abstract

**Background and objectives** Community-acquired infections are common, contributing to adverse outcomes and increased health care costs. We hypothesized that, with lower eGFR, the incidence of community-acquired infections increases, whereas the pattern of site-specific infections varies.

**Design, setting, participants, & measurements** Among 1,139,470 health care users (mean age = 52 ± 18 years old, 53% women) from the Stockholm CREAtinine Measurements Project, we quantified the associations of eGFR with the risk of infections, overall and major types, over 12 months.

**Results** A total of 106,807 counts of infections were recorded throughout 1,128,313 person-years. The incidence rate of all infections increased with lower eGFR from 74/1000 person-years for individuals with eGFR = 90–104 ml/min per 1.73 m<sup>2</sup> to 419/1000 person-years for individuals with eGFR < 30 ml/min per 1.73 m<sup>2</sup>. Compared with eGFR of 90–104 ml/min per 1.73 m<sup>2</sup>, the adjusted incidence rate ratios of community-acquired infections were 1.08 (95% confidence interval, 1.01 to 1.14) for eGFR of 30–59 ml/min per 1.73 m<sup>2</sup> and 1.53 (95% confidence interval, 1.39 to 1.69) for eGFR < 30 ml/min per 1.73 m<sup>2</sup>. The relative proportions of lower respiratory tract infection, urinary tract infection, and sepsis became increasingly higher along with lower eGFR strata (e.g., low respiratory tract infection accounting for 25% versus 15% of community-acquired infections in eGFR < 30 versus 90–104 ml/min per 1.73 m<sup>2</sup>, respectively). Differences in incidence associated with eGFR were in general consistent for most infection types, except for nervous system and upper respiratory tract infections, for which no association was observed.

**Conclusions** This region-representative health care study finds an excess community-acquired infections incidence in individuals with mild to severe CKD. Lower respiratory tract infection, urinary tract infection, and sepsis are major infections in CKD.

chronic kidney disease   Epidemiology and outcomes   renal function  
risk factors   urinary tract infections   lower respiratory tract infection  
sepsis   community   Adult   Aged   Communicable Diseases  
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Respiratory Tract Infections   Urinary Tract Infections

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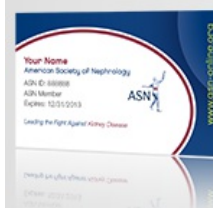
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