

CKD, Metabolic Abnormalities and Outcomes in US Adults < 65: CKD-EPI or MDRD Formulas?

Yi Peng¹, Robert N. Foley, MD^{1,2}, David T. Gilbertson, PhD¹ and Allan J. Collins, MD^{1,2}.

¹USRDS Coordinating Center, MMRF, Minneapolis, MN and ²Medicine, University of MN, Minneapolis, MN.

USRDS

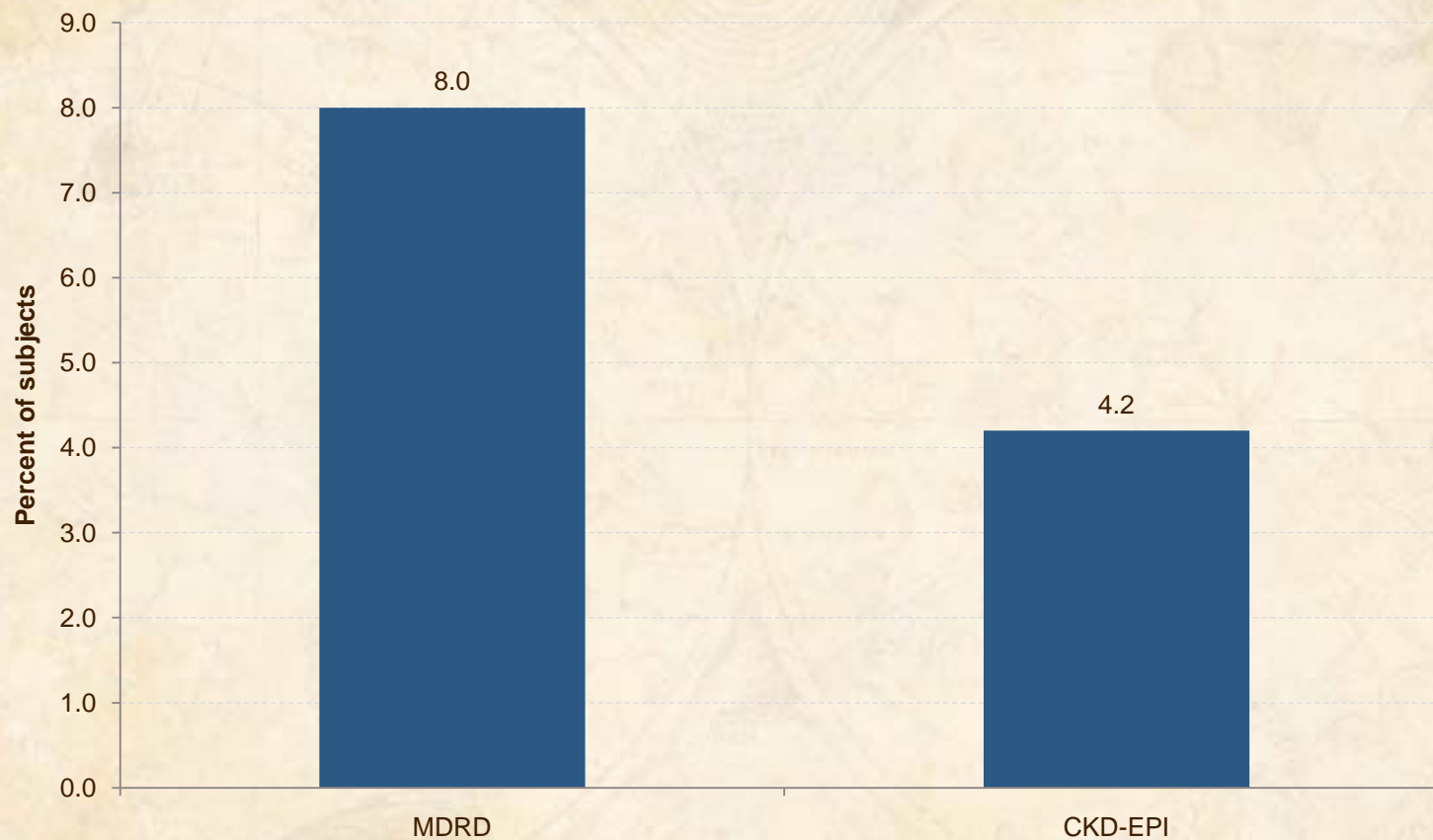
Background

- It has recently been suggested that the CKD-EPI creatinine equation (Ann Intern Med. 2009;150:604-612.) is more accurate than the MDRD equation for GFR estimation and should replace it for routine clinical use.
- However, outcome comparisons in the setting of large administrative databases are lacking.

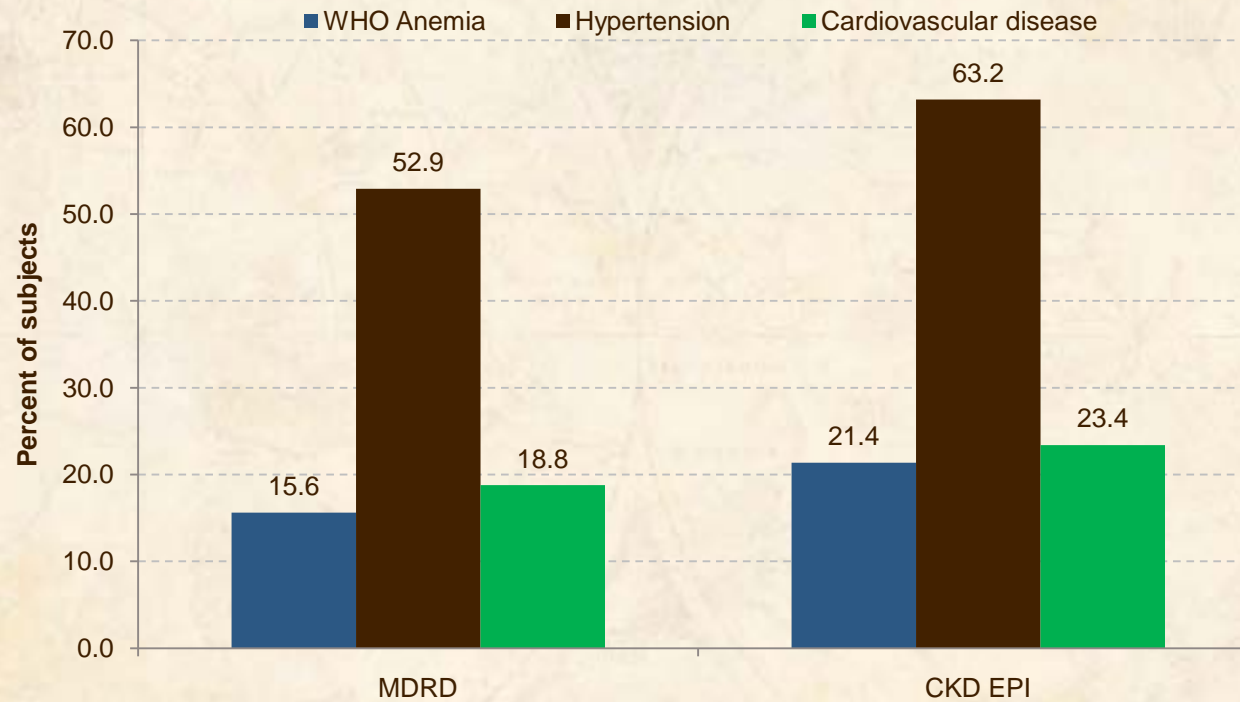
Methods

- This analysis considered 724,205 subjects aged 20-64, enrolled in fee-for-service plans, with at least one serum creatinine measured in the U.S. during 2008 (Ingenix i3 database).
- eGFR < 60 was defined with the MDRD and CKD-EPI equations.
- ICD-9-CM claims were used to define comorbidity and hospitalization and metabolic abnormalities were identified from laboratory measurement files.

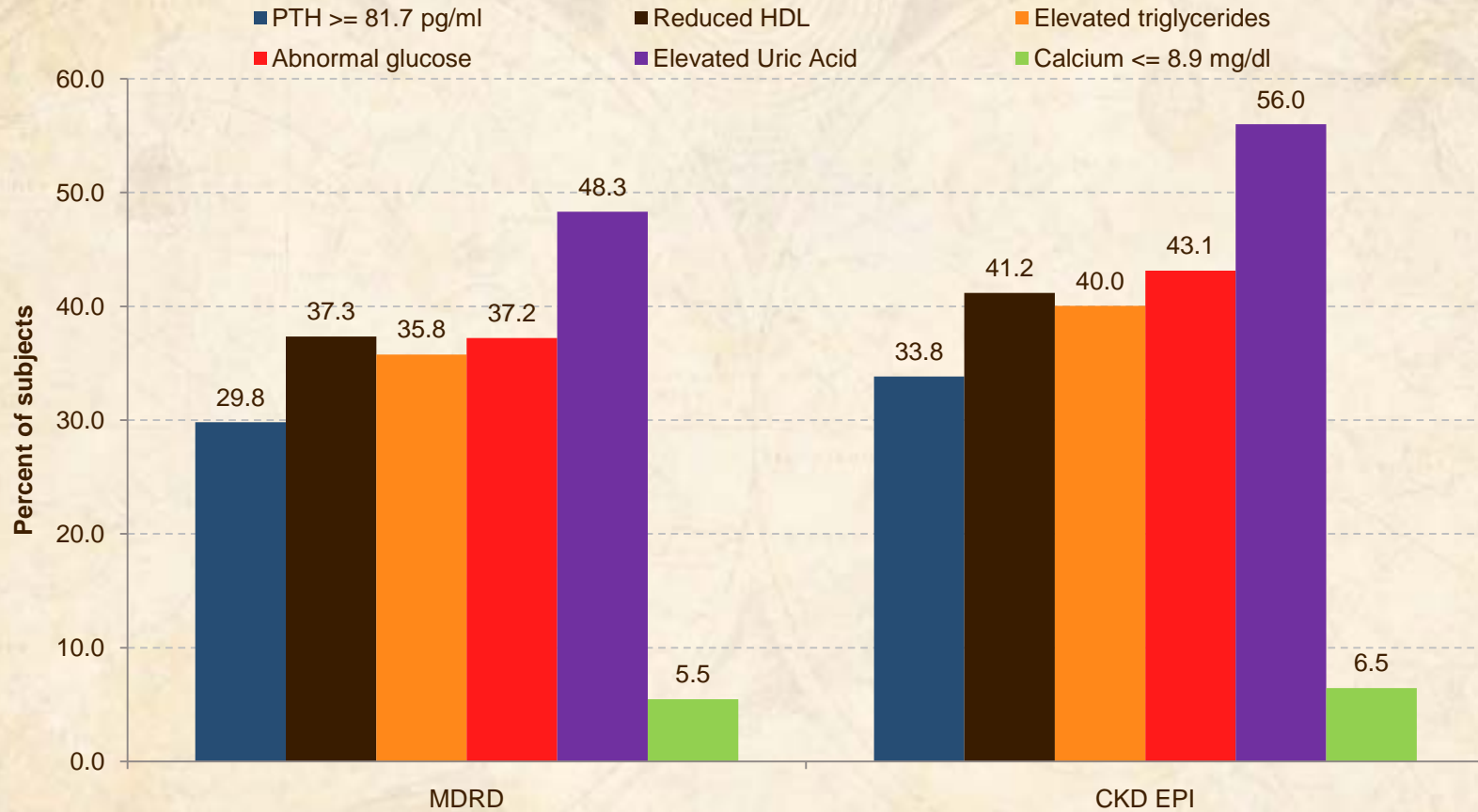
Percent of subjects had GFR < 60



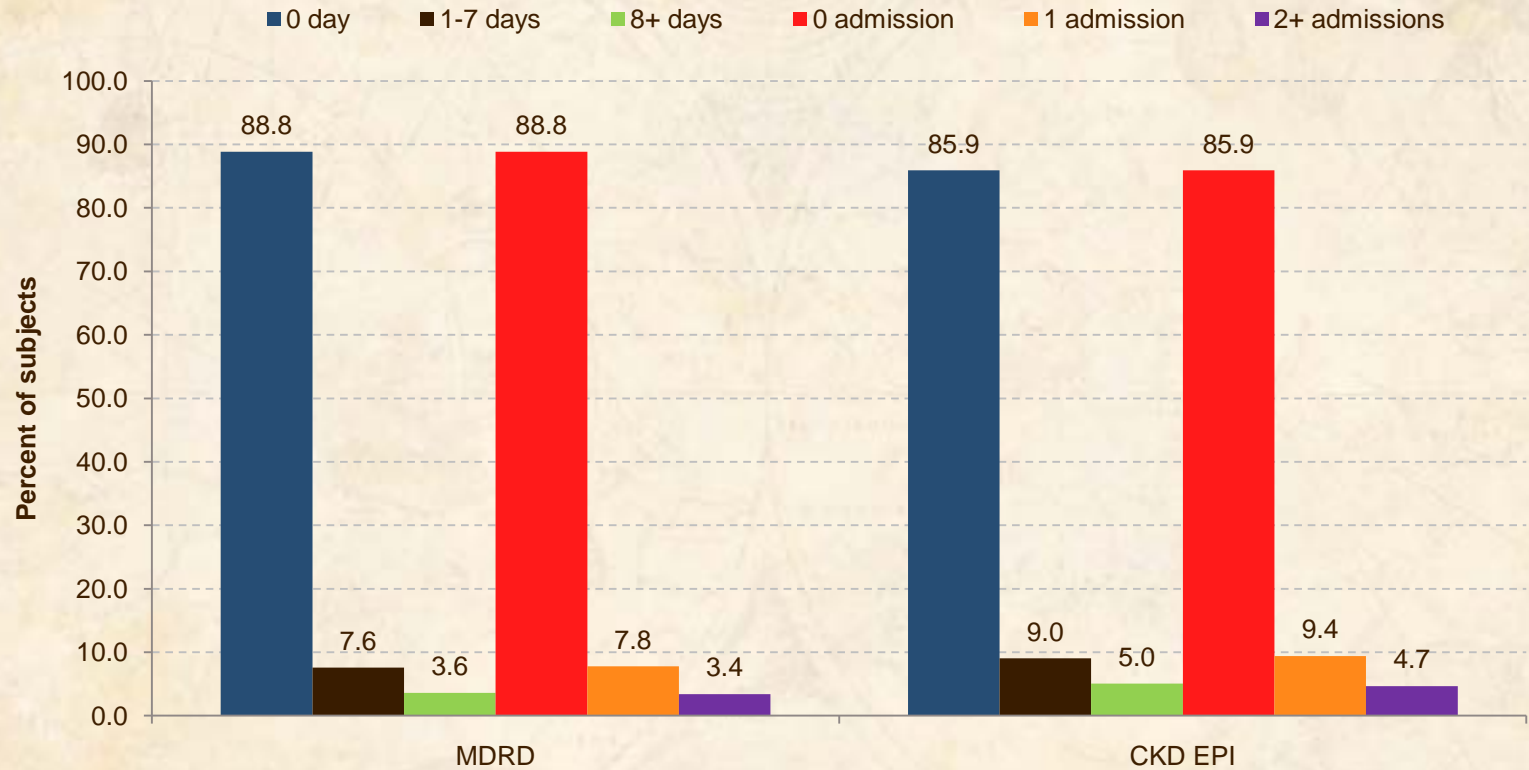
Comorbidities in subjects with eGFR < 60



Metabolic abnormalities in subjects with eGFR < 60



Hospitalization in subjects with eGFR < 60



Conclusions

- Regarding metabolic abnormalities and hospitalization, low GFR defined with the CKD-EPI formula is substantially more sensitive than with the MDRD formula.