Clinical Decision Support Flow Diagram for Management of Chronic Kidney Disease by Primary Care Physicians

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Background

- Chronic kidney disease (CKD) affects more than 15% of adults in the United States¹, and the Veterans Affairs (VA) health system is the single largest provider of health services in the U.S. for patients with CKD².
- The MEDSAFE-CDS is a knowledge-based system developed jointly by the VA and Stanford University designed to aid PCPs within the VA Health Care System in the management of chronic health conditions.
- This in-development clinical decision support (CDS) tool will guide PCPs in the management of CKD Stage 3

Purpose

- While phenotypic determinations exist for CKD, they do not identify groups specifically amenable to care via CDS.
- This flow diagram illustrates a treatment pathway that adheres to VA/Department of Defense (DoD) Clinical Practice Guidelines for the Management of CKD in Primary Care.
- Recommendations generated by this CDS are provided in an online report for PCPs
- The VA/DoD guidelines were augmented with those of Kidney Disease International Improving Global Outcomes (KDIGO)³.
- This algorithm includes filtering steps to reduce computational processing requirements. It can be extended to add functionality, such as risk prediction tools or organizationspecific resources.

Eligible Population

- Patients with hypertension, diabetes mellitus, or cardiovascular disease
- Due to the diagnostic complexity of patients with moderate or severe proteinuria but higher glomerular filtration rates, patients with CKD Stages 1-2 are also excluded.
- Patients with CKD Stages 4-5, end-stage kidney disease, and a history of kidney transplant are also excluded.

Digital Poster

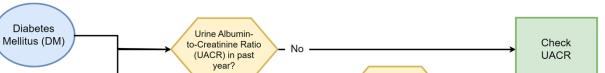
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Views expressed are those of the authors and not necessarily those of the Department of Veterans Affairs



References

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- U.S. Department of Veterans Affairs. Kidney Disease and Dialysis Services Fact Sheet. April 2015.
- www.healthquality.va.gov/guidelines/CD/ckd/KidnevDiseaseAndDialvsisServicesFactSheetApril2015.pdf Kidney Disease: Improving Global Outcomes (KDIGO) CKD Work Group. KDIGO 2012 clinical practice guideline for the evaluation and machinolic kidney disease. Kidney Int Suppl. 2013;(3):1-150.



Heavy Chronic Kidney Proteinuria Disease (CKD) Stage 3 Glomerular Filtration Rate

Hypertension,

Cardiovascular

Disease without

DM or CKD

(GFR) in past year? 2+ GFR Check measurements in

GFR past 2 years? GFR < 30? No Yes

2+ GFR values 90+ No days apart?

Yes Recommend Second latest No referral to GFR < 30? Nephrology

Yes Metabolic Initiate Acidosis Yes sodium bicarbonate Present?

Hemoglobin Check (Hgb) in past hemoglobin vear?

Hgb < 10? Yes Check ferritin and transferring Anemic? saturation

> Ferritin and Transferrin Saturation in past Ferritin < 500 6 months? Initiate and Transferrin PO iron Saturation