

Delegation Protocol Number: 8

Delegation Protocol Title:

Renal Function-Based Dose Adjustment - Adult - Inpatient/Ambulatory

Delegation Protocol Applies To:

University Hospital Inpatients: all adult patients

Emergency Department: all adult patients

University Hospital Oncology Clinic: all adult patients

Target Patient Population:

Adult patients prescribed medications that are dosed based upon renal function. Patients receiving Continuous Renal Replacement Therapy are excluded from this protocol.

Delegation Protocol Champions:

Alexander Yevzlin, MD – Department of Medicine - Nephrology

Dan Mulkerin, MD – Department of Medicine – Hematology/Oncology

Delegation Protocol Reviewer:

Philip Trapskin, PharmD – Department of Pharmacy

Responsible Department:

Department of Pharmacy

Purpose Statement:

To delegate authority from the ordering or authorizing provider to pharmacists to adjust the dose of select medications administered in the inpatient, emergency department and oncology clinic setting. Dosing adjustments are based on estimated renal function and the UW Health Renal Function-Based Dose Adjustment Adult-Inpatient/Ambulatory-Clinical Practice Guideline.

Who May Carry Out This Delegation Protocol:

Pharmacists trained in the use of this delegation protocol

Guidelines for Implementation:

1. This protocol is initiated by the ordering of a medication for administration in the hospital, emergency department or University Hospital oncology clinic.
2. If the prescriber does not want a pharmacist to initiate dosage adjustments based on renal function, then the order must indicate “do not adjust dose per protocol” or similar wording in the administration instructions.
3. Prior to order verification, the pharmacist evaluates the need for dosing adjustment based upon the UW Health Renal Function-Based Dose Adjustment Adult-Inpatient/Ambulatory-Clinical Practice Guideline which will include in each medication table if a medication may be adjusted per protocol or requires contacting the prescriber.

4. If a change in dosage is indicated, then the pharmacist modifies orders to the appropriate dosing per protocol without co-sign, and updates the administration instructions to indicate the order was changed per renal-function based dose adjustment protocol.
5. When an ordered medication is listed in the UW Health Renal Function-Based Dose Adjustment Adult-Inpatient/Ambulatory-Clinical Practice Guideline, but the pharmacist is unable to estimate renal function, then the pharmacist may order for Creatinine and/or Blood Urea Nitrogen labs.
6. If a patient's renal function improves or deteriorates, then the pharmacist re-evaluates dosing of currently ordered medications for appropriateness based upon the UW Health Renal Function-Based Dose Adjustment Adult Inpatient/ Ambulatory Clinical Practice Guideline. If a dosage adjustment is required, then the clinical pharmacist modifies orders to the appropriate dosing, and updates the administration instructions to indicate the order was changed per renal-function based dose adjustment protocol.
7. Adjustment of dosing based upon therapeutic drug levels is not within the scope of this protocol.
8. Furthermore, it is not within the scope of this protocol for the pharmacist to adjust the dose of medications in the UW Health Renal Function-Based Dose Adjustment Adult Inpatient/ Ambulatory Clinical Practice Guideline that have a dose range (e.g. 5-10mg/kg) within a given level of renal function. For example, if a prescriber ordered intravenous acyclovir (recommended dose is 5-10mg/kg every 8hours for CrCL >50mL/min) at a dose of 5mg/kg every 8 hours the pharmacist may not adjust the dose to 10mg/kg every 8 hours per this protocol.
9. If the use of a medication at a given level of renal function is contraindicated or recommended to be avoided in UW Health Renal Function-Based Dose Adjustment Adult Inpatient/ Ambulatory Clinical Practice Guideline, then the pharmacist must contact a prescriber. A pharmacist may not discontinue or hold a medication with this protocol.
10. If at any time the pharmacist is unsure about the indication for the medication or ability to accurately estimate renal function, they must discuss dosing adjustments with a prescriber.

Order Mode:

Medications: Protocol/Policy, Without Cosign

Laboratory Orders: Cosign Required, Protocol/Policy

References:

1. Cockcroft DW, Gault MH. Prediction of creatinine clearance from serum creatinine. *Nephron*. 1976;16:31-41.
2. Salazar DE, Corcoran GB. Predicting creatinine clearance and renal drug clearance in obese patients from estimated fat-free body mass. *Am J Med*. 1988;84:1053-60.
3. Stevens LA, Nolin TD. Comparison of Drug Dosing Recommendations Based on Measured GFR and Kidney Function Estimating Equations. *Am J Kid Dis*. 2009;54:33-42.
4. Frequently Asked Question about GFR Estimates. National Kidney Foundation. http://www.kidney.org/professionals/kls/pdf/12-14004_KBB_FAQs_AboutGFR-1.pdf. Accessed October 9, 2012.

Collateral Documents/Tools:

1. UW Health Renal Function-Based Dose Adjustment – Adult – Inpatient/Ambulatory Clinical Practice Guideline

Approved By:

UW Health Ambulatory Protocol Committee: February 2013, *September 2015

UWHC Pharmacy Practice Committee: February 2013, *September 2015

UWHC Pharmacy and Therapeutics Committee: February 2013, *September 2015

UWHC Medical Board: March 2013, *September 2015

UW Health Chief Medical Officer: *September 2015

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* Expedited Review Process