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Renal Impairment and Dialysis in DoseMeRx

Can I use DoseMeRx for patients with renal dysfunction, including AKI, and those receiving different types of dialysis (e.g. CRRT or IHD)?



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Updated over a week ago

The pharmacokinetic models in DoseMeRx take into account (for each individual patient) the relationship between serum creatinine and/or creatinine clearance and the drug's rate of clearance (e.g. vancomycin). DoseMeRx allows multiple serum creatinines to be recorded at various time points throughout the interval. Between these timepoints, DoseMeRx interpolates the serum creatinine level allowing for a patient's clearance to be adjusted over time. If no serum creatinine level is available, DoseMeRx uses a published model of mean serum creatinine for age, sex, weight, and height as part of the calculations.

DoseMeRx will also take into account renal function when calculating the Guideline and Label doses as well, where applicable.

Fluctuating renal function/Acute Kidney Injury (AKI)

DoseMeRx can be utilized in patients with fluctuating renal function or AKI. Of course, serum creatinine is a later marker of renal function, which means that just like any other tool, scoring method, or alerting method that uses serum creatinine, the clinician needs to keep in mind the whole patient; anuria can occur prior to a measurable rise in serum creatinine.

DoseMeRx does have a minimum and maximum serum creatinine that can be entered, however, these limits are set per facility and can be adjusted based on your preferences.

Strategies that may be considered to optimize the use of DoseMeRx in patients with renal insufficiency (not receiving dialysis) include:

1. Deselecting older levels, especially those that are less reflective of the patient's current pharmacokinetics
2. Obtaining drug levels more frequently.
3. Utilizing a different therapeutic dosing target

CRRT and Peritoneal Dialysis

DoseMeRx has not been formally validated for continuous renal replacement therapy (CRRT) or peritoneal dialysis and we cannot recommend its use in this cohort.

Intermittent Hemodialysis (IHD)

DoseMeRx supports vancomycin dosing in hemodialysis patients. [Read article →](#)

Did this answer your question?



doseme-rx.com

