0610 - Follow-up and Update

Hi and good morning all,

Here is an follow-up / update to the calculator! Feedback and questions welcomed!

Regards,

Kurt

Question 1:

"Can we prevent any maintenance doses > 4500 mg/day from showing as options on the maintenance dose table?"

Background

ASHP REPORT

Loading Doses Summary and recommendations:

12. A vancomycin loading dose of 20 to 25 mg/kg using actual body weight, with a maximum dose of 3,000 mg, may be considered in obese adult patients with serious infections (B-II). Initial maintenance doses of vancomycin can be computed using a population PK estimate of vancomycin clearance and the target AUC in obese patients.

> Empiric maintenance doses for most obese patients usually do not exceed 4,500 mg/day, depending on their renal function (B-II). Early and frequent monitoring of AUC exposure is recommended for dose adjustment, especially when empiric doses exceed 4,000 mg/day (A-II). Measurement

of peak and trough concentrations is recommended to improve the accuracy of vancomycin AUC estimation and maintenance dose optimization in obese patients, aligning with recommendations 2 and 5 for

Dosing in Obesity

tenance dose.112,120,122 For example, studies report an average vancomycin CL of approximately 6 L/h in obese patients that equates to achieving an AUC of approximately 500 mg·h/L with

a daily dose of 3,000 mg. Empiric vancomycin maintenance dosages above 4,500 mg/day are not expected in obese adults, because vancomycin CL rarely exceeds 9 L/h.112,120,121

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- For the doses greater than 4500 mg/day, I had been thinking about ways to cue the user that 4.5g/day was a threshold. It looks like there are 6 possible dosing regimens that could be selected that pass that threshold.
- I'm not sure if it should be a hard stop vs. a soft stop. For a hard stop, the pharmacist would not be able to select a regimen > 4.5q/day. I was thinking there may be valid cases where that type of regimen is the appropriate regimen, so I was trying to figure out a soft stop way.

Thoughts

1. Changed font of regimens > 4.5g/day to red instead of the normal black color.

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- 2. Alert in red becomes visible when a dose that is greater than 4.5 g/day is presented to the pharmacist in the maintenance dose table.
- 3. Total daily dose in grams is always presented to pharmacist even if checkbox isn't selected.

Maintenance Dose Table × Maintenance Dose Table Infusion Rate 1000 mg/hr MIC 0.1 - 1.0 ▼ * Target AUC/MIC range 400-600 PK Parameters Population-based 750mg 1000mg 1250mg 1500mg 1750mg 2000mg Vd: 91L infusion Ke: 0.116 0.8 hrs 1 hr 1.2 hrs 1.5 hrs 1.8 hrs 2 hrs times t1/2: 6 hrs CLVanco: 10.6 L/hr 400 mg h / L 510 mg/dL Q6H 17 5 g For the dosing regimens that exceed 4.5g per day, changed the mg h / L mg/dL 460 550 Q8H 14 font to red. 5.2 g mg h / L 420 mg/dL 10 Q12H 3 ✓ Estimated trough Total daily dose in grams mgh/L Total Daily Dose is always presented to Q18H (TDD) pharmacist even if dosing in mg/kg checkbox isn't selected. mg h / L mg/dL Q24H Show all values mg h / L mg/dL *View AUC Calculation Steps Q36H 2 Added red font alert to display if mg h mg/dL Q48H any of those values are presented to

the pharmacist

Question 2:

Question 2: "Add Skin and soft tissue infections (ABSSSI), surgical prophylaxis Enterococcal infections, Staphylococcus Epidermidis infections, to the exclusions on the landing page?"

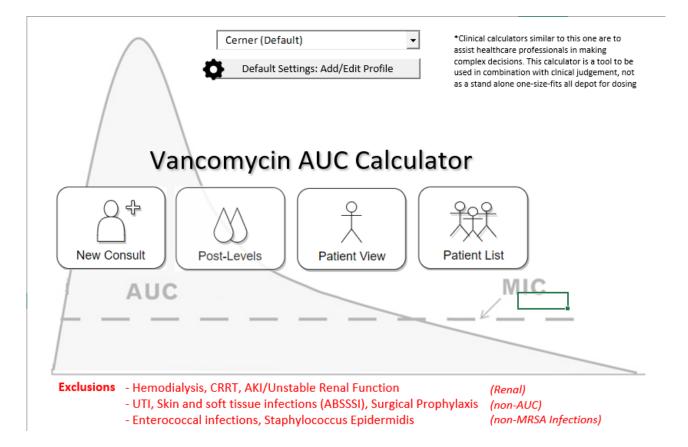
** Total daily doses > 4.5 g have been correlated with a higher incidence of AKI

* AUC calculations are estimated and rounded to nearest 10's.

• Updated Landing Page

* Click inside the blue box to view steps!

· Worried about how it looks and also added categories to the right. Worried about language used.



Question 3:

Question 3: "I wanted to clarify, we should the user hit "save".

Will the calculator intermittently save the information without "saving"?"

- 1. Each time the pharmacist presses the "Next" button, information about the patient is written into the database.
- 2. The "Save" button manually saves the patient information.

