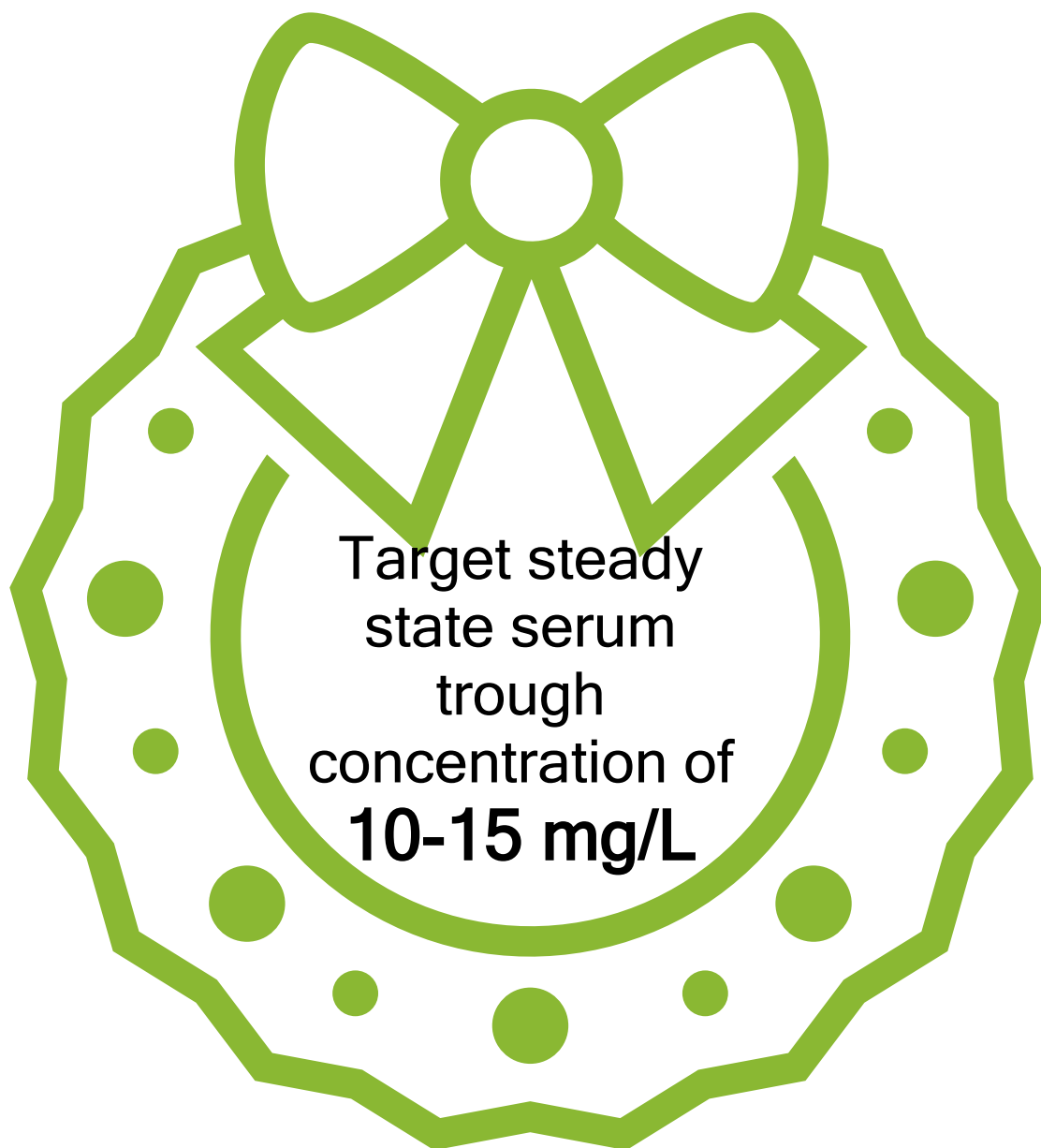


New adult **vancomycin** **trough target** is coming to town !!



Question? Call 604-417-8921

<https://aspire.vch.ca/>

Antimicrobial Stewardship Programme:
Innovation, Research, Education, and Safety
Quality and Patient Safety, Vancouver Coastal Health



ASPIRES
smart prescribing

**Vancouver
CoastalHealth**
Promoting wellness. Ensuring care.

1. Why are we changing the target trough now?

- Vancomycin trough concentrations between 15-20 mg/L are no longer recommended due to:
 - increased risk of acute kidney injury
 - lack of clinical benefit
- This change is endorsed by Provincial Antimicrobial Stewardship Clinical Expert (PACE), our local antimicrobial stewardship group (ASPIRES), ID physicians and pharmacists

2. What is our local MRSA's minimum inhibitory concentration (MIC)?

- Generally around 1mg/L, generally never above 2

3. What concentration do we need for therapeutic killing in general?

- 4-5 times MIC (10mg/L will be 10X for most MRSA)

4. Why did the old guidelines recommend targeting 15-20mg/L?

- There were theoretical concerns such as MIC creep which current literature has proven to be not a concern.

5. When are vancomycin trough levels indicated?

- When the treatment duration is greater than 7 days
 - e.g. MRSA bacteremia, infective endocarditis, osteomyelitis
- When the treatment duration is greater than 72 hours WITH risk factors for altered volume of distribution/clearance
 - unstable renal function/on dialysis
 - age >65, obesity, pregnancy, septic shock, burn patient, cystic fibrosis, low body weight
- Patient not responding to therapy

6. Will the dosing nomogram, PPOs and PowerPlans be updated?

- Yes, it will likely take a few months to complete

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Initial dosing

Total Body Weight	Loading Dose	Maintenance Dose
kg	20mg/kg	15mg/kg
40-50	1000mg	750mg
51-60	1250mg	1000mg
61-70	1250mg	1000mg
71-80	1500mg	1250mg
81-90	1750mg	1250mg
91-100	2000mg	1500mg

DOSE CAPPING: Vancomycin is a water soluble drug. While volume of distribution increases with body weight, it does not increase proportionately in obesity (increased lipid compartment). So a DOSE CAP of **3000mg for the loading dose** and **4500mg/day for maintenance** is recommended for the initial dosing, with further dosing guided by therapeutic drug monitoring.

Initial dosing interval (hours)

Serum Cr (mcmol/L)	Age Group (years)					
	20-29	30-39	40-49	50-59	60-69 ^a	70-79 ^a
40-60	8	8	12	12	12	18
61-80	8	12	12	12	18	18
81-100	12	12	12	18	18	18
101-120	12	12	18	18	18	24
121-140	12	18	18	18	24	
141-160	18	24	24	24		
161-180	24	24				
181-200	24					
Above 200						

a. In elderly patients with low muscle mass, use clinical judgement as SCr may not reflect renal function accurately

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