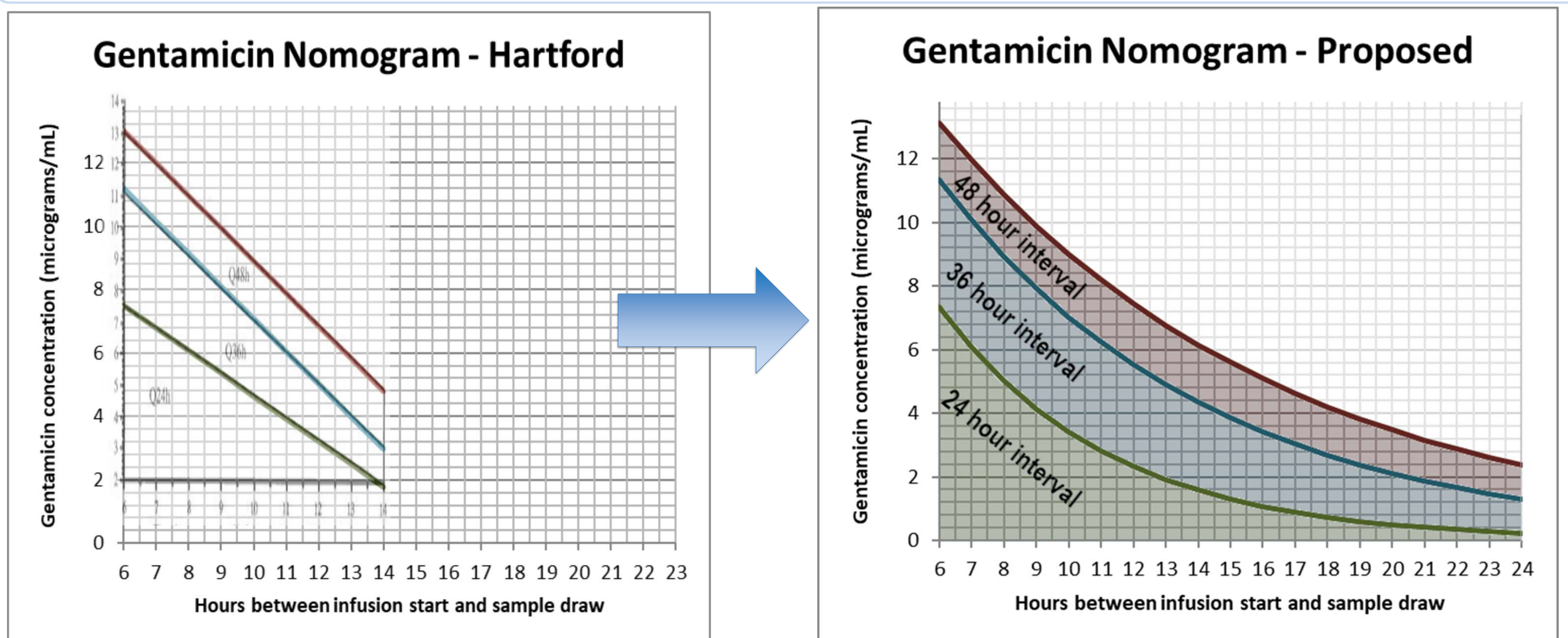


## Patients on gentamicin get daily U&Es

## why the 6 to 14-hour sampling window?

Gentamicin remains an important antibiotic in the treatment of gram-negative infections, but the monitoring of levels for dosing can be challenging. An alternative nomogram was developed based upon the limits for gentamicin clearance using the pharmacokinetic calculation of Sawchuk and Zaske<sup>1</sup>. This new nomogram was based on a patient clearing gentamicin to less than 0.5mg/L (for a minimum of 4 hours prior to the next dose, as per the original Hartford<sup>2</sup> nomogram) after a single bolus of 7mg/kg with a volume of distribution of 0.26L/kg. This alternative nomogram allows for levels to be taken between 6 and 24 hours, thus allowing the daily phlebotomist round in an NHS trust to take gentamicin at the same time as a daily U&Es sample.

Real world data on 107 patients seen in clinical practice were analysed. 14 patients would have been dosed on 36 rather than 24 hour dose interval, indicating that they would not have cleared gentamicin within 20 hours according to Sawchuk and Zaske calculations. All other dose interval recommendations remained the same.



This alternative nomogram reduces the need for more than 1 gold-top sample per day.

Acceptability measures to prescribers & further validation is required prior to clinical use

## References

1. Nicolau DP, Freeman CD et al. Experience with a Once-daily Aminoglycoside Program Administered to 2,184 Adult Patients. *Antimicrobial Agents and Chemotherapy* 1995; 39: 650-655.
2. Winter ME. *Basic Clinical Pharmacokinetics*. 5<sup>th</sup> ed. Lippincott Williams & Wilkins; 2010.p.137, 144-145.

## More Information

<https://github.com/kevfrst/Gentamicin>