Vancomycin safety QIP

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Background:

Intravenous vancomycin has a narrow therapeutic window, toxic level of serum vancomycin is commonly associated with nephrotoxicity and ototoxicity. There have been multiple serious incidents involving the misuse of intravenous vancomycin in this trust in the past 2 years. In all the incidents high blood serum levels of vancomycin were a key factor contributing to acute kidney injury.

This QiP aims to improve safety of Vancomycin prescription and level monitoring by recommending changes to current guideline and EPR powerplan.

Plan:

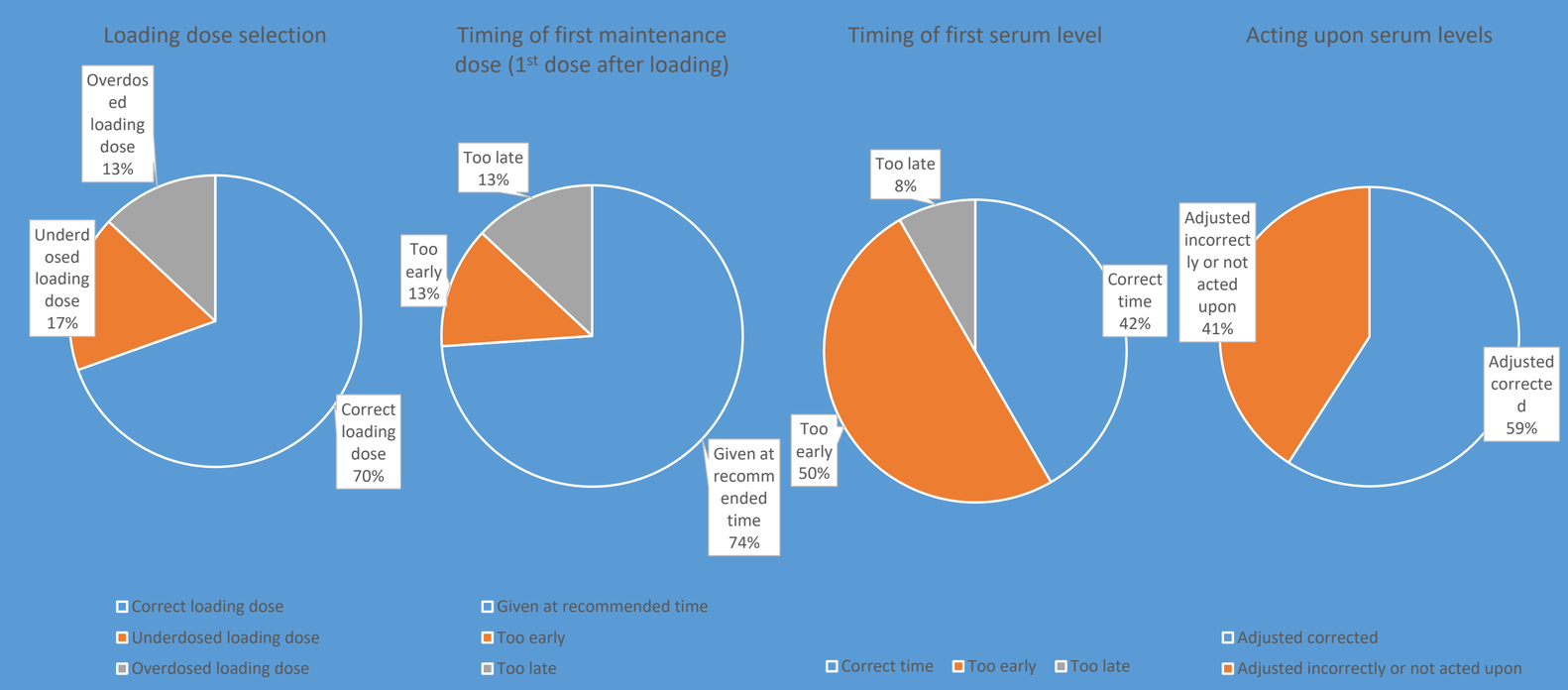
1. Learn from previous incidents about errors in Vancomycin use in our trust.
2. Explore how compliant current Vancomycin prescriptions and level monitoring are to the trust Microguide recommendation.
3. Explore prescribers' experience in Vancomycin e.g. whether they found trust guideline accessible and useful; whether they found EPR power plan easy to use.
4. Make changes to current guideline and EPR if needed based on feedbacks from prescribers and advertise these changes.
5. Assess the effectiveness of these changes on promoting safe Vancomycin use in our trust.

Do:

26 intravenous Vancomycin prescriptions were randomly selected from all vancomycin prescriptions occurred in January 2018 across all sites of OUH. They were closely examined by two junior doctors to see if the dose prescribed were correct for the eGFR and weight of the patients; if the first maintenance dose was given at the right time; if serum levels were checked at the right time; and if dose was adjusted correctly to the serum levels.

At the same time a questionnaire target at all the foundation doctors were sent out to collect their opinions on the current vancomycin guideline and EPR powerplan.

Study:



Some feedbacks from the questionnaire:

'Location of Vancomycin guideline not clear on intranet. Difficult to find.'

'It is hard to tell whether the weight goes with the line above or below on a quick glance.'

'Amending vancomycin after a level isn't very clear on the guideline.'

'A problem with powerplans in general: needs greater delineation between various options, to make them easier to read.'

'My problem is vancomycin monitoring; many times, especially after a busy weekend - it's not handed over that vancomycin needs monitoring.

'There should be a clear cut means of recording when vancomycin levels are monitored and when the next is due. Perhaps a flag or proforma on EPR?'

Act:

At the moment our QiP team is in the process of making changes on the EPR powerplan. We have suggested the use of drop down menu and changing the order of subsections to follow the sequence of:

initiation - next dose - continuation - measure level

These changes are aimed to improve delineation of the options and make it easier for prescriber to follow. They have been approved by the ASG (Antibiotic Stewardship Group) and proposals have been submitted to the EPR team.

We have further plans on creating EPR alert for level monitoring, vancomycin calculator and modifying the trust vancomycin guideline. With each change we will repeat the data collection to ensure positive effect. The final goal is to make vancomycin use easy for the prescriber and safer for the patients.