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How do I review the model fit indicator in DoseMeRx?

A model fit indicator to help guide model selection for adult vancomycin models (1-compartment, 2-compartment, and enhanced obese).

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DoseMeRx has a quick and easy feature to show you a visual representation of how the model is fitting to your patient's data. This article covers what model fit is, how it is calculated and how to interpret it.

What is model fit?

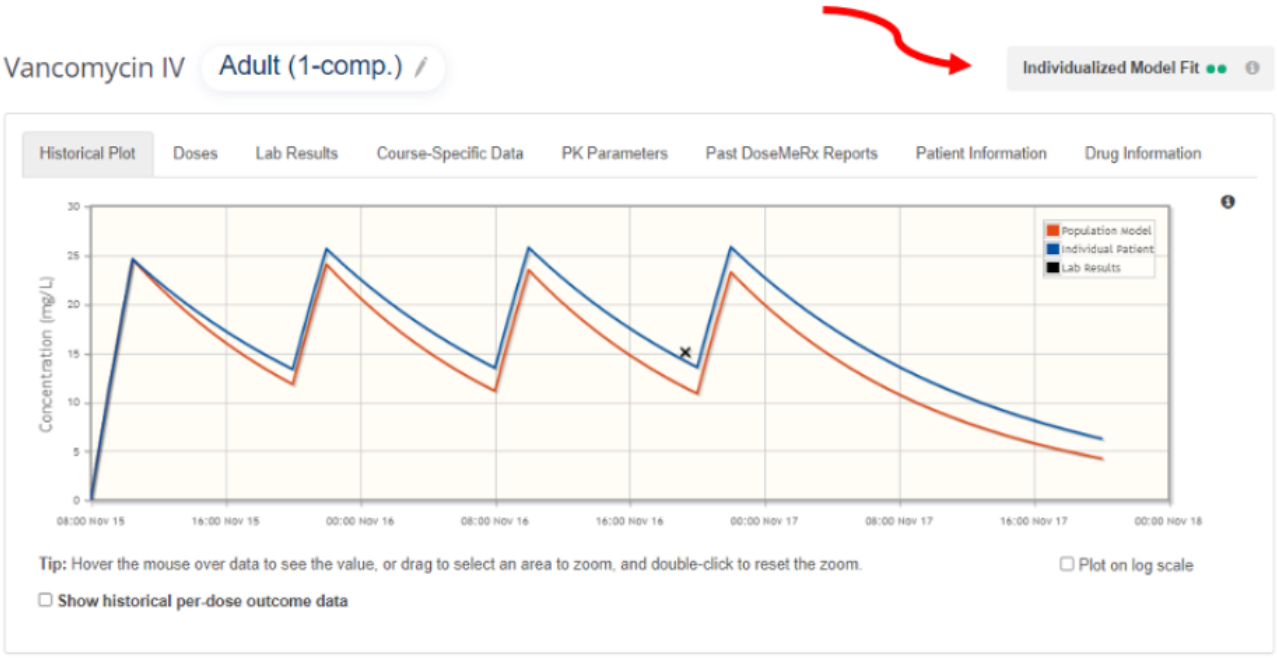
Model fit is a term used to describe how well the selected model fits the observed data. In general, a better fit corresponds to a more accurate dosing recommendation.

How is it calculated?

When a model is fitted, DoseMeRx works to provide an estimate of the patient's specific pharmacokinetics based on the model selected. Model fit distills the difference between the model predicted vs. measured drug levels down to a single value. This value is used to inform the model fit status indicator that is displayed.

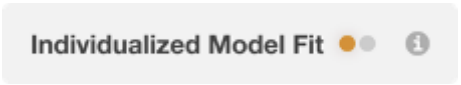
Where is the model fit displayed?

A visual model fit indicator bar will be available above the Historical Plot graph. When evaluated together, this provides additional insight that can be used to determine the most optimal dose regimen for your patient.



How do I review model fit?

Good fit: The icon above, when displayed, indicates the measured drug levels from the patient are in agreement with the model and suggest a **Good Fit**. You can also see this in the Historical Plot graph as indicated by the blue line being closer or even crossing through the recorded drug level(s) on the pharmacokinetic graph. In general, a Good Fit suggests improved accuracy of dosing predictions and a higher likelihood of obtaining the therapeutic target (e.g. AUC24).



Not ideal; needs review: The icon above, when displayed, suggests that a closer evaluation of the recommendations may be beneficial. Consider taking additional steps to improve model fit as they may be helpful in increasing the accuracy of future predictions.

As a reminder, all of the models in DoseMeRx have been scientifically validated for use in patients with demographics that are within the pre-defined patient limits (e.g. height, weight,

age) regardless of model fit.

How can I improve model fit for my patient?

Four ways to improve model fit

1. Always **check that data has been entered correctly**. Data entry issues comprise about 50% of the cases of poor model fit.
2. Consider **deselecting older levels i**n patients who have a longer course of therapy and have varying vancomycin pk throughout their stay.
3. If possible, **get another level**. A random level is fine. If you know the patient is getting other labs drawn, you could just add it to that order.
4. Consider switching to a **different model.**

Model fit should always be reviewed in combination with the Historical Plot. As with any feature in DoseMeRx, model fit is intended to be used as a guide only and should not supersede your clinical judgment.

Related articles:

- How do I switch between vancomycin models without re-entering patient data?
- Laboratory result(s) not fitting the patient
- Why do dosing recommendations differ between models?

Did this answer your question?

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