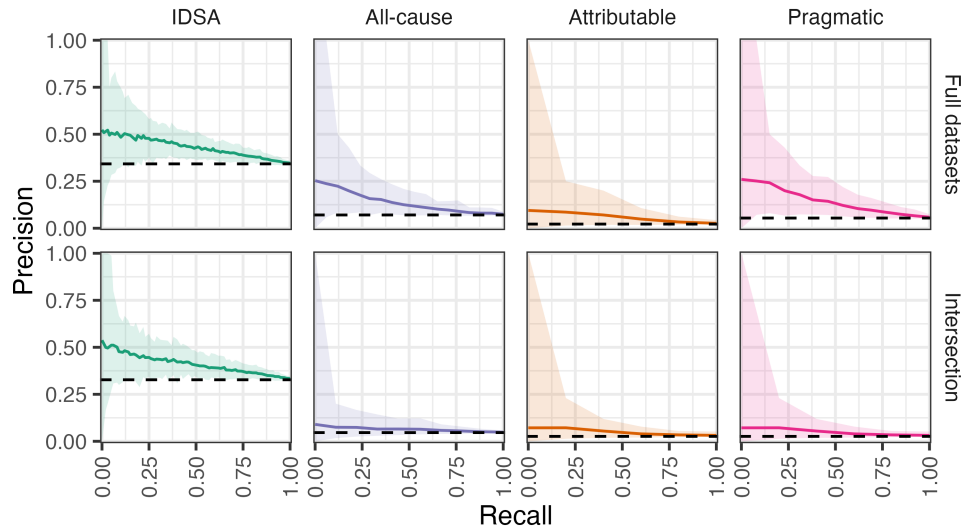
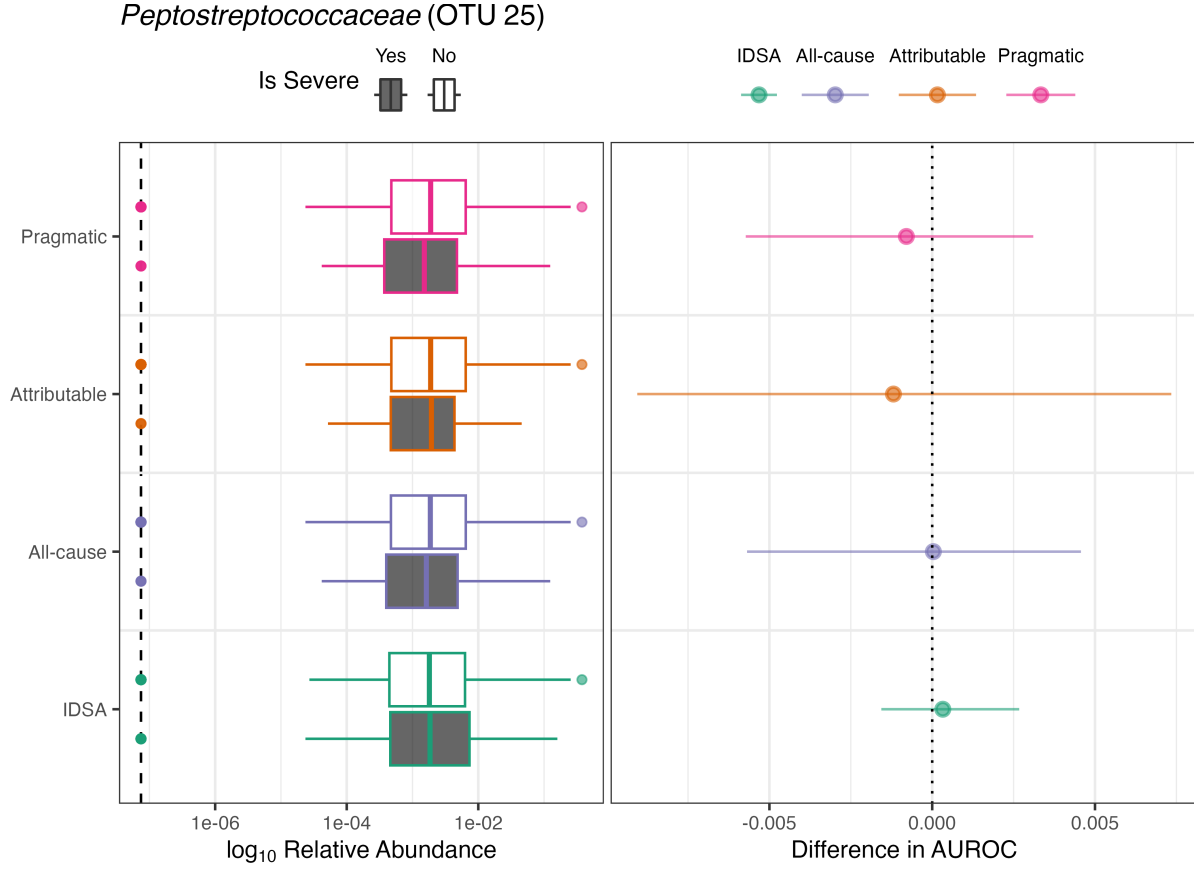


# Supplement



**FIG S 1: Precision-recall curves.** The original precision-recall curves for each model. The horizontal line is the baseline precision, i.e. the proportion of severe cases in the dataset for each severity definition. Since each definition has a different baseline precision, the PRCs cannot be compared directly without balancing the precision (see Figure 2).



**FIG S 2: *C. difficile* relative abundance and feature importance.** Of the 45 OTUs belonging to the *Peptostreptococcaceae* family, only one (OTU 25) had abundance values above the limit of detection. **Left:**  $\log_{10}$ -transformed relative abundance of OTU 25 in the full datasets. The dashed line is the limit of detection. **Right:** Permutation feature importance as measured by AUROC for OTU 25. The point is the mean difference in AUROC and the tails are the 75% confidence interval. The dotted line is a feature importance of zero, meaning the feature is not significant.