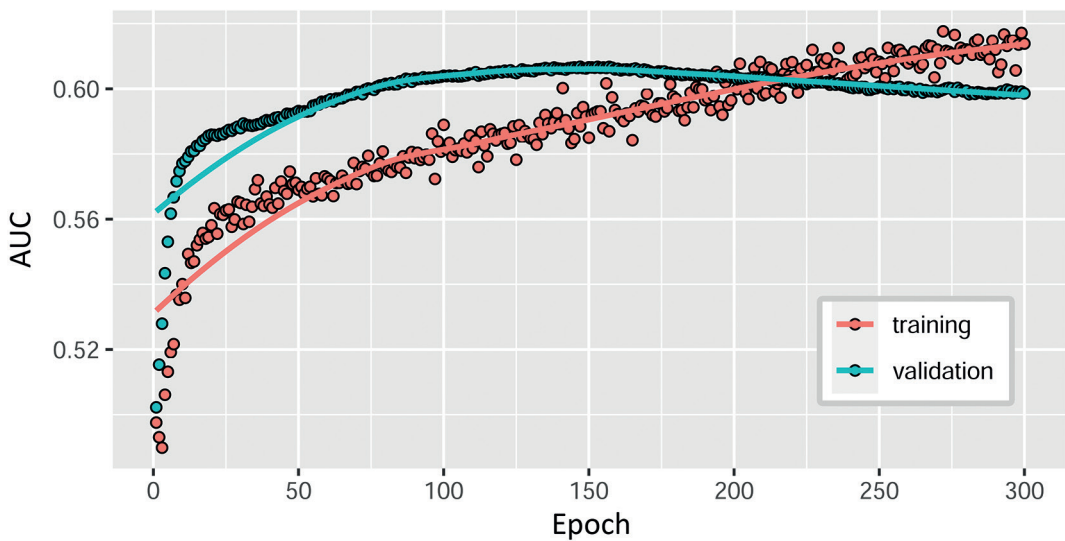


**Fig. S1. Summary of model training.** Illustration of the architecture of the primary model. This model used 1 convolutional layer with 4 filters and a kernel of size (1, 351); i.e. 351 weeks. Three dense layers with 512, 256 and 128 nodes, respectively, were used. The model summary and source code are available in Appendices S3 and S4. ATC: Anatomical Therapeutic Chemical; CNN: convolutional neural network; ICD-10: International Classification of Diseases 10<sup>th</sup> Revision.



**Fig. S2. Area under the receiver operating characteristics curve (AUC) for the training and holdout validation set.** Epoch "147" had the highest AUC for the holdout validation set.