Let us examine what we learned in this lecture.

We built an expert-trained model by a physician that can accurately identify diabetic patients receiving low quality care.

We have observed that the out of sample accuracy of the model was 78%.

But most importantly, the model identifies most patients receiving poor care, which is the major objective in the study.

Logistic regression models provide probabilities of somebody receiving poor quality care.

These probabilities can be used to prioritize patients for intervention, a particularly useful outcome from the study.

While the accuracy is reasonably high, 78%, it can be, of course, further improved.

In that respect, I expect that electronic medical records, not only claims, could be used in the future to enhance the predictive capability of such models.

So a model like the one we built can be used to analyze literally millions of records.

Whereas a human can only accurately analyze rather small amounts of information.

So clearly such a model allows significantly larger scalability.

Of course models do not replace expert judgement.

However, models provide a way to translate expert judgement to a reproducible, testable prediction methodology that has significantly higher scalability, as we discussed.

And of course experts can continuously improve and refine the model, as we have seen in this lecture.

Finally, and quite importantly, models can integrate assessments of multiple experts into one final, unbiased, and unemotional prediction.

And such methods of combining assessments and combining models is a tool that we will use later in the class on multiple occasions as a way of enhancing and improving quantitative models.