

Improving Medication Management to Reduce Readmissions and Adverse Outcomes Transcript

I thought I'd try to give just a little background to start with. And this is our own estimate, after looking at the data and the literature. Approximately, by indication, you'd estimate that approximately 16 million people would benefit from anticoagulant therapy. But some of these people have overlaps the same condition. For example, you might have someone that has A-fib, who also has had a DVT. And we estimated that over that might be as many as 1/3. So that would bring the total number down to 10 million patients. But certainly, it's a very large and common finding that patients can benefit from anticoagulation.

Unfortunately, the estimated use of anticoagulants in this country is about two to three million, partly because of both medical and legal concerns from prescribers. And also, the fact that the management of warfarin, at least, in most settings, is very complex and cumbersome and costly. And also, in most settings, we tend not to do a great job in that the INR is in the target range only about 50-65% of the time.

These data present a complex picture here. Let me just sort of walk you through it. The u-shape curve, here, is actually representing ischemic strokes and then intracranial hemorrhages in patients with atrial fibrillation. This is a large data set, from northern California, with over 33,000 patient years of data.

So what is depicted here, is that the lower end, as the INR drops below two, the risk of an ischemic stroke rises quickly to an increase of almost fourfold increase, at an INR at about 1.4. And by the time the INR drops below 1.3, on the left, the risk of ischemic stroke had increased seven and a half fold, compared to those patients with an INR between two and three.

On the far right-hand side, you see, sort of, the mirror image of this. Except that when the INR gets above 4.5, the risk of bleeding into the head is increased by 12 fold. And this continues to escalate at higher values.

On the next slide, this just summarizes what I believe is the potential for self-testing with online management. But, in the interest of time, let me go to the next slide, which depicts some recent information with one of the new agents, Dabigatran. This was just published a couple months ago.

And what this is showing at the top, where it says adding 150, 10% to 90%, that's the range in which the 80% of the Dabigatran serum concentration, would be the 80% range. In other words, 10% of the patients would have serum concentrations even lower than that low end of the bar, the left-hand end of the bar, and 10% of patients would be above the right-hand end of the bar. But what you can see is that the spread in the Dabigatran concentrations is quite wide, going from 40 nanograms per mil on the right-hand side up to 215 and as you get above 100

you have a sizable number of patients who have serum concentrations going up, close to 200 and beyond who have a profound increase and major bleeding.

Data that I think, at least with this drug, says that we really need to be able to monitor serum concentrations in order to dose this drug appropriately. The blue line is actually depicting the reduction in ischemic stroke and system embolism. So you can see that you get very little benefit above a serum concentration of 100 micrograms, or nanograms per mil, but you get a substantive increased risk of bleeding. So, I think we'll be seeing more this sort of information as we go forward with the new agents.