

Bill Frist: We talked about what atrial fibrillation is and I'll come back. It's just this disorganized beating of these upper chambers of the heart itself. The incidence of itself is interesting and unless some people sit down and actually study it or have access to our information they don't know it. The number to remember is 2.5 million Americans have AFib. And that the incidence/prevalence increases with age.

Lifetime risk for developing AFib is high. In fact, for those people over 40 years of age, one in four men or women is the lifetime risk that they will have atrial fibrillation. So when you think of it in those terms you see how high it is especially when so much is asymptomatic today. The percent of people over the age of 65 with AFib is five percent and by the age of 80 years 10 percent of people have AFib.

The risk factors themselves – and if you just think of the risk factors before I show you what the risk factors are – what are they? And it's important for the physicians and for the nurses and for the public health officials out there to think what the risk factors are to lower that threshold a little bit to make the diagnosis. They are high blood pressure. It is coronary artery disease. It is heart valve disease, all of these cardiac and cardiovascular related. Obesity itself is a risk factor, independent risk factor for atrial fibrillation as is diabetes.

Clinical presentation is important but I'm going to jump and say that about a third of patients are asymptomatic so the symptoms are important and what is asymptomatic especially if it's the more quality of life is you just don't feel quite right. It might not fall into this category on the left, but the fact of it about a third are asymptomatic.

So let's go through them. Syncope some sort of fainting episodes sort of what lay people would say as fainting. Light-headedness, all of a sudden you just – people will come in and complain, I just feel light-headed. It's like I don't know quite right where I am. Fatigue. Chest pain speaks for itself. Dyspnea, most of you know, is an awareness of breathing. Okay. It's kind of shortness of breath. It's not struggling breathing but all of a sudden I feel kind of short of breath. There's an awareness of it for dyspnea. Palpitations, you all know what it is but you might feel it in your chest, you might feel it in your head, you might feel it in your pulse but it's just where the heart is beating a little bit differently. It's not this sort of one-second beat that is normal. Thromboembolism, 'thrombo' is a clot and 'embolism' is a clot that travels and I've talked about it and we'll show a picture of it. So there's a wide range of symptoms. I mentioned 33 percent of AF patients could be asymptomatic.

The potential for the underlying electrical instruction damage for atrial myocardium is important that even if you don't feel everything, everything feels okay if you have atrial fibrillation bad things are happening. While AF symptoms alone may not always be severe, untreated disease may result in significant morbidity and mortality.

The picture itself I went through but graphically it's hard for me to remember things at all. So graphically you've got one chamber two—or the atria, one chamber, one chamber, the lower chambers. I look at it like a duplex of a house; that's the way I think of it. But you've got these upper rooms and lower rooms; upper room and lower room. When these upper chambers just start fibrillating like a little bag of worms instead of emptying every time a blood clot forms in there, flows through the ventricle itself, goes out the aorta, the main blood vessel that went off from the heart. It goes up the common carotid artery, up to the internal carotid artery and then blocks the vessel in the brain. It's interesting that strokes because you're sending a clot up there the strokes that you have it's like a damming up river downstream they tend to be worse than other types of ischemic strokes, not terribly important from the clinician standpoint, it's fascinating. It just means we've got to make the diagnosis whenever we can. That's sort of this third bullet here.

Stroke risks persist even in patients that are asymptomatic. The incidents at the top there of all stroke in patients with AFib is five percent. There's a five times increase in chance of stroke itself. The debilitating consequences we'll go through. You've got morbidity and mortality, the independent risk factor for other cardiovascular disease. So you can say when people say how bad is this? What does it do to other cardiovascular disease? You can say it increases the risk of overall death two-fold, the one that we just talked about it increases the risk of stroke five-fold and increases the risk of cardiovascular hospitalization. So increased risk of stroke five-fold is sort of the one, I think, that when you're communicating it really means something to people.

It definitely has an impact on quality of life. The number of people because they know I'm interested in atrial fibrillation who come up to me and say listen my life since I've had atrial fibrillation the diagnosis was missed for a long period of time and I bounced around to four or five doctors, the quality of life issue I just about lose my energy, I don't care about work anymore. All of that is fixable. It is fixable if you get on the right path.

The cost itself we'll talk a little bit more about the cost, the overall \$15.7 billion that stroke costs to our healthcare system if you like the kind of Washington big, big numbers. The other figures we'll talk about this afternoon with release of the report. The medical cost is generally five-fold higher in patients with AFib than in those without. So it costs money at the micro level to the individual, to the community level, to the state level to the national level to our overall \$2.3 trillion healthcare expenses each year.