**Title: Economic Burden of Cardiovascular Disease in the EU**

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"Hi, I'm Ramon Luengo Fernandez from the University of Oxford Nuffield Department of Population Health. And I'm an associate professor in Health Economics.

The Importance of this Study

So the importance of this study is to show really what the burden is of cardiovascular disease not only to the healthcare sector who pays for the treatment of these patients or patient itself, as CVD reduces their quality of life and poses patients at early risk of death. But all the other aspects CVD touches like the burden it places on family and friends who care for patients with cardiovascular disease and the workforce as many patients with CVD will either have to leave employment, take time off or die because of premature mortality. So that places a burden on the workforce.

Methods and Challenges

So the methods we used was basically, look at all the resources that patients with CVD take or consume. So, of course, we looked at, say, how many days in hospital are spent in Germany over in 2021? And then we tried to apportion all those days in hospital to days that were due to CVD. So in many instances, we just looked at international sources like Eurostat, but in others, we had to look at national sources, how many patients go to their family doctor and then apportion that to CVD. And it was this, apportioning it, that was quite tricky. So we used a patient-level data survey on nearly 150,000 patients across Europe to see those patients with CVD. How many times did they use the healthcare sector because of their CVD?

Key Data

So we found that the cost of cardiovascular diseases in Europe was €282 billion just for 2021, with nearly half of all that cost being due to healthcare services. So seeing doctors procedures in hospital, stays in hospital, we also found a big chunk of resources were spent in long-term care. So patients having paid, workers coming to take care of them while they were at home, or patients going to nursing homes, a big, big chunk of the cost was also due to informal carers. So a side of the economy that you would not really see because nobody pays a wife to take care of their husband who's had a stroke. So that was also a big component of our cost.

Measurement Methods for Informal Care

So the informal care, how we did it is we looked at the number of people using the global burden of disease that had cardiovascular disease in our country. And then we use patient-level data from the big survey I told you about before to see if you have CVD, what's the probability that you'll be taken care of by an unpaid worker? And if you receive care, how many hours of care will you receive? So that's how we estimated informal care costs.

Data Comparison to Cost Analysis from 2006

So we did the same analysis back in 2006 when the EU had just expanded to the east. Of course, since then, the EU has changed a bit. A big country like the UK is not in the European Union anymore. So we've had to reduce the cost of that. There's other countries since then that have joined the EU. So that makes a big difference. But even just looking at the countries that we had in 2006 and the countries we have now we have seen that the differences in cost per capita dividing total cost by number of citizens differences we saw between countries before have very, very much reduced. So now we can say that cost of cardiovascular disease are more homogeneous. Although there's important differences. The big, big differences we saw before have really reduced. I think from the top of my head it was from a 16 difference in 2006 between the highest and the lowest spender to around six times from the lowest to the highest spender. So a big reduction.

Key Findings from Both a Public Health and Economic Perspective

So the big, I think, findings from the public health and the health economics is that cardiovascular disease not only affects what you would think of the healthcare sector because they're the ones who pay. The healthcare sector pays for those patients to get better or to treat them is that it affects all ranges of the economy. So take account of informal carers. Nobody pays an informal carer to take care for their friend or loved one with CVD. Whereas if you actually cost the time that these people are foregoing of work or forgoing of their own leisure activities and that doesn't have a cost, the cost is huge.

How Policymakers Should Use This Data

The policymakers should use this data. First of all it allows so if you know what the cost of cardiovascular disease, you know what the cost of cancer is, you know what the cost of gastrointestinal problems is, you can start saying, okay, what is the area of highest burden and what can we do to reduce this burden? So in a way there's an incentive to reduce the burden of the diseases that are impacting the country first. So things like research spending might be able you might want to prioritise those areas with the highest burden and get a bigger share of research spending. So that's one way that policymakers could use our results.”