Transcript Details
This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: https://reachmd.com/programs/frontlines-copd/copd-in-japan-vs-the-us-comparing-prevalence-and-mortality-rates/35533/

ReachMD
www.reachmd.com
info@reachmd.com
(866) 423-7849

COPD in Japan vs. the US: Comparing Prevalence and Mortality Rates

ReachMD Announcer:
You're listening to *On the Frontlines of COPD* on ReachMD. And now, here's your host, Dr. Charles Turck.

Dr. Turck:
Welcome to *On the Frontlines of COPD* on ReachMD. I'm Dr. Charles Turck, and joining me to discuss his recently published meta-analysis examining the differences in COPD prevalence and mortality between Japan and the United States is Dr. Akira Sekikawa. He's a Professor of Epidemiology at the University of Pittsburgh School of Public Health.

Dr. Sekikawa, thanks for being here today.

Dr. Sekikawa:
Thank you for having me today.

Dr. Turck:
Well, to start us off, would you tell us what led you to research COPD in Japan versus the US?

Dr. Sekikawa:
A little bit of a long story, but I'm originally from Japan, and the first time I came here in 1994, what I noticed is that coronary heart disease is the leading cause of death. And everybody knows that the risk factor for coronary heart disease is high blood pressure or hypertension, cholesterol, smoking, and diabetes. Because I'm originally from Japan and practiced there for over 10 years, lifetime exposure to these risk factors is very similar between the two countries. Despite that fact, coronary heart disease mortality in Japan is extremely low; there is a 300 percent difference between here and there. And what about the third or fourth leading cause of death in the United States? That is COPD. The smoking rate is insanely high in Japan, but looking at the COPD statistics, wow, there are huge differences between the two. So I wanted to formally analyze the difference, whether this is really true mortality-wise and prevalence-wise. That was the initial motivation of this study.

Dr. Turck:
So with that being said, could you tell us a little bit more about the study's goal and how you went about achieving it?

Dr. Sekikawa:
Yes. The first goal was to formally compare the mortality, including mortality statistics—which are sometime tricky—misdiagnosis, or other leading cause of death. And then the prevalence—because spirometer is not formally recommended in the general population in the United States—we wanted to find some general population spirometer-based COPD data. Interestingly, despite the COPD prevalence being much lower, there are a huge number of studies in Japan administering the spirometer to a general population, so that motivated us to do a meta-analysis to estimate the prevalence of COPD in Japan.

Dr. Turck:
So what did the results show in regard to the smoking COPD prevalence and mortality rates in each country?

Dr. Sekikawa:
Smoking rate, especially in men for the past 5 to 50 years—we checked the data from national NHANES in the United States and the counterpart of NHANES in Japan—in every age group, the smoking rate was 20 to 30 percent higher throughout all five decades, although in both countries, the rate of smoking has been declining. And among women, the smoking rate was a little higher in the United States.

And then mortality-wise, there is a 2 to 3 times difference among males. In the United States, it's much higher, while among females, there was a more than 10 times difference between here and there; the United States is 10 times higher compared to Japanese women. Prevalence-wise, the prevalence was much higher in the United States in each age group—about 10 percent—both men and women. That's what we found.

Dr. Turck:
For those just tuning in, you're listening to *On the Frontlines of COPD* on ReachMD. I'm Dr. Charles Turck, and I'm speaking with Dr. Akira Sekikawa about his recently published meta-analysis on how COPD prevalence and mortality differs in Japan versus the United States.

Now, if we dive further into the findings, Dr. Sekikawa, you highlight underdiagnosis as a major issue, especially in the US. What are your thoughts about how we could improve spirometry use globally?

Dr. Sekikawa:
The issue here is that in the United States, this is an evidence-based guideline because there is no proven benefit in terms of the spirometry being administered to a general population. So for that reason, the guidelines say that only those people who have some symptoms here in the United States should take a spirometer. But because of the nature of the study, in some years, NHANES administered spirometer for every participant, so that's how we obtained the prevalence data. Whereas in Japan, although their mortality with COPD is very low, a health checkup with the spirometer is the ATS-standardized method—a very high-quality controlled one. Many studies actually administer spirometer.

Dr. Turck:
Now, as you mentioned earlier, COPD prevalence and mortality are significantly lower in Japan despite its higher smoking rates. In your opinion, what factors might be contributing to the paradox we're seeing?

Dr. Sekikawa:
That is my research theme, so one key factor is low inflammation rate. As I said, both chronic heart disease and COPD are paradoxically low in Japan. And then when we compare the two populations—again, the counterpart of NHANES data showed that the level of CRP was surprisingly low in Japan—inflammation is the key for both atherosclerosis and chronic bronchitis. So for that reason, we're going to research what determines the low inflammation in Japan.

Dr. Turck:
Before we close, Dr. Sekikawa, are there any lessons the US and other countries could learn from Japan's public health practices in preventing and managing COPD?

Dr. Sekikawa:
Globally, COPD is the third or fourth leading cause of death, both in developed countries and developing countries. The only exception is Japan. That is currently the seventh cause of death in Japan, and also, the Japanese population has had the greatest longevity for the past 30 years, so we want to learn that secret. The lesson to the United States and other developed or developing countries is what we are researching right now. Maybe some Japanese diet is the key; the Japanese diet is characterized by the high omega-3 fatty acid. Also, another ingredient that is rare in the United State but is very high in Japan is soy isoflavone. That may be the key, but that is what we are doing research on right now.

Dr. Turck:
Well, as those final comments bring us to the end of today's program, I want to thank my guest, Dr. Akira Sekikawa, for joining me to share his insights on COPD prevalence and mortality differences between Japan and the United States. Dr. Sekikawa, it was great having you on the program.

Dr. Sekikawa:
Yeah. Thank you very much for having me.

ReachMD Announcer:
You've been listening to *On the Frontlines of COPD* on ReachMD. To access this and other episodes in our series, visit *On the Frontlines of COPD* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!