**How WWI Changed America**

**Podcast Series**

**Dr. Jennifer Keene – The Spanish Flu Pandemic** (18m 18s)

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**3 speakers** (Speaker 1, Libby O'Connell, Jennifer Keene)

**[0:00:11]**

**Speaker 1**: Welcome to the How World War One changed America podcast series, sponsored by the Andrew W. Mellon Foundation with host Dr. Libby O'Connell.

**[0:00:26]**

**Libby O'Connell**: My name is Libby O'Connell, and today our guest is Dr. Jennifer Keene, Dean of Wilkinson College, professor of history at Chapman University, and World War One expert. Jennifer, welcome.

**[0:00:40]**

**Jennifer Keene**: Thank you for having me. It's a pleasure to be here.

**[0:00:42]**

**Libby O'Connell**: Very interested to be talking with you about the flu epidemic that broke out during World War One as a matter of fact. Americans struggle just to understand World War One, they have even less understanding of the influenza epidemic. Can you set this story up a little bit and describe this event?

**[0:01:01]**

**Jennifer Keene**: Certainly. It's really quite unbelievable that people have forgotten about the Spanish influenza epidemic because it was the worst pandemic in modern history. The scale is almost incomprehensible. It was a flu virus that sickened about 25 percent of the world's population, including 25 million people in the United States. And the estimates, and these are estimates, are that it actually killed 50 million people in a period of 18 months, which turns out to be about four percent of the world population. So it's really just this phenomenal killer that actually far out paces the carnage caused by the war and the speed was also unbelievable. People could literally be healthy in the morning, develop flu like symptoms by noon, and be dead within a matter of days as flu related pneumonia set in. And so it was almost the sense that nobody was safe. You could be feeling fine, then suddenly succumb. And it was an unusual flu virus because it seemed to be particularly deadly for a demographic group that's usually relatively safe from flu related deaths. Most influenza viruses or epidemics attack the very young or the very old, people who seem to have less resistance in general to disease. But this particular flu was particularly deadly for young adults, people in the 20 to 40 age range. And that was quite unusual.

**[0:02:30]**

**Libby O'Connell**: So when did it break out?

**[0:02:32]**

**Jennifer Keene**: So the Spanish influenza epidemic, and I might just mention briefly why it's called the Spanish influenza epidemic, because it first breaks out in rural Kansas. So why don't we call it the American influenza epidemic? The flu pandemic actually occurred in three waves, and the first wave started in March of 1918, the virus appeared in rural Kansas and then in two military camps in Kansas and Georgia. And so right away you can be getting a sense of how the war was going to impact the transmission of this virus. So the soldiers are transmitters and quickly through troop movements, the virus spreads to Europe and affects both troops and the civilian population. Now because of press censorship in many countries, governments were not reporting on this first wave of the flu epidemic, not wanting to cause panic, but Spain was a neutral nation where censorship was not in effect. And so it was in the Spanish press that we first began to see reports of a particularly lethal new strain of flu attacking the civilian population. So hence the nickname that it develops of Spanish flu. But the first wave was actually in comparison, not really the deadly wave. So we have this first wave in the spring of 1918 and millions become ill, but it's not really so different from previous epidemics, but it's the second wave in the summer of 1918 when the virus mutates into one that can easily penetrate deep into the lungs and trigger acute respiratory distress almost immediately. And this one, the second wave strikes in three major wartime ports and Boston, Brest, France, and Freetown, Sierra Leone simultaneously. So you can see that the scope is really increasing. Three continents almost simultaneously are being penetrated by this particular lethal strain, and then it spreads throughout the world. So finally there was a smaller third wave in the winter/spring of 1919 and this wave was in some respects particularly tragic. It wasn't as lethal as the second wave, but because it occurred after the war had ended during the demobilization period, you have to imagine the feelings of families who had breathed a sigh of relief. The war ended, their son had survived. And then only to receive the news that a few months after the armistice, their son had died of the flu. This really just added an extra tragic note to the catastrophe of the world war.

**[0:04:57]**

**Libby O'Connell**: So do you think that this pandemic would have spread so widely without the war?

**[0:05:03]**

**Jennifer Keene**: Absolutely not. The war was clearly a major driver of the scale and the intensity of the pandemic. And that was for a few reasons. I mean, first of all, this was a world war. There was a sort of global movement, not just of troops, but of goods. Really, every nation in the world was contributing in some kind of way in terms of materials or products as well as manpower to the war. So simply the movement of ships and goods helps transmit it. Some historians claim it's transmitted by steam ships and steam engines, literally like ships and trains are the transmitters. And the second thing is that we have to imagine a war concentrates people. So suddenly there are concentrations of people in training camps and ships, certainly, but also in cities, people are moving to cities to take advantage of wartime jobs for instance, and there's a lot of public gatherings. You have public demonstrations, parades in the United States, we have Liberty loan campaigns and these are meant to bring huge groups of people together in order to show their support of the war. And we have, for instance, this really vivid example in Philadelphia of a Liberty loan parade in September of 1918, it drew thousands of spectators and participants. And then three days later there's a massive outbreak of new flu cases. So you can see how the war is really generating conditions that helps spread the virus. And then we could add in a few more things. The war required doctors, so a lot of doctors and nurses had been pulled out of civilian communities. Estimates are that nearly 30 percent of US doctors, for example, were serving in the military. So civilians had less access to medical care, and officials were quite honestly faced with a bit of a dilemma. They understood that crowded conditions hasten the transmission of the flu, but what were they going to do, shut the war down? I mean they had to keep going and so almost did it knowing that it was likely they were going to be a certain number of people that caught the flu and other diseases as well. There were also epidemics, for example, in the training camps, of measles and mumps. Men who had not been exposed to those germs before suddenly came into contact with them.

**[0:07:15]**

**Libby O'Connell**: What about far from the front lines in parts of Asia or India? Did the Spanish flu travel that far?

**[0:07:22]**

**Jennifer Keene**: It literally spared no one. Of course, I'm giving estimates of the deaths because it's very difficult to get exact numbers. There's not the good record keeping that we now have today when these kinds of epidemics strike, but these are just estimates. Nineteen million died in India, that's nearly five percent of the population. Ghana reports 100,000 people dead, Indonesia, which was then called the Dutch West Indies, there's 1.5 million that are reported dead. And so this is just giving you a sense of the scope. So in the United States, the estimate here is 675,000 Americans dead out of a population of 105 million people. And that's a lot. I mean we have about 120,000 American war dead during the war. About half of those are people who die of disease, mostly from the Spanish influence pandemic. So really we see that it left nobody untouched. We have, it's spreading throughout the world. Continents, countries in Asia and Africa, in Europe, in North America, civilian, combatants that really nobody is safe.

**[0:08:29]**

**Libby O'Connell**: The flu epidemic is massive. But how does it compare to something in the past like the bubonic plague, for example?

**[0:08:37]**

**Jennifer Keene**: That says a lot right there when that's your comparison. Well, it's not considered as catastrophic as the bubonic plague, which we sort of nicknamed the black death, which is estimated to have killed between 75 and 200 million people in the 1300s, which was of course at that time a much greater percentage of the world population than the numbers killed in the Spanish influenza pandemic. But another way to think about it is that nothing since 1918 has come even remotely close to this pandemic. The closest we had was in 2009 with the H1N1 pandemic, which caused about a million deaths worldwide. Certainly significant, but nothing on the scale of the 50 million people who died in 1918 and 1919. But it does give you a sense that that was a moment where suddenly interest renewed in the Spanish influenza pandemic. So something that had been long forgotten and then when it looked like, "Oh no, are we at risk of suffering a similar type of pandemic?" Scientists, historians got interested in this again and started really putting a lot more effort into trying to understand what had happened nearly a hundred years ago.

**[0:09:48]**

**Libby O'Connell**: So how did the medical community react to the pandemic? You said that over a third of them were already involved in medical care for our soldiers and involved in the war that way. But did the medical community at home react in a certain way? Did it lead to medical advances? What did people learn from it?

**[0:10:07]**

**Jennifer Keene**: So this was difficult for the medical community to really deal with because we have to think about where medical science was in 1918. And they were struggling to understand the flu at time when, for example, the existence of viruses was unknown. Scientists did not isolate the flu virus until the 1930s, they didn't understand, they didn't know what viruses were. There were no antibiotics yet. Again, these are not advancements that come until the late 1920s. And there are no medical procedures that we might use now when somebody suffers. A lot of the deaths were from flu related pneumonia, which was bacterial, but they didn't have the antibiotics to fight it, and they also didn't have the things that we have now, like mechanical ventilation, which we could use to help somebody breathe. And when people contracted flu related pneumonia, their lungs would fill up with fluid.

**[0:10:57]**

**Libby O'Connell**: They would drown.

**[0:10:59]**

**Jennifer Keene**: They would drown, right. Literally drowning in their body fluid. They developed this very characteristic sort of blue tinge to their skin and to their lips. And it was just a terrible thing to experience and to witness. So none of the things that we have today, and not to mention, of course, no vaccines. So they were really struggling to understand it. I mean, they did understand that groups of people seemed to transmit the virus. So there were cities that began to shut things down, shut schools down, shut churches down, movie theaters, to stop having events in support of the war. But it was very haphazard. They gave people masks, put screens between patients, tried to spray disinfectants. One thing that you see often in the First World War, are signs going up telling people to stop spitting. So they did have this idea that coughing, sneezing, spitting, that droplets were released in the air and that hastened the spread of the influenza virus, and they weren't really, they weren't far off on that. It's just that it was such a microscopic virus. A lot of these screens that they were putting up didn't end up being very effective.

**[0:12:04]**

**Libby O'Connell**: Yeah, they didn't help.

**[0:12:04]**

**Jennifer Keene**: So at the end, what really seemed to be the only thing that worked was for people, the minute they became sick, to go to bed and to have good nursing. So the key was to stay hydrated, to rest immediately, to not try to persevere. And this actually put the premium on good nursing. And so nurses proved to be the heroes of this story because they were the ones who really had a chance of maybe helping somebody survive. But you can start getting a sense here then about why the disease may have been so deadly for 20 to 40 year olds. That is exactly the population who when they don't feel well, does not want to go to bed. They think, "Oh, I can just tough it out." And that proved to be exactly the wrong thing to do.

**[0:12:50]**

**Libby O'Connell**: And that's exactly the age of the population that was then gone to war too.

**[0:12:55]**

**Jennifer Keene**: Exactly. And of course there was a lot of stigma attached to soldiers showing up for sick call and complaining that they didn't feel well. Doctors were sort of trained to be questioning of this, to suspect that maybe they're just malingering and trying to get out of training. And a lot of soldiers didn't want to go into the hospital because they'd risk losing their place in their unit. As their unit moved on, they might get reassigned. And so there was a whole structure that worked against people showing up and actually resting. Now this is what happened during the war, and then of course this was still something that the medical community was worried about.

**[0:13:30]**

**Libby O'Connell**: I'm really interested in what you said about the role of nurses in medical care. Little off the direct topic, but it sounds like, in a funny way, the outbreak of the Spanish flu contributed to the professionalization of nursing and the increase of respect for women who are nurses. Is that right?

**[0:13:50]**

**Jennifer Keene**: Well, it was a little bit of a double edged sword for them. I think that what you see, certainly in soldiers memoirs or diaries or letters, soldiers who came down with the flu, and here I'm speaking of American soldiers. When they are writing home to their parents about going to the hospital and how they were cared for, it's always the nurses that they champion. I mean, they're frustrated. The doctors either don't seem to understand or the kinds of treatments that they give only make things worse and they really talk with a lot of praise about how the nurses care for them. On the other hand, some historians have argued, this is one of the reasons that our memory of the pandemic evaporates so quickly because it could not be positioned as a triumph of medical science. They wanted to really talk about that there were high hopes for the medical community going into the war that unlike the civil war, this would not be a war where disease outpaced bullets in terms of deaths among American soldiers. And they were really working hard to have good sanitary conditions, to institute the best sort of medical practices to prevent disease from really taking the majority of American soldiers' lives. And of course the Spanish pandemic really undercut that effort. And so it's not really that the medical community then loudly proclaimed how important nurses were, or how significant they were because it didn't really fit into the kind of positive progressive story they wanted to tell about the continued march of progress in medical science. So unfortunately I think that really in the immediate postwar period, the strong contribution that nursing had made, got brushed aside as something insignificant and it was not really something that nurses could use to really insist upon their rightful place in the medical community.

**[0:15:41]**

**Libby O'Connell**: When the war ended, and doctors and researchers got back into the laboratory and started work on things like antibiotics and ways of controlling this type of contagious disease for the future.

**[0:15:53]**

**Jennifer Keene**: Absolutely, and I think that because of the global scope of the pandemic, it also really fostered cooperative international research projects and the sharing of medical information. So this really was not something that one country by itself could handle. You had to have international cooperation in order to stop the spread of this kind of virus. And so you see in the postwar period both the drive to better understand what was the flu, and this did lead to [inaudible] medical research that resulted in the discovery that the flu was in fact caused by a virus, not bacteria, and that it was transmitted through airborne droplets. So this was definitely medical research on an international scale that was productive. And then obviously the coming of antibiotics helped a lot, but officials also focused on creating more effective public health systems to share information on emergencies like this. So even in the United States where we did not have an active coordinated federal response, you saw examples like Philadelphia where still in the fall of 1918 there are Liberty loan parades where people are getting sick. Whereas in other cities, city officials had instituted regulations that prohibited any large gatherings from coming together. So it's very haphazard. And now we would see a more centralized approach nationally and internationally to try to share information, craft public health measures, and really recognize that we might create national boundaries, but viruses and germs don't recognize those. They go where they want, and so we need to have a kind of coordinated response.

**[0:17:29]**

**Libby O'Connell**: This has been so interesting. I really want to thank you for coming in and talking to us about the Spanish flu. I think so few people know that much about it and after this podcast they'll be all up to date. So thank you very much Professor Keene, Jennifer Keene, for joining us.

**[0:17:46]**

**Jennifer Keene**: Thanks for having me.

**[0:17:51]**

**Speaker 1**: Thank you for listening to this episode of How World War One Changed America. The podcast series is made possible by a grant from the Andrew W. Mellon Foundation, and the collaboration of the US World War One Centennial Commission, the Doughboy Foundation, the National World War One Museum and Memorial in Kansas City, National History day, and the Gilder Lehrman Institute for American History.

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