

Hi, I'm Deboki Chakravarti, I'm a science educator, and today we're going to talk about the people who make up public health.

If you've watched some of our other videos in this series, you might think that just about everything is part of public health.

That's because the goal of public health is to protect the health of people wherever they live, learn, work and more. And everyone, from first responders to restaurant inspectors, has a part to play.

It's a team effort, and different public health professionals fulfill different roles to tackle a bigger issue.

Take the human papillomavirus, or HPV, which is the most common sexually transmitted infection in the U.S. Some types of HPV can cause cancer -- including throat cancer and anal cancer. And cervical cancer, which is the 4th most common cancer affecting people assigned female at birth.

And we know about this issue because of epidemiologists. They're public health professionals who examine health conditions, like infectious diseases or substance misuse and look for patterns in how these conditions affect populations of people. Then they use that data to help prevent and treat those problems.

They're basically disease detectives.

Back in the 80s, epidemiologists noticed the connection between certain types of HPV and cervical cancer. They realized that if we could vaccinate against HPV, we might be able to prevent cervical cancer, too.

But before a vaccine can be rolled out to the public, it needs to be tested. And those tests generate a lot of data about things like the safety of the vaccine -- as well as its efficacy, which is a measure of how well a vaccine prevents disease. This is where biostatisticians come in. Biostatisticians use mathematical analysis to help doctors, policymakers and other folks make data-driven decisions, like whether or not to approve a vaccine or experimental treatment.

Whatever they're studying, biostatisticians collect and organize important numbers, like how many people go on to develop a disease after vaccination and how many don't. Then they interpret those results and explain the numbers to scientists, health care providers or regulators, so they can make adjustments or give the vaccine the okay.

But even after a vaccine is approved, public health experts are far from done. Now health educators have to actually convince the public to get vaccinated.

Broadly speaking, health educators teach people about healthy behaviors and health care options. They develop programs based on the health needs of whole communities and teach those programs in places like schools and hospitals.

After the first HPV vaccine was approved in 2006, health educators created materials that explained why the vaccine would be helpful and how people could get it.

In Scotland in 2008, for instance, health educators partnered with schools and developed a program targeted at girls aged 12 to 13, to try and protect them from cancer-causing HPV before they were likely to be sexually active.

The educators made pamphlets and posters about the risks of HPV and the vaccine -- both the benefits and the possible side effects. They also created a curriculum about vaccination that schools could use in the long term.

By 2019, through the combined efforts of public health professionals, about 85% of all girls in Scotland public schools were vaccinated against HPV.

This campaign had a real effect on cancer risk, too. In 2019, less than 5% of women who went through this program as kids showed signs of cancer-causing HPV, compared to 30% of women who didn't go through the program.

Now, the public health professionals we just talked about played a big role in tackling issues like cervical cancer. But protecting the health of all people takes an even bigger effort -- bigger than public health professionals can do alone.

For instance, doctors, nurses and social workers play a complementary role to public health. The major difference is that they typically treat individuals, while public health professionals focus on groups of people.

But even those of us who don't have one of these jobs can help support the public health mission. We can all volunteer to make a difference as community organizers and advocates, doing things like putting together events where nurses can vaccinate people, or gathering information about the health needs in our neighborhoods.

Or we can be activists and fight racism, homophobia and other social issues that stop people from accessing the resources that impact health, like safe living conditions and unbiased medical care.

Even learning more about public health and understanding how people can work together to live healthy lives helps the cause.

Public health workers are all around us -- preventing disease and injury, keeping our communities safe, and striving to give everyone the opportunity to live a healthy life. It

sometimes seems like an overwhelming task, but if we work together, we can make real progress.

Thanks for watching! This video is part of a series created by Complexly and the American Public Health Association to shed a little light on the important work that public health does. To learn more, visit apha.org.

Sources

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