

FAST FORWARD: CDC

(COLD OPEN: GUY IN HAZMAT SUIT SHARING A DRINK WITH A MOSQUITO)

(TITLE SEQUENCE)

VO: Welcome back to Fast Forward. Today we're in Atlanta, Georgia, visiting the Centers for Disease Control and Prevention, A-K-A the CDC. What's the CDC you ask?

KEVIN: The CDC is the nation's public health agency—charged with helping prevent illness and keep the population healthy.

JENNIFER: We are responding to reports of disease outbreaks. We may go out in the field and help investigate what's happening and how to stop it.

JEANETTE: We employ about 15,000 all over world, 10K full time...here in Atlanta, which is our main campus. We have 5,800 people, and we are the 20th largest employer in the State of GA. The CDC's 24/7 mission is to save lives and protect people.

VO: Another way of looking at it is that the CDC is one of the best sources on the planet to answer any health related questions you might have. So let's start asking.

What's up with that giant mosquito from the top of the video?

KEVIN: If you think about the problem of malaria, it is like 1 big giant mosquito, because the mosquito is the big challenge and transmitter of the Malaria parasite, plasmodium, that gets passed to us when they bite us.

Malaria is an incredibly important disease. In fact, CDC was started in the 1940's to fight malaria...so it is like one big mosquito problem.

VO: Okay, I'm thinking it'll help to learn a few terms for this video. So let's get started:

Epidemiology.

VO: Epidemiology is the study of diseases and how they spread. But Jeanette has a more creative way of looking at it.

JEANETTE: Epidemiology is disease detectives—it's looking at an outbreak that you have—could be food poisoning, HIV, or AIDS, and trying to find a source or going back and trying to find a common root to all those diseases and linking it to source. Like with salmonella, sometimes you get salmonella outbreaks and you can link it back to an infected tomatoes, or spinach—that's epidemiology.

(BELL DINGING)

JEANETTE CONT'D: It's like a crime show but with disease.

JENNIFER: That's a good analogy!

JOHN: It's sort of like CSI, but it doesn't all take place in an hour...

JENNIFER: and we're not as pretty! (LAUGHS)

VO: Nice, and wouldn't it be great if the CDC had some sort of program where teenagers could get a chance to try this themselves? Say no more.

BETTY: Here at CDC we have a program in the summer called disease detective camp...

JEANETTE: It gets high schooler's into the CDC, and they get to take tours of some of the facilities, meet CDC staff...

BETTY: They can participate in experiments and it gives them the opportunity to get interested more in what goes on behind the scenes.

JEANETTE: At the end of it they do, disease detectives. They are given a scenario where there is a disease, and they have to interview people, find out the symptoms, and figure out what the disease is. It's really cool and it gets the high schooler's engaged in public health.

VO: That's some serious on-the-job training.

Okay, let's get to another term you hear a lot at the CDC.

Mutation!

JACINTA: A mutation is a genetic alteration in the DNA of a bacteria, virus, or fungi.

(BELL DINGING)

VO: And it can also be found in plant and animal cells too. And mutation plays a big part in something called the evolution of antibiotic resistance.

And it relates to how antibiotics fight infections in your body when you're sick.

I'll let Stephanie, CDC public health analyst, tell you more about that.

STEPHANIE: I've been tempted at times, when I feel better, to not finish taking my medication, or finish taking my antibiotics. You get the strongest of the strong that are still living if you don't finish your antibiotics.

(GRAPHICS SEQUENCE)

VO: What this means is that if an antibiotic kills some bacteria, but leaves more resistant bacteria alive, the population will evolve as the resistant bacteria reproduce and become the majority.

So the CDC is at the forefront of science. But Jeanette knows something about this place that just might surprise you.

JEANETTE: The great thing about CDC is that you don't have to be scientist to work here...

VO: Really? Keep talking.

JEANETTE: I didn't like math in high school, but I did like science. Not enough to major in it in college, but I liked English, so now can come here and communicate about science....

PREETI: We have security personnel, technology folks, public health people, and healthcare

workers

BETTY: You can do other things like: graphic design, communications, education materials, brochures, or posters. You can also do laboratory...travel or stay local.

JENNIFER: We all work as a team and I think that's one of the things that make CDC such a cool place to work.

JOHN: The big field now is bio-framadics; it's looking at huge amounts of data and processing...that's a lot of computer background, and computer codes. Technology is moving so fast, and we interact with those on a daily basis.

VO: Cool jobs. So what kind of people do you hire?

JACINTA: If you're trying to work at CDC, the first thing you need is to have a passion for public health...

KEVIN: I think that's kind of the glue bringing together many different professionals and training backgrounds here at CDC—people who want to make the health of our nation better, and go beyond our borders to work with other nations to try and make it a healthier planet.

VO: Okay, just in case there's any doubt about what kind of folks work here, I want to finish with a story about an amazing day Jennifer had with the CDC.

JENNIFER: The coolest thing I ever did as part of my job was actually on September 11th, 2001. We were both here at work that day when the planes hit the World Trade Center towers and they had turned TV on in the CDC lobby, and we were looking up and we were thinking to ourselves...Oh my gosh, I want to help. How can I help? And CDC was one of the few agencies that had a way to help. So they were actually going to send a team to NYC that day, on September 11th. And I raised my hand and volunteered to go. So I was on CDC Lear jet that flew into Manhattan that day with a fighter escort that day. And set up surveillance in hospitals in NYC. So that was a pretty intense time, but it's one of the things I'm most proud of at CDC.

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