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This doctor says violence is contagious, and we should treat it like a disease

Battling violence in the US may not be so different than fighting AIDS in Africa

By Ana Swanson October 2



Diana Nicolay, a former employee of Umpqua Community College, wears a school sweatshirt during a candlelight vigil for those killed during a fatal shooting at the school Thursday, Oct. 1, 2015. (AP Photo/Rich Pedroncelli)

How can we prevent future tragedies like the shooting that took place in Roseburg, Ore., on Thursday?

Some doctors believe that the key to preventing this kind of violence is to literally treat it like disease. One is Gary Slutkin, an epidemiologist who spent a decade fighting AIDS, tuberculosis and cholera in Asia and Africa.

After returning to the U.S. in the 1990s, Slutkin had a realization. The patterns of violence he saw in U.S. cities looked eerily similar to how he had seen infectious disease spread in communities around the world. He went on to found a group called Cure Violence, which advocates treating violence with the same public health approaches that are widely used to fight disease.

This model is being used to prevent community violence in 15 U.S. cities and seven countries, the

group says. But Slutkin believes that it has a much bigger role to play in helping to the U.S. address the tragedy of mass shootings, like the one that occurred in Roseburg.

I spoke with Slutkin, who now teaches at the University of Illinois at Chicago School of Public Health, about why he sees violence in America as an unrecognized epidemic. This interview has been edited for length and clarity.

Treating violence as a public health issue is still somewhat controversial in the U.S. For example, the NRA pushed to delay the confirmation of U.S. Surgeon General Vivek Murthy last year after he said that that gun violence should be treated as a public health issue. What's the history of this idea?

What has been meant by this in the past is that you can approach violence with epidemiological methods, which essentially means that you can apply science to it, figure out where it is, and predict it.

But we've gotten much more sophisticated since then, and now we have very specific health methods for reducing it. We understand that the people doing violence have picked up a set of behavioral patterns by the way the brain copies things. And also that people follow their peers, and there are strong brain processes that encourage you to do that.

If you go beyond thinking about violence as a moral problem and instead try to understand it as a health issue, many things that were previously unexplainable can be explained. People are always saying "senseless acts of violence," but that's really because we haven't made sense of it.

What is the main opposition to this idea?

There are health researchers who are highly focused on guns themselves, and they think that it being a health problem has something to do with that, and it doesn't necessarily. Our scientific understanding at the Institute of Medicine is much more fundamental -- it's understanding behavior. Arguably the most important thing that we do in public health is change behavior, such as eating, smoking, exercise, sex.

The end game here is really to understand and change the behaviors. And we've been able to show that you can drop the amount of shootings and killings very fast by using health-based detection and behavior change methods. Health workers can drop the numbers of shootings and killings in a neighborhood 50%, 70%, up to 100%.

How do health workers do that specifically?

In cities like Chicago, Baltimore, Kansas City and New York, there are workers called interrupters. And their job is to find out who is upset or angry or thinking about doing a shooting. No event has happened yet, but maybe someone was mad at someone last night at a party, or someone messed around with somebody's girlfriend.

Because of how they were selected and trained, those interrupters are trusted, and they find out who is at risk in the neighborhood. These workers approach the person, and they help cool people down and try to find some kind of resolution. And the research has shown that we can stop those events.

These workers act the same way as other health workers, who are looking for active cases of tuberculosis that could spread. Right now, there is very little plague or bird flu or SARS, why is that? Because there are health workers out there looking for cases, and they're able to prevent a first case, or if there is a first case, they're able to prevent the spread.

Do these methods really apply for a mass shooting incident like the one that happened in Oregon? Mass shootings seem much more sporadic and difficult to predict than the kind of community violence you're talking about.

I understand how they appear differently. But these mass shootings that are happening in public places are definitely contagious. They become more frequent

after each event. That's part of how the brain imprints things -- people do the same thing they saw.

So they can be managed in a similar way, having health-based detection and interruption networks that spread out along wide nets. What I suggest is that statewide health departments begin to look for where there is a lot of susceptibility. And when you do that, you end up finding a lot of other people who also need help and have different levels of the same problem.

We see the same profile repeatedly of highly marginalized, socially disconnected and depressed people. In people who are really marginalized, who have been really socially disconnected, the brain lights up in an area that is associated with pain. They have real pain. Some people are living with that chronically, and these people need to be helped.

Our society has developed too many people who are like this, and we need to turn a corner by understanding what's going on here. And that's what health is about. It's not exactly the common view, because there's a lot of anger. But the health sector really tries to understand a problem, not to judge it or blame, and very practically come up with solutions.

Is it really practical to deploy health workers to help all of the socially disconnected and depressed people in America? It just seems like the scale of this problem is so huge, would health workers really be able to address it?

The answer is certainly yes, this can be done. It will require a large number of health workers. This is a large job opportunity for the country and particularly a job opportunity for people in the community.

I'll give you an example. I worked in refugee camps in Somalia. We had six doctors, and there were a million refugees in 40 camps. There was serious malnutrition, an unimaginable rate of death from diarrhea, pneumonia, malaria. So it seemed like this was an unmanageable problem. But what we did is we recruited tens of thousands of health workers, who were taught just a few simple things that needed to be done.

These are paid jobs, but they're paid at a scale that's different than the people who have gone to ten years of school. Because what's required to help a mom manage diarrhea, or talk to a sex worker about safe sex, or talk to someone who is suffering a lot, it's often not that

complicated. We're either giving people nothing or super-everything, and it makes absolutely no sense.

God knows there are tens or hundreds of thousands of people who could use some kind of help in this arena. The country is suffering. Anxiety and depression scores in high school and college are much higher than they were 30 or 40 years ago.

Why do you think that might be?

It's a very achievement-oriented, status-directed, individualistic culture, which also somehow leaves an awful lot of people behind. And the people that are left behind are in some cases invisible to others, but they're suffering. And their suffering really affects all of us.

It's easy for us to understand how a disease can be transmitted from one person to another. But how does this work for violence?

The thing to understand is how the brain acquires behaviors or responses. TB replicates itself in the lung. Cholera multiplies in the intestine. The brain is the intermediary that takes in violence – having seen it, or having experienced it -- and then produces more of it.

It's more than one thing that's set up to do this. Copying is the main way we learn things, and it's evolutionarily functional in most cases. We are now aware that there are circuits in the cortex of the brain that fundamentally just do what they see.

There are also reward pathways that correspond with getting your friends' approval. And there's a whole other system that keeps you locked in if everyone's doing something but you're not, and that's the pain side. And then having an underdeveloped frontal lobe, like teenagers do, means behaviors are more predicted by what their friends are doing than what the consequence could be, for example going to prison or dying.

This was an epiphany for me when I was doing HIV AIDS work – whether people used a condom or not was not primarily predicted by whether people knew anything about AIDS, it was largely about what their friends were doing.

Violence is a particularly contagious behavior because it is very, very emotional. Al Bandura at Stanford figured this out years ago, that the more salient the action, the more attention it gets, the more likely it is to be copied.

What can you do after an incident like this shooting to stop the contagion?

It actually isn't so complicated, which is really fortunate. State and health departments should get funds, and they should develop detection and interruption networks that look at high risk areas, where there are a lot of individuals who are possibly socially marginalized, where mental health problems are common, and start to get into detection.

Yes, these are rare events, but the payoff is going to be so much more than the prevention of these events. There are going to be so many more people who will be helped, and that will benefit our healthcare system, our schools and our prison systems.

It's just that our world view on this is still stuck saying that these are bad people. In a way you're telling the world that the earth is round, even though it doesn't appear to be. You're telling people to hydrate their child when he has diarrhea, even though it appears to make diarrhea worse. It's not intuitive, but it's what science has revealed.

That's how we turned the corner on leprosy and plague and TB and most infectious disease. We stopped seeing these as moralistic issues, and realized that there are invisible things going on, and suddenly we understood it. We began doing hand washing, rat control, immunizations, and a whole host of new strategies that were not in play in the early 1800s. Even in recent history, we were blaming people for alcoholism or for mental illness, and some people still do that. But this is in the same category, these are brain processes.

When a problem is going on and on, and people are saying the same thing, and they're blaming the same thing, and everyone is angry, what does that mean? What is the diagnosis of that? It's because people don't understand what's going on, or they haven't found a solution that is feasible. And it's because people don't see this as a health problem that is contagious, and possible to detect and interrupt.

We do it all the time in public health, and no one sees it. No one sees why there isn't smallpox or the plague or bird flu. That's public health doing its job, and that's what needs to be applied for these shootings.

Ana Swanson is a reporter for Wonkblog specializing in business, economics, data visualization and China. She also works on Know More, Wonkblog's social media channel.