

2017

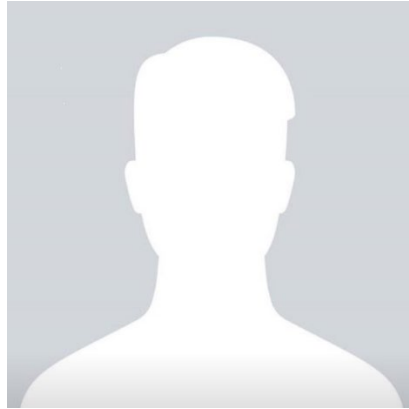
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Health and healthcare are major items of interest in the news today, and for each of us personally, but we often don't take the time to be informed until confronted by a crisis. If you or a friend were to suddenly face such a crisis, do you know what options exist in your community? The health providers of Runnels County are coming together in a sustained effort to inform our communities and their citizens about prevention and treatment options that save lives, time and money. Each week readers will have an opportunity to learn from one of the local health professionals. If we are to be informed about the present and future we must learn something about the past. Therefore, we will begin with a quick look at the history of health and healthcare.

Leading causes of death, according to a list published for Boston, MA in 1811 were: ague (malaria and other relapsing fevers), cholera/diarrhea/dysentery, consumption (tuberculosis and pneumonia), quinsy (severe tonsillitis), stillbirth and worms. In 2014, according to the Centers for Disease Control (CDC), the top ten causes of death were: Heart disease, Cancer, Accidents (unintentional injuries), Stroke, Alzheimer's disease, Diabetes, Influenza/pneumonia, Chronic kidney disease, Suicide. When we actually study population health today, compared to that of prior ages, we see that most of the gains in longevity preceded antibiotics and other 'miracles of modern medicine'. In truth it has been the productivity of farmers, the ingenuity of engineers and the material abundance produced by a free, thrifty and industrious populace that led to the greatest increase in life expectancy. First in Great Britain and then in American and elsewhere malnutrition, contaminated water, and insect borne diseases were largely eliminated.

When we examine the health and safety issues responsible for most of the disease, suffering and death before 1900, we see it is due mostly to causes and conditions beyond the control of the individual or their family. Now the situation is radically different. Of these, only Alzheimer's disease has a cause that appears to be largely independent of behavior. Influenza and pneumonia deaths would be greatly reduced if everyone was fully vaccinated. Tobacco, abuse of other substances, lack of exercise, obesity, and lives that are too full to allow adequate time for sleep are the underlying causes in a large portion of each of the other conditions.

Today those of us in the medical field have the same calling as did our predecessors. We aim to prevent premature death, foster well-being throughout life and help the dying to die with dignity, in comfort, at the place they prefer. More and more this means helping people to make better choices for themselves and their families. Not only are a person's choices the main determinant of health, it seems that as a society our choices are becoming worse, not better. After a steady improvement over the last few years, statistics recently released (www.countyhealthrankings.org) show that the rate of preventable death went up in 2015 (the last year for which statistics are available). Sadly, this trend appears destined to continue for some time. The health providers of Runnels County are coming together as the Runnels County Healthcare Coalition. We believe that we are each responsible for the health and wellbeing of ourselves and our family, and we are all called to help our neighbors when they are in need.



SP

Sociopathy as a Public Health Issue

October 12, 2017

“We struggle for the words to explain to our children how such evil can exist, how there can be such cruelty and such suffering....” Donald Trump, POTUS. Las Vegas, NV, 10/4/2017

In the movie “Hero” Sam Elliot plays Lee Hayden, a Western icon whose career has peaked long ago, and who is struggling in silence with a new diagnosis of pancreatic cancer. In a pivotal scene he is given a Lifetime Achievement Award. In his ‘acceptance speech’ he actually declines the recognition, saying that achievement is “the result of hard work.” He goes on to say that although he has worked hard, he’s not sure he deserves the award. At that point someone in the audience yells, “We love you Lee!” And Elliot/Lee expresses his love for them, saying that he is nothing without the audience who love him, but “I’m just a grain of sand. We’re all just grains of sand ... we’re just people ... workin’ hard and tryin’ to do our best ... I’m no better’n you, and you’re no better’n me ... everyone in this room is as deserving as I am of this award ...like you, miss.” That is when he chooses, evidently at random, one of the women in the audience to whom he gives the award. (By the way, Lee Hayden was wrong when he said that he didn’t deserve that award any more than anyone else in the room. It is obvious that he did, but it may not be obvious why.)

On the night of October 1, 2017 in Las Vegas, Nevada, as the result of some very hard work, SP (I refuse to use his name) killed 58 people and then himself. But because of the choices he made his hard work resulted not in achievement, but in death, suffering and incalculable loss. So then, to come back to the President’s words, what do we tell our children? How is it that cruel thoughts become cruel plans, and cruel plans become cold preparations which then lead to horrific actions resulting in inconceivable suffering? We could begin by pointing out that we all have choices; the choices we make always affect what it is that we actually do, and what people think of us. For example, from time to time even the best of us have cruel thoughts (if you doubt it, see what St. Paul wrote in Galatians 5:12!), but we can choose to nurse the cruel thought or choose replace it with another thought, or simply busy oneself with some task. Beyond that, however, we need to teach everyone that there are important things beyond choices and hard work, and even beyond all that we can see or touch or put into words. Whether or not we use words such as “spiritual” we each have evidence of these more important things by way of the

feelings generated as we relate to and connect with the world and the people around us. It is this betweenness that gives meaning to our lives. When those feelings are missing life is only a matter of our own sensations, and the lives of other people have no value beyond whatever part they may play in providing those sensations. In the general population about 96% of people have these feelings of betweenness, but the other 4% do not. They go mostly undetected, but when they are discovered they are labeled “sociopath” or “psychopath” (the two terms are equivalent). Although they have a psychiatric diagnosis, these people are not insane. Insanity refers to a failure of reality testing and applies in any case where an individual cannot distinguish the true state of affairs in the world from a false perception or thought. Actually, the 4% usually think that they are the only sane ones. To them it seems that everyone who acts out of compassion or loyalty or love is doing something crazy, based on a false understanding of the way the world really works! You may think that there is a difference between the psychopathic murderer and the sociopathic 4% of people that statistically are part of every large crowd or population of people. You would be wrong. The only thing that prevents any sociopath from committing murder is their perception that the difficulties and consequences are likely to exceed the benefits of taking a particular human life. While much could be said about the public health effects of crime, drug abuse, etc. attributable to individual sociopaths on a daily basis, the largest public health issue arises when horrific acts are discussed non-stop on cable news and reverberate through social media. This corrodes the quality of life for everyone and contributes to what are known as Adverse Childhood Experiences (ACEs). Children all over the country were terrified after September 11, 2001, and no doubt there are thousands or millions of children now who are asking just the kinds of questions to which President Trump referred. If these children cannot be re-assured in a way that is meaningful, this ACE may contribute to the future burden of chronic disease in ways we will explore in a future column.

To return to Lee Hayden, the reason he deserved the Lifetime Achievement Award is because he evidently delivered his part(s) in ways that allowed his audience to feel real feelings – betweenness. Like the man said, “We love you Lee!”

The Miracle of Vaccination

October 19, 2017

It is recommended by the CDC (Centers for Disease Control) that everyone get a flu shot this year. Before we consider why, a look at the history of vaccines will be useful.

Smallpox was a devastating disease for thousands of years, but in 1796 an English doctor named Edward Jenner observed that milk maids who had gotten cowpox seemed never to get smallpox. He developed a theory that if someone were to be intentionally infected with cowpox and then exposed to smallpox they would not come down with the dread disease. He tested his theory and in 1801 published, "On the Origin of the Vaccine Inoculation," in which he summarized his discoveries and expressed hope that "the annihilation of the smallpox, the most dreadful scourge of the human species, must be the final result of this practice." In late 1975, Rahima Banu, a three-year-old girl from Bangladesh, was the last person in the world to have naturally acquired variola major (the worst strain of smallpox) and the last person in Asia to have active smallpox. She was isolated at home with house guards posted 24 hours a day until she was no longer infectious. A house-to-house vaccination campaign within a 1.5 mile radius of her home began immediately, and every house, public meeting area, school, and healer within 5 miles was visited by a member of the Smallpox Eradication Program team to ensure the illness did not spread. A reward was also offered to anyone for reporting a smallpox case. On May 8, 1980, almost two centuries after Jenner published his hope that vaccination could annihilate smallpox, the World Health Organization officially declared the world free of this disease. Since this is the only example of the complete elimination of a widespread deadly disease we can easily see why the eradication of smallpox is considered the biggest achievement in international public health.

There is much to be learned from this story. First, a highly effective intervention was developed (in 1796) long before there was any theoretical framework for how or why such an intervention might work. Second, it was not necessary to use the actual disease-causing agent to make an effective vaccine against it. Third, we now know that smallpox vaccine results in immunity in only 95% of cases, but it has been 100% effective in completely eliminating the disease from the face of the earth. Finally, and most importantly, the way that victory was finally achieved was by isolating cases and immunizing all possible contacts. This targeted immunization succeeded where previous efforts failed by ensuring it was unlikely that anyone not immune to the disease would come in contact with the virus. By creating this community immunity (also called herd immunity) the vaccine's imperfect effectiveness was good enough to stop the spread of disease.

Do you remember mumps? Before the U.S. mumps vaccination program started in 1967, mumps was a universal disease of childhood. Since the pre-vaccine era, there has been a more than 99% decrease in mumps cases in the United States. It is therefore tempting to forego the pain and trouble of immunizations. But if a large percentage of the population does that, an isolated case of a traveler with mumps coming into the community can easily turn into a mumps outbreak as it jumps from one unimmunized person to another. If everyone in the community were vaccinated the chance of a sick person coming into contact with someone who is not immune would not be zero (because the vaccine is not 100% effective), but it would be much lower. Mumps is included in the MMR that is universally recommended at 12-15 months and 4-6 years of age. According to the CDC Two doses of the vaccine are

88% effective at protecting against mumps. The effectiveness of most vaccines rests in large part on community immunity. Next week we will consider the flu vaccine.

Flu and flu vaccine(s)

October 26, 2017

There are two types of influenza (flu) that cause disease in humans, Influenza A and B, and there are an untold number of other viruses that cause “influenza-like illness” (ILI) in humans. Influenza is important because anyone who comes down with it feels very bad for several days, and it can lead to death in some people. Most people who die of flu are either elderly or they are young children, and most of these die from a complication such as pneumonia. Getting a flu vaccine will generally reduce the likelihood that an individual will come down with the flu by 40 to 60%. However, the value of immunization extends beyond the individual who is immunized. As we noted last week, the key to eliminating smallpox was the immunization of people in contact with the sick, so it is with flu as a study done here in Texas shows. Focused efforts to increase immunization of school children against flu in Temple/Belton area resulted in a reduction of 8 to 18% of flu cases in adults (35+y/o), even though there was no increase in immunization rates for adults in Temple/Belton. This is compared to the control populations in Waco, Bryan and College Station who did not have the added emphasis on immunization for school children. This highly significant result was achieved, even though only 25% of the children in Temple/Belton were actually immunized. In another project, 85 percent of the school-age children in Tecumseh, Michigan were vaccinated against influenza A (H3N2) just before the epidemic in 1968, resulting in a 67 percent decrease in the attack rate of epidemic flu in that community, compared to a similar nearby community.

Vaccines work by exposing the body to an agent that is like the disease causing agent, but does not cause the disease. This effectively “teaches” the body to respond effectively when it is exposed to the actual disease causing agent. The way that this teaching occurs seems almost miraculous, in that every person is born with an immune system that is capable of attacking literally millions of different germs (viruses, bacteria, fungi), by first identifying the germ, and then mounting various defenses aimed specifically at that germ. The way that the body identifies a germ is as if each germ has one or more keys (antigens), and when one of these keys fits into a lock in the body’s immune system the body unleashes the appropriate targeted defense. It takes about two weeks for the defense to achieve maximum effectiveness, but once it has been unleashed the body stands ready and waiting for another assault by any germ that has the same key. That is why we try to immunize people two or more weeks before the expected exposure.

There are now several different vaccines for the flu. Although there are intranasal vaccines the most effective vaccines are shots, and these are safe for virtually everyone, even those who have egg allergies or are pregnant. All flu vaccines this year are effective against the same three strains – two types of A (H1N1 and H3N2) and one type of influenza B. Some manufacturers add a second strain of B antigen. The reason that flu vaccines are not more effective than 40-60% is that there are hundreds of strains of flu that differ in their antigens. In 2009 there was a small pandemic associated with the “Bird Flu”, a type of Influenza A. Even though the 2009 vaccine contained H1N1 antigen, the new strain was sufficiently different so as to render the vaccine ineffective against it. This new H1N1 has replaced the old H1N1 in the environment, and the 2017 vaccine is effective against it.

The CDC advises everyone who is older than 6 months should get a flu shot, preferably by the end of October. I agree, and I received mine on October 12.