

The Benefits of Preventative Medicine

When I was fifteen years old, I was in a soccer match when suddenly, I was hit in the back of the head by another player. Seven neurology appointments later, I was diagnosed with a concussion and a chronic illness called fibromyalgia. State law requires coaches to take courses on concussions; however, these courses focus on spotting telltale signs of a concussion and care for a concussed player rather than how to prevent a concussion from occurring in the first place. I believe this reflects the current curative theme of medical care: one in which the healthcare team deals with the patient's condition when it is already at its most severe. However, I believe that through extensive research, education, and genetic testing, the future of healthcare will have more of an emphasis on preventative care rather than curative

Although my coaches never taught me how to prevent a concussion from occurring, doctors are beginning to study various preventative measures. For instance, Michigan Concussion Center Associate Director of Research Dr. JT Eckner has been studying the relationship between neck strength and the chance of receiving a concussion upon impact. He believes that neck strength has a positive relationship with concussion prevention stating, "we have seen that our research participants with stronger necks experience smaller head acceleration responses, so we think that if an athlete does exercise to strengthen their neck it should reduce their concussion risk," (UofM). Although individuals such as myself were unable to benefit from preventative treatments for concussions, researchers such as Dr. Eckner show that these treatments are being developed.

Preventative medicine can also be applied to those with chronic illnesses. Many individuals in our community are suffering from chronic illnesses such as diabetes. Although the

invention of insulin was revolutionary, the disease remains the ninth-most common cause of death globally (WHO). In addition, purchasing insulin is expensive. Recently, there have been reports of individuals dying due to insulin rationing caused by the 353% increase in insulin prices within fifteen years. To combat this, many facilities have shifted towards preventative medicine. With the creation of the National Diabetes Prevention Program (National DPP) in 2010, healthcare gravitated towards education and awareness in hopes of preventing or delaying Type 2 Diabetes. On their website, the National DPP provides a training module with lessons on what constitutes a healthy meal, how to get active, and how financially insecure families can still eat healthily. I believe that programs such as the National DPP mirror the future of healthcare. As the world becomes more digitized, websites like these will positively impact Americans and those worldwide.

When discussing preventative healthcare, Stanford Medical Journal compared our current healthcare system to being asked to interpret an entire movie after only watching it for a brief moment. When patients come into their office, medical professionals are expected to care for them after only seeing a glimpse into their health history. Currently, healthcare teams are mainly involved in a patient's life when their disease has set in. However, with a shift away from curative medicine, the healthcare field will evolve to focus on prevention, education, and finally, genetic testing. Similar to our achievements with breast cancer and the mutated *BRCA1* and *BRCA2* genes, the CDC has reported that many companies are focusing their research on finding genetic predispositions to diseases such as diabetes and various cancers. Once found effective, these tests can identify an individual's predisposition to a disease, determine the severity of the disease, and even identify genetic variations that can influence a person's response to medicines to help doctors determine the best treatment to use for a particular individual.

As someone who suffers from a chronic illness, these changes to healthcare fill me with great optimism, as these have the potential to alleviate my symptoms and prevent others from developing the same ailment. This shift also has the potential to impact the lives of those who could not afford treatment before, and also allows those to work on preventing their illness rather than trying to manage it. Finally, this change will greatly impact the future of healthcare, as the field will shift away from seeing patients at their worst and towards helping them maintain their best.

Works Cited:

Centers for Disease Control and Prevention. (2019, September 20). *Evaluating Genomic Tests*. Centers for Disease Control and Prevention.
<https://www.cdc.gov/genomics/gtesting/>.

Centers for Disease Control and Prevention. (2019, August 10). *National Diabetes Prevention Program*. Centers for Disease Control and Prevention.
<https://www.cdc.gov/diabetes/prevention/index.html>.

Moser, D. (2020, May 4). *Dr. JT Eckner researching neck-strengthening as concussion prevention strategy*. Michigan Concussion Center.
<https://concussion.umich.edu/2020/04/27/dr-jt-eckner-researching-neck-strengthening-as-concussion-prevention-strategy/>.

Stanford Medicine Newsletter. (n.d.). *Digital technology can power personalized, preventive health care*. Stanford Medicine Newsletter.
<https://med.stanford.edu/communitynews/2019winter/digital-health-can-power-personalized-health-care.html>.

World Health Organization. (n.d.). *The top 10 causes of death*. World Health Organization.
<https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death>.