## Is There a Vaccine for Coronavirus? April 11, 2020

Wei Na had a friend who recently died of this new Coronavirus and was so upset. This was a friend from her time in university whom she knew very well. Though they had lived in different cities since they graduated, they had kept up with their new work, weddings and marriages and their children. They were good friends. This was very distressing for Wei Na especially since she had heard of so many people getting sick and dying from this new Coronavirus, but especially so since a good friend died from this virus. She was thinking so many times, can't anything be done to affect the human damage from this virus?

As Wei Na was thinking this her cell phone went off and another friend called her, and this friend was from the same town she was in. This friend was crying and told her another of their friends just was taken to the local hospital with symptoms, which seemed like those of the Coronavirus. Her friend told her she would not go to the hospital as so many there had this illness and she did not want to get the same illness. However, Wei Na was very close to this friend as she was like a sister to her and she needed to go. She knew she could make it to the hospital before her friend arrived, so she quickly got ready and headed to the hospital.

Upon arriving at the hospital, Wei Na found a friend there in the Emergency Room who was a doctor. She asked the doctor where those suspected of having the Coronavirus would arrive and the doctor said actually at the table in the room across the hall, which they both could see. Wei Na asked her doctor friend if she could wait here and told her the story of her friend dying and the one now coming to the hospital. Wei Na's doctor friend told her she was so sorry, but these were not uncommon stories these days. Wei Na asked her doctor friend if there is any good treatment for these patients. She said that apart from supportive care there is no good treatment yet.

Then Wei Na asked if there is no good treatment then why are there not any immunizations? Wei Na's doctor friend said that this is a very good question. She said that actually her hospital is involved some immunization studies for the Coronavirus, and she is on the study group for the development of a Coronavirus immunization. She said that they are working in this hospital with many others throughout their country and with many around the world. Wei Na was amazed at the broad approach to development of a vaccine.

Just then Wei Na and her doctor friend noted that their friend was arriving at the Coronavirus check in station. They waited for a few minutes as their friend was checked in and then was moved to the Emergency room focused Coronavirus treatment area. There she was evaluated and then had a chest x-ray and the Coronavirus test, and this would require a wait. So Wei Nai and her doctor friend resumed their discussion about the Coronavirus immunization.

Wei Na's friend said that no actual vaccine has been developed for other virus in this class like SARS or MERS. Further Malaria and HIV have no vaccine, and both have been around with a lot of research and money spent on them for decades. Thus, even with a lot of good minds there

may not be a good vaccine developed for a while for the Coronavirus. He doctor friend though did say that the Ebola virus in Africa had a good vaccine developed in a year or so, which appears to work fairly well. Wei Na asked why making vaccine's takes so long?

Wei Na's doctor friend said that there are several issues that have to be accomplished with vaccine development. First, that they know which protein in the body is being attacked by the virus and how the vaccine can possibly block this or kill something in the virus itself. This takes time to understand. Second, that the actual vaccine is safe. The doctor friend of Wei Na told her that many in the world today have concerns about the safety and efficacy of immunizations and so the makers of immunizations need to be careful in this aspect of immunization development.

Third, we need to know that the immunization works and we need to do a study to see if they actually work and this study would need to have those who get the immunization and those who don't and see if the immunization actually works and the percentage of those it works in. That is the percentage in which the vaccine does it work or not and the percentage of given sides effects and cost. These are all important issues in vaccine development.

At this point though Wei Na was still upset by the death of other friend and the one here in the hospital. She told her doctor friend that is seemed her trust in medicine getting a new vaccine out soon may be misplaced. Wei Na's doctor told her that though that might be true, a lot of very good people around the world are working on this important vaccine so hopefully soon there will be a good vaccine.

Wei Na's doctor friend told her that we actually don't have 100% faith in vaccines for at times they do are not that good. For example, this year the Influenza vaccine was just 40-50% effective. Another example is that the fairly new Shingles vaccine is about 90% effective. So, there is often much difference between the efficacy of vaccines. Further, some like the Influenza needs boosting and in the case of the Influenza vaccine, annual vaccines updates are needed each year. Another point is that the response varies among individuals so that some have little to no response but others a very good response to the vaccine. The whole point Wei Na's doctor friend made is that we want to get enough people in a certain society immunized so that we have a good 'herd immunity' or enough people are immunized that the infection's impact is significantly blunted in that society.

While Wei Na was somewhat comforted that vaccines are not as all powerful as she thought she was still concerned about the lack of having a vaccine to the Coronavirus, that it might take more time to get one and that this new vaccine might not be as good as we need or want. She expressed these concerns to her doctor friend. Wei Na's doctor friend did understand these concerns and said that many have these same concerns, so she is not alone. However, her doctor friend said, that there could be a good Coronavirus sooner than is expected that might be quite helpful. Only time will tell, Wei Na's doctor friend said.

However, Wei Na's doctor friend said that ultimately her hope is not in vaccines but in the person of Jesus Christ. Wei Na asked who Jesus Christ is and why her hope is in Jesus and not

vaccines for the Coronavirus? Her doctor friend said that is because the Bible, which is the Word of the Living God tells us that is where our hope should be. She went on to tell Wei Na that one of the ultimate virtues in the Bible is hope, which Wei Na said she could agree with and understand. Then her doctor friend said the Bible also says, 'that hope does not disappoint us, because God has poured out his love into our hearts by the Holy Spirit, whom he has given us.'

Wei Na asked for her friend to explain what this meant about hope. Wei Na certainly would like to have a hope in something if vaccines were not the solution now for the Coronavirus and even, if they had them they were not as good as she might have hoped they could be. Her doctor friend explained that the hope we can have is based on the person and work of Jesus Christ. That hope is that Jesus Christ came to earth from being the Lord who created the heavens and the earth and hold them together even now. Further he gave his life up for us by dying on the Cross that we night have not only life in this life but also eternal life.

Wei Na could not understand much of what her doctor friend said but she did begin to understand something she had wondered about, which is that our earth was created. Wei Na did not have much hope in the fact of not knowing where we came from. Knowing we were created began go give her some hope about life and where she came from. She asked though her doctor friend about what difference it made if Jesus came to earth and died for us and that relation to hope. Her doctor friend said that Jesus gave up everything to become a servant to us and this is clearly shown in four books in the Bible called the gospels, which tells about the Good News of Jesus' life on this earth.

The purpose of Jesus coming to earth, Wei Na's doctor friend said, was not to only show a life of hope in the midst of a world destroyed by sin, which is disobeying God and His Word, but to die for that sin on the Cross that we may not have to be destroyed by sin now, Also our sin separates us from God and causes us to spend a life separated from God in hell for eternity. It is that death by Jesus on the Cross, which gives us hope both now in this world, even amidst destructive things like the Coronavirus. Wei Na was now interested in what her doctor friend had to say as she had lost hope in life with her friend's death and another friend now in the hospital. She needed to have hope.

Wei Na's doctor friend went further and said that the reason that Jesus Christ's death on the Cross gives us hope is that, which destroys us, which is our sin, which not only separates us from God and thus we are hopeless but our sin destroyed the world and only with the death of Christ on the Cross can our sins be paid. It is this, which gives us hope as with the destruction of our sin we can have eternal life with God through Jesus Christ. Further that next world will be without sin and will be a perfect world where we will live in perfect bodies.

Wei Na was now more than interested in this hope, she wanted to have this hope in Jesus Christ. She was realizing that hope alone in the things of this world including medicine would not satisfy her heart and give her peace. She asked her doctor friend how to have this hope through Jesus Christ. Her doctor friend told her that this hope was attained through faith in the

work of Jesus Christ and what he has done for us on the Cross. Wei Na asked exactly what she should believe in and her doctor friend told her to pray after her and believe in what she is praying.

Wei Na's doctor friend started praying and Wei Na followed. 'Dear Lord Jesus Christ, thank you that you are my Lord in that you created the whole earth and sustain it day by day. I believe that you are my Lord and that you died on the Cross for my sins. You were buried and three days later were resurrected from the dead and are alive now and forever more at the right hand of God the Father. I believe this. I ask that you forgive my sins and give me the hope I can only have in Jesus Christ. That hope is a life to be lived for Jesus now and for eternity after I die.' Wei Na was so excited to now have a hope which she has never had before and now knows that she has that hope no matter what may come.

Wei Na and her doctor friend found out that their friend had been evaluated and though she had the Coronavirus she also was stable and could go home. Not only was she glad her friend was stable and could go home, she had a hope she did not have before coming to the hospital a hope in her now new eternal relationship with Jesus Christ.