

County EMS, Minnesota's first rural based advanced life support (ALS) ambulance service that serves south central Polk County and northeast Norman County has been busy this month preparing for the possibility of novel coronavirus impacts in the area.

The novel coronavirus is a high-consequence infectious disease that originated in Wuhan China late last year and has now become a world-wide pandemic. It causes an upper respiratory illness in those who catch the virus.

#### Contingency planning

County EMS has conducted several special planning and training sessions as they prepare for potential virus impacts. Contingency planning for unknowable impacts such as the need for ventilators, over-stressed hospital facilities, EMS supply chain problems, and the illness infecting the people who staff the ambulances are just some of the considerations.

"My biggest worry is the dedicated men and women of the community who staff the ambulance. We must protect the paramedics and EMTs. If they get sick, then we can't fulfill our mission of serving the citizens," said Steve Belau, one of the paramedics.

#### Percentages

Most of the people who catch the virus will have mild or moderate symptoms and won't even need to go to the hospital.

However, approximately 13 percent of patients who tested positive for the virus in Minnesota so far have needed to be hospitalized.

Thirty-nine patients were in the hospital as of March 29, 2020.

Of the 75 patients who needed hospital care, 16 were admitted to an intensive care unit so far, according to Minnesota Department of Health numbers posted as of March 29.

#### Preparations

Belau said, "Preparation is key, perspective is essential, and panic serves no useful purpose."

Belau also said, "as of March 29, 2020, Minnesota had an official total of 503 positive test results confirming COVID-19 out of 17,657 tests. That is a 3 percent positivity rate."

"In perspective, that means that 97 percent of the people who meet the criteria for symptoms and tested by their doctors do not have the novel coronavirus. That's kind of reassuring."

"The public health efforts recommended by President Trump and Governor Walz have been successful in keeping the virus spread manageable so far," Belau said.

"Of course, things are changing every day, and the information we have today is already out of date by two weeks because of how the virus incubates and moves through society, but our plans are evolving based on the best information currently available," Belau said.

There have been nine fatalities due to the virus in Minnesota as of March 29. All are believed to be in the high-risk group of severe underlying medical conditions and age 80-plus.

#### Seeking medical help

Belau stressed that, "People who are concerned they may be sick with the novel coronavirus should call their doctor on the telephone and discuss what the best next step should be. Don't just go to the emergency room or the doctor's office without giving the hospital or the clinic advanced notice. They need time to prepare for you and protect others from potential exposure."

#### Emergency signs

"Of course, if you have one of the emergency warning signs, call 9-1-1 and we'll come to help with the emergency and get you into the medical system safely. Those emergency warning signs include trouble breathing, persistent pain or pressure in the chest, new confusion or inability to arouse the patient and bluish lips or face."

"Call 9-1-1 if you think you are having an emergency. We will come and help you figure it out. We often talk with the doctor who helps us determine if you need to go to the hospital or not," Belau said.

EMS is prepared

Operations Chief for County EMS Chad Braun stated that County EMS is well-prepared and is supplied for the usual emergency medical services needs of the area that includes the cities of Beltrami, Fertile, Gary, Mentor and Winger, but the novel coronavirus is throwing a lot of unknowns at medical providers.

County EMS is having to use its best guess as to what kind of additional service demands the virus might add on, and they could be huge if the virus hits the area hard.

Founded in 1982, County EMS has been on the leading edge of rural ALS, and one of the early strengths that County EMS developed was performing acute care transfers between hospitals.

Ventilators available

Part of that capability included adding sophisticated ICU ventilators to the ambulances and specialized training for the Paramedics in caring for patients who need the breathing support from such a ventilator.

Patients in the high-risk group for the novel coronavirus who become ill have, in some cases needed to have a ventilator to support their breathing while in the hospital.

Braun reported that County EMS has three main ambulances and one reserve ambulance.

He related that County EMS' standard equipment includes a transport ventilator and a critical care ICU ventilator on each of the main ambulances.

One of the ventilators was made possible by a very generous gift from two local families.

Braun concluded, "If the need arises, County EMS is well suited to help with moving patients from one hospital to another".

Training and planning

County EMS Training Chief Jennifer Flikke has been conducting several planning and training sessions specific to the pandemic.

Flikke is responsible for assuring that all the paramedics, EMTs and area first responders receive high-quality and timely initial and on-going education and training.

Part of the COVID-19 preparation has included stressing ventilator operation reviews for the paramedics, personal protective equipment selection and use for the ambulance crews, and recognition of, and response to, signs and symptoms of the COVID-19 virus infection in patients and even crew members.

Protecting

crew members

According to Flikke, one of the greatest concerns for County EMS is how the virus could impair their ability to serve the citizens if the virus starts to infect crew members or their families.

If someone in the crew member's household gets sick with a confirmed case of the virus, the crew member ends up quarantined for two weeks.

That must be guarded against because of the limited depth of bench due to the facts of living in rural Minnesota.

In response to this concern, Flikke has been focusing on prevention strategies and personal protection for the ambulance crew. She asks that people who call for the ambulance with respiratory symptoms not be surprised or offended if crew members arrive with their goggles and masks on, or the crew asks the patient to wear a mask. Those precautions are part of the CDC recommended guidelines to limit spread and impact of the new coronavirus in the community.

Do not be surprised to see ambulance crew members out in public wearing protective masks as a precaution against the virus.

Supplies, equipment

Logistics Chief for the Paramedics Nick Neibauer, Jr. has been busy organizing supplies and equipment unique to pandemic preparation and response.

From protective coveralls and eye shields to approved face masks designed to filter out virus particles, many of the needed supplies and equipment have become impossible to find.

County EMS has the necessary quantities to handle the regular emergency calls, but the threat of increased sick calls and transports has required extra purchases to avoid being caught short. Again, the absence of definitive numbers and time frames requires best guesses. With a fractured supply chain and a nationwide crisis, all the suppliers to EMS services are completely out of the commonly used items. The suppliers won't even consider entering back-orders because of the uncertainty on when items can be acquired.

Neibauer said County EMS has enough supplies to get well into a pandemic situation but he will be continuing to do what he can to locate and purchase spare supplies.

Several unknowns

Like everyone else, Belau remains concerned about several unknowns. Those unknowns include maintaining enough of the critically important supplies of personal protective equipment to shield the ambulance staff from the virus and whether the virus will increase the workload for the paramedics a lot or a little.

On the supplies question, Belau said, "There are a lot of U.S. manufacturers spooling up their processes to fill the voids, but it is taking time for them to catch up with what has already been ordered."

"Unfortunately, so much of the disposable protective gear comes from China and not only are they largely shut down, but they are of course prioritizing distribution of stocks to cover their own needs", Belau said.

"If hospital capacities get overwhelmed, all the area ambulance services will be doing what they can to move patients to where space is available and that could push ambulance services to their limits or beyond," he said about the unknown workload impacts.

He also worries about the extra costs that come with a pandemic. "Extra staffing costs and reimbursement chain disruptions are unknowns of significant concern," he said.

"Time will tell"

Belau continued, "Hopefully the pandemic passes through with limited adverse impacts. Time will tell what's next as better information and data come out. People can check out [cdc.gov](https://www.cdc.gov) on the internet for more information."

"Follow the recommendations of your doctor and healthcare professionals, cover your cough, stay away from others if you are sick, maintain social distancing and avoid crowds until the pandemic passes," Belau said.

"Keep in mind more than 98 percent of the portion of the population who catch the virus recover with many of them not even realizing they had the novel coronavirus," Belau concluded.