

A white quadcopter drone with red and blue accents on its arms, flying against a clear blue sky. The drone is viewed from a slightly elevated angle, showing its underside and the camera mounted below.

A bright young engineer in the Netherlands named Alec Momont has developed a concept that could potentially transform the face of emergency medicine using one of the most popular technologic advances—drones. Momont has developed an “ambulance drone” equipped with a defibrillator to increase the survival rate of heart attack victims who experience heart attacks outside of the hospital.

Current statistics do not reflect a promising outcome for victims of cardiac arrest outside the home. Brain death due to cardiac arrest typically occurs between 4 to 6 minutes after the incident, while the average ambulance response time sits at 10 minutes. This has led to a heart attack survival rate of only 8 percent. The use of drones to speed up emergency response time is ingenious because of their ability to bypass traffic and reach victims anywhere in a 4.6 square mile radius in 1 minute, thus cutting response time significantly. Momont claims that his drones could increase heart attack survival rates from 8 percent to 80 percent. This, amongst other factors, exemplifies how drones are a positive solution to existing problems in emergency medicine.

Ambulance drones’ relatively inexpensive manufacturing cost also makes them economically attractive. A new drone costs \$20,000 which is similar to, if not lower than, the cost of a new ambulance.

“It is essential that the right medical care is provided within the first few minutes of a cardiac arrest,” says Alec Momont. ‘If we can get to an emergency scene faster we can save many lives and facilitate the recovery of many patients’.

-Alec Momont

Drones also cut costs because they do not require gas and maintenance the way ambulances do, nor do they require paramedics.

However, legal hitches have hindered the commercialization of the product as drones are not permitted to fly remotely in the Netherlands. Ultimately, if this product gets the go-ahead, Momont hopes to implement the idea of an emergency drone to deliver quick help in other situations like oxygen masks during a fire or insulin when someone goes into diabetic shock. This creation has the potential to effectively save thousands of lives if it gains the support it needs.