

Pantridge J F & Geddes J S. A mobile intensive-care unit in the management of myocardial infarction. *Lancet* 2:271-3, 1967. [Cardiac Dept., Royal Victoria Hosp., Belfast, Northern Ireland]

This article describes 18 month's experience of the operation of the first mobile coronary care unit. In that period, 312 patients were managed by the unit. There were no deaths during transport. The first successful correction of cardiac arrest outside the hospital was recorded and it was shown for the first time that successful resuscitation outside the hospital is a practical proposition. [The **SCI**[®] indicates that this paper has been cited over 260 times since 1967.]

J.F. Pantridge
Regional Medical Cardiology Centre
Royal Victoria Hospital
Belfast BT12 6BA
Northern Ireland

February 3, 1981

"The article records the experience of the use of the portable defibrillator introduced by us¹ in 1966 and describes the organisation of a mobile coronary care unit at the Royal Victoria Hospital in Belfast. The article points out that the majority of the deaths from heart attacks are sudden, occur outside a hospital, and result from an electrical disturbance of the heart muscle and that, since this can be easily corrected, the deaths are unnecessary. The last sentence of the summary of the article states, 'It has been shown perhaps for the first time that the correction of cardiac arrest outside hospital is a practical proposition.' This statement proved to be erroneous. It was pointed out that cardiac arrest had been corrected in 1775, since in that year Abildgaard had 'shocked a single chicken into lifelessness, and upon repeating the shock,

the bird took off and eluded further experimentation.'²

"It has been stated that the introduction of the portable defibrillator and the mobile coronary care unit described in the article has 'revolutionised emergency medicine and led to a proliferation of pre-hospital coronary care schemes notably in the U.S.A.'³ Pre-hospital coronary care units equipped with portable defibrillators have saved countless thousands of lives throughout the world. The article is frequently cited because coronary heart disease is the major cause of premature death in the Western World. It is estimated that nearly 1,000 Americans die each day from acute heart attacks outside the hospital and that more than two-thirds of all coronary deaths are sudden.

"It has also been said that the spin-off from the operation of the pioneer mobile pre-hospital coronary care unit initiated in Belfast in 1966 has been as significant as its introduction. The Belfast workers quickly demonstrated that 90 percent of sudden coronary deaths resulted from ventricular fibrillation, an electrical disturbance readily corrected by the portable defibrillator. The mobile unit also enabled detailed observation of patients in the very acute phase of the heart attack and showed that early intensive care may limit the amount of heart muscle destroyed and thus reduce the incidence of shock and improve the long term outlook.

"The demonstration of the importance of the portable defibrillator has led to much research and development directed towards a reduction in size, weight, and portability of the apparatus. The initial 'portable' defibrillator weighed 60 kilos. A machine weighing less than 3 kilos is now available."

1. Pantridge J F & Geddes J S. Cardiac arrest after myocardial infarction. *Lancet* 1:807-8, 1966.
2. Abildgaard P C. Tentamina electrica in animalibus instituta. *Societatis Medicae Havniensis Collectanae* 2: 157-61, 1775.
3. Editorial: Ventricular fibrillation outside hospital. *Lancet* 2:508-9, 1979.