

terial. But not only that, they find that in many cases it enables them to provide same-day service or service the following morning on orders received which, of course, makes it possible for the hospitals to vastly reduce the amount of drugs, the amount of equipment that they have to have on hand, because they have the assurance that they can order it today and have it tomorrow.

Senator HATFIELD. As you know, one of the basic problems we face in the whole health field is the problem of rising costs, particularly as it involves hospital care. I think it is very significant in this potential that you describe here for hospital administration, could represent a significant reduction in costs of operation for hospitals. Is this not true?

Mr. CALLAHAN. Yes, sir; and with the introduction of Touch-Tone telephone service which we will be describing later on, that cost reduction will be even further developed, because—well, a typical price of a Touch-Tone telephone card dialer such as I have here is around \$4.50 a month. It has the capability of transmitting ordering information directly to the computer in the way that the Salem people are planning, and replaces an arrangement that presently costs nearly \$40 a month in total. Of course, at the same time, it serves the purpose of a regular telephone also.

So there is real potential here for reducing hospital administrative costs.

Senator HATFIELD. Thank you, Mr. Chairman.

Senator NELSON. Go ahead.

Mr. CALLAHAN. In pursuing the cardiac emergency one more step, I would like to raise the question of what happens when a cardiac arrest occurs, when a heart stops. Today thousands are being restored to life through cardiopulmonary resuscitation, an emergency measure in which a stopped heart is brought back to life by rhythmic pressure on the chest. These hearts have been temporarily stilled by strokes, heart attacks, drug reactions, or accidents.

According to the American Heart Association Committee on External Cardiopulmonary Resuscitation, the tragedy is that for every life saved by this technique, probably a dozen are lost because it is not used. Resuscitation is possible in many of the over 500,000 heart disease deaths, the many thousand heart arrests in surgery, and the many thousands of deaths from drowning, suffocation, electric shocks, and other accidents. Tests show that salvage from these deaths can perhaps average more than 100,000 lives per year. The key difficulty is the need to reach the heart victim within 2 minutes; that is, before the brain dies or is irreparably damaged for lack of oxygen.

When an attack occurs in a hospital, the staff can only respond if they are aware of the situation. How do you notify everyone who needs to know—doctors, nurses, technicians spread throughout a large complex? Obviously proper communications are vital, for even within a hospital, it is estimated that 30 percent of patients having attacks die. The problem is compounded by the fact that if a patient is not in the intensive-care ward, staff coordination becomes even more critical, since vital equipment is located in other sections of the hospital.

It is therefore necessary to have some form of communications that will alert emergency team members wherever they may be in the medi-