Dr. NOBEL. Furthermore, it provides a selective mobilization response to the varying requirements of cardiopulmonary arrest, or emergency surgery, or obstetrical emergencies or civil disasters causing a large number of injured persons.

What happens at the present time?

An accident ward nurse must make from five to 10 individual telephone calls to set up emergency surgery at the very time her assistance is most needed at the patient's side. Usually the operating room, admissions, anesthesia, hematology, blood bank, surgical resident, and intern staff physician must all be notified. A nurse at the bedside of a patient requiring resuscitation must wait from 10 to 80 seconds for the switchboard operator to respond to her need for help with a busy daytime switchboard. This is the very time when she must provide physiological support of the patient. She has to breathe for the patient and perform other immediately necessary duties. Communications is critical, but physiological support of the patient is even more desperate.

When the operator does respond, she often mispages the room location. Once knowing where to go, the emergency team members must then wait a lengthy period for an elevator. Elevator delays in hospitals—I am sure you have experienced these delays—can be astronomical in terms of timing for emergency mobilization.

With the hospital emergency command system under development, the nurse at the bedside picks up the telephone, dials a specific number, for example 1212. Keep in mind again, this is the very time the critical support of the patient is required and we do not want the nurse preoccupied with administrative problems in communications.

She says "Code Blue, Room 705" and hangs up. There is no switchboard operator lag period. The nurses' voice is recorded. At the same time, a series of vital telephones ring simultaneously with a very distinct ring. Vital phones might include heart station, anesthesia, and night on-call rooms. If the phone is in use, there is a priority interrupt and the message is still transmitted. The system also transmits the message over the public address system and triggers pocket page receivers. The command system also activities a special emergency cart.

This mobile emergency life support system was developed by us 3 years ago to decrease the time required for critical medical emergency procedures, to reduce the number of persons required on the team, to eliminate many common errors in technique, and because of self-contained power and oxygen to sustain the moribund patient in transit to the operating room or intensive care unit. Briefly, it reduces the time required for critical procedures tenfold and reduces the size of the team by half. It is now in general use throughout the United States, in Europe and Vietnam.

(The mobile emergency life support system illustration referred to appears on facing page.)

Dr. NOBEL. The hospital emergency command system transmits an electrical signal to this emergency cart which energizes its elapsed time meter and electronic equipment. The elapsed time meter indicates, of course, the time since the initial alerting telephone call and thus provides a continuous timing reference to the team.

How long has it been since the original event occurred, since there was transmission of the message, what time has gone by, should we