DNR policy and CPR practice in geriatric long-term institutional care

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There has been much debate about cardiopulmonary resuscitation (CPR) in elderly patients, especially those in long-term care facilities.[1-5] Deliberations on "do not resuscitate" (DNR) policy — in reality meaning do not *attempt* resuscitation — often ignore the ineffectiveness of CPR for most frail, chronically ill older people who require permanent institutional care.[6,7]

Closed-chest CPR is a potentially life-saving procedure for people who suffer a true cardiac arrest.[8-10] Age is not a barrier to successful CPR outcome in the elderly unless there are multiple accompanying illnesses.[9-14] Unfortunately, in the absence of a DNR order CPR is commonly performed on frail, chronically ill older residents of long-term care facilities, a practice similar to performing CPR on terminally ill patients.[15-17]

Long-term health care providers must develop a professionally, ethically and legally sound framework to ensure that chronically ill elderly patients are not subjected to inappropriate CPR because of the absence of a personal or surrogate DNR order.

Medical indications for and benefits of CPR should be considered with such issues as whether a physician should unilaterally write a DNR order and whether his or her assessment of the value of CPR is based on sound data.[18-20] Added to the ethical issues are the legal implications of not obtaining a formal DNR order — being sued or charged with professional negligence. More recently the cost-effectiveness of CPR has been identified as relevant to policy formulation. The dismal success rates and substantial material and human resource costs of CPR in this frail geriatric population are pertinent to the development of sound guidelines for intervention.[21]

To determine what constitutes a cardiac arrest is a challenging task that is complicated by the DNR policy of the particular institution. Ethical and legal considerations often force physicians to perform CPR or arrange for the transfer of geriatric long-term care patients to emergency departments for this purpose.

Nurses, too, are caught in the dilemma. They are the ones who discover a patient with absent respiration or pulse and who must decide whether to initiate an arrest call or conclude that the patient is dead. Often, nurses initiate an arrest call because they are uncertain of their professional, ethical and legal responsibilities. If the facility does not have the capability for on-site CPR this means attempted resuscitation in an ambulance en route to a hospital.

The Baycrest Centre experience

Designated staff of the new 300-bed Baycrest Hospital (a long-term care facility with short-term programs) can perform on-site, round-the-clock advanced life support CPR on all patients in the hospital or in the Jewish Home for the Aged.[22,23] From March 1989 to July 1990, 323 patients died in the Baycrest Centre for Geriatric Care; 20 had undergone CPR. Of the six immediate CPR survivors five were quickly transferred to acute-care hospitals, where three died within 2 weeks. The other three survivors died in Baycrest Hospital in less than 2 months in a greatly deteriorated functional state. This experience suggests that even with immediate access to full CPR the outcome in such chronically ill patients is dismal.[7,24]

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Cardiac arrest v. death

For certain patients a true cardiac arrest is a potentially reversible event, the outcome of which can be modified by timely CPR.[6,8-14] The algorithm for standard CPR has been well established.[25] A major problem is that CPR is mistakenly given in situations in which death rather than a cardiac arrest has occurred. There is a substantial difference between the two events.[5]

A cardiac arrest is a sudden and potentially reversible aberration in cardiac activity that results in cessation of cardiac output, which — if not corrected promptly — leads to death. Dying, in contrast, is a complex process that may be the result of many concurrent organ system failures, the final common pathway being the cessation of cardiac activity. It would be a tragic misuse of technology to redefine death in the chronically ill elderly population as the inability to respond to CPR efforts.

Most elderly residents are in long-term care facilities because of their frailty and complex medical problems. During exacerbations of acute illness, such as serious cardiac or respiratory disease, major metabolic disorders, cerebrovascular accidents and overwhelming infection, the process of dying may have an uneven course,, and cessation of effective cardiac function may be the end point of the illness rather than the cause of death. The benefit of CPR in these circumstances, as reflected in the Baycrest experience, is close to zero.[7,26,27] To subject such people to CPR sadly underlines the contemporary misuse of medical technology.[8,21,28-32]

The DNR order

Obtaining a DNR order for a frail elderly resident of a long-term care facility is an issue separate from the clinical guidelines for CPR. The DNR order is an advance directive to a physician not to perform specific medical therapy (CPR). Many people entering long-term care institutions understand the implications of a DNR order and choose to have one documented, although there may be a lag in its implementation.[33-37]

Long-term care facilities for elderly people should develop policies and practices that address DNR orders and other important end-of-life issues. Included in the DNR order should be the criteria for and timing of the decision, the person responsible for communication, the method of documentation and a clear description of the DNR process whereby staff, patient and family exchange information.[4,28,38-40] Physicians who disagree with family members must explain the basis of their decision and the implications for care.[19,20,40]

For terminally ill patients Canadian guidelines have been developed jointly by the CMA, the Canadian Hospital Association and the Canadian Nurses Association;[41] unfortunately these are not appropriate for frail elderly patients who are not terminally ill as so defined.

Defining cardiac arrest

If a DNR order has not been obtained CPR should be instituted only for a true cardiac arrest. Health care professionals working in long-term care institutions should have a clear understanding of what constitutes a cardiac arrest for which CPR might be appropriate to assist in the development of protocols and guidelines for clinical intervention. The intervention must include appropriate CPR and subsequent evaluation and treatment to ensure that further cardiac arrests do not occur. Some treatments may be completely inappropriate for this frail elderly population.[42]

There are some principles[7,13,24,26] that should be acceptable in the long-term care setting.

- The arrest should have been witnessed by a reliable observer or have occurred within minutes of when the patient was last seen functioning normally. Survival is related to the rapidity of emergency response services.[11,13]
- The event should have been unexpected, given the clinical situation. Anticipated deaths should not be treated as cardiac arrests.
- The patient should not be suffering from a complex, multisystem medical problem that has been shown not to benefit from CPR (e.g., overwhelming sepsis, end-stage cardiorespiratory dysfunction, severe metabolic abnormality or a recent catastrophic cerebrovascular event).[6,32,43]
- The patient clearly does not have an illness for which death would be the expected outcome (i.e., a defined, untreatable malignant disease or an end-stage neurologic disorder).[16,17,32]

Even without a DNR order a nurse or other health care provider in the long-term care facility should not feel compelled to initiate an arrest call on discovering an elderly person without a pulse or respiration, although if there is doubt about the circumstances the call should be an option.

There is concern that such a policy might deprive people who could be saved of effective treatment[3,18-20,32] and could lead to a cavalier attitude among long-term health care providers. However, a combination of a well-formulated DNR policy and clear guidelines for cardiac arrest should eliminate most inappropriate arrest calls and futile CPR attempts and enhance the dignity of the patient's last moments. The emotional, physical and financial costs to patients, families and the health care system would be reduced without violating the right to

appropriate health care. There would be less likelihood of inappropriate litigation against or professional censure of health care professionals for failure to implement therapy.

Recommendations

A critical re-examination of CPR as a realistic therapeutic option for medically compromised elderly people in long-term care facilities is needed. This would enable patients and their families to focus on the issues relevant to future care — such as symptom control, artificial feeding and transfer to a general hospital for acute medical problems — rather than to dwell on the issue of CPR, which gives an ambiguous message to patients, families and staff.[17,19,20,27,29,32]

A revised joint statement should be developed by the CMA, the Canadian Hospital Association and the Canadian Nurses Association that recognizes and addresses the dismal CPR survival in this population even in the best of circumstances.

All long-term care facilities should outline the process by which DNR orders are obtained and documented.[3,4,28,38-41] The available evidence suggests that institutions providing only long-term care should formulate a policy that presumes a DNR status unless a specific CPR order has been given by the parties involved. Patients and relatives should be informed about CPR in this patient population and about whether the facility can realistically offer any possibility of a successful outcome.[24,35,40] It must be emphasized to all patients, families and staff that a DNR order will not result in medical abandonment, a fear often expressed by concerned family members.[32]

Geriatric facilities with special short-term care programs (e.g., for geriatric assessment, neurobehavioural assessment or rehabilitation) may decide, appropriately, to forgo the process of routinely requesting DNR orders for short-term care patients.[24,34,35,43,44] Such patients may qualify for CPR in the same way as patients admitted to short-term programs at a general hospital. If a true cardiac arrest occurred they would be candidates for CPR, although the outcome in this group of patients may also be very poor.[17,45]

Except under special circumstances (e.g., of religious constraint) the discussion of CPR and DNR should be part of the treatment plan, even if it is only to inform the patient or his or her family that CPR is not an option in that facility.[20,36,38,46,47] For various reasons a DNR order may not be obtained even though the facility staff believe that CPR would be inappropriate.[28,38-40] In such circumstances CPR should be undertaken only in the event of a true cardiac arrest.

Conclusion

Long-term health care providers should develop policies that reflect a responsible and appropriate use of medical technology while respecting individual differences due to cultural background and ethical and religious beliefs.[32,48] The goal must be to achieve appropriate, humane and reasonable care for a geriatric population at risk from complex illness, displacement, unsuitable medical intervention and the futile use of advanced medical therapies. One should not, as a final rite of passage, need to proceed through the gates of technology.[30]

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