

COMMONWEALTH OF MASSACHUSETTS
BOARD OF REGISTRATION IN NURSING

Report on the Findings and Recommendations of the
Task Force on the Nursing Management of Unwitnessed Arrests
In Long-term Care Facilities

November 2007

Background

The Massachusetts Board of Registration in Nursing (Board), at its January 9, 2002, meeting, voted to find that in the absence of resuscitation directives and a Do Not Resuscitate (DNR) order, a licensed nurse was obligated to initiate cardiopulmonary resuscitation (CPR) in compliance with Board regulation, 244 CMR 9.03(5): Adherence to Standards of Nursing Practice. The Board issued its finding in response to an inquiry from the Division of Health Care Quality, Department of Public Health, which sought to determine whether a nurse in a nursing home was required to initiate CPR when the nurse believed a resident was dead and had been for some time.¹

Since January 2002, the Board has continued to evaluate practice complaints involving Registered Nurses (RNs) and Licensed Practical Nurses (LPNs) who withhold CPR following an unwitnessed patient or resident arrest in a nursing home despite the absence of a DNR order. In the course of its evaluations, the Board has found a growing sentiment among nurses practicing in long-term care facilities that the initiation of CPR in such instances is inappropriate in light of the procedure's poor efficacy. As a result, the question that is often asked is whether the nurse practicing in the long-term care facility may choose not to initiate CPR when a nursing home patient or resident is found to be in cardiac arrest and does not have a DNR order.

The Task Force on the Nursing Management of Unwitnessed Arrests in Long-term Care Facilities was established by the Board in June 2007 to study this question further and to make evidence-based recommendations to guide the practice of RNs and LPNs in the nursing management of arrests in long-term care facilities. The Board originally planned to review the Task Force findings and recommendations in October 2007. This date was subsequently changed to November 2007 to insure adequate time for Task Force deliberations.

This report summarizes the process the Task Force used to accomplish its charge, and its findings and recommendations to the Board.

Task Force Purpose, Membership and Work Plan

The Board's Task Force on the Nursing Management of Unwitnessed Arrests in Long-term Care Facilities (Task Force) was established on June 13, 2007, to:

- Identify areas of consensus as well as barriers, best practices, and individual and systems accountability for the nursing management of unwitnessed arrests in long-term care facilities; and

- Recommend an evidence-based advisory ruling to guide the practice of Registered Nurses and Licensed Practical Nurses in the management of unwitnessed arrests in long-term care facilities.

The Task Force consists of representation from the Massachusetts Department of Public Health (DPH) Division of Health Care Quality and Control, the DPH Office of Emergency Medical Services, the Massachusetts Chapter of the National Association of Directors of Nursing Administration/Long-term Care, the Massachusetts Extended Care Federation, and the Massachusetts Organization of Nurse Executives as well as a nurse ethicist. The Board also solicited representation from the Massachusetts Medical Directors' Association; however, no response to the Board's invitation has been received. Invited agencies and organizations were selected on the basis of their experience and expertise in long-term care and emergency services. Each representative was chosen by the invited agency and organization from their respective memberships or staff while the nurse ethicist was recruited through a professional colleague referral. The Board's nursing and legal staff facilitated the Task Force meetings.

The Task Force membership (Appendix 1) includes experienced regulators, nursing service administrators and clinicians, each of whom is well-qualified in the regulation of long-term care facilities and emergency medical services, nursing service administration of long-term facilities, advance practice geriatric nursing, and nursing ethics in the long-term care setting. Six of the nine nurse members of the Task Force each practice in a different long-term care facility. A variety of clinical services are provided among the six facilities including long term care, and short-term post acute medical care and rehabilitation. The facilities range in size from 78 to over 700 beds, are privately or publicly funded, and are located throughout the state in both urban and suburban areas. The three remaining Task Force nurses hold administrative staff positions in regulatory agencies.

The Task Force meetings were designed to accomplish the systematic development of an evidence-based advisory recommendation to guide RN and LPN practice. This was achieved through a series of steps that included: the generation of ten questions by Board staff to focus discussions; the evaluation of data and information; and consensus development. A work plan was created by Board staff to facilitate the Board's review of the Task Force findings and recommendations by the projected date (Appendix 2). With the exception of the October meeting, all agencies and organizations were represented at each of the Task Force meetings. Summaries of each meeting were written by Board staff and reviewed by the Task Force members.

Anticipated Outcomes

At the first meeting of the Task Force, Board staff reported that the Board anticipated it would take the following actions, consistent with its duties and responsibilities at G.L. c. 13, s. 14, based on the findings and recommendations of the Task Force:

- Issue an evidence-based advisory ruling that incorporated the Board’s regulations at 244 CMR 9.00: Standards of Conduct to guide RN and LPN practice and education;
- Publish a Task Force Report describing the information and data considered by the Task Force in making its recommendation;
- Publish the Advisory Ruling;
- Evaluate practice complaints that involved a nurse’s failure to initiate CPR in an unwitnessed arrest using the Advisory Ruling; and
- Take action against a nurse’s license when it determined the nurse’s practice was inconsistent with the Advisory Ruling.

Board staff also described the outcome measures the Board uses when it develops new regulations, policies, advisory rulings and opinions:

The outcome is...

- Legally defensible
- Professionally acceptable
- Publicly credible
- Administratively feasible
- Economically affordable

Review of Literature and Other Relevant Documentation

Articles published in the literature between 1995 through 2006 were collected from a variety of sources including a Medline search using the words “unwitnessed cardiac arrest”, “cardiopulmonary resuscitation”, “nursing home” and “long-term care”. Other journal articles and documents were identified from the reference section of the articles from the Medline search; an internet search using the words “rigor mortis” and “dependent lividity” as well as the phrase, “signs of irreversible death”; and Task Force member and Board files. A total of 31 articles, 4 CPR protocols and 6 advance directive/DNR policies were collected and reviewed for relevance to the question.

Task Force members also reviewed the results of a 2006 Nebraska Board of Nursing survey of US nursing boards; advisories issued by the Kentucky, North Carolina and Texas nursing boards; findings from the Board’s 2006 analysis of selected CPR-related complaint cases; Office of Emergency Medical Services regulations at 105 CMR 170.000 effective 2006; Division of Health Care Quality regulations at 105 CMR 150.000; selected Division of Health Care Quality Circular Letters to long-term care facility administrations; the current Detailed Test Plan for the National Council Licensure Examination for Licensed Practical/Vocational Nurses (NCLEX-PN® effective April 2005) and the current Detailed Test Plan for the National Council Licensure Examination for Registered Nurses (NCLEX-RN® effective 2007); and the results of a September 2007 Board survey of Board-approved nursing education programs.

Literature

The selection process resulted in the inclusion of 11 articles.

The potential for post-CPR survival is low among nursing home residents who experience a cardiac arrest. This is substantiated in a review of the literature involving CPR in nursing homes, Finucane, et al,² identified six studies in which post-CPR survival rates (i.e. hospital discharge alive after a cardiac arrest in a nursing home) in 800 CPR attempts ranged from 0 to 5%. A retrospective analysis of existing cardiac arrest data in Rochester, NY, found 42 nursing home residents, 26 of who experienced an unwitnessed arrest. Only one patient was alive one year after arrest³. The American Heart Association has noted that a number of studies indicate that less than 1% of out-of-hospital arrest victims with continuing CPR survive to hospital discharge.⁴

Witness status has been cited as an independent predictor of post-CPR survival. A study by Ghushn, et al, found a post-CPR survival rate of 10.5% among 114 nursing home residents (mean age was 80.3 years); 70.2% were pronounced dead in the emergency room. The majority of these residents experienced unwitnessed arrests.⁵ In a community-based sample of 33,453 patients who experienced an out-of-hospital arrest, Swedish investigators found witness status to be one of six independent variables (initial rhythm, delay in emergency response services, place of arrest, witness status, bystander CPR, and age) associated with an increased probability of successful CPR.⁶ When none of the variables were present, survival to one month was 0.4%. In another community-based sample, researchers in Finland concluded that survival after an unwitnessed out-of-hospital arrest is not likely.⁷ In this prospective study of 809 patients who experienced an out-of-hospital cardiac arrest, 205 (25.3%) of the arrests were unwitnessed. CPR was initiated in 162 cases based on a priority dispatching protocol used by emergency services to differentiate patients with potential survival from those who exhibited signs of irreversible death; eight (4.9%) of the 162 patients were discharged alive from an acute care hospital.

Citing the low probability of post-CPR survival following an unwitnessed arrest, researchers suggest that nursing homes establish policies that restrict the use of CPR to residents who sustain a witnessed arrest (in the absence of a DNR order).^{8, 9 10} In a study of 346 Wisconsin long-term care facilities, four percent did not, by policy, initiate CPR. An additional 23% reported they would not initiate CPR but would call emergency medical services and only 30% indicated they would initiate CPR in unwitnessed arrests¹¹. Study participants cited the lack of efficacy as the common reason for maintaining policies for withholding CPR. In another survey involving 36 nursing homes, nurse researchers at the University of Minnesota found that most maintained policies requiring the initiation of CPR in witnessed arrest of non-DNR residents while only 24% required CPR in unwitnessed arrests.¹² Interestingly, almost half of the respondents to a survey designed to describe the prevalence of DNR protocols in long-term care facilities in Ontario reported they would perform CPR in the absence of a DNR order. Most indicated, however, that residents and their families, and facility staff would endorse a policy in which “do not resuscitate” was the default option and CPR would only be initiated at the request of the resident or surrogate.¹³

Data related to post-CPR survival highlights the importance of educating nursing home residents and their surrogates about CPR and DNR orders. Researchers from the

Cleveland Clinic identified race (49% of whites compared to 13% African Americans) and age (85 years or older) as independent predictors of DNR orders among patients from an 899-bed academic nursing home. The prevalence of DNR orders in this sample was 40%.¹⁴

A project conducted by the Hartford Institute for Geriatric Nursing at New York University identified several barriers to documenting DNR/CPR decisions in nursing homes: inaccessibility of DNR forms; incorrect knowledge about the use and success rate of CPR among nursing home residents; physicians unavailable to write the DNR order or uncertain about the procedure; difficulty contacting families; disagreement or ambivalence among family members about the most appropriate decision to make; and language. Following a planned intervention by an interdisciplinary team to improve advance care planning, it was found that the majority of DNR/CPR decisions were obtained after four attempts at resolving the question with residents or family members.¹⁵ To make an informed decision about their DNR and CPR preferences, it is important that patients and their families receive and understand accurate information about their condition and its prognosis, the interventions and alternatives, and risks and benefits including DNR and CPR.¹⁶ Volicer further recommends that informed consent include a discussion of CPR that distinguishes between witnessed and unwitnessed cardiac arrest.¹⁷

US Boards of Nursing

The Nebraska Board of Nursing surveyed all US nursing boards in March 2006 and found two (Kentucky and North Carolina) of the 28 respondent boards had opined that the board would not necessarily hold a licensed nurse responsible for not initiating CPR in the absence of a DNR order. Conversely, ten of the respondents indicated the nurse would be held responsible under similar circumstances. Seven boards either did not answer the question or indicated the state's practice act did not specifically address the issue. The remaining nine boards reported a nurse would be responsible for practicing to current standards; no information was provided, however, specifying the standard to which the nurse would be held.

Task Force members reviewed the advisory statements related to withholding CPR issued by the Kentucky¹⁸, North Carolina¹⁹ and Texas²⁰ boards of nursing. Information about the development and implementation of each board's advisory was then sought directly from the board's staff. Task Force members noted that each board developed its advisory in response to an inquiry from an individual nurse (Kentucky, North Carolina) or a professional association (Texas); reviewed current literature including the AHA CPR guidelines; implemented the advisory to guide the practice of nurses; and use the advisory in evaluating practice complaints. Each of the three boards reported no negative outcome to date as a result of their advisory.

2005 American Heart Association (AHA) CPR Guidelines

The 2005 AHA CPR guidelines are based on the 2005 International Consensus Conference on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations and reflect "the most extensive evidence

review of resuscitation science published to date.”²¹ The American Red Cross incorporates the 2005 AHA CPR guidelines in its CPR education programs.

According to the AHA, the reversal of clinical death is among the goals of emergency cardiac care²² since brain death begins four to six minutes following a cardiac arrest if CPR and defibrillation are not administered during that time.²³ As a result, all patients in cardiac arrest are expected to receive CPR regardless of witness status. However, because CPR may not be consistent with a patient’s wishes or if survival is not expected, the AHA provides decision-making guidelines to assist nurses and other health care providers. Thus, under the 2005 AHA standards, nurses and other health care providers would be expected to initiate CPR unless:

- The patient exhibits obvious clinical signs of irreversible death (e.g. rigor mortis, dependent lividity, decapitation or decomposition); or
- Attempts to perform CPR would place the rescuer at risk of physical injury; or
- The patient/surrogate has indicated with an advance directive (Do Not Attempt Resuscitation order) that resuscitation is not desired.²⁴

The AHA cautions against using a cardiac arrest victim’s present or potential quality of life as a criterion to withhold CPR.²⁵

Other CPR-related Protocols

Similarly, the Massachusetts Office of Emergency Medical Services (OEMS) requires Emergency Medical Technicians (EMTs) to begin resuscitation measures for all cardiac arrest patients. Three exceptions to this requirement are specified in the OEMS Emergency Medical Services Pre-Hospital Treatment Protocols, Appendix C: Cessation of Resuscitation²⁶ and include:

- Existence of an OEMS DNR Verification form or bracelet; or
- Trauma inconsistent with survival; or
- Obvious signs of biological death evidenced by decomposition or putrefaction and/or dependent lividity (i.e. clear demarcation of pooled blood within the body) and/or rigor (i.e. major joints – jaw, shoulders, elbows, hips or knees – are immovable). In addition to lividity and/or rigor, the following criterion must be established and documented to withhold resuscitation:
 - Respirations are absent for at least 30 seconds; and
 - Carotid pulse is absent for at least 30 seconds; and
 - Lung sounds auscultated by stethoscope bilaterally are absent for at least 30 seconds; and
 - Both pupils, if accessible, are non-reactive to light.

Three other randomly selected CPR protocols (Orange County EMS Agency Policy/Procedure: Prehospital Determination of Death²⁷; University Medical Center Base Hospital Policy: Deceased in Field²⁸; and U.S. Coast Guard Cardiopulmonary Resuscitation Protocol²⁹) were reviewed by the Task Force. Appendix 3 compares the assessment criterion for the determination of death found in the four CPR protocols and the Kentucky, North Carolina and Texas advisories on the withholding of CPR.

Advance Directive Policies

Task Force members reviewed the DNR and advance directive policies established by the Tewksbury Hospital, the Hebrew Rehabilitation Center (provided by individual Task Force members) and the Cleveland Clinic³⁰ and the Froedtert Hospital³¹, Milwaukee, Wisconsin, both of which were randomly selected from the internet search.

A Study to Identify Evidence-based Strategies for the Prevention of Nursing Errors

In its 2006 unpublished analysis of selected nursing practice complaint cases which it closed in 2005, the Board found six (6/78 or 8%) cases (four RNs and two LPNs) that involved a nurse's failure to initiate CPR in the care of four nursing home residents. Resuscitation directives of three of the four residents required the initiation of CPR while the resuscitation directive for the fourth resident was unknown. The six nurses had been licensed an average of 17 years (range: 1.75 years to 46 years). The employment tenure for five of the six nurses ranged from one week to five years and was unknown for the sixth nurse.

Using a modified version of the National Council of State Boards of Nursing Taxonomy of Error, Root Cause Analysis and Practice Responsibility (TERCAP™) audit instrument,³² the Board identified three categories of CPR-related nursing errors from the six cases:

- Lack of professional responsibility or patient advocacy (n = 3);
- Inappropriate clinical judgment (n = 2); and
- Faulty intervention (n = 1).

The Board's analysis also identified nurse and systems-related factors³³ that were potentially associated with the practice of the six nurses practicing in long-term care facilities including:

- Delay in procedure or treatment
 - Resident was not wearing an identification bracelet indicating the resident's resuscitation directive (e.g. Nurse reportedly was unaware that the resident's resuscitation directive required CPR. The nurse stated 5 to 6 minutes passed before the nurse was able to determine that the resident did not have a DNR order (the resident did not have a bracelet indicating resuscitation directive). Once the nurse became aware that the resident did not have a DNR order, the nurse still chose not to initiate CPR;
 - Resuscitation equipment not easily accessible to staff in emergency (e.g. Nurse needed to leave the area where the resident was located and go to a different area to find an emergency cart)
 - Resuscitation status unknown to nursing staff without consulting resident's medical record which was located at nurse's station (e.g. a newly admitted resident's resuscitation directive was not communicated at change-of-shift or other hand-offs)
 - Nurse *assumed* resident had a DNR order (Resident's resuscitation directive required CPR)
- Clinical signs and symptoms of cardiac arrest were not recognized

- Nurse lacked knowledge of what to do in assessing, validating findings and providing interventions in response to a resident's cardiac arrest (e.g. Facility's Staff Development instructor reported the nurse, licensed for 3 years, did not know what to do)
- Nurse demonstrated poor judgment (e.g. Nurse waited at entrance to facility to let EMTs into building rather than assign CNA to task so nurse could return to unresponsive resident to begin CPR)
- nurse failed to assess patient when notified patient was unresponsive
- Nurse-reported contributing factors:
 - Stress/high work volume
 - Unit conflict
 - Nurse believed CPR was a "disservice" to resident with Alzheimer's Disease
 - Nurse reported "knowing" the resident was dead "by looking" and because the nurse found the resident's "lower extremities were cool" to touch

The Board's duty as well as its goal in investigating and evaluating nursing practice complaints is to protect the public. In each of the six CPR-related cases closed in CY 2005, the Board sought to determine the existence of a practice breakdown and when needed, to implement remedial measures that would promote the nurse's safe, competent practice. In two of the six cases, the Board placed the nurses on probation in order to confirm the nurses' safe, competent practice. The Board also issued three reprimands and one dismissal in the four remaining cases.

Division of Health Care Quality (DHCQ) Regulations and Circular Letter 05-06-449

To insure the ongoing nursing competence of its employees, administrators of licensed nursing facilities in Massachusetts are required to provide in-service and educational offerings including organized orientation and continuing education programs in compliance with regulations 105 CMR 150.002(D)(3) and 150.007(I)³⁴.

Dated June 15, 2005, DHCQ Circular Letter 05-06-449³⁵ to the administrators of Massachusetts' long-term care nursing facilities requires each nursing facility to put into operation a minimum of one automated external defibrillator by November 30, 2005. Each facility administrator is charged with the development of policies and procedures related to the use and maintenance of the AED and requiring designated staff to be trained and certified in CPR and the use of an AED.

Scope of Nursing Practice

Because nurses may only perform acts within their scope of practice³⁶, Task Force members reviewed Massachusetts General Law, chapter 112, section 80B, which defines nursing as a science-based practice that involves clinical decision-making leading to the development, implementation and evaluation of a goal-oriented plan of care. M.G.L. c. 112, s. 80B, defines nursing further as the promotion and support of optimal functioning across the lifespan; the collaboration among health care team members; health counseling and teaching; and the provision of comfort measures. In addition to the application of nursing theory, the practice of RNs specifically includes the

coordination and management of resources. LPNs also apply nursing theory in participating in care planning and the coordination and management of resources.

Task Force members also reviewed Board regulation, 244 CMR 3.00: Registered Nurses and Licensed Practical Nurses³⁷, which describe further the functions of the RN and the LPN. Task Force members noted that both the RN and the LPN are able to assess the health status of individuals, and participate in analyzing data for the purpose of making informed judgments as well as participate in the implementation of nursing interventions.

Acquisition and Measurement of Related Entry-level Competencies

Noting that long-term care is the most frequently cited employment setting among newly licensed LPNs,³⁸ Task Force members sought to determine which entry-level competencies are taught in Board-approved nursing education programs related to the determination of irreversible death and the performance of CPR. To accomplish this, an electronic search of the current NCLEX-RN (2007)³⁹ and NCLEX-PN (2005)⁴⁰ Detailed Test Plans was conducted for the words “vital signs”, “lividity”, “rigor mortis”, “death”, “advance directives”, and “CPR”. The Detailed Test Plans measure the competencies required for safe entry-level nursing care; they serve as the link between what is taught in Board-approved nursing education programs and the practice of nurses in the first six months following licensure.

Task Force members found that both examinations measure entry-level competencies related to the assessment of vital signs, the performance of CPR, and the recognition of the signs and symptoms of medical emergencies. In addition, the Detailed Test Plans measure competencies related to advance directives, end-of-life care and client rights. As a result, Task Force members concluded that it is highly likely that this content is taught in entry-level RN and LPN nursing education programs since the Detailed Test Plans serve as the basis for curriculum development by Board-approved nursing education programs.

However, the words “death”, “lividity” and “rigor mortis” were not found. Subsequently, an electronic survey of all Board-approved nursing education programs was conducted on September 27, 2007, to determine the extent to which nursing students acquire knowledge, skills and abilities related to the signs of irreversible death including but not limited to rigor mortis and lividity. Results of the survey indicate few nursing curricula include content specifically related to the signs of clinical death, lividity and rigor mortis. Survey findings are summarized in Table 1.

Table 1

Program Type and Total #	# and % Respondents	# Include conclusive signs of death	# Include signs of impending death	# Include rigor mortis and lividity
LPN (23)	9 (39%)	4	3	3
RN - ADN (22)	8 (36%)	5	1	1
RN – BSN (16)	10 (63%)	5	3	2
RN - Generic Masters (7)	0	-	-	-
Total RN (45)	18 (40%)	10	4	3

As a result, Task Force members concluded that it is unlikely that basic RN and LPN programs provide nursing students with experiences in which they have the opportunity to acquire competencies in the assessment of irreversible death including lividity and rigor mortis.

Summary of Task Force Member Consensus on Issues and Barriers

Board staff identified ten (10) questions (Appendix 4) designed to provide a context for the Task Force’s initial discussions and the development of its consensus statements. The questions were based on a preliminary review of relevant journal articles, the 2005 American Heart Association Guidelines for Cardiopulmonary Resuscitation, the Texas Board of Nurse Examiners Position Statement on Registered Nurses in the Management of an Unwitnessed Arrest in a Long-term Care Facility and the four randomly selected CPR protocols.

Following their initial generative discussions, Task Force members were asked to identify consensus on the issues and barriers relevant to the nurse practicing in a long-term care facility initiating or withholding CPR in the absence of a DNR order. The areas of consensus identified by the Task Force are summarized below.

Consensus on Issues

1. In the absence of a DNR order, RNs and LPNs do not consistently demonstrate knowledge of regulations and practice standards requiring the nurse to initiate or withhold CPR. Examples include: the inappropriate use of pulse oximetry to assess respiratory status following cardiac arrest; choosing to withhold CPR in the absence of a DNR order; failure to initiate, at a minimum, chest compressions in the absence of an oral barrier.
2. The nurse is responsible and accountable for his or her nursing judgments, actions and competency. Examples of the nurse’s responsibility and accountability include: knowledge of a resident’s DNR status; clinical decision making in initiating or withholding CPR in the absence of a DNR order; acquiring and maintaining clinical competencies related to the assessment of conclusive signs of death, performance

- of CPR and the use of the AED; and performance of chest compressions in the absence of an oral barrier.
3. Thorough documentation of the nurse's decision-making is needed to demonstrate practice in accordance with accepted standards of practice in the initiation or withholding of CPR is required.
 4. Residents in long-term care settings may not have a documented resuscitation directive to guide nursing staff on whether the patient or resident desires CPR
 - a. Patient or resident/surrogate may choose not to have a resuscitation directive/DNR order because of an inaccurate understanding of what DNR means
 - b. Patient or resident/surrogate may not yet be ready to make a decision about their resuscitation directive/DNR status - informed consent requires the resident/surrogate to receive and understand accurate information about their:
 - i. Condition
 - ii. Prognosis
 - iii. Proposed interventions
 - iv. Alternatives
 - v. Risks and benefits
 - c. Involvement in patient or resident/surrogate informed consent process by medicine and nursing is key to success
 - d. Age and race can be a predictor of patient or resident with a documented resuscitation directive
 5. Nurses may lack accurate knowledge of a resident's resuscitation directive/DNR status
 - a. Nurses may choose not to initiate CPR based on their inaccurate assumption about patient or resident's DNR status
 - b. Residents fail to consistently wear ID bracelet with their DNR status
 - c. The patient or resident's DNR status may not be easily accessible to nursing staff (e.g. at the bedside)
 - d. The patient or resident's DNR status may not be consistently communicated at hand-off (change of shift or other hand-off communication)
 6. There is variation among all levels of entry-level nursing education in what is presented to nursing students regarding the assessment of irreversible death. Entry-level and continuing education are key to the acquisition and maintenance of competencies related to the nursing management of an arrest in the absence of a DNR order including, but not limited to:
 - a. Knowledge of regulations and practice standards
 - b. Knowledge of anatomy and physiology
 - c. Critical thinking (e.g. inappropriate use of pulse oximetry)
 - d. Assessment of signs of irreversible death including lividity and rigor mortis
 - e. Validation of findings
 - f. Prioritization and delegation
 - g. Performance of CPR and application of AED (e.g. health care providers "may not perform CPR well" according to AHA research; fail to provide chest compressions if an oral barrier is not available)

7. The pronouncement of death by an RN as authorized by GL c. 46, s. 9. – which serves as the tool to authorize a funeral home to remove a decedent from the long-term care facility - is often confused with the determination of death based on an assessment by the RN or the LPN for the purpose of determining whether to withhold CPR by the RN or LPN authorized at 244 CMR 3.00.
8. Any policy issued by the Board should use clear, simple terminology, and be widely disseminated.

Summary of Consensus on Barriers

1. Nurses may lack knowledge, or an understanding, of the regulations and practice standards required for the safe and effective nursing management of unwitnessed arrests in the absence of a DNR order
2. Nurses may lack entry-level and continuing competencies including but not limited to the assessment of the irreversible signs of clinical death, the performance of CPR and AED, prioritization and delegation, clinical decision making
3. Entry-level and continuing education opportunities to acquire lividity and rigor mortis assessment competencies are limited.

Conclusions

Over the course of their deliberations, Task Force members discussed the question of whether the nurse in the long-term care setting may choose to withhold CPR in the absence of a DNR order. These discussions occurred within the context of each member's own experience and perspective as a result of their review of the literature, other related documentation, and Board-generated data. As a result, Task Force members concluded:

Standard of Nursing Practice

The most appropriate standard of nursing practice in responding to a cardiac arrest regardless of setting and witness status is to initiate CPR as established by the evidence-based 2005 AHA CPR guidelines. However, because CPR may not be consistent with a patient's wishes or if survival is not expected, the AHA has also established evidence-based decision-making guidelines to assist nurses and other health care providers. Accordingly, under the 2005 AHA guidelines, nurses and other health care providers are expected to initiate CPR unless:

- The patient exhibits obvious clinical signs of irreversible death (e.g. rigor mortis, dependent lividity, decapitation or decomposition); or
- Attempts to perform CPR would place the rescuer at risk of physical injury; or
- The patient/surrogate has indicated with an advance directive (Do Not Attempt Resuscitation order) that resuscitation is not desired.

In addition, the criterion used by the Massachusetts Office of Emergency Medical Services, as identified in its Emergency Medical Services Pre-Hospital Treatment Protocols, Appendix C: Cessation of Resuscitation represents appropriate assessment criteria to establish the presence of irreversible death.

A nurse's decision to withhold CPR based on the AHA exception guideline would not represent neglect, an unjustified failure to provide treatment necessary to maintain the health or safety of a patient or resident. Since the nurse is responsible and accountable for his or her decision-making, the nurse is expected to clearly and accurately document a systematic assessment of the patient or resident as well as the nurse's subsequent judgments and actions. As noted by Finucane, et al, the decision making process "...is often all that distinguishes between neglect and careful therapeutic restraint when a vulnerable person dies without treatment."⁴¹

Scope of Practice and Nursing Competence: Individual Accountability

It is within the scope of RN and LPN practice to systematically assess a patient or resident's health status to determine whether the patient or resident exhibits signs of irreversible death for the purpose of deciding whether to initiate or withhold CPR (in the absence of a DNR order). The LPN who conducts such an assessment is not among the legally authorized health care providers authorized to pronounce death to enable a funeral home director to remove a decedent from the long-term care facility. Instead, the LPN is expected to follow the facility's protocol for obtaining MD, NP or RN pronouncement.

Throughout the Task Force meetings, it was clear that the outcome of this process presented an opportunity for collaboration between the Board, the DHCQ, and professional associations (e.g. Massachusetts Chapter of the National Association of Directors of Nursing/Long-term Care, the Massachusetts Extended Care Federation and the Massachusetts Organization of Nurse Executives) to develop and implement a comprehensive continuing education program that addresses the knowledge and skills (i.e. competencies) necessary for the effective management of cardiac arrests in nursing homes. Such a program is needed to insure that nursing practicing in long-term care facilities engage in practice that is consistent with all accepted standards of care and should include, but not be limited to, information about the regulations governing nursing practice, the advisory, the AHA standards and guidelines, anatomy and physiology offered at the appropriate RN or LPN level, clinical assessment of the signs of irreversible death and validation of findings from the assessment. Learning opportunities such as case studies and simulations that promote critical thinking, clinical decision making, prioritization and delegation should be provided.

Practice Environment: Systems Accountability

Insuring that all nurses and other health care providers have easy access at all times to information about a patient or resident's DNR/CPR preference is an essential "system-level" outcome. In addition, nurses in a management role in the long-term care setting are well positioned to promote a practice environment that is consistent with accepted standards. Examples of how this can be accomplished include offering the continuing education program described above as one of the annual, DHCQ-mandated educational programs as well as during orientation. Another crucial strategy is the inclusion of this continuing education module as part of a novice nurse transition program since newly licensed RNs and LPNs have little or no experience in the management of cardiac arrests.

The findings from the Board's A Study to Identify Evidence-based Strategies for the Prevention of Nursing Errors (2006) identifies additional strategies for the reduction of CPR-related practice breakdown.

Medical and Ethical Considerations

Post-CPR survival rates indicate a medical justification for withholding CPR in an unwitnessed arrest. The nurse's duty to "do no harm" serves as an ethical justification since the harm caused by the performance of unsuccessful CPR when a patient or resident clearly exhibits the signs of clinical death calls into question the value or benefit of performing this procedure under such circumstances. In addition, the patient or resident's right to autonomy – to make one's own end-of-life decisions relative to CPR and DNR orders and to have such decisions respected when the decision is truly informed – is another important principle to consider particularly if that decision conflicts with the nurse's own values.

Task Force Recommendations

Task Force members acted by consensus to recommend the following to the Board:

1. Issue the proposed evidence-based advisory ruling (see Appendix 5) that incorporates the Board's regulations at 244 CMR 9.00: Standards of Conduct and is based on the standard of practice established by the 2005 American Heart Association as well as the irreversible death assessment criteria as they appear in the 2005 Pre-Hospital Treatment Protocols of the Massachusetts Office of Emergency Medical Services to guide RN and LPN practice in long-term care.
2. Prior to issuing advisory ruling, seek patient/resident feedback to advisory through a focus group meeting.
3. Publish a Task Force Report describing the information and data considered by the Task Force in making its recommendation.
4. Implement strategies to promote knowledge of the advisory ruling among nurses practicing in long-term facilities statewide including:
 - a. Disseminate the advisory ruling and the tool, Strategies to Prevent CPR-related Nursing Practice Breakdown from the Board's recent analysis of nursing practice complaints closed during Calendar Year 2005 (Appendix 6):
 - i. All Board-approved nursing education programs
 - ii. Massachusetts Division of Healthcare Quality
 - iii. Massachusetts Office of Emergency Medical Services
 - iv. Massachusetts Chapter of the National Association of Directors of Nursing Administration/Long-term Care
 - v. Massachusetts Extended Care Federation
 - vi. Massachusetts Organization of Nurse Executives
 - vii. Massachusetts Medical Directors' Association
 - viii. Massachusetts Registered Nurse Association
 - ix. Massachusetts Executive Office of Elder Affairs
 - x. Massachusetts Coalition for Nurse Practitioners
 - b. Publish the advisory ruling on the Board's website and in its electronic newsletter;

- c. Collaborate with Board-approved nursing education programs in the development and implementation of a curriculum module that assures the acquisition of entry-level competencies including but not limited to:
 - i. Knowledge of regulations and practice standards including regulatory standards of conduct, CPR standards, the Board's advisory ruling, death pronouncement under M.G.L. Chapter 46, Section 9
 - ii. Knowledge of anatomy and physiology
 - iii. Critical thinking and problem solving (e.g. inappropriate to use pulse oximetry)
 - iv. Clinical judgment and decision making including
 - 1. Assessment of the signs of irreversible death including lividity and rigor mortis as well as differentiating between dependent lividity and cyanosis
 - 2. Validation of findings
 - v. Prioritization and delegation
 - vi. CPR and AED
 - d. Collaborate with the Massachusetts Division of Health Care Quality and the Massachusetts Extended Care Federation in the development and implementation of a mandatory annual nursing continuing education program that assures the acquisition and maintenance of competencies related to the initiation or withholding of CPR in a cardiac arrest including but not limited to:
 - i. Knowledge of regulations and practice standards including regulatory standards of conduct, CPR standards, the Board's advisory ruling, death pronouncement under M.G.L. Chapter 46, Section 9
 - ii. Knowledge of anatomy and physiology
 - iii. Critical thinking and problem solving (e.g. inappropriate to use pulse oximetry)
 - iv. Clinical judgment and decision making including
 - 1. Assessment of signs of irreversible death including lividity and rigor mortis as well as differentiating between dependent lividity and cyanosis
 - 2. Validation of findings
 - v. Prioritization and delegation
 - vi. CPR and AED
5. Publish the competency-based continuing education program on the Board's website.
 6. Collaborate with the Massachusetts Division of Health Care Quality and the Massachusetts Extended Care Federation to insure bedside access by nursing staff to a patient's DNR status for the purpose of avoiding delay in decision-making with regard to the initiation or withholding of CPR.
 7. Evaluate practice complaints that involve a nurse's failure to initiate CPR in an unwitnessed arrest using the advisory ruling.
 8. Measure outcomes related to the number and types of complaints involving nurses who initiated or withheld CPR one year after implementation.
 9. Direct Board staff to evaluate the application of the proposed advisory to other practice settings and subsequently, issue an advisory.

APPENDIX 1
TASK FORCE ON THE NURSING MANAGEMENT OF
UNWITNESSED ARRESTS IN LONG-TERM CARE

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APPENDIX 2

TASK FORCE ON THE NURSING MANAGEMENT OF UNWITNESSED ARRESTS IN LONG-TERM CARE

WORK PLAN

DATE	ACTIVITY
6/14/07	Written and email invitations to Board-specified agencies and organizations. <i>Date completed: 6/14/07</i>
6/29/07	Agency/organization responses to invitation due. <i>Date completed: 6/29/07</i>
7/19/07	Task Force meets at 239 Causeway Street, Boston. Agenda: <ul style="list-style-type: none"> • Overview of Task Force charge including brief history of Board, Board mission, composition and functions, task force purpose • “Issues and Drivers”: problem statement, Board analysis of selected CPR-related cases closed in 2005, member identification of issues and drivers <i>Date completed: 7/19/07</i>
8/16/07	Task Force meets at 239 Causeway Street, Boston. Agenda <ul style="list-style-type: none"> • Follow-up from 7/19/07 meeting including identification of additional issues • Identification of areas of consensus on issues, barriers • Identification of best practices, and individual and systems accountability <i>Date completed: 8/16/07</i>
9/13/07	Task Force meets at 239 Causeway Street, Boston. Agenda <ul style="list-style-type: none"> • Identification of best practice, and individual and systems accountability • Finalize preliminary elements of advisory <i>Date completed: 9/13/07</i>
10/5/07	Task Force meets at 239 Causeway Street, Boston. Agenda <ul style="list-style-type: none"> • Review and finalize draft of proposed advisory and report of Task Force findings and recommendations <i>Date completed:</i>
11/13/07	BRN review and action on Task Force findings and recommendations <i>Date completed:</i>

APPENDIX 3

TASK FORCE ON THE NURSING MANAGEMENT OF UNWITNESSED ARRESTS IN LONG-TERM CARE FACILITIES Comparison of Randomly Selected Criteria for Determination of Death

Criterion	Kentucky BON Position Statement	Texas BNE Position Statement	North Carolina BON Position Statement	Orange County EMS Agency Policy	MA OEMS Appendix C: Exceptions to Initiation of Resuscitation	University Medical Center Base Hospital Policy, Tucson, AZ	US Coast Guard CPR Protocol
Patient unresponsive		√					√ ("Unresponsive to painful stimuli such as sternal rub and no tendon reflexes")
Respiration absent (no assessment measure cited)		√				√ ("apneic or slow, intermittent, non-effective attempts at inspiration associated with pulselessness")	
Respiration absent based on 30 second auscultation				√	√ (at least 30 second auscultation plus respirations absent at least 30 seconds)		√ (assessed for 60 sec using stethoscope if available)

Death Criteria → exception to initiating CPR	Kentucky BON Position Statement	Texas BNE Position Statement	North Carolina BON Position Statement	Orange County EMS Agency Policy	MA EMS Appendix C: Exceptions to Initiation of Resuscitation	University Medical Center Base Hospital Policy, Tucson, AZ	US Coast Guard CPR Protocol
Pulse absent (no assessment measure cited)		√				√ ("Pulselessness")	
Pulse absent based on palpation				√ (15 second palpation)	√ (Carotid pulse absent for at least 30 seconds)		√ (Carotid or apical assessed for 60 seconds)
Pulse absent based on 15 second AP auscultation				√			
Pupils unresponsive and dilated		√		√	√ (Both)		√ ("Unresponsive to light and remain fixed and dilated")
No corneal reflexes							√
Rigor mortis	√	√	√	√ a/o lividity	√ (jaw, shoulders, elbows <u>or</u> knees immovable) and/or lividity	√ and lividity	√ "or lividity"

Death Criteria → exception to initiating CPR	Kentucky BON Position Statement	Texas BNE Position Statement	North Carolina BON Position Statement	Orange County EMS Agency Policy	MA EMS Appendix C: Exceptions to Initiation of Resuscitation	University Medical Center Base Hospital Policy, Tucson, AZ	US Coast Guard CPR Protocol
Dependent lividity	√	√	√ (skin blanches w/ pressure)	√ a/o rigor mortis	√ and/or rigor mortis	√ and rigor mortis	√ or rigor mortis
Algor mortis		√	√				
Extended downtime w/ EKG asystole			√				
General cyanosis		√					

APPENDIX 4

BRN STAFF GENERATED CONTEXT QUESTIONS (UNRANKED)

1. Is there consensus on whether a person without a DNR order is presumed to have consented to CPR?
2. Is there consensus on whether the “anticipated to die” condition for RN pronouncement found in G.L. c. 46, s. 9 means the resident “has a DNR order”?
 - DNR orders do not address any aspect of care other than to prevent CPR.
 - Is there consensus that meeting the “anticipated to die” condition for RN pronouncement must be based on a medical judgment/prognosis based on a documented medical assessment?
 - What assurance is there that a fully informed decision for DNR was made?
 - Were nursing and physician involved in the decision? Many facilities rely on the social worker to discuss resuscitation directives with resident/family.
3. Is there consensus on whether the assessment that death has occurred and that CPR is not an appropriate intervention is the same as “pronouncement of death”, which would require a qualified RN?
4. Criteria used in determining irreversible death vary among agencies/organizations (e.g. American Heart Association, Coast Guard EMT, Texas Board of Nurse Examiners)
5. Lack of consensus on who can determine irreversible death: RN only; RN and LPN
6. Futility/efficacy of CPR in unwitnessed arrest in long-term care facilities
 - America Heart Association: less than 1% of patients transported to hospital with continuing CPR survive to hospital discharge
 - Finucane and colleagues reviewed published studies involving resuscitation (unknown if arrests were unwitnessed) and found five studies with a 3% or less survival rate; one study with a survival rate of 5% and one of 10.5%
7. Resuscitation directive
 - Is an informed decision made – nurse and/or MD often not involved in DNR discussion on admission to a long-term care facility
 - Informed consent decisions require residents/families receive and understand accurate information about prognosis, nature of proposed intervention such as CPR, alternatives, risks and benefits
 - Absence of resuscitation directive
 - a. Staff unaware of resident’s wishes (e.g. not communicated at change-of-shift hand-off; no resident identification bracelet)
 - b. Resident/family ambivalent about making decision therefore avoid making decision
8. Nursing competence
 - Maintenance over time of nurse’s competency in performing CPR
 - Reluctance to perform CPR without barrier for mouth-to-mouth
 - Lack of understanding of reliable criteria indicating irreversible death and how to assess
9. EMS often transports a nursing home resident who meets criteria for irreversible death to the hospital ER where death is then pronounced

10. Should a BRN advisory apply to a specific setting? Should there be a differentiation in applying an advisory to a skilled nursing facility (resident's home) versus a rehabilitation/sub acute unit where the "patient" is expected to be discharged? Note: G.L. c. 46, s. 9, authorizes a qualified RN to pronounce death when a patient "...resides in a certified nursing home dies..."

APPENDIX 5

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Advisory on the Initiation and Withholding of Cardiopulmonary Resuscitation In Long-term Care Facilities

Purpose: To guide the practice of the Registered Nurse and the Licensed Practical Nurse (“the nurse”) in initiating or withholding cardiopulmonary resuscitation (CPR) when a patient or resident in a long-term care facility with 24-hour skilled nursing staff on duty has experienced a cardiac arrest.

Such practice must be in compliance with G.L. c. 112, s. 80B; 244 CMR 3.02: Responsibilities and Functions - Registered Nurse; 244 CMR 3.04: Responsibilities and Functions – Practical Nurse; 244 CMR 9.03(5): Adherence to Standards of Nursing; 244 CMR 9.03(9): Responsibility and Accountability; 244 CMR 9.03(11): Performance of Techniques and Procedures; 244 CMR 9.03(12): Competency; and 244 CMR 9.03(44): Documentation.

Advisory:

Standard of Nursing Practice

The nurse licensed by the Massachusetts Board of Registration in Nursing (Board) is expected to engage in the practice of nursing in accordance with accepted standards of practice¹. It is the Board’s current position that these standards, in the context of practice in long-term care facilities include, but are not limited to, the initiation of CPR when a patient or resident has experienced a cardiac arrest except when the patient or resident has:

- A resuscitation directive (i.e. “Do Not Resuscitate” [DNR] order) that indicates resuscitation is not desired by the patient or resident, or appropriate surrogate decision-maker; or
- Signs of irreversible death (e.g. decapitation, decomposition, rigor mortis, dependent lividity)².

In its current position, the Board now recognizes the presence of signs of irreversible death as a second condition, in addition to a patient’s or resident’s resuscitation directive, under which the nurse who practices in a long-term care facility may withhold CPR. In the absence of a DNR order and in the absence of signs of irreversible death, however, the nurse who practices in a long-term care facility is required to initiate CPR when a patient or resident experiences a cardiac arrest.

The nurse is expected to acquire and maintain competence in the performance of nursing techniques and procedures^{3 4} related to the initiation or withholding of CPR.

¹ 244 CMR 9.03(5): Adherence to Standards of Practice. Available from www.mass.gov/dph/boards/rn

² American Heart Association. (2005). Part 2: Ethical Issues. *Circulation*; 112:IV-6- IV-11, 1-14. Retrieved 4/27/07 from www.circ.ahajournals.org/cgi/content/full/112/24_suppl/IV-6.

³ 244 CMR 9.03(11): Performance of Techniques and Procedures. Available from www.mass.gov/dph/boards/rn

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Examples of these nursing techniques and procedures include, but are not limited to, the performance of CPR and the use of automatic external defibrillation (AED) as well as the assessment of irreversible death. The nurse can obtain these competencies through the nurse's successful completion of entry-level nursing education programs or those continuing education experiences developed in accordance with Board regulations at 244 CMR 5.00: Continuing Education, or both.

Nursing Assessment

In the event of an unwitnessed patient or resident cardiac arrest, the nurse practicing in a long-term care facility is expected to immediately conduct a systematic and sequential assessment of the patient or resident for all of the following clinical signs to conclude whether the patient or resident exhibits signs of irreversible death (in the absence of decapitation, decomposition or other injuries incompatible with life): justifying the withholding of CPR despite the absence of a DNR order:

- No response when the patient or resident is tapped on the shoulder and asked, "Are you all right?";⁵ and
- No respirations as determined by opening the airway using the head tilt-chin lift maneuver (or jaw thrust if a cervical spine injury is suspected) and observing for the rise and fall of the chest wall while listening and feeling for breath⁶ for at least 30 seconds⁷ (the use of pulse oximetry is not appropriate for this assessment); and
- No pulse as determined by palpation of the carotid or auscultation of the apical pulse⁸ for at least 30 seconds⁹ ; and
- Dilated bilateral pupils (if assessable) that are unresponsive to bright light¹⁰; and
- Dependent lividity¹¹.

If rigor mortis is present, as determined by the presence of hardening of the muscles or rigidity of the jaw, shoulders, elbows or knees,¹² then a finding of dependent lividity is not required.

This assessment must be conducted by the nurse to justify the withholding of CPR when all such signs are present. If any of the clinical signs set forth above are not present, the nurse must initiate CPR without delay.

⁴ 244 CMR 9.03(12): Competency. Available from www.mass.gov/dph/boards/rn

⁵ American Heart Association. (2005). Part 4: Adult Basic Life Support. Circulation; 112:IV-19- IV-34, 1-39. Retrieved 5/15/07 from www.circ.ahajournals.org/cgi/content/full/112/24_suppl/IV-19.

⁶ American Heart Association. (2005). Part 4: Adult Basic Life Support. Circulation; 112:IV-19- IV-34, 1-39. Retrieved 5/15/07 from www.circ.ahajournals.org/cgi/content/full/112/24_suppl/IV-19.

⁷ OEMS Emergency Medical Services Pre-Hospital Treatment Protocols, Appendix C

⁸ American Heart Association. (2005). Part 4: Adult Basic Life Support. Circulation; 112:IV-19- IV-34, 1-39. Retrieved 5/15/07 from www.circ.ahajournals.org/cgi/content/full/112/24_suppl/IV-19

⁹ OEMS Emergency Medical Services Pre-Hospital Treatment Protocols, Appendix C

¹⁰ OEMS Emergency Medical Services Pre-Hospital Treatment Protocols, Appendix C

¹¹ American Heart Association. (2005). Part 2: Ethical Issues. Circulation; 112:IV-6- IV-11, 1-14. Retrieved 4/27/07 from www.circ.ahajournals.org/cgi/content/full/112/24_suppl/IV-6.

¹² OEMS Emergency Medical Services Pre-Hospital Treatment Protocols, Appendix C

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The nurse who makes an appropriate assessment and conclusion of irreversible death is expected to follow the facility's policy for pronouncement of death for the purpose of allowing removal of the decedent's body.

The nurse practicing in a long-term care facility is responsible and accountable for his or her nursing judgments, actions and competency¹³ with regard to the initiation or withholding of CPR in accordance with the accepted standard of practice. Therefore, the nurse must make complete, accurate and legible entries in all appropriate patient or resident records required by federal and state laws and regulations, and accepted standards of practice¹⁴. To demonstrate that the nurse practicing in a long-term care facility has adhered to the accepted standard of nursing practice in the initiation or withholding of CPR, such documentation entries must include, but are not be limited to:

- Patient or resident DNR status (or absence of);
- Findings from the nurse's systematic patient or resident assessment including responsiveness; respiratory status; cardiac status; pupillary responsiveness; and the presence of dependent lividity and/or rigor mortis that substantiates the nurse's determination of irreversible death;
- Judgments and interventions made by the nurse based on his or her systematic assessment of the patient or resident including, but not limited to, the decision to initiate or withhold CPR;
- Collaboration and communication with other health care providers to ensure quality and continuity of care including dates and times of notifications of primary care providers;
- Collaboration and communication with patient or resident family or significant others including dates and times of notification.

Nursing Management in the Long-term Care Setting

The nurse employed in a nursing management role in the long-term care setting with 24-hour skilled nursing staff on duty is expected to adhere to accepted standards of practice for that role including, but not limited to, the development and implementation of the necessary measures to promote and manage the delivery of safe nursing care in accordance with accepted standards of nursing practice.¹⁵ Examples of such measures related to the initiation and withholding of CPR include:

- Insure acquisition and maintenance of competencies of nursing staff related to facility policies and standards of care for the initiation and withholding of CPR, the assessment of irreversible death, resuscitation directives, the performance of CPR and the use of AED which will be completed at a minimum during new employee orientation, novice nurse transition and mandatory annual continuing education programs;
- Standardize hand-off communications using a standardized format that includes the patient's current resuscitation status;

¹³ 244 CMR 9.03(9): Responsibility and Accountability. Available at www.mass.gov/dph/boards/rn.

¹⁴ 244 CMR 9.03(44): Documentation. Available at www.mass.gov/dph/boards/rn.

¹⁵ 244 CMR 9.03(46): Responsibilities of Nurse in Management Role. Available at www.mass.gov/dph/boards/rn.

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- Incorporate unit-level nursing staff in the systematic evaluation of clinical policies and procedures related to the assessment of irreversible death, resuscitation directives, CPR and AED;
- Insure patient identification mechanisms are easily accessible to all direct-care nursing staff at all times and for all patients;
- Insure that information about each patient's resuscitation directive is readily accessible to all direct-care nursing staff; and
- Adopt strategies to regularly audit nursing practice to verify nursing competency and ongoing compliance with standards of care related to the initiation or withholding of CPR, assessment of irreversible death, resuscitation directives and the performance of CPR and the use of AED.

This advisory is only applicable to the nurse who practices in a long-term care setting (with or without a sub-acute skilled care component) with 24-hour skilled nursing staff on duty. It is not intended for application, in whole or in part, to the practice of nursing in any other setting.

APPENDIX 6

MASSACHUSETTS BOARD OF REGISTRATION IN NURSING

STRATEGIES TO AVOID CPR-RELATED PRACTICE BREAKDOWN

Nurse-based Error Prevention Strategies

- Never assume!
- Insure easy access to information regarding resuscitation directives
- Actively participate in the systematic evaluation of an employing agency's clinical policies and procedures
- Advocate for standardized hand-off communications using a consistent format including, but not limited to, the patient's resuscitation status
- Actively participate in interdisciplinary root cause analyses when nursing errors occur
- Review standards of care related to:
 - Assessment of the signs of irreversible death
 - Resuscitation directives (Do-Not-Resuscitate [DNR] status)
 - Initiation and withholding cardiopulmonary resuscitation (CPR), and the use of automatic external defibrillation (AED)
 - Hand-off communications including DNR status

Nursing Education-based Error Prevention Strategies

- Design and implement simulations which challenge the student nurse's skills in clinical reasoning, organization, prioritization, communication, and delegation, as appropriate, regarding:
 - Assessment of the signs of irreversible death
 - Resuscitation directives (DNR status)
 - Initiation and withholding CPR, and the use of AED
 - Hand-off communications including DNR status

Practice Environment-based Error Prevention Strategies

- Adopt evidence-based facility policies, procedures and best practices related to:
 - Assessment of the signs of irreversible death
 - Initiation and withholding CPR, and the use of AED
 - Resuscitation directives (DNR status)
 - Hand-off communications including DNR status
- Insure the review of facility policies and standards of care related to the following in all nursing staff orientation, novice nurse transition and continuing education programs:
 - Assessment of the signs of irreversible death
 - Resuscitation directives (DNR status)
 - Initiation and withholding CPR, and the use of AED
 - Hand-off communications including DNR status

- Adopt strategies to regularly audit nursing practice to verify ongoing compliance with standards of care related to the assessment of the signs of irreversible death, resuscitation directives (DNR status), the initiation and withholding of CPR and the use of AED.
- Standardize hand-off communications using a consistent format including, but not limited to, the patient's resuscitation status (DNR status) such as are recommended by the Joint Commission on Accreditation of Healthcare Organizations
- Incorporate unit-level nursing staff in the systematic evaluation of clinical policies and procedures related to the assessment of the signs of irreversible death, advance directives (DNR status) and the initiation and withholding of CPR, and the use of AED.
- Insure patient identification mechanisms are easily accessible to direct-care nursing staff at all times for all patients
- Insure that information about each patient's advance directives (DNR status) is easily accessible to all direct-care nursing staff
- Aggregate data from root cause analyses to identify patterns

Excerpted from A Study to Identify Evidence-Based Strategies for the Prevention of Nursing Errors, Massachusetts Board of Registration in Nursing (December 2006)

END NOTES

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- ¹ Personal correspondence dated 11/21/01, from Sherman Lohnes, Division of Health Care Quality, Department of Public Health, to Gino Chisari, Board of Registration in Nursing.
- ² Finucane TE, Harper GM, Attempting Resuscitation in Nursing Homes: Policy Considerations. *Journal of the American Geriatrics Society*. 1999; 47(10):1261-1264.
- ³ Shah MN, Fairbanks RJ, Lerner EB. Cardiac Arrests in Skilled Nursing Facilities: Continuing Room for Improvement? *Journal of the American Medical Directors Association*. 2006 Jul;7(6):399-400.
- ⁴ American Heart Association. 2005 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care: Part 2 Ethical Issues. *Circulation*. 2005; 112:IV-6-IV-11.
- ⁵ Ghush HF, Teasdale TA, Pepe PE, Ginger VF. Older Nursing Home Residents Have a Cardiac Arrest Survival Rate Similar to that of Older Persons Living in the Community. *Journal of the American Geriatric Society*. 1995 May;43(5): 520-527.
- ⁶ Herlitz J, Engdahl J, Svensson L, Angquist K, Young M, Holmberg S. Factors Associated with an Increased Chance of Survival among Patients Suffering from an Out-of-Hospital Cardiac Arrest in a National Perspective in Sweden.
- ⁷ Kuisma M, Jaara K. Unwitnessed out-of-hospital Cardiac Arrest: Is Resuscitation Worthwhile? *Annual of Emergency Medicine*. 1997 July;30(1): 69-75.
- ⁸ Ibid.
- ⁹ Gordon M, Schwartz BE. Do Not Resuscitate Practice, Guidelines and Practices in Long-term Care in Ontario: Results of a Survey. *Annual of Royal College of Physicians and Surgeons*. 1996 Sept; 29(6): 332-335.
- ¹⁰ Ghush HF, Teasdale TA, Pepe PE, Ginger VF. Older Nursing Home Residents Have a Cardiac Arrest Survival Rate Similar to that of Older Persons Living in the Community. *Journal of the American Geriatric Society*. 1995 may;43(5): 520-527.
- ¹¹ Kane RS, Burns EA. Cardiopulmonary Resuscitation Policies in Long-term Care Facilities. *Journal of the American Geriatrics Society*. 1997 Feb;45(2): 245-246.
- ¹² Ryden MB, Brand K, Weber E, Oh HL, Gross C. Nursing Home Resuscitation Policies and Practices for Residents Without DNR Orders. *Geriatric Nursing* 1998; 19(6): 315-319.
- ¹³ Gordon M, Schwartz BE. Do Not Resuscitate Practice, Guidelines and Policies in Long-term Care in Ontario: Results of a Survey. *Annals of the Royal College of Physicians and Surgeons*. 1996 Sep;29(6):332-335.
- ¹⁴ Messinger-Rapport BJ, Kamel, HK. Predictors of Do Not Resuscitate Orders in the Nursing Home. *Journal of the American Medical Directors Association*. 2005 Jan-Feb; 6(1): 18-21.
- ¹⁵ McBee L, Burack MA, Carter J, Chichin, E. Discussing DNR/CPR Preferences in the Nursing Home: A Key Component of Advance Care Planning. *Americans for Better Care of the Dying Exchange*: November-December 2000. Retrieved 2/8/2005 from <http://www.abcd-caring.org>.
- ¹⁶ American Heart Association. 2005 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care: Part 2 Ethical Issues. *Circulation*. 2005; 112:IV-6-IV-11.
- ¹⁷ Volicer L. End-of-Life Care for People with Dementia in Residential Care Settings. 2005. *Alzheimer's Association*.
- ¹⁸ Kentucky Board of Nursing. Initiation of Resuscitation Absent a "Do Not Resuscitate" Order. 2005. Downloaded 7/19/07 from www.kbn.ky.gov/practice/opinionresuscitate.htm.
- ¹⁹ North Carolina Board of Nursing. The Role of the Licensed Nurse in Unwitnessed Deaths Without Do Not Resuscitate Orders. 2003. Downloaded 7/12/07 from www.ncbon.com/prac-lpnfaq.asp.
- ²⁰ Texas Board of Nurse Examiners. 15.20 Registered Nurses in the Management of an Unwitnessed Arrest in a Resident in a Long Term Care Facility. 2005. Downloaded 7/12/07 from <http://www.bon.state.tx.us/practice/position.html#15.20>
- ²¹ American Heart Association. 2005 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care: Part 1 Introduction. *Circulation*. 2005; 112:IV-1-IV-5.
- ²² Ibid.
- ²³ American Heart Association. CPR Facts and Statistics. Retrieved from www.americanheart.org/presenter.jhtml?identifier=3034352.

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- ²⁴ American Heart Association. 2005 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care: Part 2 Ethical Issues. *Circulation*. 2005; 112:IV-6-IV-11.
- ²⁵ *Ibid*.
- ²⁶ Massachusetts Office of Emergency Medical Services. Emergency Medical Services Pre-Hospital Treatment Protocols. 2006; Official Version 6.04. Available at http://www.mass.gov/Eeohhs2/docs/dph/emergency_services/treatment_protocol_prehospital.pdf.
- ²⁷ Orange County, CA, Emergency Medical Services. EMS Agency Policy/Procedure, Prehospital Determination of Death. 2004. Downloaded 8/14/07 from http://www.ochealthinfo.com/docs/medical/ems/P&P/300_399.pdf
- ²⁸ University Medical Center. Base Hospital Policies and Procedures, Deceased in the Field. 2005. Tuscon, AZ. Downloaded 8/15/07 from http://www.azumc.com/UMC/workfiles/bhpolicies/Deceased_in_Field_Assessment_DOA_DNR.pdf
- ²⁹ U.S. Coast Guard. Emergency Medical Services Cardiopulmonary Resuscitation Protocol. Downloaded 8/22/07 from http://www.uscg.mil/hq/g-w/g-wk/wkh/wkh/pdf/Coast_Guard_PrtclWthldCPR.pdf.
- ³⁰ Cleveland Clinic. Department of Bioethics Policy on Do Not Resuscitate. 2005. Downloaded 5/15/07 from www.clevelandclinic.org/bioethics/policies/dnr.html.
- ³¹ Froedtert Hospital. Do Not Resuscitate Orders, Guidelines for Physician Staff. Milwaukee, WI. 2003. Downloaded 5/15/07 from <http://www.eperc.mcw.edu/Educational%20Materials/Clinical/Guide-DNR.pdf>.
- ³² National Council of State Boards of Nursing. (2005). *Taxonomy of Error, Root Cause Analysis and Practice Responsibility* (Version 02182005). Chicago, IL: Author. The Board gratefully acknowledges permission from the NCSBN to use the TERCAP audit instrument for this study. The instrument's content validity was determined to be acceptable following a review by a senior Board staff member, a masters-prepared RN with 29 years of nursing experience in clinical practice, nursing education and regulation.
- ³³ Potential nurse and system-related factors were identified using the modified TERCAP audit instrument.
- ³⁴ Massachusetts Division of Health Care Quality. Regulations 105 CMR 150.002(l). Downloaded 7/19/07 from <http://www.mass.gov/Eeohhs2/docs/dph/regs/105cmr150.pdf>.
- ³⁵ Massachusetts Division of Health Care Quality. Circular Letter: DHCQ 05-06-449: Automated External Defibrillators (AEDs) in Nursing Homes. 2005. Downloaded 7/19/07 from http://www.mass.gov/Eeohhs2/docs/dph/quality/hcq_circular_letters/ltc_facilities_0506449.pdf
- ³⁶ Massachusetts Board of Registration in Nursing. Regulation 244 CMR 9.03(10): Acts within Scope of Practice. Available at www.mass.gov/dph/boards/rn.
- ³⁷ Massachusetts Board of Registration in Nursing. Regulation 244 CMR 3.00: Registered Nurses and Licensed Practical Nurses. Available at www.mass.gov/dph/boards/rn.
- ³⁸ National Council of State Boards of Nursing. (2006). Report of Findings from the 2003 LPN/LVN Practice Analysis Linking the NCLEX-PN Examination to Practice. Chicago, IL: Author.
- ³⁹ National Council of State Boards of Nursing. (2007). NCLEX-RN Detailed Test Plan. Chicago, IL: Author.
- ⁴⁰ National Council of State Boards of Nursing. (2005). NCLEX-PN Detailed Test Plan. Chicago, IL: Author.
- ⁴¹ Finucane TE, Harper GM, Attempting Resuscitation in Nursing Homes: Policy Considerations. *Journal of the American Geriatrics Society*. 1999; 47(10):1261-1264.