

## Review: Factors Relating to Nurses' Caring Behaviors for Dying Patients

Chuleeporn Prompahakul, BSN<sup>1</sup>, Dr. Kittikorn Nilmanat<sup>2</sup>, Dr. Waraporn Kongsuwan<sup>3</sup>

---

**Background:** Nowadays, caring for patients at the end of life becomes an indicator of the quality of care in a hospital. Nurses are the key people to provide care for dying patients, therefore caring behaviors of nurses could affect the quality of care. To attain and maintain the quality of care at the end of life, factors that contribute to nurses' caring behaviors for dying patients needs to be addressed.

**Purpose:** The purpose of this article is to review factors relating to nurses' caring behaviors for dying patients from existing literature.

**Method:** Relevant literature from electronic databases, including CINAHL, PubMed, Science direct, OVID, Proquest, and The Cochrane Library during the year 1990-2010, was examined, synthesized, and categorized systematically.

**Result:** The results showed that factors related to a nurse's caring behavior for a dying patient can be classified into three groups. These include; *Nurse's personal factors, Technological influencing factors and Environmental factors.*

**Conclusion:** The three factors related to nurses' caring behaviors for dying patients in the current review could serve as a valuable database to implement in nursing practice, education and research, in order to achieve quality of end-of-life care.

**Key words:** caring behavior, relating factor, dying patient

---

<sup>1</sup> Master of Nursing Science Student, Faculty of Nursing, Prince of Songkla University, Thailand

<sup>2</sup> Assistant Professor, Medical Nursing Department, Faculty of Nursing, Prince of Songkla University, Thailand

<sup>3</sup> Assistant Professor, Medical Nursing Department, Faculty of Nursing, Prince of Songkla University, Thailand

## **Background**

Advances in medical technology has contributed to increasing the life span of people as statistics show that the average lifespan of the world's population has increased from 77.4 years in 2005 to 78.3 years in 2010 and 79.5 years in 2020 (Heron, Hoyert, Murphy, Kochanek, & Tejada-Vera, 2009). As a result, the proportion of the elderly population has increased (Naughton, Bennett, & Feely, 2006). Therefore, the demand for care at the end-of-life (EOL) is high. During the dying phase, both dying patients and their family members face much suffering. For example, the patient may experience the following, pain, dyspnea, fatigue, nausea, vomiting, and delirium although feelings of powerlessness, hopelessness, uncertainty, and spiritual distress may be present in both the patient and family members which would affect their well being and whether the patient experiences a peaceful death (Aramrom, 2009; Labhantakul, 2000; Nichaiowit, Khetkhaiwan, Charusombong, Chatkreaw, 2003). Nowadays, the place where people die is moving to hospital settings due to a value in saving and prolonging life using advanced medical technologies for treatment (Minino, Arias, Kochanek, Murphy, & Smith, 2002; Zerzan, Stearns, & Hanson, 2000). Therefore, nurses play a significant role in caring for the dying patient and families.

Nightingale (1980) stated that the most important work in nursing is caring. Nurses have to care for the patient based on the environment around the patient. Caring behaviors of nurses can reflect the quality of nursing care. However, a multitude of studies have found that current nursing standards at the EOL care do not meet the desired expectations of the dying patients and their family members (Knaus & Lynn, 1997; Levey, 2001; Miller, Forbes, & Boyle, 2001). In addition, existing literature also reveals the evidence that the quality of EOL care in accordance to caring behaviors of nurses is often unsatisfactory for both dying patients and their family members (Baker, Wu, Teno, Kreling, Damiano, et al., 2000; Beccaro, Caraceni, & Costantini, 2010; Teno, Clarridge, Casey, Welch, Wetle, et al., 2004). Therefore, exploring factors associated with a nurse's caring behavior for a dying patient is crucial in providing quality EOL care.

## **Objectives**

The purpose of this article is to review factors influencing nurses' caring behaviors for dying patients from existing literature.

## **Methods**

### *Data collection*

A systematic search of literature, both Thai and English literature, in 1990 to 2010 was undertaken to identify factors relating to nurses' caring behaviors for dying patients. Electronic databases (CINAHL, PubMed, Science direct, OVID, Proquest, ThaiLIS and The Cochrane Library) and the Health Science library database at Prince of Songkla University were searched. The following search term pathways were employed in the electronic searches: palliative care/terminal care/end of life care, caring behavior, factors and dying patient. Moreover, unpublished research such as a thesis and dissertation were other sources of data also searched. The following inclusion criteria was adopted in the current review: (1) English and Thai language publications; (2) studies of caring behavior of nurses for every kind of patient at the end of life stage (3) studies published between years 1990 to 2010.

### *Data analysis*

Fifty nine articles came up from searching with our key words. After the first reading, twenty nine relevant articles were selected for further analysis. The method of analysis began with separating the articles into quantitative and qualitative studies and to reread intensively each article. For the correlational study, factors and the relationship between the factors and nurses' caring behaviors were extracted and put in a table. In the qualitative study, the statement that related to caring behaviors and rationales were put in a narrative table. The results between significant relationships and non significant studies were then compared.

### *Data synthesis*

The findings from the individual studies were then aggregated to produce a 'bottom line' on the clinical effectiveness, appropriateness and meaningfulness of the factors (Hemingway & Brereton, 2009). Finally, these factors were synthesized into three categories including personal factors, technological influencing factors and environmental factors.

## **Results and Discussion**

Factors relating to nurses' caring behaviors identified from data synthesis can be categorized into 3 factors, including personal factors; technological influencing factors; and environmental factors.

### *1. Personal factors*

The personal factors of a nurse refers to the relating factors of caring behaviors for dying patient such as age, years of work experience in nursing, training experience, direct experience in taking care of their own EOL family member, educational level, self-awareness and moral distress.

*Age.* Age is associated with development and maturity level; therefore older nurses had a more stable pattern in their way of life than younger nurses (Erikson, 1993). Increasing age will increase the maturity level and responsibility of a working person. However, the relationship between the age of a nurse and caring behaviors for a dying patient remain inconclusive. Numerous studies showed that age is associated with a caring behavior of a nurse. Some studies have shown that senior nurses have a higher level of caring behavior for dying patients than younger nurses (Amonprompukdee, 2004; Lange, Thom, & Kline, 2008). However, there are several studies which found that there is no significant correlation between the age and a nurse's caring behavior for dying patients (Jaidee, 1997; Pokpalagon, 2005; Servaty, Krejci, & Hayslip, 1996; Wattanachote, 1997).

*Years of work experience in nursing.* Work experience is very important for every profession, especially in nursing. Work experience is a factor that is related to an expert level in nursing practice (Orem, 1995). There are several studies which found that years of work experience have a positive relationship with a nurse's caring behavior (Apaiwong, 2000; Brunton & Beaman, 2000; Lange et al., 2008; Mateprasart, 1991; Noh, Arthur, & Sohng, 2002; Suwanmalee, 1996; Wattanachot, 1997). A senior nurse, who has worked for several years, has work experience in taking good care of the EOL patient more than a beginner nurse which can be reflected by their caring behavior. Nevertheless, some studies have shown that there were no significant differences between work experience and a caring behavior (Limvipaveeanan, 1992; Mahanuparp, Leksawat, & Sukumwang, 1998).

*Training experience.* A substantial number of studies reported that special training and coursework about death and dying improved the caring behavior towards terminally ill patients and their families (Tsai, Lee, Lai, Lui, Change, et al., 2005; Wong, Lee, & Mok, 2001). Similarly, ICU nurses perceived that training is an important method that can improve skills of caring for EOL patients and their families (Chaipet 2008). It was found that a lack of

training courses is the main barrier for ICU staff nurses and health care providers to provide the optimal care for the end of life patients (Carlet, Thijs, Antonelli, Cassell, & Cox et al. 2004; Chaipet 2008). On the other hand, a study of Pokpalagon (2005) found that there was no significant difference in the caring behavior of the end of life care of professional nurses by training experience (N=270, F= 1.112).

*Direct experience in taking care of their own EOL family member.* The direct experience about death and dying significantly correlated with nursing competency in taking care of a patient at the end of life (Pratumwan and Unipun, 1995). The qualitative study of Chaipet (2008) found the increase of a nurse's direct experience in taking care of EOL patients help nurses to learn and understand their role in taking care of the EOL patients. In addition, an experience of taking care of their own EOL family members helped nurses to understand the feelings and needs of the patients and their family members. This leads to an increasing caring behavior and acceptance of the family's behavior in each stage of the bereavement process. In contrast, a study of Pokpalagon (2005) found that there was no significant differences in the caring behavior of professional nurses based on the experience of taking care of their own EOL family members (n=270, p>0.05). So, the experience in taking care of their own EOL family members may influence the nurse's caring behavior for dying patients.

*Educational level.* Learning is the way to gain more knowledge in each branch of interest. The higher educational level of a person provides systematical thinking, competency and skills in searching for new knowledge more when compared to a lower educational level (Pokpalagon, 2005). Wattanachote (1997) found that there were significant differences among the educational level, perception and communication for truth telling about dying (p<0.05). The nurses who have an education higher than a bachelor degree could communicate the truth about dying more than when compared to nurses who possessed only a bachelor degree.

*Nurse's self awareness.* Self-awareness is the process of understanding one's own beliefs, thoughts, motivations, feelings, behaviors and recognizing how they affect others (Boyed, 2005). Several studies found that self-awareness in nurses is very important for the

nursing profession in providing care for the patients (Cook, 1998; Jack & Miller, 2008; Jack & Smith, 2007; Rowe, 1999). Daodee (1994) found that nursing self awareness correlated positively with caring behaviors at a moderate level with a significant level of  $P < 0.001$  ( $r = 0.31$ ). This finding was consistent with a study of Intong, Sumalia, Sintara, and Tontheerapat (2005) on nurses' awareness and behavior for caring for HIV/AIDS patients who received ARV which included 136 registered nurses. The finding showed a significant positive correlation between nursing self awareness and caring behavior at a moderate level ( $P = 0.025$ ,  $r = 0.31$ ). Bernard (1992) suggests that developing self-awareness helps nurses to be less of a victim and enables them to take control and responsibility for the situation and it also helps nurses to cope when confronted with a difficult situation while taking care of their patients (Smith, 2007).

In addition, self-awareness is an important key for improving the nurse-client relationship via the communication/counseling technique (Rowe, 1999). The understanding and acceptance of one's own self will allow the nurse to acknowledge a client's differences and uniqueness which can help the nurse to express more compassionate care (Townsend, 2003).

*Moral distress.* Moral distress is the painful feelings that arise when a nurse knows morally the correct thing to do but cannot act because of constraints or hierarchies (Corley, Elswick, Gorman, & Clor, 2001). In caring for patients at the end of life, nurses have to face various moral distresses. Role conflict, differences between physicians and nurses, end of life decision making, critical care and fertile care and managing care directives are identified as the sours of a nurse's moral distress in taking caring of dying patients (Corley et al., 2001; Elpern, Covert, & Kleinpell, 2005; Oberle & Hughes, 2001; Schwarz, 2003; Ulrich, Soeken, & Miller, 2003).

Lack of research study in this field describes the relationship between moral distress and caring behavior. However, some studies explain that moral distress has an impact on nurses and patient care. As such, nurses may feel guilty and blame themselves for not living up to their professional ideals, and may develop an increasing sense of powerlessness that limits their capacity for self-efficacy (Kelly, 1998; Tiedje, 2000). Nurses may also experience a decreased capacity for caring (Nathaniel, 2002; Wilkinson, 1988) which reflects a low caring competence.

In addition, moral distress is associated with ineffective communication, fragmented care and lack of advocacy, which in turn is associated with inadequate or inappropriate conscience behavior (Bowers et al., 2000; Wilkinson). Moreover, the nurses who experience repeated moral distress may lose the ability to provide quality patient care (Austin, Lemermeyer, Goldberg, Bergum, & Johnson, 2005a). Nurses may avoid patients by avoiding the role of a primary nurse or by decreasing their interaction with patients and their families (Corley, 2002; Nathaniel) which reflects a decrease in compassion and commitment in caring.

### *2. Technological influencing factors*

The obvious uses of technology are to enhance the caring of patients in safe and effective way by saving time and enlarging the information pool for nurses' clinical decision making (Mann, 1992). Further advantages include relieving nurses from repetitive jobs and thus allowing them to spend more time with their patients and the ramifications of illness and in aiding to reveal patients' parameters that cannot be palpated or percussed (Cooper, 1993; Mann, 1992).

Technology is an inconclusive factor that can influence the nurses' caring behavior. Most studies were conducted to explain the relationship between technology and caring behavior in general. It is not specific for the caring behavior in the dying patients. Few studies were conducted to examine the effect of technology on the caring attributes which referred to a nurse's caring behaviors. The result from these studies was in the same direction. The technological influences were found to positively correlate with caring behaviors. The degree of technology enhances caring communication, caring involvement, and learning to care while a lower technology environment did not (Arthur, Pang, & Wong, 2001; Arthur, Pang, Wong, Alexander, Drury, et al., 1999; Noh, Arthur, & Sohng, 2002). In contrast, a study concluded that nurses in a high technology environment may need to concentrate more on their advocacy behavior in an environment where technology may confuse patients who need advocates to speak for them (Arthur, Pang, & Wong, 2001).

### *3. Environmental factors*

*Working unit.* The environment is a barrier in providing quality EOL care. For the unit in the hospital, it can be separated into two types such as; a general unit and intensive care unit. There are some differences between these two units that can be a barrier for nurse

to provide good care for the end of life patient. In ICU, where a critically ill patient needs to be taken care of, the ratio of nurse to patient is 1:1 which increases the opportunity for ICU nurses to provide care for the dying patient. An inadequate number of nurses can lead to low quality of care due to the work load. Nurses cannot pay more attention to only one patient because of lack of time (Beckstrand, Callister, & Kirchhoff, 2006). Nurses expressed frustration in their practice about the lack of time for caring. They identified lack of time to be the common barrier to providing good care in EOL patients in ICU. The outcome of lack of time is the resignation of nurses, and thus the ratio of nurse per patients will increase (Beckstrand et al., 2006).

A study by Simpson (1997) about the experiences of nurses caring for hopelessly ill patients in an intensive care unit (ICU) found that the nurses reported that the environment in ICU is a barrier for nurses to provide holistic care to the patient and their family at the end of life. Because in ICU there is a lot of equipment taking care of the patient such as a ventilator, drainage tubes and intravenous lines and also the sound of ventilator machines or the alarms of many pieces of equipment cause a family to feel fear and less comfortable to stay beside the patient. The environment in ICU causes a family to be separated from the patient.

Losawadkul & Pongchompoo (2004) study about the families' needs of critically cardiovascular diseased patients in end of life found that most family members want to be at the bedside of the patient until the last minute of life. However, the regulation of the intensive care unit which limits the time and number of people visiting the patient seems to be a barrier. This can be reflected in nurses not providing holistic nursing care during the end of life care to the family members which are an importance component of end of life care.

## **Conclusion**

This review has highlighted factors related to the caring behaviors of nurses in caring for dying patients. A nurse's personal factors including age, years of work experience in nursing, training experience, direct experience in taking care of their own EOL family member, educational level, self-awareness and moral distress; technological influencing factors; and environmental factors are the factors related to the caring behaviors of nurses in providing care for dying patients. The relationship of each factor with nurses' caring behaviors is still inconclusive.

## Recommendations

In order to achieve quality of care at the end-of-life and increase patients' level of satisfaction to EOL care, recommendations have been identified from this review. For nurses could create programs/interventions to support EOL care experience and self-awareness. This include, nurses could create programs/interventions to relief moral distress to promote caring behavior. The factors relating to nurses' caring behavior could be contributed to nursing knowledge of EOL care. Nurse educators should integrate this knowledge in an EOL care course for continuing nursing education. For further study, the factors could be more fully examined in the context of the relationship and the predictive outcome of each factor influencing the caring behaviors of nurses in caring for dying patients.

## References

- Amonprompukdee, A. (2004). *Caring behavior for terminally ill patient in health care institute*. Unpublished master's thesis, Burapha University, Chonburi, Thailand.
- Apaiwong, R. (2000). *Nursing agency of professional nurses for providing care for chronically ill patient in the eastern regional hospital and medical center of Thailand*. Unpublished master's thesis, Burapha University, Chonburi, Thailand.
- Aramrom, Y. (2007). *Experiences of family of critically ill dying patient*. Unpublished master's thesis, Prince of Songkla University, Songkhla, Thailand.
- Arthur, D., Pang, S., & Wong, T. (2001). The effect of technology on the caring attributes of an international sample of nurses. *International Journal of Nursing Studies*, 38, 37-43.
- Arthur, D., Pang, S., Wong, T., Alexander, M. F., Drury, J., Eastwood, H., et al. (1999). Caring attributes, professional self concept and technological influences in a sample of registered nurses in eleven countries. *International Journal of Nursing Studies*, 36, 387-396.
- Austin, W., Lemermeyer, G., Goldberg, L., Bergum, V., & Johnson, M. S. (2005a). Moral distress in healthcare practice: the situation of nurses. *HECForu*, 17(1) 33-48.
- Baker, R., Wu, A. W., Teno, J. M., Kreling, B., Damiano, A. M., Rubin, H. R., et al. (2000). Family satisfaction with end-of-life care in seriously ill hospitalized adults. *Journal of the American Geriatrics Society*, 48(5), 61-69.
- Beccaro, M., Caraceni, A., & Costantini, M. (2010). End-of-life care in Italian Hospitals: Quality of and satisfaction with care from the caregivers' point of view-results from the Italian survey of the dying of cancer. *Journal of Pain and Symptom Management*, 39(6), 1003-1015.
- Beckstrand, R. L, Callister L. C., & Kirchhoff, K. T. (2006). Providing a good death: critical care nurses' suggestions for improving end-of-life care. *American Journal of Critical*, 15(1), 38-45.



- Kelly, B. (1998). Preserving moral integrity: a follow-up study with new graduate students. *Journal of Advanced Nursing*, 28(5) 1134–1145.
- Knaus, W. A., & Lynn, J. (1997). The SUPPORT prognostic model: Objective estimates of survival for seriously ill hospitalized adults. *Annals of Internal Medicine*, 122, 191–203.
- Labhantakul, N. (2000). *Nurses' experience in caring for dying patients*. Unpublished master's thesis, Mahidol University, Nakornpathom, Thailand.
- Linda, T. & Lipman, A. (2000). *Fatigue in Palliative Care Patients. Evidence-Based Symptom Control in Palliative Care*. New York: Hawthorne Press.
- Lange, M., Thom, B., & Kline, N. (2008). Assessing nurses' attitude toward death and caring for dying patients in a comprehensive cancer center. *Oncology Nursing Forum*, 35(6), 955-959.
- Levey, M. M. (2001). Compassionate end of life in the intensive care unit. *Critical Care Medicine*, 29(2), 1-9.
- Limvipaveeanan, S. (1992). *Nurse attitude toward elderly patients and nurses behavior during interaction with the elderly patients*. Unpublished master's thesis, Chulalongkorn University, Bangkok, Thailand.
- Losawadkul, S., & Pongchompoo, V. (2004). Needs of relatives caregivers in critically coronary artery disease patients. *Nursing Journal*, 33(1), 72-83.
- Mahanuparp, T., Leksawat, N., & Sukumwang, K. (1998). *Attitudes toward death and the dying patients of professional nurses Maharajnakorn Chang mai Hospital*. Unpublished master's thesis, Chang mai University, Chang mai, Thailand.
- Mann, R.E. (1992). Preserving humanity in an age of technology. *Intensive and Critical Care Nursing*, 8, 54-59.
- Mateprasart, N. (1991). *The relationship between moral reasoning in nursing practice, professional value, personal background, and moral behavior in nursing practice of professional nurse in hospitals, Bangkok metropolitan administration*. Unpublished master's thesis, Chulalongkorn University, Bangkok, Thailand.
- Miller, P. A., Forbes, S., & Boyle, D. K. (2001). End-of-life care in intensive unit: a challenge for nurse. *American Journal of Clinical Care*, 10(4), 230-137.
- Minino, A. M., Arias, E., Kochanek, K. D., Murphy, S. L., & Smith, B. L. (2002). Deaths: final data. *National Vital Statistics Reports*, 50, 1-119.
- Nathaniel, A. (2002). Moral distress among nurses. *The American Nurses Association Ethics and Human Rights Issues Updates*, 1(3). Retrieved August 18, 2010, from, <http://nursingworld.org/MainMenuCategories/EthicsStandard/s/IssuesUpdate/UpdateArchive/IssuesUpdateSpring2002/MoralDistress.aspx>.
- Naughton, C., Bennett, K., & Feely, J. (2006). Prevalence of chronic disease in the elderly based on a national pharmacy claims database. *Age and Ageing*, 35(6), 633-636.
- Nichaiowit, T., Khetkhaiwan, W., Charusombong, W., & Chatkreaw, P. (2003). *The situation of death and dying paradigm shift*. Bangkok: Health Systems Research Institute.

- Nilmanat, K., & Phungrassami, T. (2006). Status of end of life care in Thailand. UICC World Cancer Congress 2006, Bridging the gap: transforming knowledge in to action, July 8-12, 2006, Washington, DC, USA. Retrieved October 10, 2009, from / <http://2006.confex.com/uicc/uicc/techprogram/P10163.HTM>
- Nightingale, F. (1980). *Notes on nursing: what it is, and what it is not*. Edinburgh: Churchill Livingstone.
- Noh, C. H., Arthur, D., & Sohng, K. Y. (2002). Relationship between technological influences and caring attributes of Korean nurses. *International Journal of Nursing Practice*, 8, 247-256.
- Oberle, K., & Hughes, D. (2001). Doctors' and nurses' perceptions of ethical problems in end-of-life decisions. *Journal of Advanced Nursing*, 33(6), 707-715.
- Orem, D. E. (1991). *Nursing: Concepts of practice*. St Louis: Mosby Year Book.
- Pokpalagon, P. (2005). Knowledge, attitude, and caring behavior for end of life patients among professional nurses in governmental hospital, Bangkok. Unpublished master's thesis, Mahidol University, Bangkok, Thailand.
- Pratumwan, R., & Unipun, J. (1995). The relationship between selected factors and competencies of professional nurses in caring the dying patients. *Journal of Nursing Science Chulalongkorn University*, 4(2), 51-67.
- Rowe, J. (1999). Self-awareness: improving nurse-client interaction. *Nursing Standard*, 14(8), 37-40.
- Schwarz, J. K. (2003). Understanding and responding to patients' requests for assistance in dying. *Journal of Nursing Scholarship*, 35(4), 377-384.
- Servaty, H. L., Krejci, M. J., & Hayslip, B. (1996). Relationship among death anxiety, communication apprehension with the dying, and sympathy in those seeking occupation as nurse and physician. *Death studies*, 20, 149-161.
- Simpson, S. H. (1997). Reconnecting: the experiences of nurses caring for hopelessly ill patients in intensive care. *Intensive and Critical Care Nursing*, 13(4), 189-197.
- Smith, J. K. (2007). Promoting self-awareness in nurses to improve nursing practice. *Nursing Standard*. 21(32), 47-52.
- Suwanmalee, S. (1996). *The relationship between satisfaction in factors related job performance and job competency of staff nurses in Phrapokklao regional hospital, Chantaburi province*. Unpublished master's thesis, Mahidol University, Bangkok, Thailand.
- Teno, J. M., Clarridge, B. R., Casey, V., Welch, L. C., Wetle, T., Shield, R., et al. (2004). Family perspectives on end-of-life care at the last place of care. *The Journal of the American Medical Association*, 291(1), 88-93.
- Tiedje, L. B. (2000). Moral distress in perinatal nursing. *Journal of Perinatal and Neonatal Nursing*, 14(2), 36-43.
- Townsend, M. C. (2003). *Psychiatric mental health nursing: Concepts of care*. (4th ed.). Philadelphia: F. A. Davis Company.
- Tsai, L. Y., Lee, M. Y., Lai, L. Y., Li, I. F., Lui, C. P., Change, T. Y., et al. (2005). Practical effects of educating nurses on the natural death act. *Support Cancer*, 13(4), 232-238.

- Ulrich, C. M., Soeken, K. L., & Miller, N. (2003). Ethical conflict associated with managed care: View of nurse practitioners. *Nursing Research*, 52(3), 168-175
- Wattanachote, W. (1997). Communication for truth telling about dying: perception and caring behavior of intensive care unit nurses. Unpublished master's thesis, Mahidol University, Bangkok, Thailand.
- Wilkinson, J. M. (1988). Moral distress in nursing practice: experience and effect. *Nursing Forum*, 23(1), 16–29.
- Wong, F. K., Lee, W. M., & Mok, E. (2001). Educating nurses to care for the dying in Hong Kong: a problem-based learning approach. *Cancer Nursing*, 24(2), 112-121.
- Zerzan, J., Stearns, S., & Hanson, L. (2000). Access to palliative care and hospice in nursing homes. *Journal of the American Medical Association*, 284(19), 2489–2494.