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Essay

Proposals for a New Collaborative Relationship between Physician and Visiting Nurse in Home Care Medicine: A Case Study of a Terminal Home Cancer Patient

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Abstract

As technology dependent health care of Japanese terminally ill home patients increases, a better understanding is needed regarding the professional relationship between physicians and visiting nurses responsible for the care of these patients. The purpose of this study is to research into a new collaborative relationship between physician and visiting nurse in home care medicine. At first, researchers interviewed 19 visiting nurses in Y prefecture to know the present situation of home care medicine. The researchers then analyzed the case of a visiting nurse who cared for a terminally ill home patient with advanced lung cancer. The results suggest that various situations prevent the visiting nurse from receiving sufficient instructions from the physician at the time of change in condition of the patient. In order to resolve these difficulties in home care medicine, it may be necessary to review the way a physician instructs a visiting nurse and the legal system as it pertains to home care medicine, while visiting nurses should enhance even more their professional capabilities.

Introduction

Recently many Japanese people have requested the right to determine substance of their life and to choose the manner in which they will confront their own death. They have become increasingly interested in the health care environment as it relates to the dying process. As a result of this increased interest in control over one's destiny, more people are expressing the desire to die at home in the presence of family members. It is not uncommon to hear such statements as: "I want to die on the tatami mat." Owing to the *Medical Service Law* revised in 1992, the home, along with the hospital and clinic, became a location for medical care. As the number of terminally ill home patients increases, the requirements of care provided by visiting nurses have also increased. Visiting nurses have come to play an important role in the home care of terminally ill patients. But this expansion of nurse's role brings about new problems on the share of work and responsibility between physician and nurse [1–4].

Terminally ill patients are faced with a variety of symptoms such as pain, fatigue and loss of appetite. Often it is difficult for health care providers to predict sudden changes in the health status of terminally ill patients. In the case of a patient diagnosed with cancer, symptoms that occur as a result of the disease

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require a wide variety of health care actions. Thus, nurses must perform certain medical procedures according to the instructions of the physician. However, under the existing health care laws in Japan, visiting nurses are finding it increasingly difficult to cope with the rapidly changing condition of a terminally ill home patient [5–7]. This is especially true when the physician cannot be located in an expedient manner for the purpose of providing medical guidance. Being worried about the institutional ambiguity of the limits of what constitutes nursing has caused visiting nurses, who are carrying out various medical procedures, to feel ill-prepared. The problem of sharing, between the physician and the nurse, the patient care workload for the terminally ill home patient remains unresolved [8–11].

Prior studies in Japan have addressed the sharing of patient care responsibilities between the physician and the nurse, while caring for terminally ill patients who are being treated in the home setting. These studies have addressed such factors as: a) medical procedures performed by visiting nurses [12–13]; b) the reality of the instructions provided to nurses by physicians [14–17]; c) the type of medical procedure practiced, not practiced, planned to be practiced, or not planned to be practiced by visiting nurses [18]; and d) the understanding that exist between physicians and nurses working in home health care about sharing patient care responsibilities [19]. These studies have revealed, to a certain extent, the reality of home health care provided by visiting nurses, the differences in understanding that exist between physicians and nurses about what constitutes nursing care and the existent ambiguity about the physician's instructions to nurses about patient care. However, these studies have failed to examine the dilemma that visiting nurses face when carrying out health care interventions that, from a legal perspective, are indistinguishable as either medical or nursing activities. It is necessary for the delivery of high quality and safe home care medicine to be able to distinguish what specific health care interventions carried out in the home of terminally ill home patients belong to physicians and to visiting nurses.

The purpose of this study was to research into a new collaborative relationship between physician and visiting nurse in home care medicine. Firstly, researchers interviewed 19 visiting nurses in Y prefecture to know the present situation of home health care. The researchers then took up a case which included typical problems pointed out by visiting nurses in the interviews. Based upon the case of a visiting nurse, who cared for a patient diagnosed with advanced lung cancer, the investigators examined the following factors: a) the sharing, between the physician and the nurse, of health care delivery activities within the context of Japanese health care law, b) the type of instructions provided by the physician to the nurse related to the delivery of home care medicine, and c) the health care delivery activities of the visiting nurse in relationship to her/his professional capabilities.

Case Study

The subject for this case study was a 30 year-old female who had 5 years of experience as a professional nurse, with one year of experience as a visiting nurse. She worked full-time in one of Japan's western prefectures. This subject consented to take part in this study with the understanding that her privacy and her patient's privacy would be protected from disclosure.

Patient Data

The patient being cared for by the study subject was a 67 year-old Japanese man with terminal lung cancer, cancerous pleurisy and diabetes. His chief complaints were difficulty in breathing and edema of the arms and legs. The patient's wife was his primary provider of care. In 1986, the patient had undergone a lobectomy of the middle and upper lobes of the right lung, along with linac treatment. In 1994, he experienced a relapse of the cancer and, as a result, was given chemotherapy and linac treatment. In

1997, the patient was diagnosed with metastasis of the cancer to the remaining part of the right lung. At that time, he underwent additional chemotherapy and linac treatment. In early 1998, he was hospitalized due to loss of appetite. In early December of 1998, the patient was hospitalized again due to additional complications brought on by the progression of his disease. On December 17, 1998, the patient's condition worsened and he was hospitalized for the last time. On December 18, 1998, the patient passed away.

During the latter stages of treatment, the patient and his family were informed of the patient's prognosis. The patient was aware of his impending death and indicated his desire to reside at home, if possible, during his final days. This decision was supported by family members who stated that they, "would care for him at home as long as possible." In addition, the patient and his family expressed the desire for no additional medical interventions that would needlessly prolong life.

The patient's medical treatments included: oxygen therapy (4-5 L/minute) and a variety of medications (Furosemide, Famotidine, Prednisolone, Etizolam and Sennoside). The visiting nurse made home visits twice a week and then every day for the four days prior to the patient's last hospitalization. No visits to evaluate the patient in the home setting were made by the attending physician. The attending physician planned to evaluate the patient only in a clinical setting, if necessary. The physician's rationale for this decision was based upon his assessment of his current heavy patient care workload. In spite of the difficulty of home visits, the physician had to allow for the earnest wish of the patient to stay at home and have his final days with his family. The patient and his family did not want to change their attending physician and approved of the physician's lack of visits. In home care medicine in Japan, the visiting nurse is the primary health care provides. Attending physicians are often too busy to make home visits in time to evaluate changes in patient disease conditions, and so similar situations to this case can happen anywhere and anytime. Due to the physician's lack of visits to evaluate the patient while he was at home, the patient had to be admitted to the hospital for evaluation related to his impending death.

Please refer to Table 1 for documentation of the progression of the patient's terminal condition during the last 16 days of life. The data are presented in two categories: condition and complaints of the patient, and decision making and medical practices of the nurse.

Decision Making and Medical Practices of the Nurse

The authors evaluated the nurse's medical procedure in relationship to the physician's instructions for patient care using the guidelines [20]. According to the guidelines, medical procedures can be classified into "relative medical procedures, (that nurses can also perform on instructions of physicians)" and "absolute medical procedures" (that only can be carried out by a physician). Relative medical procedures, in turn, can be divided into the categories of "medical procedures that do not need special physician instructions" and "medical procedures that require special physician instructions." For example, medical procedures that do not require special physician instructions include: bathing the patient and administering prescribed medications. Medical procedures that do require special physician instructions include: handling and controlling the flow of prescribed oxygen in the patient's home, and changing the dosage and method of medication administration. Absolute medical practices include: prescribing the liter flow of oxygen, prescribing medications, regulating the dosage of medications, and the discontinuation of prescribed medications. Using these guidelines, the authors assessed whether or not the visiting nurse's actions in this particular case study were appropriate and carried out within the framework of the law.

Sharing the Patient Care Workload within the Context of Japanese Health Care Laws

Article 5 of the *Public Health Nurse, Midwife and Nurse Act* provides that the work of a nurse is "recuperating care" and "assistance of the physician in medical treatment." But according to Article 37,

Table 1 Progression of the Patient's Terminal Condition

Date	Condition and complaints of the patient	Decision making and medical actions of the nurse
12/3 a.m.	Dyspnea. The patient asked " Can I take a bath? " (even though the edema of his extremities was remarkable).	The patient can breathe for the present time with the remaining lung. I raised the amount of inflowing oxygen at the time of bathing. I had him take a bath, but monitored his condition throughout the bathing process. I observed his condition after the bath and checked his transcutaneous partial oxygen pressure.
12/6 a.m.	Hydrothorax and dyspnea from pressure caused by the tumor. The patient complained " I have a pain in my chest when I strain to defecate."	The patient did not need to strain with defecation. I directed the patient to take more Aperitiva.
12/9 a.m.	One episode of bloody phlegm.	I considered the presence of bloody phlegm to be a symptom of the disease. I decided to watch the patient's progress, unless there was an increase in bleeding.
evening		I reported the presence of the bloody phlegm to the physician.
12/12 a.m.	The wife reported, via telephone, that the patient had dyspnea during the early morning.	Since the air-inflow to the lung was good the day before, I told the wife, "To watch the patient's progress and to increase the amount of inflowing oxygen? "
p.m.	The condition of the patient improved after increasing the amount of inflowing oxygen.	I checked on the condition of the patient by communicating with his wife by telephone.
evening		I communicated the presence of the patient's dyspnea to the physician, and told him what was done to deal with it.
12/14 a.m.	The wife reported, via telephone, that the patient was complaining of abdominal distress. He has not been able to eat anything since Saturday and, thus, has not taken his medications.	The patient's respirations have not changed. The patient could be suffering from a gastric ulcer which could be a side effect of Prednisolone. I directed him to take a little more Famotidine.I instructed him to take his other medications after mitigation of the abdominal distress. I plan to visit the patient every day.
p.m.		I checked on the condition of the patient by telephone.
evening		I visited the patient. Later I had a talk with the physician. I obtained permission to regulate the medications and to adjust the relevant medical actions based upon expectant changes in the disease process.
12/15 a.m.	Anuria.	The patient has not taken his diuretic for a few days. Anuria has occurred. I concluded that it is difficult for the patient to take all of the prescribed medicines, so I decided to prioritize the medications and directed the family accordingly.
p.m.		I talked with the physician about the prioritizing of the medications.
evening	Transcutaneous partial oxygen pressure measurement drops to 70 and then rises to 96.	I visited the patient again. I used an oxygen mask to improve the intake of oxygen. I decided to use the oxygen mask, thereafter, to help prevent another drop in oxygen saturation.
2/16 a.m.	The patient complained of sleeplessness, dyspnea, and pain. Dysphagia. Transcutaneous partial oxygen pressure measurement drops to 70. The patient requests sedation.	This most likely occurred because of the patient not taking Etizolam. I changed the priority of medications making Etizolam the most important one for the patient to take. I talked with the physician about the priority of medicines. I directed the patient to take his medications at separate times throughout the day, as his condition permitted. I again used the oxygen mask. I directed the patient to take Furosemide and a tablet of Etizolam upon waking.
12/17 a.m.	Pain at night. Congestion in the lung. The wife requests hospitalization of the patient since he complains of pain at night. The patient refuses hospitalization and indicates a desire to stay at home. He states that he would rather try to control his pain by taking his prescribed medications.	I advised the patient to go into hospital at once to receive an injection for sedation since taking medications orally was becoming increasingly difficult for him. I talked with the patient and his family about their differences regarding hospitalization of the patient. I decided to watch the progress of the disease process until the patient was no longer able to take his oral medications. I informed the physician about the progression of the patient's condition and the possibility of need for hospitalization. I asked the physician to make plans to reserve a bed in the hospital for the patient.
12/18 2:00 15:00	Sudden change of disease condition occurs. Urgent hospitalization is needed. Passed away.	I received a call from the family regarding the patient's hospitalization. I made a visit to the hospital to see the patient and his family.

"assistance of the physician in medical treatment" by a nurse needs to be done under the direction of the physician, with the exceptional provision of casual or urgent cases. "Assistance of the physician in medical treatment" refers not only to nursing under the direction of the physician, but also implies that "cooperative medical procedures with the physician and nurse" also are present [21–22].

But, the law, as currently stated, fails to provide sufficient guidelines for what specifically constitutes absolute medical procedures and what specifically constitutes relative medical procedures [23]. The nurse is permitted to do only relative medical practices under the directives of a physician [24–26]. When health care is being delivered in a hospital setting and physicians are easily accessible, the nurse easily can deal with any unexpected situation. In such a setting, the nurse, despite the ambiguity of the law, feels comfortable in carrying out what may be termed as medical procedures even though specific instructions have not been readily forthcoming from the physician. However, in the case of home health care, especially in the case of a terminally ill home patient, the ambiguity of the law creates vagueness in providing the nurse with the appropriate legal direction in initiating appropriate patient care.

One has to ask whether or not the existing laws are capable of meeting the expectations of the ever changing and advancing health care environment, especially in the case of home care medicine. Some individuals have pointed out that within the current system, the laws do not match the new reality of Japanese health care [27]. Two surveys have revealed, due to the mismatch between the current health care practices and the current state of the law, that 95 percent of the health care providers most likely have gone beyond the "letter of the law" when providing patient care [28–29]. Taking these limitations of the existing laws into consideration, one is required to analyze each case of home health care delivery on an individual basis.

Discussion

Instructions from the Physician

In order that home care medicine by visiting nurses can be carried out in Japan, medical instructions for the nurses must be written, on a monthly basis, by the patient's attending physician. Such instructions are relatively simplistic and generally consist of only five basic directives. For the case study under analysis, the visiting nurse encountered difficulty in consistently obtaining medical instructions from the physician. This fact complicated her ability to deliver proper and appropriate nursing. Such a circumstance, unfortunately, is not rare [30]. Factors such as lack of access to the physician by telephone (cellular phone), inaccessibility of the physician due to his/her other patient commitments, and particularly night time create serious communication problems between the physician and the visiting nurse. This lack of communication creates serious problems for the visiting nurse as she/he attempts to deliver safe and appropriate nursing.

One then has to ask, "Can or should the nurse proceed with patient care, even though there are no written instructions provided by the physician?" Given that the progression of terminal illnesses creates for patients such problems as dyspnea, gastric distress, difficulty swallowing, a fall in serum oxygen concentrations and pain, one must conclude that the nurse cannot wait for physician directives for lengthy periods of time (i.e. 6–7 hours). In addition, the patient's family has the expectation that the nurse should be able to do something about the patient's current state of distress. When one takes all of these situations into consideration, it is no wonder that nurses may engage in certain medical procedures without the presence of written physician directives.

Thus, the physician had to rely upon information provided to him by the visiting nurse. This placed the nurse in a very important and valuable position in regards to the delivery of appropriate and safe health care. However, when physicians fail to provide adequate and up to date written health care directives for nurses,

they are forcing nurses to practice outside of the legal limits of their license. With the increased number of patients being cared for in the home setting and the nurses' current lack of support and cooperation from physicians regarding the provision of written health care directives, physicians have changed the role of the nurse from "assistant" to the physician to "substitute" for the physician!

Advanced Nursing Skills and Increased Responsibility of the Visiting Nurse

The medical procedures of the visiting nurse in this case ranged from relative medical procedures to absolute procedures (refer to Table 1). The visiting nurse had to deal with oxygen therapy and medication regulation related to the terminal stage of the patient's illness. She measured the patient's transcutaneous partial oxygen pressure in order to determine the degree of dyspnea. She then changed the amount of oxygen flow in the inhalator. The nurse, by herself, decided, as a result of her assessment, what medical procedures should be taken. Since difficulty with breathing can become a potential threat to life, the nurse must respond quickly and take appropriate action. However, when the physician's instructions on how to deal with dyspnea are lacking or ill defined, then the nurse must make her own professional judgment. Changing the amount of oxygen flow relieved the patient's respiratory distress. However, if the nurse would have made an error in judgment, it possibly could have resulted in the death of the patient. The nurse's action in this case required discreet, highly specialized judgment.

Medicinal regulation is an important activity in the control of various symptoms that occur during the terminal stages of an illness. In this case, the regulation of medications often became problematic. On certain days the administration of a diuretic was of utmost importance to control the patient's state of edema. On another day, the administration of Etizolam became the priority so that the patient's pain could be adequately controlled. The visiting nurse had to make these judgment calls in the absence of specific physician directives. The nurse's decisions were approved, at a later point in time, by the physician. At that time he provided the nurse with more thorough directives on regulating future medication needs of the patient. Unless nurses make judgments at their own discretion to carry out needed medical procedures, they are unable to meet the rapidly changing needs of their patients [31].

In this case study, home health care was initiated under the premise that the patient could comfortably recuperate at home as long as appropriate monitoring and interventions took place to control pain, dyspnea, and edema. As with any progressive terminal illness, the patient's condition changed. This, in turn, required the nurse to make decisions about implementing the best nursing possible on behalf of the patient. Thus the nurse was required to address the following questions: What is the cause of the patient's morning dyspnea? What is the cause of the patient's stomach distress? What type and how much medication should be used? What are the priorities for the administration of medications? What is the cause of the patient's sleeplessness at night? What is the cause of the patient's pain? What is the cause of the decline in the patient's serum oxygen concentration? The visiting nurse was required to make professional decisions about each of these questions. At the same time she had to consider whether she would need to deal with each problem immediately or whether she had time to communicate with the physician about the status of the patient. In addition, she also had to decide whether or not she should have the physician evaluate the patient or if she should arrange her own visit to consult with the physician. Keeping these issues in mind, she carefully made her decisions.

According to the guidelines, a nurse cannot legally carry out many of the aforementioned medical procedures. However, this does not reflect the reality of current day health care needs of terminally ill home patients [32]. This case demonstrates that professional decision making, such as judgments related to the status of the patient's disease process and the regulation of medications, is required of a visiting nurse when delivering care to a terminal cancer patient who is at home. In the case of home care medicine,

if the physician fails to visit the patient in his/her home to evaluate the patient's current status, then the responsibility of assessment and implementation of special patient care on the part of the nurse are indispensable.

Conclusion

Written instructions from the physician as well as on-going communications between physicians and nurses, are imperative for the proper care and well-being of patients contending with the terminal stages of illness while being cared for in the home setting. In addition, these actions provide for patient safety, quality patient care and prevent the nurse from being placed into the position of potentially practicing outside the legal limits of the law.

The following recommendations are proposed:

1) Physicians should verbally communicate with visiting nurses, at the beginning of every patient's home health care plan, information about the projected changes in health status that may occur. At this point in time, physicians need to place, in writing, specific limits on medical procedures, appropriate for each patient, that the nurse is permitted to carry out. It may be useful to exchange a specific protocol for the nurse to follow in advanced care.
2) As a patient's condition changes, the physician needs to review his/her written instructions and make appropriate changes.
3) A specific method of communication between physicians and visiting nurses needs to be established for each patient. This provides nurses with clear directives on how physicians should be contacted, in the event that a rapid change in the patient's health status should occur.
4) Visiting nurses need to develop their professional skills in decision-making, appropriate home health care, home health care technologies, and professional judgment. This will provide for a decrease in unnecessary physician dependence on the part of the nurse.
5) Special educational programs need to be created for advancing the skills of nurses who plan to and are currently working in home health care.
6) A re-examination of the *Public Health Nurse, Midwife and Nurse Act* needs to occur so that it reflects the most current practices of nurses who are working in home setting.

The authors believe that these recommendations, while not solving all of the issues of nursing practice that occur in the home setting, will begin to create a more conducive environment for the delivery of safe and quality home health care by visiting nurses, and that they will also give some suggestions for the solutions to other countries that come up against the problems of collaboration between physician and nurse in home care medicine.

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