

# “New Normal” Home Chemotherapy in Thailand: How the Challenging Roles of Nurses Are Changing?

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## ABSTRACT

Home chemotherapy is a service administered by oncology and home healthcare (HHC) nurses which provides a package of care to support the administration of chemotherapy to patients in their homes. The coronavirus disease 2019 (COVID-19) pandemic and new normal situation have shifted home chemotherapy administration from hospitals and become indispensable for patient care. Many cancer centers and hospitals in Thailand *ad hoc* home chemotherapy during the COVID-19 and new normal situation to maintain the effectiveness of chemotherapy for cancer patients at home; preventing COVID-19 disease infection is the most important concern. The purpose of this article is to describe the lessons learned for delivering home chemotherapy to cancer patients from oncology nurses during the COVID-19 pandemic and the new normal situation in Thailand. Nurses are at the forefront

of the current pandemic and are taking a proactive approach with multidisciplinary teams to participate in the pandemic planning within their health organizations. The role of nurses in home chemotherapy in the new normal must be stricter than usual. Both oncology and HHC nurses play a different role for home chemotherapy, but cooperation is important to improve the quality of life and maintain the quality of care with effective treatment. Therefore, the lessons learned regarding home chemotherapy during the new normal in Thailand is a good example for other countries to develop appropriate care for cancer patients in the pandemic situation from the perspective of nurses' role.

**Key words:** cancer, COVID-19, home chemotherapy, new normal, nurses' role

## Introduction

Recently, cancer has been confirmed as the leading cause of mortality worldwide, including in Thailand. In 2018, data collated from death certificates in Thailand found that the leading causes of death were cancer, cerebrovascular disease, and pneumonia. The mortality rate of cancer was 107.3 per 100,000 of the population in 2014, but this increased to 120.3 by 2018.<sup>[1]</sup> Traditional cancer treatments have included

chemotherapy, radiotherapy, surgery, anticancer medication regimen, and palliative care. Chemotherapy (37%)<sup>[2]</sup> is the most common form of cancer treatment in Thailand as advances in this type of treatment have resulted in highly effective outcomes. Nowadays, cancer treatment in Thailand is also more likely to occur in outpatient settings, otherwise known as “daycare,” resulting in shorter periods for hospital stays.

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Early coronavirus disease 2019 (COVID-19) outcome data have revealed a fatality rate of 5.6% among those affected by cancer.<sup>[3]</sup> Further study indicated that people affected by cancer had 3.5 times higher risk of severe COVID-19 disease than other patient groups.<sup>[4]</sup> The most vulnerable groups of people at risk of COVID-19 globally are those diagnosed with specific forms of cancer, especially people actively undergoing chemotherapy, which can affect the immune system.<sup>[5]</sup> Moreover, every segment of the healthcare system is contending with the impact of coronavirus, not only cancer patients who receive chemotherapy in daycare. In the context of healthcare providers, the high levels of absences from work within the cancer healthcare teams have often been due to personal illness and self-isolation. Moreover, many oncologists and oncology nurses are being redeployed in general or acute medical roles to support the many COVID-19 admissions which require intensive medical support and input.<sup>[6]</sup> From the patient's perspective, however, people suffering from cancer could have an elevated risk of severe COVID-19 infection and may experience disrupted and delayed delivery of cancer therapy because of social distancing measures, quarantines, and the general disruption of routine cancer services during the pandemic.<sup>[7]</sup>

### Background

As the pandemic in Thailand is decelerating, the new normal era has emerged, making the delivery of safe chemotherapy services a key concern. If acute care services are at maximum capacity, institutions may provide alternative provisions for the care of people affected by cancer. Nurses are at the forefront of this pandemic and are taking a proactive approach with multidisciplinary teams to participate in the pandemic planning within their health organizations. Therefore, oncology nurses will need to be flexible to facilitate the safe delivery of alternative models of care,<sup>[7]</sup> especially the delivery of chemotherapy at home for cancer patients.

Many cancer centers and hospitals in Thailand are also confronted with chemotherapy delivery care for cancer patients. In response, they have addressed the challenges and resolved this problem by providing chemotherapy services to patients at their homes. Actually, home chemotherapy in Thailand is not new. It was actually established a few years ago before the outbreak of the COVID-19 pandemic in the late 2019. Until now, it has not been offered transnationally because oncologists, oncology nurses, home healthcare (HHC) nurses, and patients were understandably resistant to the idea of it. Therefore, concerns were addressed directly to reduce the obstacles by (1) making it easy for the oncologist to order home infusions, and for patients to receive chemotherapy drugs at home, and (2) explaining

the safety procedures, credentialing, and training of the oncology and HHC nurses providing home care.

Any remaining barriers for home chemotherapy came down once the COVID-19 pandemic took hold because not providing home chemotherapy would lead to delays in treatment. This would result in low efficacy of the treatment, anxiety, and stress in patients and their families, regarding treatment outcomes and quality of life. Therefore, home chemotherapy has been prominent during the COVID-19 outbreak and will continue to be used as a prevalent method across the country in the current "new normal."

Oncology and HHC nurses will be important colleagues in other healthcare professional multidisciplinary teams, with the goal of increasing the efficacy of treatment and enhancing the quality of life for cancer patients. Therefore, this short report aims to provide a summary of the lessons learned for delivering chemotherapy to cancer patients at home from the perspective of the oncology nurses during the COVID-19 pandemic and new normal in Thailand.

## Lessons Learned

The following is a summary of the lessons derived from the implementation of home chemotherapy from the perspectives of nurses' roles in the Thai context. From the experiences to delivery home chemotherapy in Thailand during COVID-19 pandemic and new normal situation, the role of oncology and HHC nurses involved in home chemotherapy can be divided into two groups including (1) those working in hospitals and (2) those assigned to HHC.

### The Role of Oncology Nurses Working in Hospitals

Before delivering home chemotherapy, assessing and preparing the patients are crucial. The first step is identifying the group of patients who are eligible and willing to receive intravenous chemotherapy. The eligibility criteria for the treatment at home may be stricter than the criteria for the treatment in the hospital because no healthcare providers stay at home with the patients and family at all times. Moreover, assessment may be undertaken either by a multidisciplinary team (led by an oncologist and specialist cancer nurse) or by a specialist chemotherapy nurse. These assessments ensure that patients and their homes are suitable. There is also the issue of patient choice. Therefore, the role of oncology nurses in the hospital setting for preparing cancer patients to receive home chemotherapy includes the following:

1. Patients who receive home chemotherapy need to meet the following inclusion criteria
  - a. Patients who receive the fluorouracil drug, or 5-FU, with infusion therapy continuously for 2–5 days.

This is a medication for treating patients with colon cancer and cancer of the head/neck

- b. Patients who need to have a central venous catheter inserted, such as an implantable device (port) or peripherally inserted central catheter (PICC) line
  - c. Patients and families willing and prepared to maintain home chemotherapy equipment and be responsible for self-care
2. After a patient meets the inclusion criteria for home chemotherapy, an oncologist will then introduce and explain the home chemotherapy project to both the patient and the family. If the patient is willing to participate in the project, a consent form for home chemotherapy will be signed before participation. An oncologist will then prescribe the chemotherapy drug, and the patient will meet the advanced practice nurse (APN) or oncology case manager (OCM)
  3. The APN/OCM will coordinate with the pharmacist to prepare the chemotherapy drug for the patient
  4. The APN/OCM will perform a physical and psychological assessment of the patient and assess the readiness of the patient and family for a course of home chemotherapy
  5. The APN/OCM will provide information to the patient and family for a meeting with the oncology nursing team to plan care for the patient on a case-by-case basis
  6. The APN/OCM will take the patient to the chemotherapy center to insert the central venous catheter, either port or PICC line, for home chemotherapy by the oncologist
  7. The oncology nurse will administer chemotherapy for a short period, followed by 5-FU for 50 h, which is contained in an elastomeric pump (easy pump) and connected to a port or PICC line for home application. The oncology nurse will then make an appointment with the patient to remove the elastomeric pump, either at the chemotherapy center or at a hospital near the patient's home, if available
  8. The APN/OCM will educate and provide chemotherapy knowledge, central venous insertion site care, complication observation, and self-care at home while overseeing home chemotherapy. Meanwhile, teaching and demonstrating the use of the elastomeric pump, including the management and care of the equipment in case of chemotherapy leakage at home, are needed
  9. The APN/OCM will monitor and record the patient's condition by telephone on a daily basis during home chemotherapy and provide consultation for the patient and family for 24 h

## The Role of Home Healthcare Nurses

After the oncology nurse/APN/OCM in the hospital assesses and prepares the cancer patients for home chemotherapy, the patients and family will receive

HHC by supporting them during their stay at home and visiting them as planned. The role of the HHC nurse for cancer patients with home chemotherapy comprises the following:

1. The HHC nurse will assess the home care needs of the patient and family. If they meet the criteria for HHC, HHC nurses will make an appointment at an appropriate time to visit the patient and family at home
2. At the patient's home, the HHC nurse will make a general assessment, including vital signs, central venous insertion site, checking the elastomeric pump working conditions, and assessing common complications, such as nausea and vomiting, mucositis, diarrhea, constipation, and fatigue
3. On the due date for removing the port or PICC line, the HHC nurse will need to prepare the equipment set for removal
4. After the 5-FU course of medication has been completed, the HHC nurse's patient and family can check by palpating the core of the elastomeric pump to ascertain the hardness and weight of the remaining drug. The port or PICC line will be recorded in the port cleaning book after removal
5. Whether or not hazardous waste produced by the patient and family was managed correctly will be assessed and checked. The HHC nurse will then destroy the waste at the chemotherapy center or tell the patient/family to bring it to the hospital the next time they have an appointment with the oncologist
6. Education and suggestions for self-care will be given to the patient, such as exercise, food consumption, taking medication, a method to prevent the spread of the chemotherapy drugs, and observation of abnormal signs and symptoms. These will need to be relied on the oncologist at the hospital
7. Support and empowerment of the patient and family during home chemotherapy will be provided
8. In case a patient has abnormal signs and symptoms from home chemotherapy, the HHC nurse must coordinate and report to the team responsible for the care of the patient
9. After visiting the patient, the HHC nurse must update the HHC medical record immediately to share the patient's information with other healthcare providers

However, scaling these therapies for home chemotherapy beyond the current pandemic crisis will require significant changes as no effective treatment for COVID-19 disease has been developed yet.

For life in the "new normal," oncology and HHC nurses must focus on taking care of patients using home chemotherapy. Therefore, suggestions for the most effective

prevention of COVID-19 infection for those patients undergoing home chemotherapy include the use of (1) appropriate personal protective equipment, (2) thorough personnel hygiene, (3) social distancing, (4) awareness and avoidance of crowded areas, (5) regular exercise, (6) consumption of quality nutrition and appropriate food, and (6) vigilant adherence to medication and its delivery.

From *ad hoc* home chemotherapy treatment in Thailand, and with confidence that the program would get traction, the nation has addressed these barriers and begun to receive positive feedback from both patients and physicians. We believe that the home chemotherapy methods we are utilizing to provide care to cancer patients during the COVID-19 pandemic will make our healthcare system stronger and enhance the quality of cancer patient care in the long run. The home chemotherapy program is a great example of an appropriate way to prepare for and confront the COVID-19 pandemic. We know that we will continue to face challenges in the "new normal" to scale the program, but providing cancer care at home is here to stay.

Home chemotherapy will continue to be challenging in Thailand as only some kinds of cancer and chemotherapy can currently be implemented at home. Therefore, the capability of home chemotherapy will be increasingly effective in the near future. The role of oncology and HHC nurses also needs to improve and be implemented in the most effective way of enhancing the quality of care and improving the quality of life for cancer patients and their families. Home chemotherapy in Thailand is still in its early stages, so further investigation is necessary in terms of quality of life for patients and family, quality of care delivery, and cost-effectiveness. The obstacles to home chemotherapy delivery also need to be elucidated.

## Conclusions

During the COVID-19 pandemic, oncology and HHC nurses have been confronted with the challenge of caring for cancer patients via home chemotherapy. Further, they will continue to face challenges in the "new normal" for improving the quality of home chemotherapy care.

However, this crisis also offers a good opportunity to put home chemotherapy into practice, especially for oncology and HHC nurses.

Oncology and HHC nurses need to focus on effective ways to prevent COVID-19 infections in cancer patients undergoing home chemotherapy, as well as appropriate nursing practices in the struggle against this developing health crisis, which has the potential to cause serious, or even life-threatening, problems for patients' conditions.

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## Conflicts of interest

There are no conflicts of interest.

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