

## EXPLORATION OF HEALTHCARE PRACTITIONER'S PERCEPTION REGARDING PHARMACIST'S ROLE IN CANCER PALLIATIVE CARE, MALAYSIA

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### ABSTRACT

**Introduction:** Despite steps taken to increase awareness about cancer, the burden of cancer is increasing at tremendous rate worldwide. Since the patient care evolved from disease-oriented to the patient-oriented approach, the role of pharmacist was extended to introduce them in patient-care team. However, the role of the pharmacists is not generalized around the world. In various developing countries, steps are being taken to improvise patient-care through the participation of the pharmacists at ward levels but the progress is still slow. It is expected that some healthcare professionals and the patients haven't fully embraced the idea of integration of the pharmacist in the patient-care team. This study was conducted to explore the perception of healthcare professionals working in the cancer palliative care settings within Malaysia regarding the integration of the pharmacists within the cancer palliative care team. **Material and methods:** A qualitative exploratory study was designed to interview doctors, nurses, pharmacist, patients and their caregivers at the selected study sites. The interviews were audio-taped and transcribed verbatim which were then subjected to thematic analysis. **Results:** Healthcare professionals responded positively regarding the integration of the pharmacists in cancer palliative care team. They believed that the pharmacists possess remarkable knowledge and skills with respect to drugs and drug related problems. However, pharmacists complained that the quality of their work is affected due to inadequate representation of the pharmacists in the wards. **Conclusion:** Findings of the study suggested that both doctors and nurses are willing to welcome the pharmacists within the wards to constitute a triad for the improvement of patient-care within cancer palliative care. However, policies are yet to be designed to incorporate pharmacists as a permanent member of the cancer palliative care team.

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### Introduction

According to World Health Organization (WHO) estimation, worldwide burden of cancer is expected to rise to an alarming figure of 21.4 million cases of cancer per year and 13.2 million deaths due to cancer by 2030, if appropriate preventive measures are not taken. [1] Despite steps taken to increase awareness about cancer, the burden of cancer is still increasing at tremendous rate worldwide. With the emphasis on patient-oriented care, the practice of pharmacy has undergone a marked evolution. [2] Till the mid of 20<sup>th</sup> century, pharmacists were seen restricted to the compounding and dispensing areas. But with the advent of terminologies like "clinical pharmacy" and "pharmaceutical care" in the late 20<sup>th</sup> century [3] they began to interact with the patients and their healthcare colleagues [4]. The purpose of pharmaceutical care is to provide patient-oriented care in an outcome-oriented manner in order to improve patient's quality of life (QoL) [5]. Soon after the integration of the pharmacists within healthcare team it was disclosed by the pharmacists at various forums, discussion platforms, blogs and other type of information media that the transformation in the profession of pharmacy is not as smooth and far going as it was meant to be. One of the reasons reported as a barrier was that the patients and also the healthcare professionals have not fully embraced the idea of the integration of the clinical pharmacist within the patient-care team [4].

The comprehensive cancer care employs a number of treatment protocols simultaneously in order to cure or to manage the disease. As the disease progresses patient becomes more and more vulnerable to co-morbidities [6], hence, warranting the need for a type of care preferably rendered by multi-disciplinary team [7]. Anti-cancer medicines due to their perilous nature have also been classified as the second amongst the medicinal agents causing most fatal medication errors [8]. They have also been reported to have the highest incidence rate of drug-related problems [9]. Although patient care has been improved a lot over past few decades but the progress in palliative care is still slow in recently developed and developing countries [10]. In 2002, it was demonstrated that cancer palliative care in Malaysia could be improved by the integration of more specialists into the system [11]. However, during preliminary observational research conducted at different public tertiary care hospitals of Malaysia in 2014, it was found that patient care in Malaysia was still physician centred in almost all over Malaysia. The doctors were the sole incharge for designing, modifying and implementing treatment protocols for the patients. So the idea was to investigate the views of the healthcare professionals regarding integration of the pharmacist into palliative cancer care teams. Findings of the study could possibly help to devise policies in order to upgrade the pharmacy practice within the region.

### **Method:**

Qualitative exploratory research was designed to meet the aims of the study. Ethics approval were sought from Ministry of Health, Malaysia. 29 respondents were recruited through purposive sampling method. Respondents included physicians, oncologists, nurses, pharmacists, patients, and caregivers. Healthcare professionals were interviewed to express their opinion on integration of pharmacist as a permanent member in cancer palliative care team. However, patients and caregivers were also recruited to disclose those issues which may highlight the need of the pharmacist in cancer palliative care team. Demographic details of the respondents are provided in Table I. Informed consents were obtained from all the respondents. Semi-structured interview guide comprising of open-ended questions was formulated after extensive literature review. The interviews were conducted in English which were transcribed simultaneously for the concurrent analysis. The transcripts were provided to the healthcare professionals so they may read and sign the transcripts for validation of the obtained data. Due to inability to read lengthy transcripts, due to low literacy rate or physical incapability among patients, the transcripts were not provided to them for validation. However, an oral summary of the interviews was presented in front of the every patient and caregiver to obtain their agreement on the perceived findings from their interviews. The examples of the questions asked during interviews are provided in 'Appendix I' provided with this article. The respondents were also probed with the probing questions in order to get the detailed information of their perception. Thematic analytical approach was employed to analyse the collected data. Transcripts were read again and again to find key words, which were utilised for the development of themes. Both deductive and inductive approaches were employed to interpret data in form of themes.

### **Results:**

Findings obtained from the interviews of healthcare professional were interpreted as following four themes.

- 1) Pharmacists as a back-up for healthcare colleagues
- 2) Acknowledged source of information
- 3) Enhanced patient-oriented care
- 4) Prioritisation of tasks by pharmacists

However, the findings from the cancer patients and their caregivers suggested that they were totally unaware of the presence of the pharmacist in oncology ward and palliative care unit. None of the patients and caregivers recruited in this study had ever discussed their problems and issues with the pharmacist present around them.

#### **Pharmacist as a back-up for healthcare colleagues:**

Both doctors and nurses warmly welcomed the idea of integration of pharmacists within cancer palliative care team. They expressed a high level of trust in pharmacists on drug related issues.

*“I welcome their appearance in our round. Usually, I will look for the pharmacist... before doing my round because I need their support. If a patient asks something that I cannot answer so they will be my backup”*

Dr. No. 4; Female oncologist

The responding doctors also suggested the roles a pharmacist can play in order to support oncologists, when integrated into cancer palliative care team.

*“The pharmacist actually takes another initiative of actually going through the medications patient actually have been, including their traditional medication in certain ways... which actually helps and also reminds us if we are actually missing out things.”*

Dr. No.2; Male medical officer

Some of the doctors suggested that pharmacists tend to complement them in areas where they feel themselves comparatively weaker.

*"...Because our chemotherapy medication has higher rate of nausea, vomiting and diarrhoea or part from that is the dose...So they have to consume quite a number of medication per time so they obviously have trouble with that and then apart from that our chemotherapy drug, the IV drug also got problem like, you know when there is extravasation all so patient will have the side effects of the chemotherapy..."*

She added;

*"...if it's like mild Grade 1; grade 1 usually we can treat by ourselves, but it's severe Grade 2 or Grade 3 we will always ask pharmacist about their opinion whether or not stop this...treatment."*

Dr. No. 6; Female oncologist

Doctors possessed adequate awareness of the roles of the pharmacists and the scope of their practice in cancer palliative care.

*"...in managing the patients...they (pharmacists) have a bit more ...And especially to manage the symptoms in a palliative care patient having the pain symptoms and they will suggest which medication will be better for them..."*

Dr. No.7; Female medical officer

Another oncologist, supported the idea of having pharmacist by the side of doctors in such words;

*"...by having pharmacist which is stationed in oncology ward can screen through the chemo regimen. Make sure that the dosage is correct... and then after that, make sure that the sequence of chemotherapy is properly given such as drug A been given first then provide drug B, then make sure that anti-emetic is given prior to the chemotherapy, then when there is any toxicity so can advise us especially when there is any impaired liver function test or renal function test about the dose adjustment and when some complication arise such as embolism ..."*

Dr. No. 9; Female oncologist

Giving her opinion regarding the presence of pharmacist within oncology ward, a nurse expressed her immense confidence in working with in-ward pharmacists. In her words;

*"...actually we feel better if they (pharmacists) are in the wards... We are nurses we are more to the patient care we are not good in a medication..."*

Nurse No. 3; Female

Nurses are in direct and frequent contact with the patients and they have to answer the medicine related queries from the patients. All of the nurses had a consensus that pharmacist are the source of information when doctors are not around and they work with confidence as a team with pharmacists.

**Acknowledged source of information:**

Responding doctors were not at all hesitant to state that they acknowledge pharmacists as a source of information for themselves as well as patients.

*"...I think it is important for pharmacist to be in the team especially when doctors do rounds so that they can explain the side effects to the patients better than the doctor, I guess most of the doctors know side effects but general side effects and they don't know how the drug works so if the pharmacist is there they...I mean now-a-days patient is much more informative so they can get information from the internet. We doctors rarely look at that websites so we can't explain better than the pharmacists..."*

Dr. No.4; Female oncologist

One of the responding doctors informed that it is quite easy to devise a treatment plan after discussing proposed medications with a pharmacist so as to avoid any serious consequences;

*"The pharmacists are very much beneficial...to be put in the ward. Because first of all, they can help us to confirm the dosage of a medication so basically shortens our time... and sometimes they are more aware of the number of side effects of medication... they also sometimes help in explaining the... purpose and the side effect of ...drugs..."*

Dr. No. 1; Male medical officer

Doctors were found convinced that drug-related information is the specialisation of a pharmacist.

*"...good to hear from the pharmacist... we can ask them that what are the best anti-emetics to be given to the patient? And also, when there is no normal or standard anti-emetic we use... so we can discuss with them..."*

Dr. No. 8, Male medical officer.

Another doctor expressed;

*“...we will deal with the management of the side effects to chemotherapy ...and if we didn't like... have any information, how to manage the side effect... we will discuss with our pharmacist here...to manage the side effect...”*  
Dr. No.7; Female medical officer

Nursing staff also had the positive perception regarding integration of clinical pharmacist into cancer palliative care team.

*“Sometimes, the new doctor, they are not very good in endorsing chemo. So she (current pharmacist) suggests that it will be a high dose for the patient and she will recheck again. Only then we will send to the pharmacy...”*  
Nurse No. 5; female

In the above case, the nurse is emphasizing on the supervising role of the pharmacist. She believed that pharmacists are usually equipped with the relevant knowledge and the skills necessary for the delivery of patient-oriented care.

Another nurse responded;

*“...actually we feel better if they are in the wards you know compare to the nurses. We are nurses we are more to the patient care we are not good in a medication.”*

She added;

*“If in the ward let say if patient is asking about the medication sometimes we have to refer to the doctors. Even doctors also sometimes have to refer to the pharmacists it takes some time. If the pharmacist is in the ward it will be very easy and very convenience for everyone...”*

Nurse No. 3; Female

#### **Enhanced Patient-oriented care:**

Healthcare professionals believed that integration of the pharmacists within palliative care team is necessary to deliver optimum patient-oriented care.

*“...it will be much easier actually...from time spent... because currently you have a lot of patients in the ward so there is a lot of time in the ward and as a doctor you have to come down to the clinic to work. So when you spend too much of time in the ward than the other patients in the clinic don't get much of their time...”*  
Dr. No.3; Female medical officer

Oncologists explained that in the case of the end of life cancer patients, there comes a situation when a patient doesn't respond to standard therapies. In order to achieve the desired outcomes, they have to devise a plan that suits the need of that particular patient. Hence, in such case pharmacists could help them to suggest alternatives and also individualise the dose.

In the perspective of another oncologist, pharmacists deserve to be in the team as;

*“...if they (pharmacists) are there to monitor...particularly to review the patient's medication and each of the side effects, they can alert us earlier before we see it.”*  
Dr. No. 6; Female oncologist

Doctors also supported the idea of increased interaction between patients and pharmacist in order to improve treatment outcomes.

*“I think this is very necessary that every ward preferably to have their inward pharmacist because it actually depends on out-patient or direct dispatch pharmacy to explain everything is actually impossible because on clinic we have over than that...”*  
Dr. No.2; Male medical officer

The above respondent (Dr No. 2) is actually welcoming the idea of integration of pharmacists into cancer palliative care team due to their ability to counsel patients. In his prospect, pharmacists if present in wards can better communicate with patients and counsel them well on their therapy before getting discharged from the hospital.

The essence of the patient-oriented care is to devise a treatment plan that best suits the needs of a patient. Responding doctors acknowledged that while designing an individualised treatment regimen, doctors could be assisted by a pharmacist.

*“...some patient will not relieve with Tramol<sup>®</sup>, will not be relieve with morphine so we will discuss with pharmacist which is the best medication that we can give to patient in order to control the pain...”*

Dr. No. 7; Female medical officer

Nurses also believed that integration of pharmacists in cancer palliative care team may improve the standard of patient-oriented care.

*“...If the certain pharmacist is incharge to be in the ward for 24 hours that means they... only take care for that particular patient only. Let say 30 patients, 40 patients so they only incharge for that patient. They no need to incharge for hundred or two hundred patient. That means they really can concentrate to that patient they can give the help and education regarding the medication. And about the side effect about the information. All they can, spend more time to the patient.”*

Nurse No. 3; Female

The pharmacists recruited in this study also demonstrated their abilities to perform as a team with other healthcare colleagues in order to improve the quality of care provided to the patients.

*“...I will screen the prescriptions, screen chemo requests in the wards and if there is any interventions that need to be done for example wrong dose, inappropriate regimens. I will intervene accordingly I will discuss with the doctors...for the interventions...”*

Pharmacist No. 1; Female

Another pharmacist responded;

*“I’ll directly discuss to the doctors about the problem for example like may be the drugs there, there is a drug interaction may be, the drug not suitable for the patient or patient may be experience the side effects of the drug. I will discuss with the doctors...”*

Pharmacist No. 2; Female

### **Prioritisation of tasks by pharmacists**

Pharmacists recruited in the study reported that they intervene wherever the intervention is required but they also believed that there is a need to devise policies to enhance the participation of pharmacists in order to practice the full-fledge pharmaceutical care. They suggested it could be obtained by increasing the number of pharmacists per beds. Pharmacists reported that in the current settings, where they perform their routine hospital duties while continuing the assigned clinical tasks, they have to compromise their clinical role. And they do it by prioritizing their chores in order to fulfil the workload.

*“...it is not easy for us to focus on each and every patient... because each ward usually it is full bedded... each ward ranges from 28 beds to 46 beds so the most we have in one ward is 48, 46 beds...it can be full most of the time. And sometimes we extend beds to accommodate patients and there is only one pharmacist. So ...what we do is to prioritise our job. But, for chemotherapy request form, we will screen every one of them because it is our utmost priority to ensure that correct chemotherapy is been endorsed.”*

Pharmacist No.1; Female

The above-mentioned respondent (Pharmacist No. 1) was trying to say that due to the load of work both within ward as well as at inpatient dispensing, it was very tedious for them to screen every prescription prescribed by doctors in the ward. So they sometimes overlooked routine prescriptions for cancer patient’s pre- or post-medication. Another pharmacist described the same concept in the following words;

*“Sometimes... when ward is full of patients and even sometimes we need to extend beds to accommodate patients. So I have lots of work to do. Both in ward and also CDR. So it becomes very difficult sometimes to give 100%. But I think that pharmacy needs me more... I mean I need to screen prescriptions for chemo and other medications and also supervise preparation. So I focus there (inpatient pharmacy).”*

Pharmacist No. 4; Male

Another respondent disclosed;

*“...doctor round if it’s too early then I can’t catch them. So I don’t know when the drug is prescribed, so just go downstairs without my knowledge (participation). Sometimes other people screen, even though they will give right*

*dose but they don't know the history of the patient. So when I'll check I know whether it's appropriate for them or not."*

Pharmacist No. 3; Female

All of the pharmacists interviewed, responded that their advice is always respected by their colleagues. The only issue they face is related to the inadequate representation of pharmacist with respect to the number of patients in each ward.

Data collected from patients and their caregivers suggested, that they were completely unaware of the presence and purpose of the pharmacists in the oncology ward or palliative care unit. Lack of personalised counselling of the patients from healthcare professionals was common. Patients were found living with improper concepts regarding their health and treatment due to inadequate communication between patients and healthcare professionals. The absence of documented pharmaceutical care plan was seen giving rise to a number of human errors and miscommunication among healthcare staff regarding follow-up schedules of the patients. Patients were not adequately counselled about the scanning procedures and the preparations they need to do before arriving to the hospital for their check-up which was becoming the reason for agony and anxiety among patients and their caregivers

### **Discussion:**

This study painted a new picture of the perception of healthcare professionals regarding the integration of the pharmacists in cancer palliative care team. The positive response of the healthcare professionals regarding the expansion of the pharmacist's role in oncology wards and palliative care units is contrasting to the older findings which suggested that physicians did not have any idea of what to expect from a pharmacist. [12] The oncologists and physicians recruited in this study had clear understanding of the roles of the pharmacists, their knowledge and skills related to patient care. They clearly suggested the roles that pharmacists can play when integrated as a permanent member in the cancer palliative care team. This study also suggested that healthcare professionals including both nurses and oncologists prefer to turn towards the pharmacists to update their drug-related knowledge. This finding was also different from the older studies which reported that the healthcare professionals did not acknowledge pharmacists as a source of information and do not turn towards them to make drug-related decisions. [13] However, the findings obtained from the interviews of patients and caregivers suggested that the patients and the caregivers recruited in this study required active personalised counselling regarding their medication related issues. Anxiety and agony observed among the patients could also be minimised through appropriate and individualised counselling. A big proportion of cancer patients suffer due to lack of treatment-related knowledge. [14-16] This aspect was also highlighted by the doctors who expressed that due to excessive workload it was very difficult for them to spend more time on a patient. However, pharmacists if integrated into the team could assist them in provision of optimum patient-oriented care by investigating the needs of each patient. The earlier studies also suggested that incorporation of pharmacists into patient-care team resulted in increased patient satisfaction and compliance towards treatment. [17]

### **Conclusion:**

This study concluded that pharmacists can play their roles by supporting healthcare staff, not only by ensuring safety and efficacy of anti-cancer medications but also by educating them on better available options without any barrier from the other side. The study also demonstrated that pharmacists are also willing to perform clinical tasks and tend to participate in clinical activities but appropriate policies are yet to be devised to develop palliative care team models with proper justification to all professions. However, findings suggested that patients and their caregivers were least familiar with the existence of the pharmacist within wards so necessary steps should be taken to increase public awareness of the pharmacist's roles so that they may relate their problems to them. Pharmacists if introduced as a permanent member into cancer palliative care team may also lead to increased awareness among patients and their families ultimately leading to another source of information for the patients and their caregivers for their problems.

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