

## **Report of Research Travel Grant 2015 - Jincy Joseph, RN, RNT, BSN, MSN**

### **Report on visit to The National Institutes of Health in Maryland, Washington, USA**

#### **Research Back ground**

Cancer is a major cause of morbidity and mortality in Ireland. Each year about 29,000 people develop cancer and 7,500 die of the disease. It is projected that cancer incidence will increase by up to 100% in the next 10-15 years (National Cancer Registry of Ireland, 2015). As a result of the complexity of cancer care and the evolving new cancer treatments, oncology and haematology day units have become a challenging environment. Providing chemotherapy is a multistep interdisciplinary process that involves multiple handover communications, laboratory review, chemotherapy processing, production and administration. The multistep interdisciplinary process of chemotherapy administration can result in potential and actual delays and errors which can translate into longer patient wait times and inefficient use of health care professional time. Time is precious for a patient with cancer and nursing staff in our units want to make the time spent at the Oncology / Haematology units as valuable as possible for patients.

In August 2015, a research project entitled “*Improving Patient Flow in an Oncology /Haematology Ambulatory Setting: An Improvement Methodology Initiative-Action Research*” was commenced in Oncology Haematology units across two centres of excellence in cancer care in the Republic of Ireland. The improvement initiative is based on the principles of ‘Lean’, ‘Productive Ward’ and ‘Transforming Care at the Bed side, using a co-operative inquiry research design approach. The aim of this action research process is to evaluate the current process of intravenous chemotherapy administration, determine ways to eliminate waste, and improve multidisciplinary coordination and communication, and in turn, improve the patient flow across the two Oncology Haematology ambulatory day units. The process improvement strategy involves four steps, namely, Plan, Do, Study and Act phase which allows the process to be examined, make a change, evaluate, and study the results of the change, make further changes and engage in a continually improving process. My role is a co researcher in one of the research sites and to lead the project in collaboration with the research stake holders and cooperative inquiry group.

#### **The Purpose of the EONS Research Travel Grant**

During the Act phase of the study, a visit to an international centre of excellence for cancer treatment was deemed necessary which would help design a process map that reflects an international evidence-based patient flow process during an anticancer treatment protocol, based on observations and conversations in an Oncology/ Haematology day unit that could be applied to the research settings in Ireland. It was at this stage that I heard about the EONS research travel grant. The travel grant seemed

a great opportunity for me as a co researcher to visit the National Institute of Health (NIH) in Washington which is a centre of excellence in Oncology clinical research and have an excellent model of patient flow. Georgie Cusack, MS, RN, AOCNS, Director of Education and Outcomes at National Heart, Lung, and Blood Institute was contacted and kindly agreed to offer an opportunity to visit the Oncology /Haematology day unit from September 21<sup>st</sup> to 25<sup>th</sup> 2015. I would also like to thank Prof. Laserina O'Connor, and Dr Eileen Furlong, University College Dublin and the research team from St.Vincent's University Hospital and Mater Misericordiae University Hospital, Dublin for their invaluable support and guidance throughout the project.

### **Objectives for the Visit at the National Institute of Health**

- Capture the patients' perception of their experience in an Oncology / Haematology day unit prior to, during and post anti-cancer treatments.
- Identify barriers perceived by the Facilitators of patient flow in Oncology / Haematology day units prior to during and post anticancer treatments administration process.
- Design a process map that reflects an evidence-based international patient flow process during an anticancer treatment protocol based on observations and conversations in an Oncology/ Haematology day unit
- Determine an evidence based system for the management of patient flow that could be applied to the ambulatory Oncology/Haematology units in the research settings in the Republic of Ireland.

### **Overview of My Experience at the National Institute of Health, Washington**



The National Institutes of Health is located in Bethesda, Maryland, USA and made up of 27 different components called Institutes and Centers. Each has its own specific research agenda, often focusing on particular diseases or body systems. My placement location was the NIH clinical Centre.



The NIH Clinical Center, provides a versatile clinical research environment enabling the NIH mission to improve human health by investigating the pathogenesis of disease; conducting first-in-human clinical trials with an emphasis on rare diseases and diseases of high public health impact; developing state-of-the-art diagnostic, preventive, and therapeutic interventions; training the current and next generations of clinical researchers; and, ensuring that clinical research is ethical, efficient, and of high scientific quality.

I was given a very warm welcome by Georgie Cusack, MS, RN, AOCNS, Director of Education and Outcomes at National Heart, Lung, and Blood Institute. On my first day, Georgie gave me a detailed orientation to the NIH; it's over view, governance structure and the programmers and services offered by NIH clinical center. Then, I met with Megan Mikula who is the Nurse Educator for Oncology Critical Care Service at NIH Clinical Research Center. Megan had prearranged and coordinated all my placements ensuring that my learning objectives were met over the course of a five-day placement at the NIH Clinical Research Centre.

### **Visit to the 3 SE Day Hospital and Observation of Patient Fow**

#### **Visit to National Cancer Institute (NCI)**

NCI leads a national effort to eliminate the suffering and death due to cancer. Through basic and clinical biomedical research and training, NCI conducts and supports research that will lead to a future in which cancer can be prevented before it starts, identify cancers that do develop at the earliest

stage, eliminate cancers through innovative treatment interventions, and biologically control those cancers that cannot be eliminated so they become manageable, chronic diseases.

### **Observation of Patient flow in NCI – Outpatient Unit**

Clinic visits, without treatment or supportive care needs are arranged in outpatient clinics. Consultations are performed in the clinic. A two day treatment model is utilized for improved patient flow. Patients are scheduled to the outpatient clinic on the same day or previous day of chemotherapy. There are set days for specific cancer patients. Patients attend phlebotomy first. Requisition forms are completed on line by the team. Following the phlebotomy visit, the patient checks in at the reception. From the reception, they are directed to an assessment room for height and weight and a phlebotomy room if they have central lines. A nurse in charge coordinates the patient flow in this area.

Consultants, Registrar, Pharmacist, Clinical Specialist, and a coordinator are based in a meeting room where the patients are discussed in detail. During the team based consultation, blood results, scans, treatment cycles are reviewed. This is followed by physical assessment of patients in an exam room. During this assessment, chemotherapy specific toxicities are reviewed and documented. Based on the review, treatment and premedications are ordered electronically by the team. A chemotherapy pharmacist is available for checking and confirming the orders. Patients are provided with a return appointment and will proceed to the chemotherapy day unit either the same day or next day.

### **Visit to the 3SE Day Ward**

3SE is the infusion centre for adult Oncology Haematology and transplant patients. It has 38 chairs and 5 beds. On average, 75 patients are being treated daily. It operates on Monday to Sunday including bank holidays. The leadership structure includes Nurse Manager, Clinical Manager, Clinical Nurse Educators, Clinical Nurse Specialists, Charge Nurse for every shift and Registered Nurses. The skilled nursing services offered are physical assessment, supportive care including blood products, intravenous fluids, side effect management and protocol specific treatments, blood work via central vascular access devices, telephone triage, and patient education. The day unit does not have the space to support visits that do not require nursing assessment and interventions. When the day hospital is closed, adult patients are seen on the inpatient unit.

### **Observation of Patient Flow in 3SE Day Ward**

I had the opportunity to observe the patient flow in the 3 SE day ward for two days. Maureen Connelly one of the registered staff nurses orientated me to the surroundings and went through the processes in the day unit. Patients arrive to the day ward and check with the Research Assistant located at the front of the unit. This area has a white board with current patient room assignments as well as the assigned nurse. As the patients arrive, the research assistant contacts the assigned nurse

and communicates the information that the patient has arrived. Each registered nurse (RN) carries a cell phone. The nurse to patient ration is 1:3/4. A charge nurse constantly regulates and coordinates the patient flow in the day unit and allocates patients based on the workload of the nurses. This is done with the help of the computer software package which shows the status of patients by colour coded changes. Patients are given a comfort call device which alerts them when the nurse is ready for the patient. The assigned RN reviews the chemotherapy orders, and clinical notes completed previously electronically, and completes patient assessments including vital signs. Patients are reviewed by the team only as required in the event of an adverse reaction or a change in patient haemodynamic status during a treatment

### **Satellite Pharmacy**

3SE Day ward has an onsite satellite pharmacy. During my visit, I was given the opportunity to visit the satellite pharmacy and discuss with the pharmacist regarding functionalities of the satellite pharmacy. The satellite pharmacist reviews the orders, prepares the labels, and guidelines for the preparation of the prescribed anticancer drugs. This information is sent down to the chemotherapy pharmacy which is located on the ground floor through a dumb waiter. As soon as the order is received, premedications and chemotherapy are prepared from the pharmacy and sent back to the day ward through the dumb waiter. This will then be administered as per the unit policy using safe guidelines and practices. 3 SE day ward nurses are oncology educated and they receive ongoing education on different topics on a daily basis at unit level.

### **Telephone Triage**

3 SE day ward has an efficient telephone triage service which provides complementary, supportive care via telephone communication for ambulatory oncology patients receiving protocol treatment. I had the opportunity to speak with the triage nurse and understand the roles of the triage nurse and how this positively contributes to the patient outcomes and helps with the patient flow. The Telephone Triage Nurse supports the study implementation and data collection for a select cohort of patients by tracking, recording, and acting on laboratory values, assists in symptom management in congruence with the parameters of NIH protocols and nursing standards of practice.

During my visit, I had the opportunity to attend the performance management meetings, educational classes, review the nursing acuity tool and its development and uses currently. I also attended the inpatient setting, ward rounds, hand over meetings and poster presentations for nurses. It also gave me an opportunity to meet with the Oncology Nursing Directors and to share and exchange the patient flow project ideas across the two research sites in the Republic of Ireland hospitals.

## Conclusion

My experience of visiting NIH was a gigantic learning curve. This was an excellent opportunity for me both professionally and personally and the objectives of the visit were met. I was able to network with international colleagues in Oncology and Haematology units and gain access to designs and details related to evidence-based applicable patient flow processes. This was an opportunity to observe the patient flow in a well established Oncology and Haematology unit. Working with expert clinicians enabled me to examine, and discuss approaches to implement an eclectic model of patient flow across two large academic cancer units of excellence in the Republic of Ireland. This information and experience was communicated to the research team in Ireland and will be utilised in the implementation phase of the action research project. This visit has led to the development of international collaboration on this research and for ongoing communication, networking and eventual dissemination of findings. A sincere thanks to Georgie Cusack, Megan Mikula and the nursing team for contributing their valuable time, support and expertise through out my placement. I would also like the opportunity to thank EONS for awarding me the research grant that enabled this invaluable placement in NIH with such a visionary nursing team .



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