This is a letter of intent to submit an application for the ASHP Research and Education Foundation New Investigator Research Grant

Project: Implementing a Pharmacist-Led, Individualized Medication Assessment and Planning (iMAP) Pilot to Improve Medication Use During Care Transitions in Senior Adult Oncology (SAO) Patients

Background/rationale: The American Cancer Society (ACS) estimates by the year 2030, 70% of all cancers in United States (US) will be diagnosed in senior adults. The multiple layers of specialized (i.e. oncologists, radiation oncologists, surgeons), general and allied health professionals make this population particularly challenging to manage. Older adults with cancer are particularly prone to the perils associated with multiple transitions in care, including medication errors attributed to medication changes, complex regimens, and incomplete information handoff between providers which can lead to potential harm, hospitalization and heightened utilization of health care resources. Existing literature supports the need to identify and eliminate gaps in the care transitions process, especially involving drug therapy problems and non-adherence. Limited studies exist regarding using an individualized Medication Assessment and Planning (iMAP) intervention to reduce medication related problems (MRP) during transitions in care in this vulnerable SAO population.

Aims and hypothesis: The purpose of this study is to implement a pharmacist-led iMAP intervention pilot to address and reconcile MRP during cancer care transitions [Day 0 (initial face-to-face contact), Day 30 and Day 60 (telephone contact)] in order to ensure safe, effective and accountable medication-related care. In order to achieve this goal, the specific objectives are: 1) To compare the number and rate of MRP between contacts [Day 0, 30, 60]; 2) To evaluate the proportion of MRP that are successfully addressed between contacts [Day 0, 30, 60]; 3) To examine the feasibility of implementing a pharmacist-led iMAP intervention pilot. We hypothesize that a pharmacist-led iMAP is a feasible intervention to reduce MRP during care transitions in order to ensure safe, effective and accountable medication-related care.

Rationale and significance: Efforts to improve care transitions and reduce hospital readmissions are increasing the US in response to incentives from state and federal payers and policymakers, such as the Partnership for Patients Initiative (including the Community-based Care Transitions Program), and penalties for excess 30-day readmissions through the US Centers for Medicare & Medicaid Services (CMS). Studies show when pharmacists are involved in care transitions and take measures to decrease the prevalence of MRP, hospital readmission rates and preventable adverse drug events are reduced; however, these studies are mostly limited to the inpatient setting in the area of medication reconciliation and discharge programs. While these inpatient programs provide a robust framework, identifiable gaps exist because the literature does not focus on ambulatory care settings or the oncology population.

It is imperative that my proposed investigation be conducted because cancer care transitions (including ambulatory care), too, present challenges regarding MRP. Pharmacists are underused in the ambulatory oncology setting and we have an opportunity to play a critical, long-term role in providing safe, effective and accountable medication-related care. My proposed study will fill an existing gap because it targets a vulnerable and complex population that is under-represented in existing evidence. Upon the completion of this study, our findings will be presented at a national, scientific meeting and the manuscript will be submitted to a peer-reviewed medical journal for publication. Additionally, the next logical step will be to draft a comprehensive iMAP intervention manual for refinement to prepare for future scientific testing in clinical practice. The goal will be to conduct a more rigorous evaluation of the iMAP intervention to determine its effectiveness and sustainability over a prolonged period with the long-term goal being integration of this intervention into cancer care transitions as a standard of practice.
Innovation and impact: This study represents a significant innovation because it will test a novel pharmacist-led iMAP intervention [(face-to-face and telephone contact periods)] aimed at improving medication-related care, in a vulnerable high-risk population. Furthermore, this study examines the feasibility of an iMAP intervention [incorporating telephone follow-ups] which holds great potential as an innovative model to address a significant public health and healthcare related issue. Telephone follow up is a low cost, high quality intervention that has the potential to ensure safe and effective medication-related care and reduce medication related adverse events, hospitalizations and heath utility costs.

Approach and methods: This is a prospective, exploratory, pilot study conducted at the Kimmel Cancer Center at Jefferson. All patients aged ≥ 65 years with cancer (new diagnosis, progression, recurrence; all cancer types/stages) receiving an initial consultation between January 2014 and March 2015 will be eligible for recruitment. The estimated sample size is 130 patients, based on an average of 13 initial consultations per month during a 15 month period, assuming a 65% consent rate. During the initial face-to-face consultation, patients are instructed to bring in all home medications [prescription, non-prescription, herbals and supplements]. In this way, the pharmacist has an objective way to confirm medication use, assess indication for use, side effects, ability to read medication directions, to self-administer, to manage medications in an organized manner and to assess regimen complexity. Each patient will be offered a medication pill box and education on how to use the pill box as a tool to improve medication adherence. MRP will be measured based on an adaptive version of the ASHP classification system and adherence will be measured using the 8-item Morisky Medication Adherence Scale (MMAS). The pharmacist will communicate MRP and recommendations to the patient and the multidisciplinary SAO team (core members include a medical oncologist, geriatrician, pharmacy specialist, nutritionist, and social worker), update the electronic medical record (EMR) and document a progress note. Patient demographic information will be collected using data sources including: 1) patient self-report; 2) medical records; 3) physician/pharmacist progress notes. Demographic data collection includes date of birth, age, gender, race, cancer type/stage, comorbidities [number/type], Eastern Cooperative Oncology Group (ECOG) and functionality score. Within 7 days of the day 30 and 60 iMAP [telephone] contact, patients’ primary pharmacy will be contacted via telephone (conducted by key personnel) to obtain a printed medication fill history as an objective measure to gauge medication use and MRP after the initial contact. A standardized iMAP script will be used by the PI and/or Co-I to conduct the day 30 and 60 iMAP. If MRP exist, the pharmacist will instruct the patient to contact the prescribing physician/physician’s office. The pharmacist will document a progress note in the EMR and an alert message will be tasked (directed) to the prescribing and/or primary physician (if contact information via the EMR is available). The feasibility target for iMAP intervention is set at 30 minutes per patient based on current clinical experience at our center. The feasibility of the pharmacist-led iMAP will be examined based on a debriefing session for study staff (investigators and personnel) and completion of a 3-5 question qualitative survey - both to be completed at the conclusion of the study enrollment period. The iMAP feasibility measures will include: 1) time (per patient); 2) resources utilized, sufficient resources provided; 3) barriers encountered. The results of the survey will be reviewed by the PI to identify common response trends.

This new investigator award is essential to my early stage career because it affords an opportunity to build upon my soon to be completed research study (A retrospective analysis on the prevalence of polypharmacy and inappropriate medication use in SAO patients) by implementing a prospective interventional pilot aimed at addressing MRP in this vulnerable and complex population. I firmly believe that pharmacists’ active engagement in interventions to improve the quality of medication therapy is essential to furthering our profession while positively impacting patient care. My research mentor, Dr. Laura Pizzi, is a seasoned grant-funded researcher and she shares in my commitment and support to this proposal. She and I have success working together for my aforementioned AACP funded study and the ASHP Research Boot Camp. I am grateful that the ASHP Foundation provides valuable opportunities to support and develop young investigators. I sincerely hope that you will review my letter of intent favorably.

Sincerely,

Ginah Nightingale