

Final Report: A Pilot Study to Assess Adherence to Oral Chemotherapy Among Vulnerable Populations

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Use of oral anticancer medications has been increasing and is expected to continue to increase in the future. Many of these medications have improved efficacy and reduced toxicity compared to parenteral chemotherapy. However, because these powerful medications are administered at home rather than in the inpatient or clinic setting, timely prescription filling, sufficient patient education, monitoring for side effects and toxicity, safe medication handling, and adherence are all of special concern. Therefore, the overall aim of this pilot study was to collect cross-sectional data from vulnerable groups of patients receiving oral chemotherapies using patient-reported surveys to broaden our understanding of patients' experiences with medications, including identifying barriers to safe and timely administration.

Working with Tufts Cancer Center Specialty Pharmacist (D Hackenyos), we identified 121 patients receiving oral anti-cancer medications from July 2017 - April 2018 who were in one of our identified vulnerable groups (Chinese origin or public insurance) and met eligibility for screening. Over the 5-month recruitment period, we approached 61 patients and asked them to complete the patient-reported surveys prior to their scheduled clinic visit. The primary reason for not approaching a patient was that they were no longer on the medication. We were able to enroll 56 patients and all but one had evaluable data from the surveys.

Fifteen of the enrolled patients were Chinese, while the remainder had public insurance (Medicare and/or Medicaid). Mean age was 68 years and 47% were male. The most common cancer was myeloma (42%) and the most common oral anti-cancer drug was Revlimid (22%). Most patients (82%) reported doing a very good/excellent job taking their medication. Less than one-third of patients correctly recalled specific instructions about taking, handling, and storing their medications. Interestingly, few patients (5%) reported problems with medication costs, perhaps due to adequate insurance coverage or other special programs to help with costs. In fact, 69% of patients spent nothing on their medications in the past 30 days. In summary, these results indicate that patients generally have good self-reported adherence to their oral anti-cancer medications and cost does not seem to be a barrier. However, their understanding of medication instructions may be an area of future intervention and we may need to verify that they are correctly adhering to their medication regimen rather than relying on self-report.

One unique aspect of this pilot was the inclusion of patients of Chinese origin, who make up ~20% of the Tufts Cancer Center patients. These patients are particularly vulnerable based on linguistic and cultural barriers in understanding their cancer care, including their oral anti-cancer medication regimen. With the support of the Moore/Moreau pilot grant, we were able to translate all of our patient-reported measures into both traditional and simplified Chinese. In addition, we relied on multi-lingual study staff who speak multiple Chinese dialects to recruit our Chinese patients.

We are in the process of preparing a manuscript summarizing these results that we plan to submit to the Journal of Oncology Practice, which is a journal of the American Society of Clinical Oncology. This pilot is part of a larger initiative to develop an intervention to improve adherence to oral anticancer medications among vulnerable populations. Results from this completed pilot provided cross-sectional data on feasibility, adherence, and patients' understanding of medication instructions. These results have been incorporated into a second pilot study funded by the Yawkey Family Foundation (SK Parsons, PI) that will assess the operational feasibility of our proposed intervention. The intervention will include standardized meetings with the patient, pharmacist, and medication navigator and periodic check-ins and estimate the effect size for a future randomized study. We will submit an R01 or R21 grant in February 2019 in response to the following NCI funding announcement: "Oral Anticancer Agents: Utilization, Adherence, and Health Care Delivery."