Using conservative estimates, pharmacist intervention in this pilot program may impact patient care, and assess any potential financial impact.

On average, the patients were 82 years old and had 13 comorbidities and may be at risk for medication-related problems leading to adverse health outcomes. This pilot sought to examine the impact of a dedicated pharmacist resource.

Comprehensive medication management in the HBPC population is crucial as these patients have multiple comorbidities and may be at risk for medication-related problems leading to adverse health outcomes. This pilot population was comprised of persons of medically complex patients, providing comprehensive, coordinated care in the comfort of their home.

Comprehensive medication management in the HBPC population is crucial as these patients have multiple comorbidities and may be at risk for medication-related problems leading to adverse health outcomes.

On average, the patients were 82 years old and had 13 chronic conditions. The majority of patients were taking 15 or more medications (Table 1). The aim of this study was to describe this pilot program, examine the degree of medication recommendation acceptance by the practice, and assess any potential financial impact.

BACKGROUND
Comprehensive medication review is a patient-centered approach to optimize medication use and improve patient outcomes by ensuring each patient’s medication is assessed for indication, effectiveness and safety given patient status and comorbidities. Clinical pharmacists play an essential role within interdisciplinary teams to optimize medication use, alert providers to potential gaps in care, decrease inappropriate prescribing practices, and improve medication safety.

Physicians in ambulatory settings often have limited access to a dedicated pharmacist resource.

This pilot sought to examine the impact of a comprehensive medication review program by a corporate-based pharmacist on care provided by a home-based primary care (HBPC) practice. HBPC brings the expertise of primary care providers and the technology of a health care clinic directly to medically complex patients, providing comprehensive, coordinated care in the comfort of their home.

This pilot population was comprised of persons of advanced age who are medically vulnerable. On average, the patients were 82 years old and had 13 chronic conditions. The majority of patients were taking 15 or more medications (Table 1). The aim of this study was to describe this pilot program, examine the degree of medication recommendation acceptance by the practice, and assess any potential financial impact.

METHODS

Study Setting: The Northwestern Medicine Regional Medical Group Home Care (NM RMG HC) team includes 2 physicians and 3 advanced practice nurses that serve approximately 750 patients. The program workflow emanated from a weekly email sent by the home care providers to the corporate-based ambulatory pharmacist containing a list of patients to review. Selection criteria were patients new to the practice, those taking 5 or more medications, and who had an initial visit with the provider. Patient name, medical record number and date of birth were included. The pharmacist reviewed the EPIC electronic health record (EHR) for each patient.

For each patient, review consisted of reading provider progress notes, history and physical, laboratory results, and the medication list. Following review, each patient was evaluated to confirm: indications for medication use, correct dosage and directions, duplication of therapy, medication efficacy for each medical condition (based on current patient status and lab results), symptom management recommendations, and patient-centered considerations including medication affordability and alternative formulations. A Microsoft Excel spreadsheet was created and consensus regarding outcomes of interest was agreed upon by the pilot team. The spreadsheet contained multiple headings allowing for a consistent and methodical approach to review each patient profile. The completed Excel spreadsheet was returned to the providers weekly. In addition, recommendations were returned to individual providers using the In-Basket messaging functionality in the EPIC EHR system.

Measures: Patients were assessed for number of active medications prescribed, appropriate indication for each medication, dose appropriate for renal, hepatic, and other specific monitoring parameters, medication listed on the American Geriatric Society Beers Criteria, drug-drug interactions, medications to consider for deprescribing, medications to add to current therapy to optimize disease state treatment. At the end of the pilot program, the charts of those patients were re-reviewed to determine how many of the recommendations provided by the pharmacist were accepted. Three physicians where medication recommendations involving medication deprescribing and optimization were accepted by the providers are highlighted in Figure 1 below.

RESULTS
In total, 96 patient charts were reviewed. There were 175 recommendations offered. Of which, 53 (30%) were accepted by the providers. While approximately 19% of patients did not receive any recommendations, 28% and 29% of patients received one and two recommendations, respectively (Table 2). Among 78 patients who received recommended recommendations, providers accepted at least one recommendation for 40% of these patients.

The most commonly accepted intervention was medication discontinuation/deprescribing and dose adjustments. Eighty-one medications were recommended for deprescribing and 27 medications were discontinued (33%). There were 24 recommended dose adjustments and 11 medications were dose adjusted (46%). Eleven medications were suggested as an addition to the current patient regimen.

Sixty-four (67%) of the 96 patients were on medications listed as potentially inappropriate on the American Geriatric Society Beers Criteria, 11 patients were not on a Beers List medication and in 21 patients the criteria was not applicable given current age. Figure 2 shows the most common potentially inappropriate medication was a proton-pump inhibitor (41%), followed by aspirin (24%), tramadol (16%), a benzodiazepine (14%) and an opioid (8%).

Table 2: Number of Recommendations Accepted

CONTROL PLAN: Develop a screening tool identifying patients likely to benefit from pharmacist review.

CONCLUSIONS
Pharmacist integration identified opportunities to optimize patient care, improve patient safety, and potentially reduce or avoid unnecessary healthcare spending.

Using conservative estimates, pharmacist intervention in this pilot program may have resulted in healthcare cost avoidance in three specific patient cases estimated to be $53,000 in direct medical costs.

Pharmacists are uniquely qualified to assist providers in delivering optimal patient care.

REFERENCE