

EXECUTIVE SUMMARY

The project "Establishment of a Pharmacist Service for Planning Affordable Therapies" was developed via a partnership among Wayne State University, West Virginia University, practicing pharmacists, Huron-Clinton Metroparks, St. Clair County and St. Clair County Road Commission. The project was funded by the Community Pharmacy Foundation, the Michigan Pharmacy Foundation, the employers, and through in-kind contributions from the Eugene Applebaum College of Pharmacy and Health Sciences.

Project Goals

The goals of the project were to:

- Improve the effectiveness and affordability of medication regimens and lower overall prescription medication expenditures and/or health expenditures for people taking multiple medications.
- Gather information about the feasibility and effectiveness of community-based pharmacists offering comprehensive medication assessments.

Project Objectives

The project objectives included:

- Creation of a pharmacist network to provide comprehensive medication assessment and patient education
- Development of a comprehensive medication assessment program
- Establishment of a patient referral system
- Provision of recommendations to patients to improve the effectiveness and affordability of their regimens while maintaining or improving patient health status
- Collection and analysis of program outcomes

To meet these goals and objectives, the Medication Assessment Program (MAP) was created for users of multiple chronic medications. The program included a set package of services that included an initial medication assessment visit, therapy and health assessment by the pharmacist, a second visit that provided written, researched recommendations and patient education, a follow-up telephone call, and a final evaluation visit. The program was provided through a statewide network of pharmacists with administrative and clinical support offered by the colleges of pharmacy.

Results

- A network of 30 pharmacists throughout the Lower Peninsula of Michigan was established to offer the MAP program.
- A college-sponsored support system that provided centralized patient enrollment, a uniform data collection and analysis process, patient care forms, patient education materials, peer review and drug information services, and a centralized service billing process was developed.
- Sixty-seven patients completed the MAP program, with care being provided in community pharmacies, at worksites, and in patient homes.

Data Findings

Patient-related outcomes

- MAP patients had significant morbidity, reporting an average of 5.9 diagnoses and the use of 12.5 chronic medications. 17.5% reported having poor health at the time of enrollment.

- Pharmacists provided 662 recommendations related to medication and health concerns to MAP patients. Acceptance rates for recommendations related to medications, lifestyle changes, and the need for medical evaluations were 70.5%, 75.0% and 72.5% respectively.
- Pharmacist recommendations resulted in actions that improved drug therapy appropriateness and patient health, such as unnecessary medication discontinuation, improved disease and drug monitoring, drug side effect avoidance, and actions to avoid adverse health events.
- Program participation significantly increased patient self-reported knowledge of medications, health conditions, and healthy lifestyle practices.
- Pharmacist assessments indicated that 44 (74.6%) of patients had improved disease control
- Medication discontinuations, and decreases in emergency department visits and hospitalizations suggest program participation may be cost beneficial to employers and patients.

Program-related outcomes

- Fewer patients than expected were enrolled. Patient enrollment required significant advertising and face-to-face interactions with employees and retirees.
- Program implementation went smoothly with pharmacists and patients generally completing all program components and requirements.
- Pharmacists spent about 140 minutes of direct patient care time with each patient. Time spent with patients was not correlated with age, medication use or number of diagnoses reported.
- University-provided support services were widely used. Provision of such services required significantly more time than anticipated.
- Patients, employers, and pharmacists were generally enthusiastic about the program and its results.

Lessons Learned

Several lessons were learned that are valuable for future program endeavors. Specific findings and their implications are listed below.

- Program development and implementation required significant resource investment and personnel time. Individuals and organizations seeking to develop such programs should anticipate a development time of 6 months to one year with consistent administrative oversight required throughout the program.
- Additional research is needed to determine what messages and marketing and advertising methods could effectively encourage patient use of pharmacists' services. Project findings suggest considerable marketing requirements. Advertising messages should emphasize health improvement in addition to a reduction in medication-related problems.
- The comprehensive MAP approach emphasized the pharmacists' skills and was needed by many patients; however, a disease-specific intervention may have been more effective and efficient for some patients. Future programs should consider offering a combination of these services.
- Patients often lacked basic information about medication use, their diagnoses, diet and exercise that could have obtained at the time of prescription dispensing or through standard information sources. Teaching patients to become wiser users of community pharmacy services and publicly

available medication and health information sources may be useful in decreasing adverse events and improving therapy effectiveness.

- While pharmacists were enthusiastic about the program, the program time requirements were daunting to some. Methods of increasing the efficiency of patient care programs are needed.
- Pharmacists appreciated the clinical support system and relied on it extensively. Future programs should consider establishing drug information and clinical decision-making support systems for community-based pharmacists.
- Evaluation efforts were hampered by the lack of certain data. Future endeavors should incorporate the use of claims data, specific clinical parameters, and the inclusion of a comparison group, if possible. Standardized data collection tools may facilitate the development and evaluation of community-based pharmacists' services.

Project Translation into Practice

The MAP project was undertaken to test a model of care that, if successful, could serve to foster the growth of community-based pharmacist services. The translation of project activities and findings into practice has resulted in:

- The creation of a PowerPoint presentation on community-based pharmacist services and a CD of patient education materials for pharmacist use
- New research to explore the impact of MAP on pharmacists' practice
- A publication and local, state and national presentations that describe the MAP program and its outcomes
- The development of various pharmacist services for employer groups and/or the general public

Conclusion

The MAP project was successful in implementing a community-based pharmacist service that was acceptable to patients, employers and pharmacists. The MAP program was effective in improving the appropriateness of drug therapy and medication use among a population that typically included older individuals who took a high number of medications and had significant morbidity. The findings suggest that these changes may be useful in containing health care expenditures. Program processes were consistently implemented as planned. The program provided valuable information regarding the offering of comprehensive medication assessments and their outcomes. The project is creating an array of useful products for offering such services and has informed the development of a number of new patient care programs.