Implementing the Northeast Texas Hypertension Adherence Program: A pilot project to improve hypertension medication adherence among high risk populations

One out of three Texans has hypertension, a leading risk factor for heart disease and stroke. As integral members of a team-based approach to care, phar-

macists can significantly improve patient outcomes related to chronic diseases. The **Texas Pharmacy Association (TPA), in part**nership with the Heart Disease and Stroke **Program at the Texas Department of State** Health Services, implemented the Northeast Texas Hypertension Adherence Program to improve medication adherence and outcomes in high risk patients with hypertension by connecting patients to community pharmacists.

Overview/Background

Hypertension or high blood pressure costs the nation **\$46 billion each year.**¹ This total includes the cost of healthcare services, medications to treat high blood pressure, and missed days of work. In 2015, hospital charges for hypertension in Texas totaled about \$1.5 million². Hypertension can be controlled through lifestyle changes such as eating healthier, exercising more, stopping smoking, and taking medications as prescribed. The



Figure 1. Reasons for Medication Non-adherence





Center for Disease Control and Prevention reports that about 7 in 10 adults in the U.S. take medications to control hypertension.³ An estimated 3.7 million (76.6%) Texas adults reported taking medication for hypertension.⁴ About half of the patients prescribed an antihypertensive drug stop taking it within one year.⁵ Reasons for non-adherence among patients include forgetting to take medication, cost, adverse side effects, and feeling like the medication is not working (Figure 1).⁶ Medication non-adherence can lead to health complications and disease progression, hospital readmissions, and increased healthcare costs.

The Northeast Texas Hypertension Adherence Program (NETHAP) was designed to improve medication adherence and outcomes in high risk patients with hypertension by connecting patients to community pharmacists. The project uses web-based technology that allows physicians and pharmacists to share data and communicate with each other, and provide resources to improve patient outcomes. Local health departments (LHDs) coordinate the referral process and pharmacists provide structured services to patients for blood pressure control and maintenance.



Methods

- Established a network of thirteen pharmacists across eight unrelated pharmacies. Participating pharmacists received education on hypertension, medication adherence, and motivational interviewing techniques.
- Healthcare providers in three North and Northeast Texas communities used protocols to identify high risk patients with uncontrolled hypertension and connected them to pharmacists using a bidirectional referral system. • Participating LHDs: Northeast Texas Public Health District (NET Health), Wichita Falls-Wichita County Public Health District,
- Jasper Newton County Public Health District.
- These LHDs coordinated the referral process that included identifying individuals with elevated blood pressure readings and referring them to a physician for evaluation, and completing the required paperwork after the physician refers a patient to a community pharmacist.
- Patients completed an enrollment form to participate and were assigned to a network pharmacist. The pharmacist contacted the patient within three days of being referred.
- Pharmacists scheduled an initial face-to-face appointment with patients to identify barriers to taking medications, develop an action plan, address patients' concerns, and provide blood pressure monitors and education on their use.
- Pharmacists followed-up with patients four times during an eight-week period to counsel on medication adherence and provide education on ways to lower blood pressure. The follow-up visits consisted of taking two blood pressure readings, reviewing home blood pressure readings, and counseling patients on medication adherence.
- Pharmacists contacted primary care providers as needed to adjust medications.
- Pharmacists monitored medication adherence and attrition rates and submitted claims for reimbursement.

Results

- Fifty-five patients were referred to pharmacists over a six-month period.
- Forty-four patients met eligibility criteria to receive services and 34 patients were considered active in the program. (Table 1)
- Fourteen patients completed three or more visits. • Nine patients completed all five visits and achieved blood pressured control, defined as less than 140/90 mm/HG. (Table 2) The average highest systolic for these nine patients was 137 and the average highest diastolic was 88. The average lowest systolic for the nine patients was 115 and the average lowest diastolic was 69.

Limitations and Challenges

Start-up phase: The start-up phase took longer than expected and involved recruiting sites, obtaining business use agreements, installing software to interact with electronic health records, training staff, and recruiting pharmacies and pharmacists to be part of the network.

Implementation phase: Once patients agreed to participate, pharmacists were unable to contact some patients and some patients were not interested in receiving counseling from pharmacists. A few patients were found to be ineligible for the program after being referred for services. Physicians were supportive but working with pharmacists through the team-based approach is not a routine process, resulting in few referrals to the program.

Next Steps

- Continue to work with providers, physicians, and LHDs from the three communities and increase the number of pharmacists in the network.
- Expand to other regions of the state; a similar project is in development for Corpus Christi and West Texas. Several pharmacies in these areas have expressed interest in the project.
- The fee structure to pharmacists has been modified to increase the performance payment for the program. The updated fee structure consists of three types of payment:
 - Fee for Service Payment for the initial visit and then for the number of completed follow-up visits.
 - **Program Performance Payment** Payment for patients completing all four visits.
 - **Outcomes Performance Payment** Payment for patients achieving blood pressure control (blood pressure below 140/90) at the end of the fourth visit.
- Explore and pilot outreach activities to increase patient enrollment. TPA is rolling out a training program where pharmacists are able to run a report and identify "patients at risk" for medication non-adherence issues. Patients will be identified through two paths: physician referrals and pharmacists.

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Table 1: Results									
	Wichita Falls, Texas	Tyler, Texas	Jas						
Total # Patients enrolled	30	3							
Total # Patients referred	44	5							
Earliest Referral Date	March 9, 2017	March 10, 2017	Jur						

Table 2: Blood Pressure Readings for Nine Patients											
Patient	Highest Systolic	Highest Diastolic	Lowest Systolic	Lowest Diastolic	Average Systolic	Average Diastolic	% Average improvement of Highest Systolic	% Average improvement of Highest Diastolic			
1	138	88	110	82	126	85	8%	3%			
2	132	92	110	57	118	79	11%	14%			
3	143	93	111	64	129	79	10%	15%			
4	144	89	120	77	132	81	8%	9%			
5	153	88	120	74	138	79	10%	10%			
6	115	78	103	70	108	72	6%	8%			
7	131	90	122	61	126	71	4%	21%			
8	126	78	112	67	119	70	5%	10%			
9	153	100	131	70	140	85	8%	15%			
	Avg highest Systolic	Avg highest diastolic	Avg lowest systolic	Avg lowest diastolic							
	137	88	115	69							
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Conclusions

This pilot project demonstrates that collaboration between pharmacists and primary care providers, through a team-based care approach, has the potential to improve blood pressure control. The positive results, albeit from a small cohort of patients, align with the research in demonstrating that pharmacists-delivered services improve patient outcomes. As the most accessible healthcare professionals in a community, pharmacists are trusted by patients and have the clinical training and the capacity to provide patient care throughout the continuum of chronic diseases, including prevention, chronic disease management, patient education, adherence counseling, and provider consultation.

References

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