



The Effectiveness and Feasibility of the Appointment-Based Model in a Large Retail Chain Pharmacy

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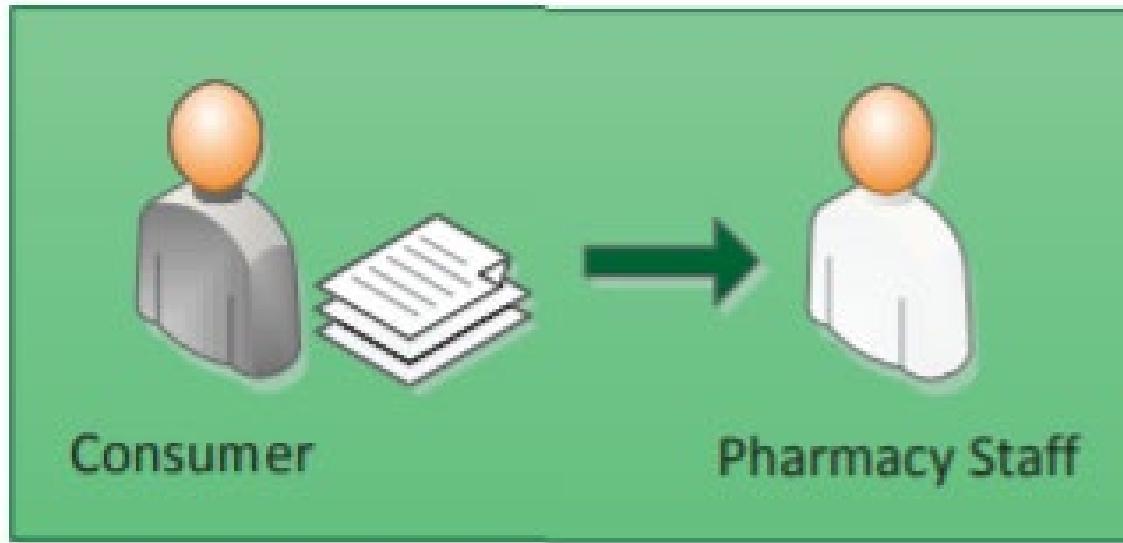
Background

- The Appointment-Based Model (ABM):
 - Patients are contacted on a monthly or a 3-month basis to synchronize chronic medications for same day refill
 - Benefits:
 - Makes it convenient for patients to pick up all medications at once
 - Allows for one-on-one time with a pharmacist to personally review each medication
- Previously showed to help increase adherence rates
 - Many studies performed using the ABM have been within smaller independent pharmacies rather than large chains



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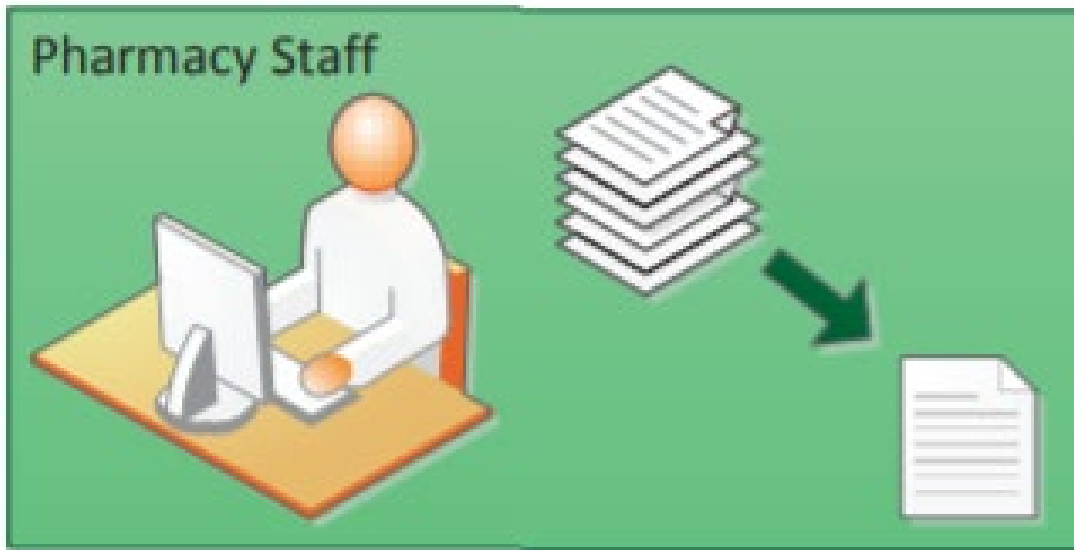
The Appointment- Based Model



Steps 1-3

1. The consumer brings new or refill prescriptions to the pharmacy.
2. The pharmacy staff explains the ABM and how it can decrease visits to the pharmacy.
3. The consumer decides to enroll in the ABM and talks with the pharmacy staff about establishing a synchronized appointment date to pick up prescriptions each month.

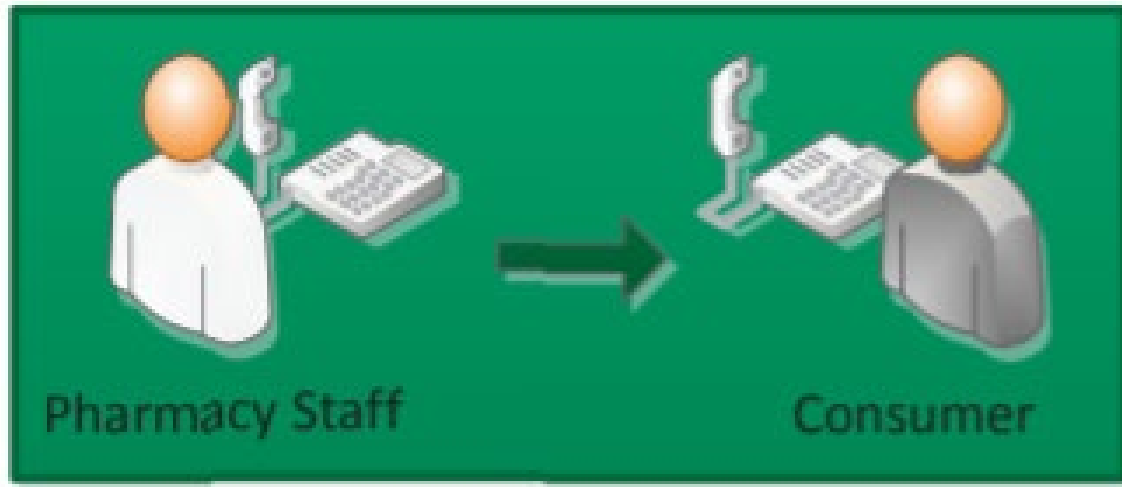
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Steps 4-5

4. The pharmacy staff reviews the consumer's profile to formulate a plan to synchronize all chronic medications so they can be picked up on the same date.
5. In order to synchronize prescriptions to the determined appointment dates, the pharmacy staff will perform "short fills" (less than a typical supply) or "long fills" (more than a typical supply) depending upon refill timing and the cost of the medication.

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Step 6

6. Each month a member of the pharmacy staff will call the consumer approximately a week before the appointment date to confirm that the prescriptions should be filled, to identify any changes in therapy, and to facilitate any care coordination that should take place before the more medications are dispensed.

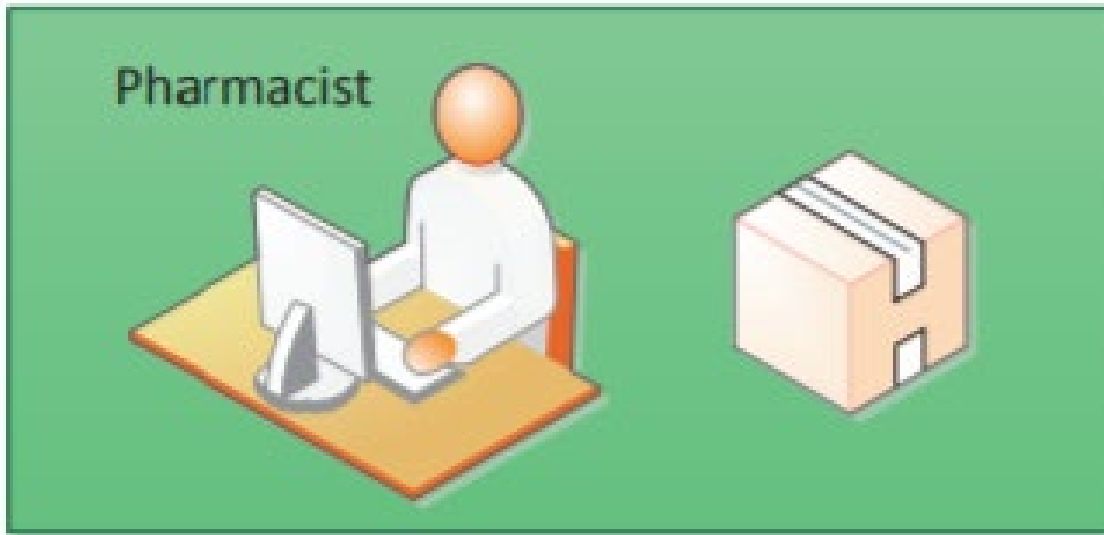
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Step 7

7. After reviewing potential changes to the patient's medication regimen, the pharmacy staff prepares each prescription and creates one package for easy pick up on the consumer's appointment date.

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Step 8

8. Each month the pharmacist reviews the comprehensive prescription order, evaluates the medication profile, and uses information gathered on the monthly call to identify potential compliance issues and topics to discuss with the consumer.

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Steps 9-10

9. On the selected appointment day, the consumer visits the pharmacy to pick up the prescriptions that have been prepared.
10. The pharmacist may engage in medication therapy management services, which can include performing a comprehensive medication review, counseling the consumer about the prescriptions, asking questions that arose during the medication profile and monthly call review, and identifying ways to optimize medication use.

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Medication Synchronization Enrollment

Technician calls patient to determine interest in enrollment

Technician enrolls patient who is interested in picking up all prescriptions at once

Computer automatically calculates the number of tablets needed in short fills and a sync date

Computer automatically refills prescriptions based on synchronization date without notifying the patient

Pharmacy staff continually monitors each patient for medication changes to re-synchronize

Purpose

- To determine if the ABM is effective and feasible in a large retail chain setting

Objectives

- **Primary Objective:** describe the impact of the ABM on patient adherence in select chronic disease states
 - Hyperlipidemia
 - Hypertension
 - Diabetes
- **Secondary Objective:** determine patient acceptance of appointments with a pharmacist
 - If accepting of appointments, to determine how long these appointments take

Methodology

Study Design

- Prospective
- **Location:** 24-Hour retail chain pharmacy, filling ~600 prescriptions/day
- Patients recruited from the pharmacy's medication synchronization program enrollment list

Inclusion & Exclusion Criteria

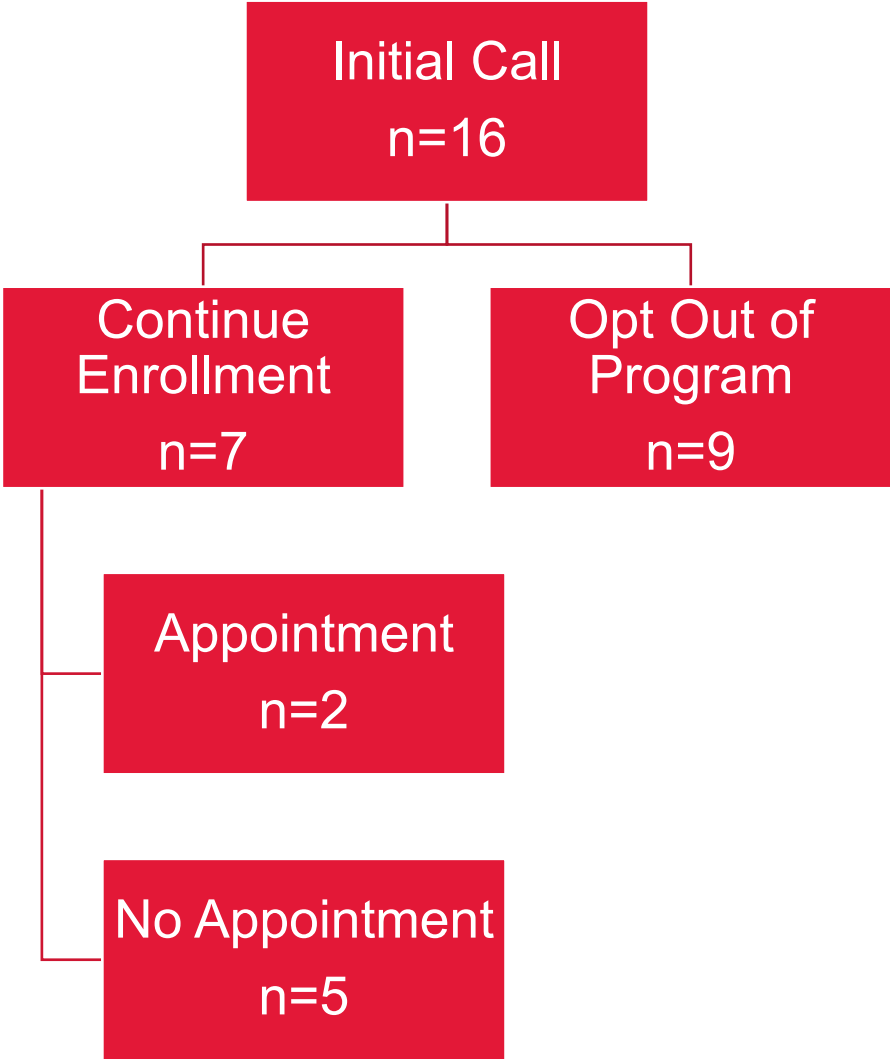
Inclusion

- Patients taking 4 or more chronic prescription medications
- At least 3 fills of one or more of the following medications: statin, angiotensin-converting enzyme inhibitors/angiotensin II receptor blockers (ACE-I/ARB), or oral diabetes mellitus (DM) type 2 medication

Exclusion

- Patients with a regular refill history of controlled substances
- Patients with a regular refill history of insulin or other injectable products
- Patients with a regular refill history of inhalers
- Delivery patients

Study Groups



Results

Endpoints

- **Primary Endpoints:**

- Change in PDC at first refill post-initial contact compared to baseline in all groups
- Percentage of appointments accepted

- **Secondary Endpoints:**

- Show rate of appointments
- Time spent on appointments

Patient Demographics

Baseline Characteristics	Appointment n=2	No Appointment n=5	Opt Out n=9
Female (%)	100	60	55.6
Average Age	64.5	67.6	68
Enrolled in 90-Day Supply (%)	100	60	66.7
Enrolled in Auto-Refill (%)	0	40	11.1
Had Medications Synced Prior to Initial Call (%)	0	20	11.1
Average Number of Medications	5.5	6.6	5.4
Average Number of Star-Rated Medications	3	2.4	2.3

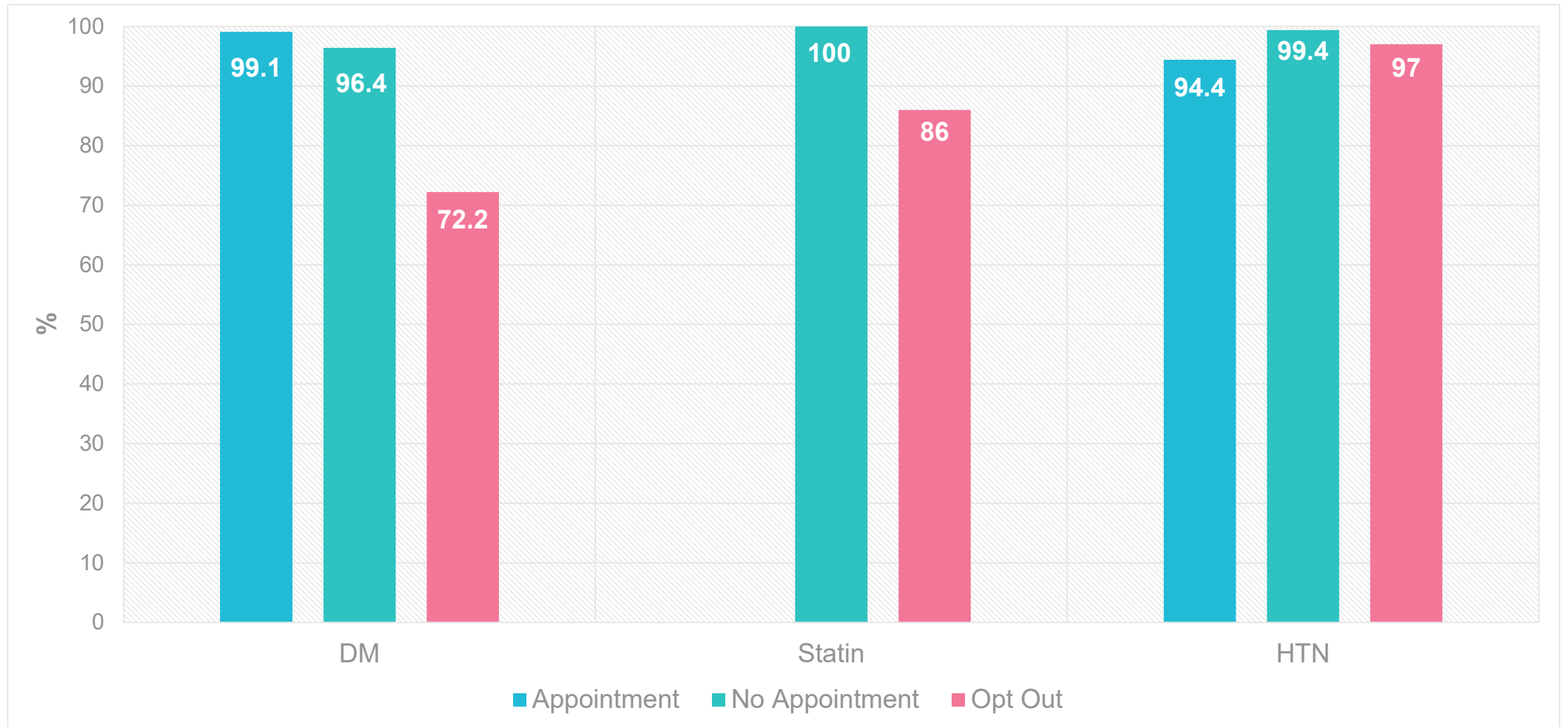
12.5% of patients accepted appointments

Primary Endpoints

Proportion of Days Covered

$$\text{PDC} = \left(\frac{\text{Number of days in period "covered"}}{\text{Number of days in period}} \right) \times 100\%$$

Average Baseline PDC



Change in PDC

	Appointment		No Appointment		Opt Out	
	Average Initial PDC (%)	Average PDC Post-First Fill (%)	Average Initial PDC (%)	Average PDC Post-First Fill (%)	Average Initial PDC (%)	Average PDC Post-First Fill (%)
DM	99.1	-0.4	96.4	-1.9	72.2	+1.4
Statin	-	-	100	0	86	+1.9
HTN	94.4	+2.9	99.4	+0.3	97	+0.3

Secondary Endpoints

- **Show Rate: 0%**
 - Time spent with a pharmacist was unable to be determined

Discussion

Strengths & Limitations

Strengths

- Large population of patients to set inclusion and exclusion criteria from
- Attempting to implement a new model in a different retail setting compared to previously done studies

Limitations

- Time constraints
- Stay-at-home orders
- Lack of a direct phone-line for call backs
- Lack of appointment attendance
- High amount of unreachable patients
- Too strict of exclusion criteria

Key Discussion Points

- Most common reasons for unenrollment:
 - Unable to be reached after 2 attempts (n=3)
 - Financial issues with picking up prescriptions at the same time (n=2)
- Most common reason for rejecting an appointment:
 - Prescriber reviews medications during appointments (n=3)
- Education about the purpose of medication synchronization is key, to staff as well as patients.

Conclusion

- Based on this study, the ABM does not seem to be manageable within a large retail chain.
 - The workload of managing medication synchronization patients requires full-time attention to manage a large amount of patients enrolled.
 - Additional management of appointments would be an additional challenge for pharmacists to manage on top of normal pharmacy workflow.
- Further research is needed to assist other retail chain pharmacies implement these types of programs into their workflow to improve patient care.

Due to these findings, a quality improvement project has been implemented at the host-pharmacy.

References

1. Pharmacy's Appointment Based Model (ABM). APhA Foundation website. <https://www.aphafoundation.org/appointment-based-model>. Accessed October 28, 2019.
2. Watson LL, Bluml BM. American Pharmacists Association Foundation Pharmacy's appointment based model: implementation guide for pharmacy practice. <https://www.aphafoundation.org/sites/default/files/ckeditor/files/ABMImplementationGuide-FINAL-20130923.pdf>. 2013. Accessed October 26, 2019.
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