

# An Electronic Tool to Aid Community Pharmacists in Optimizing Care for Persons with Diabetes



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## BACKGROUND

- According to the Centers for Disease Control and Prevention, over 30 million people in the United States have diabetes.
- Literature demonstrates that incorporating community-based pharmacists in the care of patients with diabetes results in positive health outcomes.
- Patients with diabetes visit their community pharmacy often, which gives community-based pharmacists the opportunity to optimize medication regimens.
- Incorporating an electronic tool in the dispensing workflow could guide community-based pharmacists in managing patients with diabetes according to treatment guidelines.

## OBJECTIVES

- **Primary:** To develop and integrate an electronic tool into dispensing workflow to aid community-based pharmacists in providing care to patients with diabetes.
- **Secondary:** To collect data on the utility of the tool, which is defined as the number of times the tool was utilized, the number and type of medication therapy problems (MTPs) identified, and the percentage of MTPs resolved.

## METHODS

### STUDY DESIGN

- This prospective study was conducted over 50 days at three Realo Discount Drugs locations in Jacksonville, NC.

### STUDY PROCEDURE

- Training and instruction steps were provided to all pharmacy team members who participated in this study.
- *Realo's Diabetes Optimization Tool* (RDOT) was developed based on the American Diabetes Association (ADA) 2018 Standards of Medical Care in Diabetes guidelines.
- The primary investigator worked with the pharmacy's software vendor to create an RX edit (short code) that alerted the pharmacist when verifying a diabetes medicine.
- The alert prompted the pharmacist to document MTPs identified and related interventions by using the RDOT.

## STATISTICAL ANALYSIS

- Descriptive statistics were used to evaluate data.

### Acknowledgment

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## PRELIMINARY RESULTS

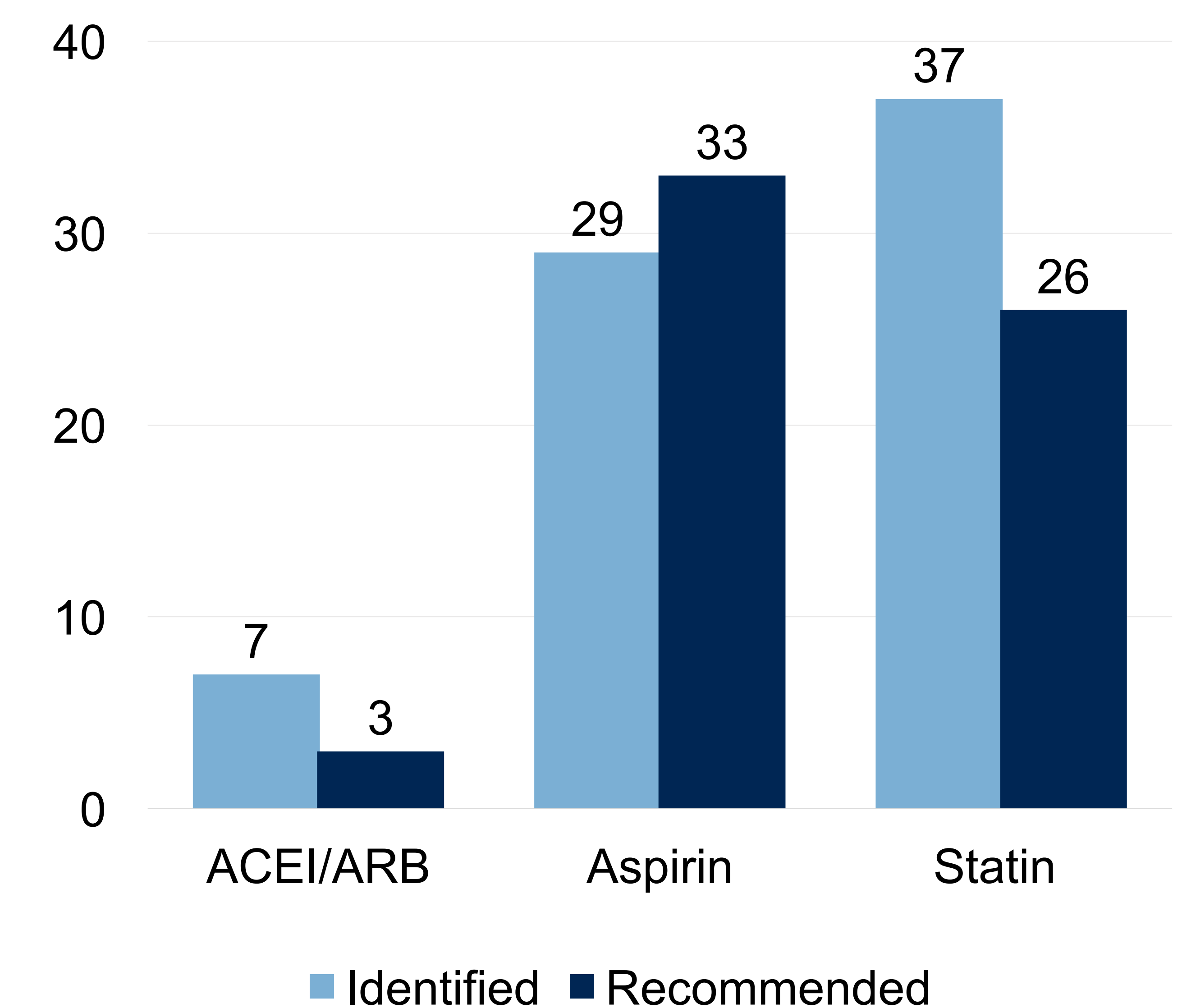
### PRIMARY OBJECTIVE

Realo's Diabetes Optimization Tool (RDOT)	
Question 1 <b>AGE</b>	Is this patient $\geq 40$ and $\leq 75$ years of age? <input type="checkbox"/> Yes → Proceed to question #2 <input type="checkbox"/> No → Proceed to question #3
Question 2 <b>STATIN</b>	Is this patient taking a moderate or high intensity statin? <input type="checkbox"/> Yes → Proceed to question #3 <input type="checkbox"/> No → Recommend a once daily dosing of a moderate or high intensity statin to patient's provider
Question 3 <b>ASPIRIN</b>	Is this patient $\geq 50$ years of age, has at least one additional major risk factor for cardiovascular morbidity or mortality (family history of premature atherosclerotic cardiovascular disease, hypertension, dyslipidemia, smoking, or albuminuria), and is not at an increased risk of bleeding? <input type="checkbox"/> Yes → Evaluate if the patient is currently receiving low-dose aspirin therapy. If no, recommend Aspirin 81-162 mg/day; Proceed to question #4 <input type="checkbox"/> No → Proceed to question #4
Question 4 <b>HTN</b>	Does this patient have hypertension? <input type="checkbox"/> Yes → Proceed to question #5 <input type="checkbox"/> No → End of tool
Question 5 <b>ACEI/ARB</b>	Is the patient on an angiotensin-converting enzyme inhibitor (ACEI) or angiotensin II receptor blocker (ARB)? <input type="checkbox"/> Yes → End of tool <input type="checkbox"/> No → Contact provider to evaluate if the patient's urinary albumin levels been assessed <ul style="list-style-type: none"><li>▪ If urinary albumin-to-creatinine ratio is <math>\geq 30</math> mcg/g recommend an ACEI or ARB</li><li>▪ If albumin levels are not available, recommend provider evaluates patient's kidney function</li></ul>

### SECONDARY OBJECTIVE

- Between the three study locations, pharmacists **utilized the tool 788 times**.
- At **Pharmacy Location A**:
  - The tool was utilized 164 times
  - 4.2% (n=7) were not on an ACEI/ARB
  - 18.0% (n=29) were not on aspirin therapy
  - 22.6% (n=37) were not on statin therapy
- Results from Pharmacy Location B and Pharmacy Location C have not been analyzed.
- The total percentage of MTPs resolved has not yet been analyzed.

### MTPs Identified vs. Recommended



## DISCUSSION

- Pharmacists reported that they found the tool useful but were not able to utilize the tool when the store was busy.
- At times, the pharmacists utilized the tool after the diabetes medication was dispensed and utilized student pharmacists to help with MTP follow-up.

## PRELIMINARY CONCLUSIONS

Based upon results to date:

- **An electronic tool was successfully utilized** by community-based pharmacists during and after the verification workflow station at one of three independent community pharmacies.
- The implementation of an electronic tool **helped community-based pharmacists identify gaps in therapy and enforce recommendations** in alignment with the 2018 ADA guidelines.