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## COMMUNITY PHARMACY FOUNDATION

### COMPLETED GRANT SYNOPSIS

## Community Pharmacy Based Rapid Strep Testing with Prescriptive Authority

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**Objectives**

- 1) Illustrate the value of, and need for, a pharmacist directed patient care program designed to diagnose and treat group A streptococcal pharyngitis
- 2) Stimulate colleagues to pursue similar collaborative practice agreements (prescriptive authority protocols) within their practice settings
- 3) Document the value (from a patient’s and payer’s perspective) and market this clinical service within the community

**Methods**

Design	<p>Rapid antigen detection tests (RADT) are an alternative to throat cultures for diagnosing group A streptococcal (GAS) pharyngitis. Pharmacists at Jones Pharmacy obtained prescriptive authority via a collaborative practice management agreement to diagnose and prescribe antimicrobial therapy when a rapid strep test was positive. The following information was obtained from patients requesting this clinical service:</p> <ol style="list-style-type: none"> <li>1) Age, gender, race, height, weight, prescription and non-prescription medication history</li> <li>2) Patient presentation, symptoms, and physical assessment by a pharmacist was recorded (Acute Pharyngitis Evaluation Form), and matched against Centor Criteria</li> <li>3) Patients for whom a Centor Criteria score merited use of a rapid antigen detection test were made aware of its availability and cost</li> <li>4) Data from the Acute Pharyngitis Evaluation Form and results of rapid antigen detection tests were coded and analyzed at the conclusion of the pilot study</li> <li>5) Study population consisted of those patients for whom all information was completed</li> <li>6) Data were analyzed using SPSS version 14.0</li> </ol> <p>At the conclusion of the study, a template describing the service and the process to implement this service across practice settings was developed.</p>
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| Study endpoints | <ul style="list-style-type: none"> <li>• Percent of patients for whom Centor Criteria indicated use of a rapid antigen detection test was appropriate; percent of rapid antigen detection tests that were positive</li> <li>• Cost of pharmacist directed rapid antigen detection test service (to the patient; payer) versus cost of physician visit; and time delay in resolution of disease</li> <li>• Provide step-by-step guide to implement a rapid antigen detection test service in a variety of practice settings</li> </ul> |
|-----------------|---|

**Results**

This community pharmacy based rapid antigen detection testing (RADT) project was a collaboration between two Washington state community pharmacies, Jones Pharmacy in Spokane, and Rextra Care Pharmacies in Seattle. Data from Jones Pharmacy was coded and analyzed. A template for implementation of a community pharmacy RADT program was developed by the pharmacists at Jones Pharmacy. The template was used to

successfully transport and implement this pharmacist directed patient care service to two Rxtra Care Pharmacies. Viewridge Rxtra Care Pharmacy offers the rapid strep to the community at large as well as the pharmacy's clientele. A different approach will be taken with the Rxtra Care Pharmacy at the Mount, which is a pharmacy located inside a long term care and assisted care facility. Rapid strep testing will be offered to the employees of The Mount as a "loyalty" program.

- Study End Point #1:
  - Out of the 85 tests performed, 30.6% (n=26) were positive and 69.4% (n=59) were negative.
  - Most of the positive tests were among children. 73.1% of the positive tests were children (n= 19), while 26.9% of the positive tests were adults (n=7).
  - 85.9% (n=61) of patients received supportive care although 30.6% (n=26) tested positive.
  - 28.3% (n=23) of patients received antimicrobial therapy.
- Study End Point #2:
  - Pharmacist directed rapid antigen detection testing services cost the patient \$45.00 per encounter.
  - When compared to a \$100 charge for a physician visit, a patient could expect to save \$55.00 per encounter. This savings would not be realized, however, if a physician's visit had a less expensive copay associated with it. The next step involves working with payer(s) to allow this service to be billed as an office visit as follows:
    - CPT Code 99201 (New Patient: Evaluation and Management of a self-limited or minor problem), 10 minutes:
      - Problem focused history
      - Problem focused exam
      - Straightforward decision
  - Patients sought out the pharmacist directed rapid antigen detection testing service anywhere from 12 hours to 240 hours after the appearance of symptoms. Because this service is offered "on demand" we can surmise there would have been an additional time delay of at least one day to secure an appointment with a physician if urgent care was not accessed.

The rapid strep testing protocol can be accessed from the template associated with this abstract.

### **Conclusion**

This study illustrates that a community pharmacist can conduct RADT, identifying whether or not group A Streptococcus is present, and whether or not antimicrobial chemotherapy is to be prescribed. The literature documents the effectiveness of the rapid test for GAS pharyngitis in medical clinics or hospitals, and across age groups. However, we are aware of no other data as to the value of a rapid antigen detection testing service offered in a community pharmacy. Future research will focus on the hypothesized reduction in direct (out-of-pocket; payer) and indirect (patient; society) costs associated with use of a rapid antigen detection test service in a community pharmacy.

Benefits to patients as documented in this study:

- patients were relieved of acute symptoms via antimicrobial therapy, and duration of illness was shortened
- early treatment has been shown to decrease the rate of transmission

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- early treatment has been shown to prevent secondary complications such as acute rheumatic fever, peritonsillar abscess, otitis media, sinusitis, glomerular nephritis, and mastoiditis
- antimicrobial resistance is minimized by protocol driven prescribing of chemotherapy

Detailed project results are available from the primary author ([lmaclea@wsu.edu](mailto:lmaclea@wsu.edu)).

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