

A photograph of a stone building with a doorway, symbolizing a new era. The building is constructed from reddish-brown stones and has a simple, rectangular doorway. The doorway is slightly recessed into the wall, and there are a few steps leading up to it. The overall appearance is that of an ancient or traditional structure.

# Doorway to a New Era Pharmacists as Public Health Partners

**Diana Fortune RN BSN  
TB Program Manager  
New Mexico  
Department of Health**

**February 25, 2016**

# November 2010

- ▶ **NM Pharmacist Association**
  - Considering prescriptive authority for pharmacists to place TSTs
  - Researching with regulatory agencies
    - Medical Board
    - Nursing Board
    - Department of Health
      - TB Program
- ▶ **NM Pharmacists large range of prescriptive authority**
  - Lack of accessible health care in many areas of the state

# Background on New Mexico

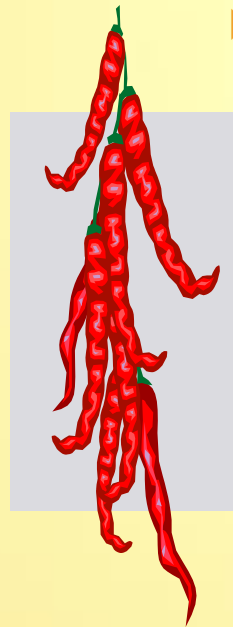


# Land of Enchantment: Fun Facts

▶ Do NOT need passport

▶ State Question?

- Red or Green



▶ 5<sup>th</sup> largest state – land mass

- 121,000 sq miles

▶ 6<sup>th</sup> LEAST populated

- 2 million

▶ 1912 – bilingual gov't

- No official language



# Barriers to accessible TSTs

- ▶ Decrease Public Health \$\$
- ▶ **Lack of Nursing Staff**
- ▶ Remote areas of state

# Newspaper Coverage.....

## NEW MEXICO: Wider Access to TB Test Expected: Pharmacists May Administer Exam

*Albuquerque Journal (02.07.11) - Tuesday, February 08, 2011*

**Olivier Uyttebrouck**

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This spring, New Mexicans will be able to go to participating pharmacies for a TB skin test for \$35 or less, according to state pharmacy officials.

In January, the New Mexico Board of Pharmacy approved a rule change allowing pharmacists to administer the test upon completing CDC-approved training. Some pharmacists who have already received the training could begin offering the test as early as this month, although it should be more widely available by May, said New Mexico Pharmacists Association Executive Director Dale Tinker.

According to Tinker, interest in the test is particularly strong among **small, independent pharmacists in rural areas with limited access to medical providers**. Some professionals, including most health care workers, are required to get TB tests as a condition of employment, Tinker noted.

The Mantoux tuberculin skin test is administered by injecting a small amount of a protein derivative under the skin in the forearm. The patient must return within 72 hours to have any reaction to the test measured.

110208

AD110214

# NM Board of Pharmacy

## ▶ Prescriptive Authority

- March 7, 2011 – protocol was added for Pharmacist to administer TSTs (regulation 16.19.26.12)

### 16.19.26.12 TB TESTING:

#### A. PROTOCOL:

- (1) Prescriptive authority for Tuberculosis (TB) testing shall be exercised solely in accordance with the written protocol for TB testing drug therapy approved by the board.
- (2) Any pharmacist exercising prescriptive authority for TB testing must maintain a current copy of the written protocol for TB testing approved by the board.

#### B. EDUCATION AND TRAINING:

- (1) The pharmacist must successfully complete training as specified by the New Mexico department of health tuberculosis department.
- (2) Continuing education: Any pharmacist exercising prescriptive authority for TB testing shall complete continuing education as specified by the centers for disease control.

#### C. AUTHORIZED DRUGS:

- (1) TB skin antigen serum(s).
- (2) Prescriptive authority for TB testing shall be limited to those drugs delineated in the written protocol approved by the board.

#### D. RECORDS:

- (1) The prescribing pharmacist must generate a written or electronic prescription for any TB test administered.
- (2) Informed consent must be documented in accordance with the approved protocol for TB testing and a record of such consent maintained in the pharmacy for a period of at least three years.

E. **NOTIFICATION:** Upon signed consent of the patient, the pharmacist shall notify the patient's designated physician or primary care provider and the department of health of any positive TB test.

[16.19.26.12 NMAC - N, 03-07-11; A, 09-06-15]

- ▶ Pharmacists must complete training by NM DOH TB Program

# Official Collaboration began.....

- ▶ Had a meeting.....June 2, 2011
  - NM TBP
  - NM Pharmacist Association
  - NM Board of Pharmacy
  
- ▶ TBP leading role in education of pharmacists TST training
  - NM TBP did Press Release on August 31, 2011
  - Webinar – Heartland National TB Center;
    - Understanding the TST: A Primer for Non-TB Staff
      - Sept 8, 2011
      - July 27, 2015
    - Must view prior to doing the hands on training





# New Mexico Pharmacists Association

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## Tuberculin Skin Testing in New Mexico Pharmacies

When Monday, July 27,  
2015

9:30 AM - 1:30 PM

Location Walgreen's District  
Office, 7770  
Jefferson NE Suite  
400, Albuquerque,  
NM

### Registration

- Member Pharmacist –  
\$100.00 (USD)
- Non-member pharmacist –  
\$150.00 (USD)
- Student of UNM College of  
Pharmacy – Free  
This program is fee to  
currently enrolled students.

### *Tuberculin Skin Testing in New Mexico Pharmacies*

*Registration is now full! If you wish to be added to a wait list please let  
us know!*

**Monday, July 27, 2015**

9:30am – 1:30pm

**NOTE:** *There is a one hour home study pre-requisite for this program! The program link is  
below!*

*See the information for "Understanding the Tuberculin Skin Test: A Primer for Non-TB Staff"*

Here is the link to download the home study webinar!

[http://www.heartlandntbc.org/assets/training/archive/unthtuskte\\_20110909\\_0915.wmv](http://www.heartlandntbc.org/assets/training/archive/unthtuskte_20110909_0915.wmv)

Homestudy Evaluation form download!

[Continuing Education Evaluation Form - 72715TBfortunehome-study.doc](#)

**SPACING IS LIMITED, SO CONFIRM YOUR SEAT TODAY!**

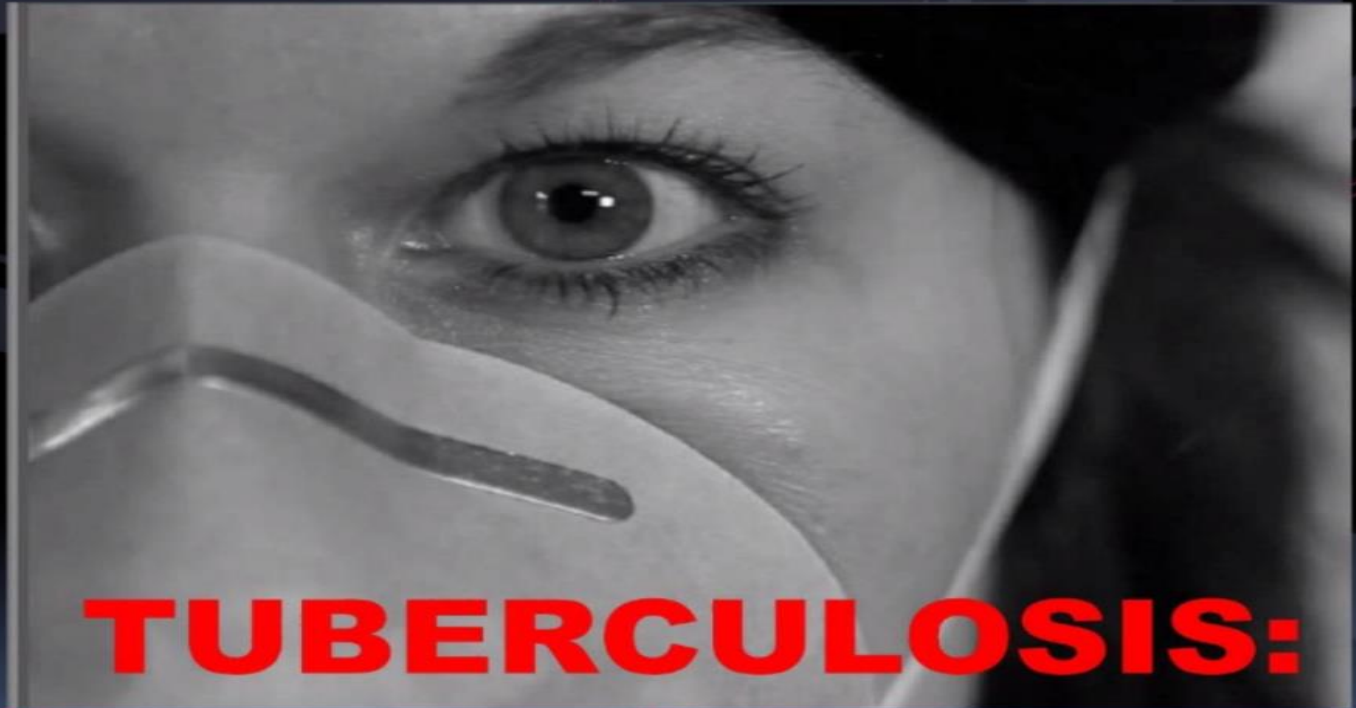
**Diana Fortune, RN, BSN; TB Nurse Consultant**  
New Mexico Department of Health, TB Program

**Deborah Isaacks, RN**  
New Mexico Department of Health - TB Nurse Consultant

Understanding the Tuberculin Skin Test: A Primer for Non-TB Staff

Heartland National TB Center Webinar (recorded)

July 7, 2015



# **TUBERCULOSIS: EXPOSED**

Diana Fortune RN BSN  
TB Program Manager  
New Mexico Department of  
Health

Webinar Archived at New Mexico Pharmacists Association Website

<http://www.nmpharmacy.org/>

# Division of Services.....

## Pharmacists Testing

- ▶ Low Risk Population (TSTs)
  - Pharmacists to test
    - School
    - Work
    - Change of immigration status

- ▶ High Risk Populations
  - Tested @ Public Health
    - TB Suspects
    - Contacts
    - Immune compromised
      - HIV
      - TNF-alpha blockers
      - Other immune compromised

## Public Health Testing

# In addition.....

## ▶ TST Health History

- Utilize NM DOH standardized form
- Accurate reading of TST
  - CDC cut-points

## ▶ Referral of +TST

- CXR prior referral health dept
- May refer to PCP

## ▶ Refer high risk clients: public health

- (Do not test at Pharmacy)
- Contacts to cases
- Transplant recipients
- Persons going on TNF-Alpha blockers

NEW MEXICO BOARD OF PHARMACY  
TUBERCULIN SKIN TESTING HEALTH HISTORY AND CONSENT FORM  
(FAX THIS FORM TO THE NMDOH TB PROGRAM, 505-827-0163)

Patient Name (Last, First, MI): \_\_\_\_\_ Birth Date: \_\_\_\_\_  
Address: \_\_\_\_\_ Race: \_\_\_\_\_ Sex: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_ Telephone: \_\_\_\_\_  
Physician/Primary Care Provider (PCP): \_\_\_\_\_ Telephone: \_\_\_\_\_  
Reason for TB Skin Testing:  Employment  School  Immigration  Other \_\_\_\_\_

A pharmacist has discussed the nature and purpose of the TB skin test with me as well as the risks, benefits and alternatives. I have had an opportunity to ask questions. I understand that I am to return to have the TB skin test read in 48-72 hours by the pharmacist. I further understand that a positive TB skin test requires my further medical evaluation, and my physician or primary care provider as well as the New Mexico Department of Health TB Program will be notified of any positive TB skin test results.  I consent to the TB skin test  I DO NOT consent to the TB skin test

Client/Guardian Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Allergies: \_\_\_\_\_  
Current Medications: \_\_\_\_\_

History of live virus immunization(s) in previous 4-6 wks?  Yes  No If yes, immunization(s) and date(s): \_\_\_\_\_

TB Symptom Review:  None  
 Persistent cough (> 2-3 wks)  Fever  Chills  Hemoptysis  
 Night sweats  Poor appetite  Weight Loss (≥10%)  Fatigue  
**(IMPORTANT: persons with symptoms of TB disease (persistent cough plus one or more other symptoms of TB) require a complete medical evaluation and refer to their physician/PCP or the nearest local public health office. FAX THIS FORM TO THE NMDOH TB PROGRAM, 505-827-0163)**

Pediatric Patients (< 6 years of age):  
 Failure to thrive  Decreased activity, playfulness and/or energy  
 Lymph node swelling  Wheezing  Personality changes

Previous Testing/Treatment/Other: \_\_\_\_\_ Date(s) and result(s) of previous documented TST/IGRA: \_\_\_\_\_  
History of treatment of:  LTBI or  TB disease?  Yes  No If yes, medication(s) and dates of treatment: \_\_\_\_\_  
History of BCG vaccination?  Yes  No If yes, date(s): \_\_\_\_\_ Pregnant or suspected pregnancy?  Yes  No If yes, LMP: \_\_\_\_\_

**HIGH-RISK** for the following persons who are at highest risk of developing tuberculosis disease if they are infected, tuberculin skin tests are considered positive at 5mm of induration or larger:  
 HIV-infected or strongly suspected  Fibrotic changes on x-ray consistent with prior TB  Organ transplant recipients  Recent contact with TB case\*  
(Name of index case: \_\_\_\_\_)  Persons who are immunosuppressed for other reasons (e.g., taking the equivalent of ≥15 mg/day of prednisone for 1 month or more, taking tumor necrosis factor- $\alpha$  antagonists)

(\*IMPORTANT: all recent contacts to a TB case should be referred to the nearest local public health office. Persons who are severely immunosuppressed require further medical evaluation even if the TB skin test is negative and should be referred to their physician/PCP or the nearest local public health office. FAX THIS FORM TO THE NMDOH TB PROGRAM, 505-827-0163)

**MODERATE-RISK** for the following persons with other medical conditions which increase the risk of progression to TB disease or population risks for recent infection, tuberculin skin tests are considered positive at 10mm of induration or larger:

<input type="checkbox"/> Diabetes mellitus	<input type="checkbox"/> Silicosis	<input type="checkbox"/> Gastrectomy or jejunoileal bypass
<input type="checkbox"/> Age less than 5 years	<input type="checkbox"/> Weight 10% less than ideal body weight	<input type="checkbox"/> Chronic renal failure or on hemodialysis
<input type="checkbox"/> Leukemia/Lymphoma	<input type="checkbox"/> Cancer of head/neck/lung	<input type="checkbox"/> Skin test conversion: increase of 10mm or more within 2 years (recently infected)

**Other Medical Conditions**  
 Injection drug user  Infant, child, or adolescent exposed to an adult in a high-risk category  Homeless Shelter

**Population Risks**  
 Resident or employee of high-risk congregate setting:  Correctional  Health Care

Mycobacteriology lab worker  Other, explain: \_\_\_\_\_  
 Recent arrivals\*\* (within 5 years) from countries where TB is common. Country: \_\_\_\_\_ Year of US arrival: \_\_\_\_\_

\*\* (Include permanent change of residence, military service, or non-tourist travel for > one month)

**LOW-RISK** for persons at low risk for TB, for whom tuberculin testing is not generally indicated, TST's are considered positive at 15mm of induration or larger.

# CEU provided by NM Pharmacist Association

## Pharmacists Continuing Education Evaluation Form Fill out for ACPE Approved Statements of Credit

New Mexico Pharmacists Association

2716 San Pedro NE, Suite C, Albuquerque, New Mexico 87110, (505) 265-8729 / (800) 464-8729

### *“Tuberculin Skin Testing in New Mexico Pharmacies”*

ACPE #0104-9999-11-039-L01-P (Pharmacists) 4.0 Contact Hours or 0.4 CEUs Initial Release Date: 9/25/11  
August 19, 2012 Walgreen's District Office, 7770 Jefferson NE Suite 400, Albuquerque, NM

Diana Fortune RN & TS Deborah Isaacks, RN

New Mexico Department of Health - TB Nurse Consultant, Santa Fe, NM

Did presenter appropriately cover the application-based program objectives below: Please rate using the following scale:

1-Poor 2-Fair 3-Good 4-Excellent

- Analyze the cause, transmission and pathogenesis of tuberculosis, specifically latent tuberculosis infection and its progression to tuberculosis disease
- Discuss significant recent trends in the epidemiology of tuberculosis and identify populations in the United States and New Mexico at high-risk of latent tuberculosis infection and progression to tuberculosis disease

1 2 3 4

1 2 3 4

234  
Pharmacists  
Trained



TST Training  
Practicum



# Formal Evaluation Project

## Evaluation of a pharmacist-performed tuberculosis testing initiative in New Mexico

Bernadette Jakeman, Brittni Gross, Diana Fortune, Sarrah Babb, Dale Tinker, and Amy Bachyrycz

### Abstract

**Objective:** To report experiences of the New Mexico pharmacist tuberculosis (TB) testing program.

**Setting:** Community pharmacies in New Mexico interested in participating in the TB testing initiative from March 2011 to August 2013.

**Practice innovation:** To expand accessibility of TB testing, New Mexico pharmacists were granted the authority to prescribe, administer, and read tuberculin skin tests (TSTs) in March 2011. To receive this special prescriptive authority, pharmacists had to complete a New Mexico Department of Health training program in accordance with the Centers for Disease Control and Prevention guidelines.

**Evaluation:** Data were collected on the number of TSTs performed and the TST reading follow-up rate. Patient data collected were demographic information, reason for obtaining a TST (e.g., immigration, school, or work), TB risk factors, and TST results.

**Results:** In New Mexico, 43 pharmacists were certified for TB testing during the evaluation period, 25 of whom were actively prescribing and performing TB testing at eight community pharmacies. There were 606 tests administered to 578 patients; 70.9% women, median age 31 years (4–93 years). Employment and school were the main reasons for obtaining a TB test. A total of 578 of 623 (92.8%) patients followed up to have their TSTs read. A total of 18 positive tests (3.1% positivity rate) were identified and appropriate referrals were made.

**Conclusion:** New Mexico expanded the scope of practice for pharmacists. Pharmacist-performed TB testing had a valuable public health benefit. TB testing follow-up rates at community pharmacies in New Mexico were high, most likely due to convenient hours, accessible locations, and no required appointments.

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**Correspondence:** Bernadette Jakeman, PharmD, PhC, AAHVP, BCPS, College of Pharmacy, University of New Mexico, 1 University of New Mexico, MSC 09 5360, Albuquerque, NM 87131; bjakeman@salud.umn.edu

**Previous presentation:** American College of Clinical Pharmacy Annual Meeting, October 14, 2013, Albuquerque, NM

**Disclosure:** The authors declare no relevant conflicts of interest or financial relationships.

Received June 20, 2014. Accepted for publication October 10, 2014.

# Evaluation Project Objectives

## ▶ Objectives

- Provide a qualitative assessment of the TSTs performed by pharmacists in NM & identify potential benefits of providing TST at community pharmacies
- Evaluate outcomes of TB testing performed in a community pharmacy setting
- Describe the standardized training for pharmacists to accurately place, read and interpret the TST.



B. GROSS<sup>1</sup>, A. BACHYRYCZ<sup>1</sup>, D. FORTUNE<sup>2</sup>, D. TINKER<sup>3</sup>, S. BABB<sup>1</sup>, B. JOHNSON JAKEMAN<sup>1</sup>

<sup>1</sup>Univ. of New Mexico Hlth. Sci. Ctr., Albuquerque, NM, <sup>2</sup>New Mexico Dept. of Health, Santa Fe, NM., <sup>3</sup>New Mexico Pharmacists Assoc., Albuquerque, NM.

## Background

- Tuberculosis (TB) rates in the U.S. are decreasing, but TB is still one of the leading causes of death in the world<sup>1</sup>
- Early identification of latent TB infection is essential in eliminating TB disease
- The number of new cases in Hispanics, Asians and Blacks remains higher than that of non-Hispanic whites<sup>2</sup>
- The average incidence of TB in the US is 3.40 per 100,000. The average incidence in TB in New Mexico (NM) 2012 is lower than the national average at 1.92 per 100,000, but regions within NM range up to 3.76 per 100,000<sup>2</sup>
- NM is a highly rural state, which limits access to healthcare providers
- NM pharmacists were granted the authority to prescribe and administer the tests as of March 2011 under regulation 16.19.26.12<sup>4</sup>

## Objectives

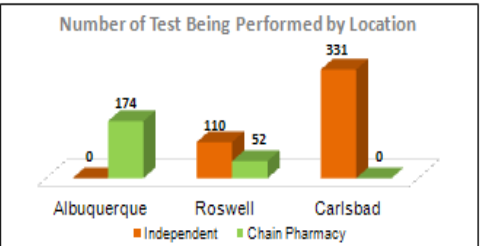
- Objective 1:**  
To describe TB skin testing performed by pharmacists in NM in order to identify benefits of providing TB testing at community pharmacies.
- Objective 2:**  
To evaluate the outcomes of the new pharmacist TB testing initiative being performed in a community pharmacy setting.

## Methods

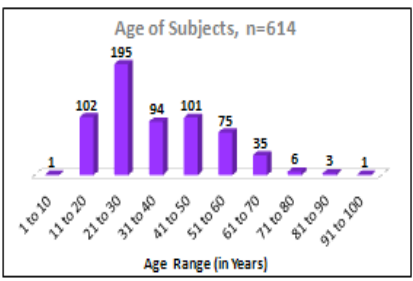
- This is a retrospective chart review of Department of Health (DOH) data forms collected from community pharmacies in NM from March 2011 to September 2013.
- Data was collected from the consent form of any patient of all ages who received a TB skin test in a community pharmacy by their own accord.
- Pharmacy data collected included: number of pharmacists receiving DOH TB training, number of pharmacists prescribing and performing tests, number of TB tests performed, reading return rate, and number of positive and negative tests.
- Patient data collected included: demographics, reasons for receiving a test, TB risk factors.

## Results - Testing Sites

- In NM, 43 pharmacists are certified for TB testing, 25 of which are actively prescribing and administering TB tests at eight NM community pharmacies.
- Data collected from these pharmacies are from Albuquerque (urban), Roswell (rural), and Carlsbad (rural) at 6 chain pharmacies and 2 independent pharmacies.



## Results – Patients Data

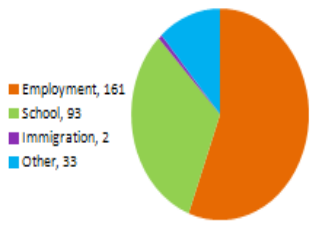


### TB History

	U/A*	No	Yes
Past TB Skin Test	297	185	144
Past Treatment of LTBI	367	258	1
Past Treatment of TB	359	265	2
Past BCG Vaccination	376	245	5
Current TB-Like Symptoms	55	543	28

\*U/A= Unavailable

### Reason for Obtaining Skin Test, n=289



- Subjects were evaluated for:
  - High Risk:** HIV, fibrotic changes on an X-ray, organ transplant recipient, recent contact with an active TB case, immunosuppressed for another reason
  - Moderate Risk:** immunocompromising medical condition, minor exposed to a high risk adult, injection drug user, employee of a high risk setting (correctional, health care facility, homeless shelter), mycobacteriology lab worker, greater than 1 months spent in a high risk location, other
  - Low Risk:** All other subjects

### Moderate Risk, n=182

- Med. Conditions, 32
- Minor Exposed, 3
- IDU, 1
- Work: correctional, 4
- Work: health, 126
- Mycobacteriology, 1
- Other, 6
- High Risk Setting, 9



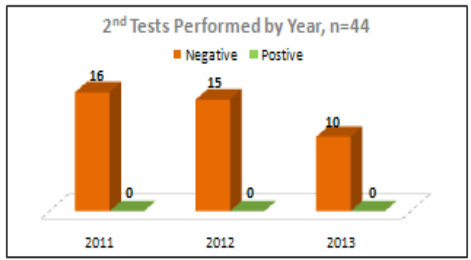
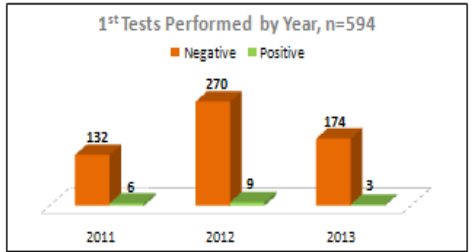
### High Risk, n=11

- Transplant, 1
- Recent Contact, 2
- Immunosuppressed, 8



## Test Results

- There were a total of 668 TB skin tests prescribed and administered by NM community pharmacists to 626 patients.
- Of the 624 subjects who had a single TB test placed, 44 had a second test placed.



- Of the 668 tests administered, 91.2% had an appropriate follow up time, 3.7% had an inappropriate follow up time, and 4.9% of subjects did not return for a skin test reading.

## Conclusions

- Pharmacist-performed TB testing can have a valuable public health benefit.
- NM has expanded the scope of practice for Pharmacists to include prescribing and administering TB skin tests.
- 3% of all pharmacist-performed tests in NM were positive, even in a population with mainly low to moderate risk
- TB testing follow-up rates at community pharmacies in NM were high, most likely due to convenient hours, accessible locations, and no required appointments.
- We hope to see pharmacist TB testing programs expanded within the U.S.

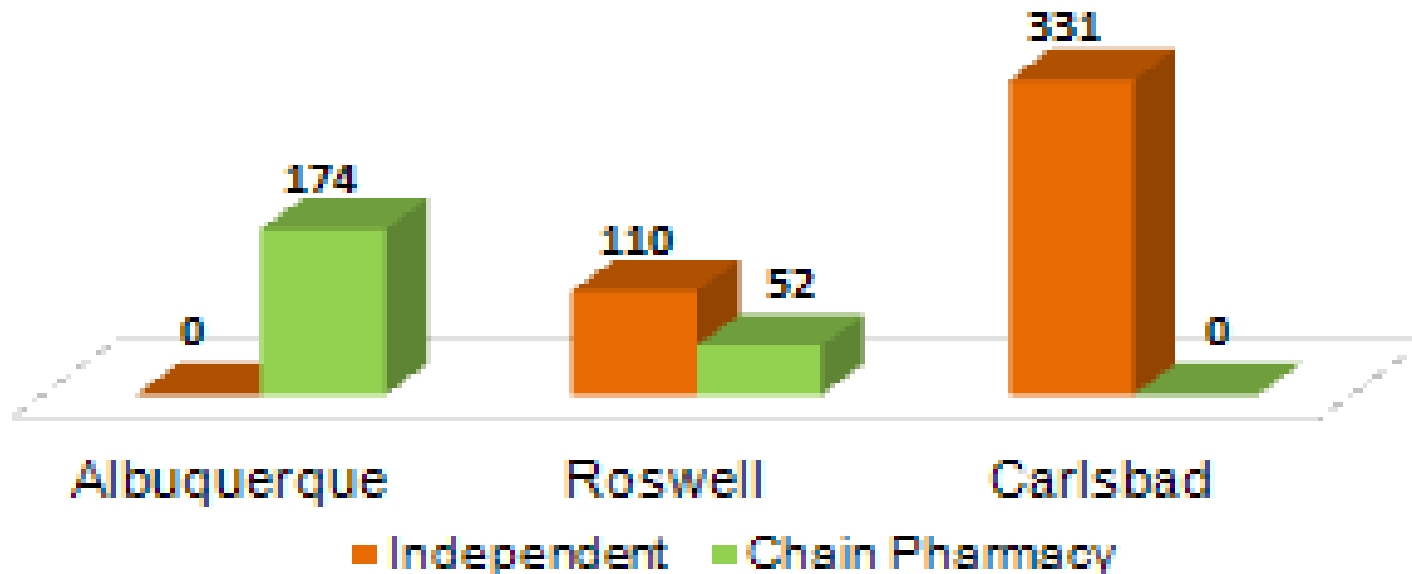
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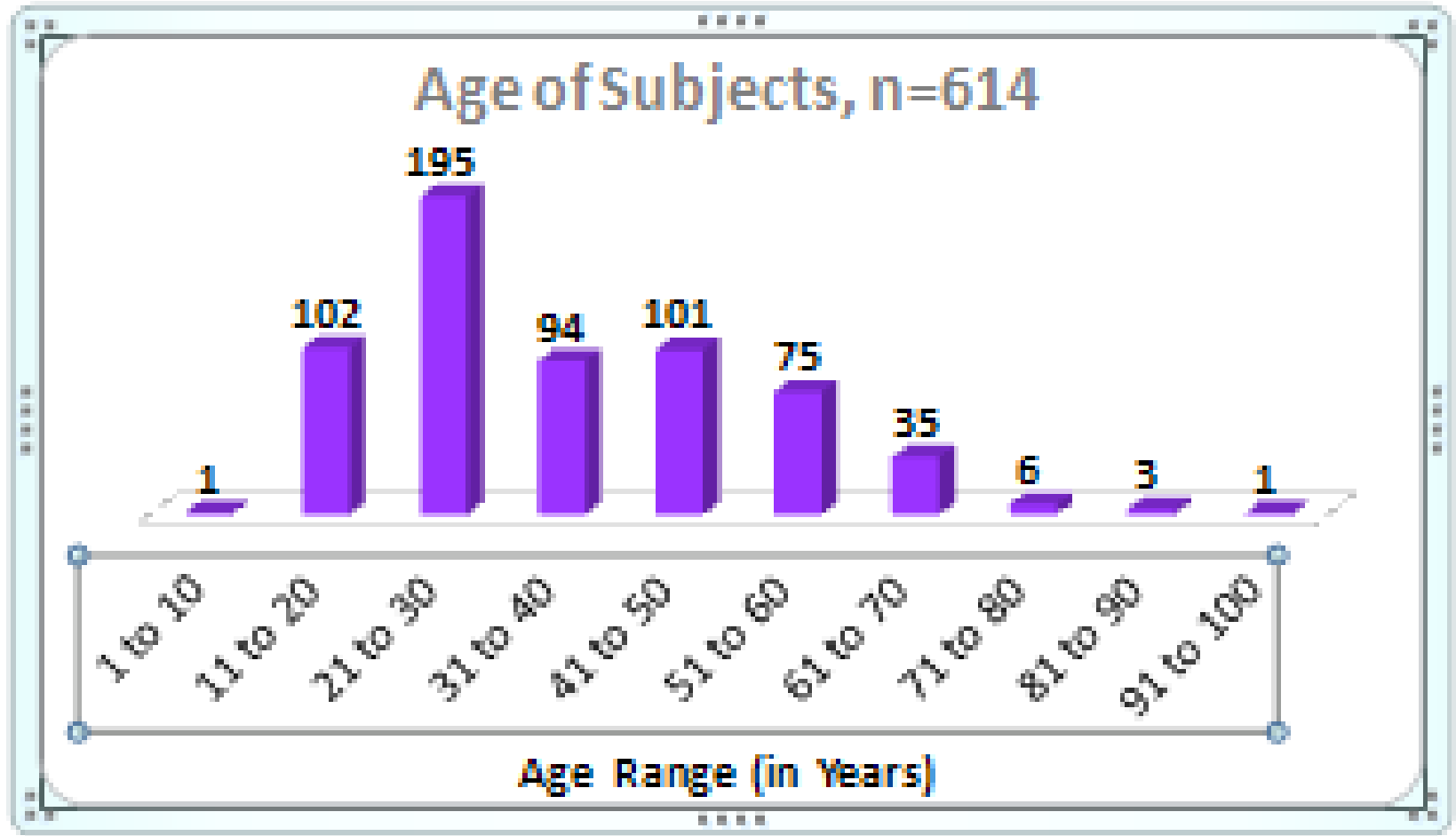
# Pharmacist TST Training Practicum

- ▶ 43 pharmacist completed TST training practicum
  - 25 are actively prescribing (as of August 2013)
- ▶ Participating Pharmacist by location

Number of Test Being Performed by Location



# Age of subjects tested



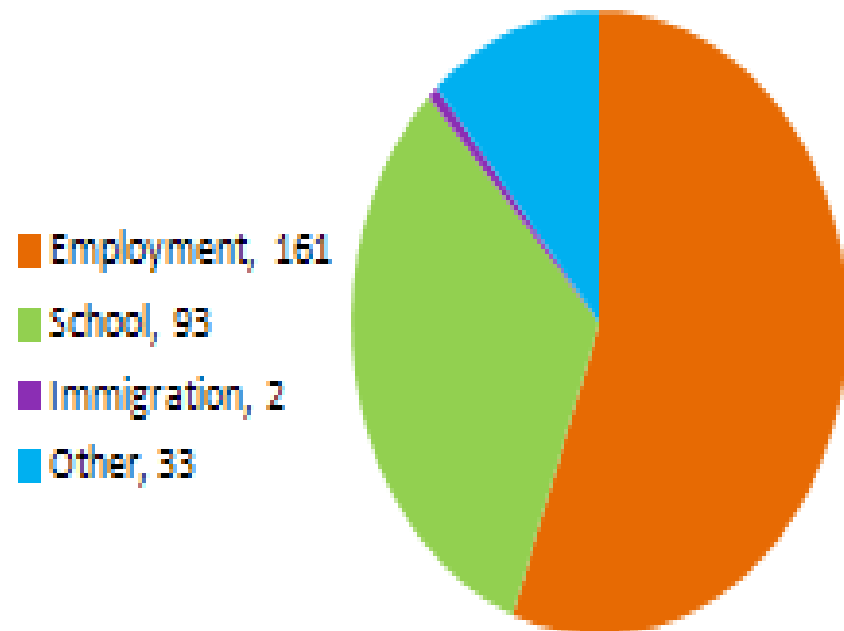
# Client History & Reason for obtaining TST

## TB History

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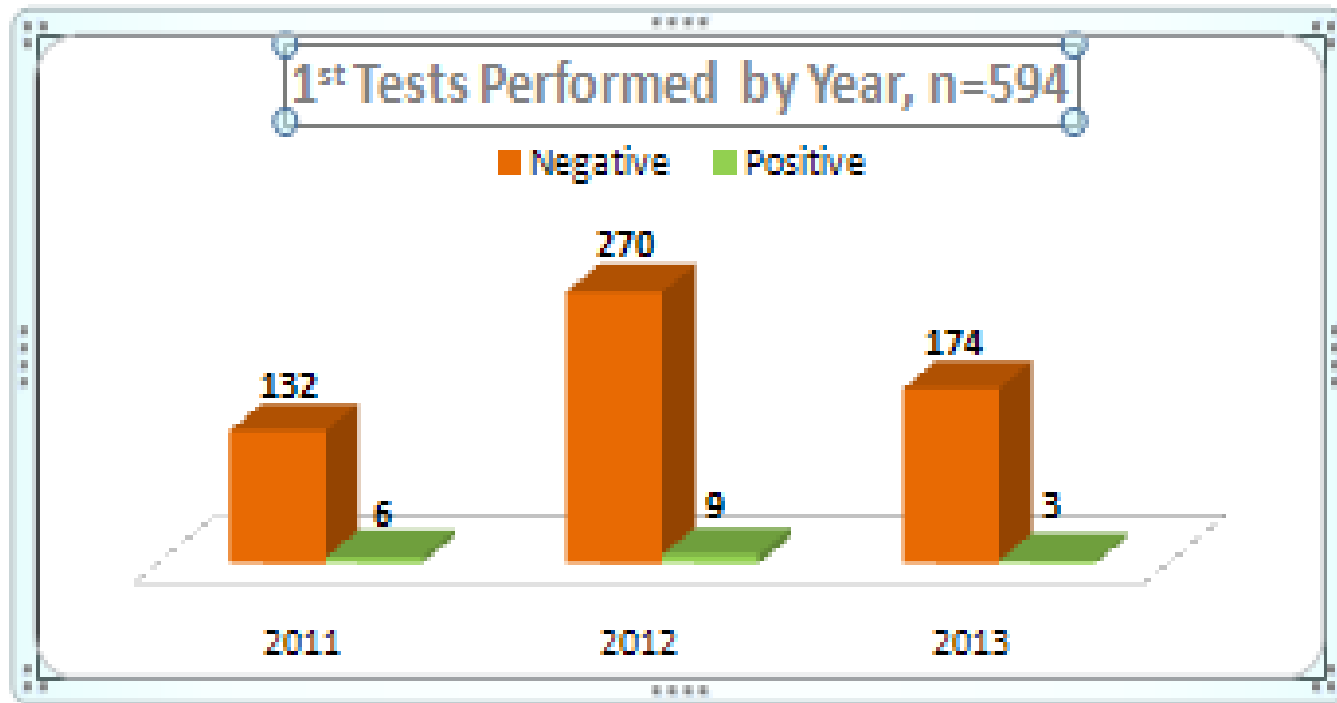
\*U/A= Unavailable

## Reason for Obtaining Skin Test, n=289



# TSTs performed

- There were a total of 668 TB skin tests prescribed and administered by NM community pharmacists to 626 patients.
- Of the 624 subjects who had a single TB test placed, 44 had a second test placed.



Positivity rate of 3.1%

# In conclusion:

- Pharmacist performed testing resulted in increased access to TSTs
- TB testing follow-up rates at community pharmacies were high – most likely due to convenient hours, accessible location and no required appointment.
- Pharmacists refer when clients present with signs or symptoms of TB disease
- In the era of declining public health dollars
  - all avenues of collaboration to ensure sustained TB prevention efforts should be explored
- Perhaps expanded pharmacist TB testing program will be seen throughout the United States.

# Future NM TB Program & Pharmacy Collaborations



- ▶ Utilizing Pharmacist to provide DOT for persons with TB Infection 3 Pilot sites around NM
  - Areas where there are nursing shortages
  - Plan to have initial visit with DOH nurse
    - then refer to pharmacy for DOT
    - Plan to utilize 3HP
  - University of New Mexico Pharmacist is applying for grant
  
- ▶ Excited to hear next speaker that has already done this in California!