

Leveraging the Attention

**HOW TEXAS TOOK ADVANTAGE OF HEIGHTENED NATIONAL
AWARENESS TO EXPEDITE ONGOING SPECIMEN TRANSIT
QUALITY IMPROVEMENT EFFORTS**



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PROGRAM SPECIALIST

Texas DSHS Newborn Screening Laboratory

2014

Texas Newborn Screening Performance Measures Project



- Initiated Sept. 2007
- Develop evidence-based performance measures to improve patient care for newborns identified with disorders through the newborn screening program

Pre-analytical Measure	Goal
Specimens Unsuitable for Testing	100% Satisfactory Specimens
Timing on Initial NBS Specimen Collection	100% Collected between 24 and 48 hours
Specimen Transit Time from Collection to State Laboratory	100% Received within 72 hrs from collection
Specimen Missing Key Demographic Information	100% Submission of all key demographic information

Specimen Collection Rules and Instructions

- Texas Administrative Code (Rules)
 - Drawn between 24 and 48 hours or immediately prior to discharge
 - Blood specimens must be mailed to the department within 24 hours after collection.
- Instructions
 - Must ship dried specimen WITHIN 24 HOURS.
 - DO NOT hold specimens for bulk mailing. Send within 24 hours of collection.

Rev. 01-2012 **EXPIRES** PerkinElmer 226 **LOT** 100535 / 312104
11/30/2014

TEXAS NEWBORN SCREENING INSTRUCTIONS

A first specimen is required for all newborns at 24-48 hours of age, or just prior to discharge. A second specimen is also required at 7-14 days of age.

Invalid results may occur with:

- Infants having received a transfusion.
- Specimens accompanied by improper or incomplete paper work.
- Sticks on ITM.

DO NOT use expired form.
DO NOT use chlorhexidine gluconate, such as Chiorhex Oral Swabs.
DO NOT use any other disinfectant on the specimen.
DO NOT use devices that contain EDTA or citrate anticoagulant.
DO NOT use capillary tubes.
DO NOT use any other collection device.
DO NOT use any other collection device.
DO NOT hold specimens for bulk mailing. Send within 24 hours of collection.

Parental Decision For Storage / Use of NBS Blood Spot Cards (Page 2):

1. Parent or submitter may fill out Section 1. A patient label with the requested information is acceptable.
2. Parent reviews, completes, and signs form.
3. Parent provides information on the back of the card spot cards if parent requests.
4. It is the parent's option to take the form home and return to DSHS by mail at a later date.

Demographic Form (Page 3):

1. Legibly print ALL information. USE BLACK INK AND BLOCK CAPITAL LETTERS. Press hard for good copies.
2. For "or" screens, if available, fill in the serial number for the baby's 1st screen in the "Serial Number" field.
3. Fill in the number to indicate baby's Sex, "Feed", "Ethnicity", "Status" and "Baby's Age at Time of Collection/Visit".
4. If the specimen is a repeat for a previous abnormal, fill in the Texas DSHS "Repeat" field.
5. Under "Submitter Information", fill in the address where the results are to be sent. Labels for this may be ordered from Texas DSHS, Laboratory Service Section. The box on demographic information sheet that indicates "Check to verify parent information & decoder form distributed."
6. Remove and keep the yellow submitter copy of the demographic information.

Collection Procedure: Cord blood is not acceptable

1. Place baby's limb in dependent position.
2. Cleanse skin with alcohol, DEX and puncture with disposable lancet.
3. Apply one drop of blood.
4. Allow blood to dry.
5. Apply second drop of blood to the other side to ensure **COMPLET E SOLIDIFICATION OF THE ENTIRE CIRCLE**. (see below).
6. **COMPLETION OF THIS STEP MAY INDICATE AN INCOMPLETE TEST.**
7. Cover dried specimen with attached flap.
8. Mail into dried specimen of submitter's address in provided envelope to Laboratory Services Section
P.O. Box 148341
Austin, TX 78714 - 8341

Collect sample from attached area

Acceptable: Circle filled and completely saturated

Unacceptable: Caked, clogged, or layered

Insufficient, multiple applications

Serum rings present

To order more Newborn Screening Collection Kits, contact
Texas Department of State Health Services
Laboratory Services Section
1-888-965-7111 ext. 7661
Fax: 1-512-776-7672

INSURANCE / SELF-PAY

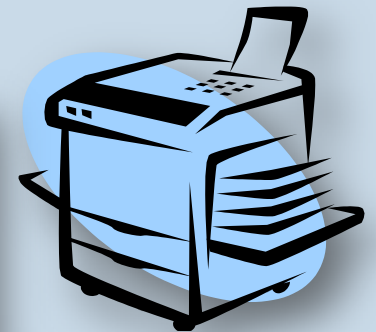
PerkinElmer Health Sciences, Inc.
177 PAINT CREEK, GERMANTOWN, SC 29351 USA

BIOHAZARD

Quality Improvement Assistance for Healthcare Providers



- Newborn Screening email distribution list (>7000 recipients)
- Fax notifications
- Educational Inserts
 - Kit Orders
 - Result Reports
- Submitter telephone consultation
- Onsite Presentations



Quality Improvement Education



- Report Cards
- Online Resources
 - Specimen Shipping Instructions
 - Specimen Collection Video
 - Unsatisfactory Specimen Guides
- Yearly Reminders Prior to and During Holidays
- Quarterly Quality Improvement Hints

TIPS TO AVOID THIS TYPE OF REJECTION:

- Allow the card to dry thoroughly in a horizontal position for a minimum of 3-4 hours after the specimen has been collected.
- Ship dried specimens directly from the collection facility to the Newborn Screening Laboratory.
- Ship dried specimens *within 24 hours, preferably via overnight courier*. If mail or courier services are unavailable, ship as quickly as possible.
- Do **not** batch or hold specimens for bulk mailing.
- Ensure proper postage.
- Note that mail holidays (Christmas, Thanksgiving, etc.) will further delay delivery.
- Consider the use of courier services, especially during the holidays.
- Ensure that all specimens are sent with a correct Date of Collection.
- Identify internal processes which may delay shipment and look for possible improvements.

- Remember to Use Correct Mailing Address when Sending Specimens:

If using Overnight/Priority Shipping (UPS, DHL, FedEx, etc) please use this address:

Texas Department of State Health Services
 Laboratory Services Section, MC 1947
 1100 W. 49th Street
 Austin, TX 78756-3199

If sending by regular mail, please use this address:

Texas Department of State Health Services
 Laboratory Services Section, MC 1947
 PO Box 149341
 Austin, TX 78714-9341

Specimen Transit Time from Collection to State Laboratory

	Count	Percent	State Average	Goal
Goal: Received within 72 hrs from collection	495	90.49%	68.02%	100%
Received by state laboratory <24 hrs from collection	203	37.11%	12.33%	
Received by state laboratory <48 hrs from collection	406	74.22%	46.10%	
Received on day 14 or more - rejected for testing	0	0.00%	0.11%	0%

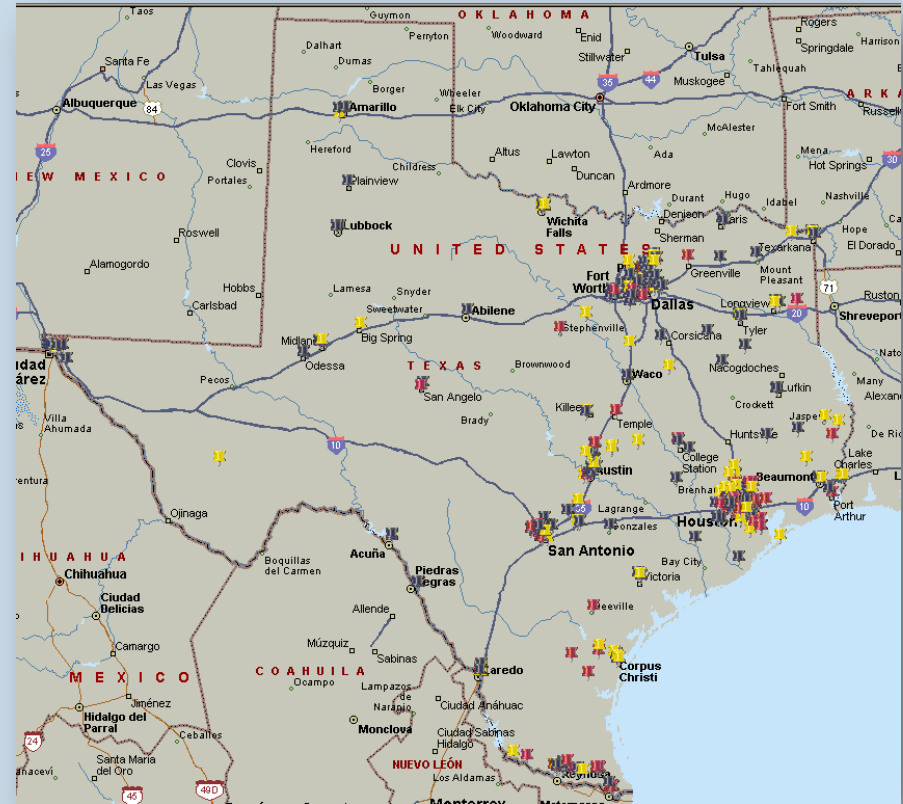
Courier



- Pilot project started April 2010
 - Did not cover all facilities
 - Did not include pickups on weekends or major holidays
 - Set up as a single tier service that included special handling for all shipments
- Expanded 2012
- Cost ~\$2.5 million

NBS Submitter Accounts: **432**

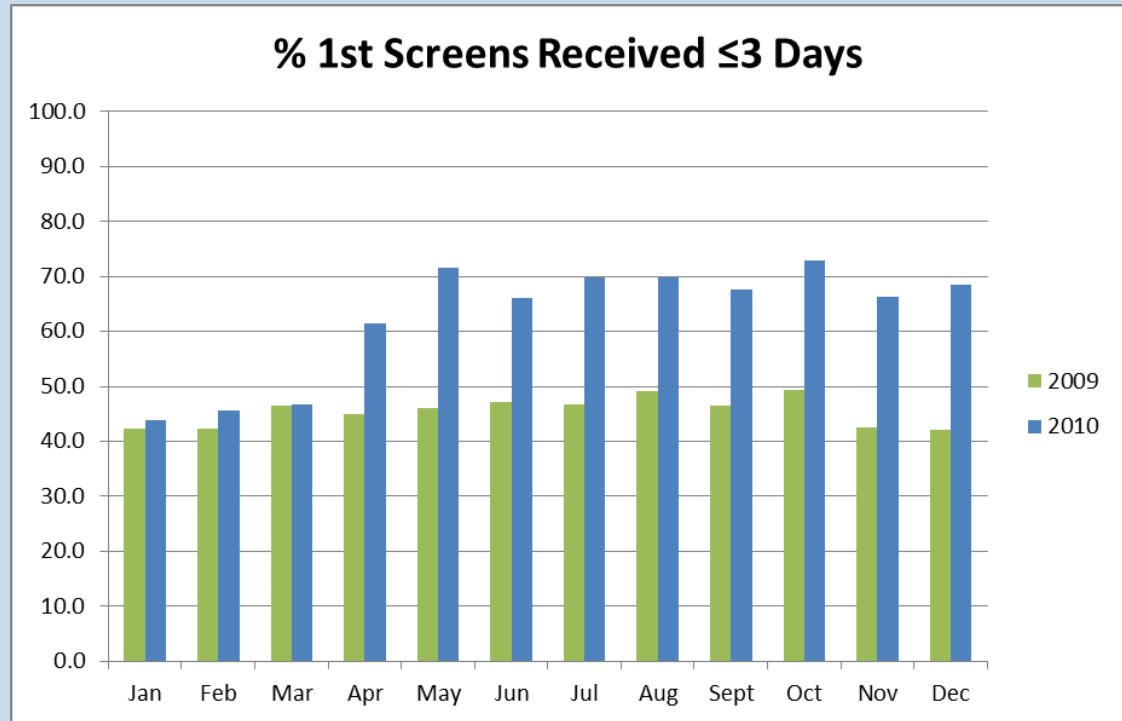
Covers **67%** of NBS specimens



Courier Effect on Delayed Specimens



- 1st screen Specimens Received ≤ 3 Days after Collection
 - Before ~46%
 - After ~70%
- 2013 - Lean Six Sigma Project to Improve Courier Efficiency



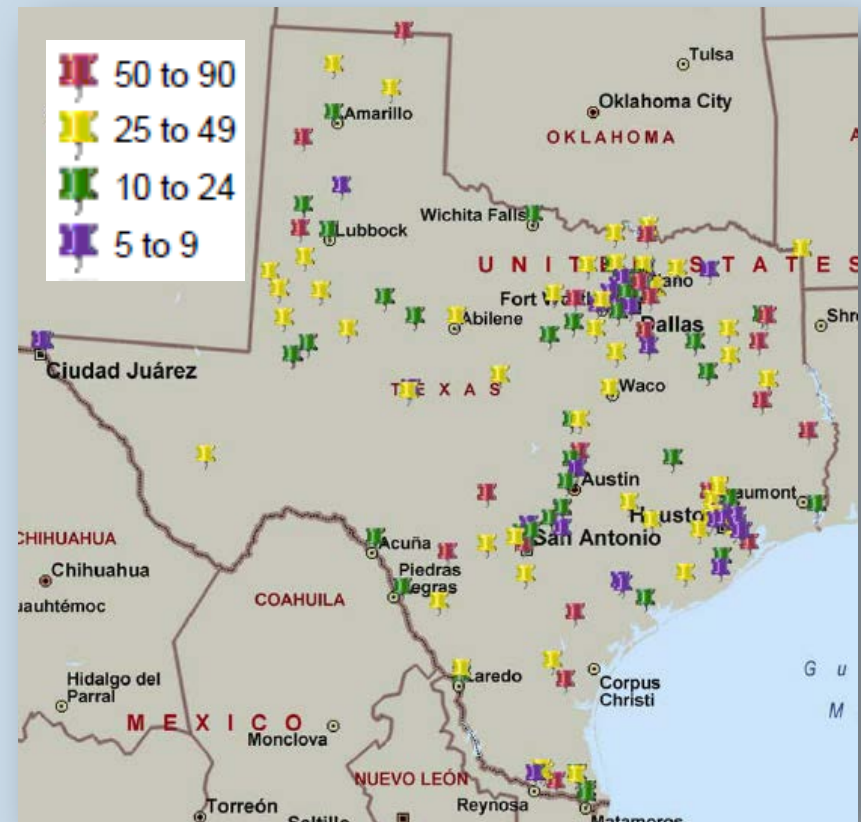
Transit Time Workgroup - Issue Re-Assessment



2013

- 392,358 1st screens
- ~400 birthing facilities and healthcare providers
 - ~270 Hospitals
 - ~130 Birthing centers, clinics, and midwives
- ~30 % of all 1st screens received > 3 days after collection
- Of 280 largest birthing facilities
 - 261 >10% 1st screens delivered > 3 days
 - 99 >50% 1st screens delivered > 3 days
- 25 facilities responsible for 37% of delayed specimens

% of Specimens Received > 3 Days after Collection



Transit Time Workgroup - Strategy for Improvement



- Expand Issue Awareness
- Identify Submitter Barriers and Issues
- Review and Revise Submitter Education
- Implement New and Ongoing Outreach Initiatives
- Pursue System Improvements
- Target 25 Sites with most specimens delayed
- Enhance Monitoring
- Expand Scope to Include Other Key Quality Measures



Expand Issue Awareness / Gather Information



- Series of listserv notices
- Stakeholder Consultation
 - Agency Management
 - Advisory Committee
 - Healthcare Professional Organizations
- Submitter Phone Consultation
 - 25 Sites with most specimens delayed
 - >50 smaller facilities with high percentage of delayed specimens
 - Best performing sites
- Onsite Consultations by NBS Medical Director
- Joint letter to Hospital CEOs from DSHS Commissioner and Texas Hospital Association
- Submitter Survey



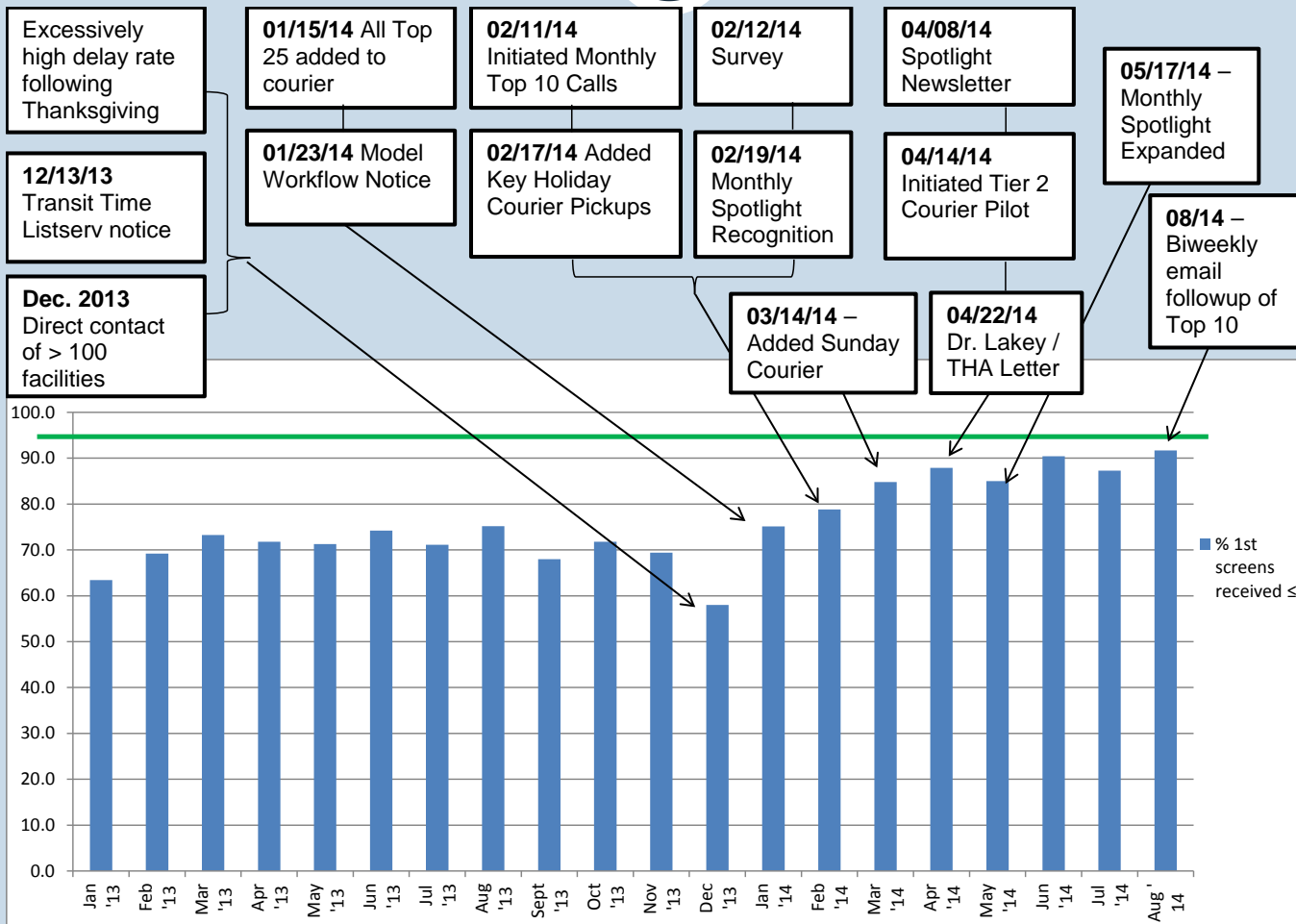
Submitter Barriers to Meeting the Timeframe



- Cost of using an overnight courier for shipment of specimens.
- Limitations of DSHS Courier
- Use of hub hospitals as intermediary shipment points before sending to the Laboratory.
- Batching of samples taken over multiple days before shipment due to cost concerns.
- Flawed systems and communications among departments within hospitals (i.e. nursery, lab, and shipping).
- Misinterpretation or miscommunication about the timeline for specimen collection, drying, and shipment.



Workgroup Initiatives



Outreach Initiatives – Spotlight Recognitions

- High Volume Site Recognition

- Large facility with best overall adherence to performance measures
- Top performing large sites for transit time

- Lower Volume Provider Recognition

- List of all providers that meet performance measures 100%

SPOTlight RECOGNITION
Recognizing healthcare facilities and providers with outstanding newborn screening performance

BEST OVERALL St. David's Georgetown Hospital

- Percentage of 1st newborn screens received within 72 hours of collection **100%**
- Percentage of 1st newborn screens collected between 24 & 48 hours or immediately prior to discharge **100%**
- Percentage of satisfactory specimens **100%**

ADDITIONAL LARGE FACILITIES WITH PERFECT TRANSIT TIMES
(time between collection & receipt in the laboratory)

UTMB Galveston
 Medical City Dallas Hospital Dallas
 Texas Health Harris Methodist Hospital Hurst—Eules—Bedford
 Memorial Hermann Katy Hospital Katy
 Oakbend Medical Center Richmond
 Baylor Medical Center at Carrollton Carrollton
 Wadley Regional Medical Center Tenarkana
 St. Luke's the Woodlands Hospital The Woodlands
 St. David's Medical Center Austin
 Texas Health Harris Methodist Hospital Fort Worth
 Christus Santa Rosa Hospital San Antonio
 Driscoll Children's Hospital Corpus Christi
 University Hospital San Antonio

SPOTlight RECOGNITION
Healthcare providers with perfect newborn screening specimen quality performance as measured by the metrics below

Percentage of newborn screens received within 72 hours of collection **100%**

Percentage of satisfactory specimens **100%**

AL ALAMI, BACHAR, MD
 ALDAPE, ADOLFO, MD
 ALEJANDRO-CAMERO, ELVA, MD
 ALL CHILDRENS PEDI CLINIC
 ALLEN PEDIATRICS
 ALVARADO, NIVEA I., D.O.
 ANDERSON, LAURA, M.D.
 ANGELS SINGING OVER ME
 ANZALDUA, MARIO R., M.D.
 ARCHER, KERSTIN A, MD
 ARTURO A. HERNANDEZ, MD
 AUSTIN PEDIATRIC CLINIC
 B PEDIATRICS
 BARNETT, JACQUETTA
 BAYLOR MED CTR AT CARROLLTON
 BAYSHORE PEDIATRICS
 BEE CAVES PEDIATRICS, P.A
 BEE WELL PEDIATRICS
 BEJARANO, ALDO, MD
 BELLAIRE GESSNER MED CLIN
 BENAVIDES, MICHAEL, M.D.
 BENNETT, JENNIFER
 BHUCHAR, SUBODH K., M.D.
 BIOS FAMILY CLINIC
 BIRTH SERVICES INC
 BISHOP M.D., MARSHALL C,
 BLAND, APRIL
 BLANKENSHIP, LILIAN, M.D.
 BRAYER, ALICE
 BROWN, JOHN H, M.D.
 BURTON, MELODY,
 CALDWELL, WILLIAM D, MD
 CALVERT REBECCA RN CPNP
 CAMERON COUNTY HLTH DEPT
 CAROUSEL PEDIATRICS

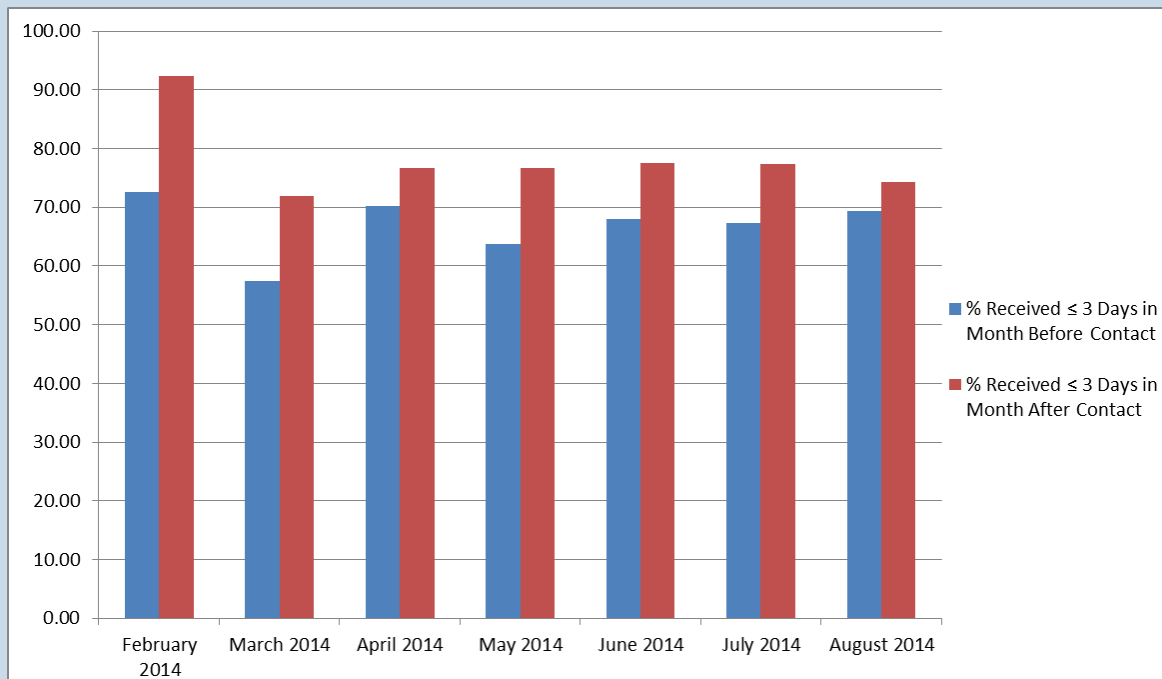
CASTRILLLO
 CAVAZOS,
 CEDAR PA
 CENTRAL I
 CENTRO S
 CERVANTI
 CHANG, SI
 CHAVEZ, J
 CHILDBIRI
 CHILDREN
 CHILDREN
 CHISHOLA
 CHRISTUS
 CITY OF G,
 CLINIC FO
 CLINIC LA
 CLINICA H
 CLINICA M
 COHEN, JK
 COLEMAN COUNTY MED CENTER
 COLLEGE STATION MED CTR
 COMMUNICARE HLTH CNTR-SAN
 COMMUNITY CARE
 COMMUNITY HEALTH CARE
 COMMUNITY WELLNESS CLINIC
 COMPASS PEDIATRICS PLLC
 CONROE PEDIATRICS ASSOC.
 COOK CHILDREN'S PHY NTRWK
 COOK, DEBORAH T., M.D.
 COOK, SHELLEY
 COPELAND, STEPHANIE, M.D.
 CORSICANA-NAVARRO CPH
 CROSLEY, ARCHER, M.D.
 CROSSTIMBERS HEALTH CLINIC
 DANZIGER, DANNY, M.D.
 DARLING, MARY ELIZABETH
 DENA WOODLE FOGLE FNP
 DESCHNER, RHONDA,
 DESHPANDE, MRUDULA, M.D.
 DOCKRAY, LEE, MD

Questions / Comments? Please contact the Newborn Screening Laboratory: 1-888-963-7111 x7585 (local call: 512-776-7585)

New Outreach Initiatives – Top 10



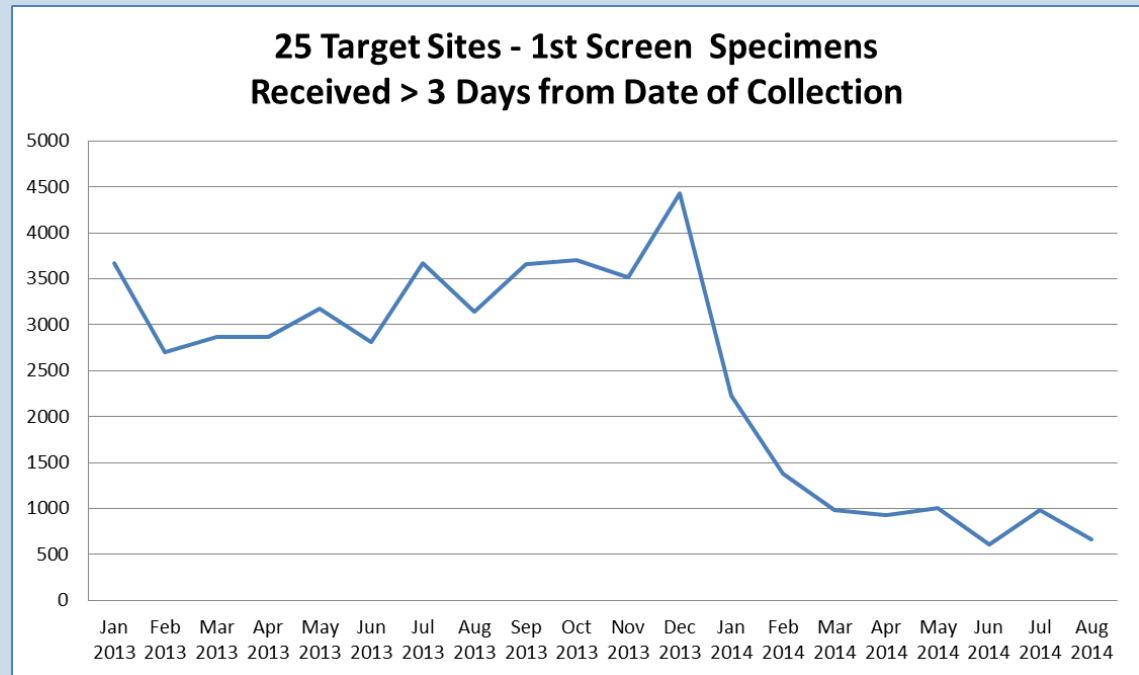
- Monthly follow-up with 10 facilities with highest volume of delayed specimens in previous month
- Escalate Repeat Offenders
- Biweekly followup with statistics



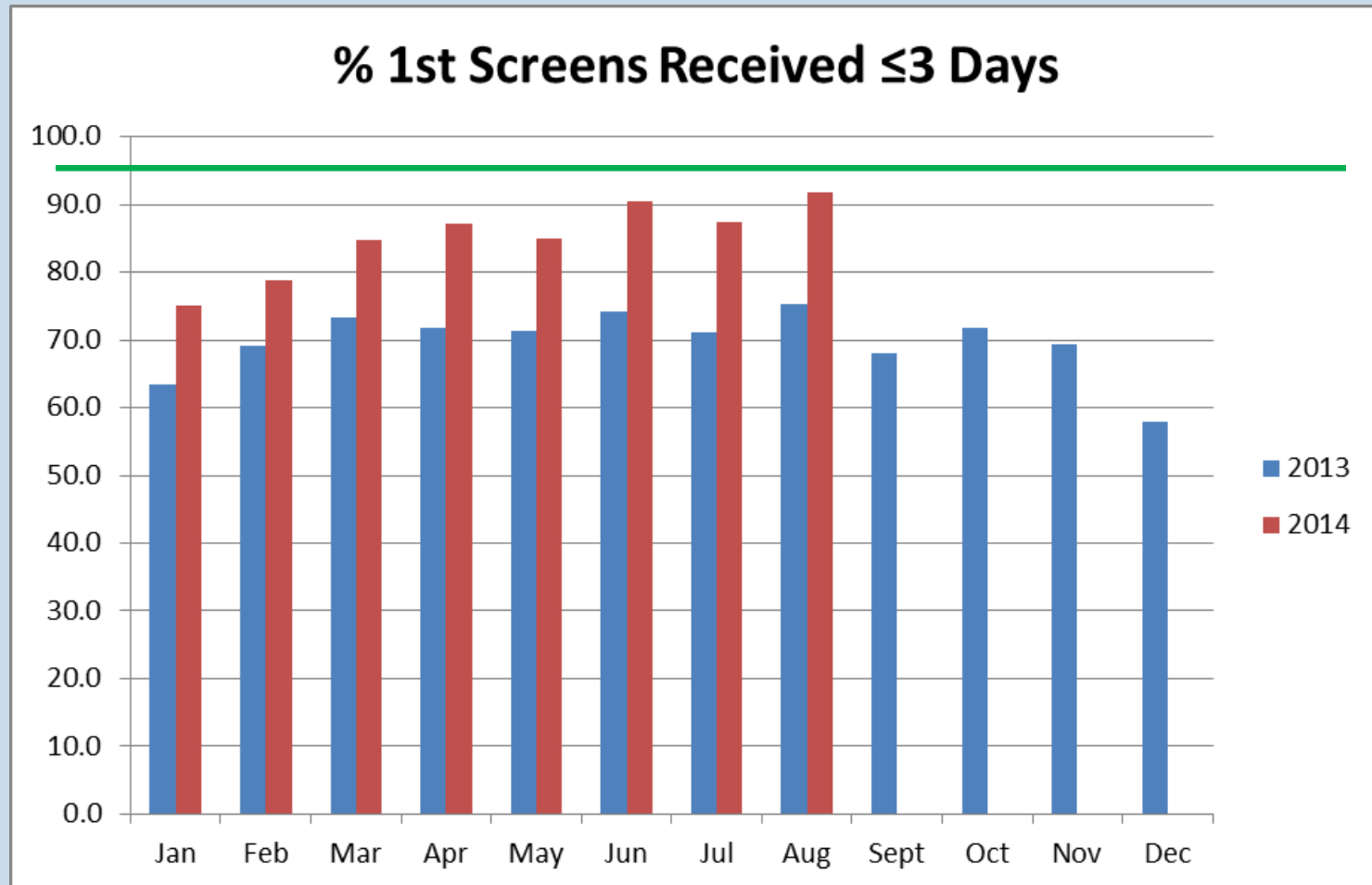
25 Target Sites



- All sites consulted regarding internal workflows
- Courier status
 - 8 already using courier
 - 17 added between Nov. 2013 and Jan. 2014
- December 2013 – **4429**
- August 2014 - **666**



Transit Time Status Summary

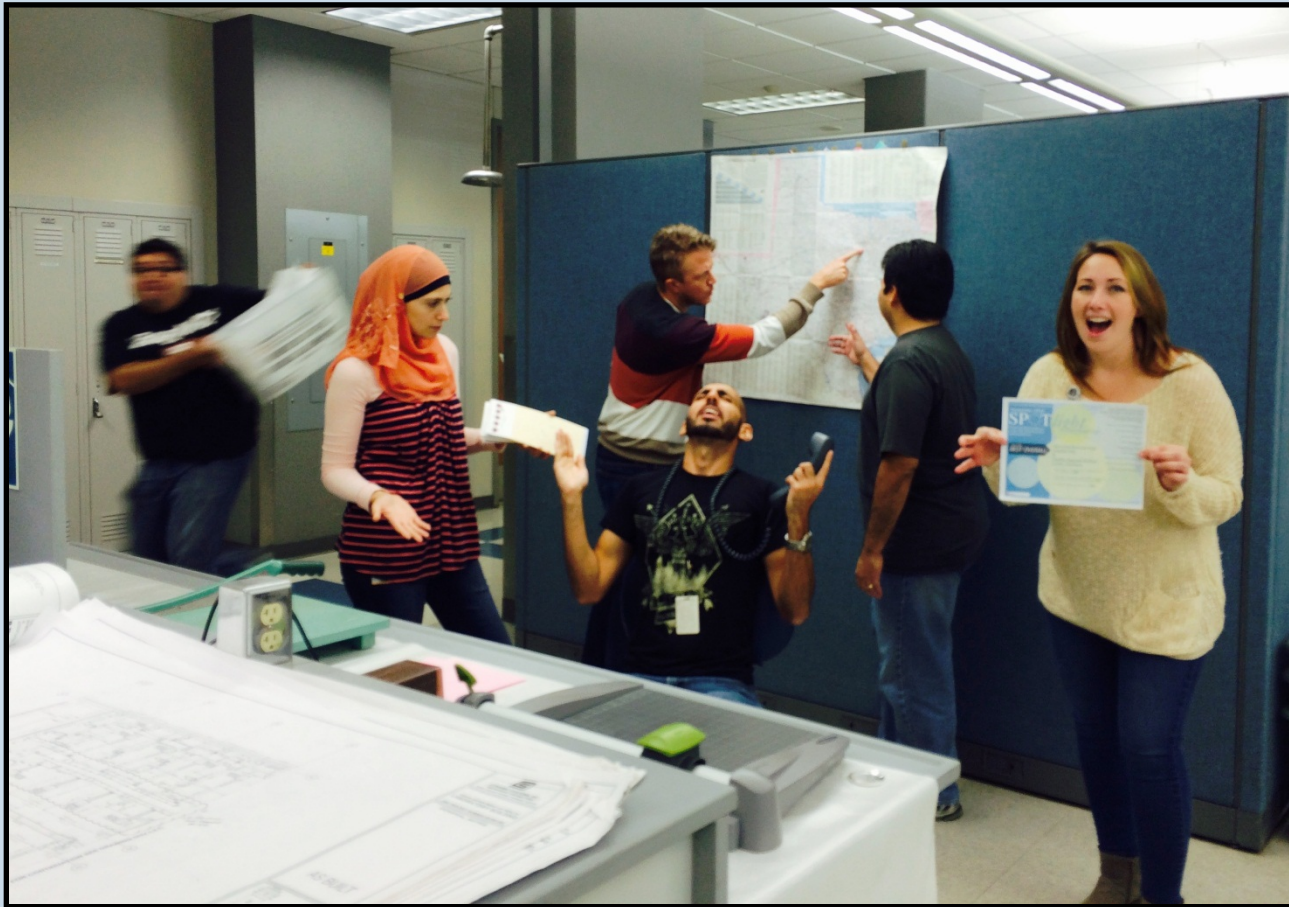


Next Steps



- Continue outreach activities
- Expand courier services to all submitters
- Expand submitter tracking and education to include other quality measures
- Reassess TNSPMP Performance measure goals
- Assess laboratory workflows and improve laboratory turnaround times

Thank You



Transit Time Workgroup

Salvador Arreola

Amani Khamis

Sepehr Arshadmansab

Calvin Chapa

Callie Bresette

Evila Atkinson

Crystal Fitzhugh

Pearl Smith

Amy Schlabach