

Public Health Performance Management Centers for Excellence

2014 Quality Improvement Grantees
Learning Congress

September 26, 2014

Latent Tuberculosis Treatment Evaluation & Improvement

Clark County

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Jeff Sogo, Public Health Nurse



1

Funded by the U. S. Centers for Disease Control's National Public Health Improvement Initiative

Project Team



- Monica Czaplá, Program Manager
- Jeff Sogo, Public Health Nurse
- Josh VanOtterloo, CSTE Epi Fellow
- Alan Melnick, Health Director/Health Officer
- Derel Glashower, Epidemiologist

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Clark County

- Total population: 442,800 (OFM)
- ~47.5% in unincorporated areas
- Clark County Public Health (CCPH):
 - 78.15 FTEs
 - \$10,131,149 annual budget (2013)
 - Currently working towards PH Accreditation

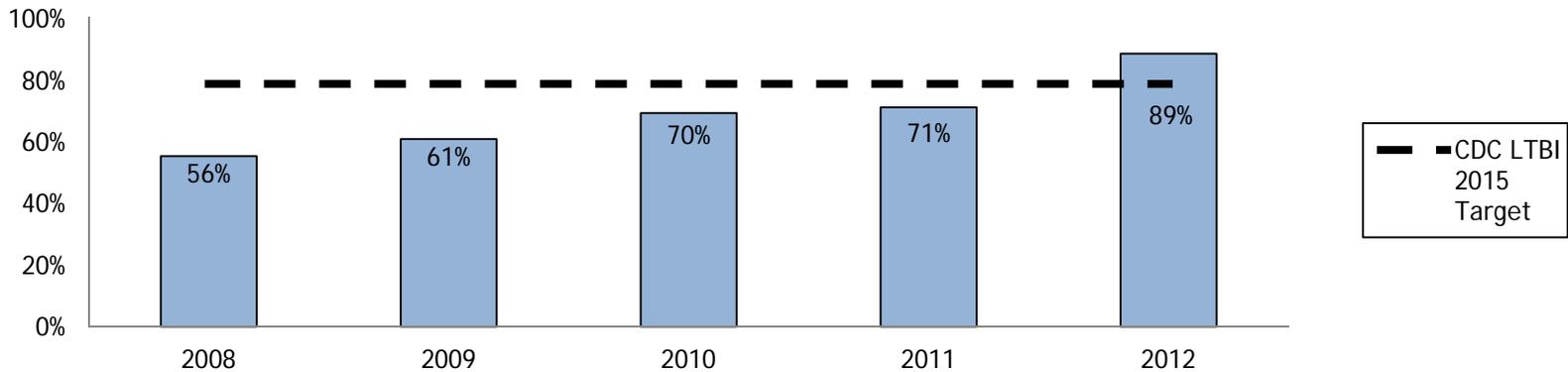


September 26, 2014

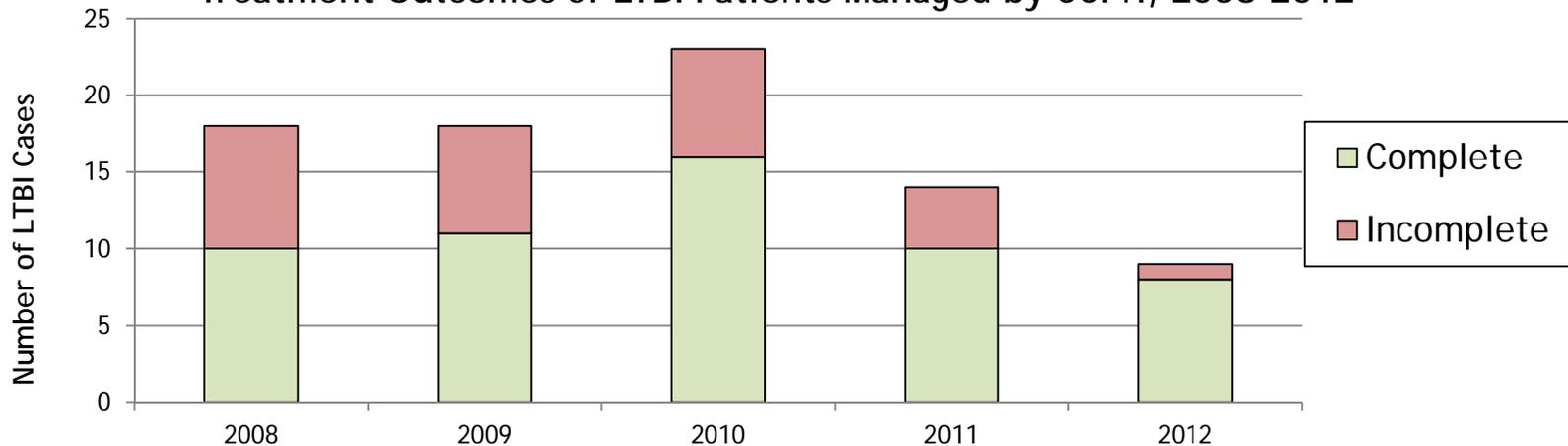
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Problem Identified

LTBI Treatment Completion Rates by Year
CCPH 2008-2012



Treatment Outcomes of LTBI Patients Managed by CCPH, 2008-2012



Background

- Change in Department direction and resources in 2008
 - Transferred nearly all clinical services, including TB clinic, to community
 - Lost institutional knowledge of data systems - TB Data!
 - Department staff reduced by 52.9 FTE
 - Continued to operate with efficiency as high priority

Context

1) New LTBI Treatment Regimen Available

- ~2012, 2 drugs for 3 months
- Short course, excellent complement to eDOT

2) CCPH Changed Approach to LTBI Treatment

- Prioritized and selectively treated LTBI patients

Risk Factor	Reasonable* Estimate of Increased Risk	Documented Range of Risk Estimates
Tumor necrosis factor (TNF) inhibitor use	20+	1.6 - 90.1
HIV positive not on antivirals	10+	4.1 - 24.0
Malnourishment	10+	2.2 - 37.5
Children < 5 years of age	6	5.5 - 7.9
Contacts to active cases/Recent Converters	3	1.7 - 3.4

* Reasonable estimates are this analyst's subjective estimate of increased risk based upon estimates in the scientific literature, study size and design, and CDC estimates

3) Culture Change on the CD Team

- Grassroots effort by frontline staff to use eDOT

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AIM Statement

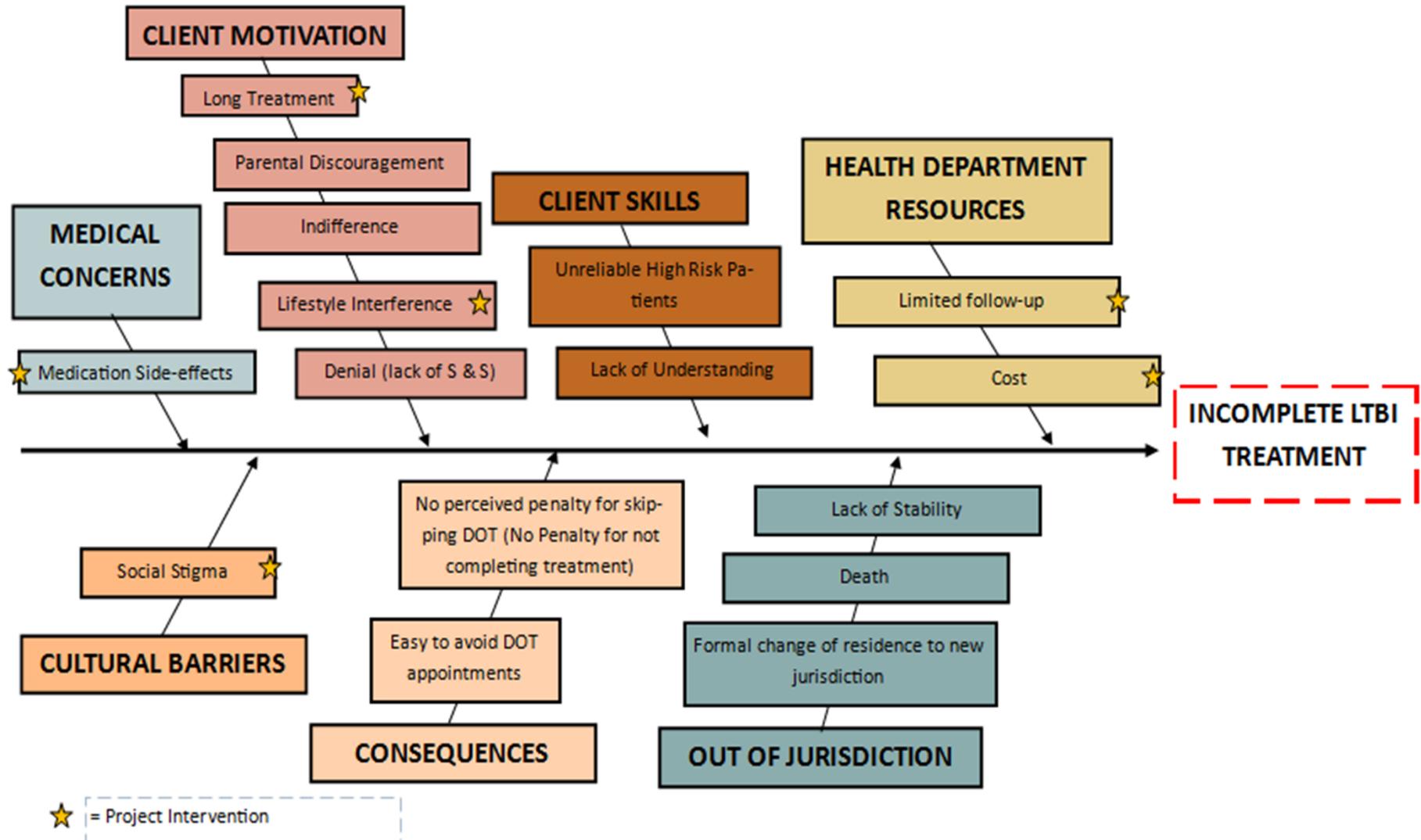
- *To decrease the number of people who develop active Tuberculosis through the timely and efficient treatment of latent Tuberculosis infection (LTBI).*

September 26, 2014

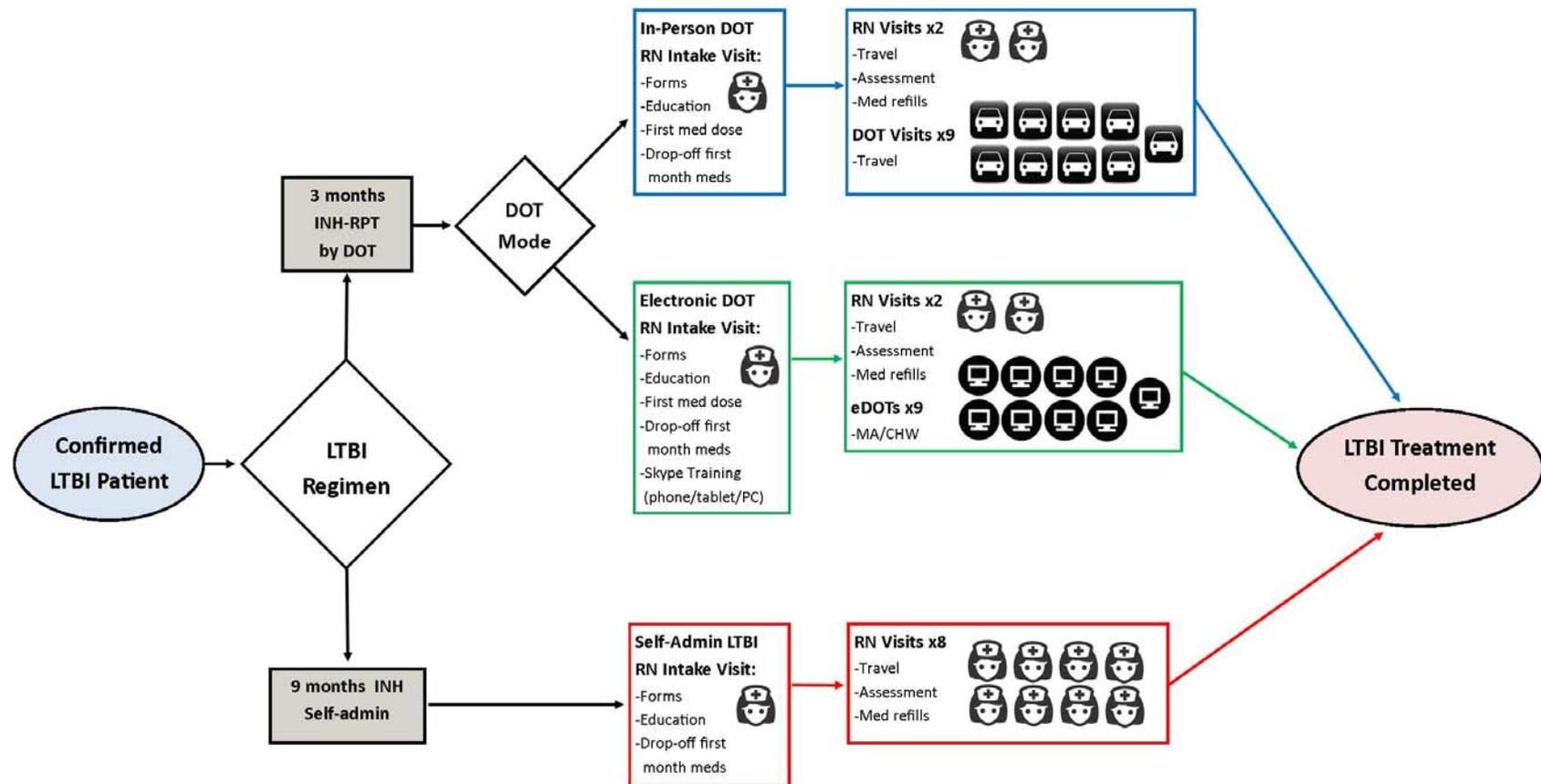
Project Activities

- Assemble Team
- Gathering the Data
 - Identify Source
 - Abstract Information
- Identify Root Causes
- Analyze Baseline Data
 - Bar graphs with summary statistics
- Explore Solutions
 - Examine Costs and
 - Developed Solutions
- Implementation
 - New Process developed
 - Formalized processes

Quality Tools - Fishbone (Cause/Effect) Diagram



Quality Tools - Process Map



Quality Tools - Improvement

Identify Potential Solutions:

- Provide patient-centered DOT experience
 - Recommended by CDC and WHO
- Encourage new 12-week regimen
- Lend hardware, such as tablets, to improve DOT adherence

Quality Tools - Improvement

Develop an Improvement Theory:

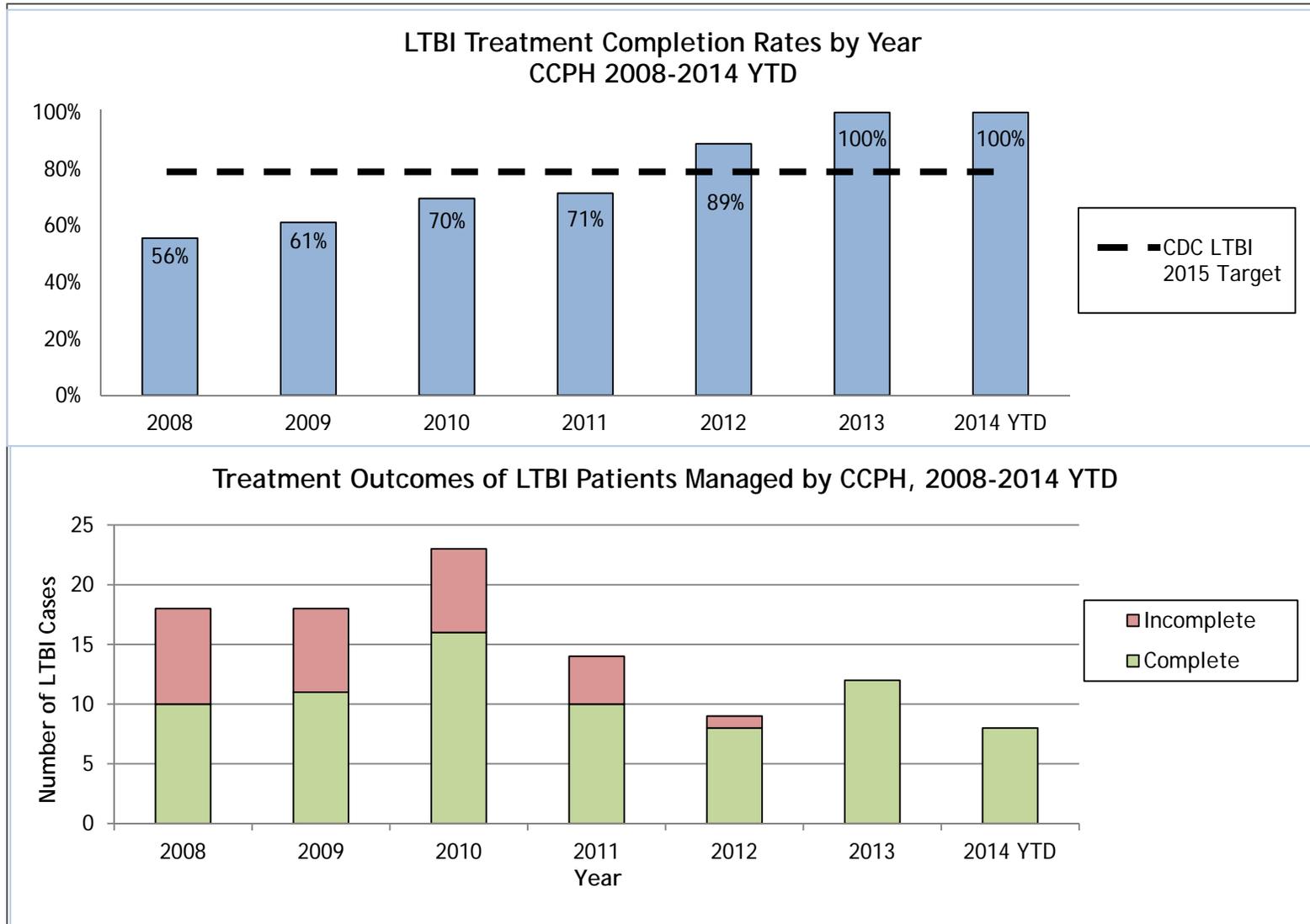
IF we:

- Provide an eDOT option
- Encourage the 12-week regimen
- Provide select clients with eDOT hardware

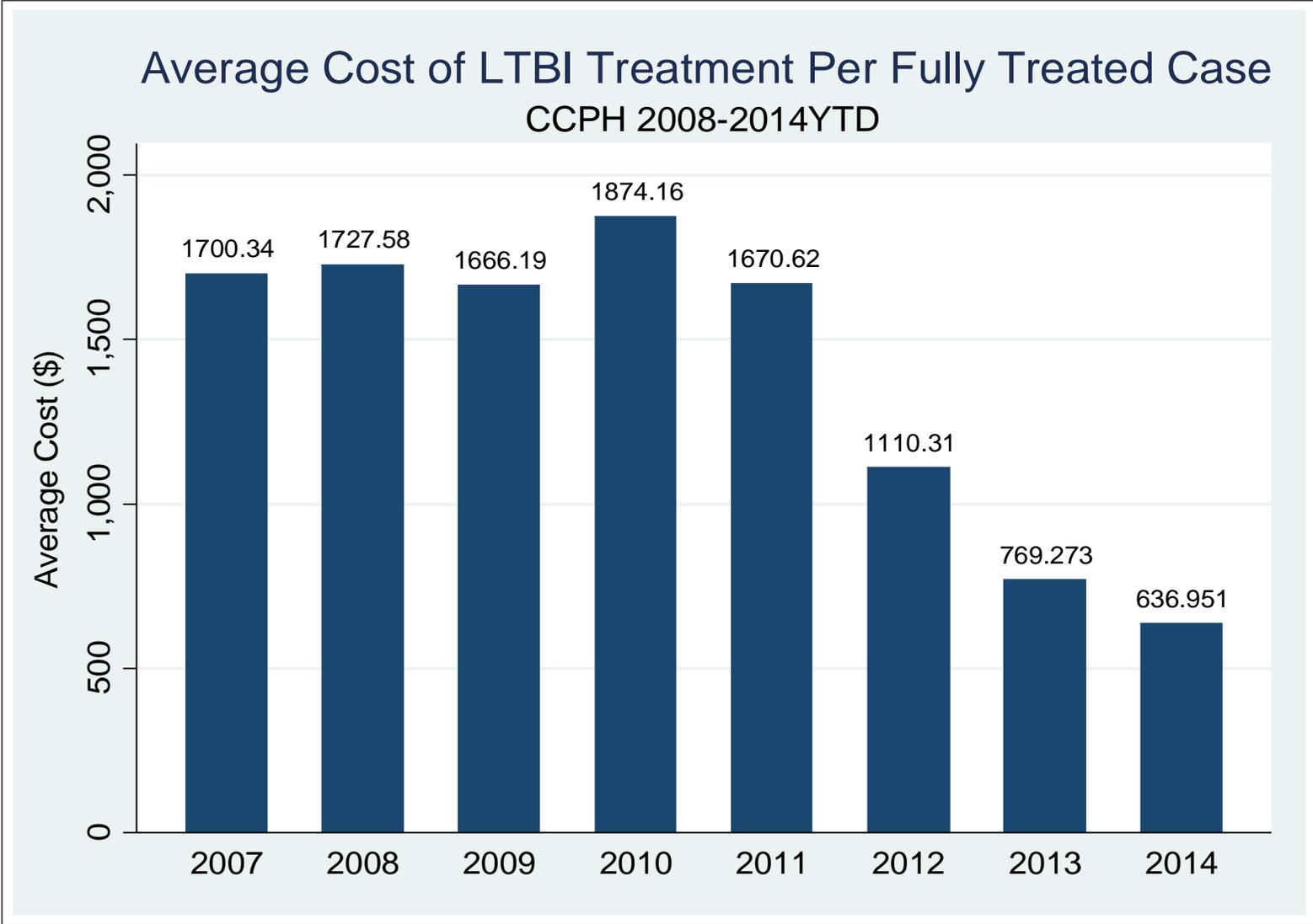
THEN:

- LTBI treatment completion rates will improve
- Costs for the department will decrease
- Resources will be liberated for other TB control objectives

Results - Treatment Outcomes



Results - Cost Savings



Next Steps

- Consider expanding eDOT and LTBI treatment to other lower-risk patients as resources permit
- Create database for tracking all LTBI cases with QI information that cannot be captured by other programs
- Continue to improve data collection
- Promote eDOT as a patient-centered approach that improves treatment completion rates with inherent cost savings
- Robust Program assessment
 - Patient surveys
 - Analysis of missed doses, treatment interruption, side-effects, cost, patient perception

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