



The Move from Traditional Change Management to Agile Methodology

Jean Davis Palazzetti, MSN, MBA, HCM, RN, Senior Director Nursing Informatics, Banner Health

Implementing *agile* change management methodology in a large healthcare organization

Agenda

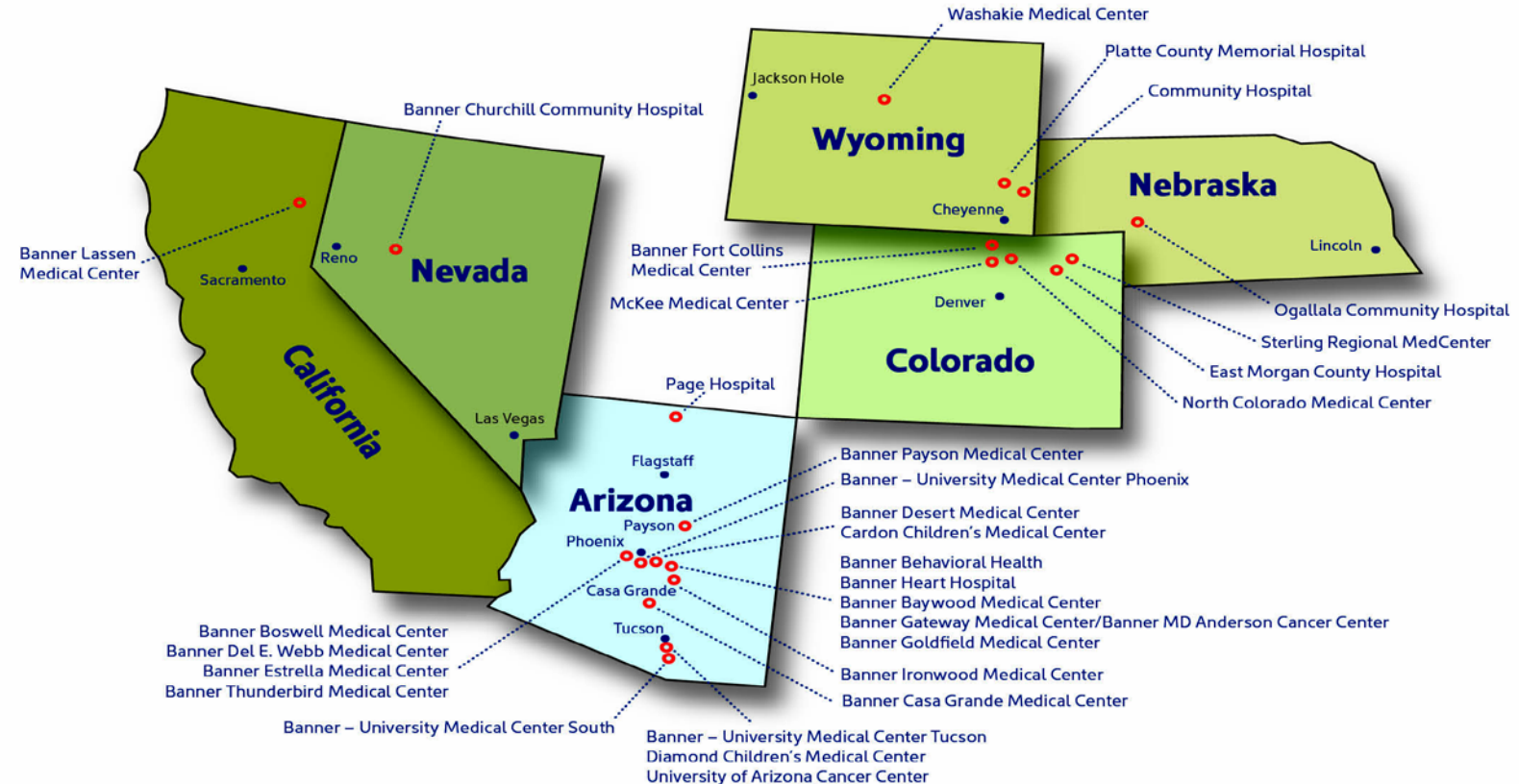
- Pre-*agile* Landscape at Banner Health
- Why *agile*
- *Agile* principles
- How to implement *agile*
- Benefits to *agile*
- Supportive Data
- Retrospective

Learning Objectives

- Explain the importance of moving from traditional change management to *agile* methodology
- Explain how to implement a governance model to support an *agile*, rapid methodology
- Describe the importance of data drive approach, using analytics to lead design
- Identify three principles of *agile* methodology
- Describe three benefits of *agile* methodology

Banner at a Glance

- » 28 Acute Care and Critical Access Hospitals
- » Behavioral Hospital
- » Banner Health Network
- » Banner Network Colorado
- » Banner Medical Group and Banner – University Medical Group with nearly 2,000 physicians and advanced practitioners and more than 200 Banner Health Centers and Clinics
- » Banner Home Care and Hospice
- » Outpatient Surgery
- » Urgent Care
- » Banner – University Medicine division
- » \$7.6 billion in revenue in 2016
- » AA- bond rating
- » \$753 million in community benefits, including \$89 million in charity care (2016)



Dare To Dream



Sofia

Banner Mission Statement: “Making health care easier, so life can be better.”

- Focus on Banner’s mission statement
- Waterfall change management did not lead us to making health care easier
- Using *agile* methodology improves efficiency and ease of use for our clinicians by making the EHR more intuitive
- Improving efficiency and ease of use for clinicians should in turn translate to healthcare easier and life better for our “Sofia’s”

Landscape for Change Prior to *Agile* Implementation

- Significant growth
- New venues of care delivery
- Essential Clinical Data Set
- Clinician satisfaction
- Patient obsessed culture-Sofia
- Minimal data used to drive changes/enhancements

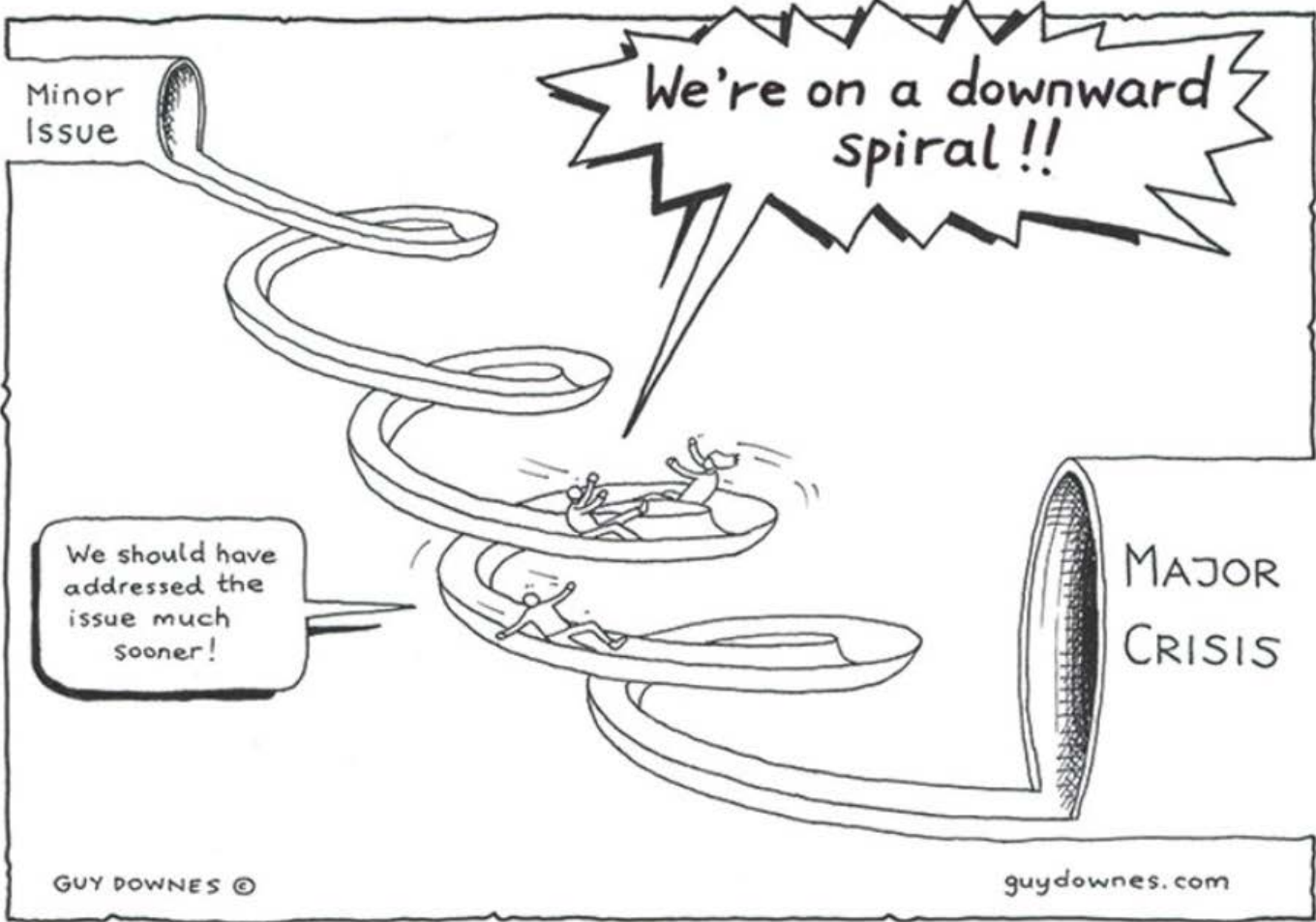
Landscape for Change Prior to *Agile* Implementation

- Enhancement process was long
- Unclear governance for decision making
- Metrics unclear
- Large meetings caused difficulty in decision making
- Education not always effective
 - “One size fits all”

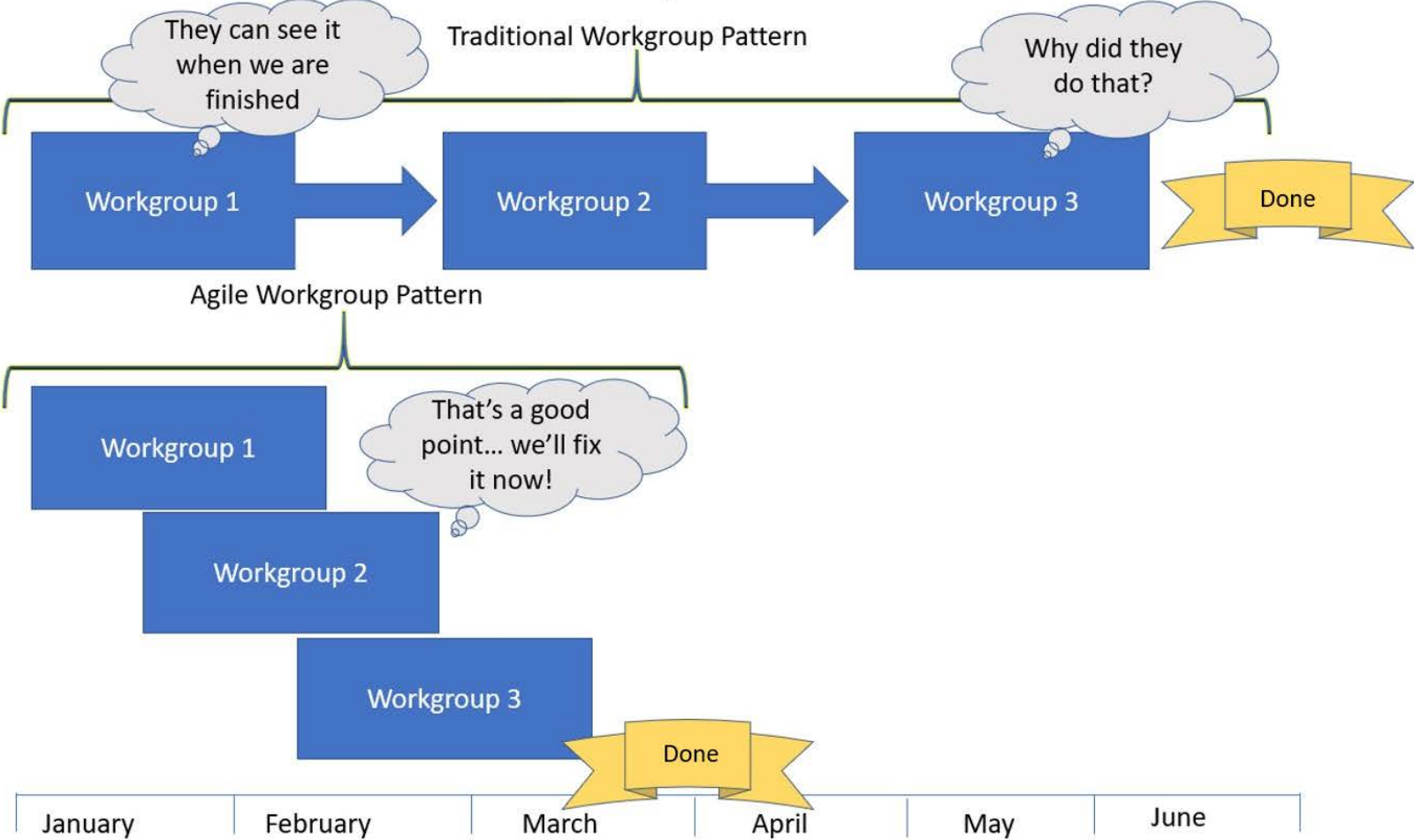
Pre Agile

- Used waterfall change management
- Other factors
 - EHR conversion for large academic center
 - Large backlog of requests
 - Adoption low or not measured
 - Communication to large organization challenging
 - Rarely measured success of implementation or adoption of change

Which Landed us Here



Traditional versus Agile



Agile Principles

- We satisfy customer quickly and with continuous delivery
- We welcome changing requirements
- We value individuals and interactions over processes and tools
- We value working software over comprehensive documentation
- We value collaboration over contract negotiation
- We respond to change over following a plan

How to Implement Agile

- Begin with training
- Assemble the teams
 - Optimal size 5 to 9 people
 - Too few-may not have breadth of knowledge
 - Too many-difficult to make decisions
 - IT lead and informatics lead for each team
- Get started
- Scrum meetings
- Grooming sessions
- Meaningful retrospectives

Scrum

- Lightweight framework
 - Small, close-knit teams develop complex products
- Originated from software engineers in the 1970's
- Not technical
- Adapts to other industries
- “Inspects and adapts”
- Continuous improvement
 - Product
 - Process

Scrum

- Begin with a bright idea
- Form scrum team
 - Size
 - Specific roles
- Create product backlog



Roles in Team

- Scrum recognizes only three distinct roles
 - Product owner
 - Scrum master
 - Team members
- Different from traditional large team
 - More efficient

Product owner

- Responsible for maximizing the business' return on investment
- Directs team to most valuable work and therefore away from less valuable work
- Prioritizes backlog
- Authorizes change in team's priority
- Records requirements
- Creates acceptance criteria
- Answers questions
- Responsible for user stories

User Stories

- User stories exist to provide explanations in plain English so anyone can understand the purpose of the story or capability
 - As a/an _____
 - I want _____
 - So that _____

Scrum Master

- Coach
 - Guides team to higher levels
 - Cohesiveness
 - Self-organization
 - Performance
- Scrum expert and advisor
- Facilitator
- Teaches team
 - Scrum related information
 - *Agile* tools and practices
- Not the boss
- Impediment bulldozer

Team Members

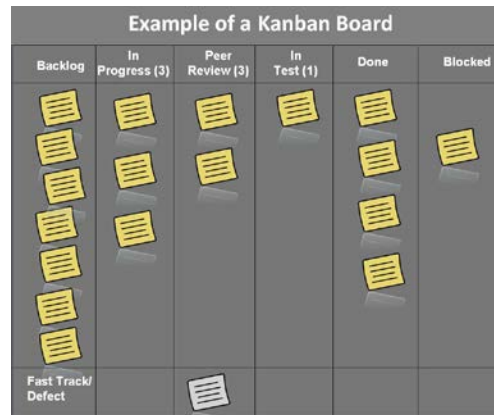
- Highly collaborative
- Self organizing
- Those who do the work are best authorities on how work should be done
- Create schedule estimates for business
- Team of specialists
 - Should possess all skills required to complete “product”
 - Although specialized, all are responsible for the team delivering quality product
 - May have to work outside of specialty
- Responsible for completing user stories

Scrum Artifacts

- Product backlog or user stories
 - List of deliverables
 - Features
 - Bug fixes
 - Documentation changes
 - Education requirements (if applicable)
 - Infinite lifespan
 - Sprint backlog
 - Finite lifespan-length of current sprint
 - All stories for current sprint
 - Tasks

Scrum Artifacts

- Task board
 - Electronic
 - Whiteboard with sticky notes
 - Labels can be as simple as to do, doing, done
 - Provides visibility to everyone where tasks and stories are at any given time



Retrospective

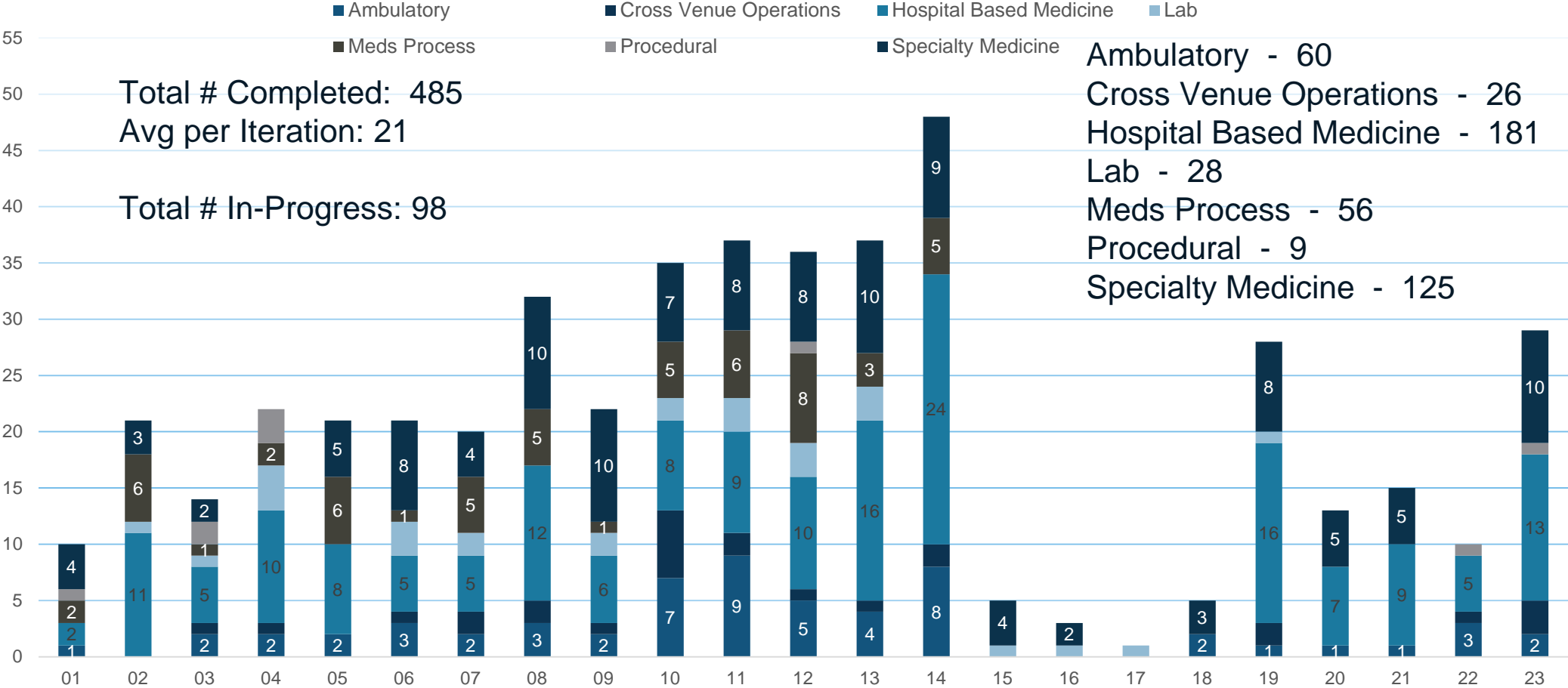
- Hold retrospective after each iteration
- Examine what went well
- Examine what can be improved upon
- NOT traditional lessons learned meeting
 - No long laundry list of what did not go well
 - Choose two to three things to improve upon for future iteration
 - Examine both product and process

Benefits of Agile

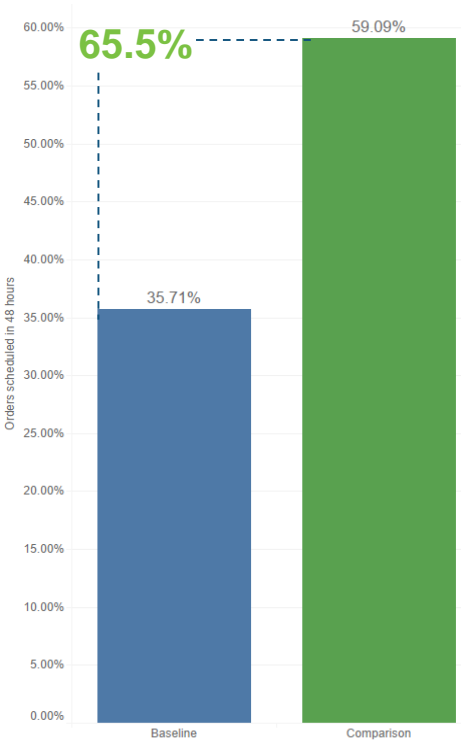
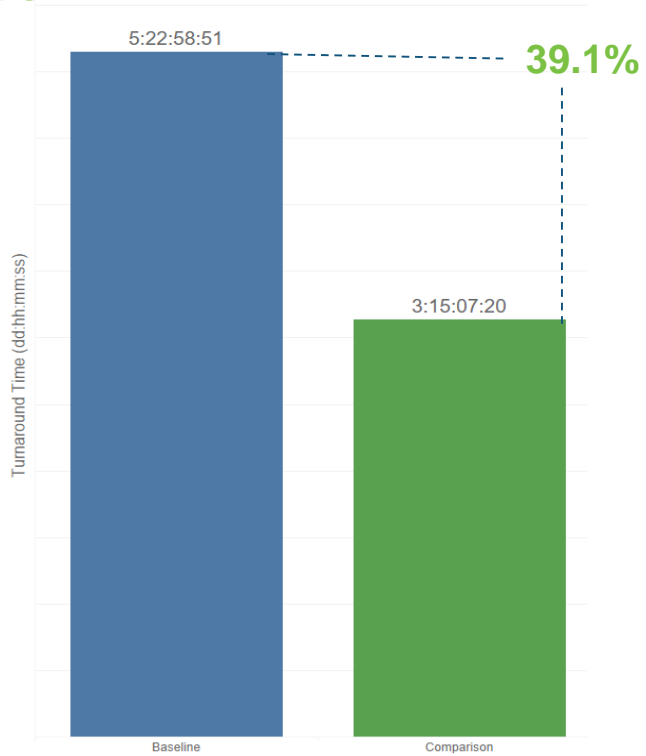
- Whole team at the table in real time
- Simplicity
- Reflection and fine tuning
- Team size
- Work is now in manageable units
- Focus on quality
- Frequent delivery

Project LightSpeed - Capability Completed

Workstream Capabilities Completed by Iteration



Orders to scheduling for Imaging--Tucson has decreased their turn around time by **39.1%**, 2 days and 7 hours while increasing the number or orders scheduled in 48 hours by **65.5%**



Baseline: February 2018
 Go Live: September 5, 2018
 Comparison: January 2019
 Excludes orders with a turnaround time of greater than 28 days
 TAT: Time between order being placed and order being scheduled (Imaging Orders)

Medication alert reduction

Go-Live
Date

Go-Live Date: August 8, 2018

Analytics
Key Dates

Baseline: March 1, 2018 – March 31,
2018 (31 days)

Comparison: August 9, 2018 – September 8,
2018 (31 days)

Goal of Project

Reduce the total mCDS alert rate for all users

- Reduce the overall mCDS alert rate by 21%

Prevent over 323,000 mCDS alerts/month

- Prevent over 118,000 PowerPlan mCDS alerts/month
- Prevent over 205,000 mCDS alerts/month based on order details

21

PowerPlans no longer firing duplicate therapy – resulted in **118,020** mCDS alerts prevented

16

PowerPlans no longer firing drug-drug alerts – resulted in **16,260** mCDS alerts prevented

5

Additional Filtering Scenarios Implemented* – resulted in **27,144** mCDS alerts prevented

4

Order Detail Filtering Scenarios implemented – resulted in **119,444** mCDS alerts prevented

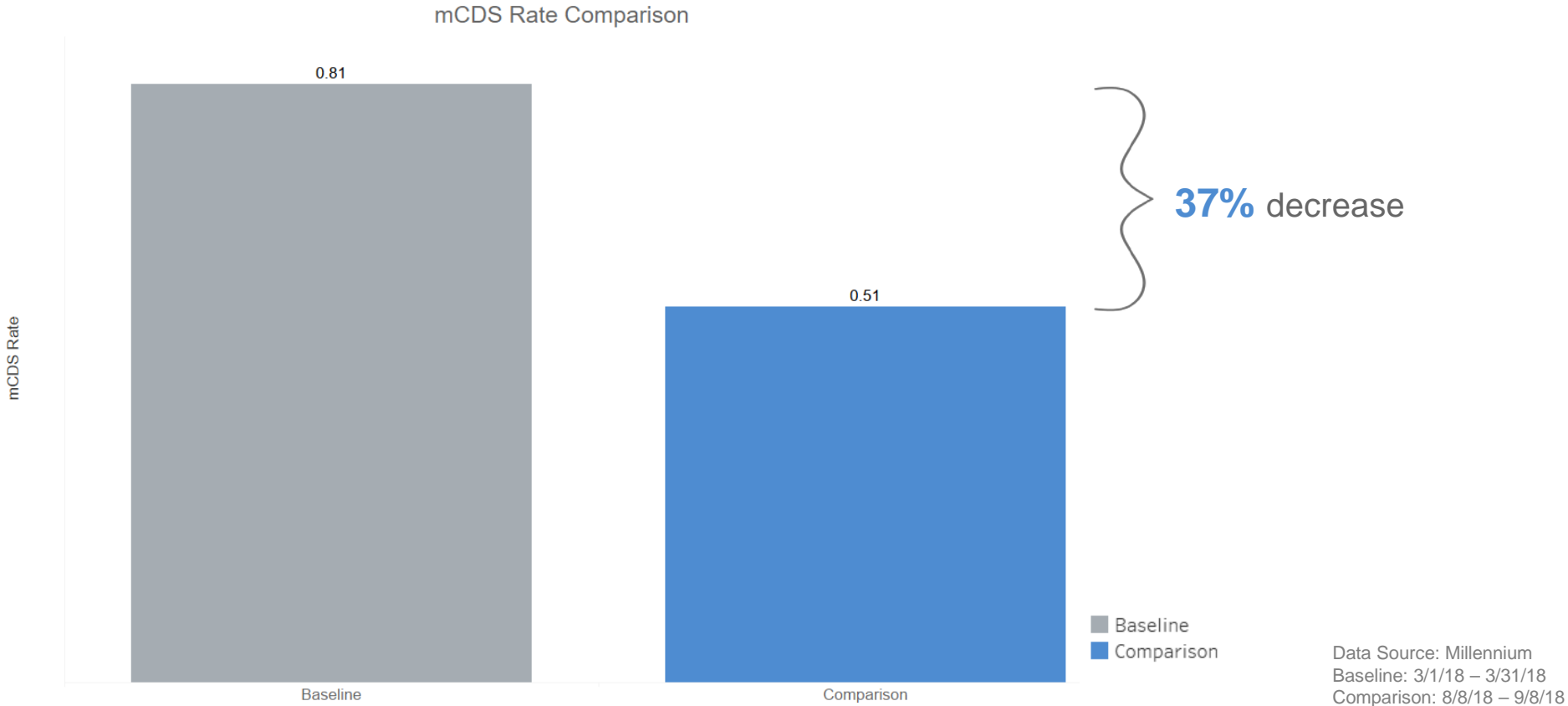
2

Venue of Care Filtering Scenarios Implemented* – resulted in **253,664** mCDS alerts prevented

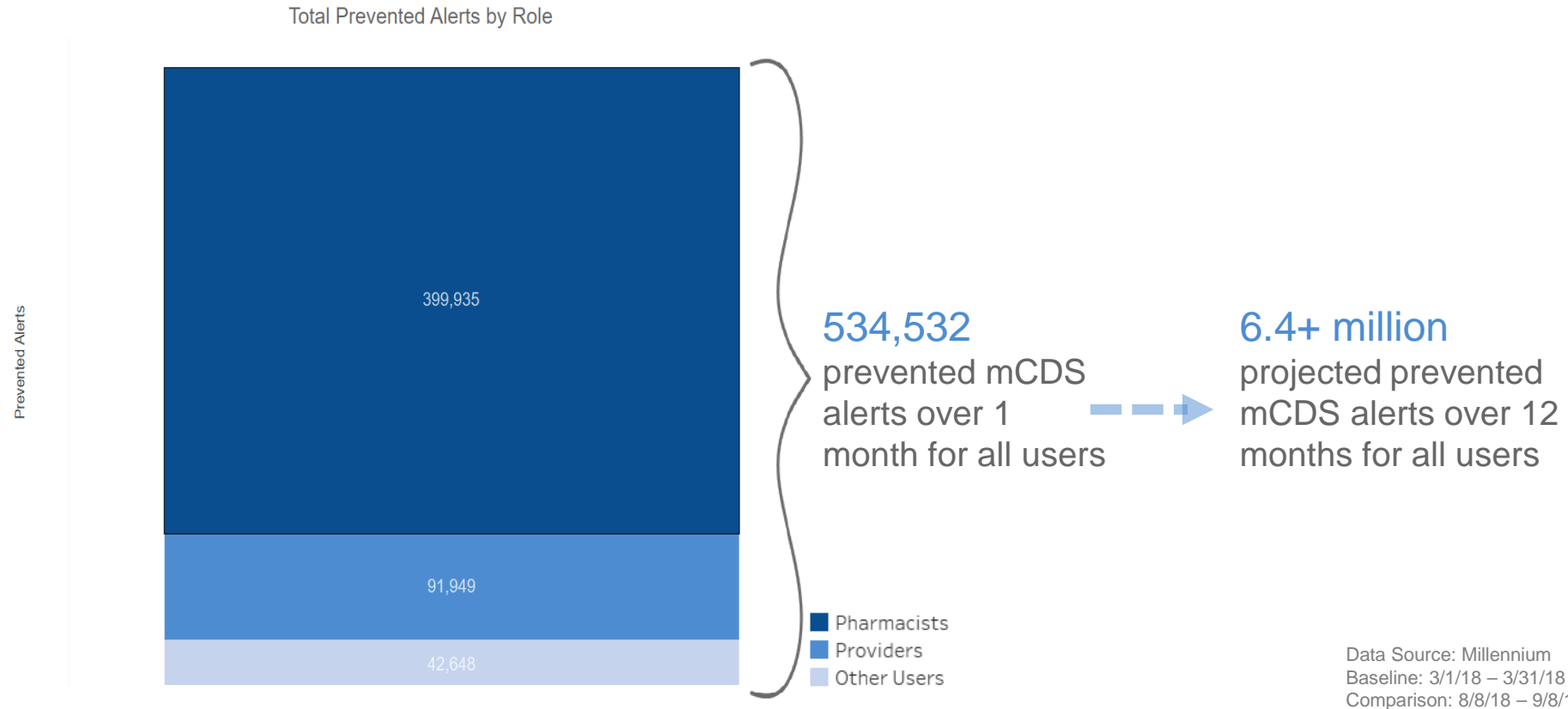
Reduce the total mCDS alert rate for all users

Target: Reduce by 21%

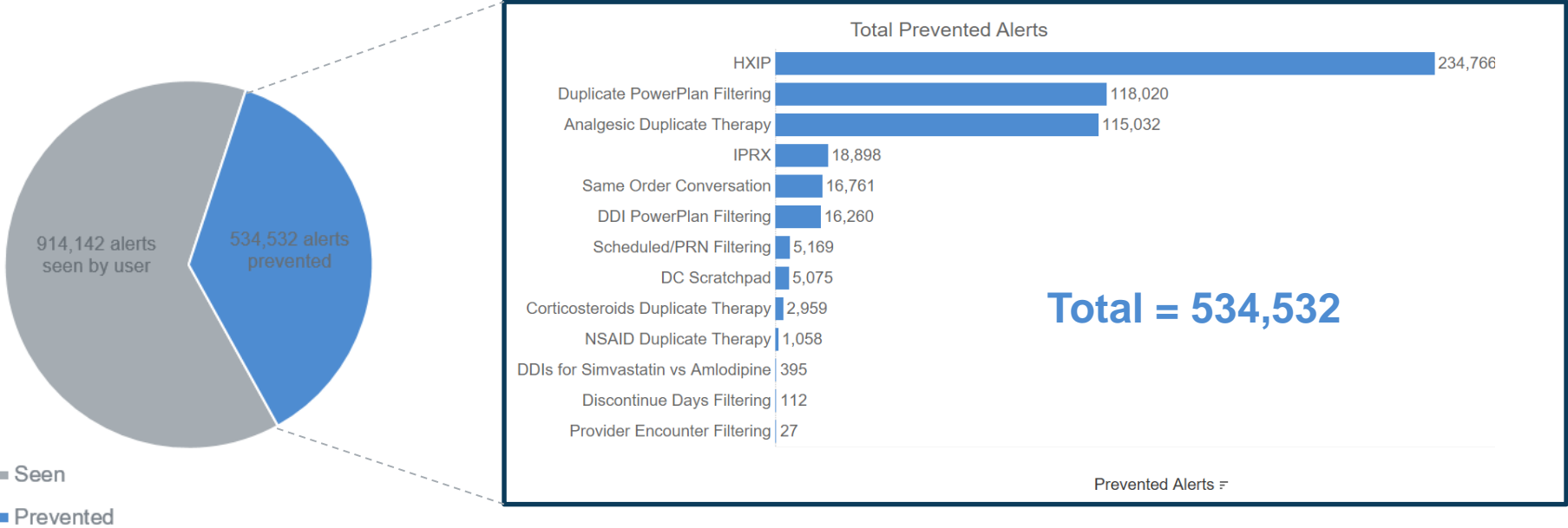
Decreased mCDS Alert Rate by 37%



Prevented **534,532** mCDS alerts for all users
6.4+ million projected prevented mCDS alerts over 12 months for all users

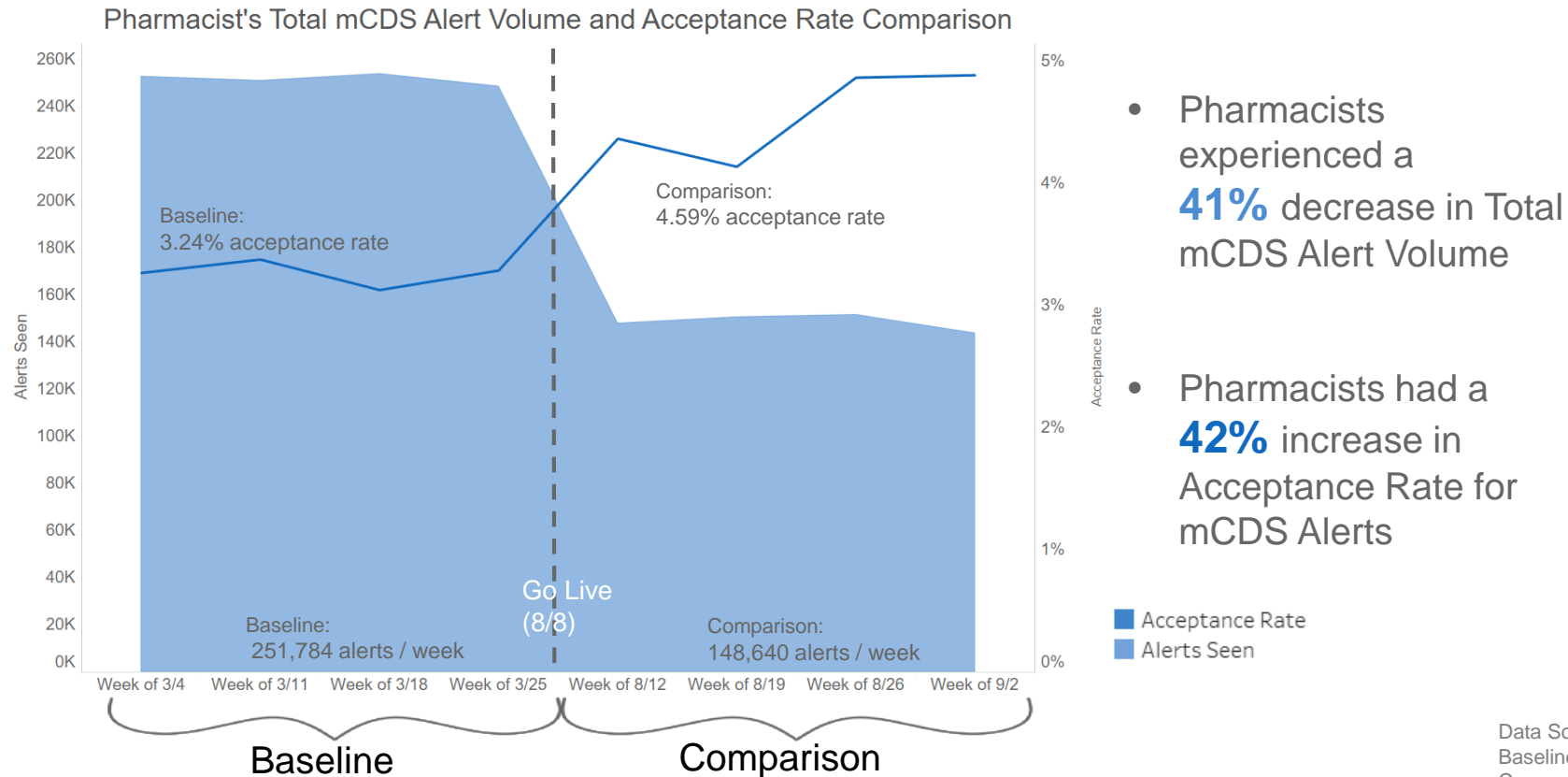


Total mCDS Alerts Prevented: Per Scenario Breakdown



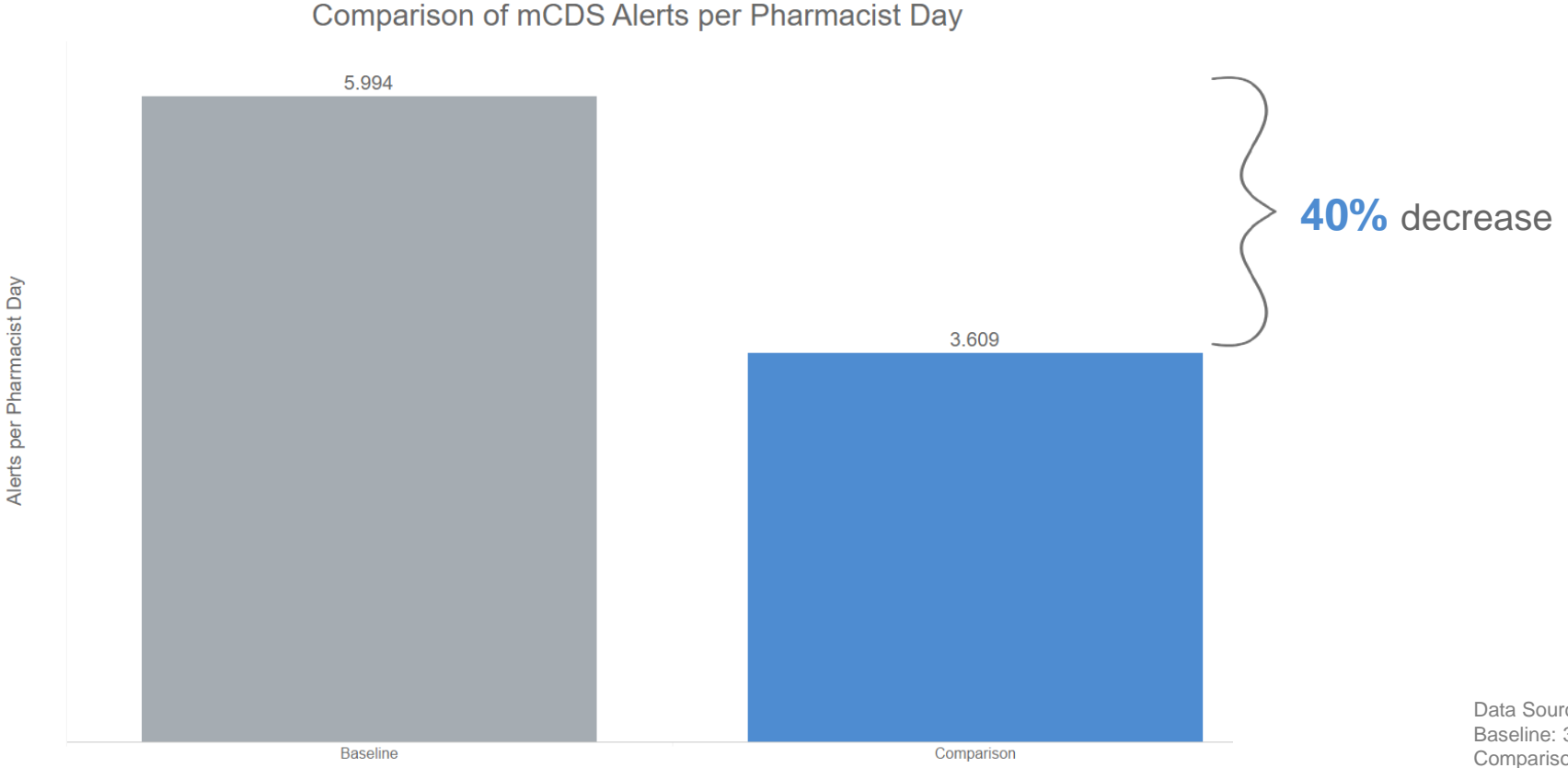
Data Source: Millennium
 Baseline: 3/1/18 – 3/31/18
 Comparison: 8/8/18 – 9/8/18

A 41% decrease in Total Alert Volume, resulted in a 42% increase in Acceptance Rate over 4 weeks for Pharmacists



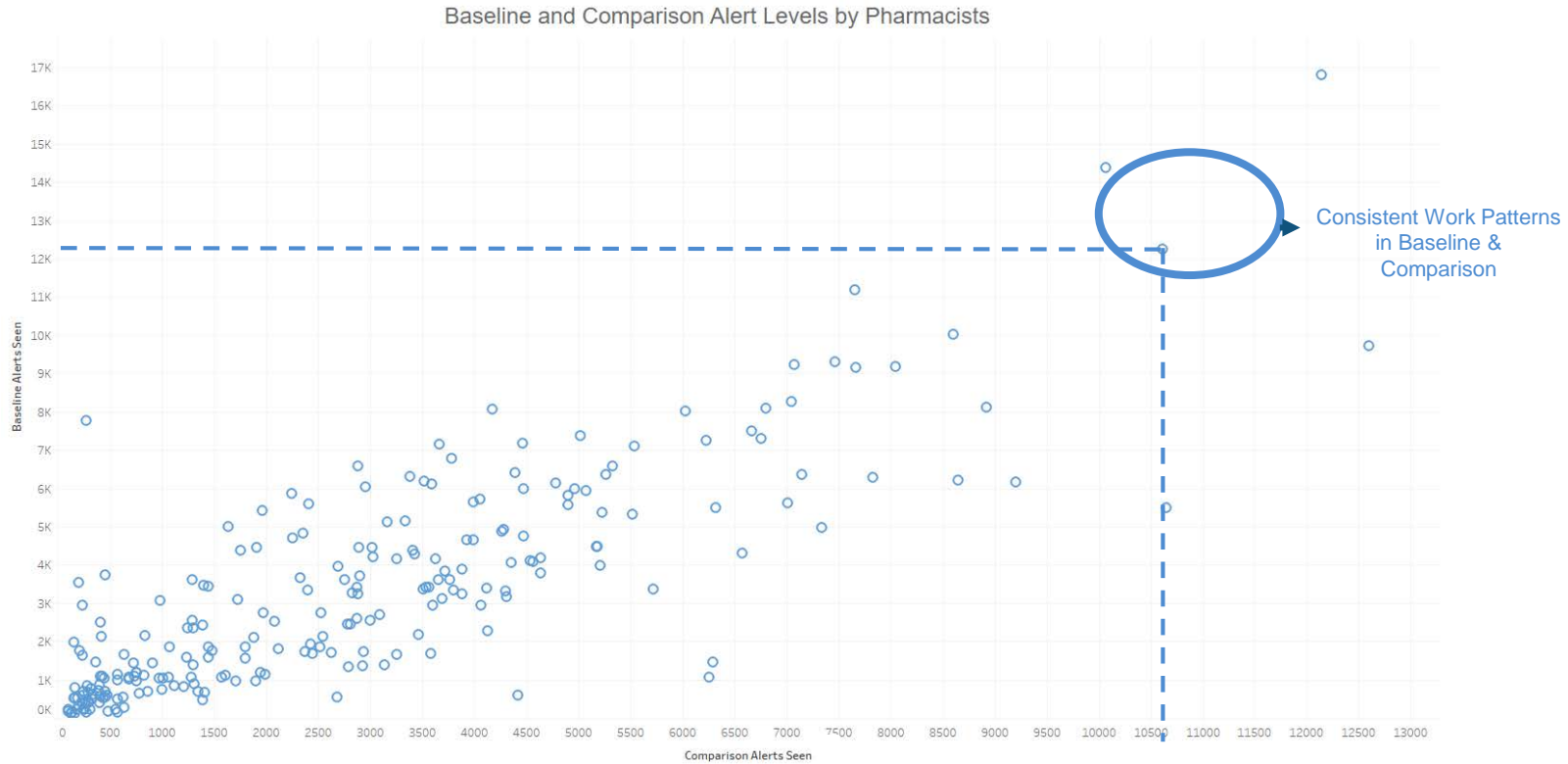
Data Source: Millennium
Baseline: 3/1/18 – 3/31/18
Comparison: 8/8/18 – 9/8/18

Pharmacists experienced a 40% decrease in mCDS alerts per Pharmacist Day



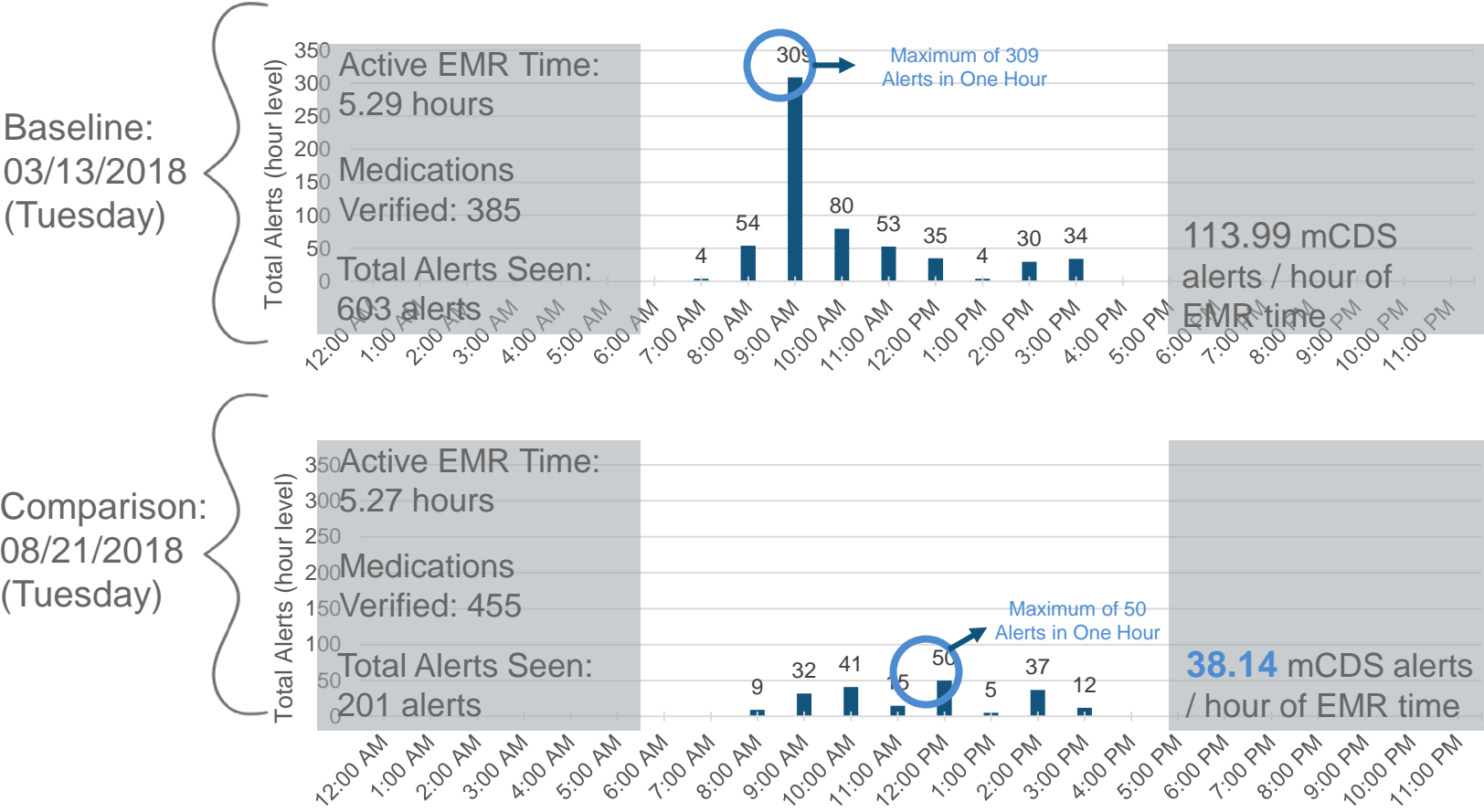
Data Source: Millennium
Baseline: 3/1/18 – 3/31/18
Comparison: 8/8/18 – 9/8/18

Identify Pharmacists with High Volume of Prevented mCDS Alerts



Data Source: Millennium
Baseline: 3/1/18 – 3/31/18
Comparison: 8/8/18 – 9/8/18

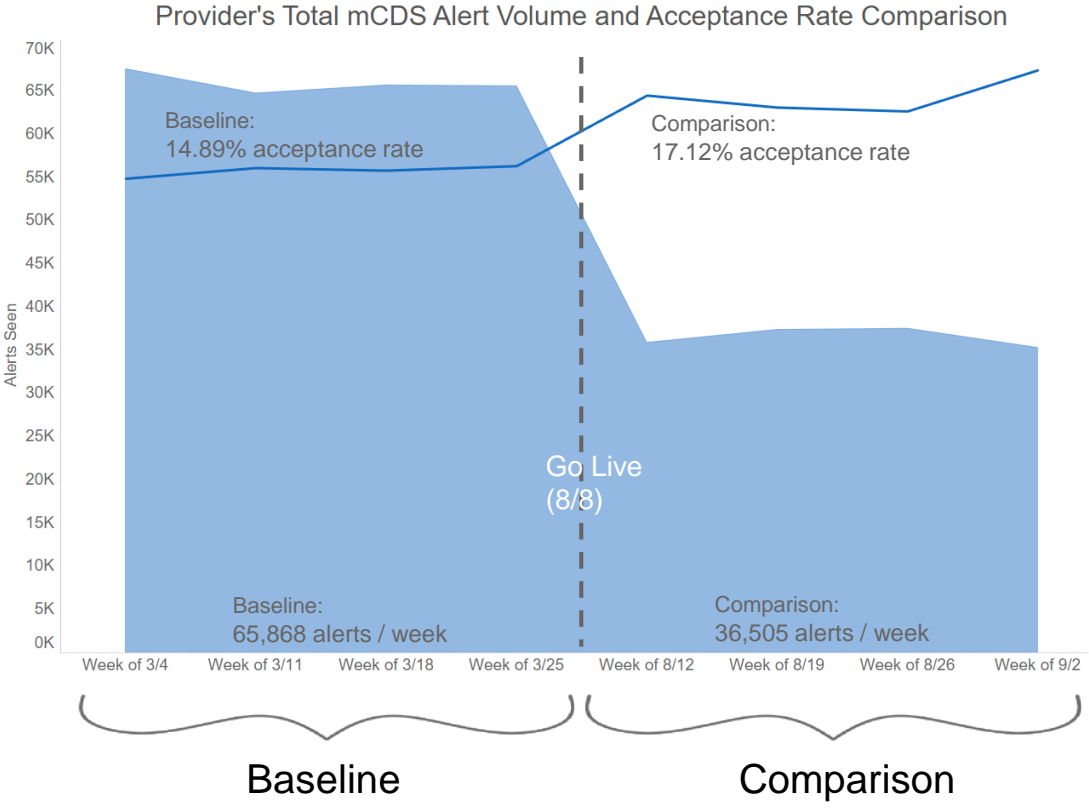
PharmD experienced a reduction of 75.85 mCDS alerts per hour of time spent in the EMR



Data Source: Millennium
 Baseline: 3/13/2018
 Comparison: 8/21/2018

Provider Impact

A 45% decrease in Total mCDS Alert Volume, resulted in a 15% increase in Acceptance Rate over 4 weeks for Providers

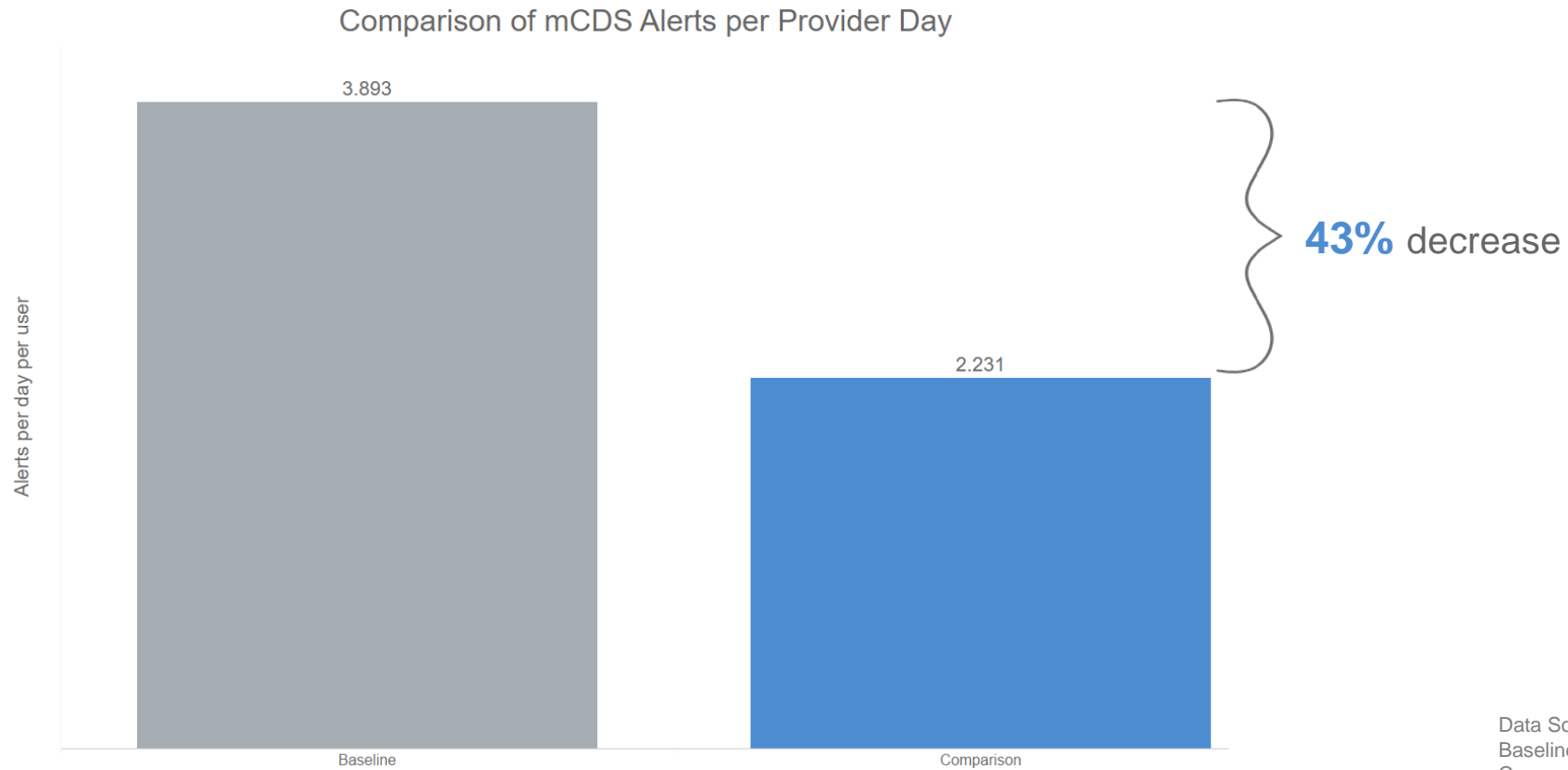


- Providers experienced a **45%** decrease in Total mCDS Alert Volume
- Providers had a **15%** increase in mCDS Alert Acceptance Rate

■ Acceptance Rate
■ Alerts Seen

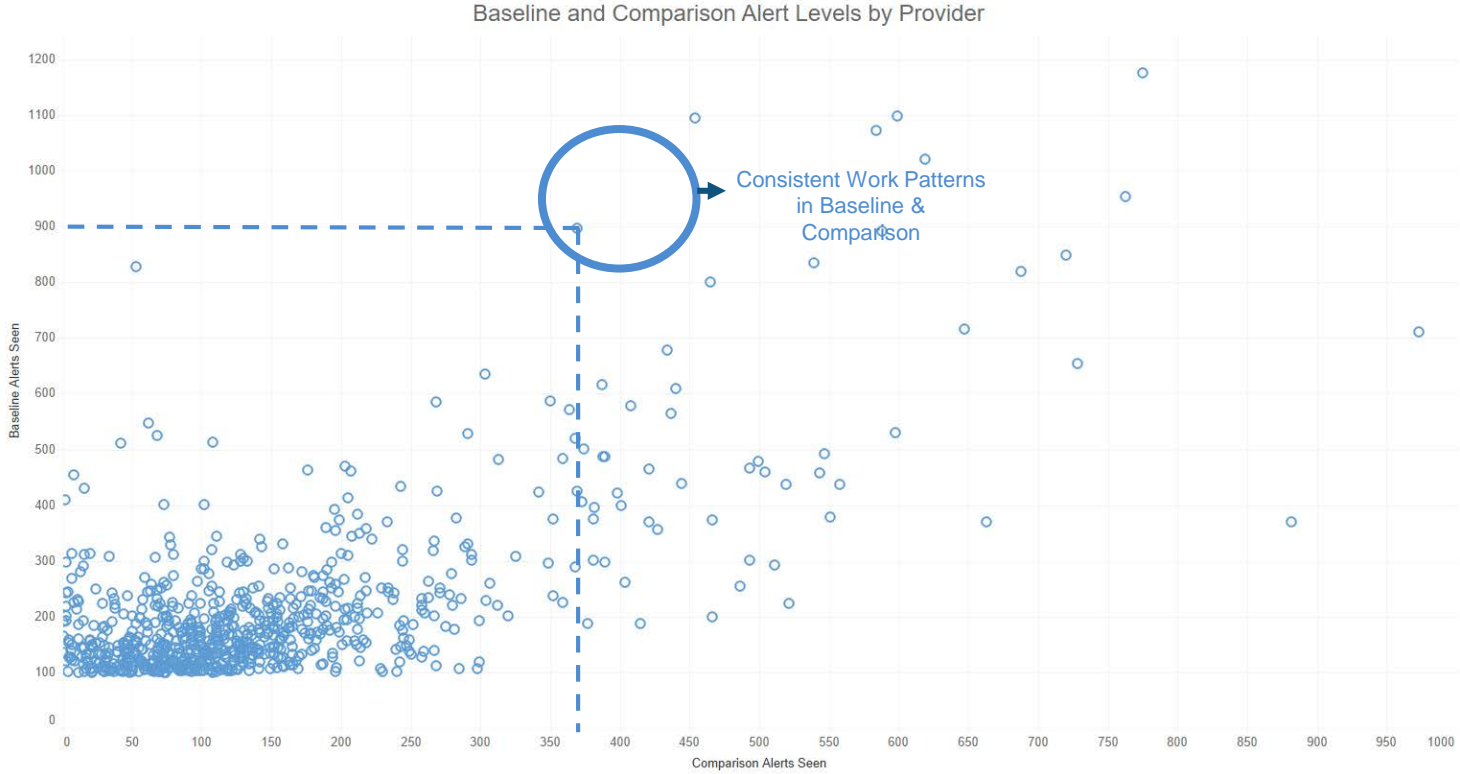
Data Source: Millennium
Baseline: 3/1/18 – 3/31/18
Comparison: 8/8/18 – 9/8/18

Providers experienced a 43% decrease in mCDS alerts per Provider Day



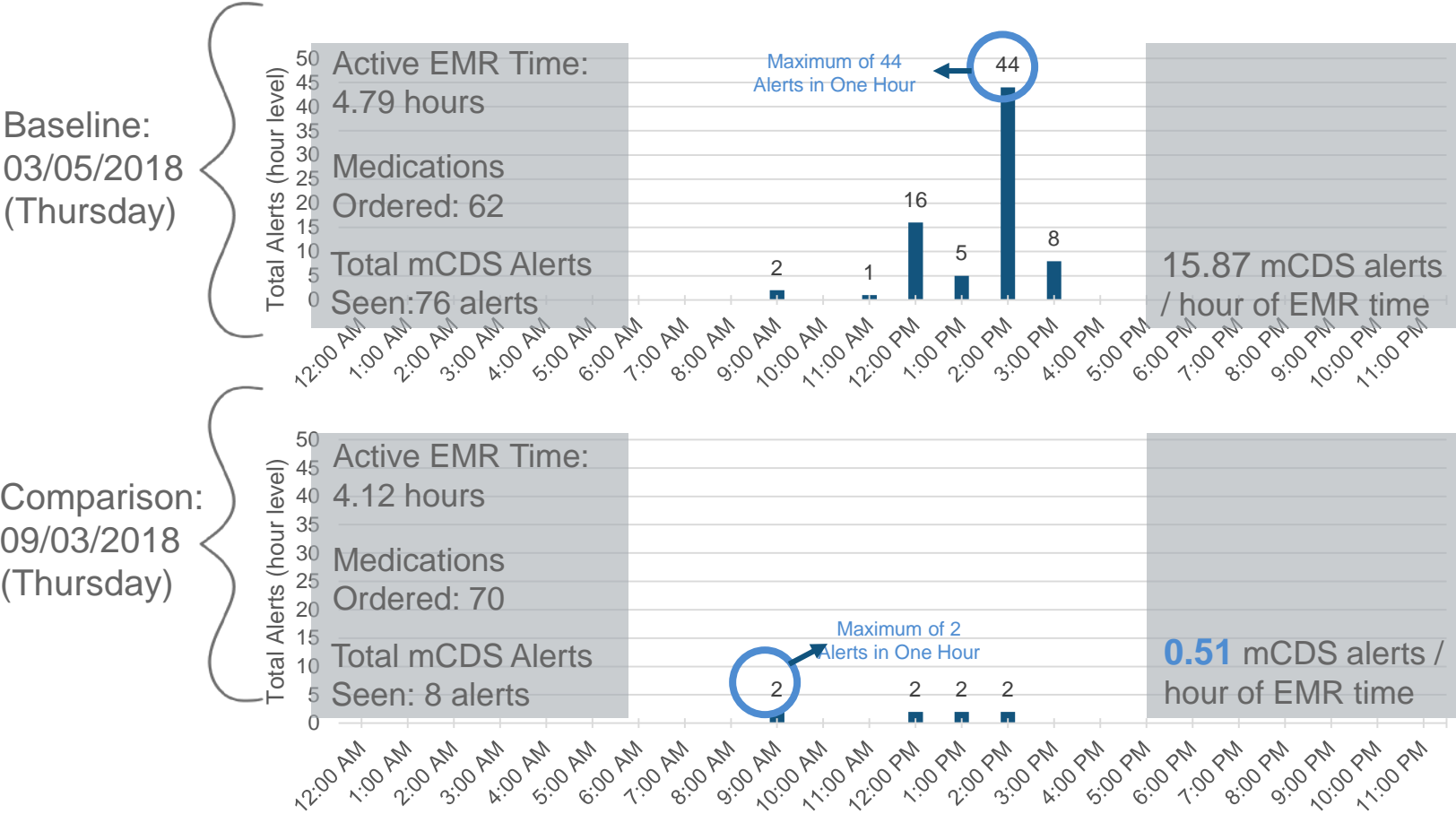
Data Source: Millennium
Baseline: 3/1/18 – 3/31/18
Comparison: 8/8/18 – 9/8/18

Identify Providers with High Volume of Prevented mCDS Alerts



Data Source: Millennium
Baseline: 3/1/18 – 3/31/18
Comparison: 8/8/18 – 9/8/18

Physician experienced a reduction of 15.36 mCDS alerts per hour of time spent in the EMR



Data Source: Millennium
 Baseline: 3/05/2018
 Comparison: 9/03/2018

Project Goals Overview

Reduce the total mCDS alert rate

- ✓ Reduced the overall Medication alert rate by **37%**
 - Goal: 21%
 - Exceeded goal by 16%

**Prevent over 323,000 mCDS alerts/month:
Implement Exclusive PowerPlan Filtering for all users**

Target: Prevent 205,000 mCDS alerts

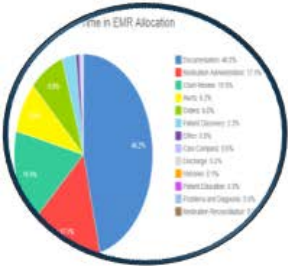
Banner Comprehensive Approach



Data Utilization



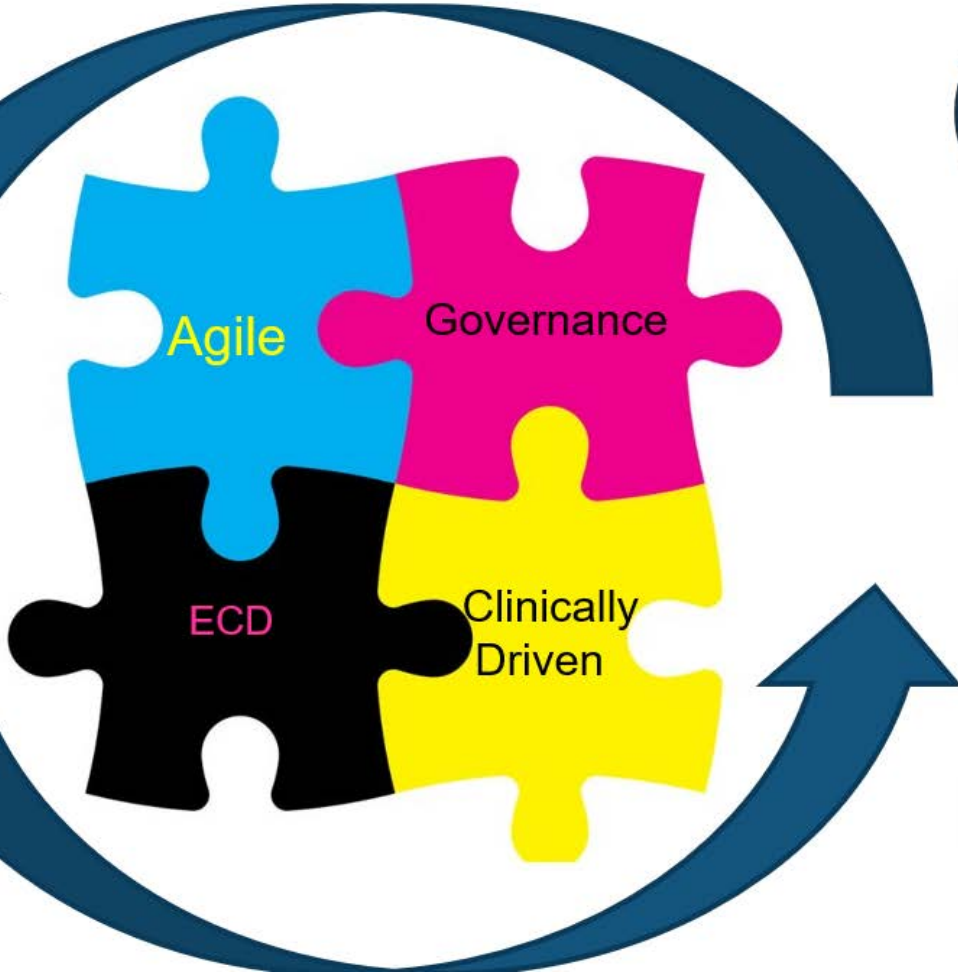
ECD/Model



Efficiency Analysis



Subjective Survey



Post Agile Assessment

- Successes
 - Started quickly, were not paralyzed by new process
 - Workstream teams were engaged and leadership supportive of process
 - Stakeholders in agreement
 - Accomplished large amount of work in relatively short timeframe
 - Clinicians eager for change

Post Agile Assessment

- Opportunities for improvement
 - All parts of a project do not need to be completed in one iteration
 - Education/communication
 - Adoption
 - Usage and efficiency analytics needed prior to implementation and after
 - Need to use an iteration to address poor adoption
 - All projects need to be in one tool
 - Visibility
 - Scrum of scrums needed to be sure changes are distributed among several groups
 - May have been too *agile* in the beginning

Summary

- Importance of using *agile* vs traditional change methodology
- Governance
 - Senior leadership approval
 - Business makes priorities, not IT or Informatics
- Use data to help business decide if work is valuable
 - Both before and after change

Summary

- Agile Principles
 - Satisfy quickly
 - Welcome changing requirements
 - Value individuals and interactions over processes and tools
 - Collaboration over comprehensive documentation
 - Respond to change versus following a plan
- Describe three benefits of *agile* methodology
 - Whole team meeting in real time
 - Work is in manageable units
 - Frequent delivery

Questions?



Contact information

- Jean Davis Palazzetti, MSN, MBA, HCM, RN

Senior Director Nursing Informatics

602-747-7538 | Jean.Palazzetti@bannerhealth.com