



Promised TAT as a Key Performance Indicator:

All the Secrets and Successes of Making it Work

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October 1, 2013

Why are we here...

- **Purpose:** To share insights learned by BloodCenter of Wisconsin's Diagnostic Laboratories on their humble journey, from selecting a meaningful metric to managing the data and translating this data into actionable opportunities for improvement.
- **Objectives**
 - Demonstrate how published turn-around-time (PTAT) is a reflection of the internal and external customer voice.
 - Share best practices of PTAT data management and customizing the metric to fit you and your customers' needs.
 - Explore the process of translating a static metric to a dynamic action plan/continuous improvement opportunity

Why are we here...

- **Take Aways**

- Insights into choosing a goal and metric based on the voice of the customer.
- Methods to utilize standard work in managing published turn-around-time (PTAT) metrics.
- The importance of recognizing why tests miss their PTAT, how to track this data, and ways to make data actionable.
- A mechanism to identify and ask for help in addressing road blocks to achieving PTAT goals.
- Real lessons learned regarding the challenges and successes around the implementation of percent made PTAT as a Key Performance Indicator (KPI).

BloodCenter of Wisconsin

Mission:

BloodCenter of Wisconsin advances patient care by delivering life-saving solutions grounded in unparalleled medical and scientific expertise.

Vision:

Together we will become the blood center without equal, discovering new ways to save more lives.

Values:

Excellence – To strive to be the best

Integrity – To bring honesty and responsibility to all we do

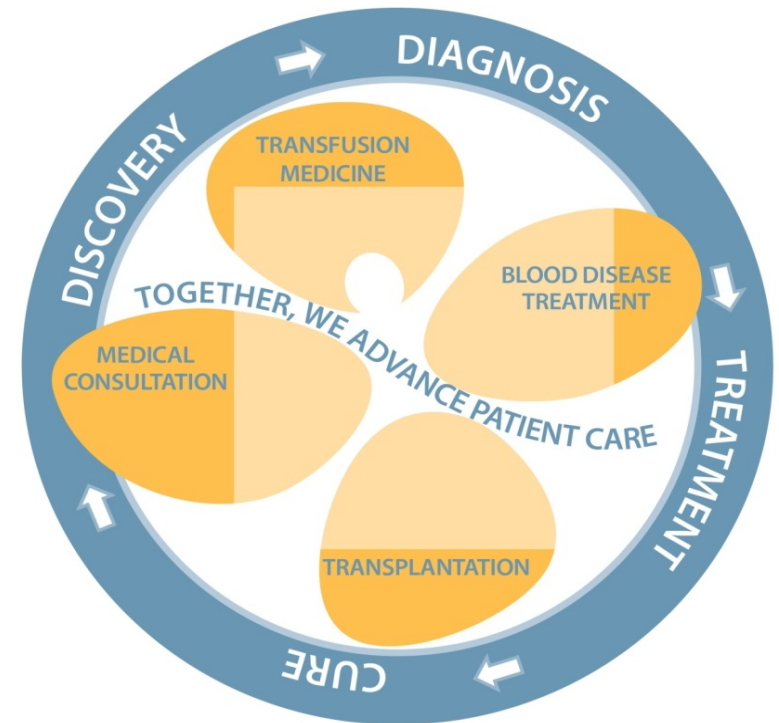
Learning – Dedication to acquire and share new knowledge and skills

Respect – To affirm each person's dignity and worth

Innovation – To create new knowledge and solutions

Service – To anticipate and exceed customer expectations

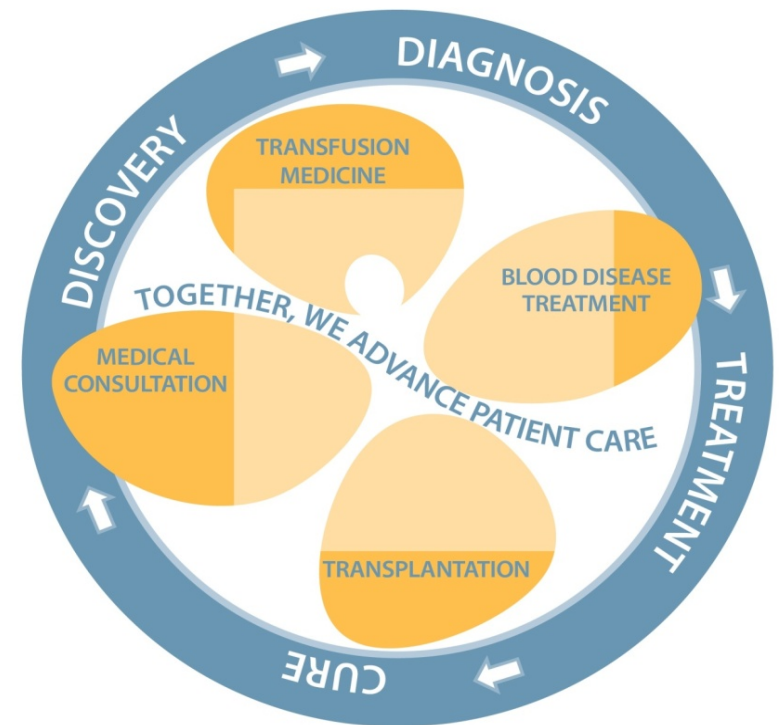
Serving patients and the community through our **Continuum of Care**



Multifaceted Care

- Blood Services
- Medical Science Institute
- Blood Research Institute
- Organ and Tissue Donation
- Diagnostic Laboratories

Serving patients and the community through our **Continuum of Care**



Diagnostic Laboratories

- Use innovative tests and unparalleled expertise to help physicians **deliver better care to the patient.**
 - Comprised of multiple areas of expertise
 - Hematology Lab (HEM)
 - Histocompatibility Lab (HLA)
 - Immunohematology Reference Lab (IRL)
 - Molecular Diagnostics Lab (MDL)
 - Molecular Oncology Lab (ONC)
 - Platelet Immunohematology Lab (PNIL)
 - Transfusion Services (located in Children's Hospital of Wisconsin)
-
- Product Development Lab
 - Applied Research Lab





One day Alice came to a fork in the road and saw a Cheshire Cat in a tree.

“Which road do I take?” she asked.

“Where do you want to go?” was his response.

“I don’t know,” Alice answered.

“Then,” said the cat, “it doesn’t matter.”

Excerpt from *The Adventures of Alice in Wonderland*

If you don't know where you are going, any road will get you there.

~Lewis Carroll

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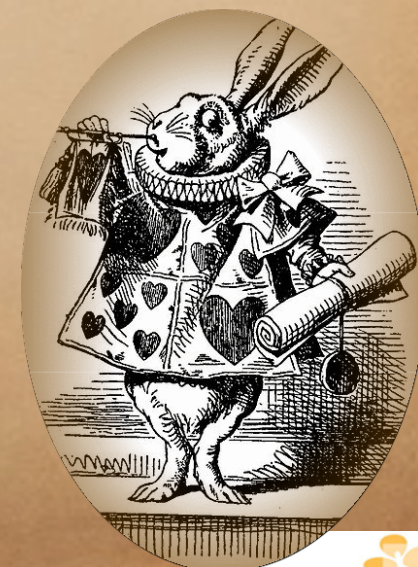
Chapter 6.....2013

Epilogue...

**Establish the Voice
of the Customer**

Take Action

**Monitor Progress
toward your Goal**



Find your foundation...

Everything we do starts and ends with **patient care**:



Establish the Voice of the Customer

- Define your customer
- Choose a tool to capture the voice of your customer. The tool should:
 - Capture the wants and needs of your customer
 - Assess the gap between your services and your customers' requirements
 - Be easily accessible to the customer



<http://www.b2bmarketing.net/>

Taking Action on What You've Heard and Learned

- Use the results of your assessment tool to **create a goal**
- Your Goal should:
 - Bridge the gap between the service you're currently providing and the needs of your customer
 - Be supported from the executive to the staff level
 - Be S.M.A.R.T.



<http://steampunkopera.wordpress.com>

S.M.A.R.T.

| | Your goal should be... | Or in other words... |
|---|------------------------|--|
| S | Specific | Goal should be clear and precise, not fuzzy and vague |
| M | Measurable | Goal should be tangible enough that it can be measured <u>simply</u> and with appropriate frequency <u>without significant effort</u> |
| A | Attainable | Set realistic goals. They shouldn't be so big that they seem impossible |
| R | Relevant | Set goals that challenge you but fit within the “bigger picture” of your Lab <u>and</u> DL <u>and</u> BCW |
| T | Timely | Make your goals fit into a manageable time frame. |

Approach goals with a “From _____ to _____ by _____” mentality.

Monitor your progress toward your goal

- Select a metric
 - Easy to manage
 - Quick to retrieve
- Display the metric
 - Reviewed frequently
 - Owned on the bench level
- Establish process to support progress toward the goal
 - Celebrate successes
 - Celebrate and learn from failures



http://www.nrepp.samhsa.gov/Courses/ProgramEvaluation/NREPP_0406_0070.html

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Voice of the **Customer** **TAT Metric**



Diagnostic Labs' Customer Feedback (VOC)

- VOC: 14% of customers said their TAT expectations were not met; Quick TAT is critical because it is needed to deliver timely and well-informed care to patients.
- Established Baseline: In Q4 of 2008, the Diagnostic Labs:
 - Met 83.4% of their published TAT
 - Had an overall average TAT of 4.2 days
- Identified Need: Focus on and improve on TAT
- Resulting Goal: Improve DL average TAT for results by 25%, from 4.20 days to 3.15 days by 12/31/2009.
- Metric: Average TAT in days

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Epilogue...

Capturing, Maintaining, and Displaying the Data



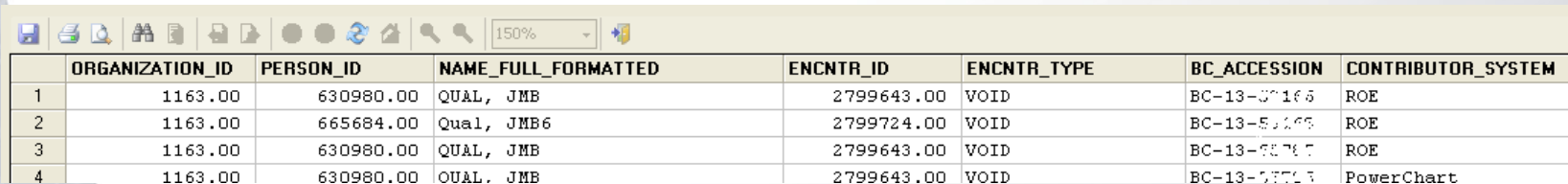
January 2009 – Defining the Metric

- Focus on DL impact
- **Start:** Sample receipt onsite
 - Paper requisition: Time of order entry
 - Interface: Time of sample receipt
- **End:** Results made available to client



January 2009 – Capturing the Data

- LIS System (Cerner) Report
 - Testing Lab
 - Test Name
 - Client
 - Patient Name and/or Accession Number
 - Contributor System (interface, manual, etc)
 - Order Date
 - Receipt Date
 - Completed Date




The screenshot shows a software interface with a toolbar at the top containing icons for file operations, search, and zoom (set to 150%). Below the toolbar is a table with 8 columns: ORGANIZATION_ID, PERSON_ID, NAME_FULL_FORMATTED, ENCNR_ID, ENCNR_TYPE, BC_ACCESSION, and CONTRIBUTOR_SYSTEM. The table contains 4 rows of data.

| | ORGANIZATION_ID | PERSON_ID | NAME_FULL_FORMATTED | ENCNR_ID | ENCNR_TYPE | BC_ACCESSION | CONTRIBUTOR_SYSTEM |
|---|-----------------|-----------|---------------------|------------|------------|--------------|--------------------|
| 1 | 1163.00 | 630980.00 | QUAL, JMB | 2799643.00 | VOID | BC-13-00165 | ROE |
| 2 | 1163.00 | 665684.00 | Qual, JMB6 | 2799724.00 | VOID | BC-13-50165 | ROE |
| 3 | 1163.00 | 630980.00 | QUAL, JMB | 2799643.00 | VOID | BC-13-00165 | ROE |
| 4 | 1163.00 | 630980.00 | QUAL, JMB | 2799643.00 | VOID | BC-13-00165 | PowerChart |

April 2009 – Managing the Data

“Pushing the button” 

Utilities Switchboard



TAT Analysis

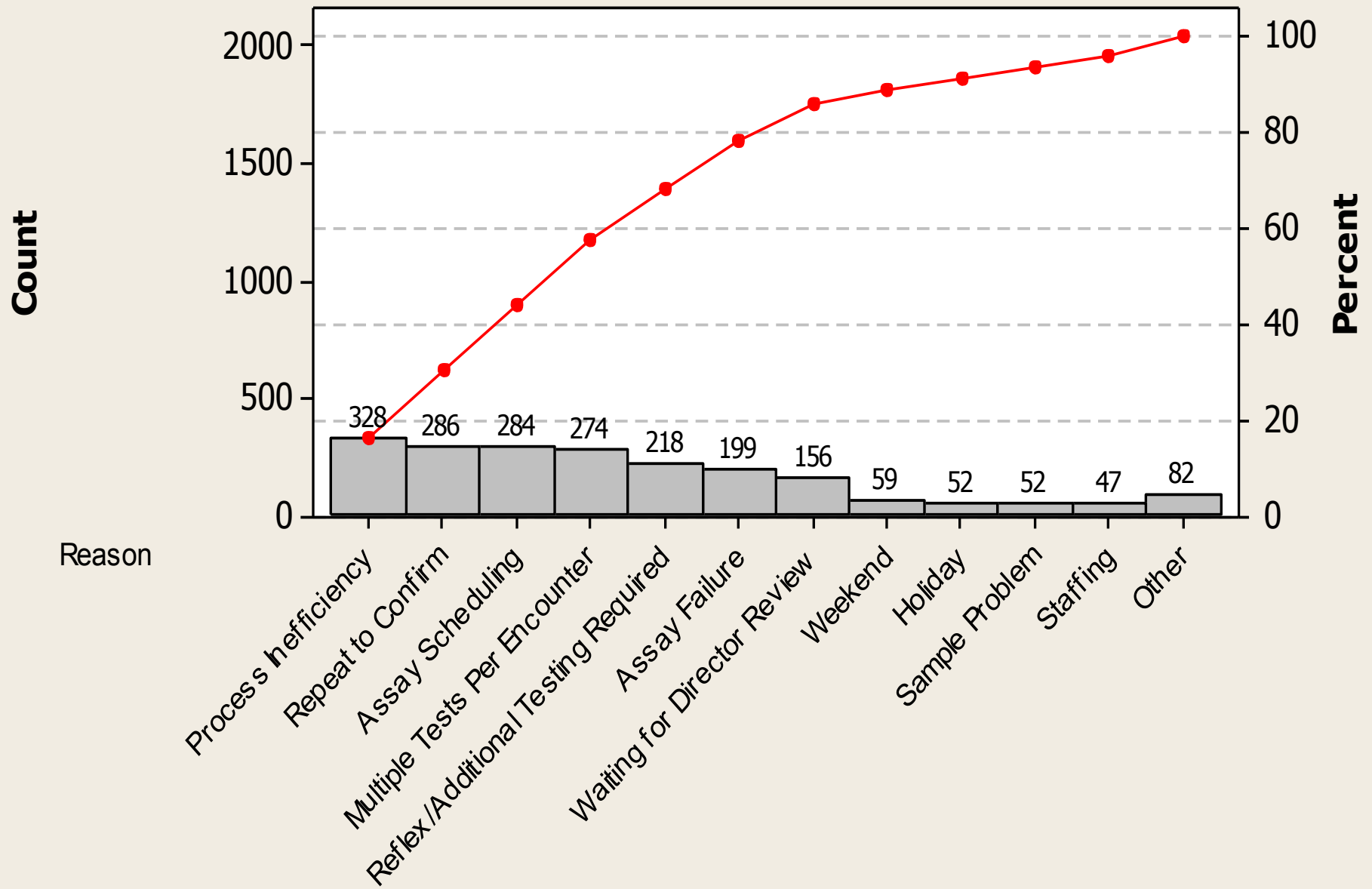
- ☐ Order Items Excluded from TAT Report
- ☐ Organizations Excluded from TAT Report
- ☐ Import Utilities
- ☐ Database Limitations
- ☐ Back

June 2009 - Reason Codes

- Lab staff began to enter pre-determined reason codes *for each test that missed* into the DL TAT Access Database
- Pareto the reason codes overall or by lab

| Reason Code | Reason |
|-------------|--------------------------------------|
| 1 | Assay Failure |
| 2 | Equipment/Instrument Failure |
| 3 | DNA Isolation Failure |
| 4 | Technologist Error |
| 5 | Order Entry Error |
| 6 | Supply/Supplier Problem |
| 7 | Process Inefficiency |
| 8 | Staffing |
| 9 | Repeat to Confirm |
| 10 | Waiting on Customer for Missing Info |
| 11 | Reflex/Additional Testing Required |
| 12 | Missed Run |
| 13 | Weekend |
| 14 | QLS Override |
| 15 | Waiting for Director Review |
| 16 | LabTest |
| 17 | Assay Scheduling |
| 18 | Holiday |
| 19 | Sample Problem |
| 20 | Minimum Batch Size Not Met |
| 21 | TAT Formula Error |
| 22 | TAT Formula Error - ARUP (interface) |
| 23 | Multiple Tests Per Encounter |

Pareto Chart of Reason Codes



2009 - Displaying the Metric

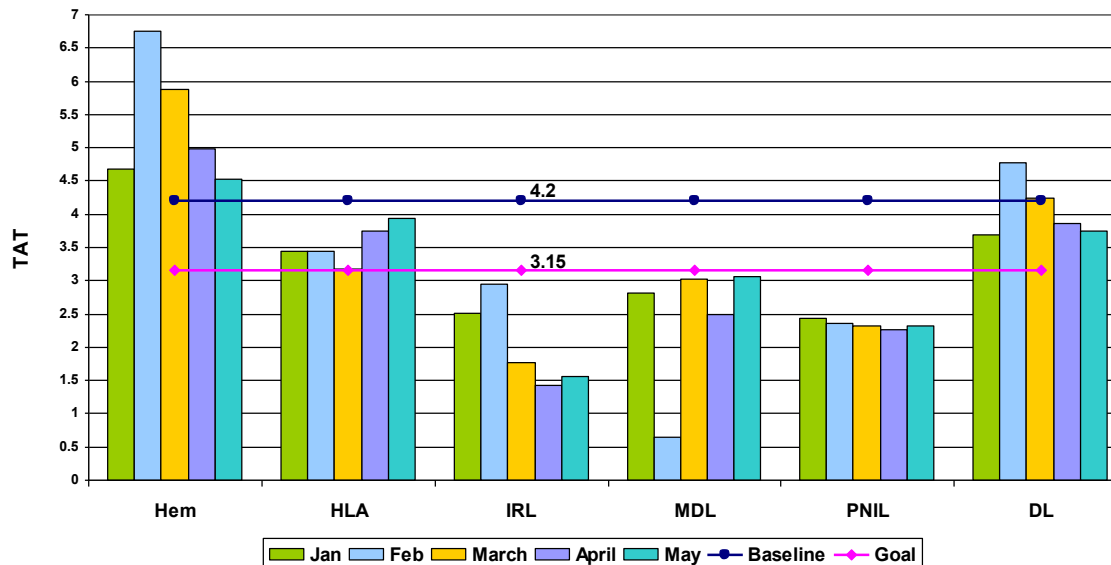
- Monthly summary
- Quarterly summary

| | | |
|-------------|--------|----------|
| Overall Lab | N= | 8168 |
| Av.TAT | % Made | % Exceed |
| 3.1 | 96.2 | 3.8 |

Average Exceed TAT= 9.8 days

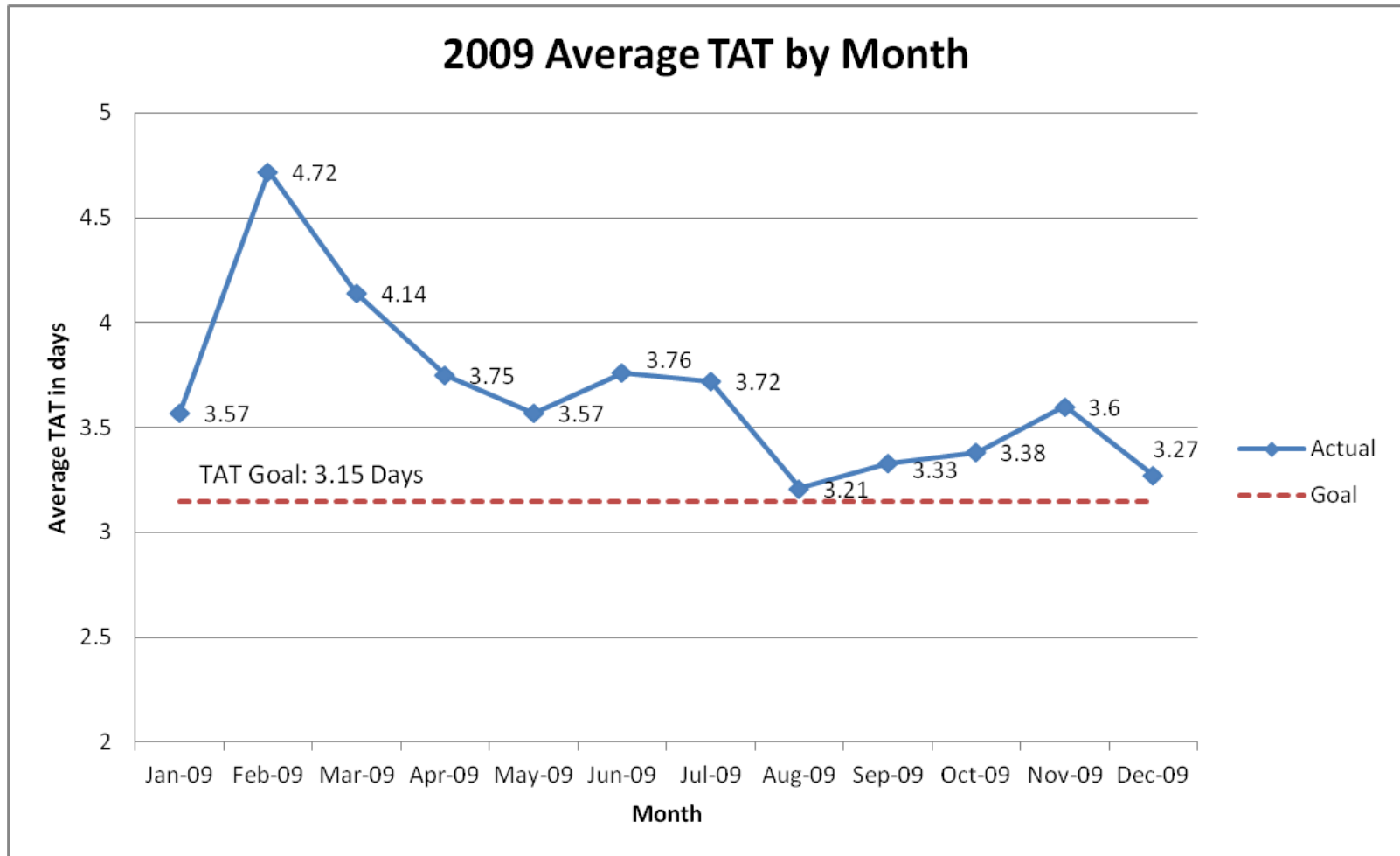
| Histo | Week Ending | YTD TAT | 2009 Goal | 2008 TAT | YTD Volume | 2008 Volume | Published TAT |
|------------------------|-------------|---------|-----------|----------|------------|-------------|---------------|
| HLA B Locus Sequencing | 7-Mar | 4.1 | 3.8 | 5.1 | 150 | 874 | 5-7 Days |
| HLA ABC Low Res Typing | 7-Mar | 3.8 | 2.9 | 3.9 | 151 | 1059 | 5-7 Days |
| HLA DRB DNA Sequencing | 7-Mar | 3.9 | 3.9 | 5.2 | 122 | 843 | 5-7 Days |
| HLA Ab Detection | 7-Mar | 2.0 | 2.2 | 2.9 | 512 | 2233 | 3 Days |
| HLA AB Low Res Typing | 7-Mar | 2.9 | 1.7 | 2.3 | 25 | 426 | 5-7 Days |

Diagnostic Labs Average TAT by Lab
January - May 2009

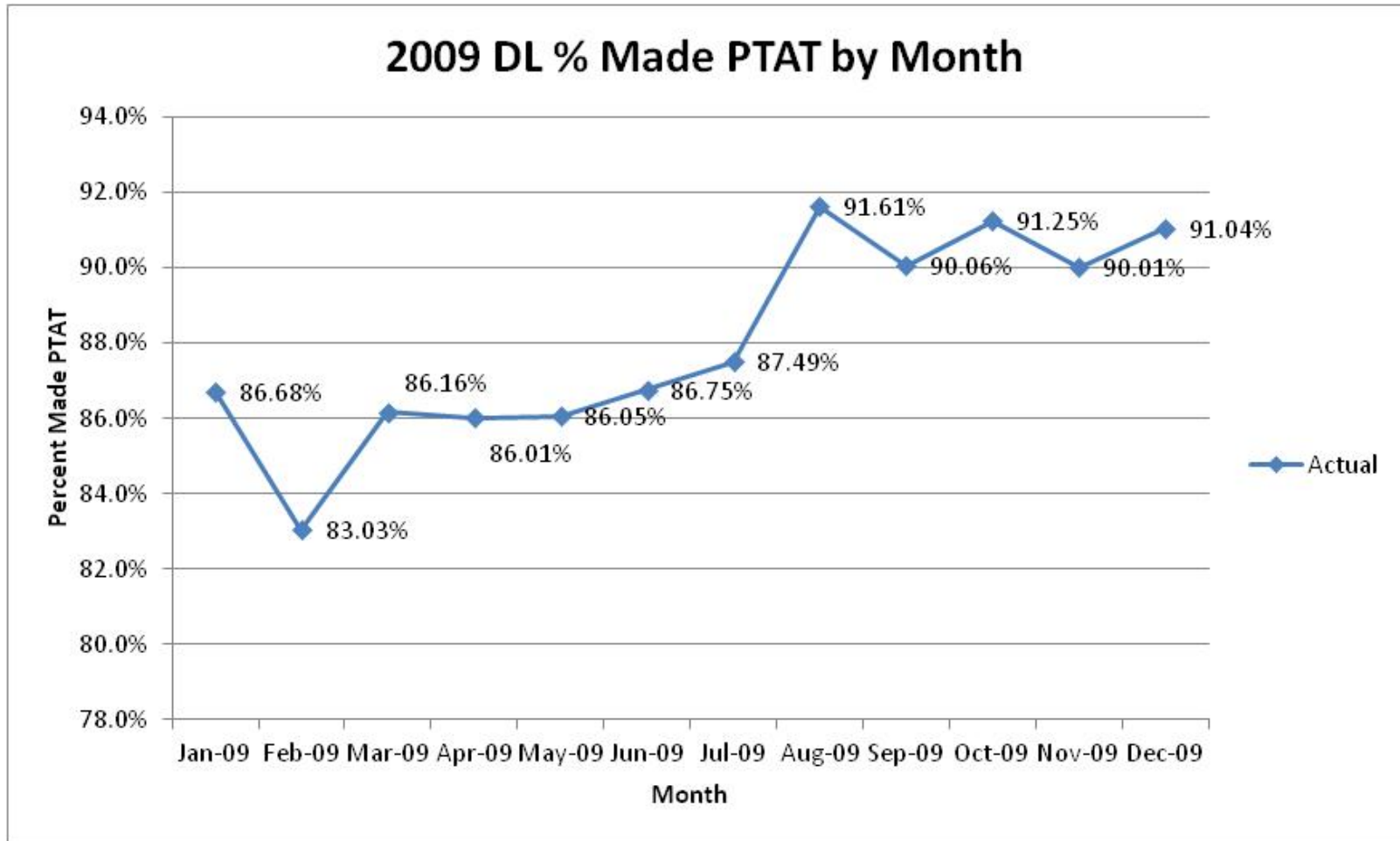


| | | | % PTAT |
|----------|-------------|-------|--------|
| HEM | Exceed TAT | 2031 | 83% |
| | Made TAT | 9905 | |
| | Total | 11936 | |
| HLA | Exceed TAT | 606 | 92% |
| | Made TAT | 6955 | |
| | Total | 7561 | |
| IRL | Exceed TAT | 608 | 69% |
| | Made TAT | 1350 | |
| | Total | 1958 | |
| MDL | Exceed TAT | 771 | 80% |
| | Made TAT | 2994 | |
| | Total | 3765 | |
| PNIL | Exceed TAT | 1378 | 80% |
| | Made TAT | 5659 | |
| | Total | 7037 | |
| DL Total | Exceed TAT | 5394 | 83% |
| | Made TAT | 26863 | |
| | Grand Total | 32257 | |

2009 DL Average TAT Line Chart



2009 % Made PTAT Line Chart



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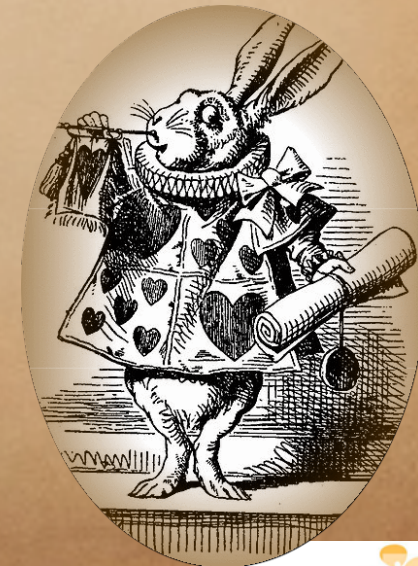
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Epilogue...

**Strategy
Deployment
Driving Progress
Adjusting the Goal**



- Launched Strategy Deployment
 - **Define** key strategic initiatives to establish growth
 - **Monthly** review of performance
 - **Track** performance using Key Performance Indicators (KPIs)
- Impact on TAT: Monitored as % Made PTAT



BLOODCENTER
of WISCONSIN™

2010 - Driving the Progress

Rewarding the Positive

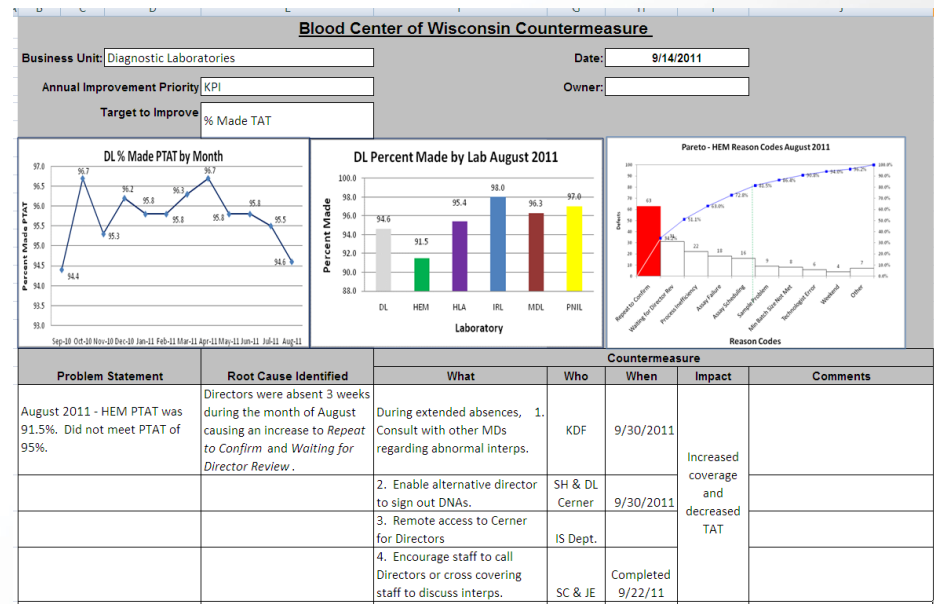
- Individually celebrated labs that made monthly goal in SD
- Individually awarded “Trophy” to lab with best 3 month rolling-average RA

| % Made | Jun-Aug |
|--------|---------|
| DL | 93.5 |
| HEM | 92.1 |
| HLA | 93.7 |
| IRL | 91.9 |
| MDL | 95.5 |
| PNIL | 95.2 |

MDL has the highest % Made PTAT

Enforcing Accountability

- Individually put labs that did not meet goal into Countermeasure



2010 - Driving the Progress

Benefits

- Fostered “healthy” competition between labs
- Drove the message of TAT at the staff level
- Helped get staff engaged in process improvements

Drawbacks

- One or two labs tended to win the bowl every month
- Didn’t consider the support teams helping to make the process improvements
- Monthly award intervals penalized the labs with long term solutions
- Enforced silos

2010 - Driving Progress

HLA Sequencing First Pass Yield - Six Sigma Project

- **Problem Statement:**

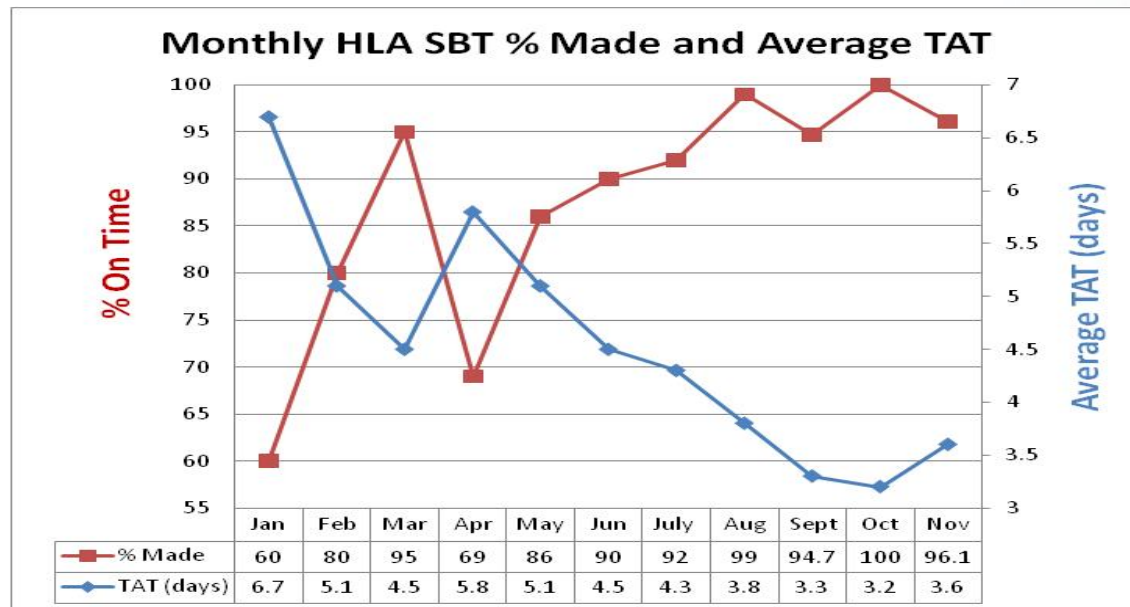
During the period from 2/12/10 to 7/16/10 the first pass yield for the HLA sequencing process was observed to be 57.9%

- **Objective Statement:**

Improve the HLA sequencing first pass yield from 57.9% to >80% by 7/30/10.

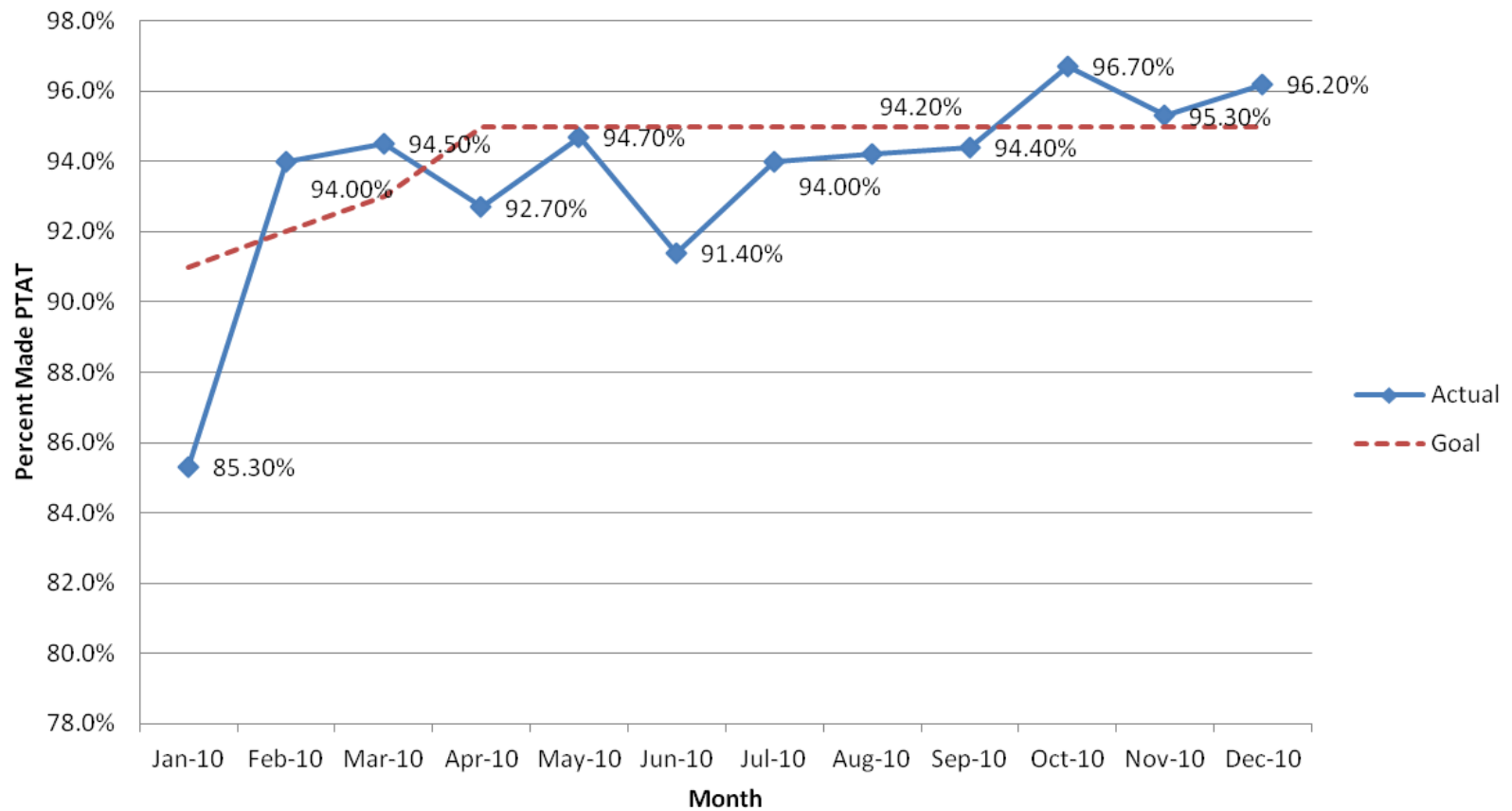
- **Primary Metric Definition:**

First Pass Yield – frequency of sample progression through the entire sequencing process without having any step repeated. This is correlated to the repeat rate for any of the individual sequencing assays



2010 – Adjusting the Goal

2010 DL % Made PTAT by Month



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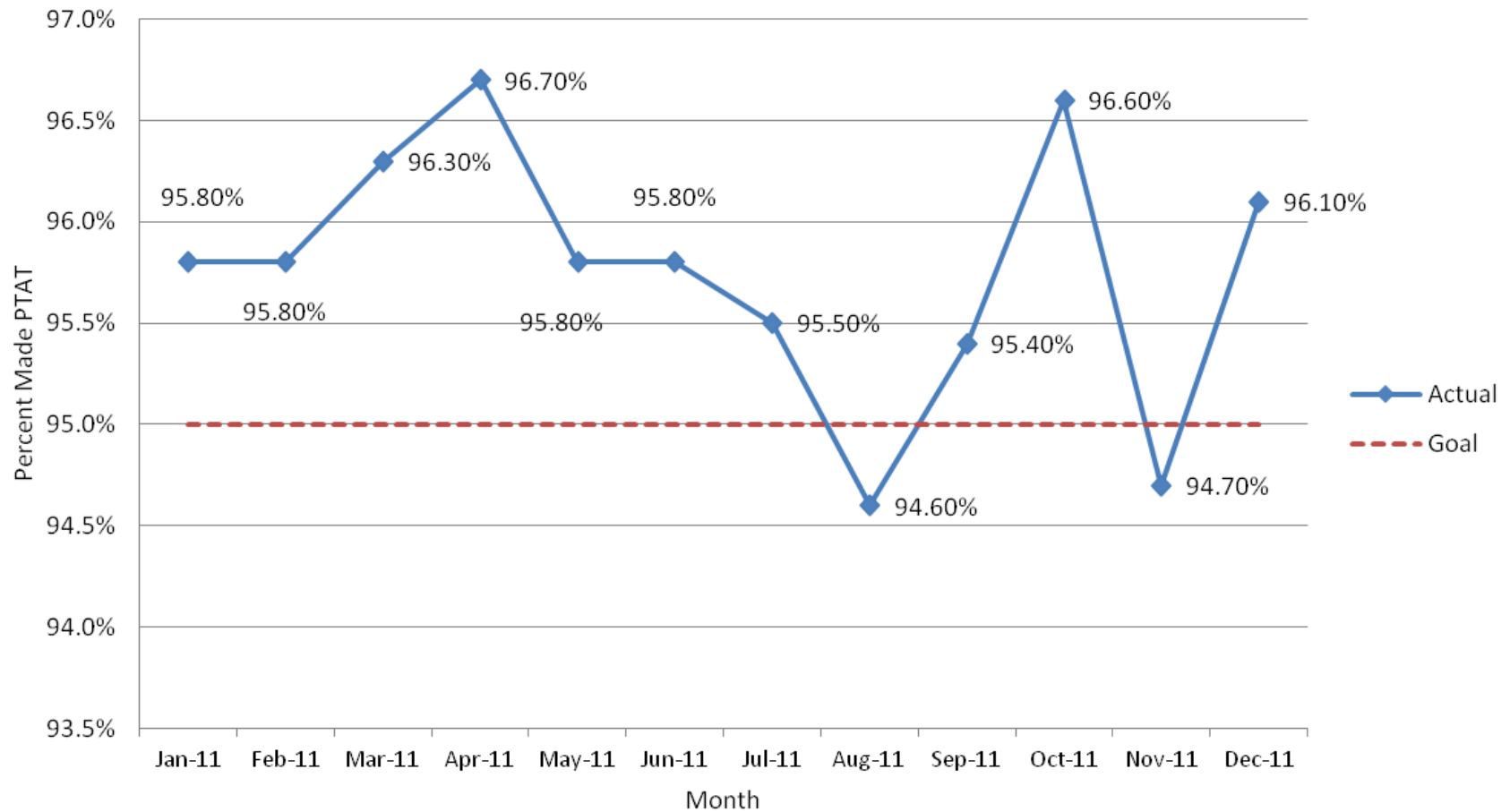
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Adjusting the Goal **Progress Check**



2011 – Adjusting the Goal

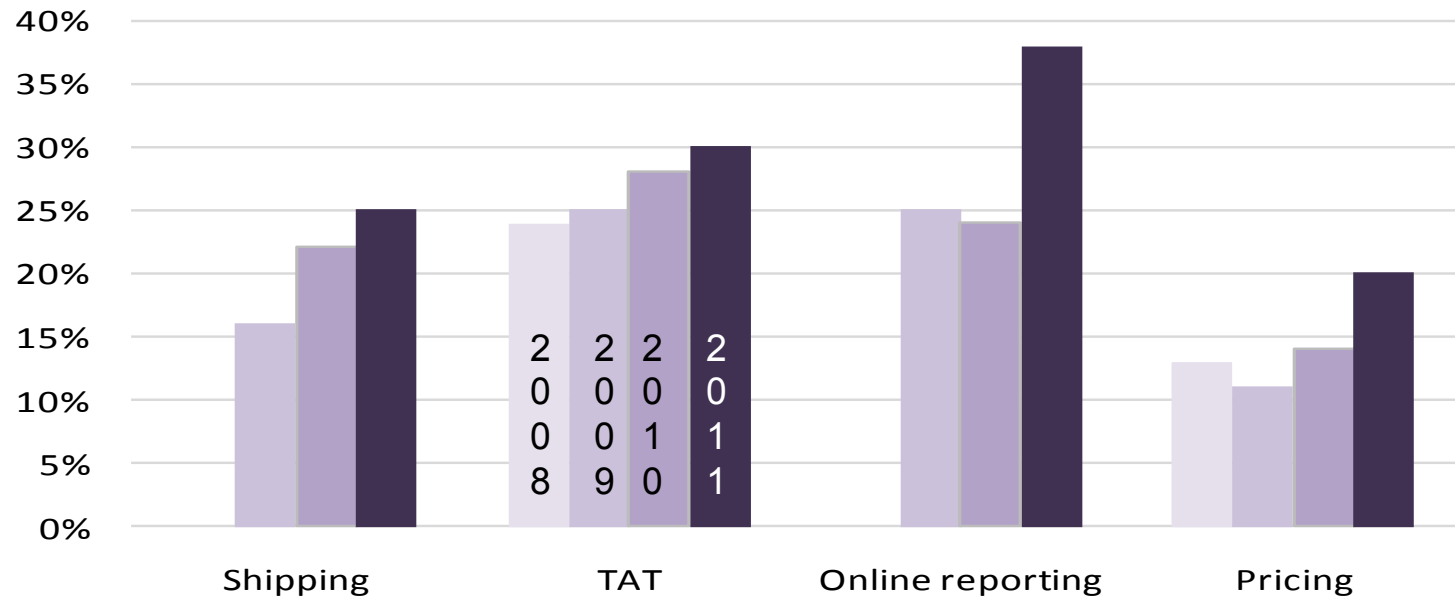
2011 DL % Made PTAT by Month



Survey result comparisons and trending

- Evidence of overall positive trending or improvement with shipping procedures, TAT, online reporting & pricing

"Exceeds expectations"



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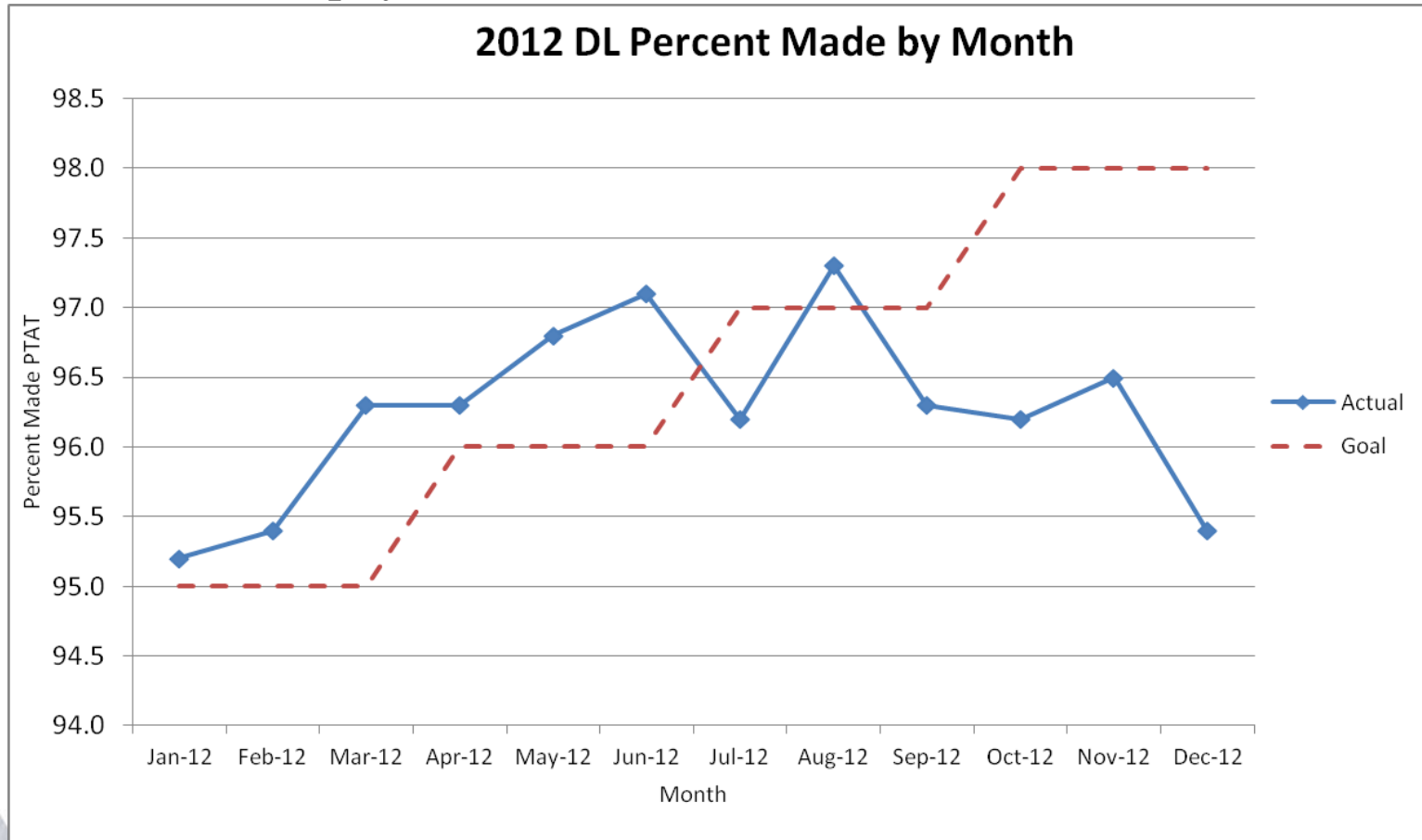
Epilogue...

Adjusting the Goal Weekly Pulse Monthly Report 2013 Planning



January 2012 – Adjusting the Goal

- Incremental increase in PTAT goal each quarter
- Ended the Trophy award



Weekly Pulse...

DL

| | |
|------------|-------|
| N | 2073 |
| TAT | 2.8 |
| % Made | 98.1% |
| % Exceed | 1.9% |
| # Made | 2033 |
| # Exceed | 40 |

HEM

| | |
|------------|-------|
| N | 668 |
| TAT | 3.2 |
| % Made | 98.4% |
| % Exceed | 1.6% |
| # Made | 657 |
| # Exceed | 11 |

HLA-Overall

| | |
|------------|-------|
| N | 479 |
| TAT | 3.9 |
| % Made | 97.5% |
| % Exceed | 2.5% |
| # Made | 467 |
| # Exceed | 12 |

HLA-SBT

| | |
|------------|--------|
| N | 179 |
| TAT | 4.0 |
| % Made | 100.0% |
| % Exceed | 0.0% |
| # Made | 179 |
| # Exceed | 0 |

IRL

| | |
|------------|-------|
| N | 34 |
| TAT | 1.5 |
| % Made | 94.1% |
| % Exceed | 5.9% |
| # Made | 32 |
| # Exceed | 2 |

MDL

| | |
|------------|--------|
| N | 100 |
| TAT | 2.9 |
| % Made | 100.0% |
| % Exceed | 0.0% |
| # Made | 100 |
| # Exceed | 0 |

ONC

| | |
|------------|--------|
| N | 92 |
| TAT | 5.7 |
| % Made | 100.0% |
| % Exceed | 0.0% |
| # Made | 92 |
| # Exceed | 0 |

PNIL

| | |
|------------|-------|
| N | 700 |
| TAT | 1.4 |
| % Made | 97.9% |
| % Exceed | 2.1% |
| # Made | 685 |
| # Exceed | 15 |

CCR

| | |
|----------------|-------|
| N | 45 |
| Avg TAT | 6.1 |
| %Made | 95.6% |
| %Exceed | 4.4% |
| #Made | 43 |
| # Exceed | 2 |

CCR data is already included in the individual and overall lab totals. This box breaks out the CCR data to give a snapshot of its impact on the overall DL total.

July 2012 – Monthly Report Modifications

One comprehensive DL report

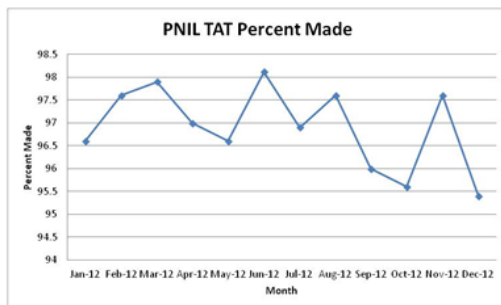
- Individual and overall laboratory dashboards
- Individual lab p-charts
- One section for each lab highlighting “top 3” tests

PNIL Monthly Turn Around Time (TAT) Report

Timeframe 12/01/2012 - 12/31/2012

Monthly
Overall PTAT

| DL | | PNIL | |
|---------|-------|---------|-------|
| N | 7345 | N | 2628 |
| Avg TAT | 3.3 | Avg TAT | 1.7 |
| %Made | 95.4% | %Made | 95.4% |
| %Exceed | 4.6% | %Exceed | 4.6% |
| #Made | 7010 | #Made | 2506 |
| #Exceed | 335 | #Exceed | 122 |

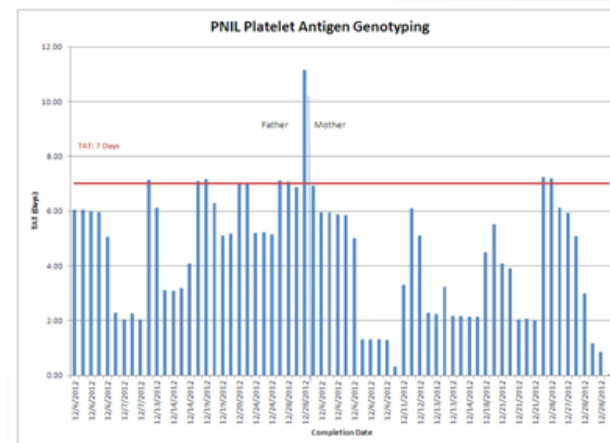
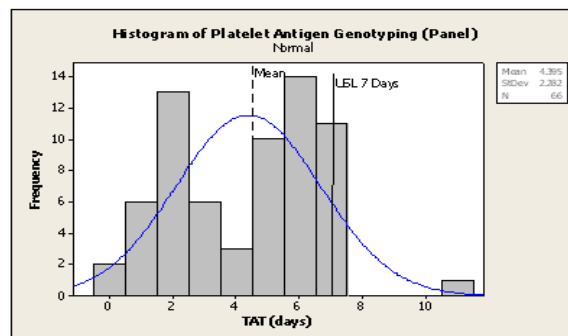


Summary:

In the month of December, PNIL completed 66 Platelet Antigen Genotyping panel tests. Of these 66, 10 (15.2%) exceeded the published TAT (PTAT) of 7 days.

Of the 65 tests completed in December, 21.2% were completed in 2.0 to 2.9 days, 25.8% 5.0 to 5.9 days, and 15.2% were completed in 7.0 or greater days. In sum, 84.8% were completed in less than 7 days.

Please see last month's report for more details:
[PNIL November TAT Report](#)



Top 3 Assay
Dashboard

| Crossmatch | | MACE | | Plt Atp Genotyping | |
|------------|---------|------------|---------|--------------------|------|
| N | 33 | N | 93 | N | 66 |
| Avg TAT | 2.9 | Avg TAT | 2.7 | Avg TAT | 4.4 |
| %Made | 100.0 | %Made | 100.0 | %Made | 84.8 |
| %Exceed | 0.0 | %Exceed | 0.0 | %Exceed | 15.2 |
| #Made | 33 | #Made | 93 | #Made | 56 |
| #Exceed | 0 | #Exceed | 0 | #Exceed | 10 |
| Avg Exceed | #DIV/0! | Avg Exceed | #DIV/0! | Avg Exceed | 7.5 |

NATP

The reason these three tests were selected was because each of them is part of the NATP test. Each of the three sections below contains a very high level overview of the three tests compared to last month's data.

| Test TAT Range (days) | # of tests resulted | % of Total Test | Cumulative % |
|-----------------------|---------------------|-----------------|--------------|
| < 1.0 | 3 | 4.5 | 4.5 |
| 1.0-1.9 | 5 | 7.6 | 12.1 |
| 2.0-2.9 | 14 | 21.2 | 33.3 |
| 3.0-3.9 | 6 | 9.1 | 42.4 |
| 4.0-4.9 | 3 | 4.5 | 47.0 |
| 5.0-5.9 | 17 | 25.8 | 72.7 |
| 6.0-6.9 | 8 | 12.1 | 84.8 |
| ≥ 7.0 | 10 | 15.2 | 100.0 |
| Total | 66 | | 100 |

Streamline the Calculations

| E31 fx | | |
|-------------|-----------------|--|
| A | B | C |
| | DL | |
| | N | =SUM(F3,I3,F11,L11,C11,I11) |
| | TAT | =AVERAGE("Clean Data"!G:G) |
| | % Made | =1-C6 |
| | % Exceed | =C8/C3 |
| | # Made | =SUM(F7,I7,F15,L15,C15,I15) |
| | # Exceed | =SUM(F8,I8,F16,L16,C16,I16) |
| | IRL | |
| | N | =COUNTIF("Clean Data"!A:A, "IRL") |
| | TAT | =AVERAGEIFS("Clean Data"!G:G, "Clean Data"!A:A, "IRL") |
| | % Made | =1-C14 |
| | % Exceed | =C16/C11 |
| | # Made | =C11-C16 |
| | # Exceed | =COUNTIFS("Clean Data"!\$A:\$A, "IRL", "Clean Data"!\$H:\$H, "exceed tat") |

Test Specific Formulas

| HEM | VWF Multimers | | VWF Antigen | | VWF Ristocetin | |
|-----|---------------|------|-------------|---------|----------------|---------|
| | N | 342 | N | 229 | N | 273 |
| | Avg TAT | 4.7 | Avg TAT | 2.5 | Avg TAT | 2.7 |
| | %Made | 98.8 | %Made | 100.0 | %Made | 100.0 |
| | %Exceed | 1.2 | %Exceed | 0.0 | %Exceed | 0.0 |
| | #Made | 338 | #Made | 229 | #Made | 273 |
| | # Exceed | 4 | # Exceed | 0 | # Exceed | 0 |
| | Av Exceed | 11.5 | Av Exceed | #DIV/0! | Av Exceed | #DIV/0! |

| | A | B | C |
|---|-----|----------------------|--|
| 1 | HEM | | |
| 2 | | VWF Multimers | |
| 3 | | N | =COUNTIFS('Monthly Data'!\$B:\$B, "*vwf multimer*", 'Monthly Data'!\$A:\$A, "Hem") |
| 4 | | Avg TAT | =AVERAGEIFS('Monthly Data'!\$G:\$G, 'Monthly Data'!\$A:\$A, "hem", 'Monthly Data'!\$B:\$B, "*vwf multimer*") |
| 5 | | %Made | =(C7/C3)*100 |
| 6 | | %Exceed | =100-C5 |
| 7 | | #Made | =C3-C8 |
| 8 | | # Exceed | =COUNTIFS('Monthly Data'!\$A:\$A, "HEM", 'Monthly Data'!\$H:\$H, "exceed tat", 'Monthly Data'!\$B:\$B, "*vwf multimer*") |
| 9 | | Av Exceed | =AVERAGEIFS('Monthly Data'!\$G:\$G, 'Monthly Data'!\$A:\$A, "HEM", 'Monthly Data'!\$B:\$B, "*vwf multimer*", 'Monthly Data'!\$H:\$H, "exceed tat") |

December 2012 - Planning for 2013

- Reviewed the KPI Goal
 - How S.M.A.R.T is it?

2012:

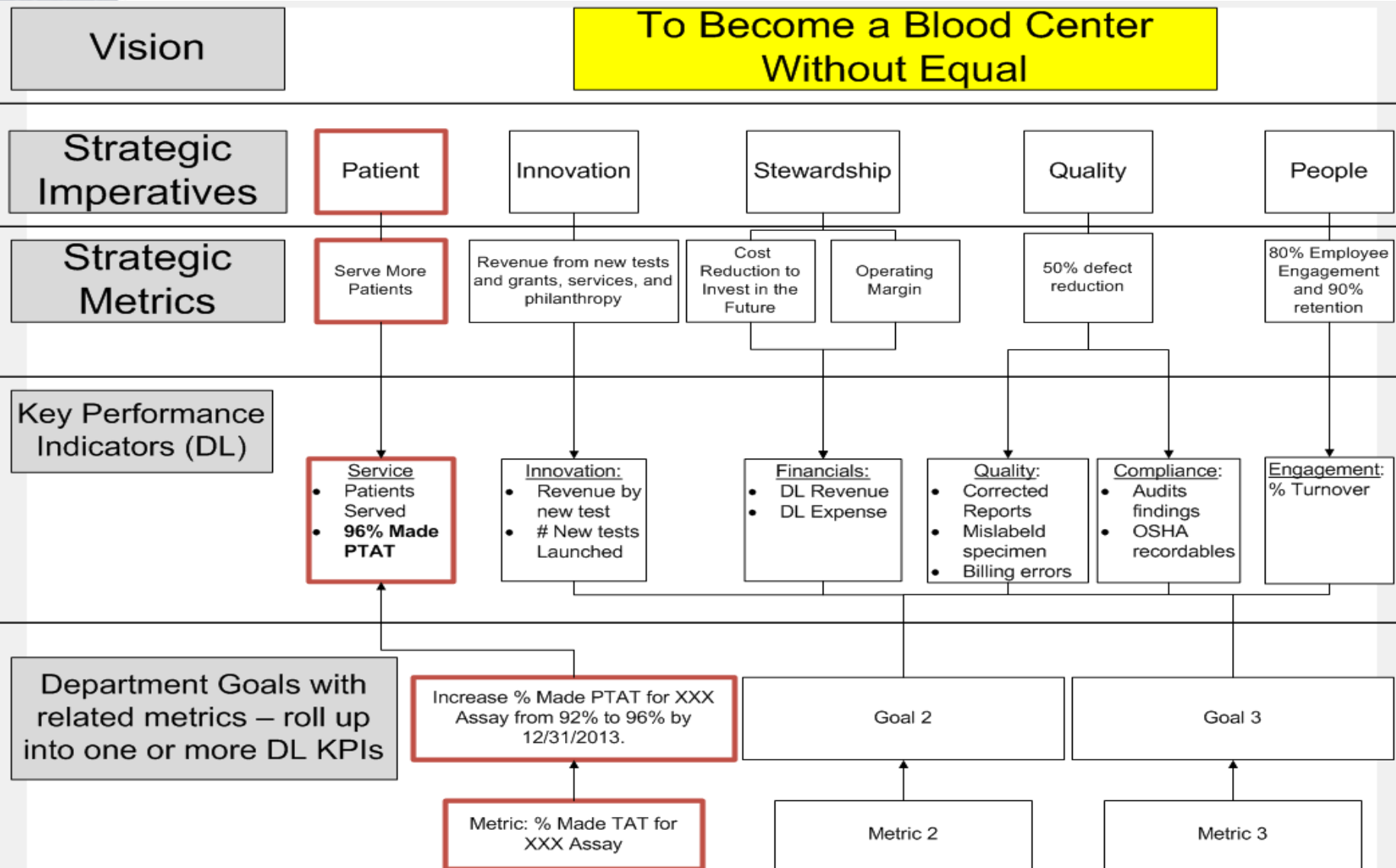
| | | | | | | | | | | | | | | | |
|-------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| % Made PTAT | Target | 98% | 95% | 95% | 95% | 96% | 96% | 96% | 97% | 97% | 97% | 98% | 98% | 98% | 98% |
| | Actual | 96.3% | 95.2% | 95.4% | 96.3% | 96.5% | 96.8% | 97.1% | 96.2% | 97.3% | 96.3% | 96.2% | 96.5% | 95.4% | 96.3% |

- Revised the goal
- Established unified approach to tracking and countermeasure

2013:

| | | | | | | | | | | | | | | | |
|-------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-----|-----|-----|-----|-------|
| % Made PTAT | Budget | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% | 96% |
| | Actual | 97.4% | 94.9% | 97.4% | 97.1% | 97.5% | 97.2% | 96.6% | 96.4% | | | | | | 96.7% |

Introduction of the “Alignment Diagram”



December 2012 - More planning for 2013

- Conducted our first Operational Retreat
- Launched Huddle System in DL
- Built a new Support Analyst Team
 - Centralized data analysis
 - Comprehensive approach



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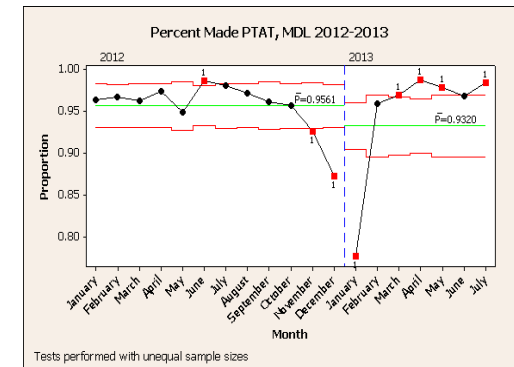
Epilogue...

Monthly Reports **SD Presentation** **Reason Code Guide**



January 2013 - Monthly Reports

- Overall Made PTAT p-Chart
- Individual and overall laboratory dashboard
- Analysis
- Overall reason code table
- Individual lab p-Charts
- Individual lab reason codes



Individual Lab Dashboard

All of the tan boxes below include CCR data in the counts, except where noted.

| | | |
|--|--|--|
| DL N 8241 Avg TAT 3.2 %Made 96.4% %Exceed 3.6% #Made 7948 #Exceed 293 | HEM N 2762 Avg TAT 4.0 %Made 96.5% %Exceed 3.5% #Made 2665 #Exceed 97 | HLA N 1981 Avg TAT 4.1 %Made 96.6% %Exceed 3.4% #Made 1913 #Exceed 68 |
| IRL N 139 Avg TAT 1.6 %Made 87.8% %Exceed 12.2% #Made 122 #Exceed 17 | MDL N 424 Avg TAT 3.3 %Made 98.3% %Exceed 1.7% #Made 417 #Exceed 7 | ONC N 298 Avg TAT 5.0 %Made 99.0% %Exceed 1.0% #Made 295 #Exceed 3 |
| PNIL N 2637 Avg TAT 1.4 %Made 96.2% %Exceed 3.8% #Made 2536 #Exceed 101 | CCR (GSK) N 99 Avg TAT 4.4 %Made 100.0% %Exceed 0.0% #Made 99 #Exceed 0 | DL w/o CCR N 8142 Avg TAT 4.1 %Made 96.4% %Exceed 3.6% #Made 7849 #Exceed 293 |

Analysis

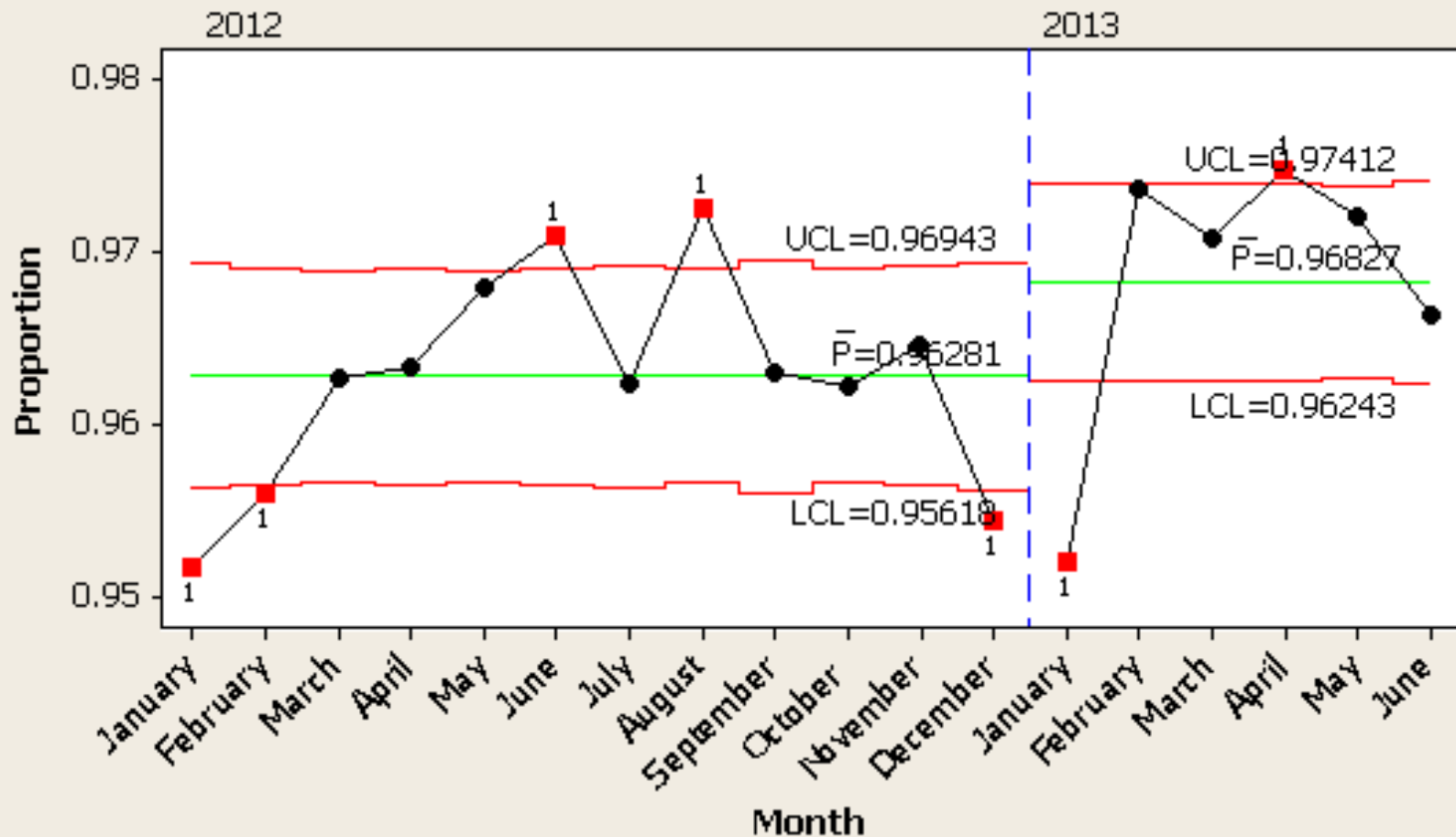
The PTAT for DL in July was similar to June's (96.6%), but down compared to the PTAT average for February to May (97.3%). Although DL is in control on its P-Chart, the last three months, including July, are trending downward.

The two most frequently used reason codes were "Repeat to Confirm" and "Multiple assays per an encounter". Combined, these two reason codes made up 40% of 291 reason codes entered by staff.

| Row Labels | Failed test- Repeated on next run | Repeated E/e on next run/WkD type 4 | Weekend | Grand Total |
|--------------------|---|--|----------|-------------|
| RCG Common | 6 | 2 | 1 | 9 |
| DAT-Neg | | | 3 | 3 |
| RCG Variant | | | 2 | 2 |
| RhD Study | | | 1 | 1 |
| Cold Autoantibody | | | 1 | 1 |
| HTLA | | | 1 | 1 |
| Grand Total | 6 | 2 | 9 | 17 |

January 2013 - Strategy Deployment Presentation

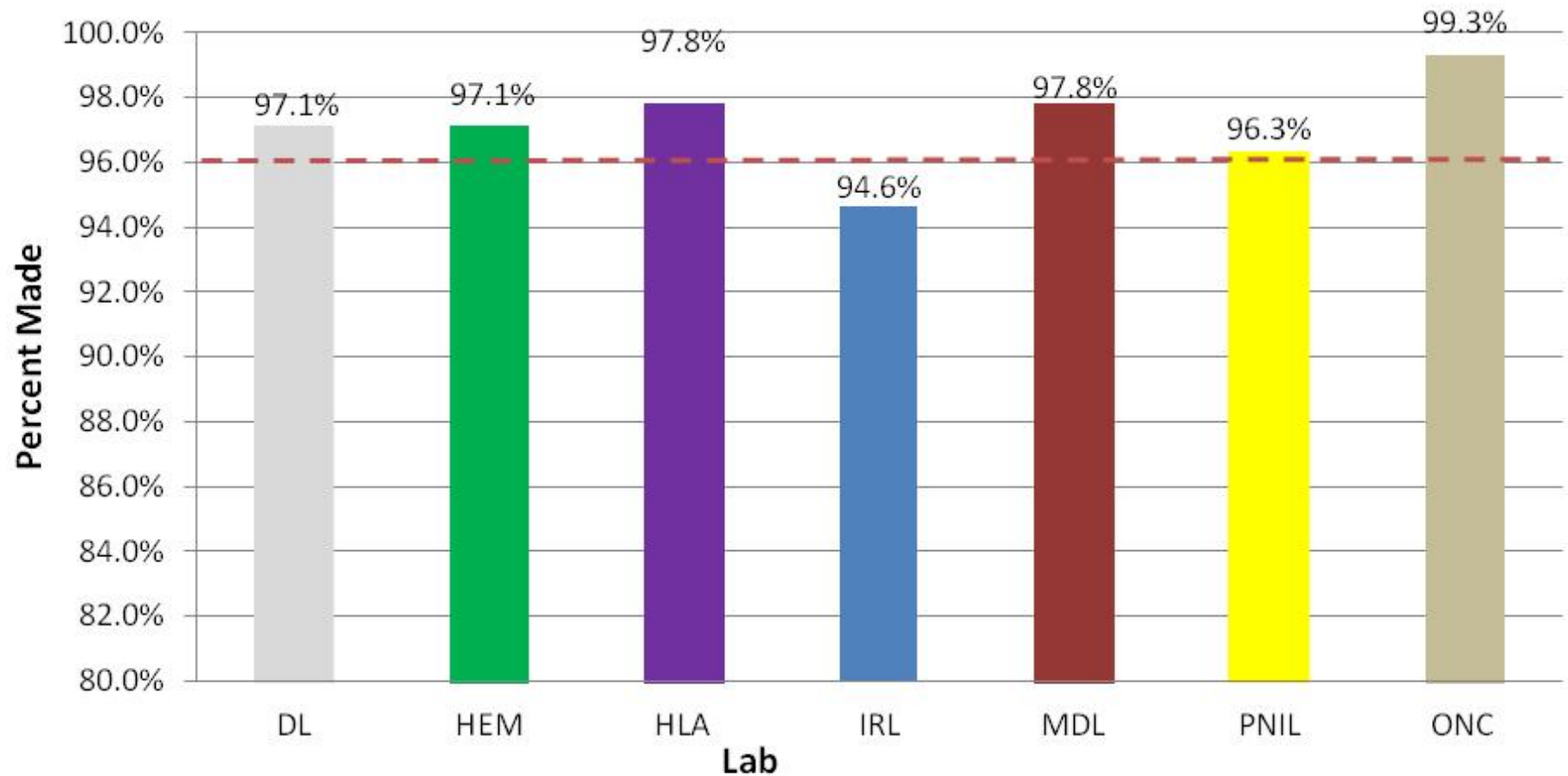
Percent Made, DL 2012 - 2013



Tests performed with unequal sample sizes

DL % Made PTAT 3 Mo RA

DL % Made PTAT by Lab 3 Mo RA (April 2013 - June 2013)



Calculation Updates

- **HLA Flow Cytometric Crossmatch and QLS Override**
 - Turned on to accommodate FRD data request
 - Not historically included and currently deleted from the data set
- **Meeting with RC users on July 8th**
 - New RC to be added
 - Will start to see in July's data

April 2013 - Reason Code Guide

- Input from user group
- Consolidated codes that were similar
- Assigned a definition for consistency in coding
- Revisit the guide quarterly

| Reason Code | Reason | Definition |
|-------------|---|--|
| 1 | Assay Failure | Entire assay failure due to controls, calibrator, or technical error (i.e. QC failure). |
| 2 | Equipment/Instrument Failure | Test completion delayed due to equipment or instrument failure. |
| 5 | Order Entry Error | Test was ordered incorrectly by BCW or client. |
| 6 | Supply/Supplier Problem | Test held because of a supplier or supply problem such as backordered reagents, bad lot number, or bad batch of kits. |
| 7 | Process Inefficiency | Testing is delayed due to a problem in or deviation from the process, such as misplaced paperwork or samples or delayed "send out" testing ("send out" testing refers to reference labs outside of BCW). |
| 8 | Staffing | Not enough staff to complete testing due to PTO, illness, or extended leave. |
| 9 | Repeat to Confirm | Repeating a sample or samples based on a defined set of rules or by director request. |
| 10 | Waiting on Customer for Missing Info | Client provided an incomplete requisition and testing must be delayed until required information is gathered. |
| 11 | Reflex/Additional Testing Required | Additional testing on a sample or samples that involves a change in method or reagent compared to the original run. |
| 15 | Weekend | Testing is delayed because staff is not scheduled on weekend or assay is not run on weekend. |
| 16 | QLS Override | IGNORE |
| 17 | Waiting for Director Review | Problem or routine case that is waiting on director review and/or signature before it can be completed. |
| 19 | Assay Scheduling | Sample received on a day or at a time that it missed the scheduled start of an assay. |
| 20 | Holiday | Sample(s) arrived on or around a BCW holiday. |
| 21 | Sample Problem | Sample that delays testing due to reasons related but not limited to insufficient amounts, incorrect sample type, and/or sample integrity. |
| 22 | Minimum Batch Size Not Met | Sample held for next test run because there were not enough samples to justify a run. |
| 23 | TAT Formula Error | Test that, in reality, did not miss the published TAT. Error was due to an incorrect TAT calculation involving Labtest or immediate order in the database. Applies primarily to HEM Interp and Comments. |
| 25 | Multiple Tests Per Encounter | Test or group of tests that is waiting on results from another part of the group. This test(s) cannot be reported until the other(s) is completed. |
| 27 | Waiting on results from another BCW Lab | PTAT is exceeded because reporting lab was waiting for results of testing performed by another BCW lab. |

April 2013 - Reason Codes in the SD Presentation

| Reason Code | HEM | HLA | IRL | MDL | ONC | PNIL | Grand Total | % of Codes |
|--------------------------------------|------------|-----------|----------|-----------|----------|-----------|-------------|------------|
| Process Inefficiency | 24 | 8 | | | | 12 | 44 | 15.4% |
| Multiple Tests Per Encounter | 27 | 16 | | | | | 43 | 15.1% |
| Waiting for Director Review | 26 | 5 | 3 | 4 | 4 | | 42 | 14.7% |
| Reflex/Additional Testing Required | 5 | 9 | | 7 | | 17 | 38 | 13.3% |
| Repeat to Confirm | 27 | 3 | | 1 | 2 | 2 | 35 | 12.3% |
| Assay Failure | | | 1 | | | 26 | 27 | 9.5% |
| Assay Scheduling | 2 | | | | | 22 | 24 | 8.4% |
| TAT Formula Error - Labtest | 11 | | | | 1 | | 12 | 4.2% |
| Sample Problem | 7 | | | | | 3 | 10 | 3.5% |
| Weekend | 3 | | 5 | | | | 8 | 2.8% |
| Supply/Supplier Problem | | | | | | 1 | 1 | 0.4% |
| Waiting on Customer for Missing Info | | | | | | 1 | 1 | 0.4% |
| QLS Override | | 20 | | | | | 0 | 0.0% |
| Total | 132 | 41 | 9 | 12 | 7 | 84 | 285 | |

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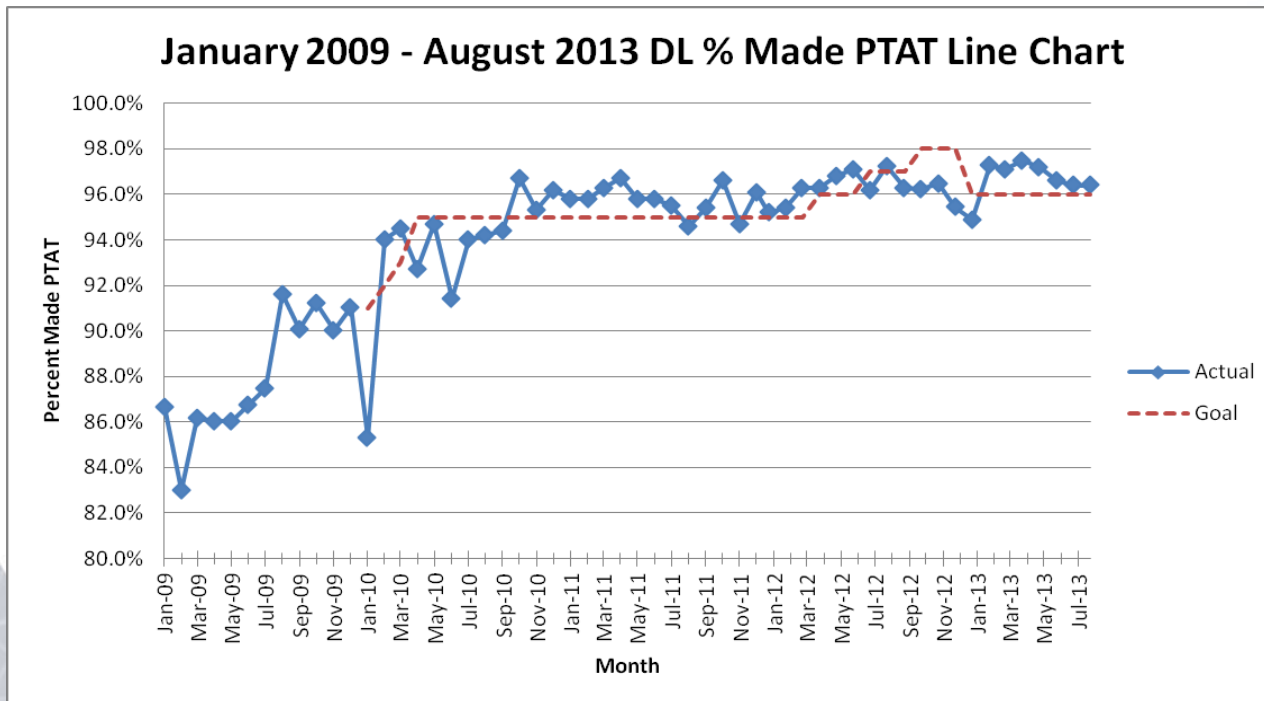
Epilogue...

2014 Planning and Beyond...



2014 Planning and Beyond...

- Improved ways of capturing the customer voice real-time
- Raising the bar– dropping published TAT (PTAT) while continuing to meet our goal of % made
- Serving 24/7 customer operations as an esoteric laboratory
- Alignment of Strategic and Operational Goals
- Lowering the published TAT



The secret to making TAT work as a KPI...

1. Establish the voice of the Customer
 - Define your customer
 - Know where you are going
2. Set a goal
 - SMART
 - Supported from the top down and bottom up
3. Monitor progress toward the goal
 - Select a metric
 - Display the progress
 - Establish a process to support progress

What we think we did well –

- **From the beginning:**
 - Captured the customer voice
 - Selected an actionable goal based on customer feedback
 - Enrollment of DL and Corporate support groups from the beginning
 - Centralized team with protected resources to “own” launch and support
- **Along the way:**
 - Simplified the metric
 - Centralized team to standardize and report the metric
 - Used lessons learned to regroup our goal each year
 - Continuously challenged the labs and each other
 - Realized the importance of and included Contract Research in TAT
 - Used operational retreat to ground operations around KPIs

What we think we could have done better -

- Initiated goal planning earlier in the year
- Grounded our goals and focused on alignment from the beginning
- Refrained from overloading on too many metrics and projects at once
- Established clear agreement on how to measure and measure consistently
- Rolled out standard work from the beginning



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Helpful Sites

- **Needs Assessment Tools:** <http://www.needsassessment.org/>
- **Program Evaluations:** http://www.nrepp.samhsa.gov/Courses/ProgramEvaluation/NREPP_0401_0010.html
- **Tag Clouds:** <http://tagcrowd.com/>
- **SMART Goals Template:** <http://hrp.stanford.edu/documents/SMARTGOALSTemplate2012.doc>
- **Alice in Wonderland Images** (unless otherwise noted): <http://fromoldbooks.org>