



SIGNATURE
HEALTHCARE

Signature Healthcare

CHART GRANT

06/04/2014



Signature Healthcare

- Brockton based integrated hospital and medical group
- Population management- Medicare Advantage; Blue Cross HMO; Harvard Pilgrim; BMC; Medicaid
- DSTI Hospital



Thank You

- CHART is Helping Signature:
 - Meet Triple Aim
 - Continue Transformation from FFS to Population Health
 - Maximize Value of Integrated System
 - Innovate in community with many health challenges.



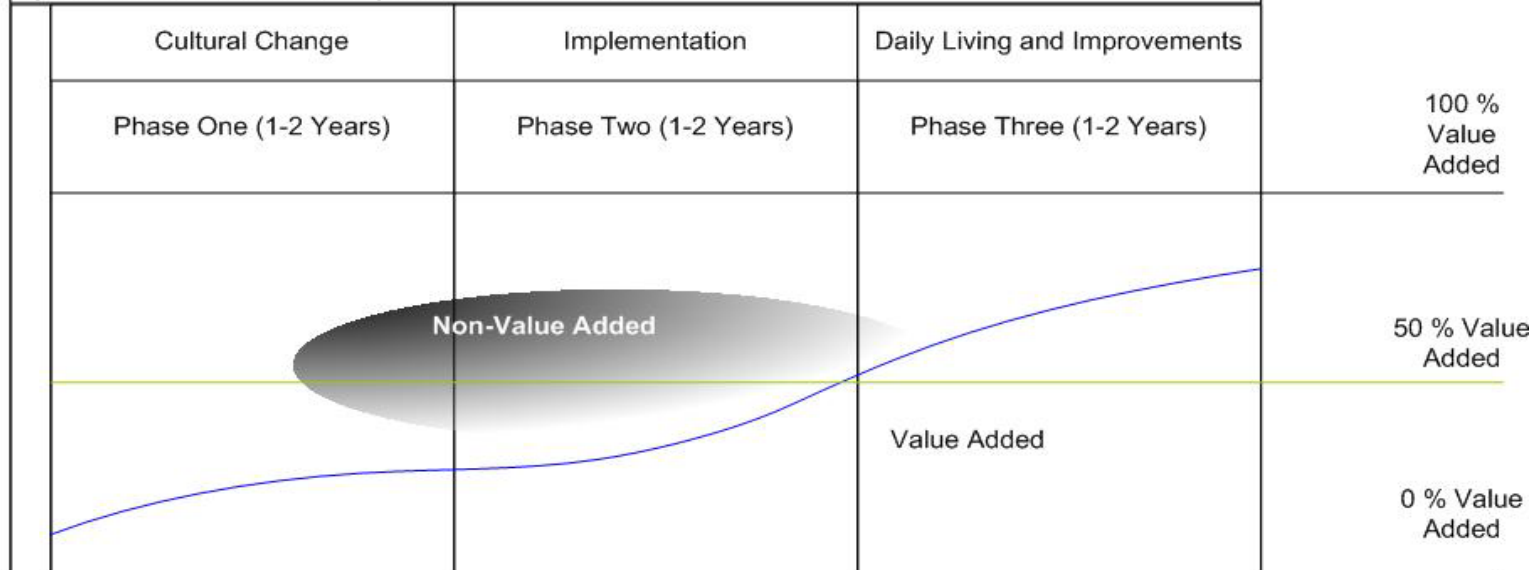
Foundation for Current CHART grant

- High-Reliability Health Care: Getting There from Here; Mark R. Chassin and Jerod M. Loeb, The Milbank Quarterly Vol. 91 2013
 - Safety Culture
 - Robust Process Improvement
 - Leveraging Technology for Safety and Quality



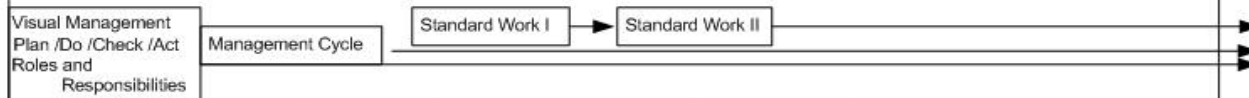
Robust PI

Operational Excellence Implementation Phases



Level A	Level B	Level C	Level D	Level E	Level F
Why OE? Change Management Steering Committee	Organizational Strategy	One-Page Report Perfect Attendance	TPM Intro to QC Circle	Proposal Writing Conflict Management	Job Rotation Outside Supplier (JIT)
BSC / Master Planning Communications Plan Suggestion System	Teamwork Pilot Hall Kanban I Andon I	One Piece Flow Meeting Facilitation Effective Listening Problem Solving II	Kanban II Andon II Customer Chain Job Relations	Project Management QC Circle Promotion	Inventory Turns Organization for Future 2 QC Circles per year Management Development
Safety Problem Solving I Work Place Organization		Infrastructure Strategy			

foundations



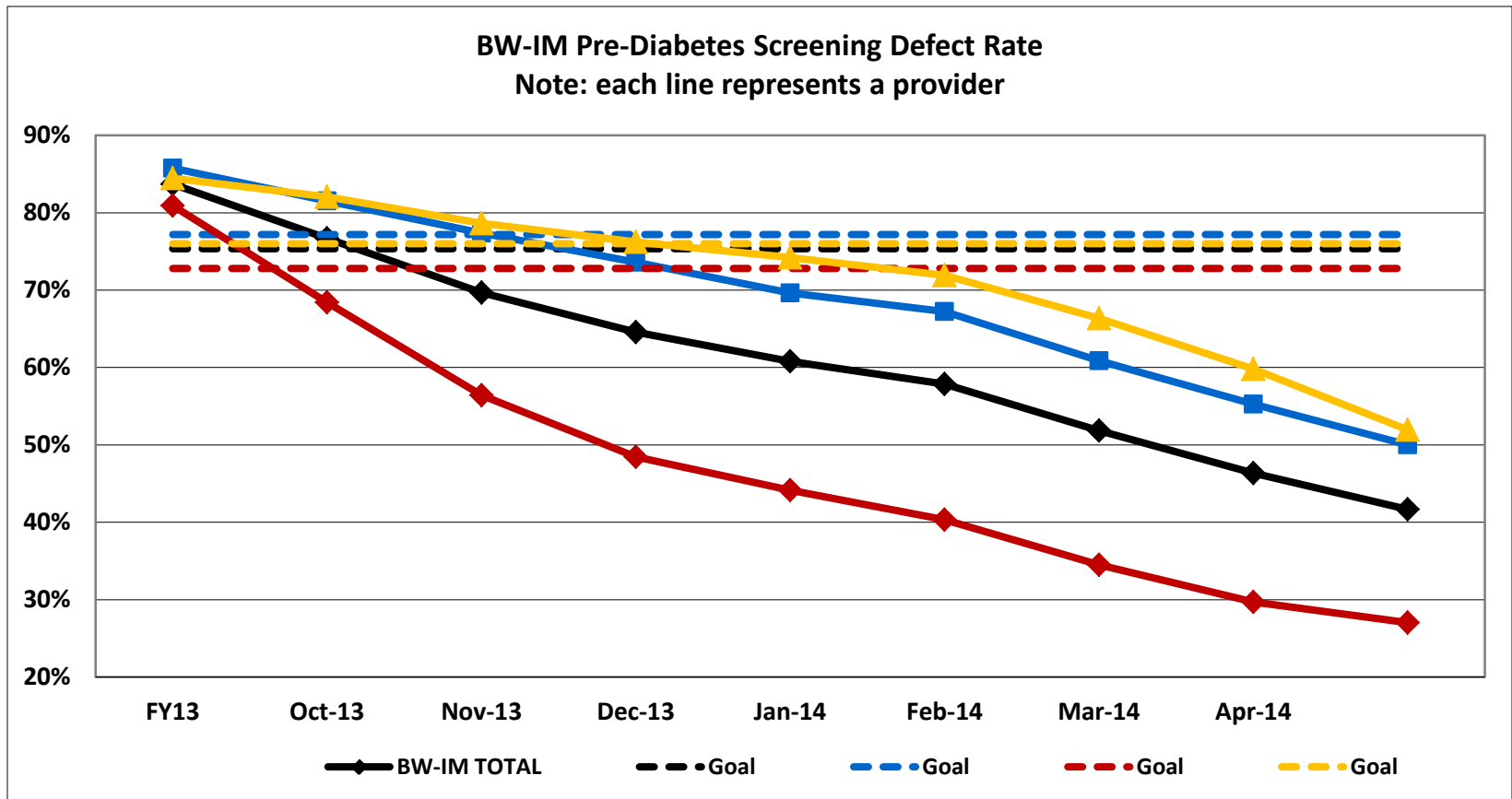


Lean Improvements

- Examples:
 - Employee injury OSHA RIFR down from 8 to 2.91
 - Numerous Infection prevention improvements: Zero VAP or UTI in CCU for 2 years; Zero CLABSI on adult units 3 years; Zero Hip, Knee or Bariatric Surgery infections over 2 years.
 - 16% reduction in patient falls
 - 25/29 Medicare Core measures in top 10% nationally
 - Raynham physician cancer screening defect reduction this year improved by 82%
 - Door to Cath Lab open heart vessel down 22%
 - Medicaid readmits decrease this year over 25%
 - Hospital patient satisfaction response of hospital staff improved each of past three years for a total improvement of 26%
 - Annualizing 3900 Implemented suggestions this year
 - Bridgewater IM reduced defects in pre-diabetic screening by 50% this year with 15% of patients reducing weight by over 5% in first quarter of initiative with Old Colony Y
 - Complex Elderly clinic reduction in ED visits and inpatient admissions

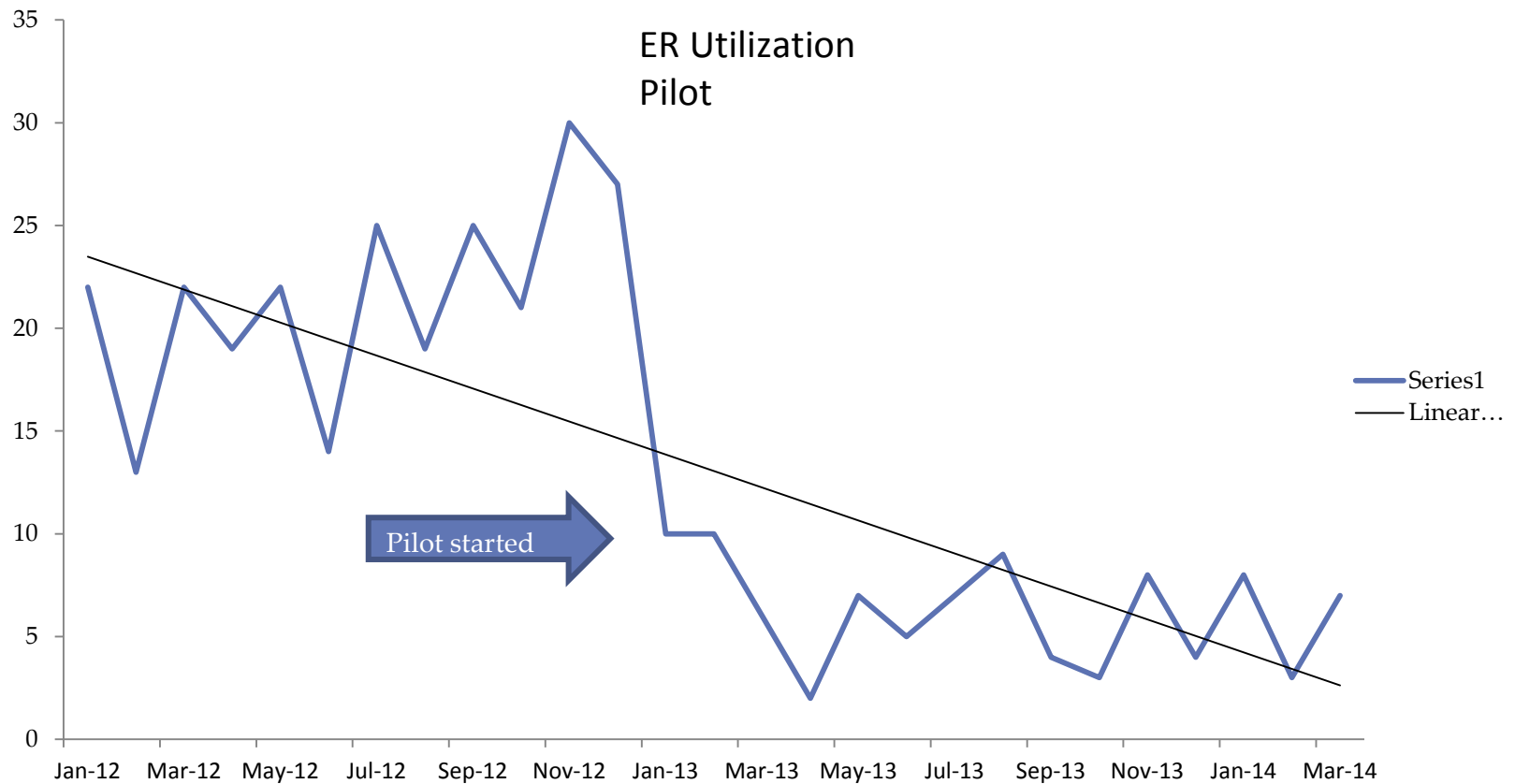


Pre-Diabetic Pilot



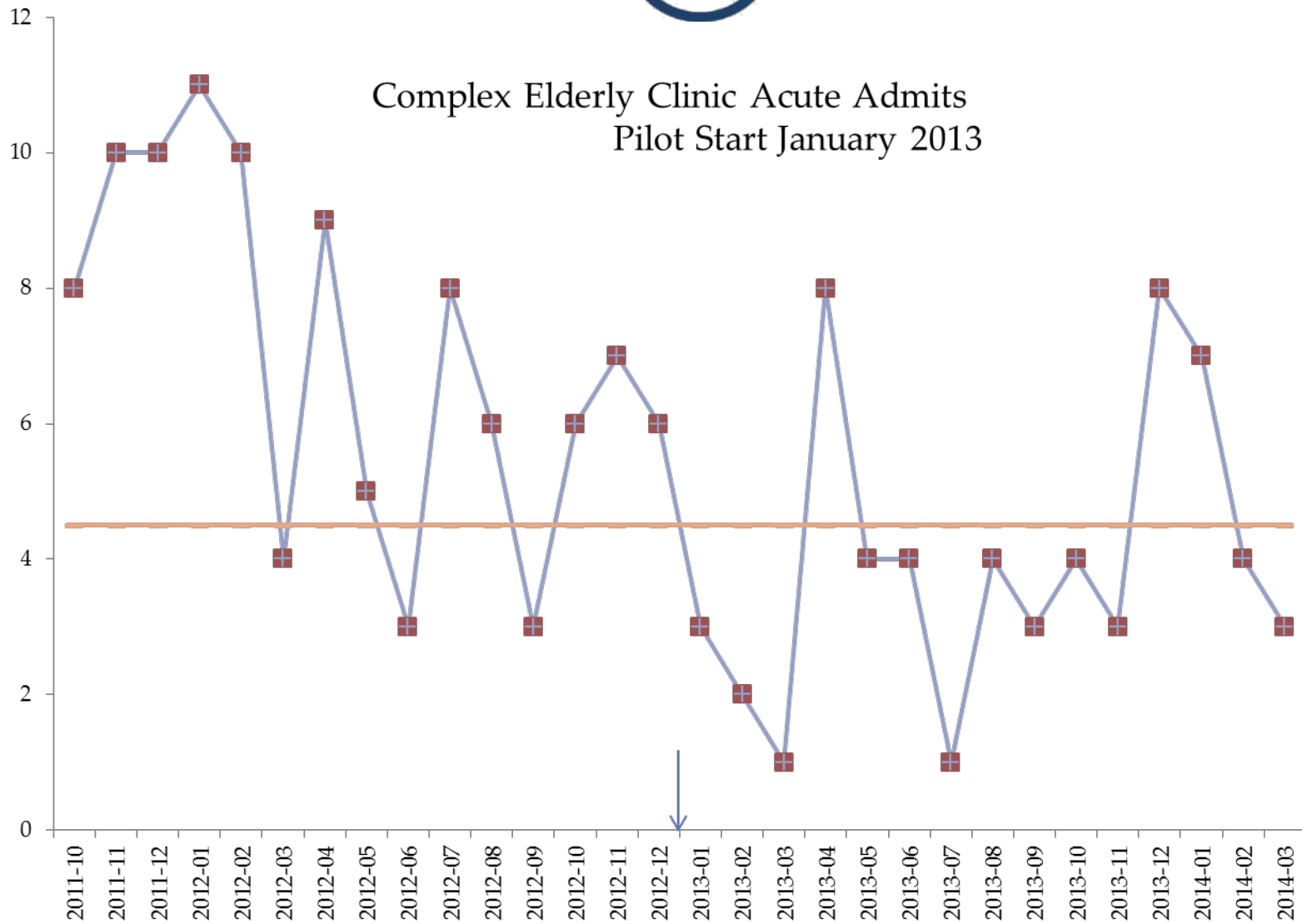


Complex Elderly Clinic





Complex Elderly Clinic Acute Admits Pilot Start January 2013





Lean Assessment Findings

- Developed health care maturity assessment vs. world class. On a scale of 1-5 SHC is ahead of schedule for: Employee safety ; Quality Consciousness and Quality Assurance
- Signature is behind schedule for Patient Safety; Just in Time; Operational Excellence System Leadership and Continuous Improvement



Draft Lean Recommendations

Next two years

- Improve human resource systems
- Spread training across staff and physicians
- Develop a system for visual management and problem solving during non-day shifts
- Expand number of Pilot Halls (Centers of Excellence to trial improvements for spread)
- System to spread gains from Pilot Halls
- Develop Value Stream Improvement and Quality Circles
- Implement Level C and D Lean Concepts (from KCOE phase 2)



Sustainability Lean Aims (5 Year)

- Reduce All Cause Mortality by 10%
- Reduce Readmissions 50%
- Reduce Serious Adverse Events by 50%
- Decrease ED LOS 25%
- Decrease LOS by 15%
- Improve patient experience to 75th percentile
- Decrease FTE per adjusted discharge 10%
- Decrease supply cost per discharge 10%
- Increase TME surplus by 1% per year



Culture of Safety

- Culture of Safety Assessment by Healthcare Performance Improvement (HPI)
 - Lessons from Aviation and Nuclear Power
 - Prior results 50-80% reductions in serious AE
 - Assessment includes:
 - Review of 2 years of Adverse Event Root Cause
 - AHRQ Culture of Safety Results
 - Interviews with cross section of physicians and staff
 - Preliminary Findings: 70% acts leading to harm related to culture; highest human error cause related to critical thinking and non-compliance
 - Next Steps: interviews and intervention design; culture leaders skills; training non-technical skills to staff and medical staff; improved cause analysis; habit formation



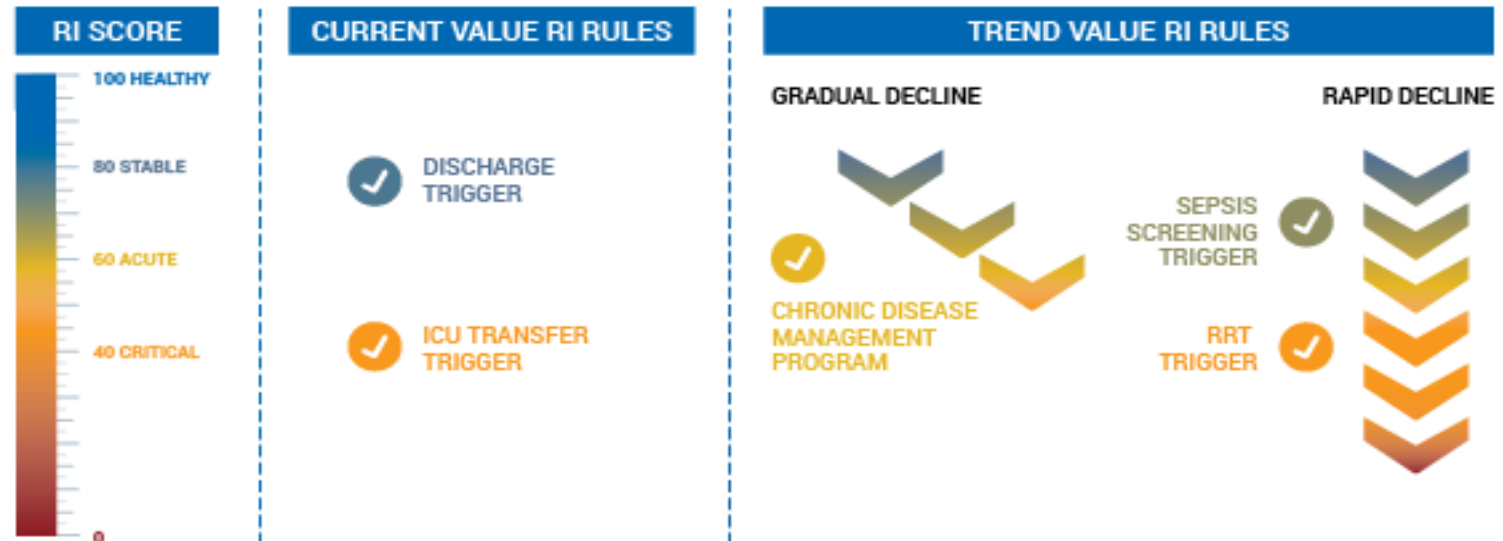
IT Enhancements

- PeraHealth – real time monitoring of Rothman Index
- Index draws information from Nursing Assessment; Vitals; Lab Values
- Alerts Staff to Changes in Status
- Anticipated Application
 - Early recognition of sepsis
 - Activation of rapid response team
 - Understanding risk for re-admission



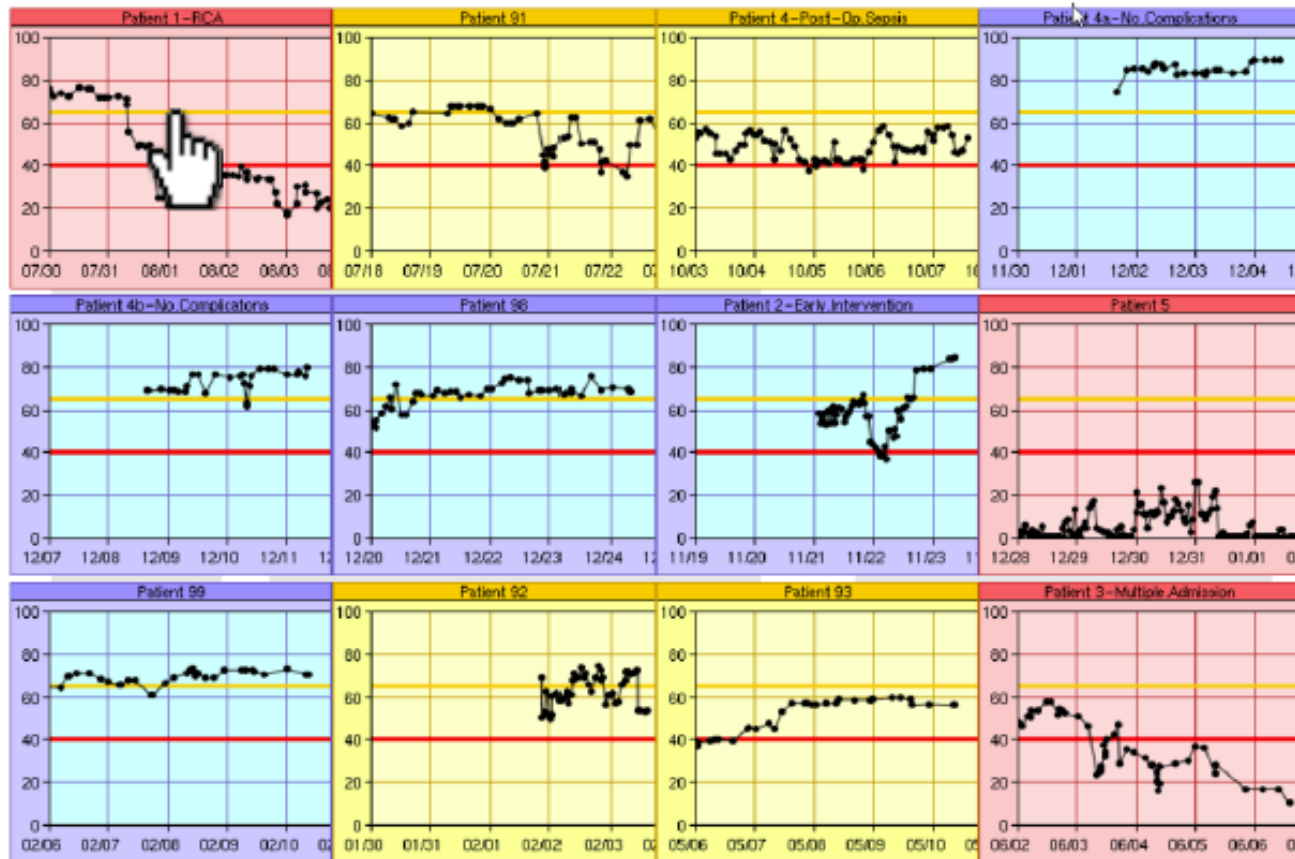
THE ROTHMAN INDEX SCORE from PeraTrend

The Universal Patient Score that Creates a Common Foundation for Communication in Healthcare



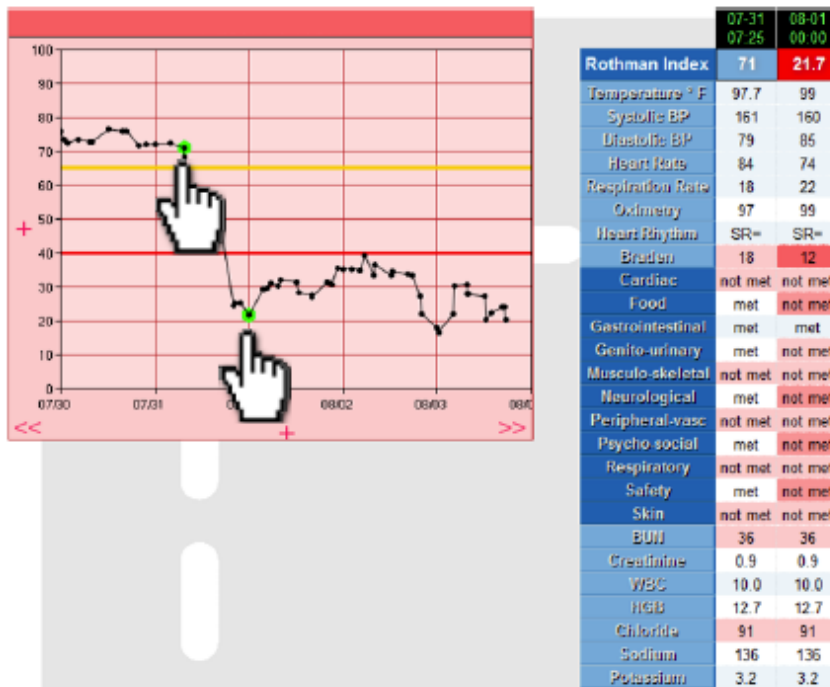


Using PeraTrend – Multiple Patient View





Using PeraTrend - Click Multiple Points To Compare Data





IT Enhancements

- Verisk
 - Identification of patients:
 - High Cost (25K).....Care Management
 - Low Cost:
 - High Disease Burden (top 5%)
 - High Care Gaps.....Close Care Gap and Disease Mgt
 - Low Care Gaps.....Monitor compliance
 - Low disease burden.....Wellness Program
 - Care Gap Example: Not refilling chronic condition medication; evidenced based care gaps in diabetes
 - Currently verifying data into software



Questions