



Building Reusable Research Networks

Carole Lannon MD MPH

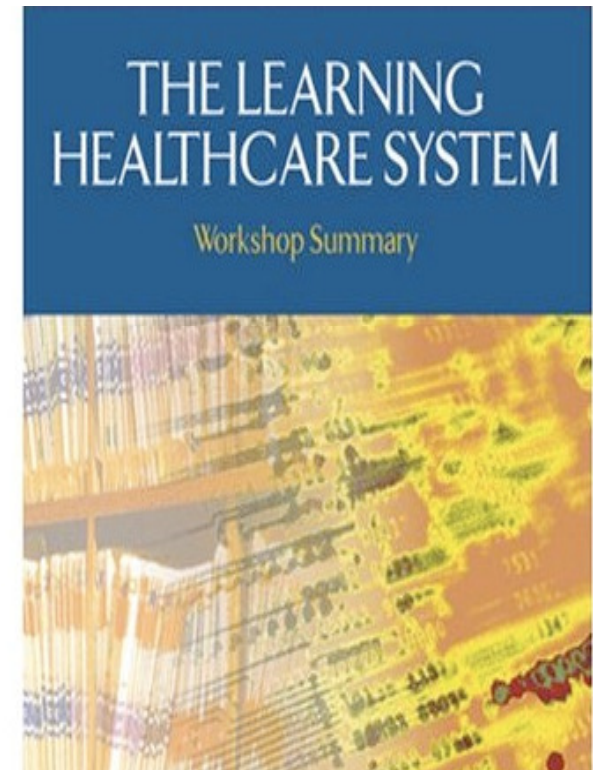
Director, Learning Networks

Cincinnati Children's Hospital Medical Center

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Learning Healthcare System

- Patients and providers work together to choose care based on best evidence
- Drive discovery as natural outgrowth of patient care
- Ensure innovation, quality, safety and value
- All in real-time



CCHMC Learning Networks

*5 Networks, 119 Locations, 38 CTSA*s

Ohio Children's Hospitals Solutions for Patient Safety

Ohio Perinatal Quality Collaborative

ImproveCareNow Network

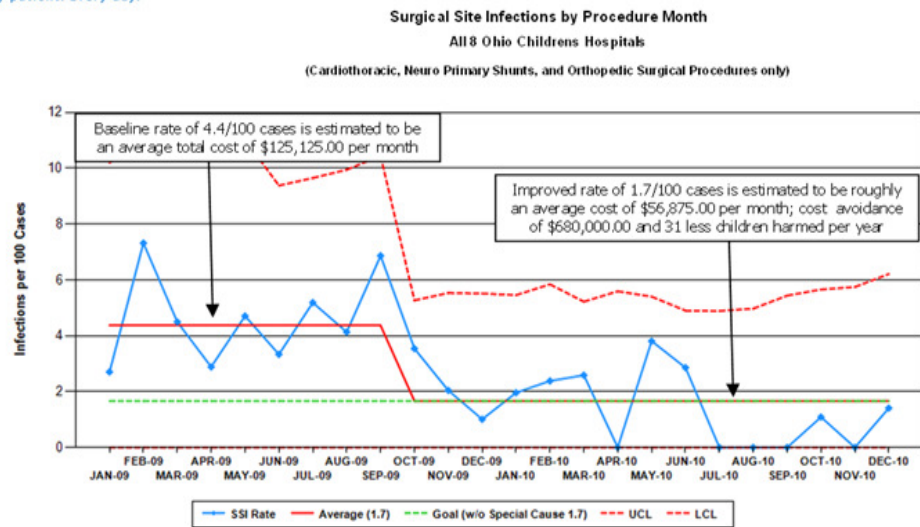
National Pediatric Cardiology Quality Improvement Collaborative

Pediatric Rheumatology Care and Outcomes Improvement Network



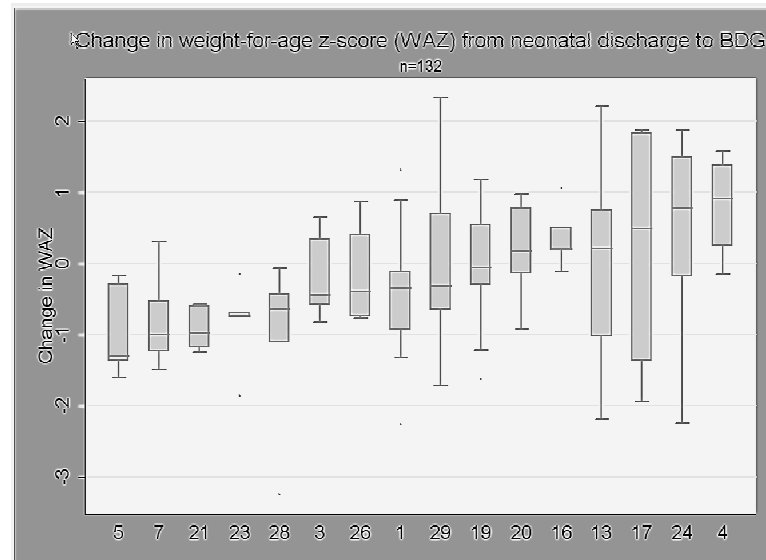
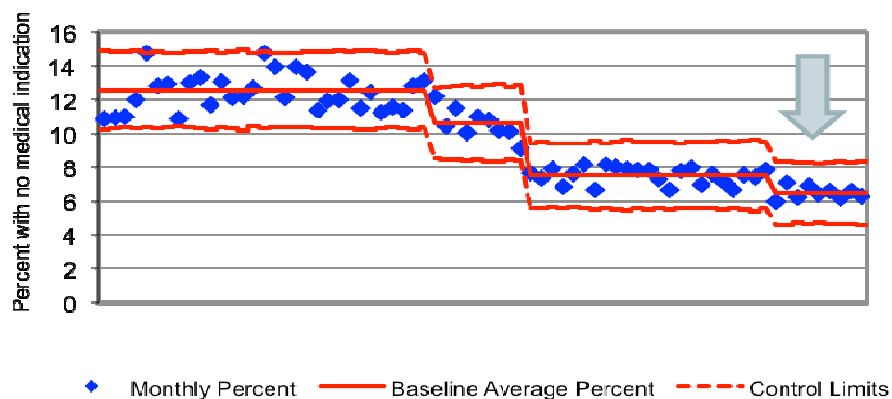
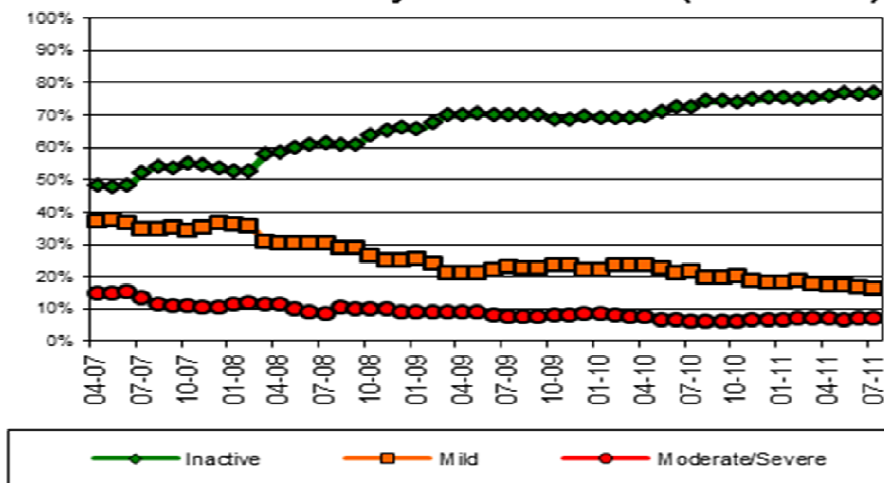
Results

2 patients every day



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% of Patients by Disease Status (cumulative)



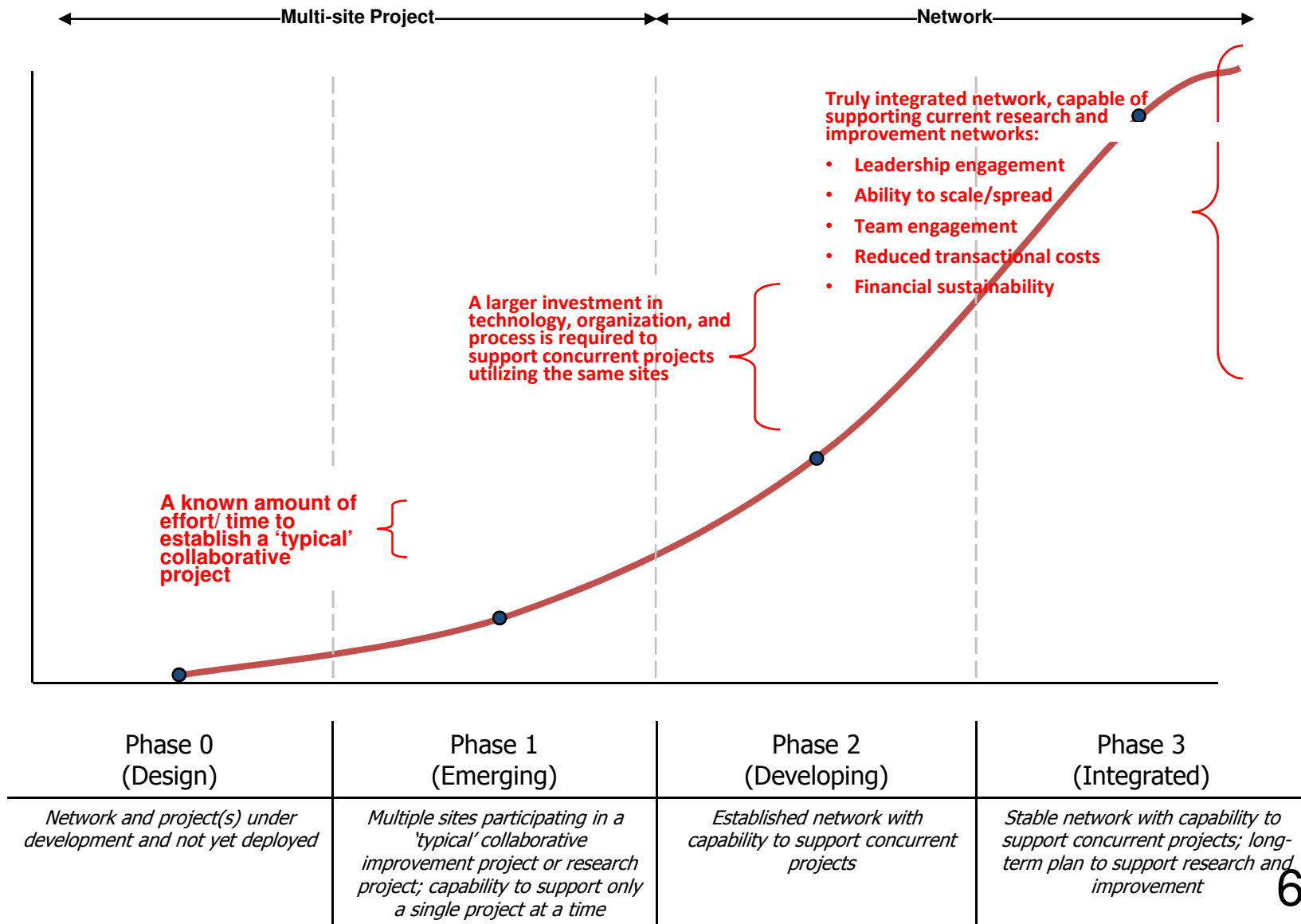


Registries that have higher likelihood to constitute long-term infrastructure are those *with at least one purpose being QI.*

Rich Gliklich, MD
Harvard Medical School
President, Quintiles Outcomes

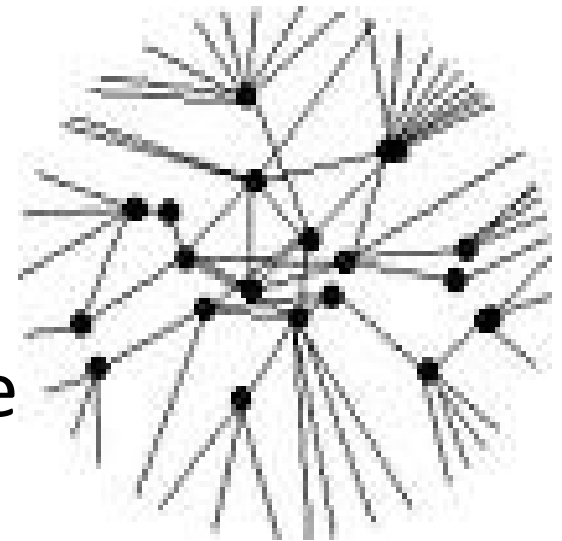
Draft LN Maturity Model

Based on CCHMC Network Experiences



How do you create a 'reusable network'?

1. Focus on outcome
2. Build community
3. Effective use of technology
4. Learning system--system science
QI, qualitative research, clinical
research



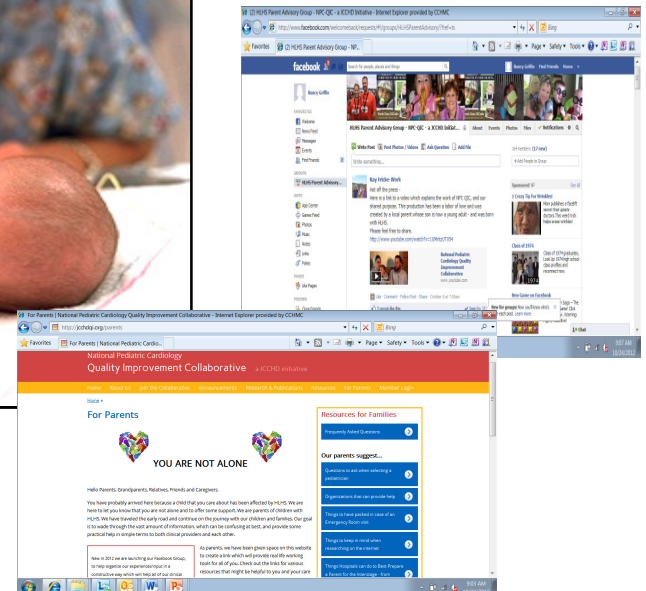
ImproveCareNow

Chronic Collaborative Care Network



Building community

- Compelling purpose
- Core leadership – patients, clinicians, researchers
- Sharing stories
- Many ways to contribute



“I have learned more about the needs of parents during the few years of the collaborative than in my previous 18 years of clinical practice”.

Pediatric Cardiologist Team Lead

National Pediatric Cardiology Quality Improvement Collaborative



IMPROVE**CARE**NOW



COLLABORATIVE CHRONIC CARE
NETWORK



American
Board of
Pediatrics



ENHANCED



REGISTRY

Effective use of technology



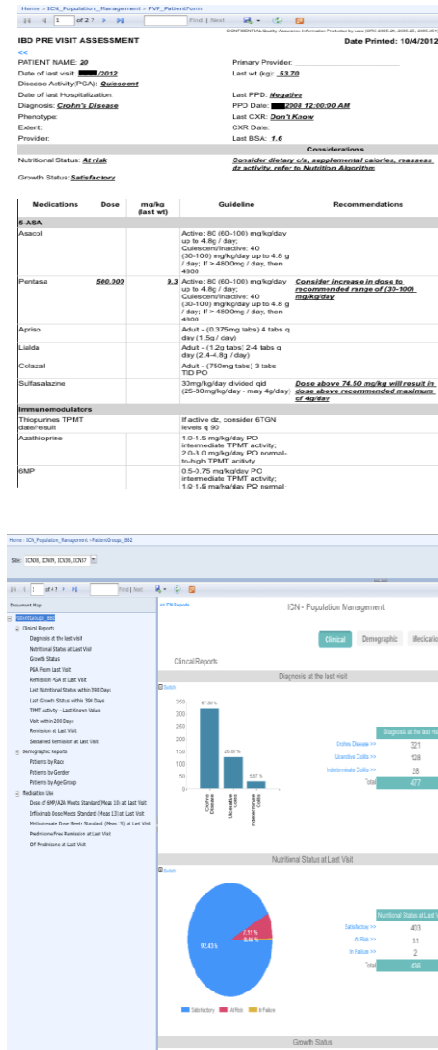
Example: Data Collection

Data in once

- Automate chronic care processes for clinical care
- Performance measurement for QI and learning
- Measure and improve data quality
- Research - care center, population and individual level

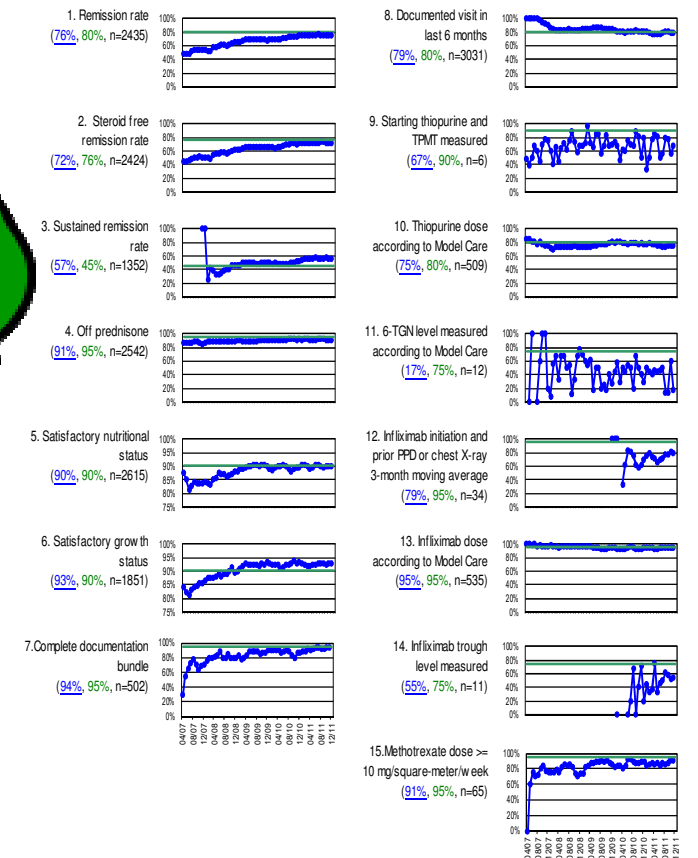
John Hutton, MD; Keith Marsolo, PhD; Charles Bailey, MD; Christopher Forrest, MD, PhD; Marshall Joffe, MD, PhD; Wallace Crandall, MD; Mike Kappleman, MD, MPH; Eileen King, PhD

ImproveCareNow Chronic Collaborative Care Network



Key Measures
Monthly Report – December 2011

Advanced Track
All Sites Performance
(score, goal, n)

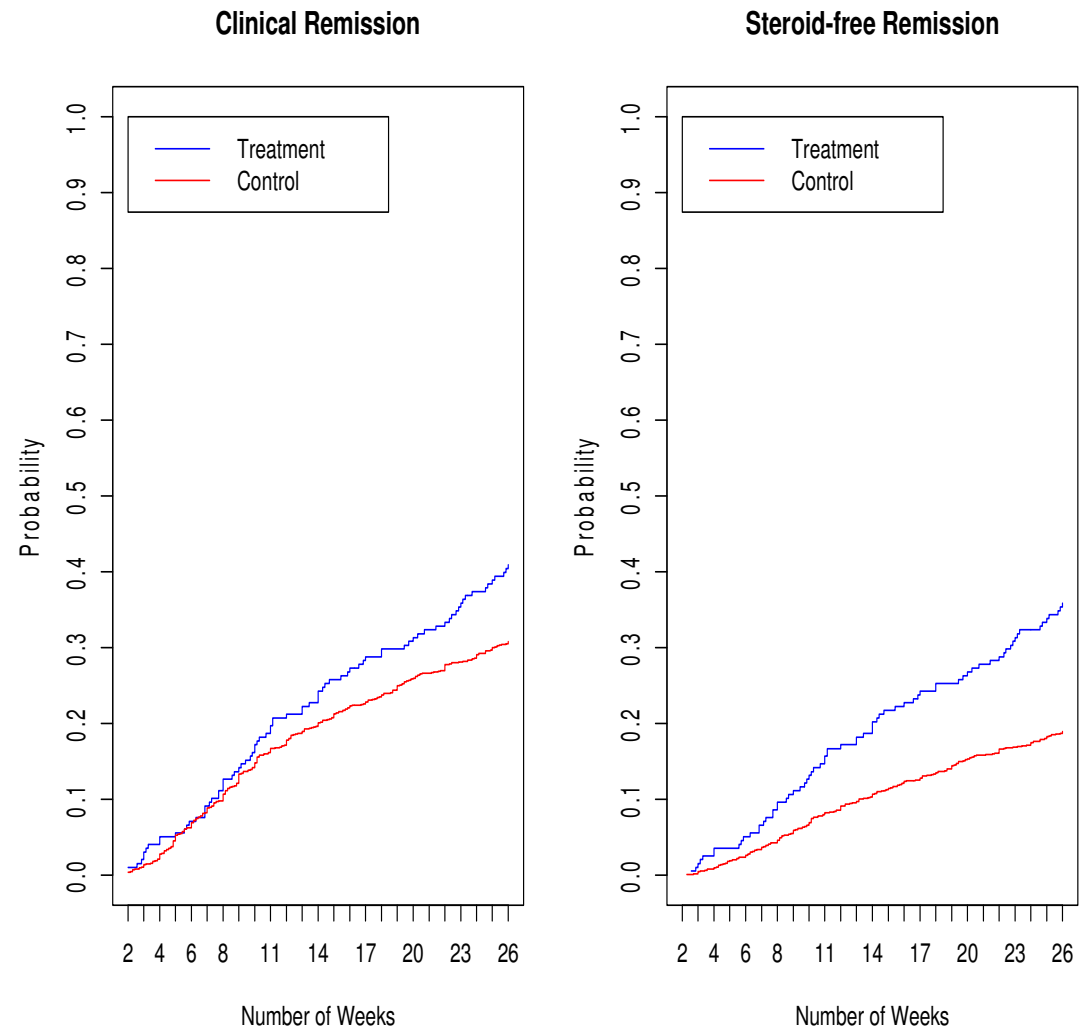


'Big Data'

Population Comparative Effectiveness Research

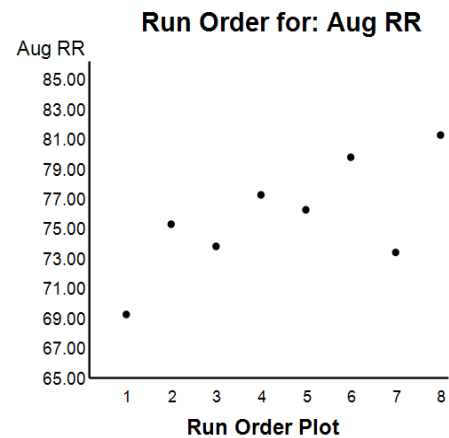
Replicated results of study showing benefits of therapy

Simulation: Used control group to estimate treatment effect for patients with moderate/ severe Crohn's

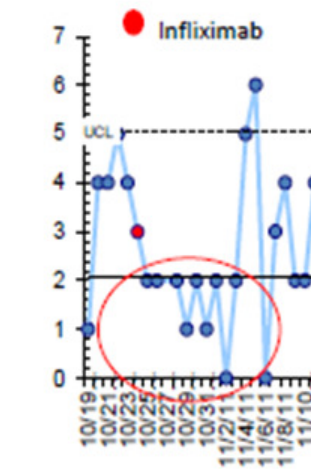


ImproveCareNow

Chronic Collaborative Care Network



Treatment Combination	Pre-visit Planning	Population Management	Self-Management Support
Site 1	-	-	-
Site 2	+	-	-
Site 3	-	+	-
Site 4	-	-	+
Site 5	+	-	+
Site 6	-	+	+
Site 7	+	+	-
Site 8	+	+	+



Nocturnal Stools (I chart)



Challenges

Where is the puck going?

- Some ideas:
 - Big Data/HIT
 - Ubiquitous sensors (e.g. smart phones)
 - Registries -> Cloud computing
 - Distributed production with engaged patients and clinicians