

Northwell Health Laboratories: Value, Outcomes, Precision Medicine

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Disclosures

- ClaraPath (start up from Cold Spring Harbor Laboratories)*
 - 2015: Scientific Advisory Committee
- Northwell Health Genomics Alliance (with OPKO Health)
 - 2015: President of LLC

What is Laboratory “Value”?

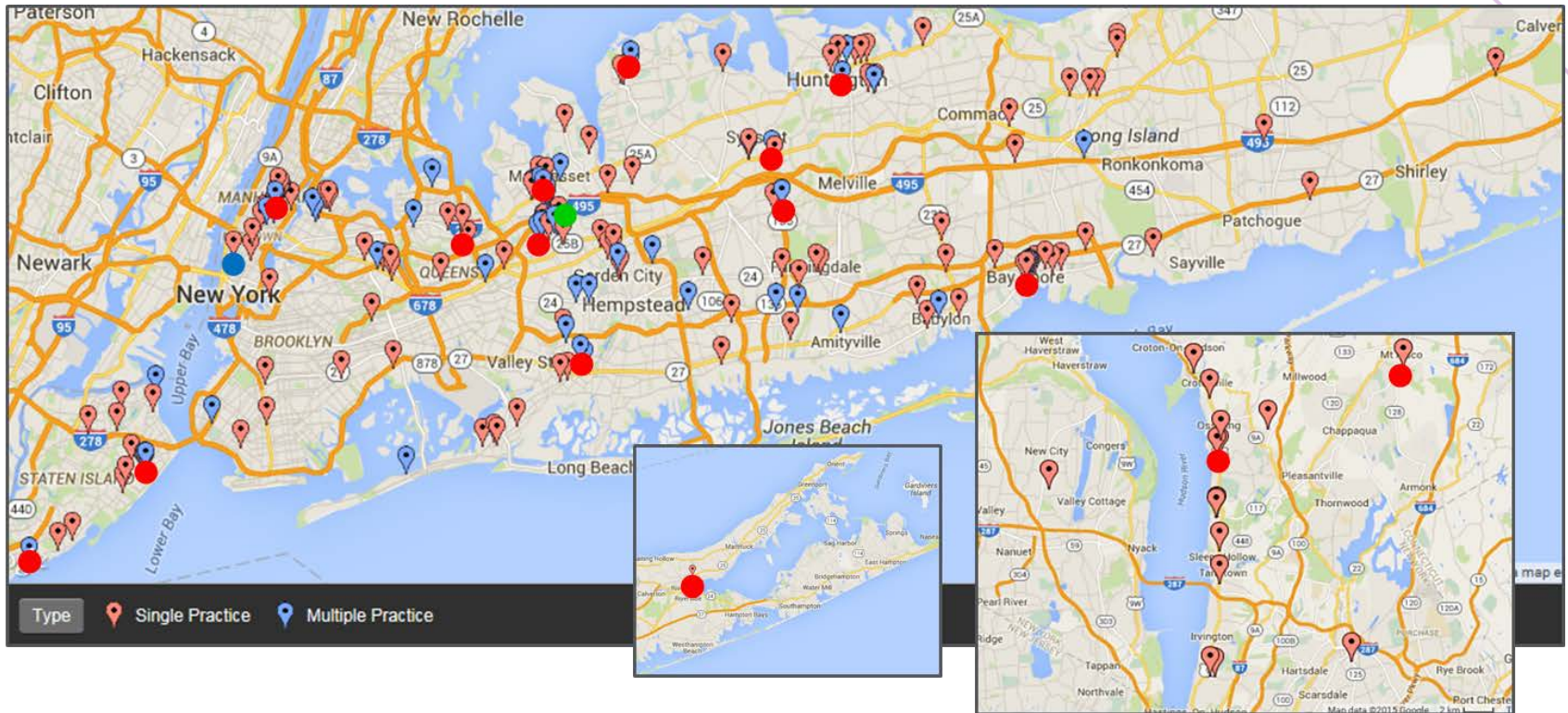
- “Value generation” is in the eyes of who is paying for it:
 - Hospital-based testing: *Hospital-Health System-Payer*
 - Ambulatory testing: *Health System-Payer*
 - ABN*/Co-Pay/Balance bill: *Consumer*
- Listen to the people who need our services:
 - What are their needs? Are we meeting them?
 - Is our lab testing doing any good for the patient?
 - Can we prove it?
- Write your story
- Tell your story

So how does a Laboratory deliver “Value”?

- Support health system Financial Outcomes
- Improve Health System Revenue: Documentation and Coding
- Provide lower cost services: or will someone else do it instead?
- Support Value-based Payment: meeting contractual metrics
- Support Risk-based Payment: Coordinating care at lower cost
- Improve Patient Access: Patient-centered care
- Improve Patient and Provider Experience: Are you a “good lab”?
- Actually improve Patient Outcomes? Can you quantify it?
- Help drive health system Strategies

Leverage the Information you are already generating, demonstrate your impact on Outcomes (of whatever nature), and make sure that you are publicizing your Accomplishments

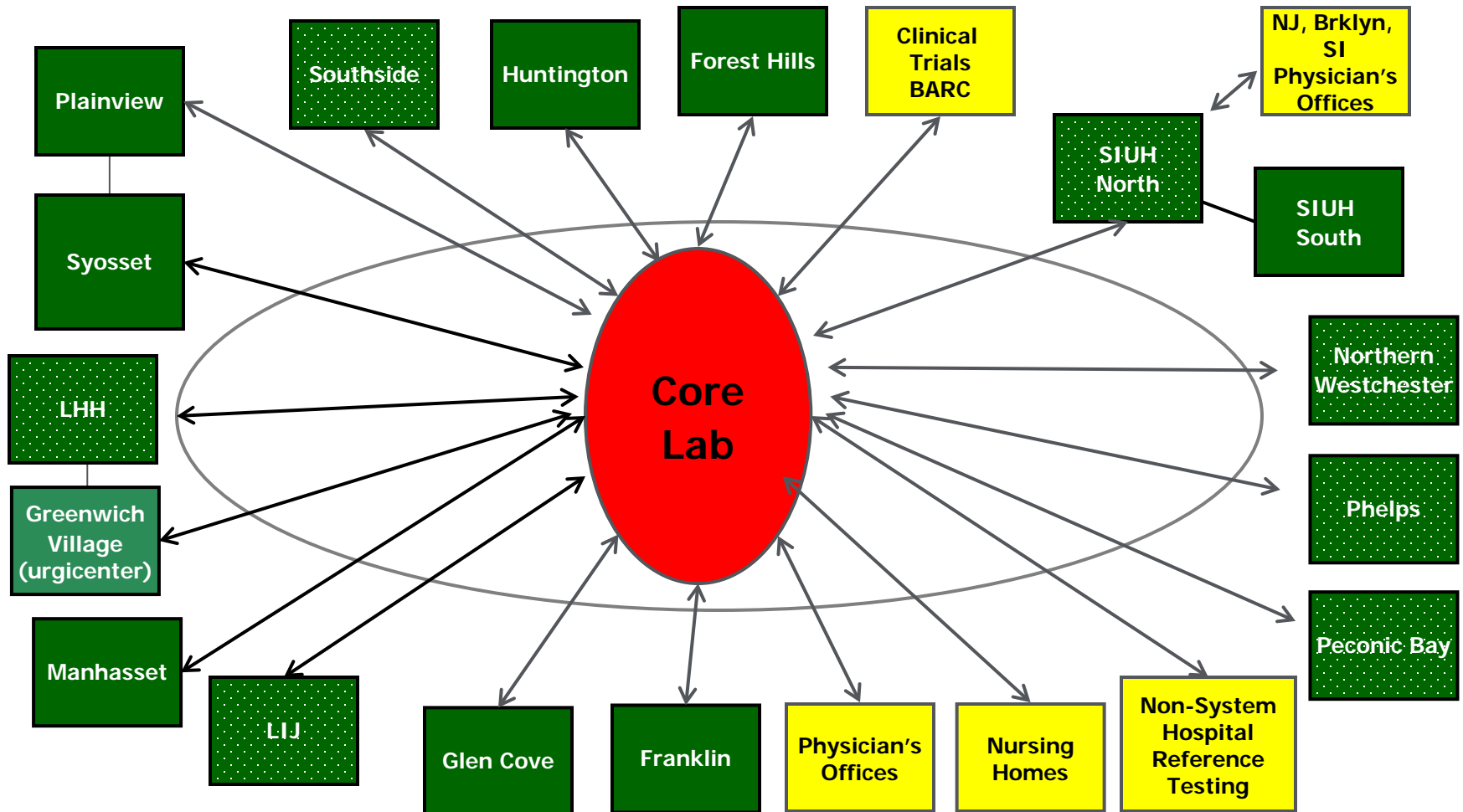
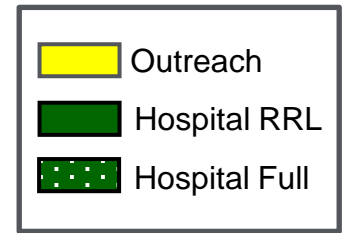
Northwell Health



- Reference laboratory (9% of ambulatory market)
- 21 Hospitals (27% of regional market)
- Free-standing Emergency Room

450+ practice locations
>4M patient encounters per year
Network of SNFs, AmbSurg, UrgiCenters

Northwell Health Laboratory System



Plus: 32 Patient Service Centers, in-office phlebotomy, home draw, network support of P&OLs

Northwell Health Laboratories

Chair/SVP/ED
VP

Senior
Leadership Group

System
Managers

Hospital Laboratories

Medical Director
Admin Director

n = 15

Core Laboratory

Financial Services
Logistics
Quality
Continuing Ed
LIS/Informatics
Procurement
Sales/Marketing
Phlebotomy/PSC
Business
Development

Divisions

Blood Banking
Transfusion Med

Infectious
Disease
Diagnostics

Point-of-Care
Testing

Hemato-
pathology

Cytopathology

Pediatric
Pathology

Autopsy
Pathology

Joint Standards

BB/TM

Central Processing

Charting

Chemistry

Cytopathology

Education

Hematology

Histology

LIS

Infectious Disease
Molecular Path
Cytogenetics

Path Assistants

Phlebotomy

Point-of-Care

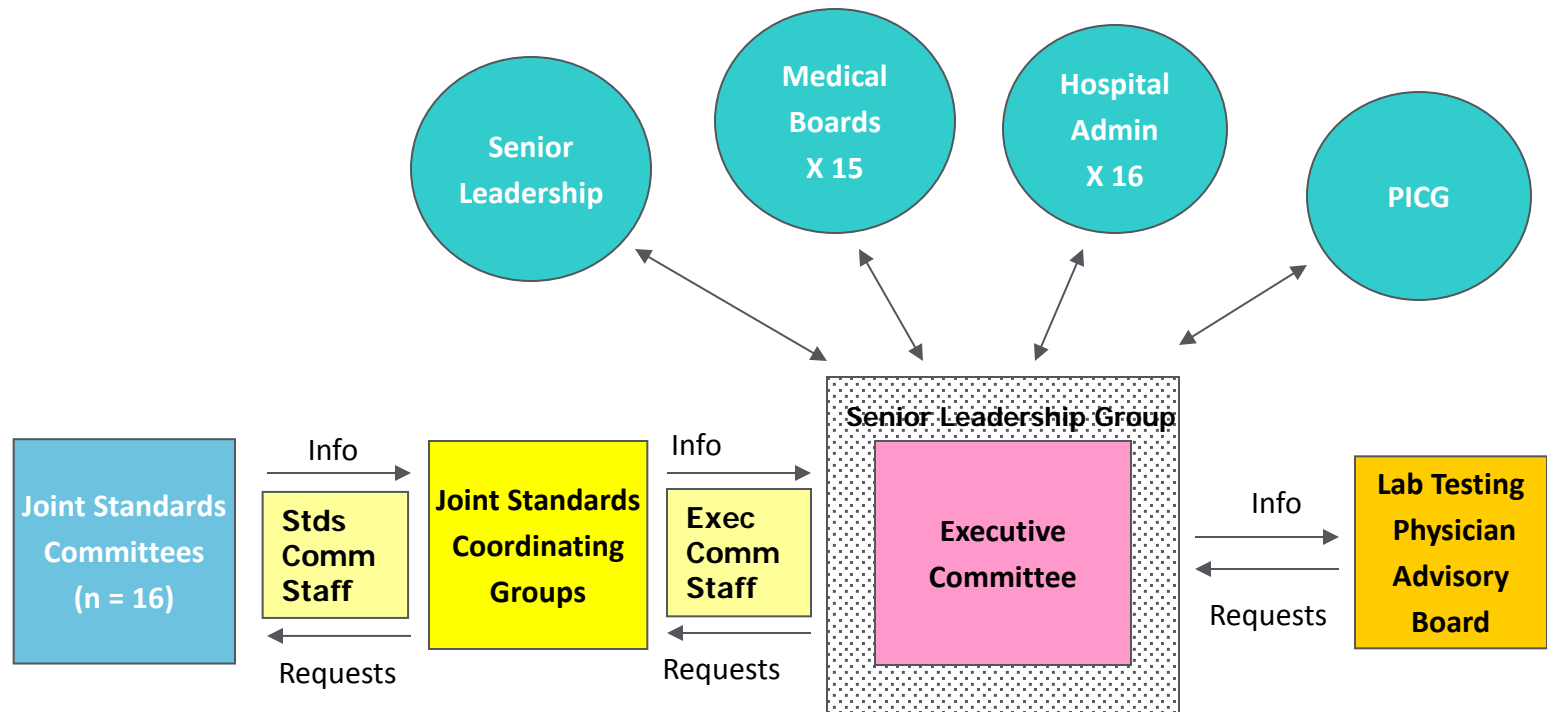
Safety

Surgical Pathology

Validation

Laboratory Process Improvement
Coordinating Group (PICG)

Joint Standards Committee Process



Requests

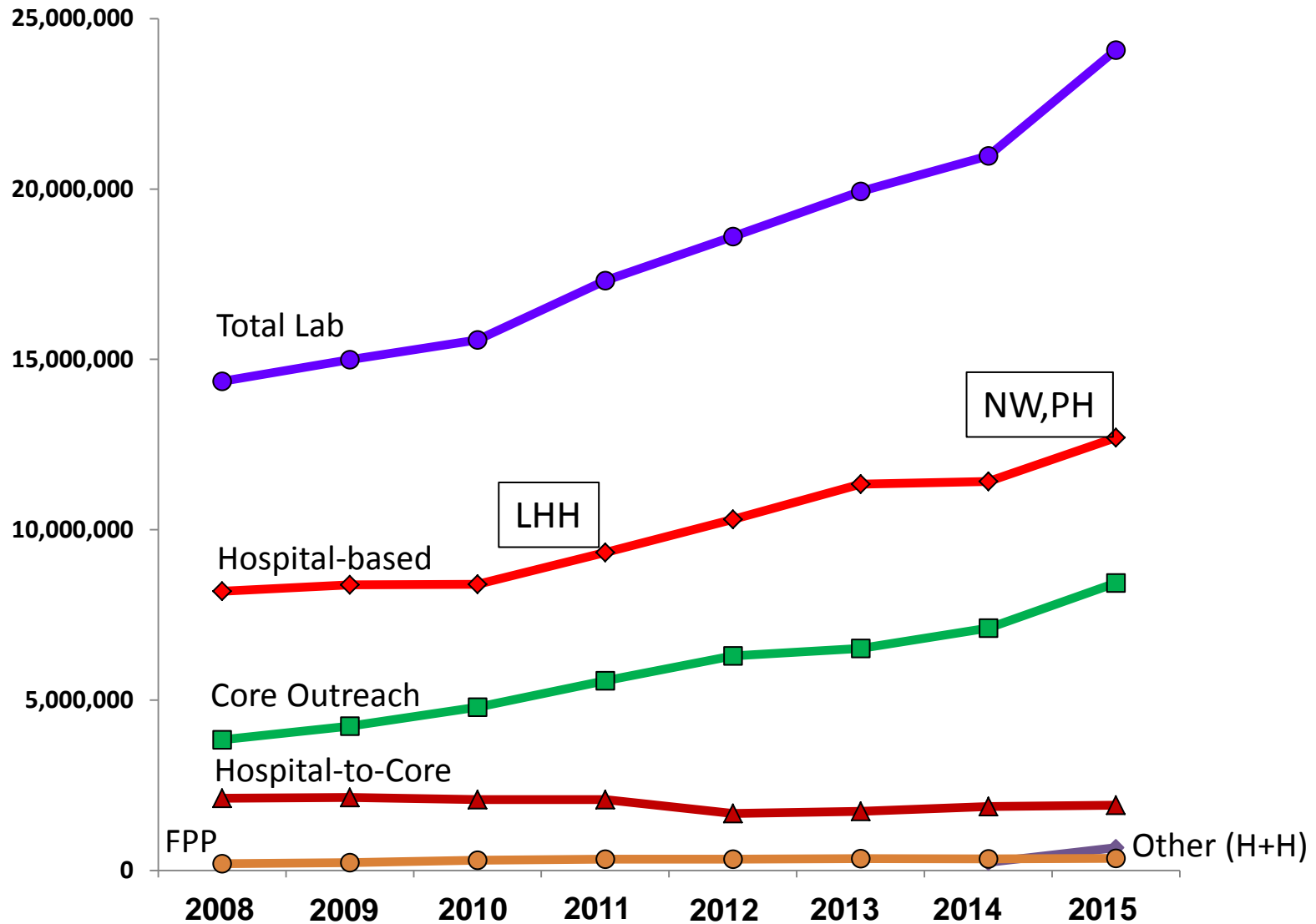
What?
When Needed?
Who to Involve?
Who to respond to?

Information

Minutes
Need for Change
Resource Needs
Decision

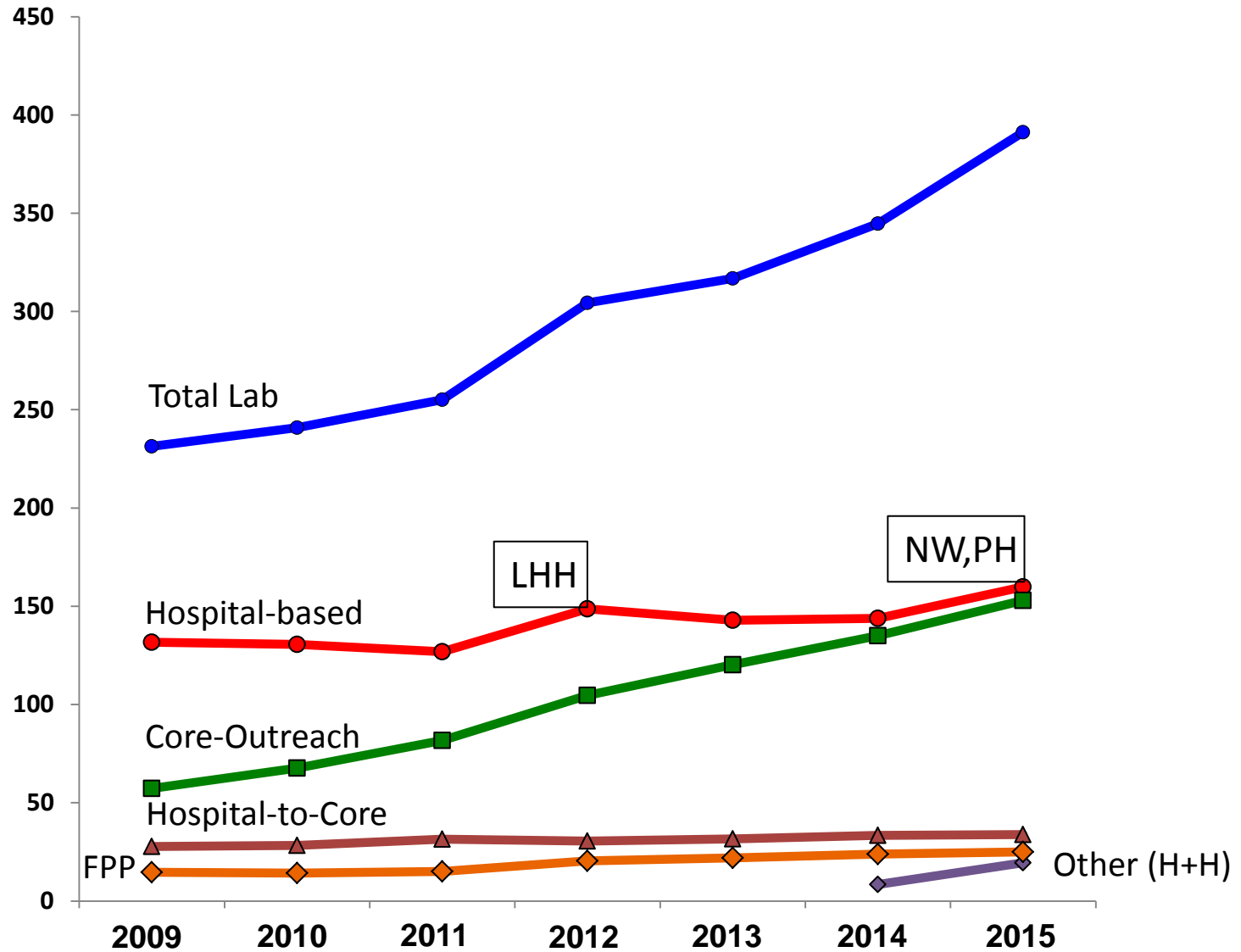
Northwell Health Laboratory Service Line (volumes)

2015

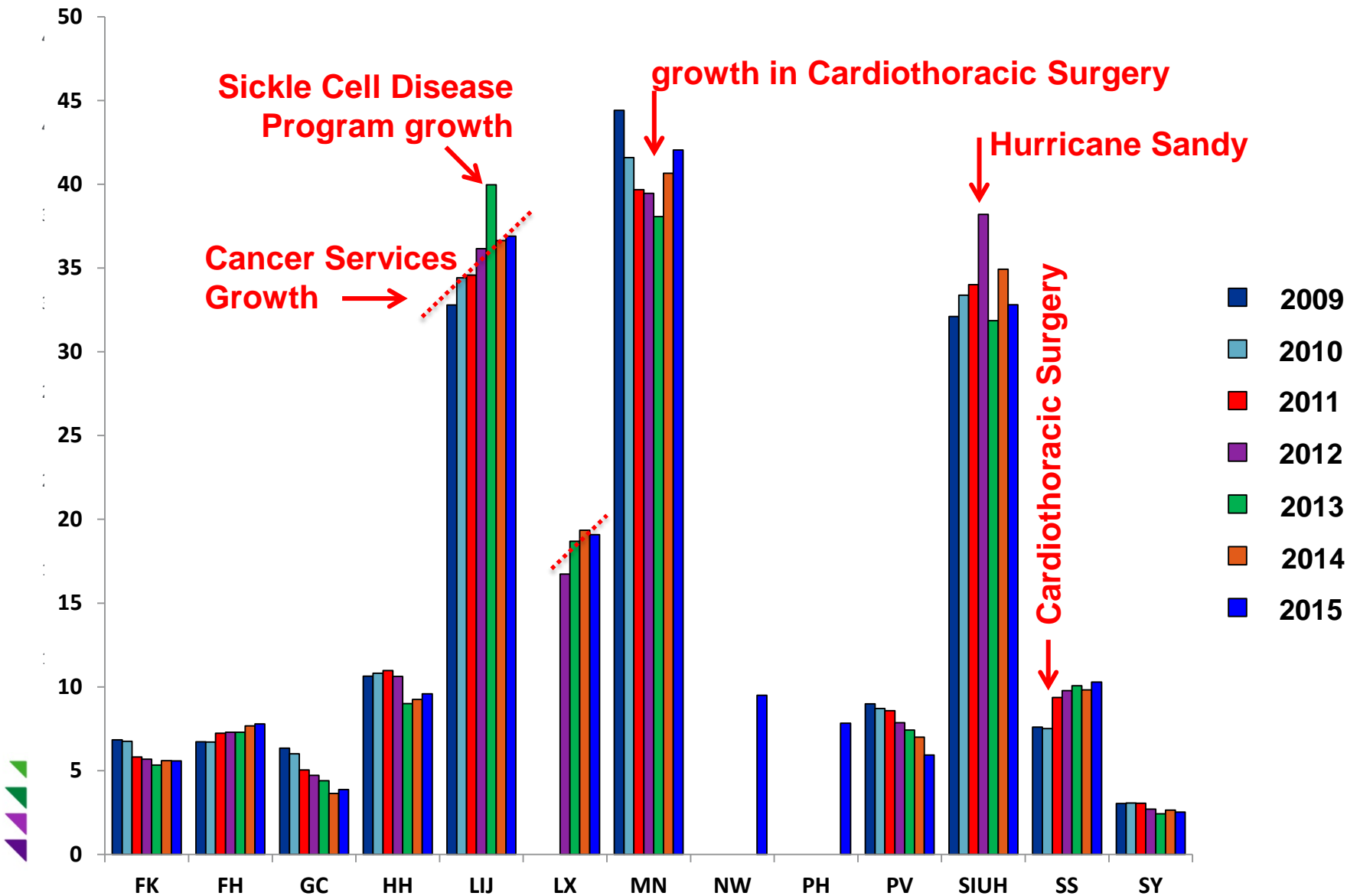


Northwell Health Laboratory Service Line (\$M)

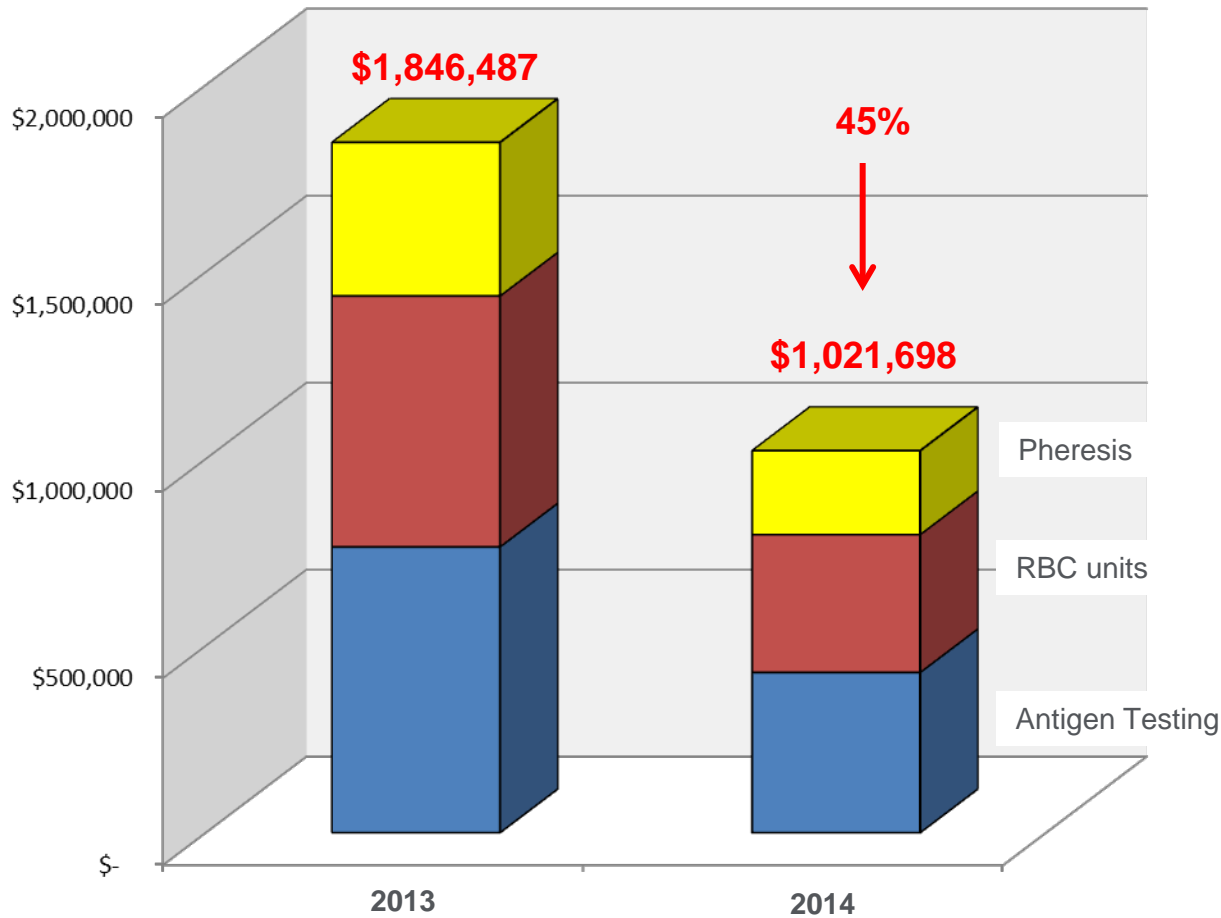
2015



Hospital Laboratory Costs (\$M)



Blood Product Management: CCMC Sickle Cell Disease



Phase 1: Product Standardization

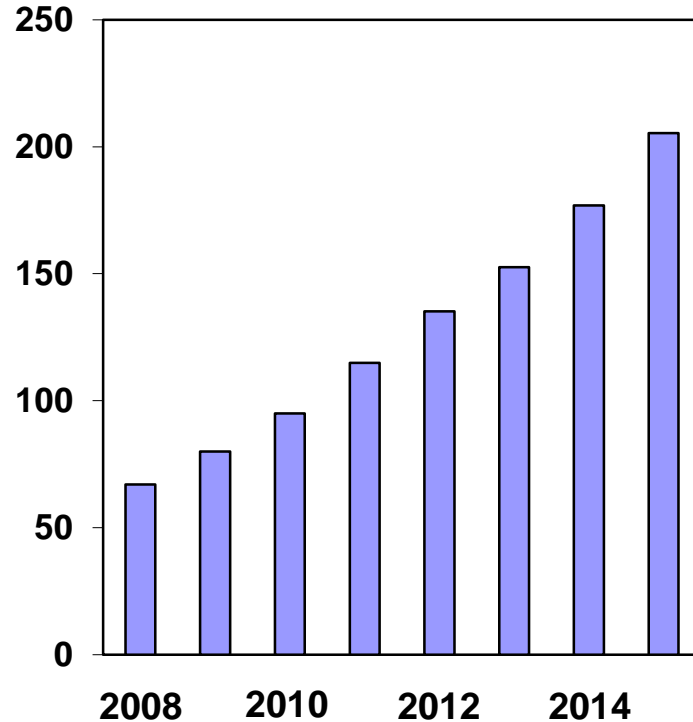
Phase 2: Standardized clinical criteria for use

Phase 3: Product selection:

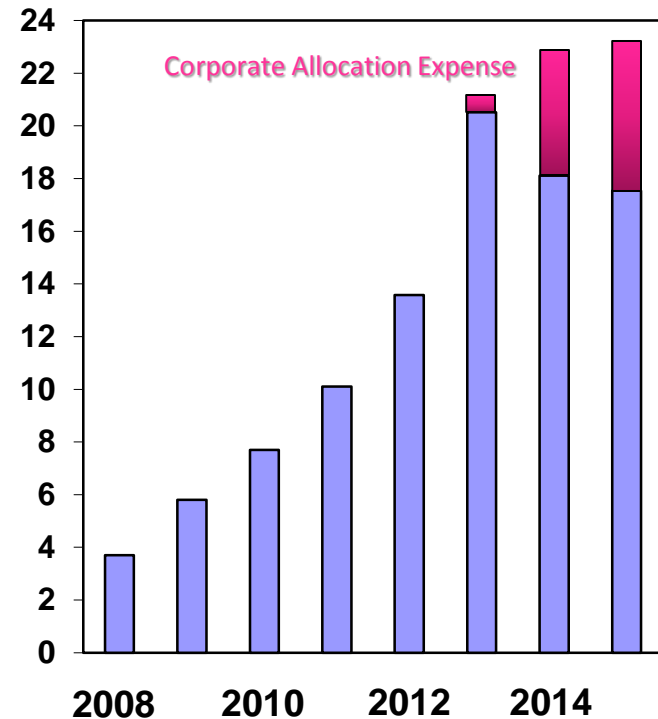
- “Deep” Ag typing of units
- Health IT to track unit Ag and recipient reactivity
- Administration of pre-typed units only

Northwell Health Laboratories (Core Lab)

Operating Revenue (\$M)



Net Revenue (\$M)



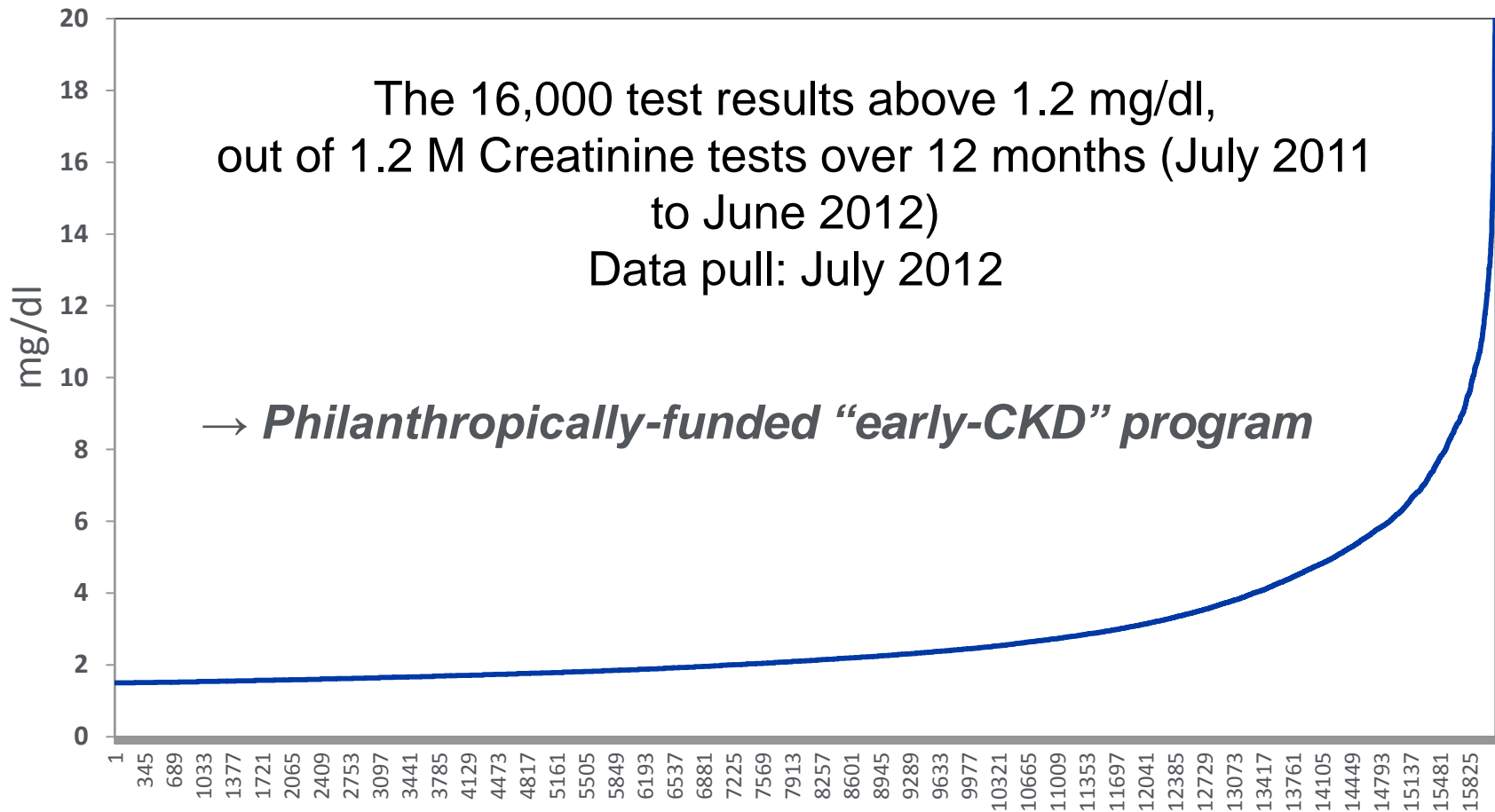
2015 Contribution to health system – Laboratory Service Line

Core Laboratories:	Actual	\$17.5 M
Corporate Allocation Expense:	Actual	\$ 4.8 M
Hospital Laboratories:	To Budget	\$ 2.9 M favorable
Pathology Department:	Actual	(\$ 0.3 M)

NET CONTRIBUTION **\$24.9 M**



Chronic Kidney Disease Management*

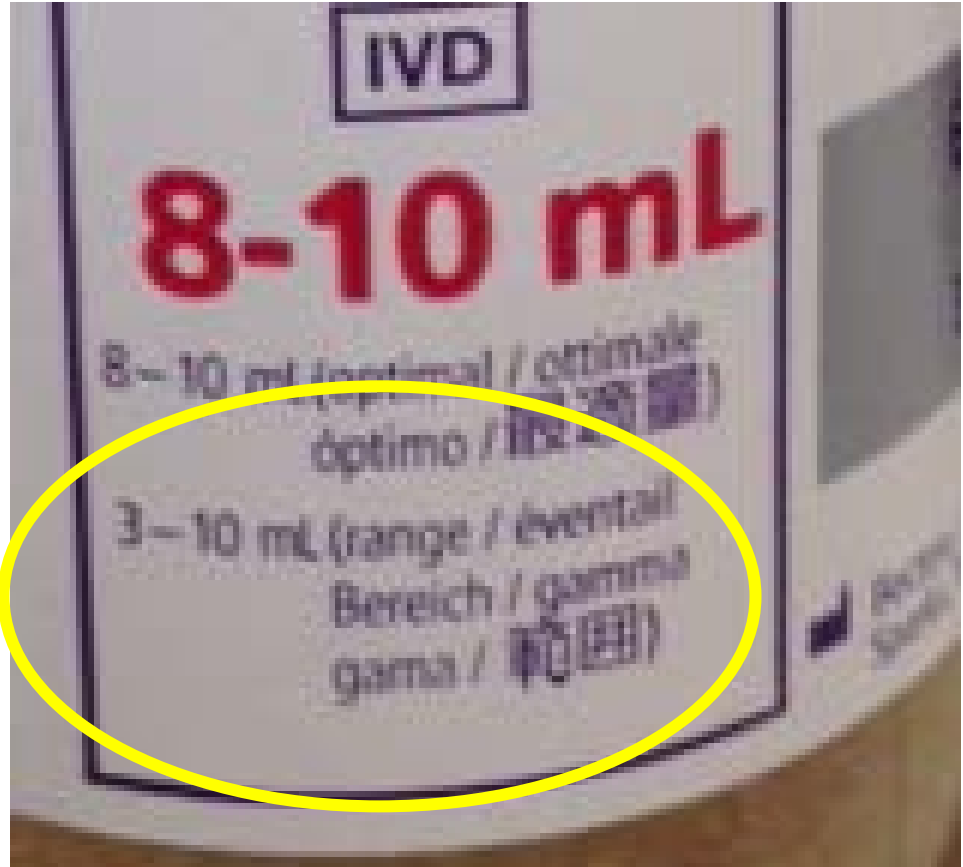
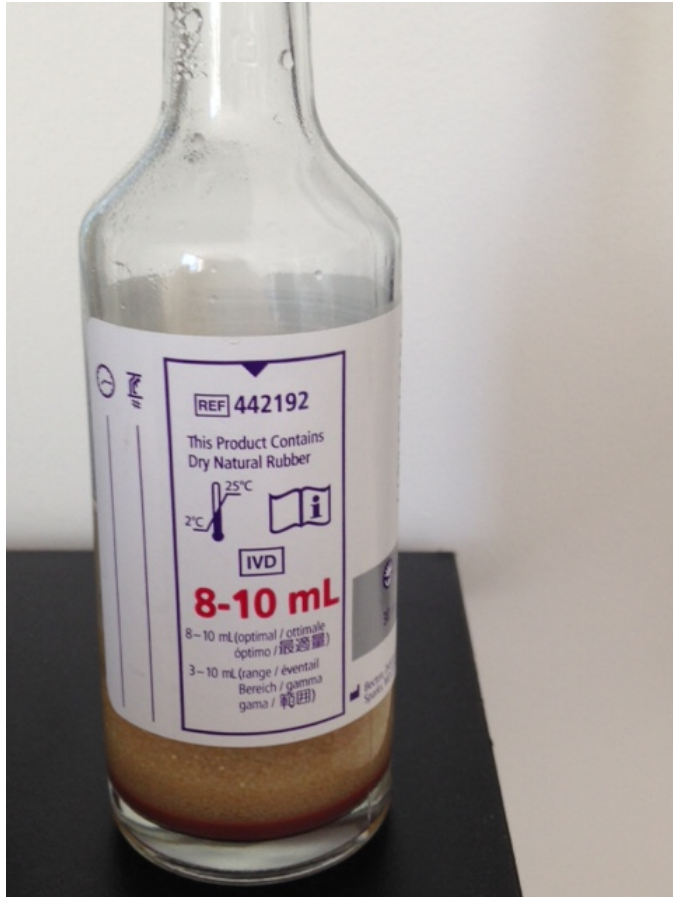


*When our “Business Intelligence” became “Pathology Informatics”

Pathology Informatics

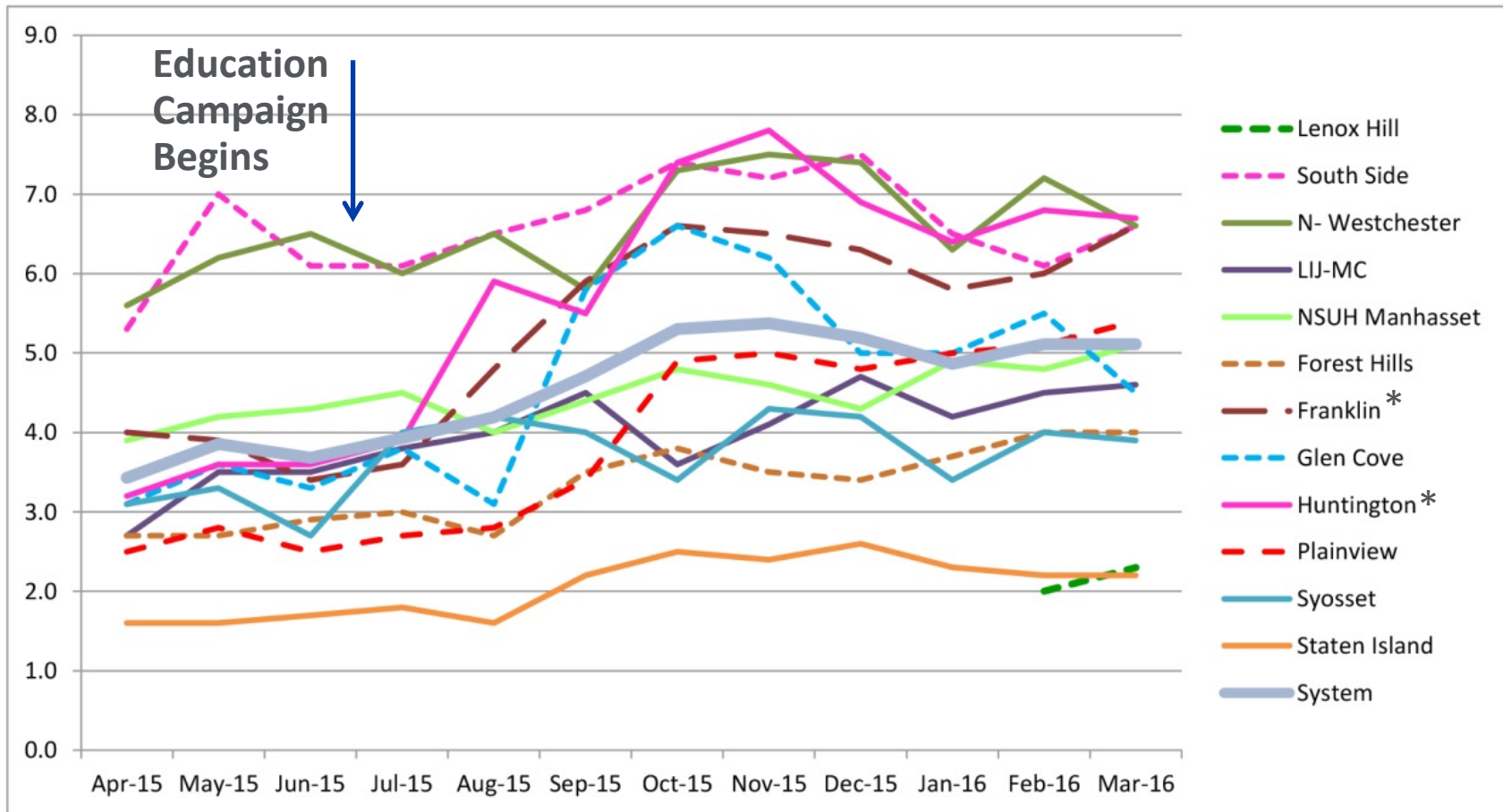
- Est. in 2013; a “group”, not “division” (n = 8 and growing)
- Works intimately with LIS team (n = 30 and growing)
- CMIO and CIO for Laboratory Service Line
 - CMIO: works with clinical stakeholders throughout system
 - CIO: accountable to enterprise IT (CIO, OCIO)
- Design and build infrastructure – Internal and External
- LDW*: architecture, programmers, analysts, project manager
- Data integration from multiple systems throughout enterprise
 - “Owning” deliverables from laboratory environment
- Delivery platforms, both as internal and external builds
- Return-on-Investment: within first year – *but to health system.* (Benefit does not derive to Laboratory Service Line)

Blood Culture Fill Volume



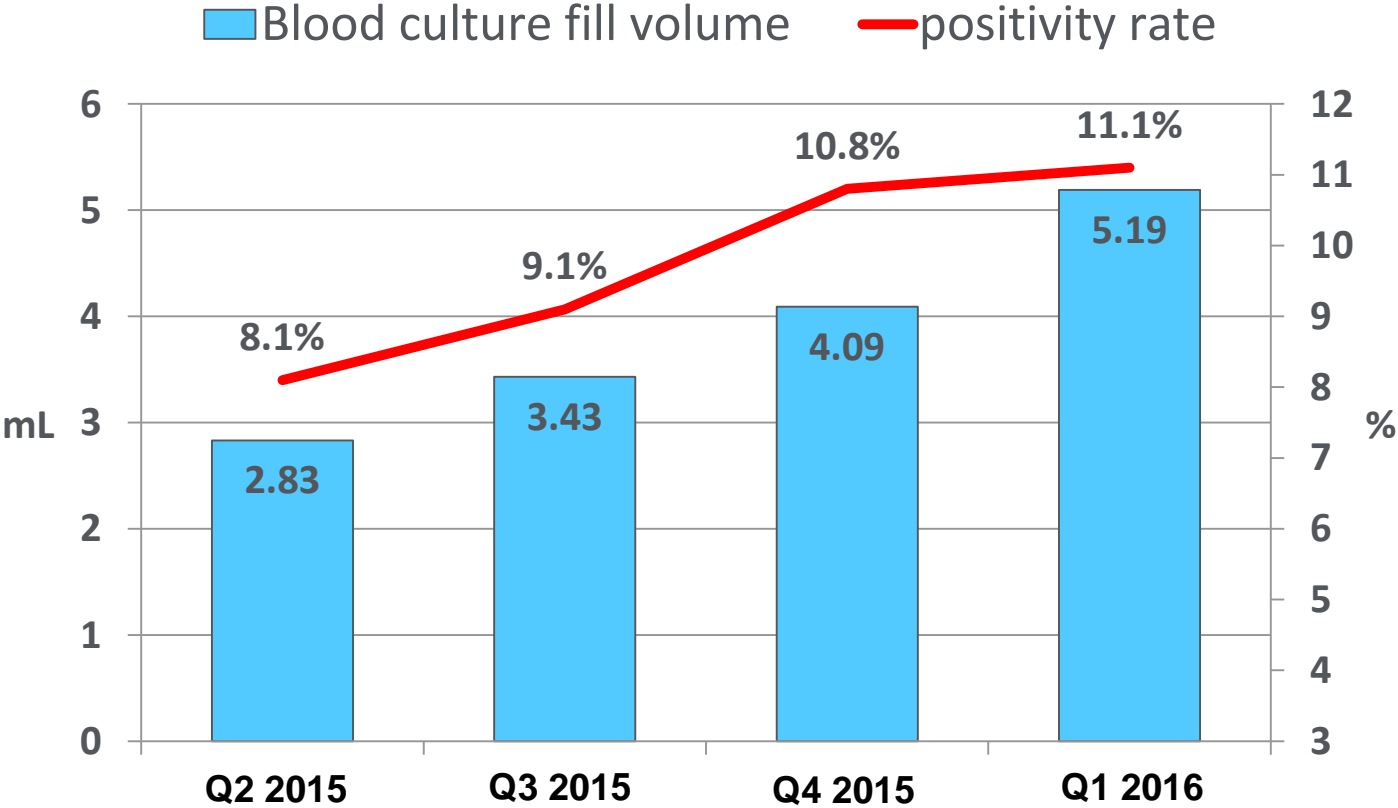
Fill volume: Optimal is 8 – 10 mL
Maximum is 10 mL
Minimum is 3 mL

System Quality Initiative Blood Culture Fill Volumes



*most improved

System Quality Initiative Blood Culture Fill Volumes



Laboratory Leadership + Phlebotomy training →
Nursing Leadership → Education +
Hospital Leadership = **Prioritization**

Interprofessional Council: Lab, Nursing

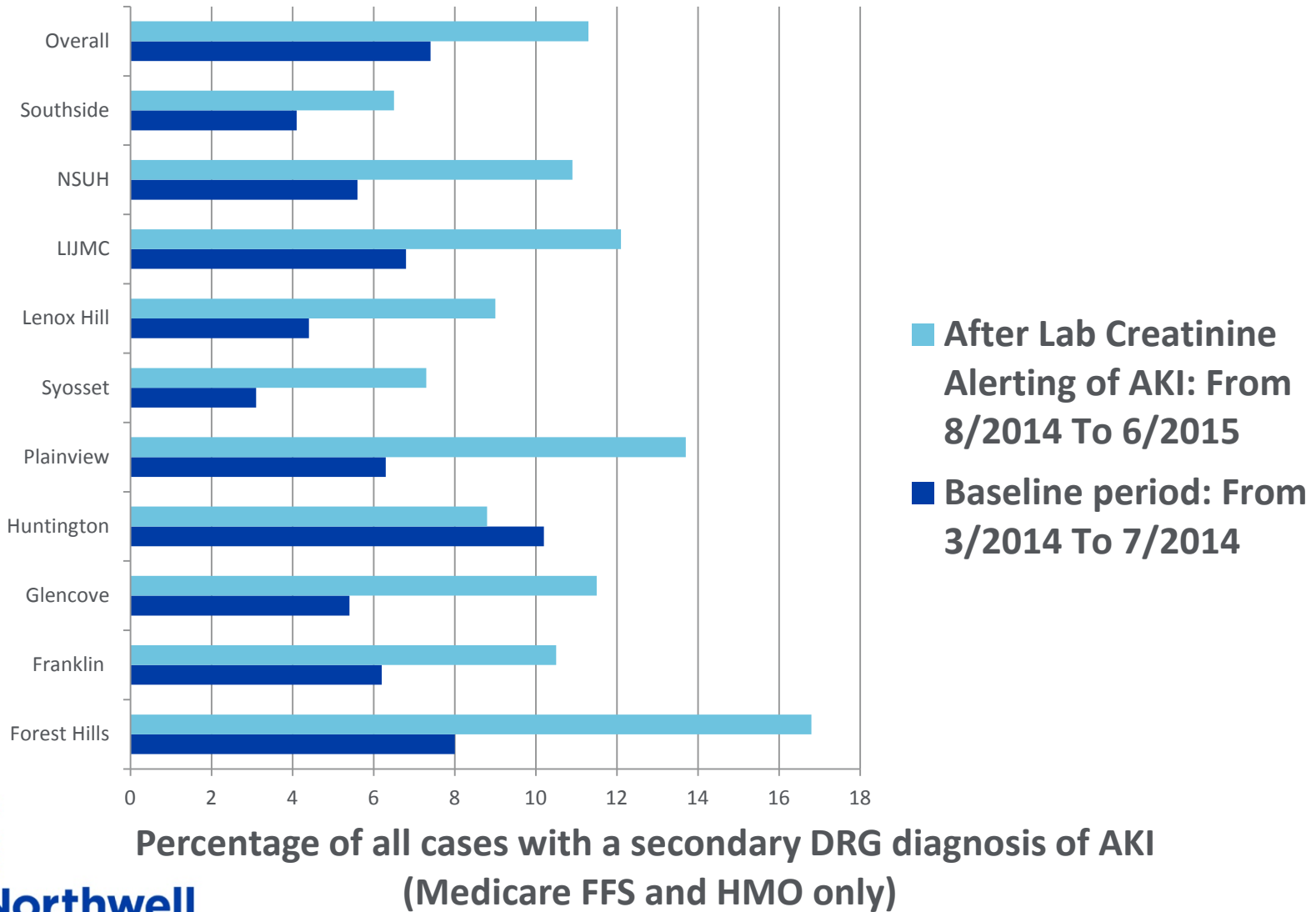
Goal: To provide leadership in system-wide initiatives requiring interprofessional collaboration*

- 2014: Blood Glucometer implementation
 - On-label → Off-label validation
 - 13,000 personnel trained
- 2015: Blood product administration standardization
 - Risk Assessment and risk mitigation (19 hospital sites)
- 2015 – 2016: Phlebotomy standardization
 - Governance (Phlebotomists – 30% of draws, Other – 70%)
 - Best practices (e.g., Blood Culture bottles)
 - Procurement, Bar Coding, Work Flow

Acute Kidney Injury

- AKI affects 5-7 % of all hospitalized patients and majority of patients are cared for by non-nephrologists
- AKI is under-recognized and under-diagnosed:
 - 6 to 30 fold increase in in-hospital mortality
 - Average LOS is increased by 3 to 7 days
 - Hospitalization costs increased by \$4,000 to \$10,000/day/patient
 - \$10B in annualized costs throughout the U.S.
- Lab instituted a “delta creatinine” Alert pilot program:
 - 50% relative rise OR 0.3 mg/dl rise: detects 99.8% of AKI patients
 - 7:00 AM daily notification to CMO → distributed to units
 - Pilot initiated at Forest Hills Hospital (250 beds) Jan 1, 2014
 - Alert triggered 5,185 times in 6m = 40 times per day
 - Clinical rounding identified 20 pts per day = **8% of admissions**

System-wide Identification of AKI



Enhanced Inpatient Reimbursement*

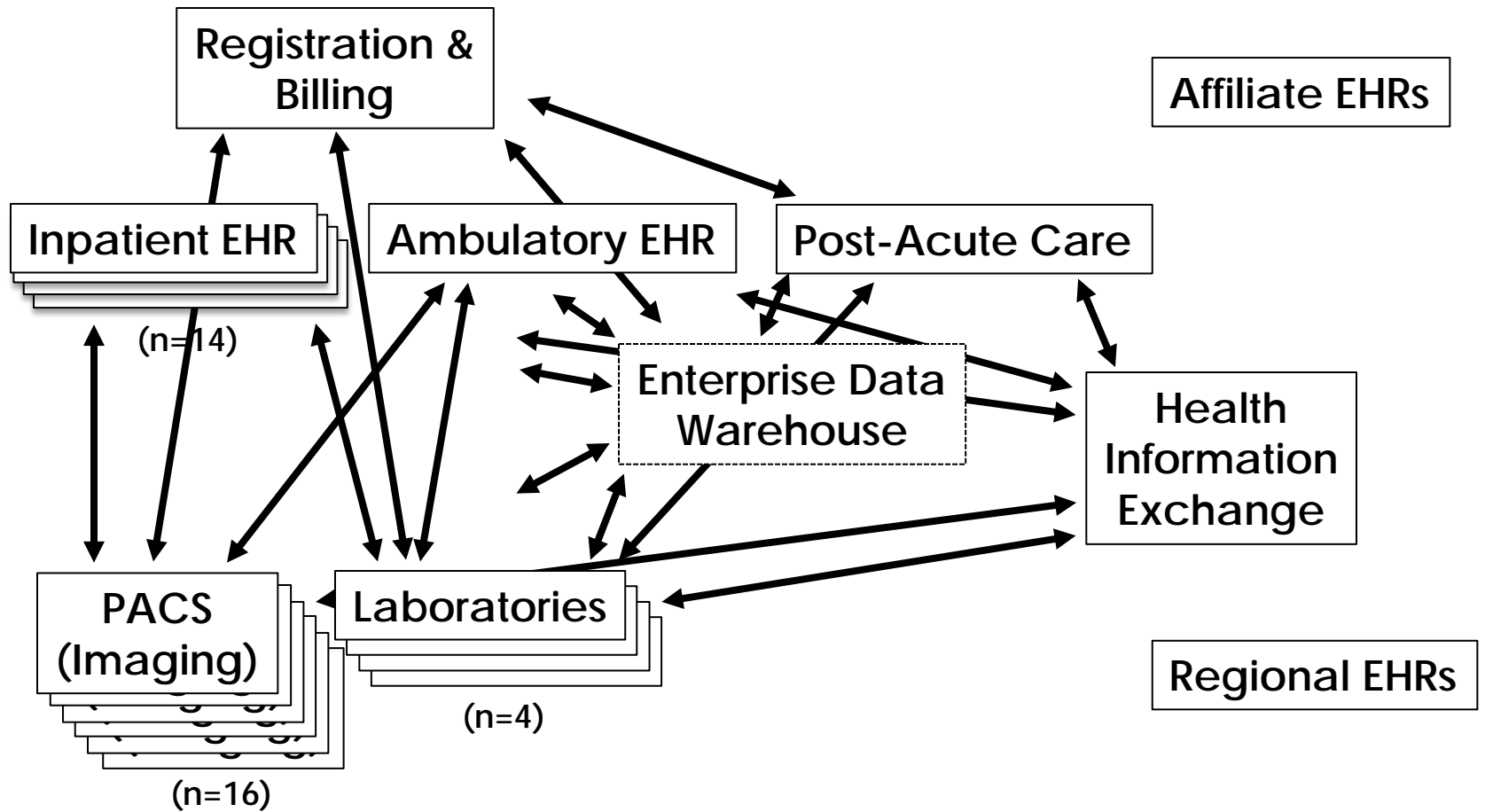
- The system-wide AKI capture rate has increased from 7.4 % (in July 2014) to 12.9 % (in July 2015) since the daily lab AKI reporting and education program for physicians began
- Average revenue increase per DRG with secondary diagnosis of AKI is \$700
- Secondary diagnosis of AKI /month in 2014 (avg.): n = 615
- Secondary diagnosis of AKI / month in 2015 (avg.): n = 930
- Increase in secondary diagnosis of AKI from 2014: n = 315
- Increased in reimbursement / month because of secondary diagnosis of AKI= $315 \times 700 = \$ 220,500$
- Increase system reimbursement for 2015 = ~ **\$ 2.65 million**

Utilization - Heat Maps – LDW alone

#	Ordered Test	Total	Doc 1	Doc 2	Doc 3	Doc 4	Doc 5	Doc 6	Doc 7	Doc 8	Doc 9	Doc 10	Doc 11	Doc 12	Doc 13	Doc 14	Doc 15	Doc 16	Doc 17	Doc 18	gini coef
	Total	100%	17%	11%	10%	9%	8%	7%	7%	6%	6%	5%	4%	4%	2%	2%	2%	1%	0%	0%	
1	Glycosylated Hemoglobin	9931	1.60	0.00	1.68	0.00	2.05	3.07	0.00	0.00	0.00	0.00	0.00	2.14	1.81	2.38	0.00	0.00	2.13	1.45	0.56
2	Vitamin D 25 Hydroxy	5469	0.74	2.87	1.14	0.00	1.14	1.11	1.98	0.09	0.84	0.00	0.00	1.15	0.77	1.11	0.00	0.77	0.54	0.71	0.45
3	LEAD	4851	0.00	0.75	0.81	1.76	0.51	0.00	0.75	1.52	1.16	2.30	3.74	1.29	1.46	0.62	3.49	2.26	0.00	0.00	0.48
4	HHC Quantiferon-TB Gold	4365	0.66	0.98	1.48	1.84	0.03	0.21	1.11	1.70	2.13	0.44	0.00	1.04	2.59	0.40	0.33	0.78	2.76	2.41	0.43
5	Order Comment	1127	2.39	0.01	0.07	1.44	1.29	0.36	0.19	2.03	0.40	2.22	1.39	0.31	0.11	0.04	0.18	0.00	0.71	0.00	0.59
6	Tubes Received	1111	2.42	0.00	0.00	1.44	1.29	0.37	0.21	2.01	0.38	2.12	1.38	0.34	0.11	0.04	0.18	0.00	0.72	0.00	0.58
7	HHC HIV AG/AB Screen by CMA	1094	1.40	0.00	0.15	6.22	0.23	0.19	0.20	2.47	0.02	0.00	0.00	0.25	0.00	0.16	0.00	0.00	0.00	0.00	0.83
8	HPVHR MRNA	1087	0.73	0.41	0.00	1.41	0.00	0.00	0.00	1.00	1.40	7.12	0.00	0.00	0.00	0.00	11.63	0.73	0.00	0.00	0.81
9	Viral Load	838	0.00	2.71	0.01	3.71	0.00	0.00	0.03	4.79	1.32	0.00	0.00	0.00	0.00	0.00	0.00	2.84	0.00	0.00	0.78
10	Antinuclear AB	736	1.62	0.00	1.51	0.00	2.17	1.04	0.95	0.05	1.97	1.67	0.00	0.52	0.50	0.89	0.75	0.00	1.09	2.26	0.46
11	Vitamin D 1,25 Dihydroxy	666	0.59	0.95	0.37	0.39	0.39	0.22	3.51	3.26	0.95	0.06	3.57	0.00	1.67	0.33	0.00	0.34	0.40	0.83	0.57
12	Benzo QuaNT Ur Confirm	587	0.00	9.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.35	0.00	0.00	0.93
13	HHC HPVGENO	503	1.21	0.00	0.00	0.00	1.99	0.00	6.79	0.00	0.00	0.00	0.00	0.00	0.00	7.61	0.00	0.00	0.00	0.00	0.85
14	Blood Culture	493	0.00	9.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
15	Hepatitis C RNA Quant	429	0.00	2.87	0.00	1.75	0.00	0.00	0.03	2.13	4.00	0.00	3.88	0.00	0.00	0.00	0.00	3.43	0.00	0.00	0.72
16	Vitamin B1	391	3.32	0.21	0.00	0.00	0.00	0.00	4.26	0.00	0.04	1.87	0.39	0.00	0.00	0.11	0.51	0.00	0.00	0.00	0.82
17	H.Pylori AG Stool	349	0.00	2.34	0.00	4.47	0.00	0.00	0.00	2.17	2.06	0.00	2.42	0.00	0.00	0.00	0.00	1.95	0.00	0.00	0.72
18	HLX CFTR Results	326	0.00	3.92	0.00	0.03	0.60	0.00	2.55	0.00	4.24	0.00	0.00	0.17	2.65	0.13	0.00	4.17	0.00	0.00	0.73
19	Testosterone Free and Total	321	0.36	1.65	0.90	0.82	1.26	0.68	1.50	0.70	1.69	1.34	0.16	1.02	0.00	0.54	2.66	4.94	0.00	0.00	0.50
20	Hepatitis B Surface Antibody, Quant	313	0.67	1.39	3.73	0.00	1.74	2.09	0.70	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75
21	Vitamin B6	271	4.88	0.07	0.04	0.00	0.05	0.00	2.05	0.00	0.06	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
22	Transglutaminase IgA	253	1.09	0.37	0.67	1.80	0.77	0.97	0.12	0.68	1.25	3.07	2.93	0.00	0.00	0.00	2.38	0.00	0.00	0.00	0.59
23	Cyclic Citrullinated Peptide AB	250	0.98	0.89	1.32	1.41	1.56	0.81	0.76	2.69	0.56	0.78	0.51	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.54
24	Herpes Simplex 1/2 Ab IGG	244	0.07	3.34	1.60	0.47	0.64	0.83	0.00	0.71	0.65	0.00	0.00	1.78	1.52	1.78	0.00	11.13	0.00	0.00	0.71
25	Fecal Occult Blood Immuno	217	0.00	0.00	2.76	0.00	0.00	0.07	0.00	0.00	0.08	0.00	0.00	5.02	2.28	11.83	0.23	22.43	0.00	0.00	0.84

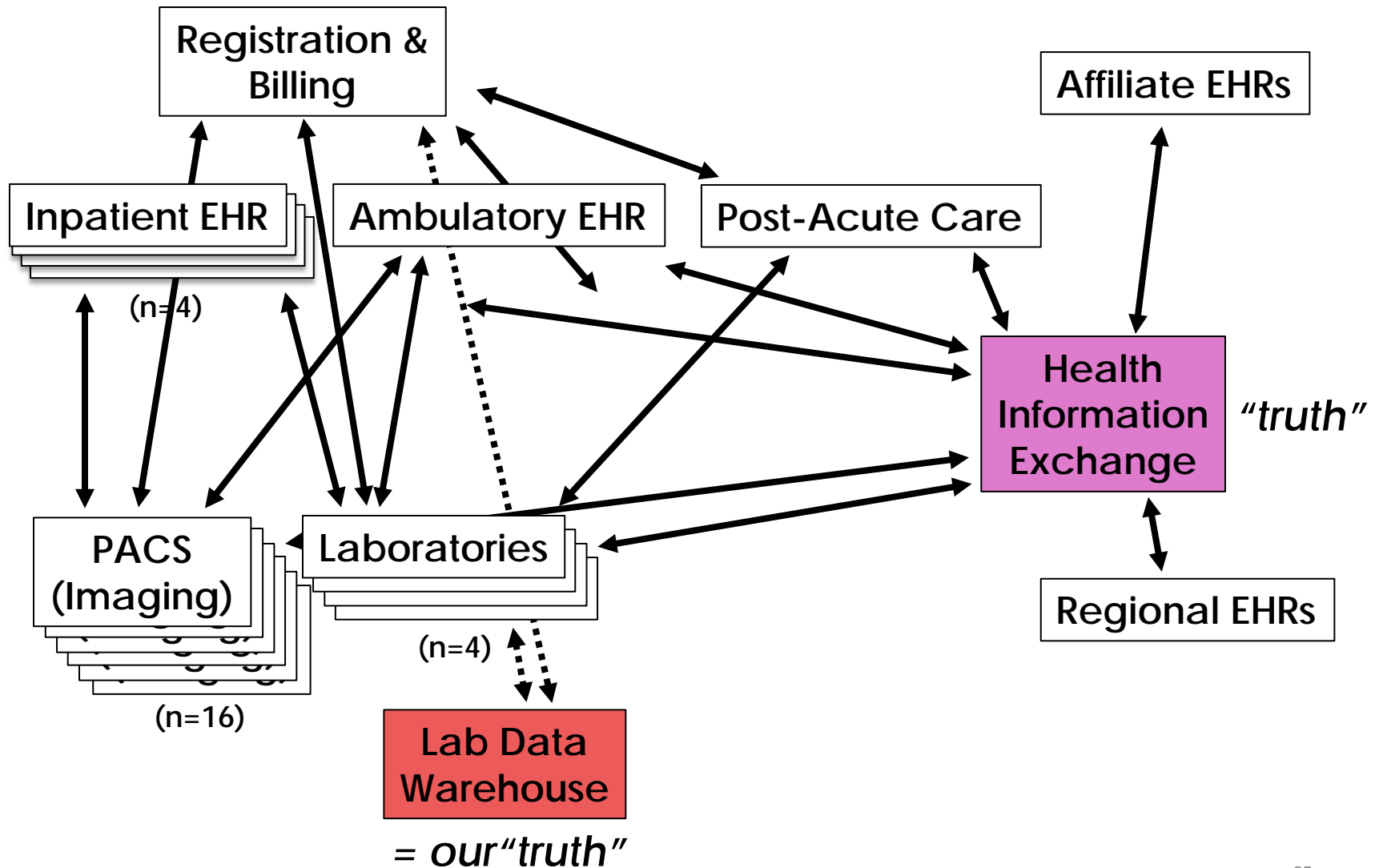
→ Utilization Management, Gaps-in-Care, Quality Measures, Outcomes

Enterprise Data*

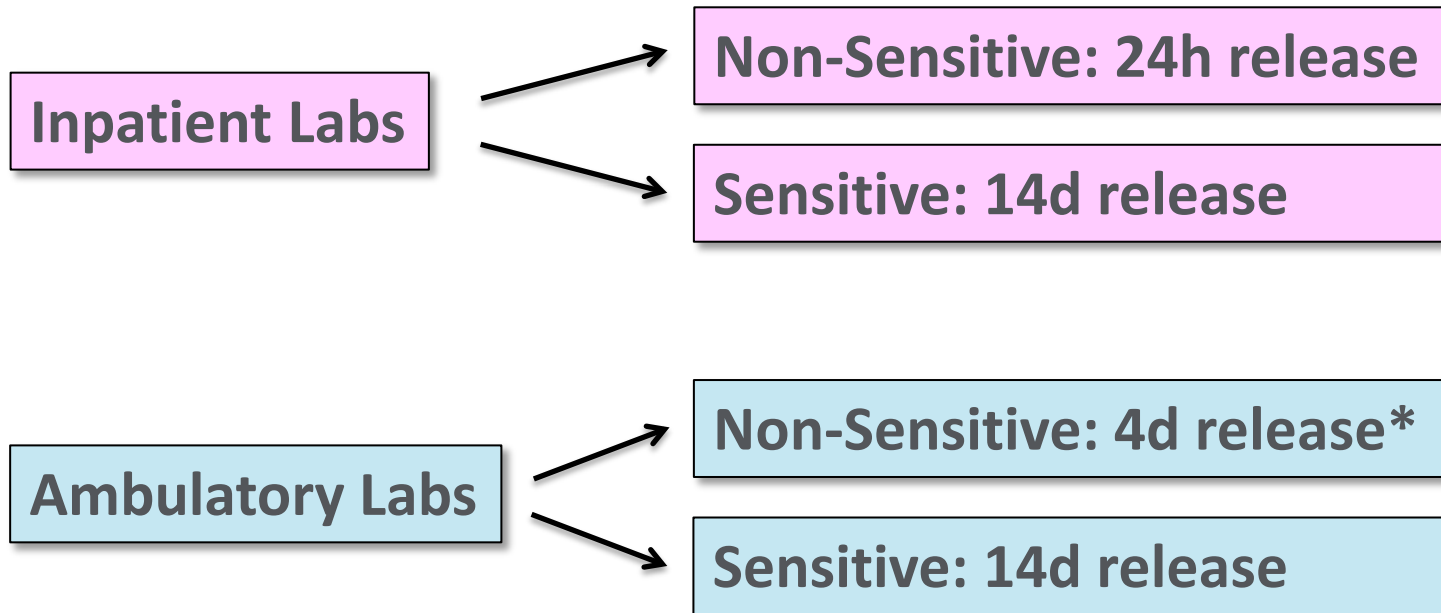


*Northwell Lab's worm's eye view of the Northwell Health System

Northwell Lab's approach

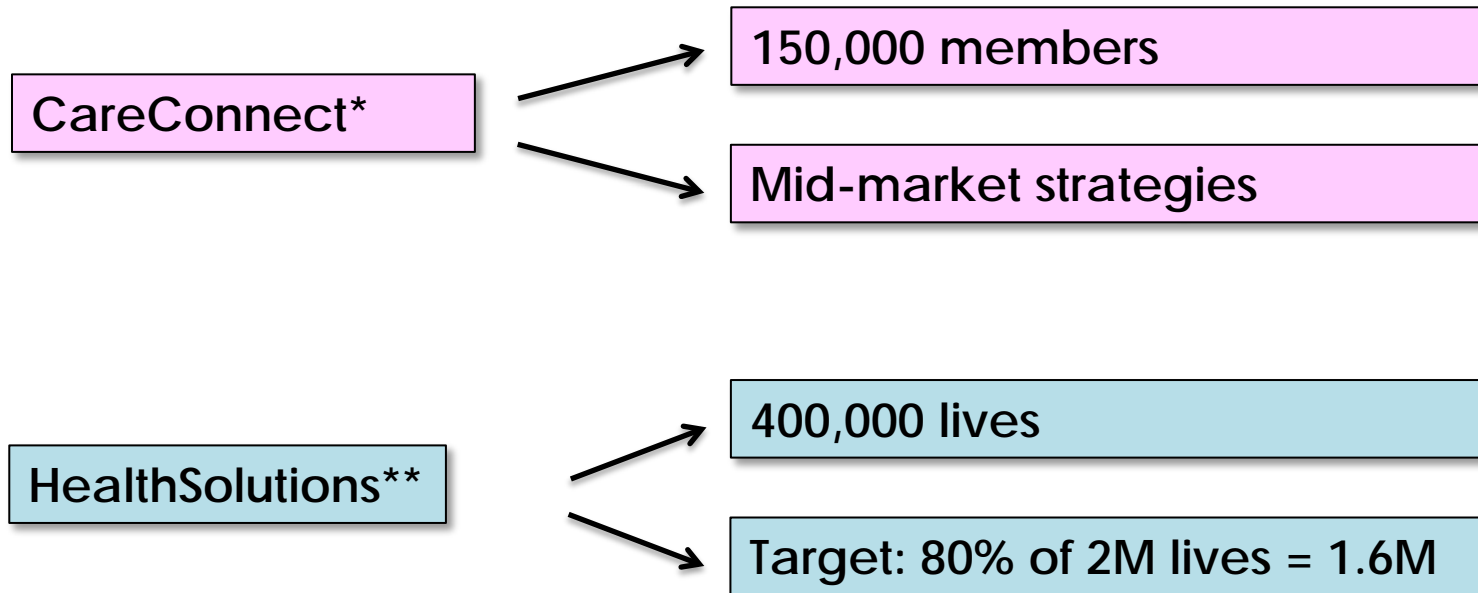


Patient Portal: “Follow-my-Health”



*with “look-back” data

Insurance* & Coordinated Care**



Core Competencies:

Clinical "Population Health" data
Laboratory data & analytics
Claims and Utilization data
Pro-active Risk Assessment
Pro-active Care Coordination

LDW plus other data sources

Formation of a Joint Venture

Northwell Health Labs

- Central “Core” Laboratory
- 12 Hospital Based Labs
- \$300 Million Annual Operating Budget
- Approx. 1600 FTE’s
- 18 Million Billable Tests/year
- Not-for-Profit Health System
- Focus on Patients, Community and Education

Health & Hospitals

- 4 “Core” Laboratories
- 11 Hospital Based Labs
- \$260 Million Annual Operating Budget
- Approx. 1400 FTE’s
- 16 Million Billable Tests/year
- Public-Benefit Corporation
- Focus on Patients, Community and Education

Vision

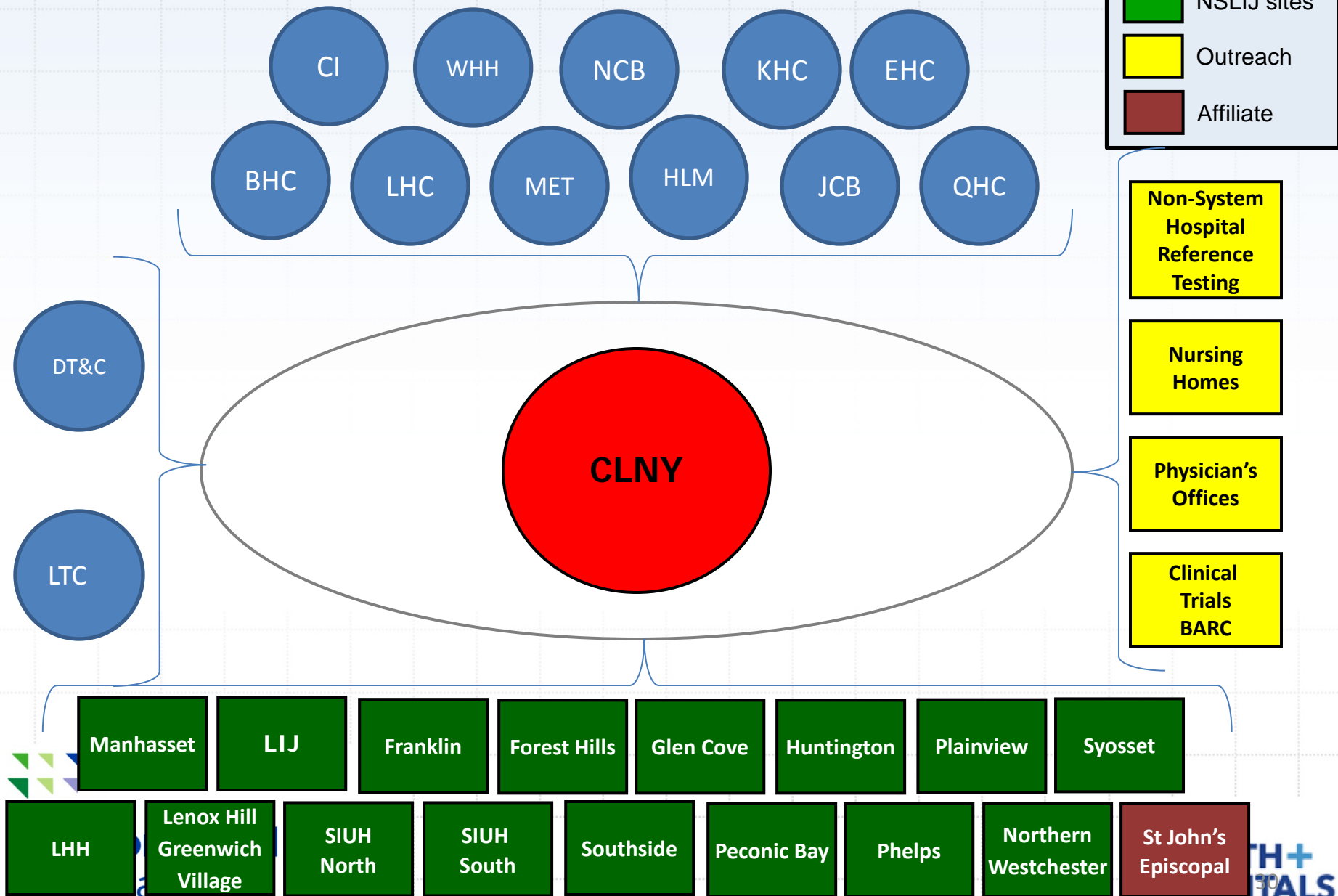
Shared Consolidated Core Laboratory

- Standardized Equipment across all Laboratories
- Standardized Information System
- Standardized SOP's through Joint Standards program
- Standardized Quality Program
- Seamless Integration of Laboratory Services

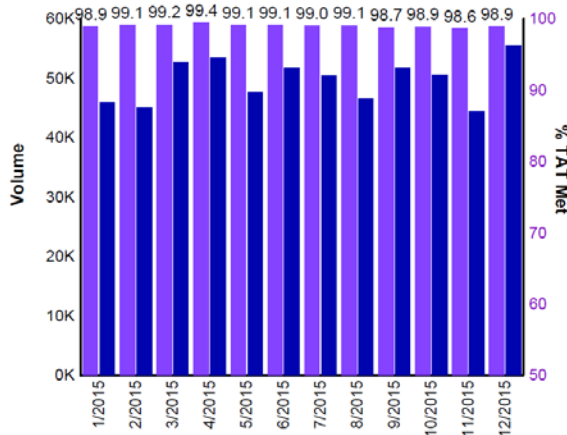
Increased Quality and Depth of Service

Decrease Cost: H+H and NSLIJ are projected to see combined >\$40M savings annually by 2018

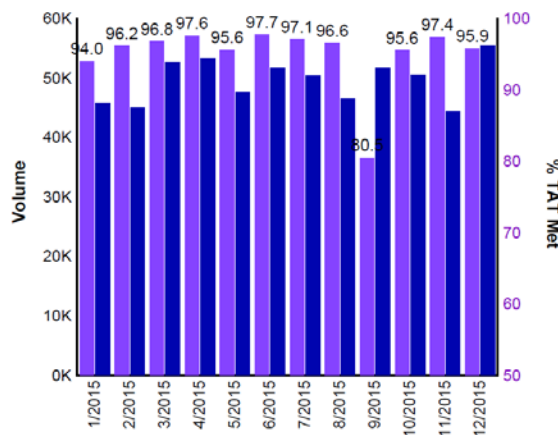
CLNY Alliance Network



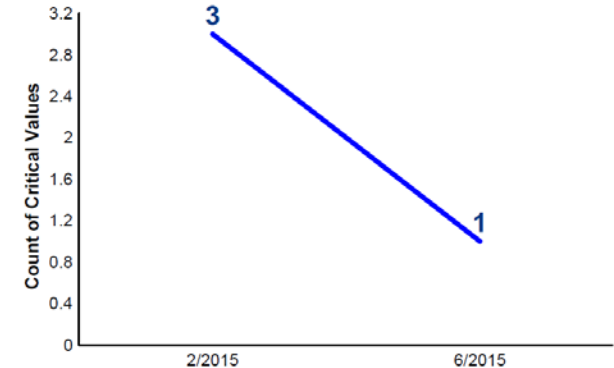
In-house Overall TAT%, 2015



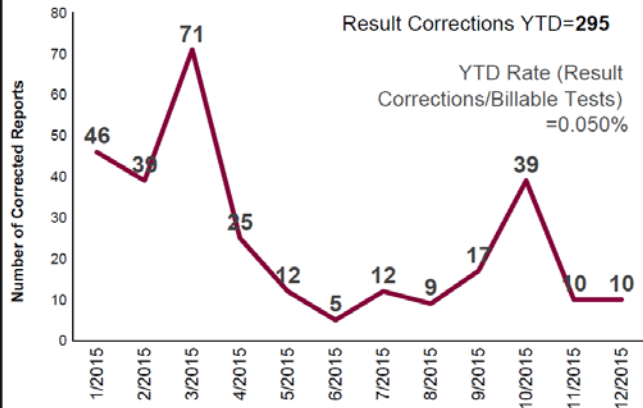
Sendout Overall TAT%, 2015



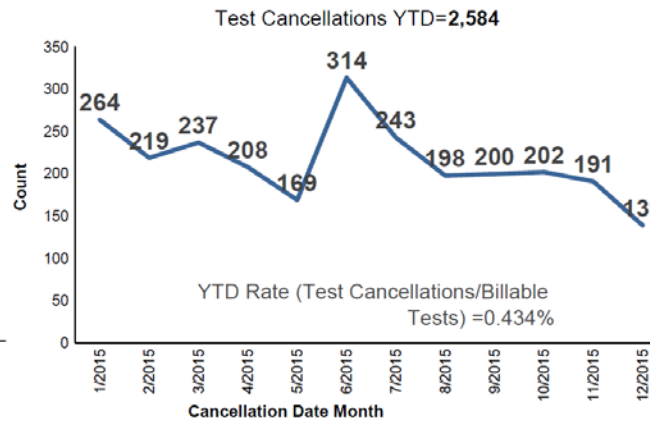
* Critical Values not called within 15 minutes of result by month, 2015



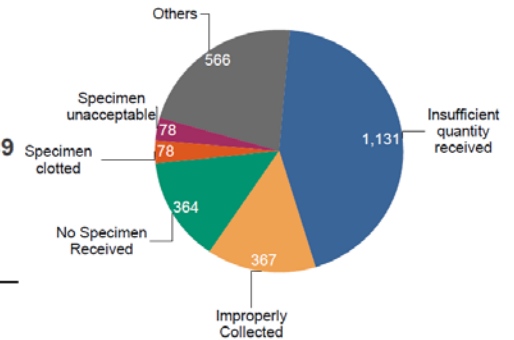
Result Corrections by Month, 2015



Test Cancellations by Month, 2015



Top 5 Reasons for Test Cancellation, 2015



Notes:

Inhouse % Turnaround Time (TAT) met = Inhouse met / Inhouse total
 Sendout % Turnaround Time (TAT) met = Sendout met / Sendout total
 * Critical values show count where TAT: Resulted to Time of 1st Call exceeded 15 min

	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	YTD
Billable Tests	45,828	45,004	52,659	53,376	47,649	51,722	50,458	46,593	51,708	50,487	44,347	55,427	595,258

Northwell: Enterprise-level Genomics

- **Cancer:** ~ 16,000 unique cancer patients cared annually*
 - **Cancer Genomics:** detects “actionable” (diagnostic, prognostic, therapeutic) gene variants that impact patient management
 - **Hereditary Cancer Genetics:** screening and counseling for patients with a strong personal and family history
 - 5-10% of all cancer is hereditary
 - Approximately 9% of women who present for a mammogram meet criteria for hereditary breast and ovarian genetic testing
- **Prenatal Diagnosis:** ~40,000 live births annually*
 - Non-invasive perinatal screening (NIPS) → Cell-free DNA
 - Carrier screening
 - Prenatal microarray
- **Pediatric & Adult Genetics**
 - Cardiomyopathy, epilepsy, mitochondrial disorders, etc.

* 1.1% of 1.7M newly-diagnosed cancer patients/yr
1.0% of 3.96M live births/yr in U.S.

Meeting the Needs of the Competitive Market



Memorial Sloan Kettering
Cancer Center™



Icahn
School of
Medicine at
**Mount
Sinai**



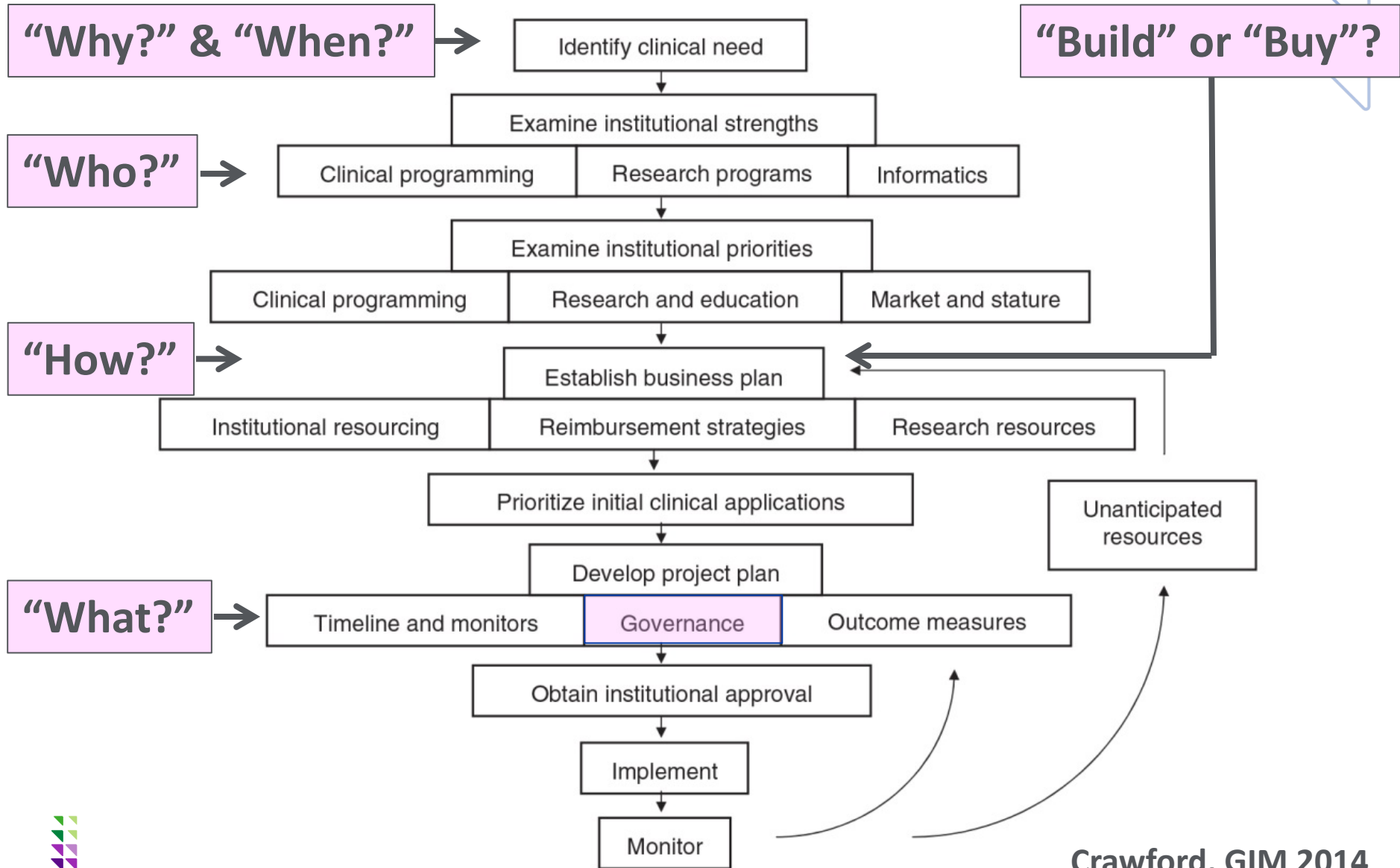
COLUMBIA UNIVERSITY
*College of Physicians
and Surgeons*



Weill Cornell Medical College

Genomics as an essential element of brand identity and market presence

Schematic for institutional decision-making and project strategy



A Joint Venture: Why?

- The strengths of Northwell Health:
 - These are **our** patients: they and their families live here
 - We have a mature delivery system for total care
 - We have clinical data that no one else has (if we collect it)
- Why partner (as opposed to build)?
 - We don't have the time to do a build
 - Our respective assets are complementary
- Intended outcomes:
 - Immediate alignment of respective expertise of the partners
 - Delivery of cost-effective laboratory testing
 - Creation of disciplined clinical pathways for use of genomic testing
 - Achievement of value: for our patients, in our marketplace

Genomics Partner



- Cancer
- Maternal Fetal
- Pediatric Genetics
- Adult Genetics

Northwell Health
Laboratories



Genomics: Essential Questions

- **Testing:** “The right testing on the right patient, at the right time”
 - Cancer Genomics: *ab initio* or *in extremis*?
 - Hereditary Cancer Genetics: oncologists, medical geneticists, PCP?
 - Prenatal Genetic Testing: for at risk or for all pregnancies?
 - Pediatric Genetics: peds geneticists, generalists?
- **Utility:**
 - Is clinical care actually informed by Genomic information?
 - *Do patients do better for having had Genomic testing?*
- **Cost:**
 - Is this just a costly lab test?
 - Or, is the total cost-of-care lower for having had such testing?
 - Are we willing to take the financial risk?

→ ***Institutional account; Northwell takes responsibility for testing***

Due Diligence: Selecting a Partner

- April – Aug 2013: 4 months to schedule a meeting (only time)
2 initial site visits
- Sep – Dec 2013: Drafting of Request for Qualifications (RFQ)
- Jan – Mar 2014: By invitation: deadline for RFQ applications
- Apr – Jun 2014: Internal review of RFQ applications
- Jul – Oct 2014: Site visits to five candidate partners
- Nov 2014 – Apr 2015: Development of Letter of Intent
- Apr – Dec 2015: Development of Business Agreements
- Jan 2016: Launch

Partner Laboratory



BioReference Genomic Capabilities

Oncology (NGS)

- Actionable panels for myeloid disorders (37 genes) and solid tumors (31 genes), site-specific panels for MDS, AML, MPNs, lung, colon, melanoma
- Inclusive of: *FLT3, NPM1, BRAF, KIT, EGFR, KRAS, NRAS, PDGRA*

Oncology (Mutation Analysis)

- *JAK2, MPL515, NPM1, BRAF, ALK, ROS*

Hereditary Cancer (Genetic Screening)

- BRCA Testing: *BRCA1/BRCA2/Ashkenazi*;
- Site-Specific: HBOC, CRC, Endometrial, Melanoma, Pancreatic, Renal
- Management Panels (only genes associated with management guidelines)
- Comprehensive Cancer Panel (32 genes)

Pharmacogenomics (Mutation Analysis)

- *UGT1A1, CEBPA, Warfarin, P450 2C19 (Plavix), DPD (5-FU)*

Prenatal (NIPT, Array, Carrier)

- 44 tests: NIPT, Comprehensive Carrier Screen Panels, AJ-focused panels, individual carrier screens

Pediatric and Adult Genetics

- 122 tests for Rare Constitutional Disorders: Cardiomyopathy, Epilepsy, Mitochondrial Disorders, etc.

BioReference Laboratory Locations

- **Elmwood Park, NJ:** Oncology & Women's Health NGS
 - >10 years genomic testing
 - Genomics lead by Dr. Robert Daber, Ph.D.
 - Thought leader in cancer genomics,
 - Previously served as the Technical Director of Clinical Genomics at UPenn, where he pioneered the implementation of NGS in oncology by building one of the earliest CAP/CLIA NGS diagnostic labs in the U.S.
- **Gaithersburg, MD:** GeneDx (NGS for Rare Disorders, Cancer)
 - Industry leaders for inherited disorders
 - Founded by Sheri Bale, Ph.D.
 - Authored ACMG guidelines on interpreting sequence variants and clinical laboratory standards for next-generation sequencing

Joint Venture Structure

- *Strategic Alliance*: The master agreement
- *Laboratory Service Agreement (LSA)*: Laboratory Testing
 - Genetic Counseling: Test selection; Test interpretation
 - Basic Genomics: standard reporting
 - Enhanced Genomics: Northwell signs out the reports
 - Genomic Tumor Boards, strategic teaching
- *Limited Liability Corporation (LLC)*: The Joint Venture
 - Generation of Knowledge: **Collect our Data**
 - Goal: “Developments”
- *Fair Market Value*
 - On-site Genetic Counselors (as arranged)*

Joint Venture Fundamental Principles

- [Patient Data]: Patient information on the Requisition
- [Test Results]: either through Basic or Enhanced Genomics
- [Clinical Data]: The “clinical metadata” (pre- & post-test)
- *Intellectual Property*
 - *De-identified data*: [Patient Data] and [Test Results]
 - *Northwell-centric Knowledge Base*:
[Patient Data] + [Test Results] + [Clinical Data]
- *Potential Developments*:
 - Software Analytics
 - Databases
 - Actual Knowledge

Protections

Northwell-centric Knowledge Database

- Northwell Data: Is “ours” to use for any unrelated purposes
 - Note: [Patient Data] and [Test Results] enter into BRLI de-identified database, in keeping with industry standards

NHGA*
Tests

OPKO/BioReference Genomics Database

Protections

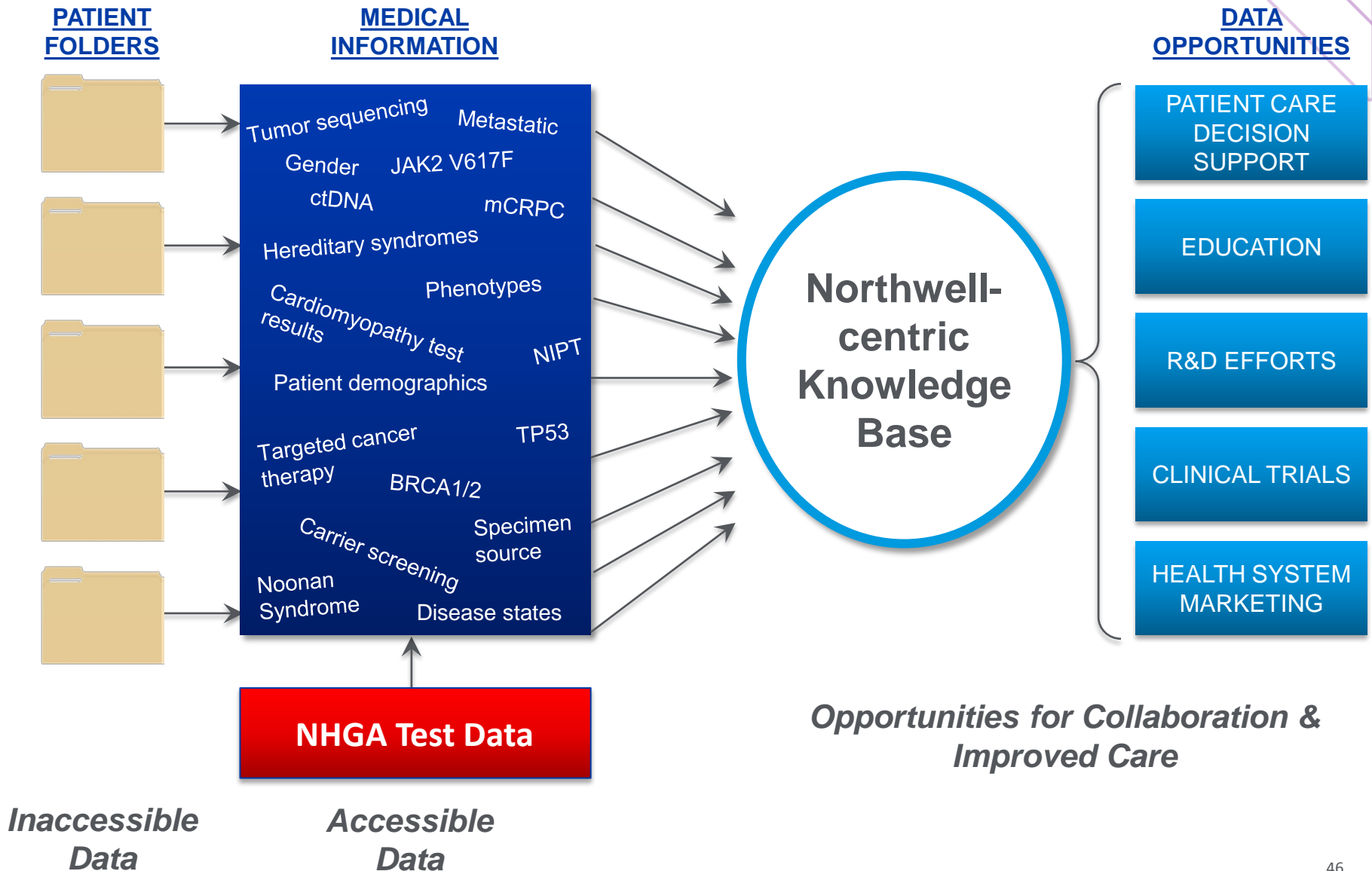
Northwell-centric Knowledge Database

- Northwell Data: Is “ours” to use for any unrelated purposes
 - Note: [Patient Data] and [Test Results] enter into BRLI de-identified database, in keeping with industry standards
- [LLC Developments]: Licensed from LLC if “mature”
- *Exclusivity*
 - Excluded: named Northwell affiliations
 - Geography: designated exclusivity for “Strategic Alliances”
 - *Allows for alliance partners from non-competing geographic regions*

NHGA*
Tests

OPKO/BioReference Genomics Database

Joint Venture Knowledgebase



Current Status (1st Quarter 2016)

ITEMS COMPLETED

- ✓ Governance of “Northwell Health Genomic Alliance”
- ✓ “Master” IT interface built with BRLI
- ✓ 1st group constitutional tests built and activated (02/18)
- ✓ Testing for Cancer Genetics Risk begun
- ✓ Testing for Carrier Screening begun

ITEMS IN PROGRESS

- Prioritized extended test build: constitutional, somatic
- “Cancer Genomics Governance Group”
- “Cancer Genomics Research Committee”
- IRB application for databasing under LLC
- Due diligence on Patient Consents (for research)
- [Cancer Genetics Counselor] practice activation
- Marketing “sweep” of ambulatory OB, Oncology practices
- Due diligence on hospital-based ordering (LHH, SIUH....)
- Swinging Anatomic Pathology test ordering to BRLI
- Establishing “Benefits Investigation” for revenue cycle

NHGA: Target Deliverables 2016



VISION

Established
Genomics
Programming
By year-end 2016

Dec
2016

Routine (prioritized):
Clinical Programming

Routine (prioritized):
Data Entry
Data Extraction
Data Transmission

Sep
2016

Begin prioritized:
Cancer Genomics
Cancer Genetics

Jun
2016

COE Clinical
Pathways
Full internal
marketing

May
2016

Coalesce Governance
Swing current testing
****Constitutional****

Finish
initial
test
build

April
2016

Begin Test Build
Begin internal
marketing
Socialize

Mar
2016

Establish Governance
Set operational priorities
Establish master account


Feb
2016

Jan
2016


Northwell enterprise-level biobanking



OPKO:BioReference



Genetic Counselors



Northwell
HealthSM

- Cancer
- Maternal Fetal
- Pediatric Genetics
- Adult Genetics

Northwell Health
Laboratories



Cold Spring
Harbor Laboratories



Are the Northwell Labs delivering “Value”?

- Support health system Financial Outcomes ✓
- Improve Health System Revenue ✓
- Provide lower cost services ✓
- Support Value-based Payment ✓
- Support Risk-based Payment ✓
- Improve Patient Access ✓
- Improve Patient and Provider Experience ✓
- Actually improve Patient Outcomes? ✓
- Help drive health system Strategies ✓

This is an infinite space.

There is plenty of room for humility.

Do not take your status for granted for a minute.

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