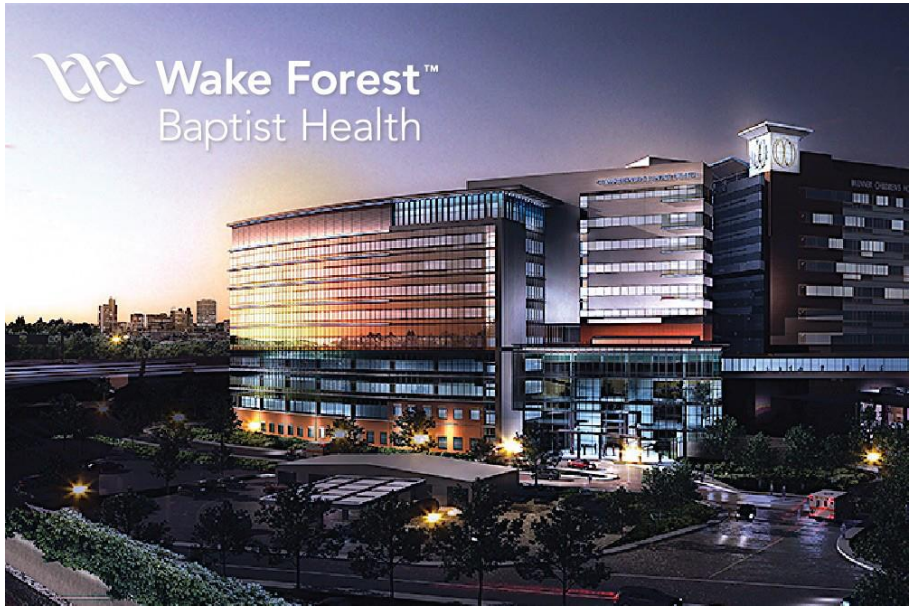
Bringing Efficiency into Anatomic Pathology: Opportunities, Ideas, and Lessons Learned in Managing Costs, Boosting TAT and Quality, and Increasing Productivity”



Michael B. Cohen M.D.

Rita D’Angelo Ph.D.

Disclosures

- None

Outline

- Review “The Troubles” at WFBMC
- Cursory history of US medical economics
- Brief insight into economic forces in AP reimbursement
- AP v. CP
- What top performers do

“The Troubles”
in Pathology at WFBMC

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WAKE FOREST BAPTIST LAB'S PATH ERRORS TEACH LESSONS

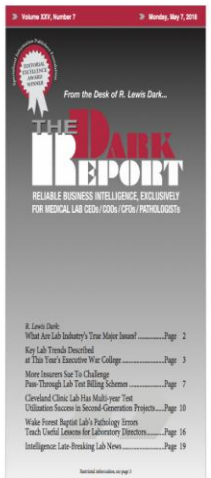
CMS inspection uncovered multiple serious deficiencies in histology and pathology departments

By Joseph Burns | From the Volume XXV No. 7 – May 7, 2018 Issue

← Cleveland Clinic Lab Has Multi-year Test Utilization Success

May 7, 2018 Intelligence: Late Breaking Lab News →

***CEO SUMMARY:** For medical directors and pathologists interested in improving their labs' compliance with CLIA regulations, a report from federal and state inspectors of an inspection of the pathology lab at the Wake Forest Baptist Medical Center offers insights into what issues caught the inspectors' attention. During their visit in February, the government lab inspectors found multiple, serious diagnostic errors in the medical center's academic pathology department.*



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Volume XXV No. 7 – May 7, 2018

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Timeline

- 8/2017 Start at WFBMC
- 9/2017 assume interim chair role
- Risk Management become aware of concerns
- Self reporting to NC DHSR
- 2/2018 first inspections
- 3/2019 scheduled biennial CAP inspection
- 6/2019 end of tour of duty as interim chair

Some Lessons Learned

- Leadership…the Laboratory Director & others
- The importance of CULTURE
  - Patient comes first
  - Safety & quality
- Hire the appropriate staff
- FPPE/OPPE matter (focused/ongoing professional practice evaluation)
- Policies & Procedures
- Validation
- Support from Administration

Burnout

- Emotional exhaustion
- Depersonalization (cynicism)
- A sense of lack effectiveness and a reduced personal accomplishment

https://nam.edu/initiatives/clinician-resilience-and-well-being/

The US Medical Practice Environment: A paradox founded amidst cataclysms

- 1st Cataclysm: The Great Depression
- Public Work Based Welfare (1st paradox)
- Health Insurance as a Social Security Benefit =
  Welfare based on contributions earned by work
  – individual / spousal / parental

--Courtesy Stephen Black-Schaffer

The US Medical Practice Environment: A paradox founded amidst cataclysms

- 2nd Cataclysm: A World at War – WW II
- Private Work Based Welfare (2nd paradox)
- Health Insurance as an Employment Benefit =
  Welfare based on contributions earned at work
  – social support provided as a "fringe benefit"

--Courtesy Stephen Black-Schaffer

With government and business both seeking to control (reduce) healthcare costs

- **Diagnosis-Related Groups (DRGs)** => shifted hospital cost object => cost plus => prospective payment => encouraging efficiency.
- Physician services required corresponding tool => control (reduce) payments.
- Why? "Usual & customary" payment inequalities => selective vulnerability to reductions => impeding cost control => poor cognitive & rich procedural => local patient access & global public relations problems.

- **Resource-Based Relative Value Scale (RBRVS)** => level physician payment playing field => enable physician service payment control (reduction).

--Courtesy Stephen Black-Schaffer

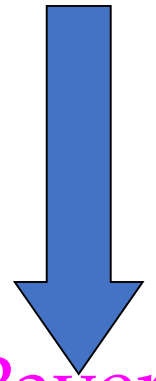
RBRVS

- 1992 Physician Work Relative Values resource-based.
- 1999 Direct Practice Expense Relative Values resource-based (transitioned => 2002)
- 2000 Professional Liability (Malpractice) Relative Values resource-based.
- 2007 Indirect Practice Expense Relative Values resource-based (transitioned => 2010)

--Courtesy Stephen Black-Schaffer

Changing reimbursement strategies

Reimbursement:	Cost Object:	Provider:	Control:
Fee for Service	Indiv Service	MD Hosp	Provider
Per Diem Pay	Daily Care	Hospital	
Prospective	Episode	Hospital	
Global Fee	Episode	MD + Hosp	Payer/
Capitation	All Care	ACO	Patient



--Courtesy Stephen Black-Schaffer

What is the significance of this progression?

- It reflects a shift in control from providers to payers, as these strategies redefine final cost objects progressively less from the perspective of the provider and more from that of the payer (and the patient)
- In doing so, it progressively redefines what had been production (revenue) centers as service (cost) centers
- Who gets paid for what is shifting, away from volume and intensity of services and toward accountability for performance (outcomes):

↕ QUALITY OF OUTCOMES
↕ CONSUMPTION OF RESOURCES

- "Value Proposition" => Ratio of Outcomes to Resources

--Courtesy Stephen Black-Schaffer

AP Becomes Big Business

- Mid 1990s: AmeriPath (bought up by Quest Diagnostics), PathGroup, Aurora Diagnostics (now part of Sonic Healthcare),…
- 2004 start of called pod labs, in office anatomic pathology [Dermatology, GI, Urology,…]

88305

- CPT code: Surgical pathology, gross and microscopic examination (Level IV)
- Technical (TC) and Professional (PC) Components
- In MI, CMS TC reimbursement changed from ~$64 (2012) to ~$31 (2013); in 2019 it's ~$28
- PC increased 1.7% between 2015 and 2019; in 2001 PC was ~$44
- CPI has increased ~10% between 1/2015 and 7/2019 (~47% since 2001)

- **Thanks to Mick Raich, Vachette**

Level IV Exam - Code 88305

Abortion - Spontaneous/Missed
Artery, Biopsy
Bone Marrow, Biopsy
Bone, Exostosis
Brain/Meninges, Other than for Tumor Resection
Breast, Biopsy, Not Requiring Microscopic Evaluation of Surgical Margins
Breast, Reduction Mammoplasty
Bronchus, Biopsy
Cell Block, Any Source
Cervix, Biopsy
Colon, Biopsy
Duodenum, Biopsy
Endocervix, Curettings/Biopsy
Endometrium, Curettings/Biopsy
Esophagus, Biopsy
Extremity, Amputation, Traumatic
Fallopian Tube, Biopsy

Level IV Exam - Code 88305

Fallopian Tube, Ectopic Pregnancy
Femoral Head, Fracture
Fingers/Toes, Amputation, Non-Traumatic
Gingiva/Oral Mucosa, Biopsy
Heart Valve
Joint, Resection
Kidney, Biopsy
Larynx, Biopsy
Leiomyoma(s), Uterine Myomectomy - without Uterus
Lip, Biopsy/Wedge Reaction
Lung, Transbronchial Biopsy
Lymph Node, Biopsy
Muscle, Biopsy
Nasal Mucosa, Biopsy
Nasopharynx/Oropharynx, Biopsy
Nerve, Biopsy
Odontogenic/Dental Cyst

Level IV Exam - Code 88305

Omentum, Biopsy
Ovary with or without Tube, Non-Neoplastic
Ovary, Biopsy/Wedge Resection
Parathyroid Gland
Peritoneum, Biopsy
Pituitary Tumor
Placenta, Other than Third Trimester
Pleura/Pericardium - Biopsy/Tissue
Polyp, Cervical/Endometrial
Polyp, Colorectal
Polyp, Stomach/Small Intestine
Prostate, Needle Biopsy
Prostate, TUR
Salivary Gland, Biopsy
Sinus, Paranasal, Biopsy
Skin, Other than Cyst/Tag/Debridement/ Plastic Repair
Small Intestine, Biopsy

Level IV Exam - Code 88305

Soft Tissue, Other than Tumor/Mass/ Lipoma/Debridement
Spleen
Stomach, Biopsy
Synovium
Testis, Other than Tumor/Biopsy/ Castration
Thyroglossal Duct/Branchial Cleft Cyst
Tongue, Biopsy
Tonsil, Biopsy
Trachea, Biopsy
Ureter, Biopsy
Urethra, Biopsy
Urinary Bladder, Biopsy
Uterus, with or without Tubes & Ovaries, for Prolapse
Vagina, Biopsy
Vulva/Labia, Biopsy

Private Payer Pressure

- Anthem (BC/BS), which is >12 states (40M members), decreasing reimbursement for PC for many 8000 series CPT codes by as much as 70% from negotiated rates and would be less than Medicare (~50%); pathology is an ancillary service
- The impact would be greatest on small group practices
- The impact would also affect patients

Some differences Between AP & CP

- Cell/tissue based v. body fluids
- Individual patient v. patients at large (Part B v. Part A)
- Volumes & TAT
- Automation v. Pathologist
- High complexity v. POCT waived/Moderate complexity testing
- Qualitative v. Quantitative results--variability

Some similarities Between AP & CP

- Focus on quality/accuracy/TAT/patient safety
- Importance of pre/intra/post analytic components
- Integration of molecular methodologies
- Limited direct patient interactions
- Critical to medical decision making
- To the ‘clinician’ both are a black box

The Anatomic Pathology Process

Surgical Pathology

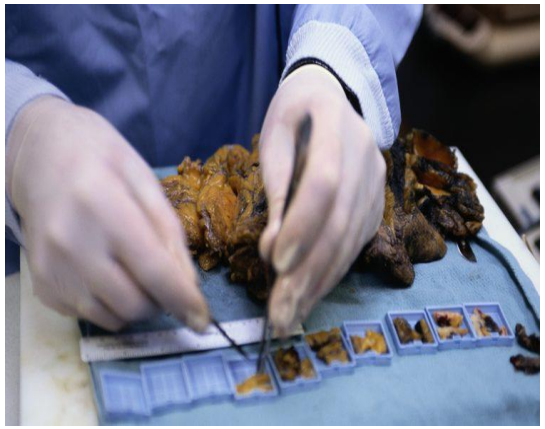
1

The tissue is retrieved from the body

2

Tissue is added to containers with preservative

3



Biopsy is grossed(processed) and the tissue is added to the cassettes

4

Cassettes are processed

Biopsy Tissue

Specimen is embedded into paraffin blocks

Thin sections are cut on a microtome

Sections placed on a glass slide

Interpretive consultation

https://www.quora.com/Why-does-it-takes-so-long-to-get-cancer-results-from-pathology

Defective Process in Anatomic Pathology

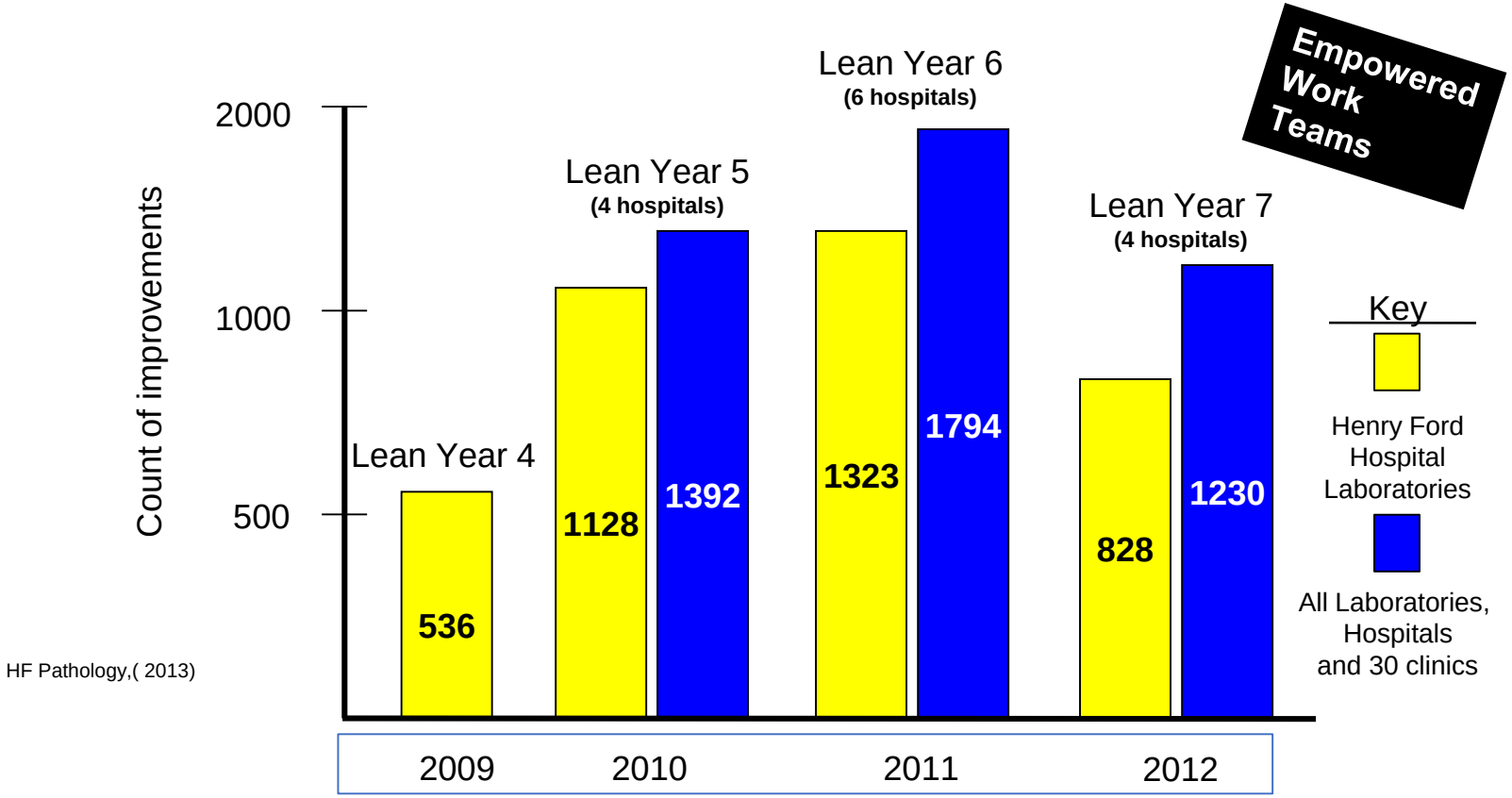
- Lack of standard collection
- Missing patient information
- Specimen misidentification
- Delayed courier pick up and delivery
- Lost samples
- Outdated procedures
- Lack of formal training

Frustration →

https://www.irishnews.com/news/2018/03/12/

What do Top Performers Do?

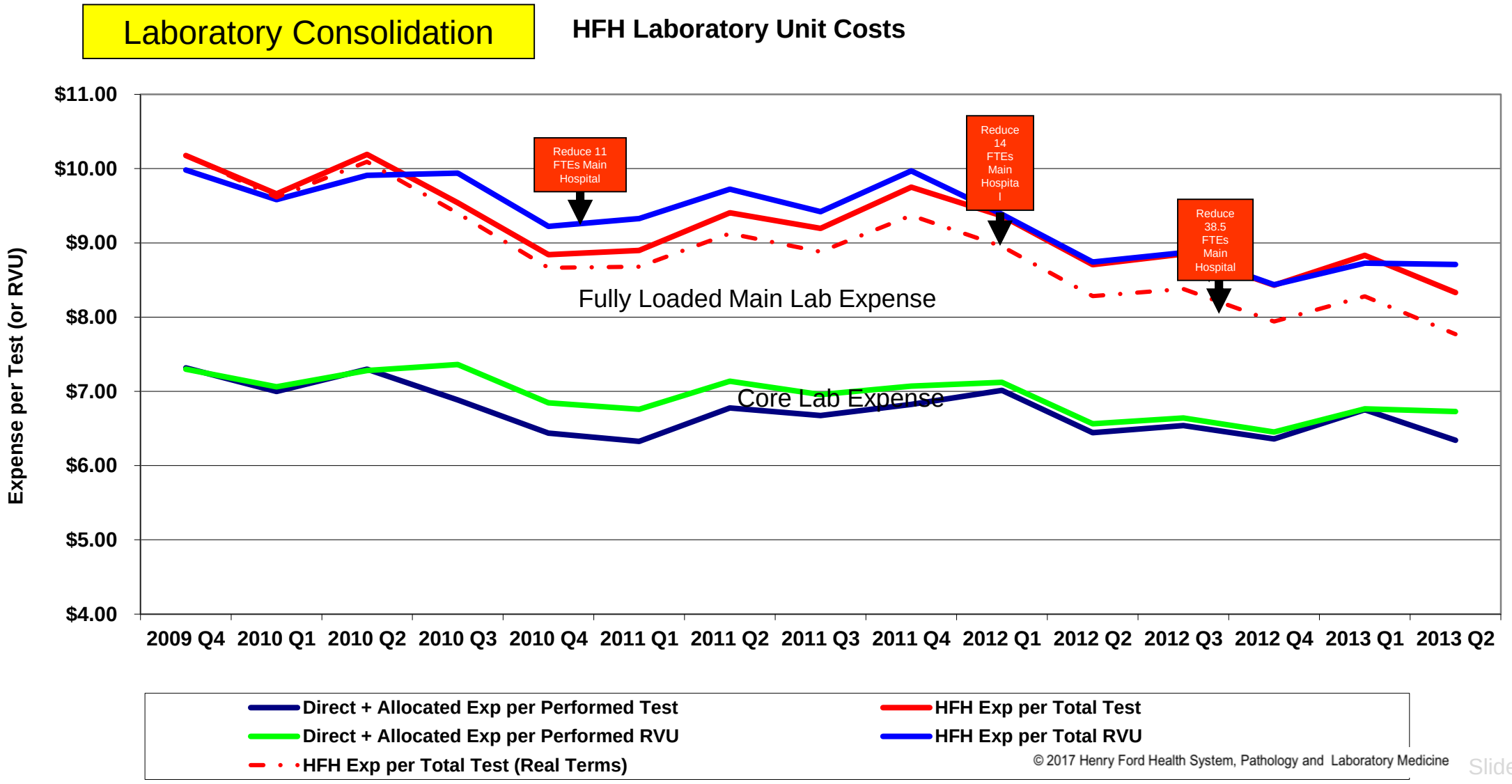
Total Implemented Process



HF Pathology,(2013)

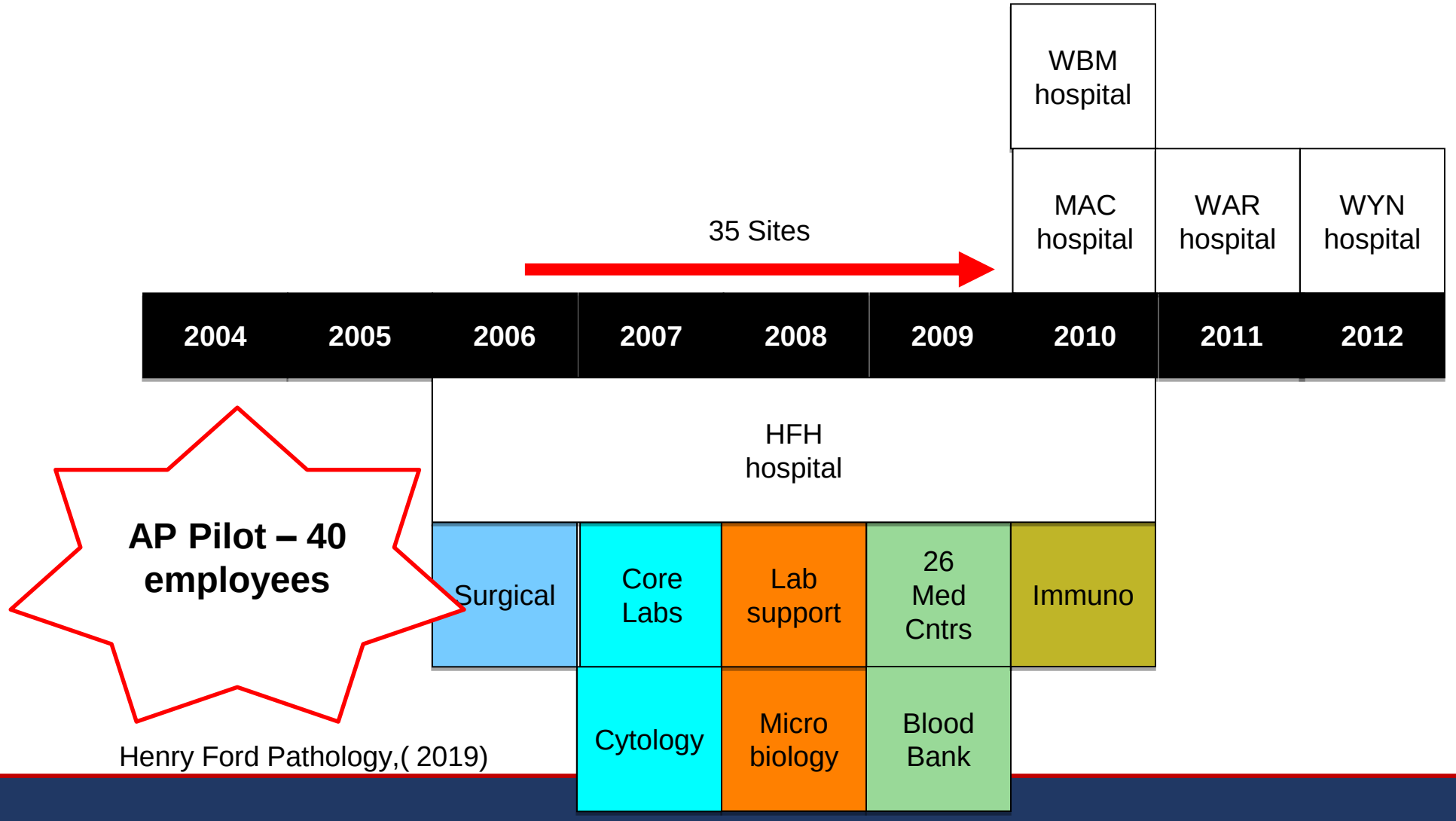
Trends: Cost Per Unit

Laboratory Consolidation



How was Lean Accomplished?

Henry Ford Pathology and Laboratory Medicine
Lean Continuous Improvement initiative



Henry Ford Pathology,(2019)

How do WE Gain Operational Efficiency?

Wake Forest Pathology AP Accessioning Value Stream Map

Supplier:
Accessioning Techs (specimens from CP - Clinical Labs, OR)

Customer:
Grossing PAs/ Residents

Current State (OR)

Specimens waiting in CP

No Shift Stagger

Clinic Lean issues (longer term)

No feedback to Clinics of summarized QC issues weekly from Accessioning

All manual input

No accessioning internal data summary, huddle to root cause

Specimen containers/cassettes/ requisitions on cart and transport trays not lean

Step 1:
Verify Patient Information matches labels

Step 2:
Generate Accession number and add to containers (manual)

Step 3:
Select part type, number, and color of cassettes (from specimen type)

Step 4:
Print cassettes (accession number, part, number/color of cassettes)

Step 5:
Assemble cassettes, tape to specimen container (only when more than one) with requisitions stacked on top

Specimens waiting in CP (up to 12 hr. delay)

No requisition (1 to 5 day delay)

Top Performers
Revise/redesign the entire process:
From specimen collection to report

Automate Central Processing

70% of mistakes happen in the pre-analytic phase — during sample collection, handling or processing

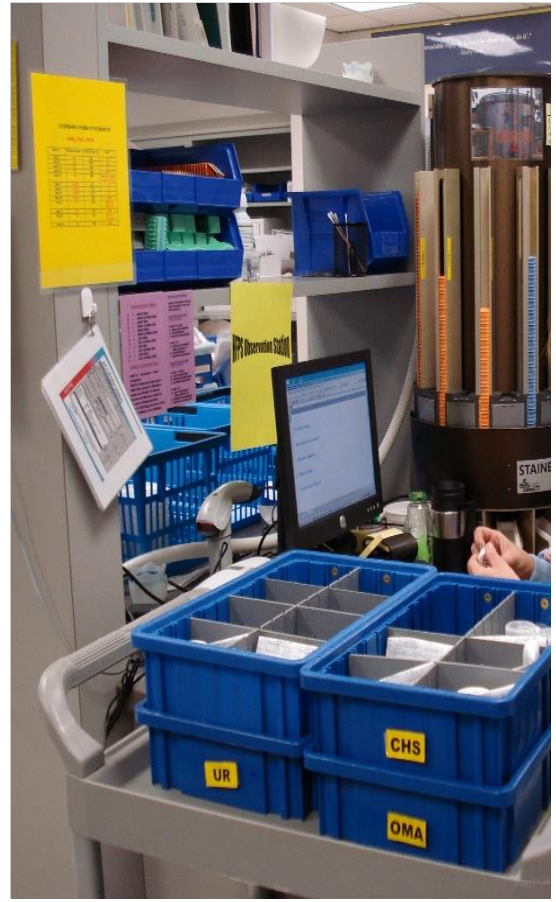
One million patient specimens every week

Mayo Clinic - Sorts 6,000 specimens per hour

Eitel, L., (2017)

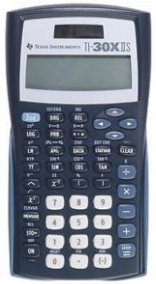
Batching Work Load

- One-piece flow
- Just- in –time
- Continuous flow
- Waste reduction



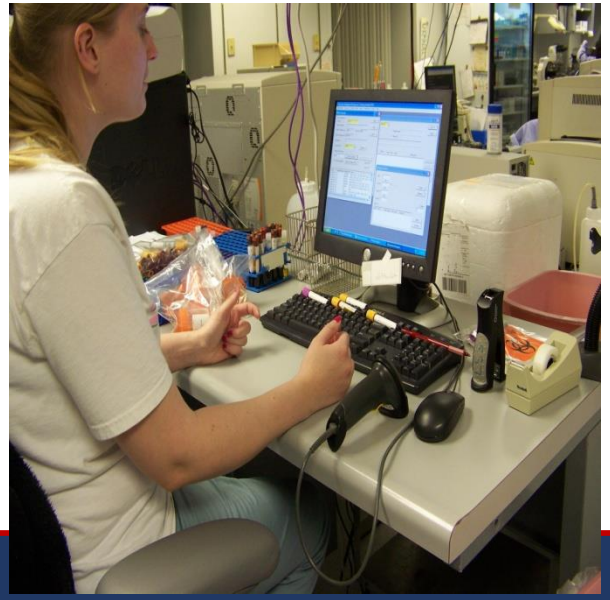
Henry Ford Pathology, (2013)

Waste Elimination



Total waste per hour: 14 min 40 sec
(11 bags/hour)
Total waste per shift: 2 hrs 24 min
Time wasted in a 40 hr week: 9 hrs 36 min
Time wasted per year: 499 hrs 12 min

Above data is for ***only*** 1 shift !!



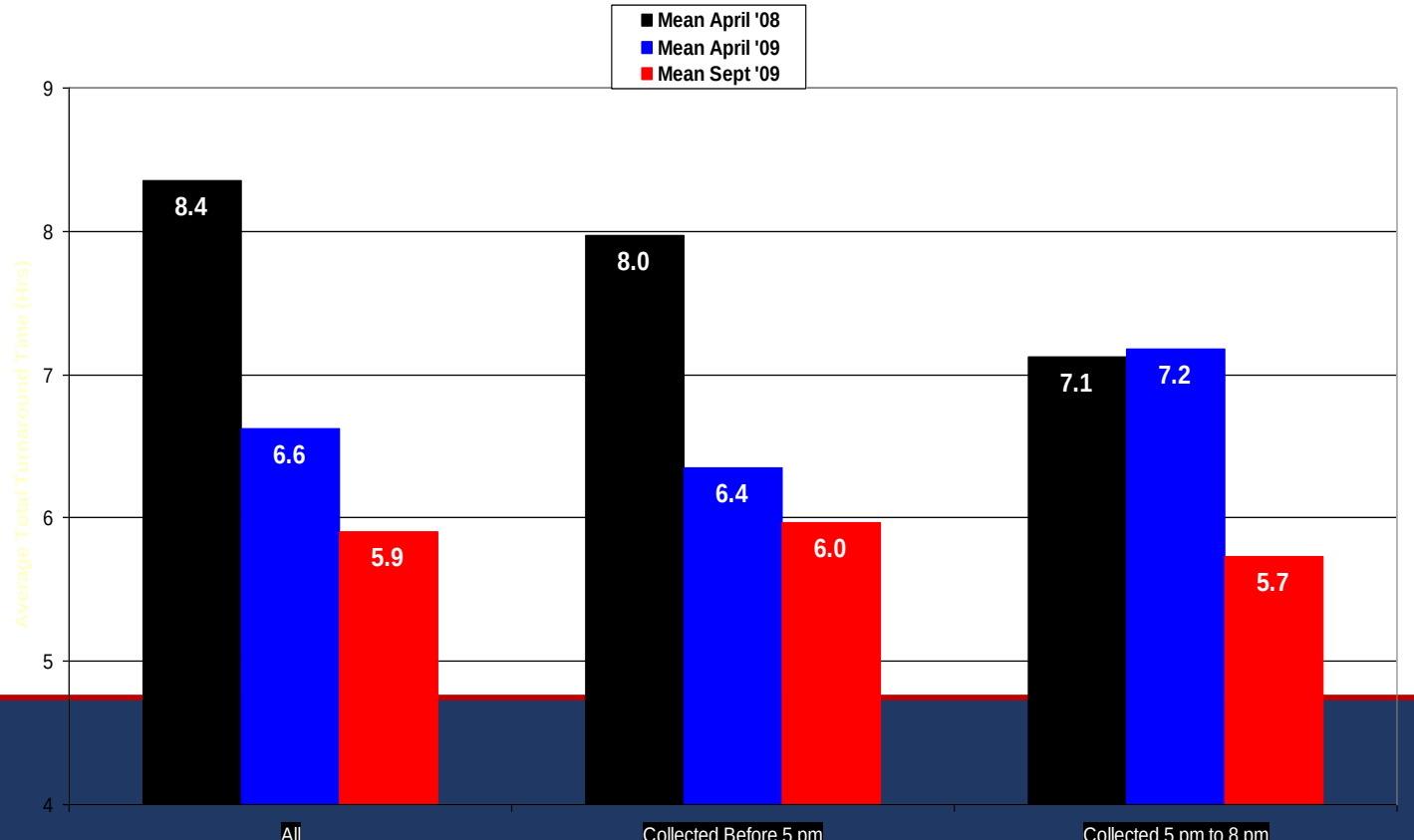
Henry Ford Pathology, (2013)

Standardize the Collection Process

Reduce Supplier Time Waste

1. Standard forms
2. Job Aids
3. Error proofing
4. Color Coding
5. Delivery time expectation

50% Faster from 25 Miles Away



Henry Ford Pathology, (2013)

Implement the Pull System

Identify a maximum limit

50 →

3

50 →

1

→

50 →

2

https://www.leicabiosystems.com/histology-equipment/tissue-processors/asp6025/

Kanban Inventory Program

- Definition of Kanban:
- kan means “visual” and ban means “card”

= $$$$$$

- The maximum number of inventory will decrease as the PUSH inventory become a PULL inventory

Henry Ford Pathology, (2013)

Kanban Control Inventory

A repetitive schedule with a visual

Kanban built into the system

Continuous flow production

Reduce the amount of inventory

Just- In - Time approach to inventory

Take Home Message

Learn new skills to achieve Lean operational efficiency and use those skills to streamline Anatomic Pathology

from

Specimen collection → report → patient/healthcare worker


Questions