Impact of Diagnostics on the Integrated Care Mode: The Importance of a System Approach

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Objectives

1. Explain the genesis of the integrated care models
2. Identify root causes of why the laboratory may be segregated
3. Outline ways that the laboratory can be more system oriented.

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What's the problem we are trying to fix?

- The US spends almost twice per capita than other industrialized nations
- According to the CIA and National Census Bureau, the US ranks 50th in the world on life expectancy
- Price≠quality in a system that spent $2.5 trillion on health care in 2010 (CMS).

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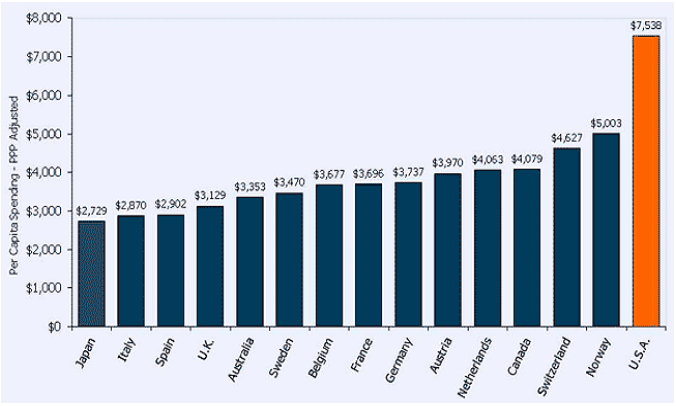
Exhibit 1
Total Health Expenditure per Capita, U.S. and Selected Countries, 2008



Source: Kaiser Foundation web site

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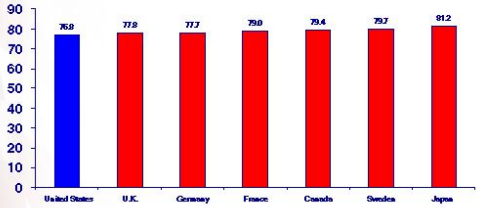
The United States lags other industrialized nations in life expectancy at birth.



Source: OECD Health Data 2002.
Note: Life expectancy at birth for the total population is estimated by the OECD Secretariat for all countries, as the unweighted average of the life expectancy of men and women. Data for Germany are from 1999.

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2010 Life Expectancy Data (Source:AP)

Life expectancy

Japan's life expectancy was 82 years for babies born in 2004, leading the list of developed countries, while the U.S. is just above Mexico with 77.9 years.

2004 life expectancy for selected countries, in years

Japan	82.0
France	80.4
Australia	80.3
Sweden	80.3
Canada	80.0
U.K.	78.3
U.S.	77.9
Mexico	74.9
China	72.0
Iraq	68.3
India	66.5
Sudan	47.9
Afghanistan	42.5

Sources: Census Bureau; National Center for Health Statistics

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Why Are New Care Models Being Proposed?

- Health care is moving away from the historical fee for service models:
  - Cost issues
  - Quality of care issues
- The Affordable Care Act has several goals:
  - Paying for performance
  - Promoting better care and protecting patient safety
  - Ensuring all Americans have access to care
  - Crackdown on fraud and waste
  - Developing measures of health care quality

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The Need….

Health care organizations are being expected to achieve "Better Care" by improving "the quality, safety, access and reliability of how care is delivered"*

* **National Strategy for Quality Improvement in Health Care (DHHS 2011)**

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Health Care is Not Highly Reliable

- HAIs estimated by CDC 1.7 million
  - Percentage related to SSI 22%
  - Percentage related to CAUTI 32%
- HAI-related deaths 99,000
- Wrong site surgeries (MN extrapolation) 1,829
- Retained foreign objects (MN extrapolation) 2,012
- Diagnostic Errors 9%
- Medication errors 5%

(0.25% impact patient care)

Sources: CDC, CMS, Minnesota DOH, Medscape

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Hospital Acquired Conditions Required Reporting (not POA) 2009 Results

1.	Retained foreign object	189
2.	Air embolism	24
3.	Blood incompatibility	8
4.	Pressure ulcers	1,311
5.	Falls	5,684
6.	Catheter-associated UTI	2,323
7.	Vascular catheter-associated infection	2,555
8.	Poor glycemic control	435
9.	SSI	198
10.	Pulmonary embolism & DVT	2,505

Source: Federal Register, August 2010

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Diagnostic Error

- The leading cause of malpractice claims
  - 17% of all preventable errors (Harvard Med Practice Study)
- Occurs at twice the rate of medication errors
- According to a Quantia MD survey, testing was part of the problem (% errors) in a survey of 6394 physicians:
  - Inadequate follow-up on testing results (29%)
  - Failure to order appropriate tests (21%)
  - Incorrect interpretation of test results (10%)

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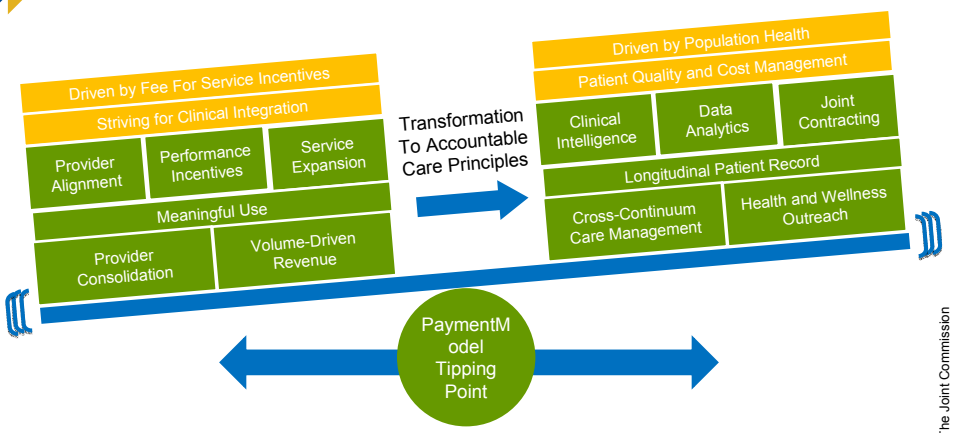
Payment Reform: The "Tipping Point"



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KPMG, "The Evolution of Accountable Care: Accelerating the Transformation of U.S. Healthcare. 2010

Historical Strategies to Contain Cost

- Capitated reimbursement models
- Reduction in expense per unit through process redesign, automation, or shift in testing model
- Increase of volume through mergers, acquisition or reference testing
- Rewarded cost cutting and/ or high volume independent of impact on care
- Silo approach didn't always consider downstream impacts

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ACA Programs To Reduce Cost by Improving Care

- ACA= Affordable Care Act
- Hospital Value Based Purchasing Program (October 1, 2012)
- Medicare Advantage Plan- incent improvement
- Accountable Care Organizations/ PCMH
- Readmissions Reduction Program
- Physician Quality Reporting and ePrescribing
- And more…

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Improved Metrics Systems and Reporting

- Physician Quality Reporting system
- Partnership for Patients
- Care Integration programs
- EHR adoption
- Avoiding unnecessary radiation
- Hospital acquired conditions reporting
- Medicare Hospital compare website releases patient safety rating for hospitals
  - Lowest quality will have reimbursement reduced 2%

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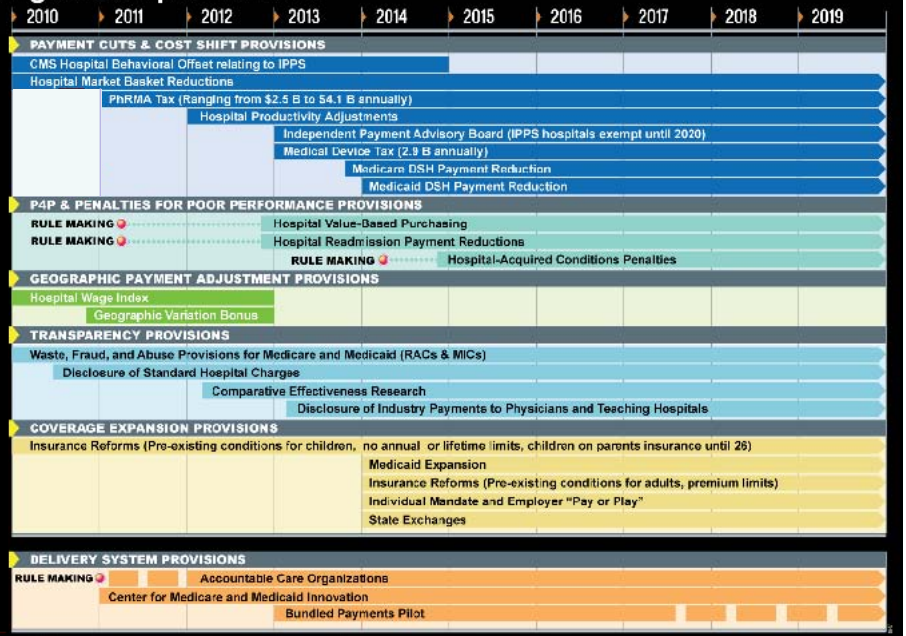
Changes are upon us now!



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Premier Webinar, "Partnership for Patients: Better Care, Lower Costs ' Goals and Funding Overview of New HHS Initiative" April 21, 2011

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Accountable Care Organizations

- HHS announced final rules on October 20
- Providers will share in savings by delivering better care coordination, higher quality care and efficient delivery
- Quality measures in 4 domains:
  - Patient experience
  - Care coordination and patient safety
  - Preventive health
  - Caring for at-risk populations

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ACO Structure

- Will publish scores on quality measures
- Care for at least 5000 Medicare beneficiaries in legal entity with care coordination
- Patient satisfaction ratings will be used in determining savings
- Applications accepted through January 1, 2012 and program begins in April
- Federal savings could be up to $940 million over four years

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Patient-Centered Medical Home

- Also called Primary Care Medical Home
- Has five functions/ attributes:
  - Patient-centered
  - Comprehensive care
  - Coordinated care
  - Superb access to care
  - Systems-based approach to quality and safety
- There are accreditation programs for PCMH as part of Ambulatory Services

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ACO/ PCMH Common Features

- Patient-centered
- Care coordination
- Outcomes driven
- Shared savings
- Performance measurement
- Integration of information throughout system, including patient access

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What are Hospitals Doing to Meet the Challenges?

- Increase alignment, partnerships and care coordination
- Implementing evidence-based practices to improve quality
- Reduce redundancy and standardize processes
- Develop integrated information systems

Source: FierceHealthcare 10/17/2011

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What Does this Mean for the Lab?

- Volume will decrease
- Overall revenue will decrease for most labs as usage shrinks.
- Lab tests will require link to clinical utility or face utilization scrutiny
- Emphasis on evidence showing testing improves outcomes
- Data management regarding utilization will be needed
- Better integration of lab results into patient record

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How Do Labs Meet the Challenge?

- Come out of the silo!
  - Integrate information systems
  - Consider every process as starting and ending with patient not in/ out lab
  - Standardize processes and efficiencies
  - Apply generalities to specifics instead of over reliance on checklists
  - Add value by being the diagnostics leaders
  - Emphasize assays associated with health and wellness, especially in chronic conditions
- Adopt System Think!

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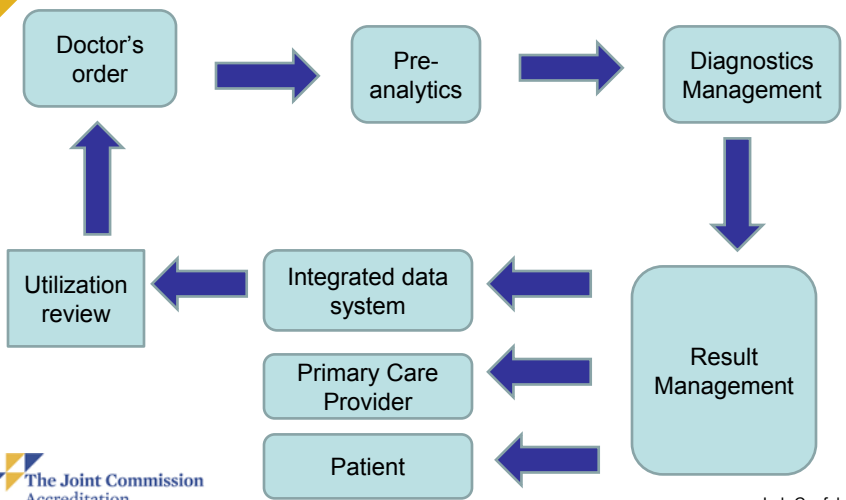
Future Business Model



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Systems Focus

- Include extra-laboratory diagnostic functions:
  - Doctor order documentation
  - POCT
  - Waived Testing
  - Specimen collection
  - Critical value reporting
  - Permanent chart record of test results

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The Clinical and Laboratory Standards Institute Quality System Essentials

1. Organization	7. Process Management
2. Customer Focus	8. Documents and Records
3. Facilities and Safety	9. Information Management
4. Personnel	10. Nonconforming Event Management
5. Purchasing and Inventory	11. Assessments
6. Equipment	12. Continual Improvement

CLSI *Quality Management System: A Model for Laboratory Services; Approved Guideline GP26-A4—Fourth Edition*. Wayne, PA: Clinical and Laboratory Standards Institute, 2011.

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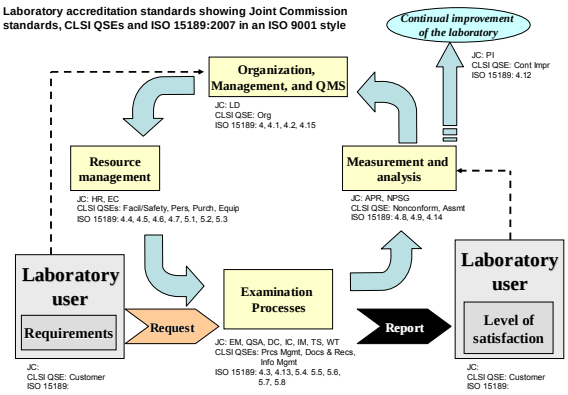
Quality Management System



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The Joint Commission's Vision

"All people experience the safest, highest quality, best-value health care across all settings"

The Joint Commission's Mission

To continuously improve health care for the public, in collaboration with other stakeholders, by **evaluating** health care organizations and **inspiring** them to excel in providing safe and effective care of the highest quality and value

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Tracer Survey Methodology

The cornerstone of The Joint Commission survey, tracer methodology uses actual patients as the framework for assessing standards compliance.

- Individual tracers follow the experience of care through the entire health care process in the organization.
- System tracers evaluate the integration of related processes
  - Coordination and communication among disciplines and departments
  - In-depth discussion and education regarding the use of data in performance improvement

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Joint Commission Tracer Methodology

- Laboratory Tracer
  - Select at least four dates covering the two year period since last assessment
  - At least one patient with a transfusion will be selected for Tracer
- Tracers follow the patient documentation from the doctor's order into the lab and back out to the patient chart
- Assesses the entire patient care continuum for the diagnostic services, not just individual tasks
- Directed towards systems and outcomes

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Reviewed in a Lab Tracer

- Doctor's order
- Pre-analytic processes
- Analytic Process
- Post-analytic processes
- Report on patient's chart (not just LIS), including
  - Critical value notification
  - Completeness of EHR for test reports
  - Results of transfusion reaction work-up with lab director's interpretation
- Personnel records and competency
- Quality system documents
  - Validations, correlations, maintenance, quality control, proficiency testing

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Advantages of Tracer Methodology

- Watch processes in sequence, following path of work across departments
- Interact with staff who are doing the work
- See processes that span across multiple specialties for a system review
- See how the results appear to the clinical staff

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Does Accreditation Matter?

- Research showed that hospitals accredited by The Joint Commission outperformed non-accredited hospitals on national AMI measures over 4 year period
  - Only 69% of non-accredited hospitals achieved adjusted overall scores>90%
  - 84% of accredited hospitals achieved<90%
  - 3,891 hospitals studied

S.P. Schmaltz et al: *Hospital Performance Trends on National Quality Measures and the Association with Joint Commission Accreditation*. Journal of Hospital Medicine, 2011, October; 6 (8): 454-61

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Broad vs. Prescriptive Requirements

- Broad
  - Processes (means to an end)
  - Many ways to accomplish goals
  - Processes designed by organizations
  - Remains valid with changing science
- Prescriptive
  - Specific requirements (specific outcome)
  - The only way
  - Evidence-Based
  - Readjustments are required with changing science

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Intracycle Monitoring

- Process audit should be ongoing
- Perform mock Tracers
- PT is one method in current practice
  - Review passing scores for bias or >1.5 SD trends
- Identify your highest priority areas and do an audit
- Target process improvement at gaps in audit
- Look at the whole process, not just the lab analytic departments

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Performance Metrics

- Lab does not have mandatory metrics for CMS
  - One NQF approved voluntary standard on complete reports for colorectal cancer reporting.
- Most ACA initiatives require data
- Use data to improve your processes
  - Example: DMAIC methods on Centerfortransforminghealthcare.org
  - Process improvement data
    - Tie as close as possible to patient

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Diagnostic Information Systems Imperatives

- Ability to order the right test by the right name
- All of the LIS required information should be present in the permanent record including reference ranges
- HHS proposes that all patients should have direct access to their test results
- Ability to integrate across different settings in ACOs and PCMH
- Feed data for performance metrics

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Organizational Alignment

- The laboratory is the only department in a hospital that is not accredited by a single organization in a unified survey
- Contract services are surveyed concurrently
- What are the implications?
  - Lack of visibility
  - Lack of common language
  - Lack of common systems
  - Lack of trust and “buy-in”

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Five Critical Elements to transform patient care:

(1) Impetus to transform;

(2) Leadership commitment to quality;

(3) Improvement initiatives that actively engage staff in meaningful problem solving;

(4) Alignment to achieve consistency of organization goals with resource allocation and actions at all levels of the organization; and

(5) Integration to bridge traditional intra-organizational boundaries among individual components.

Lukas et al., Health Care Manage Rev, 2007, 32(4), 309-320

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Sources of Laboratory Error

a) patient and sample misidentification;

b) specimen collection and transport;

c) analytical quality;

d) rapid transmission of laboratory results, particularly critical test results;

e) interpretive service and other tools for allowing a more accurate interpretation of laboratory data.

Only one of these happens entirely within the walls of the lab.

Plebani, M. Exploring the iceberg of errors in laboratory medicine. Clinica Chimica Acta 404 (2009) 16–23

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Integrated Care Models Will Demand From Labs:

- Outcome performance measures
- Integrated information systems
- Standardized systems and processes
- Patient satisfaction
- Risk mitigation
- Diagnostic management and care coordination

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In closing….

"When it comes to the future, there are three kinds of people: those who let it happen, those who make it happen, and those who wonder what happened." John M Richardson, Jr.

"For tomorrow belongs to the people who prepare for it today." African proverb

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