Non-regulatory Approaches to Laboratory Improvement

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College of American Pathologists
Non-regulatory Approaches to Laboratory Improvement

- CAP Background
- CAP Quality Improvement Programs
- Focus on Q-PROBES™, Q-TRACKS® and EXCEL® programs
- Summary of Current and Future Activities
College of American Pathologists

• Medical society formed to develop consistent standards of quality in laboratory medicine and the practice of pathology
• 16,000 board certified pathologist members
• Accredits over 6,000 clinical laboratories worldwide
• Offers a number of unique programs aimed at helping laboratories evaluate and improve the quality of their clinical and anatomic pathology services designed to improve patient care.
CAP Quality Improvement Programs

• Focus on developing and implementing quality improvement activities, establishing realistic benchmarks, accreditation, research and professional education
• Contribute in a meaningful way to the goals of improving patient outcomes, reducing medical errors
• Unique because these efforts apply a systems approach to quality assurance
• Monitor the total laboratory testing cycle
• Make assessments provided through peer feedback and comparisons
CAP Quality Improvement Programs

- Q-PROBES and Q-TRACKS
- Surveys Interlaboratory Comparison Programs
- EXCEL
- Scientific Literature and Consensus Statements
- Continuing Education
Q-PROBES and Q-TRACKS

- Study format developed used to collect data from a diverse cross-section of laboratories.
- Current practices in all phases of the testing cycle and to propose general recommendations on how to improve laboratory practices.
- Used to identify measurable improvements against peer activity and to determine the sustainability of various approaches over time.
- Identify improvement opportunities that reach beyond the testing phase to evaluate the quality of the process outside the lab that impacts lab results and patient care.
Surveys Interlaboratory Comparison Programs

- Offers a wide array of proficiency testing and educational solutions to assist laboratories in the improvement of patient testing and outcome
EXCEL

• Established to provide high quality proficiency testing to physician office and other small laboratories
• Goal to improve the quality of medical practice via proficiency testing and educational enhancement offerings
Scientific Literature and Consensus Statements

• Members and staff have published more than 100 articles and consensus statements in peer-reviewed medical journals related to the development of clinical practice evaluations, standards and quality assurance recommendations.

• Publications include consensus statements in which CAP has played an instrumental role in catalyzing collaboration among the various stakeholders in the laboratory and pathology communities.
Continuing Education

• The College is active in developing and sponsoring continuing education (CME/CE) activities for both the pathologist and the non-pathologist laboratorian

• These activities enhance the College’s on-going efforts to disseminate information, and update participating entities regarding the evolving standards in clinical practice and quality assurance
Q-PROBES and Q-TRACKS

- Study format developed College used to collect data from a diverse cross-section of laboratories
- Current practices in all phases of the testing cycle and to propose general recommendations on how to improve laboratory practices
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Q-PROBES & Q-TRACKS

How are areas identified for development?

• Subscribers
• Literature
• CAP Committees
What is a Q-PROBES Study?

• Snapshot in time
• Data collection over a few months
• Single primary performance indicator measured
• Possibly multiple secondary performance indicators
• Data collected about many possible influencing variables
What is a Q-PROBES Study?

- Detailed statistical analysis with correlations, and critique production with many graphs and data tables
- Individual data report provides labs performance compared to all institutions
- Full Data Analysis provided to include discussions of results, detailed data analysis, practice variables associated with performance, and recommendations to implement improvement.
What is a Q-TRACKS Monitor?

- Moving Picture
- Monitors performance over time
- Quarterly data submission
- Single primary performance indicator monitored
- Possible secondary indicators
- Quarterly data analysis provide the most effective peer groups to assess performance
- Data trended over time
- Annual Summary Report addresses relevant issues, performance indicator summary over time, and demographic and practice variables of participating institutions for each monitor
Q-PROBES / Q-TRACKS

The development process

• Standardization
  – Definitions
  – Data Collection Methodology
  – Statistical Analysis and Graphical Display

• Participant Performance Feedback
• Benchmark Data for Performance Evaluation
• Variables Associated with Performance
• Recommendations for Improvement
Q-PROBES / Q-TRACKS
Clinical & Anatomic Pathology Services

- Clinical Pathology
  - Chemistry
  - Hematology
  - Blood Bank
  - Urinalysis
  - Microbiology
  - Point of Care Testing
  - Phlebotomy

- Anatomic Pathology
  - Surgical Pathology
  - Frozen Sections
  - Gyn Cytopathology
  - NonGyn Cytopathology
  - Autopsy
Q-PROBES / Q-TRACKS
Quality Issues

• Turnaround Time
• Satisfaction
  – Patient
  – Physician
  – Nursing
• Diagnostic Performance
• Efficiency
Q-PROBES / Q-TRACKS
Quality Issues

• Safety
• Accuracy
  – Ordering
  – Testing
  – Reporting
• Information Systems
• Errors
• Competence
Q-PROBES / Q-TRACKS

History

• 1989-2004  130 Q-PROBE Studies
• 1998  First two Q-TRACK Monitors
• 1998-2004 14 Q-TRACK Monitors
2004 Q-PROBES Studies

- Hospital Nursing Satisfaction with Clinical Laboratory Services
- Laboratory Technical Staffing
- Rate of Manual Peripheral Blood Smear Review
- Patient Safety with Digoxin Measurements
2004 Q-TRACKS Monitors

- Patient Identification
- Blood Culture Contamination
- Laboratory Specimen Acceptability
- Blood Product Wastage
- Gynecologic Cytology Outcomes
- Patient Satisfaction with Phlebotomy Services
2004 Q-TRACKS Monitors

- STAT Test Turnaround Time Outliers
- AM Rounds Inpatient Test Results Availability
- Critical Value Reporting
- Small Surgical Specimen Diagnosis Turnaround Time
- Physician Satisfaction with Surgical Pathology Reports
- Type and Screen Completion for Scheduled Surgery
2004 Q-TRACKS Monitors Laboratory Participation

- Patient Identification Accuracy: 161
- Blood Culture Contamination: 140
- Lab Specimen Acceptability: 156
Q-TRACKS Monitor
Patient Identification
Regulatory Imperative

• CAP requires two patient identifiers before collecting a specimen

• JCAHO lists patient identification as a 2004 National Patient Safety Goal
Quality Indicator

Wristband Error Rate (%) =

\[
\frac{\text{Number of Wristband Errors}}{\text{Number of Wristbands Checked}} \times 100
\]

Phlebotomists check wristband accuracy during normal phlebotomy sweeps and classify any errors that are detected.
Wristband Error Types

- Missing wristband (72.8%)
- Conflicting wristbands (4.2%)
- Wrong wristband (3.4%)
- Illegible wristband (6.5%)
- Erroneous ID (4.5%)
- Missing information (8.5%)
## Wristband Errors (%)

### Spread in Institutional Performance

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Wristband Errors Over Time
Improving Performance

- **Monitor error rates**
  monitoring associated with improved performance
- **Provide immediate feedback about errors**
  policy associated with improved performance
- **Use staff other than nurses to place wristbands**
  institutions that use nurses have higher error rates
- **Require written orders for wristband removal**
  policy has been associated with lower error rates
- **Develop “zero tolerance” for incorrect wristbands**
  discrepancies must be corrected prior to specimen collection
- **Place wristband confirmation on admission checklist**
- **Report wristband errors to hospital QA committee**
New 2005 Q-PROBES and Q-TRACKS Offerings

Q-PROBES:
• Identification Errors
• Urine Culture Contamination
• HPV Testing
• Reference Ranges and Critical Values Comparisons.

Q-TRACKS:
• Turnaround Time of Troponin
EXCEL Program
EXCEL Program

• Established to provide high quality proficiency testing to physician office and other small laboratories
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EXCEL Program

- Thousand of laboratories enrolled
- Includes a series of smaller modules appropriate for the physician office laboratory sector
- Data collected reflect the methodologies most frequently found in this laboratory setting
- Provides PT products for many waived testing analytes and procedures so labs can assess their performance
EXCEL Program

- Provides laboratories with unknown samples for proficiency testing
- Formalized education activities included with all EXCEL mailings providing CE credits for all laboratory staff
- Play a significant role in quality assessment of CLIA-waived testing
CAP Awarded
CDC Cooperative Agreement
Assessment of Quality Assurance
Best Practices Using Clinical Outcomes Evidence