THE VALUE OF CAP’S Q-PROBES & Q-TRACKS

Peter J. Howanitz MD
Professor, Vice Chair, Laboratory Director
Dept. Of Pathology
SUNY Downstate
Brooklyn, NY 11203, USA
Peter.Howanitz@downstate.edu
OVERVIEW

• Discuss History of Q-Probes & Q-Tracks
• Demonstrate Results Of Some Studies
• Discuss Impact On Pathology
• Improve Patient Care
• “Skunkworks” For College Of American Pathologists
HOW Q-PROBES & Q-TRACKS HAPPENED

- 1979-Chairman NYSSPATH QC Committee
  - Workshop For Participants On QC
  - Made Case For Pre & Post Analytical QC
- Chair Of CAP QC Committee 1982
- Filled QA Workshop ASCP/CAP Meeting 1986
- Began Pilot Planning 6 Quality Indicators 1987
TOTAL TESTING PROCESS

FIGURE 1-1
Outline of steps from time test is requested until the result is interpreted.
CAP’s Q-PROBES & Q-TRACKS

• Q-Probes Launched 1989
• Peak Participants 1996-1700 Labs
• Q-Tracks Launched 1999
• Both Programs Continue Today
• 25th Year Anniversary 2014

WHY DEVELOP PROGRAM?

• Determined Pathology Quality Attributes
• Teach Laboratory Community QI
  – JCAHO (TJC) Requires QI
  – CLIA’88 Requires QA For All Steps Total Testing Process
  – CAP Accreditation Requires QI
• Q-Tracks Best Drives Improvement
• Improve Patient Care
ADVANTAGES OF PROGRAMS

• Provide Educational Tools i.e. Publications
• Develop Benchmarks
• Provide “Off Shelf” Products
• Conserve Participant Resources
• Partially Fulfill Regulatory Requirements
• Help Pathologist With Leadership & Management
TYPES OF Q-PROBES STUDIES

• All Short Term Subscription Studies
• All Steps In Total Testing Process
• Extensive List Other Quality Indicators
  – Safety Practices
  – Competency Assessment
  – Good Laboratory Practices
  – Repeat Studies
• Similar To Snapshot
Q-TRACKS

• Ongoing Studies For Years
• Limited Number Of Studies
• Use Q-Probes Benchmarks
• Submit Data Every Quarter
• Similar To Movie
HOW PROGRAMS WORK

• Studies Developed By Committee
• Field Evaluated Before Made Available
• Purchased By Participants
• Directions & Materials Participant Data Collection
• Data Sent To CAP For Analysis
• Benchmarks, Participant Data Returned In Critique
• Educational Tools Available
DATA-COMPLICATIONS OF PHLEBOTOMY

<table>
<thead>
<tr>
<th>Indicator</th>
<th>613 Institutions</th>
<th>10&lt;sup&gt;th&lt;/sup&gt; Percentile</th>
<th>50&lt;sup&gt;th&lt;/sup&gt; Percentile</th>
<th>90&lt;sup&gt;th&lt;/sup&gt; Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Size Bruise (mm)</td>
<td>4048 Bruises</td>
<td>20.5</td>
<td>11.0</td>
<td>5.0</td>
</tr>
<tr>
<td>% Bruised Patients</td>
<td>4048 Bruises</td>
<td>32.0</td>
<td>16.7</td>
<td>7.1</td>
</tr>
<tr>
<td>% Pts Identifying Outstanding Employee</td>
<td>11107 Patients</td>
<td>25.6</td>
<td>46.7</td>
<td>69.8</td>
</tr>
<tr>
<td>Median Wait Time (Minutes)</td>
<td>23783 Patients</td>
<td>15.0</td>
<td>6.0</td>
<td>4.0</td>
</tr>
</tbody>
</table>

# BEDSIDE GLUCOSE ENABLERS INCREASED ACCURACY

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>MEDIAN ACCURACY</th>
<th>P VALUE</th>
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</thead>
<tbody>
<tr>
<td>Lab Personnel vs RN Responsible For Testing</td>
<td>67 vs 49</td>
<td>.0007</td>
</tr>
<tr>
<td>Lab Personnel Perform Testing</td>
<td>65 vs 53</td>
<td>.01</td>
</tr>
<tr>
<td>Nursing Personnel Not Performing Testing</td>
<td>63 vs 57</td>
<td>.04</td>
</tr>
<tr>
<td>Lab Personnel Performs Training</td>
<td>64 vs 50</td>
<td>.02</td>
</tr>
<tr>
<td>Lecture Used In Training Program</td>
<td>63 vs 45</td>
<td>.01</td>
</tr>
<tr>
<td>Repeat Training/Performance Review Operators</td>
<td>63 vs 41</td>
<td>.0002</td>
</tr>
<tr>
<td>Regular Clinical Lab Result Correlations</td>
<td>63 vs 50</td>
<td>.02</td>
</tr>
<tr>
<td>Regularly Compare Proficiency Results</td>
<td>62 vs 50</td>
<td>.04</td>
</tr>
<tr>
<td>Participate In Bedside Glucose Proficiency Testing</td>
<td>63 vs 50</td>
<td>.03</td>
</tr>
<tr>
<td>Laboratorian vs RN Collected This Study Results</td>
<td>67 vs 51</td>
<td>.03</td>
</tr>
</tbody>
</table>

Jones et al. Arch Pathol Lab Med 1993;177:1080-1087
## SELECTED BENCHMARKS

<table>
<thead>
<tr>
<th>STEP</th>
<th>Sample Size</th>
<th>Median</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order Right Test</td>
<td>15,011 Tests</td>
<td>23.0%</td>
<td>Anti-HBC Test, No AST, ALT</td>
</tr>
<tr>
<td>Patient Prepared</td>
<td>18,679 Toxic Levels</td>
<td>24.4%</td>
<td>Digoxin Collected &gt; 6 Hrs Dosing</td>
</tr>
<tr>
<td>Accurate Orders</td>
<td>224,431 Measurements</td>
<td>1.8%</td>
<td>Test Ordered, Not Received Lab</td>
</tr>
<tr>
<td>Patient Identified</td>
<td>451,436 Pts</td>
<td>6.5%</td>
<td>Patients Wristband Incorrect</td>
</tr>
<tr>
<td>Specimen Collection</td>
<td>29,700 Pts</td>
<td>6.0 min</td>
<td>Timely Of Collection</td>
</tr>
<tr>
<td>Specimens Rejected</td>
<td>35,325 Specimens</td>
<td>0.38%</td>
<td>CBCs Rejected</td>
</tr>
<tr>
<td>Results Evaluated</td>
<td>5837 Results</td>
<td>85.0%</td>
<td>% Abnormal Results Documented</td>
</tr>
<tr>
<td>QI Resources</td>
<td>9860 Indicators</td>
<td>40 h/Mo</td>
<td>Time To Complete QI</td>
</tr>
</tbody>
</table>
Figure 1. Adherence to written competence plan by laboratory section. Striped bars indicate technical employees; solid bars, nontechnical employees.
TROPOIN TURAROUND TIMES

ED TURNAROUND RESULTS

TAT of potassium and hemoglobin results from ED patients in 2 studies
CLINICAL LABORATORY ERROR RATES

Howanitz PJ Arch Pathol Lab Med 2005;129: 1252-1261
27 TURNAROUND TIME STUDIES

- CSF Analytes
- ED-(4)
- Routine Test
- Stat Test Outliers*
- Routine Outpatient Tests (2)
- Biochem Markers AMI*
- Reporting Positive Blood Cultures
- Morning Rounds Test Results Available*
- Blood Component Preparation
- OR Blood Delivery
- Urinalysis

*Also Q-Tracks Studies
Q-TRACKS WRISTBAND ERROR RATES
CONTINUOUS IMPROVEMENT

Figure 1. Mean wristband error rates for 1999 participants (▾), 2000 participants (▿), and 1999–2000 participants (▲).

Q-TRACKS WRISTBAND ERROR RATES
CONTINUOUS IMPROVEMENT

Figure 4. Percentage of patient wristband errors of Q-Tracks participants according to the length of program participation.
Aggregate percentage of types of wristband errors (N=45197) for 2 years. Arch Pathol Lab Med. 2002:126: 809-815
PHYSICIANS’ 8 MOST IMPORTANT CLINICAL LABORATORY SERVICE ASPECTS

Figure 2. Physicians’ rating of most important service aspect for clinical laboratories. TAT indicates turnaround time.
# COMMITTEES’ 8 MOST IMPORTANT QUALITY INDICATORS

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>DISCIPLINE</th>
<th>TESTING PROCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Satisfaction</td>
<td>Entire Laboratory</td>
<td>Entire Process</td>
</tr>
<tr>
<td>Test Turnaround Times</td>
<td>Each Discipline</td>
<td>Entire Process</td>
</tr>
<tr>
<td>Blood Utilization</td>
<td>Transfusion Medicine</td>
<td>Preanalytical</td>
</tr>
<tr>
<td>Patient Identification</td>
<td>Each Discipline</td>
<td>Preanalytical</td>
</tr>
<tr>
<td>Blood Culture Contamination</td>
<td>Microbiology</td>
<td>Preanalytical</td>
</tr>
<tr>
<td>Specimen Rejection</td>
<td>Each Discipline</td>
<td>Preanalytical</td>
</tr>
<tr>
<td>Proficiency Testing</td>
<td>Each Discipline</td>
<td>Analytical</td>
</tr>
<tr>
<td>Critical Value Reporting</td>
<td>Entire Laboratory</td>
<td>Post Analytical</td>
</tr>
</tbody>
</table>

Howanitz PJ. Arch Pathol Lab Med 2005; 129: 1252-1261
## Q-PROBES DEMOGRAPHICS

<table>
<thead>
<tr>
<th>Category</th>
<th>AP NUMBER</th>
<th>CP NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q-PROBES STUDIES</td>
<td>52</td>
<td>115</td>
</tr>
<tr>
<td>AUTHORS &amp; COAUTHORS</td>
<td>33</td>
<td>50</td>
</tr>
<tr>
<td>ARCHIVES PUBLICATIONS</td>
<td>49</td>
<td>75</td>
</tr>
<tr>
<td>OTHER PEER REVIEWED PUBLICATIONS</td>
<td>18</td>
<td>21</td>
</tr>
<tr>
<td>NON-ARCHIVES CITATIONS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARCHIVES CITATIONS</td>
<td>1355</td>
<td>1609</td>
</tr>
<tr>
<td>PARTICIPANTS</td>
<td>15,406</td>
<td>42,663</td>
</tr>
<tr>
<td>COUNTRIES</td>
<td>18</td>
<td>24</td>
</tr>
<tr>
<td>CAP TODAY ARTICLES</td>
<td>17</td>
<td>55</td>
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PROGRAM ACHIEVEMENTS

• 17TH CAP CONFERENCE - 300 PARTICIPANTS
  – Arch Pathol Lab Med 1990:114:1101-177

• Invited To Discuss Q-Probes @ Juran Institute International Meeting

• Identified 1 or 6 Outstanding Medicine Programs By Healthcare Forum

• Personal Awards, Careers

• CDC Finalists Best Manuscript 3 Times
PROGRAM ACHIEVEMENTS

- Competency Assessment Program POCT
- Influence On CAP Accreditation Program
- Approved For Maintenance Of Certification
- Cytology Conference
- CDC Grant
- Specialty CAP Pathologist Certificate Program
- Evalumetrics
Competency Assessment Program for 2013
With Safety & Compliance courses

One comprehensive program offering:
• Competency assessment and training
• Safety and compliance training
• Continuing education (CE) credit

cap.org/competency
THE JOINT COMMISSION REQUIREMENTS

• Organization Monitors Healthcare Quality
  – Medical Staff Requirements
    • Performance Data On All Physicians
    • Ongoing i.e. Not At 2 Year Reappointment Process
    • Department Specific Requirements
    • Chair Of Department Responsible
      – Med Staff Executive Committee Responsible
      – Credentials Committee Responsible
EVALUMETRICS

- CAP Released 2013
- 2 Years In Development
- Software Designed In House
- Ongoing Professional Practice Evaluation
- Focused Professional Practice Evaluation
- Competency Program For Pathologists
- Over 60 Metrics On Introduction
# EVALUMETRICS CP METRICS

<table>
<thead>
<tr>
<th>Metric Title</th>
<th>Practice Area</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Laboratory Management TAT</td>
<td>Core</td>
<td>Timeliness Document Approval</td>
</tr>
<tr>
<td>PT Peer Review</td>
<td>Core</td>
<td>Quality PT Review</td>
</tr>
<tr>
<td>Transfusion RX Report Review</td>
<td>Transfusion Medicine</td>
<td>Written Report Review</td>
</tr>
<tr>
<td>Bone Marrow Aspiration</td>
<td>Hematology</td>
<td>Properly Performing Procedure</td>
</tr>
<tr>
<td>Protein Electrophoresis Peer Review</td>
<td>Chemical Pathology</td>
<td>Interpretation Concordance</td>
</tr>
<tr>
<td>On Call Reliability</td>
<td>General Pathology</td>
<td>Available, Respond Promptly</td>
</tr>
</tbody>
</table>
CONCLUSIONS

• Discussed History of Q-Probes & Q-Tracks
• Demonstrated Results Of Some Studies
• Discussed Impact On Pathology
• Improved Patient Care
• “Skunkworks” For College Of American Pathologists-Innovation New Programs
• Questions