A Practical Approach to Test Utilization

Donna Beasley, DLM(ASCP)

Tuesday May 6, 2014
4:00pm
Session Objectives

• At the conclusion of this session, attendees should be able to:

  • Develop and implement a Test Utilization Committee and Program & know the objectives and mission

  • Understand why test utilization is a problem and where to focus to make an impact

  • Establish specific strategies to impact test utilization

  • Resources to help with your program
What is Test Utilization?

• Depends on the Mission of the Lab?
• Historically
  • To provide accurate test results at the lowest possible cost
  • Necessary but missing the patient focus element
• New Definition of Test Utilization
  
  To rapidly and efficiently enable the accurate diagnosis of conditions, the selection of appropriate treatments and the effective monitoring of health status

• Focus is on the value for the patient
• Decreased costs would naturally follow
• “The Correct Test, for the Correct Patient, at the Correct Time”

1. Mayo Clinic, Department of Pathology & Laboratory; Laboratory Test Utilization: Identifying Opportunities and Implementing Solutions, 2010
Historical Test Utilization Practices
Understand - Why is there a problem?

• Testing choices have expanded
  • Lack of clinician knowledge about appropriate test selection and test result interpretation
  • Lack of evidence-based medicine and practice guidelines
  • Multiple names and abbreviations or acronyms for tests are inconsistent across labs
• Pathologist and Laboratory role hasn’t had the structure to be as consultative
  • Aid in test selection; alternative choices and result interpretation
• System build to aid in test ordering isn’t customized or maximized
Why is there a problem?

- Excessive costly reference lab testing
  - No structure around Inpatient usage
  - Without appropriate consideration of pre-test and post-test probabilities
  - Effect on management of patient often ignored
  - Misused as “rule out” strategy
- Patients more involved in their healthcare research and request
- Lab itself can contribute to utilization
  - Tight reference ranges
  - Reflex policies
  - Requisition or CPOE format
  - Custom panels
Why is there a problem?  
Main focus should be on **Provider Issues**

- Patient pressure
- Insurance issues
- Malpractice fears
- Lack of knowledge as to what is sent out and cost
- Confused on test selection itself
- Lack of order entry decision support tools
- Better to order “everything” while the patient is presented
- Apathy and lack of follow-up for abnormal results
- Practice is volume driven and $ driven

- What other reasons do you see & hear?
Don’t Go It Alone
Build a Test Utilization Committee

• Develop a Clinical Team
  • Lab Director
  • Pathologist
  • Physician Champion
    ✓ Oncologist
    ✓ Hospitalist
  • Intern or Resident
  • Nurse
  • Educator
  • IT and LIS
• Set frequent and re-occurring meetings
• Establish roles and responsibilities
Utilize Physician Input
How do they cope and make decisions

- Ask a colleague?
- Order more tests?
- Use the internet for e-research?
- Review journals?
- Clearly monitor patient progression?
- Order another office visit?
- Refer to a specialist?
- Check with the lab for result interpretation or recommendation?
  - System allows review of previous results (longitudinal?)
  - Normal range variation between labs
  - Symptoms don’t match results
  - Interpretive results not thorough or suggestive
Rational for a Test Utilization Program

- Use of strategies to reduce or avoid the need for Reference Test and more effective alternatives are available
- Identify the clinical conditions and associated laboratory parameters under which the test is indicated
- Define the various Test components, including clinical indications for their use, monitoring parameters, and advantages and disadvantages
- Appropriate use of high dollar reference tests

<table>
<thead>
<tr>
<th>Improve LOS</th>
<th>Lower Cost</th>
<th>Standardize</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Reduce waiting</td>
<td>• Test Spend</td>
<td>• Practices</td>
</tr>
<tr>
<td>• LOS</td>
<td>• Total Cost of Care</td>
<td>• Process</td>
</tr>
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</table>
Mission

• Develop a strategy with the goal of test ordering to provide and monitor clinically appropriate patient care that results in cost effectiveness
  • Test utilization strategies cannot be driven only by cost
  • Clinical practice that positively affects the patient outcome is the objective
  • Appropriate tests are those that are medically necessary for the management of the patient
  • Inappropriate testing is not defined by whether it will be paid!
  • Define, build, measure, monitor, educate, communicate
Objectives: High Level

- Facilitate Physician Awareness: Information & Education
- Establish enforceable evidence-based ordering guidelines embracing both electronic solutions
- Develop a consistent high test cost review process with secondary approval as an approach to test conservation
- Review current policy/procedures and practices related to Test Utilization
- Coordinate education to staff and physicians on revised policies
- Outline opportunities for improvement from DRG benchmark data
- Identify metrics to provide monthly feedback to physicians and subgroups
Reduce Errors Associated with the Test Utilization

- Wrong test is ordered
- Correct test isn’t ordered
  - Alternative test was available
  - Appropriate test result is not utilized
- Incorrect interpretation of result
- Action not taken or wrong action is taken
Where to START?
Business Intelligence is Key

- Filter an Accounts Payable file for all Lab/Path cost centers
- Filter for Purchased Services and look for Reference Laboratory
- Use PIVOT table to find total spend by Lab
- Review Utilization Report to document Test, Volume & Price by Reference Lab
  > Sort high to low by spend
  > Sort high to low by volume
- Retrieve a Report at **Specialty/Provider level**
  > Sort by Specialty
  > Sort by Provider
  > Sort by DRG if able
  > Look for ordering patterns – significant variability in usage of tests
- Report of Ref Tests resulted post discharge
Can’t Conquer the World
Where to put your focus

• Go back to your reports
  • High dollar Reference Tests
    > How many reference labs are being utilized?
    > High volume tests – does it make sense to bring in-house?
• Utilization by Specialty/Physician
  > Education
  > Communication
• Inpatient Testing
  > Frequency
  > Results vs date of discharge
• Algorithms and order sets
• Obsolete Tests
Restrictive Test Ordering
Requiring additional approval

- Develop a test tier levels for ordering which require secondary approval for some tests
- Reference tests that are a certain $ amount
- Tests going to a non-contracted alternative reference lab
- Specialists vs other providers
- Ordering of obsolete tests
- Frequency changes
Inpatient Frequency Limitations

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemoglobin A1c</td>
<td>1 per admission</td>
</tr>
<tr>
<td>CBC with diff</td>
<td>&lt; 3 hours</td>
</tr>
<tr>
<td>CBC without diff</td>
<td>&lt; 3 hours</td>
</tr>
<tr>
<td>Hemogram</td>
<td>&lt; 3 hours</td>
</tr>
<tr>
<td>CBC with manual diff</td>
<td>&lt; 24 hours</td>
</tr>
<tr>
<td>Mg</td>
<td>&lt; 12 hours</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>&lt; 12 hours</td>
</tr>
<tr>
<td>BMP</td>
<td>&lt; 12 hours</td>
</tr>
<tr>
<td>CMP</td>
<td>&lt; 12 hours</td>
</tr>
<tr>
<td>Renal panel</td>
<td>&lt; 12 hours</td>
</tr>
<tr>
<td>Hepatic panel</td>
<td>&lt; 12 hours</td>
</tr>
<tr>
<td>CRP</td>
<td>&lt; 24 hours</td>
</tr>
<tr>
<td>ESR</td>
<td>&lt; 24 hours</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>1 per admission</td>
</tr>
<tr>
<td>lipid panel</td>
<td>1 per admission</td>
</tr>
<tr>
<td>Total CK</td>
<td>&lt; 24 hours</td>
</tr>
<tr>
<td>Hemoglobin electrophoresis</td>
<td>1 per admission</td>
</tr>
<tr>
<td>Serum protein electrophoresis</td>
<td>1 per admission</td>
</tr>
<tr>
<td>Serum immunotyping</td>
<td>1 per admission</td>
</tr>
<tr>
<td>urine protein electrophoresis</td>
<td>1 per admission</td>
</tr>
<tr>
<td>urine immunotyping</td>
<td>1 per admission</td>
</tr>
<tr>
<td>Herpes simplex virus PCR</td>
<td>1 per admission</td>
</tr>
<tr>
<td>C Diff PCR</td>
<td>1 per admission</td>
</tr>
</tbody>
</table>
Inpatient
When is it NOT Appropriate to Order:

- Test does not lead to a change in the patient’s management plan or outcome while admitted
- Test will not impact the current patient stay
- Test result will not be available for several days most likely after discharge and will not change current clinical plan or outcome
- Could the test be safely ordered in 2 weeks after discharge without any adverse effects on the patient condition?
- Development of guidelines (Appropriate Use Criteria)
  - Frequency for IP
## Reference Results Post Discharge

<table>
<thead>
<tr>
<th>Ordering Physician</th>
<th>No</th>
<th>Yes</th>
<th>Total</th>
<th>Percent After Discharge</th>
<th>&gt;= 50 Percent of Tests Resulted after Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jones, MD</td>
<td>326</td>
<td>252</td>
<td>578</td>
<td>44%</td>
<td>&gt;=50 reference test resulted after discharge</td>
</tr>
<tr>
<td>Mavis, MD</td>
<td>322</td>
<td>221</td>
<td>543</td>
<td>41%</td>
<td>Physician has &gt;=50 reference tests resulted and &gt;=50% of them are resulted after discharge</td>
</tr>
<tr>
<td>Tiffany, MD</td>
<td>290</td>
<td>198</td>
<td>488</td>
<td>41%</td>
<td></td>
</tr>
<tr>
<td>Provider, ER</td>
<td>221</td>
<td>193</td>
<td>414</td>
<td>47%</td>
<td>Date Range: 04/01/2013-08/31/2013</td>
</tr>
<tr>
<td>Oncologist, MD</td>
<td>137</td>
<td>124</td>
<td>261</td>
<td>48%</td>
<td></td>
</tr>
<tr>
<td>Germaine, MD</td>
<td>55</td>
<td>102</td>
<td>157</td>
<td>65%</td>
<td></td>
</tr>
<tr>
<td>Smith, MD</td>
<td>68</td>
<td>97</td>
<td>165</td>
<td>59%</td>
<td></td>
</tr>
<tr>
<td>Speer, MD</td>
<td>86</td>
<td>94</td>
<td>180</td>
<td>52%</td>
<td></td>
</tr>
<tr>
<td>CARL, MD</td>
<td>2</td>
<td>89</td>
<td>91</td>
<td>98%</td>
<td></td>
</tr>
<tr>
<td>Amy, MD</td>
<td>47</td>
<td>87</td>
<td>134</td>
<td>65%</td>
<td></td>
</tr>
<tr>
<td>Bern, MD</td>
<td>60</td>
<td>85</td>
<td>145</td>
<td>59%</td>
<td></td>
</tr>
<tr>
<td>Jerald, MD</td>
<td>107</td>
<td>83</td>
<td>190</td>
<td>44%</td>
<td></td>
</tr>
</tbody>
</table>
Strategies for Ordering Improvement
Paper or Electronic

- For each specialty make their common tests easy to order and uncommon tests hard to order
- Eliminate custom panels
- Reduce ease of esoteric test ordering
- Sunset obsolete tests and remove from requisition or template (Sed Rate, Bleeding times, etc)
- Review standing orders and make deletion simple
- Review and eliminate where team approves reflex testing
- Offer pop-up alternatives with CPOE orders
- Explore “Clinical Decision Support” tools
- To reduce out of pocket costs for patient, build test with $’s to indicate cost
- Eliminate “privileged” provider rules
Don’t Reinvent the Wheel
Web Algorithm Resources

ARUP ALGORITHMS
http://www.arupconsult.com/Algorithms/or.html
http://www.arupconsult.com/Topics/index.html

QUEST INFORMATION
http://www.questdiagnostics.com/home/physicians/medicare-policies.html
* State by State Medicare Limited Coverage Policies

TEST UTILIZATION STRATEGIES

MAYO ALGORITHMS
http://www.mayomedicallaboratories.com/articles/resources/index.html
http://www.mayomedicallaboratories.com/media/articles/algorithms/Thyroid.pdf
http://www.mayomedicallaboratories.com/media/articles/algorithms/CTDC_v4.pdf
http://www.mayomedicallaboratories.com/articles/index.html?s=&t1=Algorithm&p=&sm=&sy=&em=&ey=&go=Search&ss=1
Other Specific Strategies

- Cardiac markers: use of Troponin; eliminate CK-MB
- Assure that policies have conservative criteria for ordering of reference tests, i.e. Test>$400
- Electronic orders that have the criteria outlined with rules built to trigger a secondary approval process
- IP frequency limitations; CBC ordered within 4 hr?
- If TAT is greater than 4-5 days, cannot order as an IP if over $500
- Consolidate Ref Labs and/or bring testing in-house
- Assign dollar $ to test in build or develop pocket cards
- Further focus on duplicate testing (i.e., same day/repeat ordering of non-emergent tests)
- Decrease Buffy Coats, Diffs and Retic per day/patient
- Rapid HIV restricted to Lab, ER and L&D
- Lactic Acid POCT and LOS
- Sample letter Vitamin D testing utilization guidelines
- Education program with interns and hospitalists; rounding
Next Steps

- Consensus development & approval process
- Work with IT to be able to generate a monthly report of test utilization by specialty/provider
- Utilize the report for a specialty specific scorecard
- Develop guidelines to communicate provider scorecard results
  - At monthly peer specialty meetings
  - By who?
- Develop educational strategies
  - Physician lounge/dining monitors; newsletters, etc.
  - Onboarding
  - Rounding
Monitoring for Sustained Improvement

- Determine who is responsible (Pathologist or Specialist)
- Monitor the any modification of the outlier orders:
  - Approved
  - Cancelled
  - Approved dependent upon result of an alternative test
- ✓ Document the reasons for the outlier orders
- ✓ Document any suggestions and complaints
  - Change in workload
  - IT problems
- Continue the education efforts with physician feedback
- Analyze reports for additional opportunity
- Establish criteria for benchmarking performance with consequences associated with non-compliance
Resources

- Division of Laboratory Science and Standards (DLSS)
- Laboratory Science, Policy and Practice Program Office (LSPPPO)
- Office of Infectious Diseases (OID)
- Office of Surveillance, Epidemiology and Laboratory Services (OSELS)
- Centers for Disease Control and Prevention (CDC)
- Centers for Medicare & Medicaid Services (CMS) - http://www.cms.hhs.gov/clia/
- College of American Pathologists (CAP) - www.cap.org
- Clinical Laboratory Improvement Advisory Committee (CLIAC)
- National Institutes of Health (NIH) Genetic Testing Registry
- The Association for Molecular Pathology (AMP)
- Clinical Laboratory Integration into Healthcare Collaborative (CLIHC)™
- Food and Drug Administration (FDA) – specific to Direct to Consumer (DTC) genetic testing and Laboratory Developed Tests (LDTs)
- Office of In-Vitro Diagnostic Device Evaluation and Safety (OIVD)
- American College of Medical Genetics (ACMG) - there are standards for cytogenetic testing
- Laboratory Medicine Best Practices Initiative is available at www.futurelabmedicine.org
Questions and Thank You!

Donna Beasley, DLM(ASCP)
Manager
Huron Healthcare
dbeasley@huronconsultinggroup.com