Cost of Testing and Challenges for Capital and Reagent Requests

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Objectives

- Define business terminology
- Discuss testing/equipment acquisition options
- Discuss how to plan your testing / equipment justification

Terminology

- Return on Investment (ROIs)
  - Tangible or intangible returns for an investment
  - How long is it going to take to pay off instrument and make a profit
  - Does your institution have a set period of time that they want to see this done?

Terminology

- Payor mix
  - Who has fiscal responsibility for payment services (Medicare, Medicaid, private payor, managed care, uninsured, etc.)
  - What patient population will be needing test
    - In-patient or out-patient

Acquisition Options

- Capital purchase
- Capital Lease
- Reagent Rental
- Equipment Placement

Capital Purchase

- Pros
  - Lower reagent cost than Reagent Rental
  - Equipment becomes part of the institution's holdings
- Cons
  - Money up front
  - Inability to change testing platforms if needed
  - Administrators tend to force the lab to use owned equipment well beyond its lifespan
  - Service billed annually. Service notices may be missed.

Capital Lease

- Pros
  - Monthly payments
  - Have the option to buy equipment at the FMV after a set period of time (usually 5 years)
  - Ability to return the equipment to the vendor after the contract term expires
- Cons
  - Have option to have service billed annually or surcharged onto the test
  - Some direct leases have penalties for terminating early

Reagent Rental

- Pros
  - No money needed upfront for cost of equipment (does not come out of the capital budget)
  - Equipment & Service surcharged onto the test, no worries about service contract renewals for the duration
  - Upgrades maybe more readily available
- Cons
  - Reagent commitment necessary and if testing volume drops a shortfall may occur or volume may increase and the cost per test may not be at the best pricing
  - Do not own equipment at the end of term, must either enter into new RR agreement, return it, or buy it out at the Fair Market Value (FMV)

Equipment Placement

- Pros
  - Attractive to administration
  - Can be use to try out equipment, perform validations
- Cons
  - Vendors are reluctant to do this
  - Maybe only done for a short period of time

Due Diligence

- Selection of equipment/test
- SWOT analysis
- Need to know current cost of performing test and cost with new instrument/test
- What's the mix of in-patient vs out-patient
- Now it is time to justify your equipment request

Funding Competition

Justification

- Technologist time
- Cost of consumables
- Test turn-around-time
- Maintenance time and performance
- Accuracy of test
- What other testing available on instrument
- Best practices
- Implementing testing algorithms
- Outcome studies
- Patient/client satisfaction

Justifications

- Technologist time
  - Time studies of actual hands-on time
  - Time needed for instrument maintenance
  - Lean analysis
- Turn-around-time
  - Current vs New Test/Equipment TAT
  - How will improved TAT improve patient care
    - Faster through-put in Emergency Department
    - Aid antimicrobial stewardship with more timely result of pathogen

Justifications (2)

- QC involved, should be less than current method
- Test accuracy
  - Compare sensitivity and specificity of new test to current test offered
  - How more accurate test off-sets price of test
    - Negative or positive predictive value may influence:
      - Admit vs non-admission
      - Isolation vs non-isolation
      - Antibiotics vs anti-viral drugs

Justification (3)

- Best practices
  - Reach out to your clinical practices and see what their guidelines are
    - Co-testing for HPV and Pap smears
    - Testing algorithms for transplant patients

Justifications (4)

- Testing algorithms
  - Viral respiratory infection
    - Flu/RSV done first, if negative
      - Reflex to larger panel
  - In-patient diarrhea
    - Test for *C. difficile* first
  - Out-patient diarrhea
    - Norovirus
    - GI panel
      - Reflex to culture if positive
      - Reflex to Ova and parasite exam if needed

Justifications (5)

- Outcome studies – details discussed in later talk
  - Decrease in LOS
  - Decrease in morbidity/mortality
- Patient/Client satisfaction
  - Win – win in most instances

Where to get the data

- Monthly testing volume reports
  - Broken down by in-patient or out-patient
- Send-out volume reports, cost of send-out test, and TAT
- Invoices for consumables, reagents, and QC material
- Maintenance records and cost
- Ask your vendor to supply a contract usage report for the time period needed if they have existing business with the hospital

Gathering Data (2)

- Infection Control computer system
  - Number of isolation days
  - Length of stay
  - Healthcare associated infection rates

Gathering Data (3)

- Antimicrobial stewardship program metrics
  - How often was medication changed
  - At what point was medication changed
- System data warehouse

Stakeholders

- Emergency Department
- Infectious Diseases
- Transplant Services
- Infection Control
- OB/GYN Department
- Antimicrobial Stewardship
- Oncology

Capital Acquisition Analysis

Capital Costs	
New Instrument	
Estimated Tax	
Shipping	
Total Cost $	

Capital Acquisition Analysis

Service Contract		
New Instrument		
Standard Service Agreement		
Starting Year		

LIS Interface
Additional charges

Capital Acquisition Analysis

Operational Coat Analysis			Current Methodology			Cost Per Test	
	2016 Volume	Annualized 2017	Supply Cost	Service Cost	Labor Cost	Total Cost/Test	Total Per Year Cost
Test							

Operational Coat Analysis			New Methodology			Cost Per Test	
	2016 Volume	Annualized 2017	Supply Cost	Service Cost	Labor Cost	Total Cost/Test	Total Per Year Cost
Test							

Summary

If I can't be at Jazz Fest,

I'd rather be at CVS

- Know preferred capital acquisition method
- Perform due diligence for test method/equipment
- Gather data to support your decision
- Present your case

References that may aid in Cost Justification

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