

Making the *Business Case* for Improving HIV Testing Rates in the US Dept of Veterans Affairs

Henry D. Anaya PhD

**Quality Enhancement Research Initiative (QUERI HIV-HEPATITIS)
United States Department of Veteran's Affairs**



VA QUERI Centers

- National research program
- Health-related research pertinent to vets
- Nine research centers nationwide (HIV, colorectal cancer, diabetes, heart disease, mental health, spinal cord injury, trauma blast, stroke, and substance use disorders)

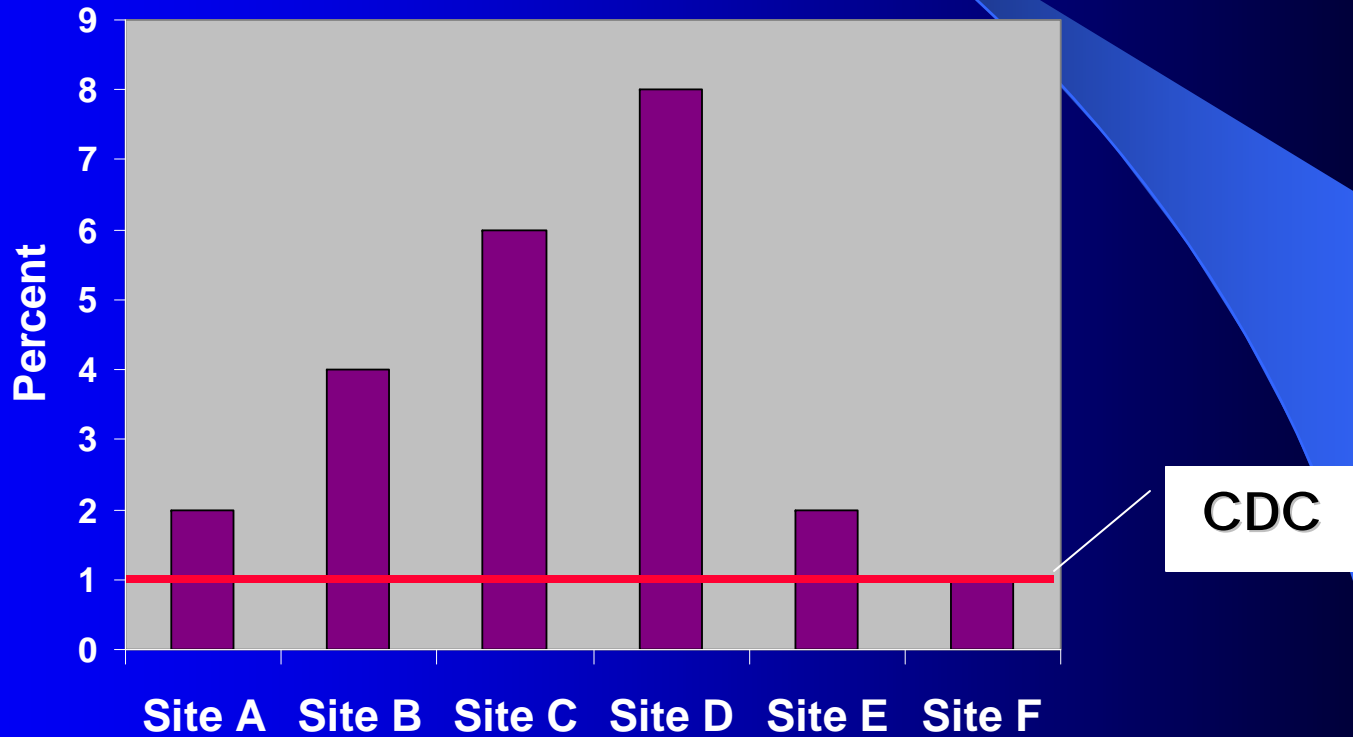


Business Case Modeling

Business case modeling is more than return on investment, and more than simply about money:

It is how to socially market an idea for improving care within a complex organization.

VHA Seroprevalence Exceeds CDC Threshold



Motivation behind Increasing HIV Testing

- The VA has high HIV prevalence;
- HIV is easier and cheaper to treat if detected early;
- Screening improves health at far less cost than other tests;
- The VA is falling far short of testing those at risk.

Making the Case within VA

National

- Quality Enhancement Research Initiative (QUERI)
- Public Health Strategic Healthcare Workgroup (13B)

Regional

- VISN Director/ VISN Quality Manager
- Clinical Practice Council
- Quality and Performance Improvement Council

Local

- Medical Executive Committee (MEC)
- Primary care clinic directors
- Provider groups

The Question

“You’ve given us a strong rationale for long-term benefits of earlier identification, but what is the short term impact of increasing screening and an acute influx of HIV patients on the system?”

or

“Where is it coming out of my budget when?”

Business Case Modeling

- Proposal justifying cost-benefit action
- Prerequisite for beginning large projects
- Contains issues such as project relevance, benefits, costs, and risks
- Typically reviewed at initiation and throughout

Business Case Modeling (cont'd)

- Data-driven models for making managerial or technical decisions
- Valuable tool for program managers although vastly underused
- Used by Dept of Defense

Process Map Method

- Flowchart approach
- MS Excel-based
- Top-to-bottom and quarter-to-quarter
- Links rates/costs over time
- Evaluated 1st year org. costs associated with two scenarios ↑ screening from:
 - 0 to 5%
 - 0 to 10%

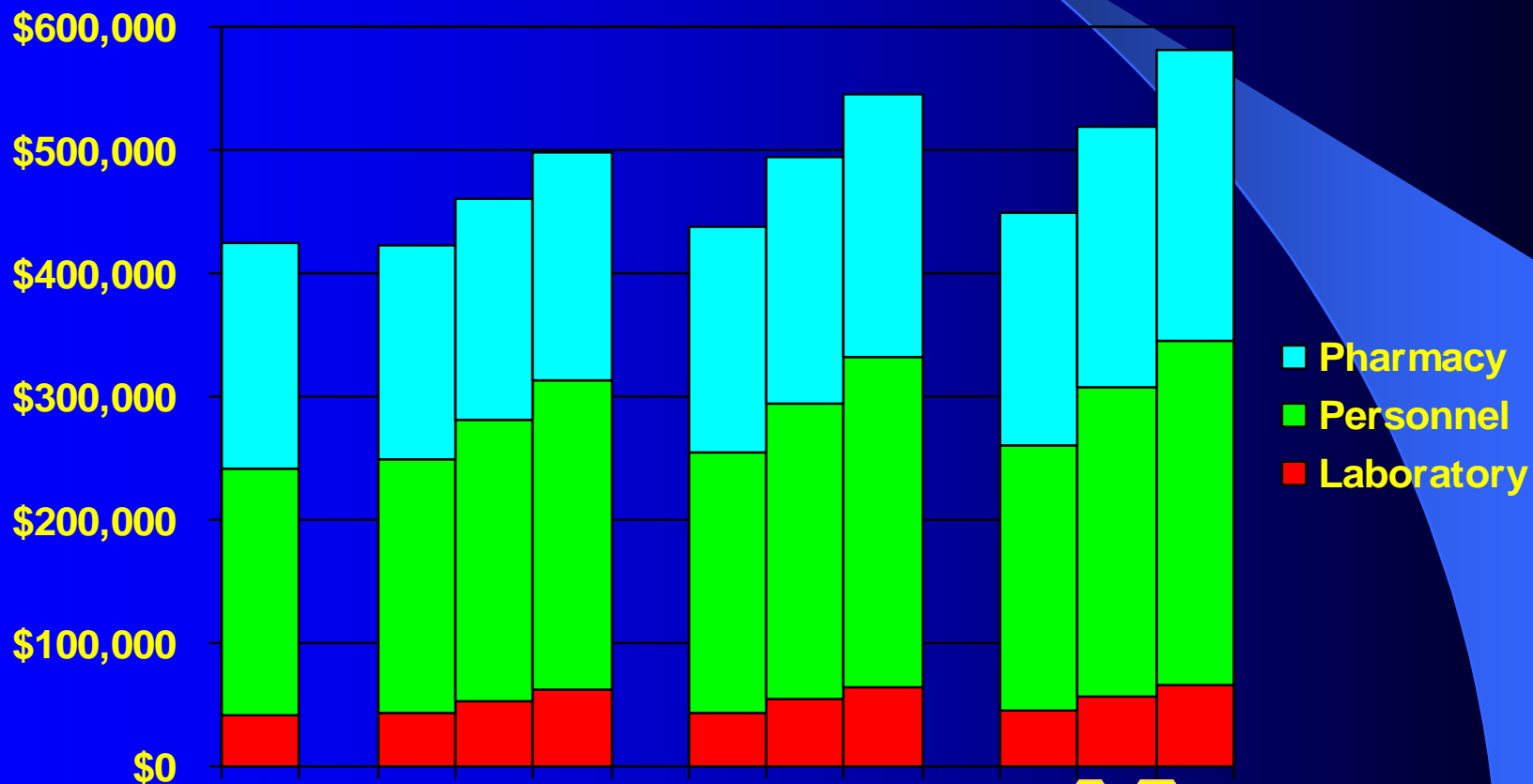
Process Map Entry Points

- Initial enrollment estimates based on past enrollment patterns (20,000 unique patients annually),
- estimates of patients previously tested (20%)
- estimates of all tests resulting in new HIV infections (.45%)
- the clinical settings at which these patients were cared for
- estimated proportions based on CD4 count at time of entry into care
- estimates of patient flow in and out of these three CD4 marker states
- estimates of patient mortality
- estimates of per-patient and infrastructure costs associated with newly identified HIV-positive patients

Excel Inputs

PERIOD 1			
Starting populations			
Screened -ve		5000	
Unscreened		15000	
Unscreened	to primary care	70	10500
Unscreened	to clinic subst abuse	30	4500
Screened -ve	to primary care	70	3500
Screened -ve	to clinic subst abuse	30	1500
Primary care		14000	
Clinic substance abuse		6000	
Primary care	Test %	20	2800
Primary care	Untested %	80	11200
Clinic Subst abuse	Test %	30	1800
Clinic Subst abuse	Untested %	70	4200
Test Clinic		2800	
Test Substance abuse		1800	
Test clinic only	positive %	1	28
Test clinic only	negative %	99	2772
Test Substance Abuse	positive %	3	54
Test Substance Abuse	negative %	97	1746
Patients at confirm stage		82	
Confirm	positive %	98	80.36
Confirm	negative %	2	1.64
Positive Initial		80.36	
Negative		4519.64	
Positive Initial	CD4 + viral Initial	80.36	
Positive Initial	CD4 > 350	25	20.09
Positive Initial	CD4 <=200-350	35	28.13
Positive Initial	CD4 < 200	40	32.14
			New Dx
CD4 > 350	CD4 > 350 - On therapy	10	2.01
CD4 > 350	CD4 > 350 - No Rx	90	18.08

Direct Quarterly Costs of Expanded HIV Testing Baseline vs. 0%, 5% or 10% Increase (0.45% Pos. Tests)



Implications

- **BCM effective, powerful, simple**
- **Cost-modeling has implications for org. impacts**
- **Models are highly flexible**
- **Stakeholders should consider BCM**