Redefining Global Health Care

Narrowing the Gap Between Aspiration and Action

Michael E. Porter, PhD

Bishop Lawrence University Professor Harvard University

Jim Yong Kim, MD, PhD

Chairman, Department of Social Medicine Harvard Medical School

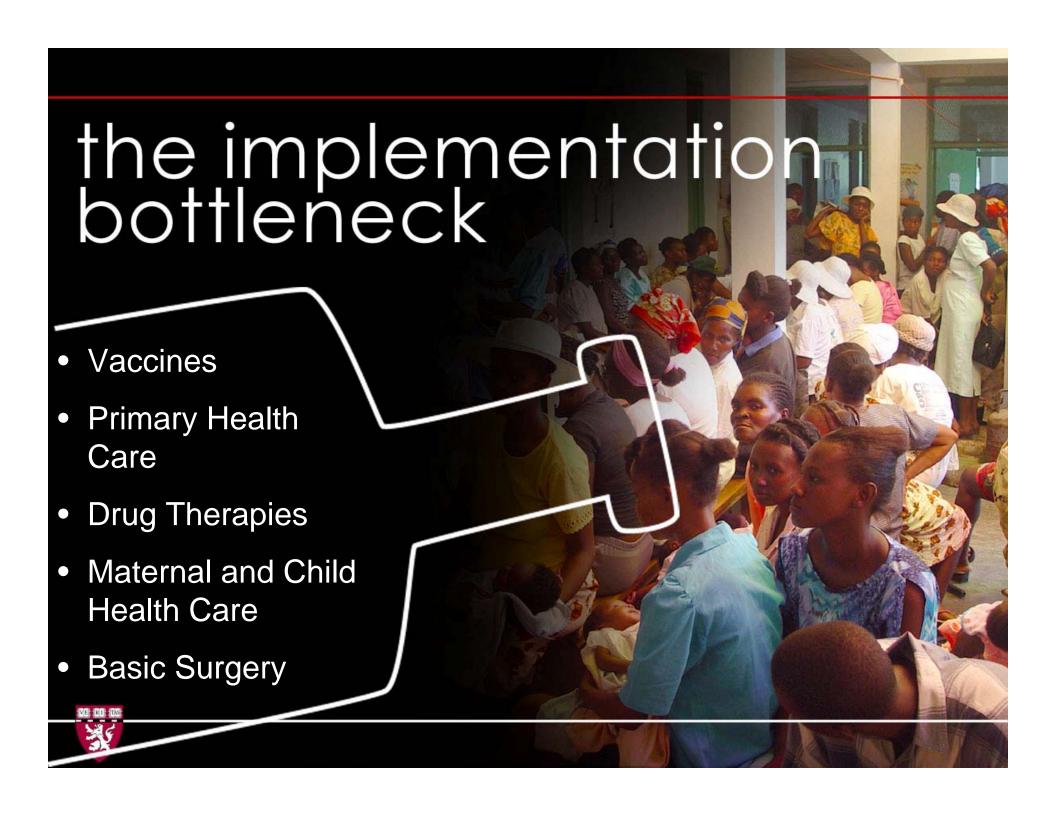
WHO: COMMISSION ON MACROECONOMICS AND HEALTH

8 Million deaths per year could be averted with programs for which we have effective interventions to prevent and treat several diseases

- -HIV/AIDS
- -TB
- -Malaria
- -Childhood Infectious Disease

- -Maternal and Perinatal Conditions
- -Tobacco-related Illness
- -Micronutrient Deficiencies

Source: Table 2, Commission Report 2003



UNPRECEDENTED OPPORTUNITY











- Key leaders and institutions have recognized the gravity
- Since 2001, over \$85B in new funding for development
- 28x HIV/AIDS spending increase from \$300M in 1996 to \$8.5B
- Dramatic decline in treatment costs
- A golden era of funding for global health programs





THE UNITED STATES EXPERIENCE

	Aspiration	Action		
Beta blockers within 24 hours of admission with chest pain	100%	69%		
Antibiotic administered within 8 hours of admission with pneumonia	100%	87%		
Mammography at least every 2 years	100%	60%		
Fundoscopic examination for diabetic retinopathy	100%	70%		

Source: Jencks et al analysis of Medicare data, JAMA, 2003

NEW CHALLENGES

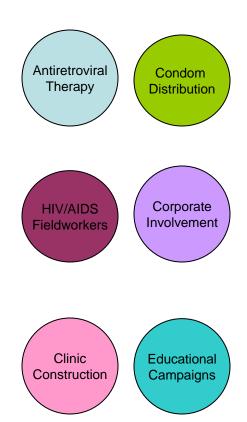
Increasing funding will allow...

- program innovation
- A move from small projects to large scale implementation
- greater impact on the health of populations
- a focus on a wider range of diseases

- ...but requires thoughtful new leadership to
- manage resources effectively
- close the "know-do" gap
- create administrative efficiencies, reduce resource consumption, reduce supply costs, and improve quality
- Create high value delivery models

GLOBAL HEALTH "STRATEGY" TO DATE

- Countries working in isolation of each other
- Project-based
 - Donor preferences
 - Scarcity of resources
 - Experimental pilots
- Ineffective and Non-results oriented
 - Absence of technology and measurement orientation
- Clear need for a better approach



A NEW PARADIGM

- The need for holistic framework that incorporates all activities and actors contributing to global health outcomes at a medical condition level
- Value = Health outcomes per dollar spent
- Porter and Teisberg's concept of a "care delivery value chain"

INFORMING	Lifestyle counseling Diet counseling	- Explanation of the diagnosis and implications	Lifestyle counseling Diet counseling Education on procedures	seling and com-	Medication coun- seling and com- pilance follow-up Lifestyle and diet counseling	- Medication com- pliance follow-up - Lifestyle & diet counselling - RRT therapy options counselling
MEASURING	Serum creatinine Glomerular flitration rate (GFR) Proteinuria	Special urine tests Renal ultrasound Serological testing Renal artery anglo Kidney blopsy Nuclear medicine scans	specific pre- testing	• Procedure- specific measurements	-Kidney function tests	- Kidney function tests - Sone metabolism - Anemia - Officeriab visits - Telephone infliered Interaction
ACCESSING	Office visits Lab visits	Office visits Lab visits	• Various	Office visits Hospital visits	Office/lab visits Telephone/ Internet interaction	
	MONITORING/ PREVENTING • Monitoring renal function (at least annually) • Monitoring and addressing risk factors (e.g. blood pressure) • Early nephrologist referral for abnormal kidney function	DIAGNOSING - Medical and family history - Olrected advanced testing - Consultation with other specialists - Data Integration - Formal diagnosis	PREPARING Formulate a treatment plan Frocedure-specific preparation (e.g. diet, medication) Tight blood pressure control Tight diabetes control	INTERVENING Pharmaceutical *Kidney function (ACE inhibitors, ARBs) Procedures *Renal artery angiopiasty urological (if needed) *Vascular access graft at stage 4	RECOVERING/ REHABING -Fine-tuning drug regimen -Oetermining supporting nutritional modifications	MONITORING/ MANAGING - Managing renal function - Managing skidney side - effects of other treat- ments (e.g., carcilac - catheterzation - Managing the effects of associated diseases (e.g., diabeties, hyper- tension, uremia) - Referral for renal replacement therapy (RRT)

 Allows careful examination of all activities of care delivery system and more thoughtful deployment of resources

DEVELOPED WORLD AND RESOURCE-POOR SETTINGS SUFFER FROM SIMILAR DELIVERY PROBLEMS

The product is treatment



The product is health

 Volume of services (# tests, treatments)



Value of services (health outcomes per unit of cost)

Specialties



Integrated care

Discrete interventions



Care cycles

Individual disease stages



Sets of prevalent cooccurrences

 Fragmentation of entities and programs



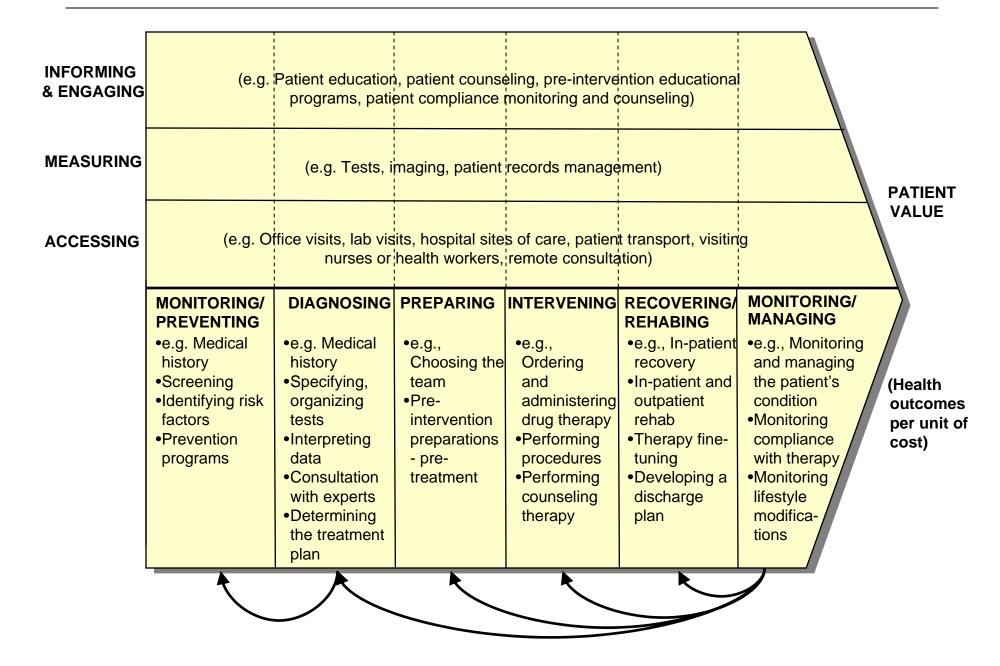
Integrated care delivery organizations

Stand alone facilities



Facilities networks

THE CARE DELIVERY VALUE CHAIN



ANALYZING THE CARE DELIVERY VALUE CHAIN

- 1. Are the **set of activities** and the **sequence of activities** in the CDVC aligned with value?
- 2. Is the appropriate **mix of skills** brought to bear on each activity and across activities, and do individuals work as a **team**?
- 3. Is there **appropriate coordination** across the discrete activities in the care cycle, and are handoffs seamless?
- 4. Is care structured to **harness linkages** (optimize overall allocation of effort) across different parts of the care cycle?
- 5. Is the right information collected, integrated, and utilized across the care cycle?
- 6. Are the activities in the CDVC performed in appropriate facilities and locations?
- 7. What provider departments, units and groups are involved in the care cycle? Is the provider's **organizational structure** aligned with value?
- 8. What are the **independent entities** involved in the care cycle, and what are the relationships among them? Should a provider's **scope of services** in the care cycle be expanded or contracted?

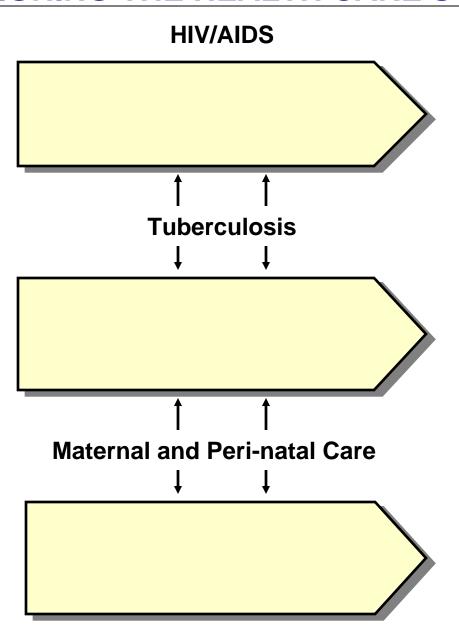
HIV/AIDS CARE DELIVERY VALUE CHAIN

INFORMING & ENGAGING						
MEASURING						
ACCESSING						PATIENT VALUE
	PREVENTION & SCREENING	DIAGNOSING & STAGING	DELAYING PROGRESSION	INITIATING ARV THERAPY	ONGOING DISEASE MANAGEMENT	MANAGEMENT OF CLINICAL DETERIORATION (Health outcomes per unit of cost)

HIV/AIDS CARE DELIVERY VALUE CHAIN

INFORMING & ENGAGING	Prevention counseling on modes of transmission on risk factors	 Explaining diagnosis and implications Explaining course and prognosis of HIV 	Explaining approach to forestalling progression	Explaining medical instructions and side effects	Counseling about adherence; understanding factors for non- adherence	Explaining co-morbid diagnoses End-of-life counseling	
MEASURING	HIV testing TB, STI screening Collecting baseline demographics	HIV testing for others at risk CD4+ count, clinical exam, labs	Monitoring CD4+ Continuously assessing comorbidities	Regular primary care assessmentsLab evaluations for initiating drugs	HIV staging, response to drugs Managing complications	HIV staging, response to drugs Regular primary care assessments	PATIENT VALUE
ACCESSING	Meeting patients in high-risk settingsPrimary care clinicsTesting centers	Primary care clinicsClinic labsTesting centers	Primary care clinicsFood centersHome visits	Primary care clinicsPharmacySupport groups	Primary care clinicsPharmacySupport groups	Primary care clinicsPharmacyHospitals, hospices	
	PREVENTION & SCREENING • Connecting patient with primary care • Identifying high-risk individuals • Testing at-risk individuals • Promoting appropriate risk reduction strategies • Modifying behavioral risk factors • Creating medical records	DIAGNOSING & STAGING • Formal diagnosis, staging • Determining method of transmission • Identifying others at risk • TB, STI screening • Pregnancy testing, contraceptive counseling • Creating treatment plans	DELAYING PROGRESSION Initiating therapies that can delay onset, including vitamins and food Treating comorbidities that affect disease progression, especially TB Improving patient awareness of disease progression, prognosis, transmission Connecting patient with care team	INITIATING ARV THERAPY • Initiating comprehensive ARV therapy, assessing drug readiness • Preparing patient for disease progression, treatment side effects • Managing secondary infections, associated illnesses	ONGOING	MANAGEMENT OF CLINICAL DETERIORATION Identifying clinical and laboratory deterioration Initiating second- and third-line drug therapies Managing acute illnesses and opportunistic infection through aggressive outpatient management or hospitalization Providing social support Access to hospice care	(Health outcomes per unit of cost)

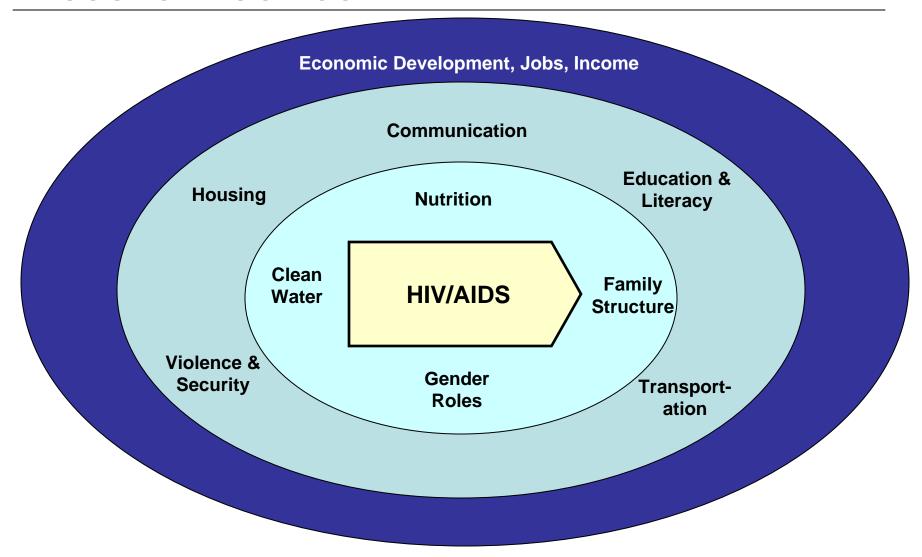
DESIGNING THE HEALTH CARE SYSTEM



IMPLICATIONS FOR HIV/AIDS CARE

- Management of social and economic barriers is critical to the treatment and prevention of HIV/AIDS
- Screening is most effective when integrated into a primary health care system
- Early diagnosis helps in forestalling disease progression
- Improving maternal and child health care services is integral to the HIV/AIDS care cycle through substantially reducing the incidence of new cases of HIV
- Intensive evaluation and treatment at time of diagnosis can forestall disease progression
- Improving compliance with first stage drug therapy lowers drug resistance and the need to move to more costly second line therapies
- Coordinated development of primary care infrastructure can improve the value of the HIV/AIDS care cycle while simultaneously improving value in the care of other diseases

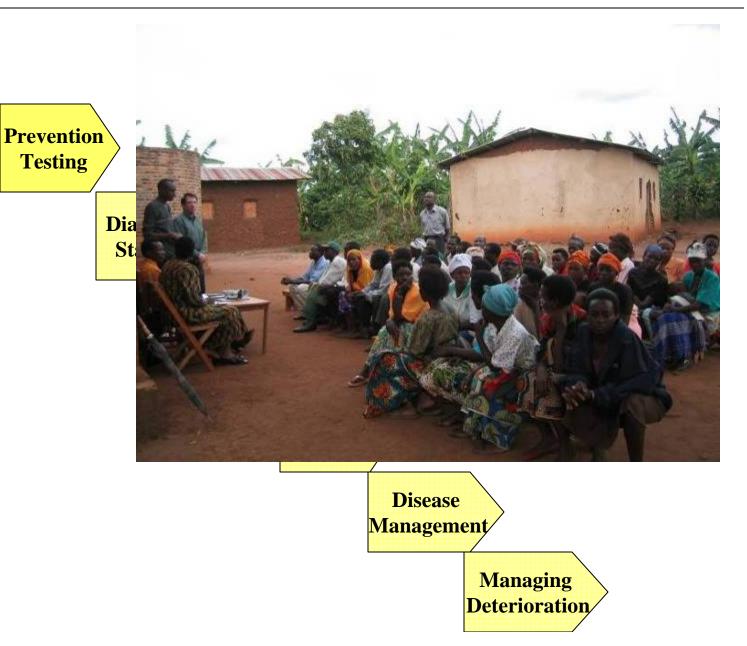
HEALTH AND HEALTH CARE DELIVERY IN THE RESOURCE-POOR CONTEXT

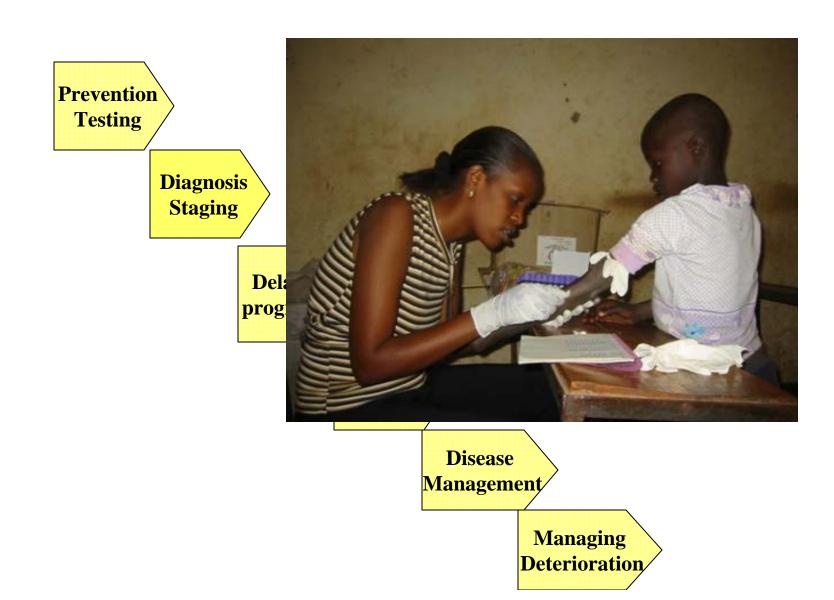


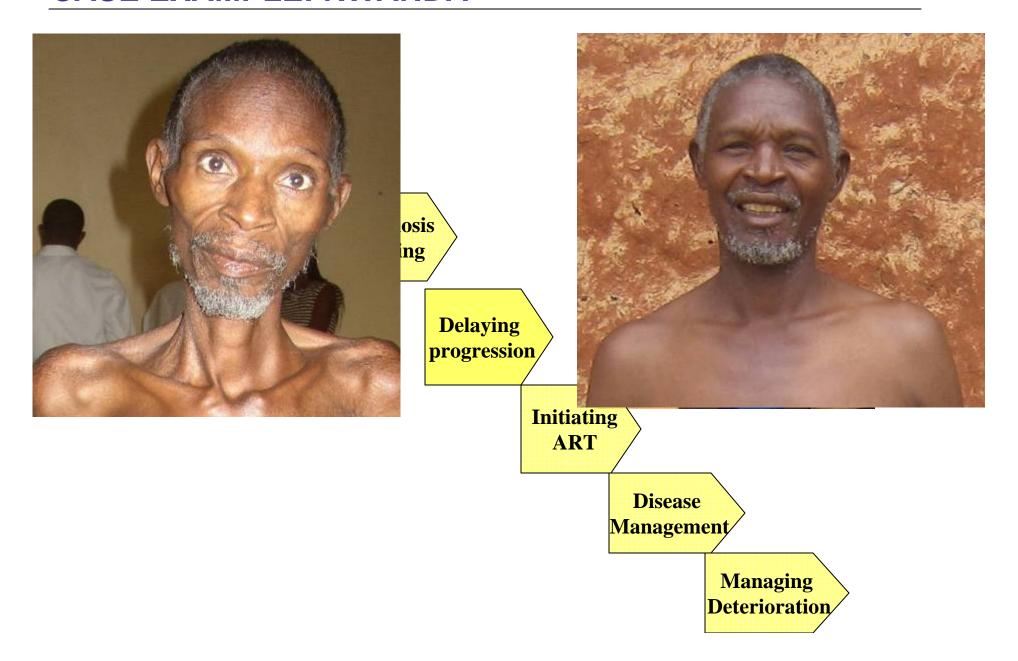
- Health care delivery must incorporate the realities of patient circumstances
- Health care system development should maximize the leverage of the health system to positively impact the broader context

HOW DO WE STUDY COMPLEX STRATEGY PROBLEMS?

- Develop theoretical principles about the underlying phenomenon
- Employ a mix of quantitative and qualitative analysis
- Conduct in-depth field research focused on the role of organizational leaders and their choices, studied in context
- Careful study of numerous case studies spanning multiple settings and encompassing both success and failure
- Develop frameworks that can be applied prospectively to guide practice
- Encompass the complexity of the whole problem
- Intensive interaction with practitioners to disseminate concepts and refine implementation in specific country settings





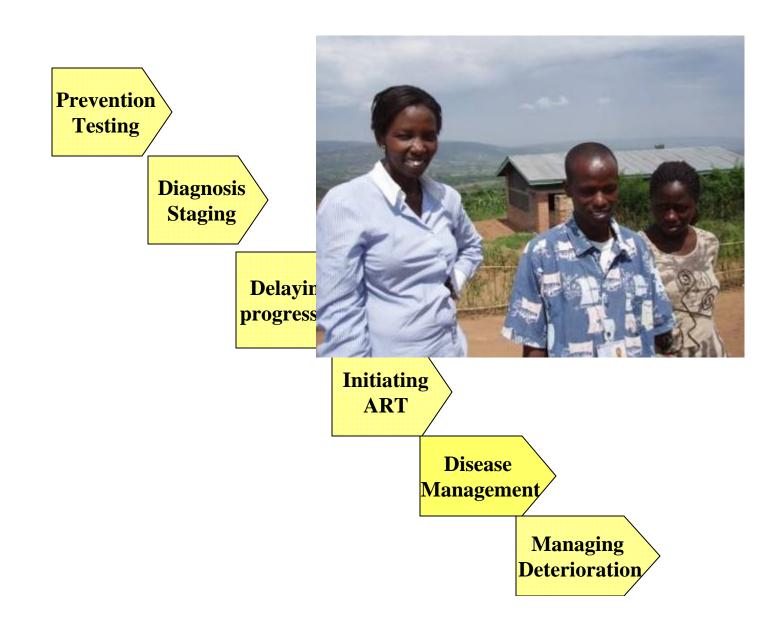




Initiating ART

Disease Management

Managing Deterioration





EVALUATE HOW THE SEQUENCE OF ACTIVITIES IS ALIGNED WITH VALUE

- Are there coordination and linkages across activities?
- How are human resources deployed?
- How are facilities and organizational structures arranged to create value?
- How is information shared across activities?

COORDINATION AND LINKAGES ACROSS ACTIVITIES

Prevention Testing

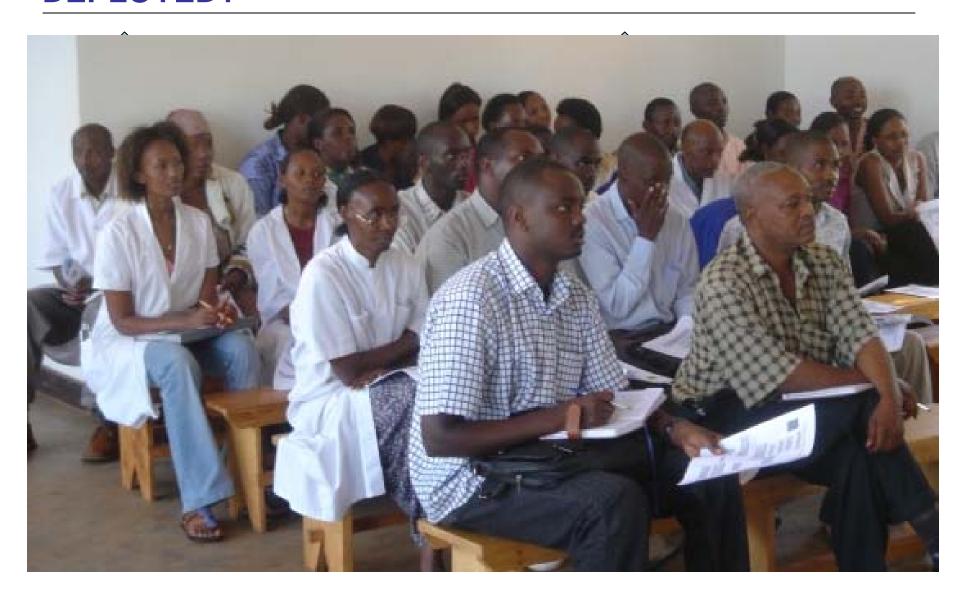


Disease Management

EVALUATE HOW THE SEQUENCE OF ACTIVITIES ARE ALIGNED WITH VALUE

- Are there coordination and linkages across activities?
- How are human resources deployed?
- How are facilities and organizational structures arranged to create value?
- How is information shared across activities?

HOW ARE HUMAN RESOURCES DEPLOYED?



EVALUATE HOW THE SEQUENCE OF ACTIVITIES ARE ALIGNED WITH VALUE

- Are there coordination and linkages across activities?
- How are human resources deployed?
- How are facilities and organizational structures arranged to create value?
- How is information shared across activities?

FACILITIES ARRANGED TO CREATE VALUE





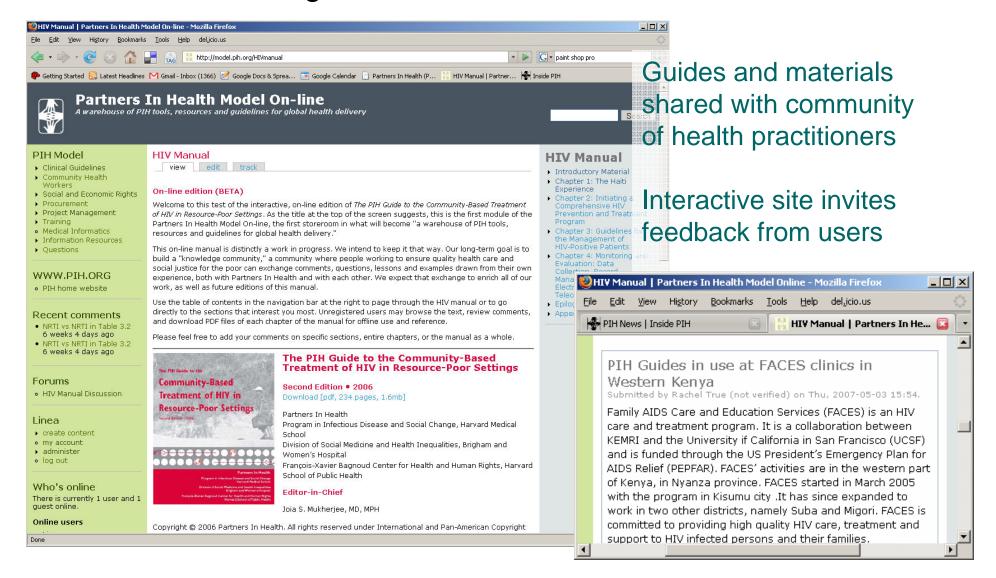
- Governments in Africa and especially Rwanda must be engaged.
- Building the public health infrastructure and education system will best serve the public and allow the right to health care and education in Rwanda.
- Integrated HIV programs can increase uptake of vaccinations, family planning, and improve primary health care in the public sector

EVALUATE HOW THE SEQUENCE OF ACTIVITIES ARE ALIGNED WITH VALUE

- Are there coordination and linkages across activities?
- How are human resources deployed?
- How are facilities and organizational structures arranged to create value?
- How is information shared across activities?

Communities of Practice: Progress to Date

Community of Practice among Partners in Health Network



IS2 add specifics

add specifics Partners Information Systems, 5/29/2007



After

Before



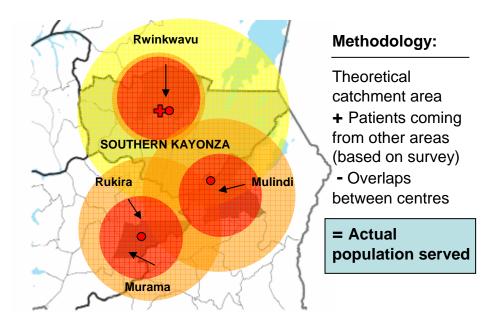
Summary of detailed unit costing, extrapolated to a full district

100% = US\$ 4.7 million in 'steady state' (2011)

New Sites/Capital investment (14%) Administration Building/ Infrastructure Labour, excl. accompagnateurs Referrals -(32%)Transport/ Communication Labour, accompagnateurs Social (education, only (5%) housing, mutuelles, micro-finance, etc.) Outpatient **Nutritional Supplies** Support (5%) (28%)

Estimated 'catchment' area of unit

100% = 265,000



~25 US

~6000 US\$/Capita

PARTNERS IN HEALTH: RESULTS

Haiti

- Over 1 million patient visits in clinics in 2005
- More than 9500 HIV patients monitored with over 2200 on ART
- Inspired President Bush's Emergency Plan for AIDS Relief

Peru

- More than 2000 people treated for MDR-TB
- Trained over 4000 healthcare workers in MDR-TB management in 2005
- Changed Global Policy

Rwanda

- Projects sites serve over 350,000 people
- Over 1800 on ART, 100 more each month
- Commitment to first ever national primary health care scale-up

AN OPPORTUNTIY FOR HARVARD TO LEAD

- There is a deadly gap between what we know and what we do
- Millions of lives can be saved even without new technology, but simply by doing what we know better
- There is an urgent need for a new science of healthcare delivery that transforms the way global health practitioners implement effective solutions
- Harvard University is uniquely positioned and qualified to promote this new discipline

OUR NEXT STEPS

Create a University-wide initiative on Global Health Delivery that accelerates innovation in global health delivery

This initiative will:

- Study the most striking successes and failures in global health care delivery
- Support the creation of an international electronic medical record and launch web-based communities of practice
- Launch two care delivery innovation centers to accelerate the creation of new care delivery models
- Create training programs and materials to support the diffusion of innovation

OUR SPECIFIC NEAR-TERM NEEDS

People

- Assemble a staff of case researchers (10-12)
- Build scale-up team to survey all 30 districts in Rwanda and develop a plan to launch a national care delivery program throughout the country.
- Recruit 5-7 engineers to build the user interface for open MRS and communities of practice
- Recruit staff to lead and engage communities of practice
- Endow professorships in global health delivery sciences

YOUR SUPPORT

 Your expertise from leading/analyzing successful delivery and implementation efforts

Your assessment of our plan and approach

Your support

