



Operations Research and Implementation Science

Introduction

Operations Research Mini-Course

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Know-Do Gap"

- Research debate framed around '10/90 gap'
- We know many times more than we are able to apply
 - 30-50% lack essential drugs globally
 - Childhood vaccination ~ 50% in Africa
 - Antenatal care (pMTCT, malaria, syphilis) ~ 10-30%
 - ARVs are quite effective, but only ~40% in treatment
- Critical gap today is "know-do" gap



Approaches to address the "know-do" gap

Problems are not usually inadequate performance - but **systems**

"Every process is perfectly designed to give you exactly the outcome that you get."

Don Berwick, Institute for Healthcare Improvement

Find out why systems are not functioning optimally - assess access, quality, systems, workforce



Commission on Health Research for Development (COHRED-major donors) 1990

- All countries should undertake essential national health research (ENHR)
- Intl partnerships should address priority health problems
- Funding should be focused on health problems of the south
- Monitoring mechanism should be established

Subsequent meetings in Bangkok (2000), Mexico City (2004)



Different concepts of OR

- Clinical assessment
- Complex modeling
- Simple systems analysis (what we do)

*There can be substantial overlap
between these*



Health Systems Research & Operations research - How it works

- Identify bottlenecks in system
- Make changes
- Measure impact of changes
- If it works, expand changes and inform policymakers



Further characteristics of HSR/OR

- Action research
- Involves policy makers, users and providers in design
- Uses standard qualitative and quantitative methods
- Embedded in people's day-to-day practices



Helpful conditions for HSR/OR

- Engagement in service delivery
- Work closely with decision-makers
- Opportunistic research funding
- Reward systems (status, publications, promotion)

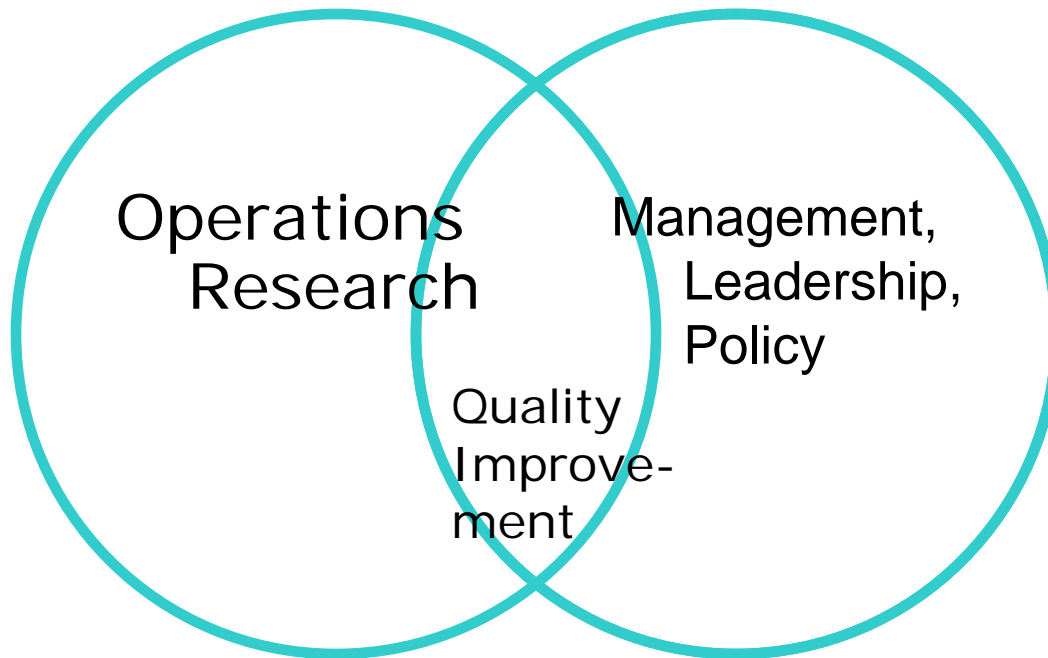


Increasing use of HSR/OR

- WHO - Real Time Interactive OR (RTIOR)
- Doris Duke Foundation - OR grants
- PEPFAR - Technical Evaluations, Public Health Evaluations

'Implementation Science' in Health

Umbrella concept for rigorous approaches to improving health care delivery



Critical elements:

Information technology, financing, human resources, logistics, anthropology, clinical science



Implementation science at the UW

- Operations research in several courses (Micek, Dept of Industrial & Systems Engineering)
- Health Systems and Strategies Research CFAR (Gloyd-Micek)
- Implementation science course in 2010 (Sherr)
- MPH in leadership, policy, and management (Katz)
- Global Health Leadership Program (Katz)
- Potential PhD in Global Health Implementation Science (Departments of Global Health, Health Services, Schools of Business, Engineering, Public Affairs)



Einstein

"Better an approximate answer to the right question than a precise answer to the wrong one"

Thank you!

