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Quality of Care

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Objectives

- After listening to, viewing, and studying the lecture materials in this course, you will be able to do the following:
  - Understand quality-of-care concepts
  - Compare and contrast three different quality-of-care frameworks and use them to solve immunization program problems

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Section A

Conceptualizing Quality of Care

Quality of Care

- *Quality of care:* "The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge"

  — Institute of Medicine, 1990

- Notes
  - This definition incorporates both treatment and prevention
  - "Desired" health outcomes are those sought by the recipients of the services
  - "Current professional knowledge" refers to ever-changing technical standards of care

Why Emphasize Quality of Care?

- Merely making health services accessible does not ensure they will be utilized
- Research in many settings has shown that demand for immunizations and other primary health care services rises with the quality of those services
- Conclusion: To attain and maintain healthy populations, countries must find ways to improve the quality of care on offer

Indicators and Dimensions of Quality of Care

- Safety
- Effectiveness
- Appropriateness
- Efficiency
- Timeliness
- Acceptability
- Health outcomes
- Health improvement
- Prevention/early detection
- Technical quality/ proficiency/ competence
- Access
- Continuity
- Availability
- Availability of information
- Consumer participation/choice
- Patient/carer experience
- Respect and caring
- Affordability

The WHO-Recommended Quality-of-Care Framework

- It is difficult, if not impossible, to rank these in importance or use them to construct a single measure of quality of care
- To solve this problem, Evans et al (2001) conceptualized three intrinsic goals for any health system; an intrinsic goal is one for which attainment is desirable in itself, holding all other goals constant

The WHO-Recommended, Quality-of-Care Framework

- **Optimal health for all**
  - Includes reducing premature mortality and improving non-fatal health outcomes
  - Means attaining better health levels, less health inequality

Continued

The WHO-Recommended, Quality-of-Care Framework

- **Responsiveness**
  - Meets legitimate non-health-related expectations of the population
  - Two components
    - Respect for the person (dignity, confidentiality, need for information)
    - Client orientation (prompt attention, provision of basic amenities, choice)
  - Means increasing the level of, and equalizing access to, responsive health services

Continued

The WHO-Recommended, Quality-of-Care Framework

- **Fairness in financing**
  - Financial risk protection for households
  - Principles
    - A household's contribution to the system should not impoverish its members
    - Poor households should pay a lower proportion of their disposable income on health than rich households
  - Concerned only with distribution

Continued

The WHO-Recommended, Quality-of-Care Framework

- Note that **optimal health for all** and **responsiveness** correspond to the often cited **technical** and **interpersonal** quality-of-care dimensions
- The indicators and dimensions listed previously refer to instrumental goals for achieving these intrinsic goals
- Here's how Evans et al mapped them together:

Goal	*Level* of Attainment or Quality	*Distribution* of Attainment or Equity
Optimal health	Health outcomes/improvement Technical quality/ proficiency/competence Appropriateness Effectiveness Safety Prevention/early detection Access/availability/continuity	Access/availability/continuity
Responsiveness	Consumer participation/choice Patient/carer experience Acceptability Respect and caring Availability of information Timeliness	
Fair financing		Affordability

The Donabedian Quality-of-Care Framework

- Most empirical quality-of-care research focuses solely on the instrumental goals
- The most common framework is that of Donabedian (1980, 1986, 1988) who conceptualized three quality-of-care dimensions

Continued

The Donabedian Quality-of-Care Framework

- **Structure:** the attributes of settings where care is delivered
- **Process:** whether or not good medical practices are followed
- **Outcome:** impact of the care on health status

Continued

The Donabedian Quality-of-Care Framework

- The context (structure) in which care is delivered affects processes and outcomes
  - (If the facility is an unpleasant place to be, people won't come, workers won't do a good job, and children won't be immunized)
- Outcomes indicate the combined effects of structure and process
  - (Child is up to date on vaccinations)
- Structure and process are readily measured
  - (Is the waiting room clean, the nurse polite?)

Continued

The Donabedian Quality-of-Care Framework

- A particular outcome is chosen to measure a particular performance or process
  - (Full immunization to measure tracking or reminder system)
- Synthesis: to monitor outcomes is to monitor performances, which are conditional on structure and process
  - (Low coverage rates imply poor performance, which might be due to no electricity, poor attitudes, other factors)

The Donabedian Quality-of-Care Framework

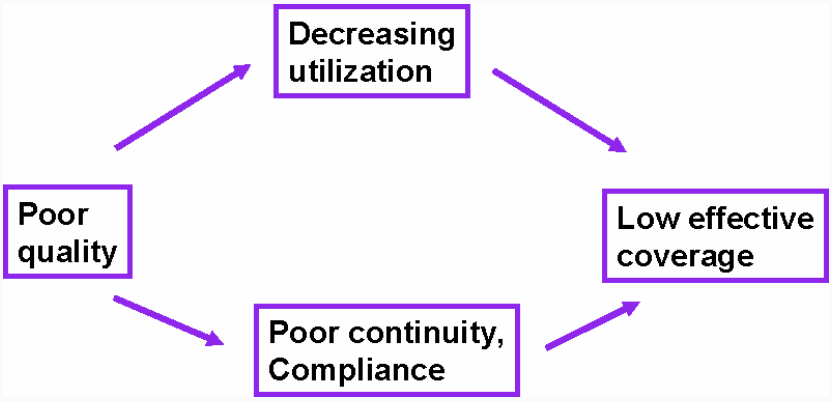
- System redesigns and other inputs will hopefully correct deficiencies, improving quality of care (home visits, tracking)
- Continued performance monitoring keeps quality of care high (local health committee conditions pay on performance)
- Note: only structure and process can be manipulated!

Examples of Donabedian Immunization Items

Dimension	How Measured
◆ Structure — Physical plant — Waiting time	 — Direct observation — Supervisory checklist
◆ Process — Client-provider interaction — MIS	 — Participant observation — Exit interviews — Data quality assessment
◆ Outcomes — Vaccine coverage	 — Household surveys

The Bamako Initiative

- What to do about quality of care when the system is failing?
- Many West African countries faced this kind of unhealthy equilibrium in the mid 1980s



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The Bamako Initiative

- Solution: improve quality of care
- The B.I. model identifies four quality-of-care components
  - Effectiveness
  - Efficiency
  - Sustainability
  - Equity

Continued

The Bamako Initiative

- **Effectiveness**
  - Offer services that address the most important health problems of the most vulnerable groups
  - Integrate curative and preventive services (maternal care, immunizations)
  - Attain high population coverage
- **Efficiency**
  - Rationalize essential drug supply
  - Routinely use information for decision-making
  - Monitor costs

Continued

The Bamako Initiative

- **Sustainability**
  - Share costs
  - Community control
- **Equity**
  - Serve the underserved
  - Allow exemptions
  - Use cross-subsidies
- Note: a system can be effective without being equitable, but only an effective system can be equitable

Summary

- These three frameworks reflect three different ways to define quality of care:
  - *WHO:* philosophical; universal right to high-quality health care
  - *Donabedian:* organizational; health systems research
  - *Bamako Initiative:* economic
- Each can be used to analyze immunization program problems

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Section B

Case Studies of Quality of Care and Immunization: Case One

Case One: Dhaka, Bangladesh

- Perry et al (1998) analyzed the quality of immunization services in Zone 3 of Dhaka (1994 population: 450,000)
- 1995 Dhaka coverage high: 59% 12–23m fully immunized, 84% of mothers with child <12m immunized against tetanus
- However, neonatal tetanus and measles caused 19% and 5% of infant deaths, and measles caused 16% of deaths ages 1–4y in urban Bangladesh in 1995
- EPI infrastructure in Zone 3 (1994):
  - 14/36 MCH-FP clinics give immunizations
  - 57 fieldworkers visit Zone 3 households
  - Azimpur Maternity Center

A Donabedian Conceptual Framework

- Inputs (structure)/processes/outputs
- Service input dimensions
  - Facilities
  - Equipment, supplies
  - Staff training
  - Provider knowledge, attitudes
  - Supervision
  - Facility amenities

Continued

A Donabedian Conceptual Framework

- Service *process* dimensions
  - Services offered
  - Technical quality of services
  - Counseling quality
  - Quality of interpersonal relations
  - Access
  - Safety
  - Promotion of continuity of care

Continued

A Donabedian Conceptual Framework

- Service *output* dimensions
  - Client satisfaction
  - Client perception of quality
  - Client knowledge, attitudes
  - Client behaviors
  - Efficiency

Methods

- 5,940 households surveyed
  - 100 non-slum, 60 slum clusters
- All 36 MCH-FP clinics assessed
  - 165 client-provider interactions observed
  - 33 MCH-FP providers interviewed
  - 165 MCH-FP clients interviewed
- 57 MCH-FP field workers interviewed
  - 114 fieldworker clients interviewed

Results: Service Inputs

- Equipment, supplies: Supply problems rare
- Training: Adequate
- Knowledge: Staff who regularly immunize were knowledgeable about EPI, *other staff less so*
- Supervision: Regular but of *low quality*
- Facilities: Physical amenities up to par

Results: Service Processes

- Services on offer
  - EPI, MCH, FP well integrated
- Technical quality
  - Clinic staff regularly vaccinated all eligible children, pregnant women, and gave them cards
  - Correct injection, sterilization technique followed
  - No routine data analysis

Continued

Results: Service Processes

- Counseling quality
  - Fieldworkers promoted TT with pregnant women, but only 55% reviewed children's immunization statuses during home visits
  - Only 48% of mothers informed about side effects
  - Immunization statuses checked for only 11% of children accompanying mothers visiting for other reasons
  - Estimated 44% of children had missed immunization opportunities
  - Estimated 87% of women had missed TT immunization opportunities

Continued

Results: Service Processes

- Interpersonal relations
  - Nearly all client-provider encounters rated as respectful, friendly, informative
  - 93% of clients rated clinics as friendly, 83% found encounter educational

Continued

Results: Service Processes

- Access
  - Slum households have more difficult access to fixed facilities
  - None of the clinics open every day
  - Household survey showed
    - 61% of mothers with children 0–2y had immunization cards
    - 23% of mothers with children 0–11m had TT cards
    - 90% of children 0–23m had at least one vaccination
    - 68% of ever-pregnant married women had received at least one TT vaccination

Continued

Results: Service Processes

- Promotion of continuity of care: providers generally told clients when to return for next vaccination

Results: Service Outcomes

- Client satisfaction: 98% satisfied
- Client perception of quality: 96% would recommend the clinic to a friend
- Client knowledge
  - Only half said vaccines prevent vaccine-preventable diseases
  - 23% of TT eligible women did not know TT was available in the clinics they visited

Continued

Results: Service Outcomes

- Client attitudes
  - 68% of women plan to get TT
  - 22% of younger women fear TT
- Efficiency: good
  - Median 27 clients per immunization session
  - Median clients per worker per session: 18

Recommendations

- In this case, most of the problems detected were in the process dimension
- To improve quality, the authors concluded, remedial efforts should first address:
  - Missed opportunities
  - Poor accessibility in slum areas
  - Low knowledge about immunization among mothers and providers

Continued

Recommendations

- Note: This was a cross-sectional study, so the performance monitoring function in Donabedian's model was not operating
- True quality assurance entails implementing the recommendations and continuing to monitor performance
- The importance of the monitoring function is evident in the next case study

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Section C

Case Studies of Quality of Care and Immunization: Case Two

Case Two: Bamako Initiative

- Knippenberg et al (1997) describe the cases of Guinea and Benin in the mid 1980s, where the Bamako Initiative strategies were refined
- Quality of care was low
  - People bypassed village health workers
  - Schedules not respected
  - Immunization not integrated with other services
  - Continuity, compliance insufficient
  - Little supervision, quality control
  - Vaccine supply precarious

B.I. Strategies to Improve Quality of Care

- **Effectiveness**
  - EPI fully integrated with other PHC services, offered daily
  - Staff teamwork emphasized
  - Essential drugs directly distributed
  - Outreach services reorganized
  - Children registered in utero for vaccination
  - Active tracking, channeling
  - TT given during antenatal visits
  - Monthly group supervision
  - Semi-annual coverage monitoring sessions

The Coverage Curve

- The B.I. team used an innovative graphic tool to show the nested determinants of effective coverage
- **Availability:** inputs are there
- **Accessibility:** people can reach the services
- **Utilization:** people use them
- **Adequate coverage:** compliance, timing is right
- **Effective coverage:** the proportion of people receiving high-quality services

Continued

The Coverage Curve

- In this example, an availability bottleneck was solved in 1992, but others remained
- That year, most of the availability-access bottleneck was also solved, increasing immunization access to 91%
- By 1993, active channeling and defaulter tracking reduced the high dropout rate (utilization-adequate coverage bottleneck)
- An accessibility-utilization bottleneck remained to be solved

B.I. Strategies to Improve Quality of Care

- **Efficiency**
  - Essential generic drugs procured
  - Management information system simplified
  - Recurrent costs monitored in relation to coverage
- **Sustainability**
  - Locally affordable user fees imposed
  - Local operating costs assessed regularly
  - Community health management committees control funds
- **Equity**
  - Mark up costs of inexpensive treatments to cross-subsidize more expensive but essential treatments
  - Exemptions for truly indigent: case-by-case basis

Continued

B.I. Results

- Guinea and Benin increased the percent of children under one fully immunized from 5% to 62% and 12% to 60%, respectively, over the period 1986–1993
- Mean cost per fully immunized child: US$10–12
- Utilization of all PHC services increased
- Overall, user fees were covering all local recurrent costs in both countries by 1993
- Conclusion: "…people act rationally and are willing to pay more if the product is otherwise unavailable, if access becomes easier, or if quality is perceived to have improved"
- (Knippenberg et al 1997:Page S44)

Continued

B.I. Results

- By 1995, over 5,000/7,000 West and Central African health centers, serving about half the population, had adopted BI strategies
- Success, however, has not been not uniform
  - Health centers obtain varying levels of effectiveness, efficiency
  - By 1993, about one-third were still not covering their designated local recurrent costs
  - The poorest 5–10% do not utilize the centers at all, but the remaining poor utilize them more than do the better-off

Findings

▼ Notes Available

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Source: USAID, 2001, Divelbess 2000

Summary

- The Donabedian and B.I. frameworks both require monitoring and feedback to assure quality
- This is feasible and should be part of any routine immunization program
- The B.I. strategies embody:
  - Rational choice among users
  - Providers, community engaged in a continuous, evidence-based quality assurance process
- Both frameworks help immunization programs meet the WHO-endorsed intrinsic goals:
  - Optimal health for all
  - Responsiveness
  - Equity