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Quality

Health Economics Lecture 10

Outline

- Part 1) Command and control for quality
- Dimensions of quality
 - Measurement
 - Significance
- Government interventions in quality
 - Strengths and weaknesses
- Part 2) Corporate Structures and Quality
- Business case for quality
 - Strengths and weaknesses
- Franchises vs. vertical firms
 - Examples of franchises

Reminder: Why so important

- Uncertainty
 - Information asymmetry
 - Consumers can't assess quality well and are vulnerable
 - Providers ex ante face uncertainty regarding which services would produce most quality
- Unregulated markets will fail



Principle 1: Can only manage if measured

- Quality measurement is the foundation of quality improvement

Dimensions of Quality

- Donabedian's Trinity
 - Structure
 - Who does what?
 - What certifications and qualifications?
 - Process
 - What gets done?
 - Did so and so do this or that?
 - Outcome
 - What happened to the patient's health?
 - Deaths, complications, satisfaction

Structure Measurement

- Joint Commission on Accreditation of Hospitals
 - Hospitals seek and pay JCAHO to accredit their hospitals
 - Document review, site inspection, staff interviews
- Document review
 - What are credentials of staff
 - What are written policies for operations
 - Do staff seem to know the policies
 - Dust, dirt, rodents?



Process Measurement

- What percent of patients were immunized?
 - Counseled?
 - Got timely treatment?
- Did staff wash hands?
- Do staff take temperatures properly?

Physician Quality Reporting Initiative

- PQRI is a voluntary Medicare program started 2007
- Doctors choose 3 quality indicators for their practice and report them to Medicare
 - Percent of heart patients prescribed aspirin
 - Percent over 65 immunized for pneumonia
 - Percent of smokers advised to quit
- Medicare pays 2% of annual billing to reporting doctors –about \$5000 per doctor
- New office software automates collection of PQRI measures



Outcome measures

- Deaths while in treatment
- For acute conditions:
 - Cure rates
 - Readmission rates
 - Nosocomial infection rates
- For chronic conditions:
 - Numbers of flare ups, ER visits
 - Quality of Life Measures
 - SF-36

Patient Satisfaction

- If “respect and dignity” are part of the objectives then patient satisfaction must be measured
- Current technology:

How would you rate your experience with Dr. X

Dissatisfied 1 2 3 4 5 Satisfied

- Satisfaction surveys heap 90+% of responses on “5”
 - Number one determinant of satisfaction=Waiting time
 - Low statistical power to detect differences

A New Outcome Measure

- Medical error rates
 - Deaths from medical errors=44,000-98,000
 - From Institute of Medicine, 1999
 - Cost \$37.6 billion
 - Extrapolations from medical record review in New York (1985) and Utah/Colorado (1992)
 - Adverse events in 459 out of 14,732 randomly selected medical records (3%)
 - Adverse events attributable to errors were 53-58%
 - Surgical complications, adverse drug events, and delayed or incorrect diagnoses and therapies
- Current focus on systems, not people
 - Checklists and systems engineering



Principle 2

- The more it matters, the harder it is to measure
 - Structure gets measured the most, followed by process
 - To measure outcome, you have to look at 14,000 charts or exit interview thousands of patients
- Which aspects of quality matter most?
 - Debated goals of health systems
 - Improved health
 - Improved distribution of health
 - Respect and dignity
 - Financial protection

Government Interventions for Quality

- State licensure and certification
 - State boards of licensure for nurses, doctors, dentists
 - Licensure for hospitals
- Federal payers
 - PQRI
 - Scrutinize claims for appropriate medical care
 - Deny payments for unproven technology
 - Flag potential problems e.g. patients being prescribed 20 different prescriptions for narcotics

Government quality assurance

- Government tools=courts, bureaucrats, inspectors
 - Courts and inspectors need objective certifiable measures
 - Government focus falls more on structure

REVIEW: Government Solution

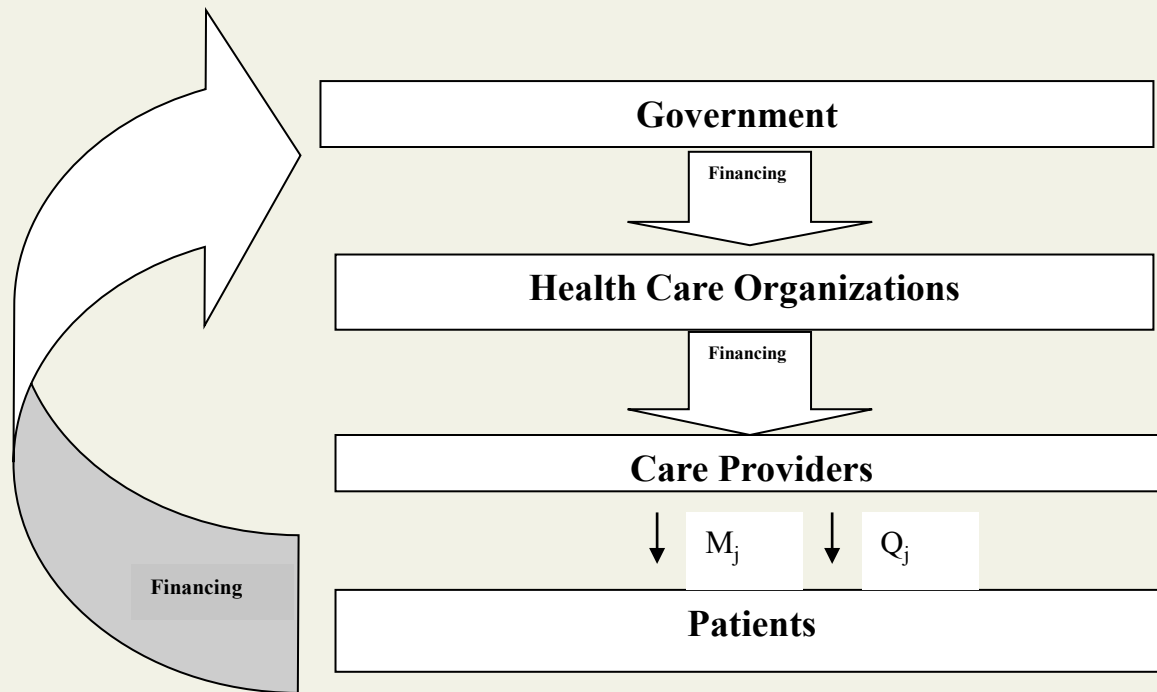


Figure 2. The financing of a government operated health system. Financing is generated from patients (citizens) in the form of taxation and public borrowing. Funds are distributed to health care organizations e.g. ministry of health, and hence to individual health care providers. M_j stands for the volume of medical services of type “j”. Q_j stands for the quality of services of type “j”.

Principle 3: Asymmetric information deters quality

- Your health is worth more to you than to anybody else (including your family, employer, and insurance agent).
 - If you can't recognize and demand quality, those external to you can't make enough money from recognizing it for you.
- Business case that relies on current institutional structure of payments is difficult
- Patients can't detect some of the most important aspects of technical quality

Principle 4: Coordination Above Private Providers

- A coordinating body that oversees individual providers is fundamental to address access and quality
- Could be government or *non-governmental*
- Coordinating body to measure quality and inform or reward MD
 - MD utility depends on profit, leisure, and patient health
 - Quality takes MD effort
 - Quality usually involves lost leisure or lost profit
 - Longer visits, paying more attention
 - Coordinating body improves the marginal utility to MD of effort spent on quality of care

What coordination can do

- Incentivize better quality
 - Simple act of collecting PQRI data and telling doctors how they compare to others is an incentive
 - Appeals to professional status
 - Paying for performance (P4P)
 - UK government implementing in NHS
 - US government expected to follow PQRI with P4P
- Engineer hospitals and clinics for patient safety
 - Review near misses
 - Identify look alike sound alike medicines
 - Appoint patient safety officers

What is the business case for quality?

- Hypothesis: Investing money on improving service quality will reap an attractive return on investment for a private investor
 - In theory, returns could come because
 - Healthier patients submit fewer claims
 - Higher satisfaction gives an edge where one must compete for patients on quality instead of on price
 - Reputation as a “caring” health organization will come in handy with staff recruitment

What weakens the business case for quality?

- Consumers inability to perceive quality differences
- Displacement of pay-offs in time and place
 - Mean duration of stay in a Baltimore based Medicaid HMO was <3 years
- Disconnection between consumers and payers
- Concentration in insurance providers forcing more price competition than quality competition

Four Principles of Quality in Health Care

- Principle 1: Can only manage if measured
- Principle 2: The more it matters, the harder it is to measure
- Principle 3: Asymmetric information deters quality
- Principle 4: Coordination above private providers necessary

- Governments not always able to coordinate quality
 - E.g. developing countries
- Non-governmental models of coordination needed
 - Coordination provides important public goods and thus deserve the subsidies they will require during start up.

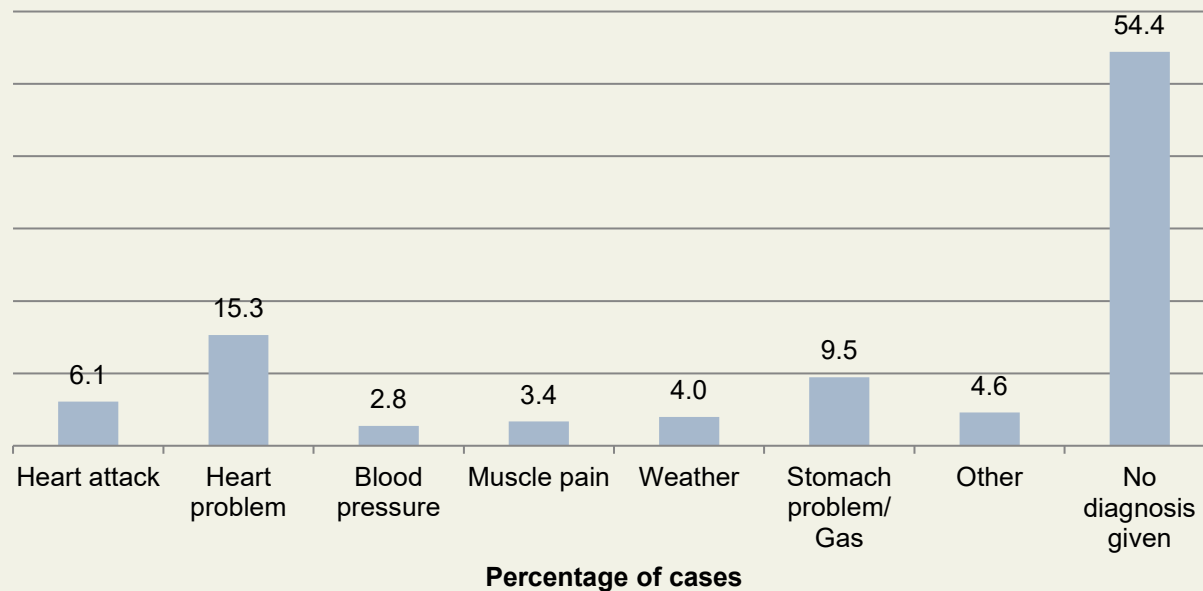


Part 2: Social franchising

- Quality assurance when governments are weak

Conditions are poorly diagnosed

Diagnosis for heart attack

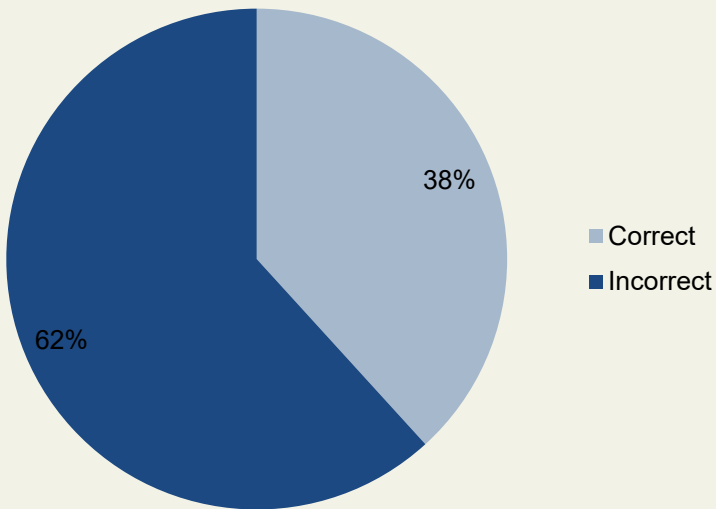


Source: (Das, 2011)

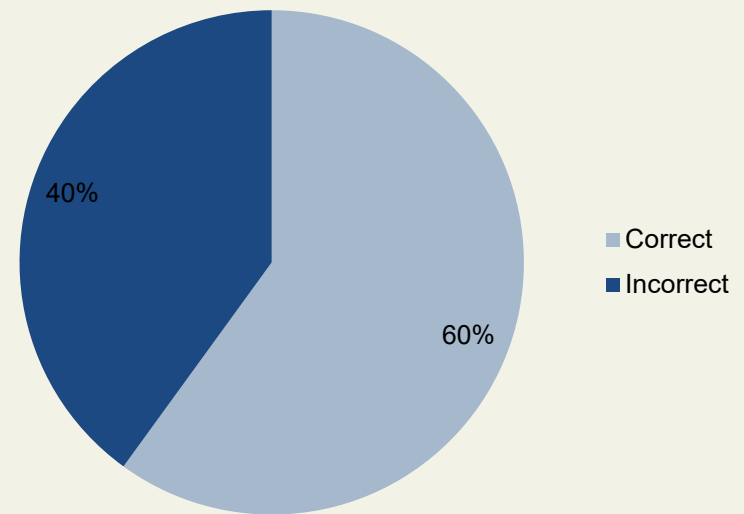
Based on 327 Simulated Patients in New Delhi, saying “I am 45, and I have crushing chest pain.”

Public sector doctors do much better in their private clinics

Likelihood of correct treatment for a heart attack: Public MBBS in public clinics



Likelihood of correct treatment for a heart attack: Public MBBS in private clinics



Source: (Das, 2011)



Current system in low income countries

- Fragmented
- Parallel systems
 - Public clinics with vertical hierarchies of government salaried doctors and nurses
 - Private clinics with sole proprietors
 - Mission clinics
- Governments hard pressed to undertake command and control models
- Need new approach

McDonald's



75% US restaurants franchised
25% Vertically incorporated

- Franchisee effort
 - Keeps premises clean, well lit, employees friendly, burgers fully cooked
- Headquarters effort
 - Design and run snappy ads, develop menu items

Getting to optimal effort at quality

- Ideally the optimal effort is defined by the rule
- “Supply effort until”
 - Marginal Cost of Effort=Marginal Revenue of Effort
 - Asymmetric information lowers marginal revenue of effort to improve quality
- A sole proprietor reaches the optimum at equilibrium
- Partnerships dilute incentives to supply any effort
 - If you only get half the profit, you don’t work as hard
 - Marginal revenue is divided up and thus lower in cooperative ventures

Vertically integrated firm

- Employee
 - Receives a flat wage, W from headquarters
 - Gets bonus tied **little** share of revenue $(1-s)$
 - i.e. gets $(1-s)R+W-E_p$
 - optimal effort defined by
 - $(1-s) \times \text{Marginal Product of Effort} = \text{Marginal Cost of Effort}$
- Headquarters
 - Pays a flat wage, W
 - Retains BIG share of revenue (s)
 - i.e. gets $(s)R-W-E_G$
 - optimal effort defined by
 - $(s) \times \text{Marginal Product of Effort} = \text{Marginal Cost of Effort}$

Franchise Contract

- Franchisee
 - pays a flat franchise fee, F to headquarters
 - gets to keep **BIG** share of revenue $(1-s)$
 - i.e. gets $(1-s)R-F-E_F$
 - optimal effort defined by
 - $(1-s) \times \text{Marginal Product of Effort} = \text{Marginal Cost of Effort}$
- Franchisor at headquarters
 - gets the fee and a little share of revenue, s
 - i.e. gets $sR+F-E_G$
 - optimal effort defined by
 - $s \times \text{Marginal Product of Effort} = \text{Marginal Cost of Effort}$

Rules of Thumb

- In franchises: share is bigger for the franchisee
 - Hence franchisee effort will be more optimal than headquarters'
- In vertical firms: share is bigger for headquarters
 - Hence headquarters effort will be more optimal
- If they can't measure each others' effort players will give the larger share of revenue to the player whose effort will have the larger impact on revenue



Health Franchises

- Franchisee effort
 - Spend enough time with each patient
 - Thorough interview and exam
 - Correct diagnosis, treatment, counseling
 - Offer respect and courtesy
- Headquarters effort
 - Design and run snappy ads, market the logo
 - Keep provider up to date on clinical care
 - Give pointers on practice management
 - Access to capital and volume discounts

Health Franchises and Quality

- Franchisee effort
 - Supply quality only if there is a business case
 - INFORMATION ASYMMETRY erodes business case for quality
- Headquarters effort
 - Command and control quality assurance usually needed

Franchising model

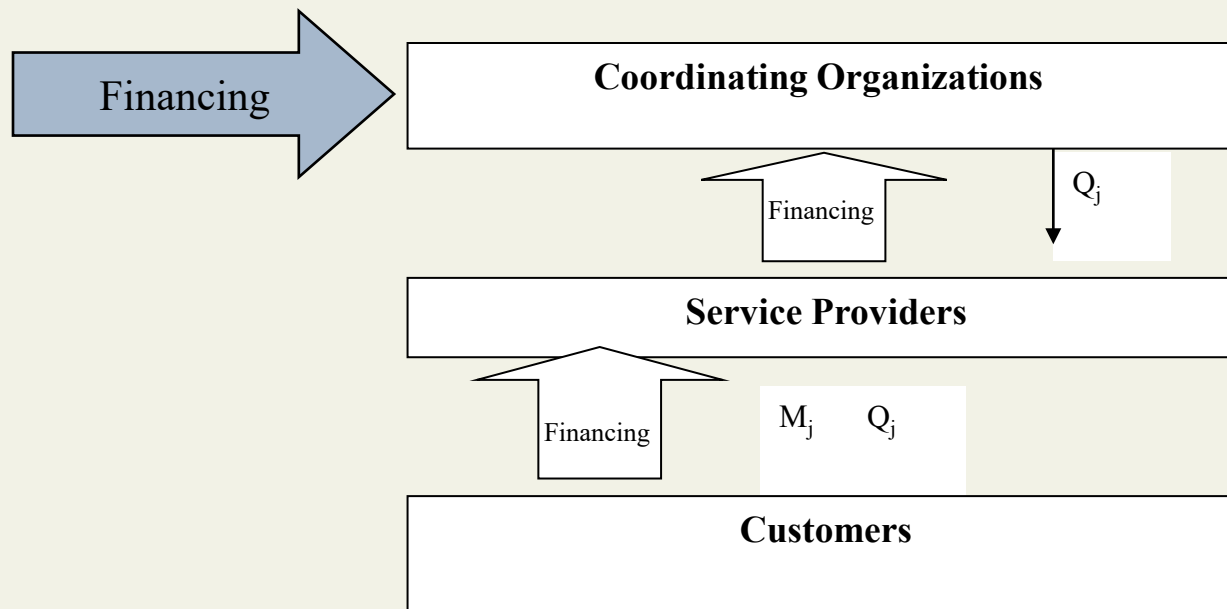


Figure The financing of a commercially franchised system. Financing for the providers is generated from customers in the form of user fees. Financing for the coordinating organization is drawn from fees and royalties paid by the service providers. M_j stands for the volume of services of type “j”. Q_j stands for the quality of services of type “j”.



Financing?

- Need financing for a coordinating body
- It doesn't really matter whether the coordinating body is situated in public or private sector as long as it is financed and functional

Examples

- Ugandan Pharmacist Association
 - Seeking to certify quality for networks of private pharmacists
- Population Services International (PSI) Myanmar
 - Network of 1000 doctors
 - Each signs up for franchised product lines
 - Malaria, TB, Family Planning
 - Gets subsidized drugs
 - Gets monthly supervisory visits

Conclusion: Social franchising in health care

- An approach where governments are not able/willing to offer adequate oversight to private sector
- Asymmetric information means that the higher quality produced by franchise headquarters won't necessarily lead to higher revenue
 - Outside financing for quality needed on an ongoing basis