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Primary care :
population and system impact

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Questions

- Primary care and its impact on:
 - Health
 - Hospital use
 - Costs
- Characteristics of effective primary care

Research approaches



- Between & within country cross sectional observations (most)
 - Is supply of primary care physicians related to health and other outcomes?
 - Do people with and without access to primary care have experience different outcomes?
 - Are differences in outcomes associated with specific characteristics of primary care?
- Before and after studies (few)

Primary care: key characteristics

- First-contact for each new need
- Long term person- (not disease) focused care
- Provider of comprehensive care for most health care needs
- Co-ordination of care sought elsewhere
- (Family and community orientation)
- (Usually doctor provided or doctor led)

Main findings



- Health is better in areas with more primary care doctors
- People with access to primary care are healthier than those without
- The more the characteristics of primary care are present, the better health of the population
- Universal access to primary care is associated with reduced inequalities in health outcomes
- Quantity and quality of primary care is associated with lower and better use of hospitals
- A greater orientation of a health care system is associated with lower system costs
- Quality of primary care – when well organised – is as good or better than specialised care
 - for common chronic disease, for patients with co-morbidities and when quality measured on multiple dimensions

Mortality and primary care

- England:

- One extra GP / 10,000 (approx 15% increase) associated with 6% decrease in all-cause mortality

Gulliford et al. JPHM 2002; 24:252-4

- USA:

- One extra primary care physician / 10,000 (approx 12% increase) associated with average of 5.3% decrease in mortality

– *Makinko et al. Unpublished.*

Cited by Starfield B et al . Milbank Quarterly 2005; 83: 457-502

- Spain

- reduced deaths from stroke and lung cancer in areas that introduced primary care

Villalbi et al 1999.

Inequalities and primary care

- In deprived areas in the US:
 - Low provision of primary care associated with higher than average post-neonatal and stroke mortality
 - High provision of primary care associated with lower than average post-neonatal and stroke mortality
 - Access to primary care reduces effects of poverty on self-reported health status

Shi et al (1999), Shi & Starfield (2000)

- Lower limb amputation in Afro-Caribbean with diabetes:
 - 2-3x increase in US; not increased in UK.

Leggeter et al (2002)

Variations in standardised hospital death rates: numbers of doctors

- Not significantly related to measures of social deprivation of area of residence
- Best predictors of standardised hospital death rates
 - % of emergency admissions
 - the numbers of hospital doctors per bed, and
 - the numbers of general practitioners per head of population in the localities from which hospital admissions were drawn

Jarman B et al. Explaining differences in English hospital death rates using routinely collected data.

BMJ 1999; 318:1515-20

Variations in standardised hospital death rates: numbers of doctors

- 1% (333) increase in hospital doctors associated with 186 fewer hospital deaths
- 1% (267) increase in GPs associated with 575 fewer hospital deaths

Jarman B et al. Explaining differences in English hospital death rates using routinely collected data.

BMJ 1999; 318:1515-20

Costs of care

- Between countries
 - Countries with weaker primary care had significantly higher health care costs (r=0.61 p<0.001)

Starfield & Shi (2002)

- Within countries
 - More primary care physicians associated with lower total health care costs
 - More specialists associated with more spending

Baiker & Chandra (2004)

Hospital use

- UK
 - 15 to 20% increase in GPs associated with decrease in hospital admissions of 14 / 100,000 for acute illness & 11 / 100,000 for chronic disease

Gulliford (2002)

- USA
 - Admissions for preventable conditions 4x more likely in those without primary care physician
 - Hospital admissions 50 - 100% higher when ongoing care provided by specialists compared to family physicians

Shea et al (1992)

Greenfield et al (1992)

Characteristics of primary care: associations with aspects of quality



- Longer consultation time (≥ 10 min)
 - Better quality: chronic disease mx
- Good team-working
 - Better access & continuity of care & pt satisfaction
 - Better quality: chronic disease mx & preventive care
- Practice size
 - Small: better for access
 - Large: quality of care; range of services

Campbell et al (2001)

Characteristics of primary care: associations with aspects of quality

- Increasing practice size
 - Lower mortality (AMI, avoidable mortality and all-cause mortality)
 - Fewer hospital admissions
- Single handed practice
 - Increased hospital admissions
 - Increased mortality (AMI, all-cause) (weak)
- Practices with female GP
 - Fewer hospital admissions
- Wider range of services
 - Non-significant trend towards lower mortality and fewer admissions
- % GPs > 60 yrs
 - Non-significant trend towards increased mortality

Gulliford et al (2004)

Primary care

- Evidence consistent with primary care
 - Improving public health
 - Reducing the health effects of poverty
 - Reducing hospital use
 - Improving hospital use
 - Reducing total costs

Benefits of primary care: to what are they attributed?

- Improving *access to care*, especially for deprived populations
- Delivering technically *high quality care* (chronic diseases, co-morbidity / multiple pathology / psycho-social model)
- High rates of use and success with *preventive interventions*
- More *efficient and appropriate care* – associated with continuity of relationships and person centred care
- *Early presentation* of disease and *early intervention*
- *Better use of specialist care* – increasing benefit and reducing iatrogenic harm

NHS Act (1946)

- “The Minister of Health ischarged with the duty to promote the establishment in England and Wales of a comprehensive health service designed to
 - secure improvement in the physical and mental health of the people of England and Wales and
 - the prevention, diagnosis and treatment of illness...”

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References



- Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health.
The Milbank Quarterly 2005; 83: 457-502.
- Gulliford MC, Jack RH, Adams G et al. Availability and structure of primary medical services and population health and health care indicators in England.
BMC Health Services Research 2004; 4:12
(www.biomedcentral.com/1472-6963/4/12)
- Starfield B, Shi L. Policy relevant determinants of health: an international perspective.
Health Policy 2002; 60: 201-18
- Campbell SM, Hann M, Hacker J et al. Identifying predictors of high quality care in English general practice: observational study.
BMJ 2001; 323:1-6.
- Jarman B, Gault S, Alves B et al. Explaining differences in English hospital death rates using routinely collected data.
BMJ 1999; 318: 1515-20.

Primary care

“The provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community.”

Institute of Medicine, 1978.

Primary care

“that aspect of a health services that assures *person focussed care over time to a defined population, accessibility to facilitate receipt of care when it is first needed, comprehensiveness of care* in the sense that only rare or unusual manifestations of ill health are referred elsewhere, and *coordination of care* such that all facets of care (wherever received) are integrated.”

Starfield, B. J Epidemiol Community Health 2001; 55:452-4.