UNIVERSITY OF CAMBRIDGE

Shifting the balance of care - Can primary care reform reduce demand on hospitals?

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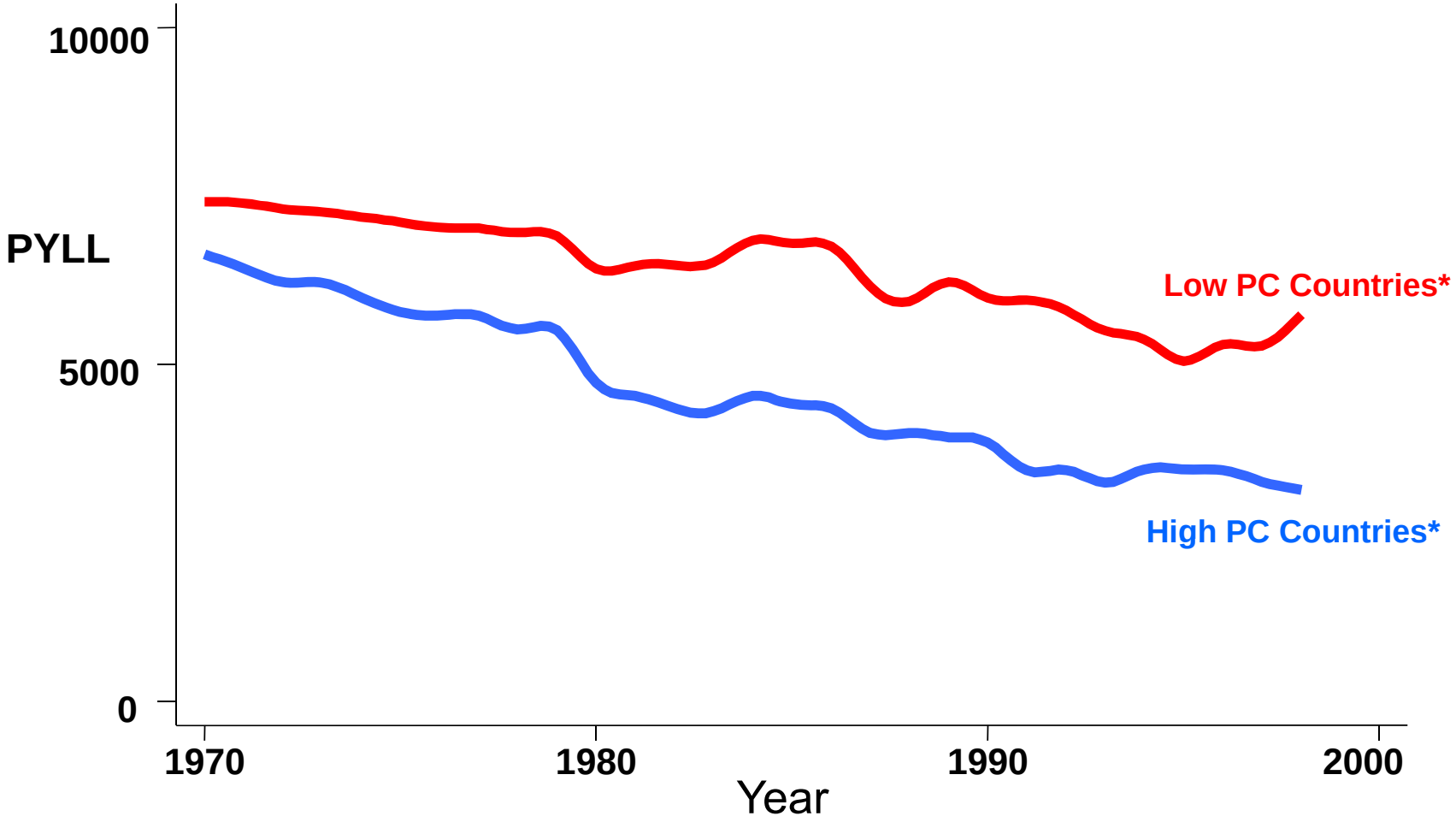
16.09.10

Primary care-oriented systems are associated with

- More preventive interventions
- Better health outcomes
- Greater patient satisfaction
- Reduced costs of health care
- Reduced use of secondary sector

Primary Care Strength and Premature Mortality in 18 OECD Countries



*Predicted PYLL (both genders) estimated by fixed effects, using pooled cross-sectional time series design. Analysis controlled for GDP, percent elderly, doctors/capita, average income (ppp), alcohol and tobacco use. R^2(within)=0.77.

Source: Macinko et al, Health Serv Res 2003; 38:831-65.

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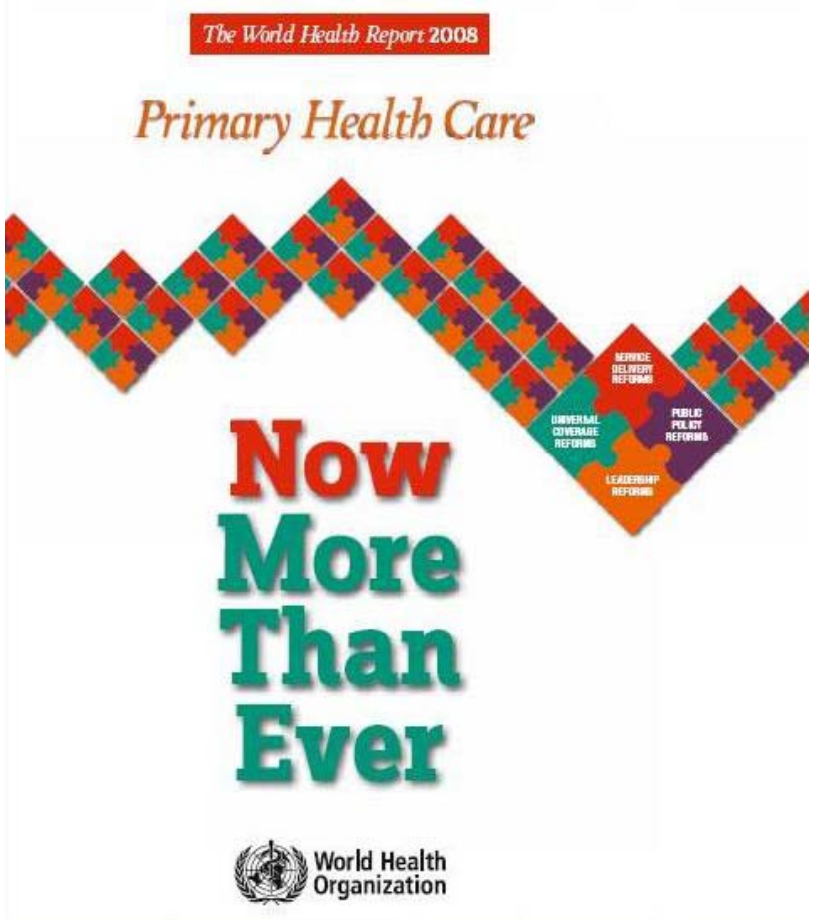

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strengthening primary health care

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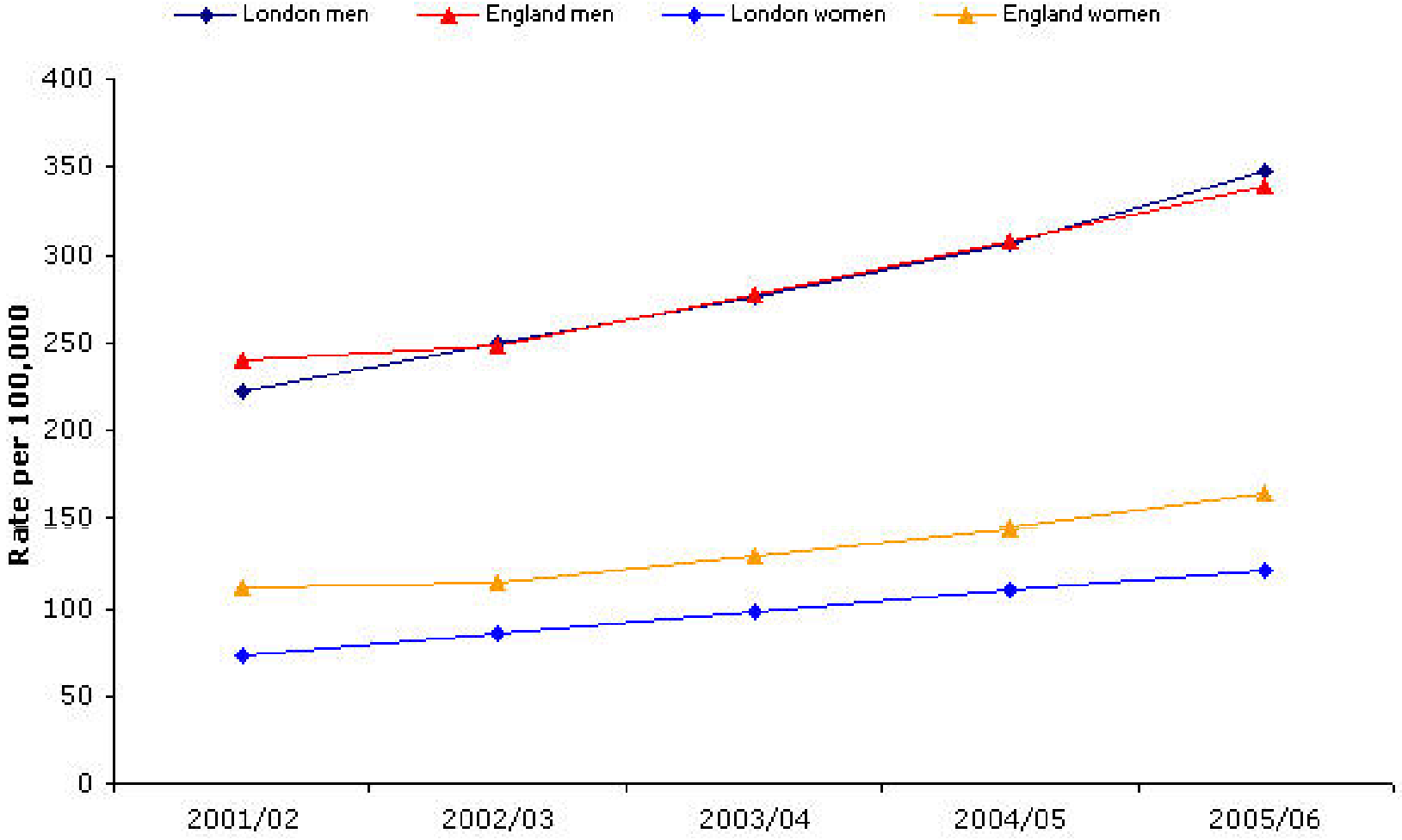
Referral rates



Approaches to reducing demand for secondary care

- Direct transfer of services
- Relocation of specialists
- Educational approaches
- Contractual and financial incentives
- Systemic and organisational change

1. Direct access for GPs to hospital-based tests / treatments

- *Experience so far*: GPs have direct access to an increasing range of diagnostic services and hospital-based therapies.
- *Potential benefits*: Reduction of outpatient attendance and waiting time from presentation to testing and services; reduction of direct costs to hospitals.
- *Potential risks*: Increase in demand for testing and treatment as a result of inappropriate referral.
- *Research findings*: Direct access to hospital-based tests and treatments avoids a substantial proportion of outpatient appointments. It reduces waiting times, is preferred by patients and generally cuts costs without increasing GP workload.

Alternative outpatient discharge procedures

- *Experience so far*: In some clinical areas, regular outpatient follow-up has been shown to confer no clinical benefit.
- *Potential benefits*: The avoidance of an inappropriate or badly timed hospital visit when follow-up care can be as effectively provided by primary care practitioners.
- *Potential risks*: Reduction in quality of care; greater use of NHS resources in the long term; unacceptable increase in GP workload; unacceptable change to patients
- *Research findings:* Patient-initiated follow-up is the preferred option for patients with a range of diseases, including rheumatoid arthritis, cancer and inflammatory bowel disease. There are signs that patient-initiated follow-up may be as effective as a routine outpatient appointment.

Hewlett S et al. Patient-initiated follow up in rheumatoid arthritis: six year randomised controlled trial. BMJ 2004; 229: 1672-4.

Abstract

Objectives To determine whether direct access to hospital review initiated by patients with rheumatoid arthritis would result in improved clinical and psychological outcome, reduced overall use of healthcare resources, and greater satisfaction with care than seen in patients receiving regular review initiated by a rheumatologist.

Design Two year randomised controlled trial extended to six years.

Setting Rheumatology outpatient department in teaching hospital.

Participants 209 consecutive patients with rheumatoid arthritis for over two years; 68 (65%) in the direct access group and 52 (50%) in the control group completed the study (P = 0.04).

Conclusions Over six years, patients with rheumatoid arthritis who initiated their reviews through direct access were clinically and psychologically at least as well as patients having traditional reviews initiated by a physician. They requested fewer appointments, found direct access more acceptable, and had more than a third fewer medical appointments. This radical responsive management could be tested in other chronic diseases.

2. Moving specialist services to primary care settings

- *Experience so far*: Small-scale initiatives, mainly in the 1990s. Has become a part of recent NHS policy.
- *Potential benefits*: Improved access to services; potential to address unmet need in the community; better interaction between specialists and GPs.
- *Potential risks*: Inappropriate reduction in specialist referral threshold; increased costs of specialist services; patients requiring further hospital outpatient visits.
- *Research findings*: Relocation improves access to specialist care and increases patient satisfaction. With the exception of the attachment of physiotherapists to primary care teams, this strategy has proved ineffective in reducing demand on outpatient services. It has brought no improvement in GP skills or reduction in GP workload. Due to economies of scale, specialists appear to be generally most efficient when working in hospital settings. Relocation may improve equity in care provision in remote rural areas.

Investigation of benefits and costs of an ophthalmic outreach clinic in general practice

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SUMMARY

Background. *With the advent of general practitioner fundholding, there has been growth in outreach clinics covering many specialties. The benefits and costs of this model of service provision are unclear.*

Aim. *A pilot study aimed to evaluate an outreach model of ophthalmic care in terms of its impact on general practitioners, their use of secondary ophthalmology services, patients' views, and costs.*

Method. *A prospective study, from April 1992 to March 1993, of the introduction of an ophthalmic outreach service in 17 general practices in London was undertaken. An ophthalmic outreach team, comprising an ophthalmic medical practitioner and an ophthalmic nurse, held clinics in the practices once a month. Referral rates to Edgware General Hospital ophthalmology outpatient department over one year from the study practices were compared with those from 17 control practices. General practitioners' assessments of the scheme and its impact on their knowledge and practice of ophthalmology were sought through a postal survey of all partners and interviews with one partner in each practice. Patient surveys were conducted using self-administered structured questionnaires. A costings exercise compared the outreach model with the conventional hospital ophthalmology outpatient clinic.*

Results. *Of 1309 patients seen by the outreach team in the study practices, 480 (37%) were referred to the ophthalmology outpatient department. The annual referral rate to this department from control practices was 9.5 per 10 000 registered patients compared with 3.8 per 10 000 registered patients from study practices. A total of 1187 patients were referred to the outpatient department from control practices. An increase in knowledge of ophthalmology was reported by 18 of 47 general practitioners (38%). Nineteen (40%) of 47 general practitioners took advantage of the opportunity for inservice training with the outreach team; they were more likely to change their routine practice for ophthalmic care or referral criteria for patients with cataracts or diabetes than those who did not attend for inservice training. The outreach scheme was popular with patients, for whom ease of access and familiarity of surroundings were major advantages. The cost per patient seen in the outreach clinics (£48.09) was about three times the cost per patient seen in the outpatient department (£15.71).*

Conclusion. *The model of ophthalmic outreach care in this pilot study was popular with patients and general practitioners and appeared to act as an effective filter of demand for care in the hospital setting. However, the educational impact of the scheme was limited. Although the unit costs (per patient) of the outreach scheme compared unfavourably with those of conventional outpatient treatment, potential health gains from this more accessible model of care require further exploration.*

Keywords: ophthalmology services; general practitioner services; health service costs; outreach clinics; cost-effectiveness.

Introduction

DEMAND for ophthalmic care is high.[1] Hospital ophthalmology provider units are struggling to achieve contracted waiting time targets.[2] Demographic trends, technological developments and evidence of unmet need suggest that the demand for ophthalmic care will continue to rise.[3] Procedural changes within hospital ophthalmic outpatient departments can reduce waiting times[4] but, without a large expansion in the number of consultants, more radical approaches to the supply side of the referral process need to be investigated.

Many general practitioners do not feel confident to manage any but the simplest eye condition because they have received minimal exposure to ophthalmology during their training.[5] As a consequence, minor problems are referred to hospital where many new patients are discharged at their first visit.[6]

The present strategic preoccupation with investment in community-based care — 'shifting the balance'[7] — is based on the belief that such investment is likely to save costs by reducing the demands on secondary care. Outreach models bringing staff and equipment into primary care sites have the potential to influence referral activity both directly by filtering out unnecessary referrals and indirectly through educational contacts with primary health care professionals. With the advent of general practitioner fundholding in 1991, there has been growth in outreach clinics covering many specialties.[8] The cost-effectiveness of this model of service provision has been questioned.[9]

The aim of this pilot study was to evaluate an outreach model of ophthalmic care in terms of its impact on general practitioners, their use of secondary ophthalmology services, patients' views, and costs, by studying the first year of an ophthalmic outreach clinic scheme.

Method

All 86 general practices in the London borough of Barnet were offered the opportunity of participating in this prospective pilot study. Seventeen practices (20%) accepted the offer. Seventeen of the practices that did not accept the offer were selected as control practices. There were 63 general practitioners in the study practices serving 125 600 patients and 65 general practitioners in the control practices serving 125 500 patients; 55 general practitioners in the study practices participated throughout the year-long study, from April 1992 to March 1993. Study and control practices were matched as far as possible in terms of number of

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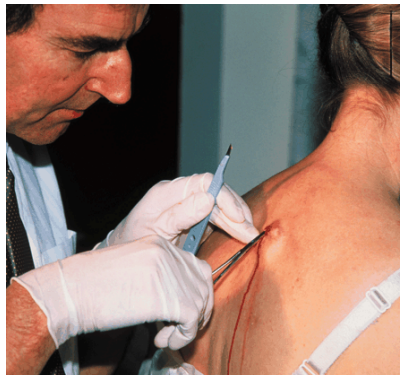
Submitted: 4 January 1995; accepted: 27 April 1995.

- Referral rates from control practices 9.5 per 10000; from study practices 3.8.
- Cost per patient seen in outreach £45; in outpatients £15.71.

Intermediate care: GPs with special interests

- *Experience so far:* This type of intermediate care was first outlined in the NHS Plan (Department of Health, 2000).
- *Potential benefits:* Improved access to services; GPSIs addressing unmet need as well as diverting hospital referrals; potential to raise standards of care provided by GP colleagues.
- *Potential risks:* GPs' referral threshold may be lowered; local GPs may become de-skilled; patients seen by GPSIs may still require hospital outpatient visits.
- *Research findings*: Evidence suggests that GPSI clinics provide high-quality care that is more accessible than hospital outpatients. However, lack of uniformity in the GPSI model and costs generally higher than the cost of specialist services.

Minor surgery



- *Experience so far*: Financial incentives introduced in the 1990 GP contract brought a significant increase in minor surgery undertaken in primary care.
- *Potential benefits*: Shorter waiting times; lower costs; increased patient satisfaction; enhanced job satisfaction for GPs.
- *Potential risks*: GPs may fail to diagnose serious conditions or maintain surgical skills and equipment; lack of back-up; higher risk of infection.
- *Research findings*: There is little impact on hospital waiting times. Some studies show a reduction in quality of care.

O'Cathain A et al. Cost effectiveness of minor surgery in general practice: a prospective comparison with hospital practice. BJGP 1992; 42: 13-17.

Table 2. Outcomes reported by patients in postal questionnaire.

Outcome	% of respondents reporting outcome		Odds ratio	Mantel-Haenszel pooled estimate of the odds ratio (95% confidence interval)
	General practice	Hospital		
Wound infection (n = 83/105)	*1.2*	*1.9*	0.60	0.64 (0.02 to 9.09)
Other complications[a] (n = 88/105)	*5.7*	*9.5*	0.55	0.68 (0.17 to 2.44)
Return to doctor (n = 88/102)	*[illegible]*	*[illegible]9*	3.57	3.57 (0.95 to 14.29)
Healing time >10 days (n = 52/78)	*34.6*	*35.9*	0.94	0.98 (0.42 to 2.27)
Unsightly scarring (n = 80/99)	*6.3*	*24.2*	0.21	0.29 (0.09 to 0.78)*
Poor cosmetic result (n = 74/99)	*13.5*	*28.3*	0.40	0.48 (0.18 to 1.25)

n = total number of general practice/hospital respondents. [a]For example, burst stitches. *P<0.05.

Table 3. Outcome of histopathology tests on samples from the two settings.

Outcome	% of specimens		Odds ratio	Mantel-Haenszel odds ratio (95% confidence interval)	Probability
	General practice (n=41)	Hospital (n=85)			
Clinical diagnosis does not match histological diagnosis	*43.9*	*22.4*	2.70	Not valid[a]	P<0.05
Malignant condition clinically diagnosed as benign	*9.8*	*1.2*	10.18	9.58 (0.85 to 445.07)	P<0.05[b]
Not adequately excised	*4.9*	*0.0*	–	–	NS[b]

n = total number of specimens sent to a histopathology laboratory. [a]Odds ratio not constant across strata. [b]Fisher's exact test. NS = not significant

Table 5. Costs of minor surgery for one patient in the two settings.

	Costs (£)[a]	
	General practice	Hospital
Excision		
Initial outpatient visit	—	8.28
Treatment	17.78	16.62
Histopathology test	14.68	14.68
Follow-up visit	1.07	5.96
Total	33.53	45.54
Cryotherapy		
One treatment	3.00	3.22

Liaison

- *Experience so far:* A variety of liaison arrangements include community clinics with on-site GPs and specialists; systems for regular communication between specialists and GPs; liaison meetings; shared record cards; computer-assisted shared care.
- *Potential benefits*: Reduced need for outpatient attendances without compromising quality.
- *Potential risks*: A lack of overall benefits at greater cost.
- *Research findings:* Liaison models of working may improve the quality of primary care but have little impact on health outcomes. Reduction in outpatient attendances is occasionally, but not consistently, achieved. Successful delivery depends heavily on good communication between individual primary and secondary care clinicians.

Telemedicine consultations between GP and specialist

- *Experience so far*: Small-scale initiatives mostly involving the GP or nurse sitting with the patient while presenting the case to the specialist. Most evaluations in rural settings.
- *Potential benefits*: Saving outpatient visits.
- *Potential risks*: Poor communication (e.g. in psychiatry) or difficulty making a diagnosis (e.g. in dermatology).
- *Research findings*: Telemedicine (e.g. teledermatology appear to be plausible strategies for populations with poor access to hospitals. NHS costs are generally greater than conventional hospital clinics.

3. Educational approaches

E.g. referral guidelines, audit-and-feedback, educational interventions

- *Experience so far*: A large body of evidence suggests that the process of GP referral to specialists can be improved.
- *Potential benefits*: More appropriate GP referral behaviour could reduce outpatient attendance.
- *Potential risks*: GPs may fail to refer patients who would benefit from specialist opinion.
- *Research findings*:

  1. Interventions that can be effective in reducing inappropriate referrals are:

  ● structured referral sheets, which prompt GPs to conduct any necessary pre-referral tests or treatments

  ● educational outreach by specialists.

  2. Using in-house second opinions before referral is potentially promising.

  3. Ineffective interventions include: passive dissemination of referral guidelines; audit-and feedback of referral rates; discussion of referral rates with an independent medical advisor.

NHS
National Institute for
Health and Clinical Excellence

Increased adherence to guideline

Reduced gastroscopy referrals

Quality improvement report

Influencing referral practice using feedback of adherence to NICE guidelines: a quality improvement report for dyspepsia

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Abstract

Problem: Rising demand and increasing waiting times for upper gastrointestinal endoscopy (gastroscopy).

Design: Quality improvement study with pre- and post-intervention data collection.

Setting: Three endoscopy units in two hospital trusts (Singleton, Morriston and Baglan Hospitals endoscopy units), UK.

Key measures for improvement: Number of gastroscopy requests from general practitioners (GPs) and hospital doctors; their adherence to dyspepsia referral guidelines and the referral-to-procedure interval for upper gastroscopy. Data collected for six months before and for five months after the intervention.

Strategy for change: Referrals were assessed against the National Institute for Health and Clinical Excellence (NICE) guidelines for the management of dyspepsia by two part-time GPs and feedback sent to clinicians where requests did not adhere to the referrals criteria

Effects of change: Adherence to guideline criteria increased significantly among GPs after the intervention (from 55% to 75%). There was no similar effect for hospital doctors, although their adherence rate (70%) was at a higher level than that of GPs before the intervention. The number of gastroscopy referrals for dyspepsia declined after the intervention, particularly from hospital doctors where a drop of 31% was observed, from 26.6 to 18.4 referrals per week. With the inclusion of seasonal effects, an estimated drop of 3.2 referrals per week from general practice was not significant ($p = 0.065$) while an estimated drop of 10.0 referrals per week for hospital doctors was very significant ($p<0.001$).

Lessons learnt: Referral assessment can be successfully introduced and shows promise as a way of improving the quality of referrals and reducing demand. Hospital clinicians are more resistant than GPs to referral assessment but nevertheless responded to the feedback by reducing their endoscopy gastroscopy requests. Most such referrals are generated in hospitals rather than in primary care: this finding has important implications for demand management.

4. Contractual change,

c.f. Quality & Outcomes Framework

- Improving quality of chronic disease management likely to reduce burden on secondary sector in long-term but hard to demonstrate.

- Financial incentives to encourage GPs to reduce referral rates can be effective but risk that reductions may apply to both necessary and unnecessary referrals.

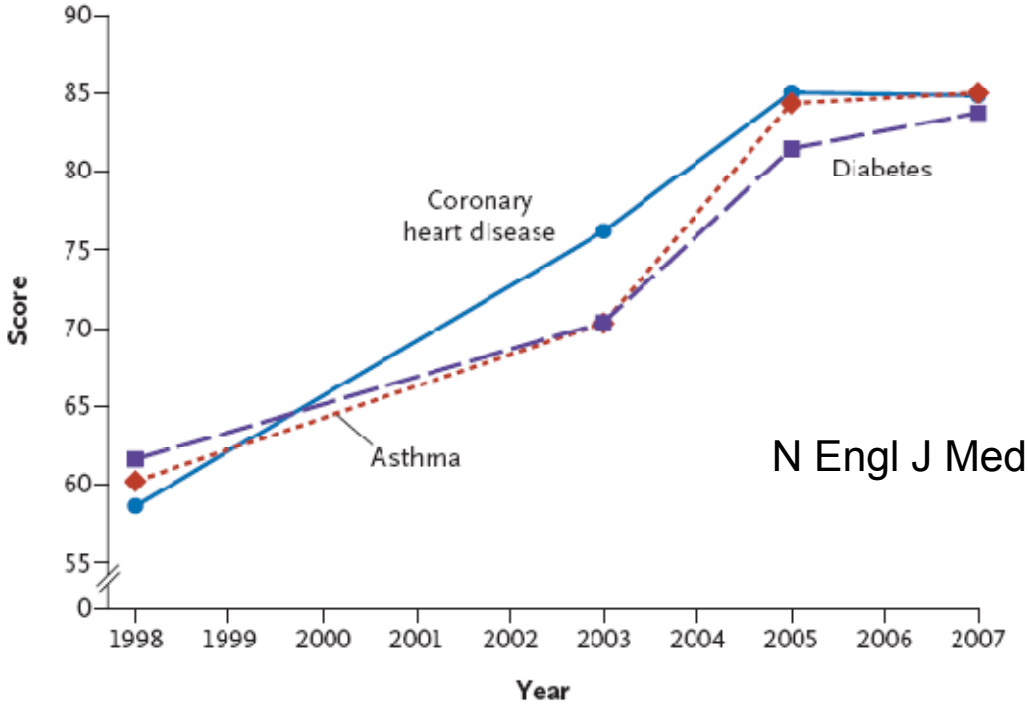
- Beware the unintended consequences of P4P.

Domains for quality indicators in QOF 2009

- Clinical
  - Secondary prevention of coronary heart disease
  - Cardiovascular disease: primary prevention
  - Heart failure
  - Stroke & TIA
  - Hypertension
  - Diabetes mellitus
  - COPD
  - Epilepsy
  - Hypothyroid
  - Cancer
  - Palliative care
  - Mental health
  - Asthma
  - Dementia
  - Depression
  - Chronic kidney disease
  - Atrial fibrillation
  - Obesity
  - Learning disabilities
  - Smoking
- Organisational
  - Records and information
  - Information for patients
  - Education and training
  - Practice management
  - Medicines management
- Patient experience
  - Length of consultations
  - Patient survey (access)
- Additional services
  - Cervical screening
  - Child health surveillance
  - Maternity services
  - Contraception

Health gains of QOF

- Real but modest gains in some areas, e.g. asthma, diabetes
- No definite improvement in CHD related to QOF
- Better recording in QOF but not untargeted areas
- Inequalities related to deprivation slowly narrowing



N Engl J Med 2009;361:368-78.

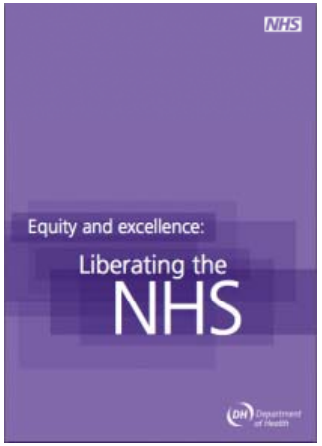
But beware…

- No clear reductions in referral rates or improved health outcomes (except epilepsy)
- Unintended impact, e.g. on workforce, day-to-day practice, professionalism
- Opportunity costs contested

5. Organisational/systemic change

e.g. Primary care commissioning

GP Fundholding	1990
Total Purchasing	1994
Locality Purchasing	1996
Primary Care Groups	1998
Primary Care Trusts	2000
Practice Based Commissioning	2005
GP Consortia	2011



Limited impact of PC-led commissioning

- Some evidence for reduced referrals and prescribing costs
- High transaction costs
- GPs lack necessary skills (in needs assessment, budgetary management, etc)
- Information deficits
- GPs' ownership and enthusiasm limited
- Structural obstacles to transferring ££ from secondary sector (e.g. fixed costs)
- Political obstacles (no hospital closures)
- Contested efficiency gains

Approaches to reducing unplanned admissions

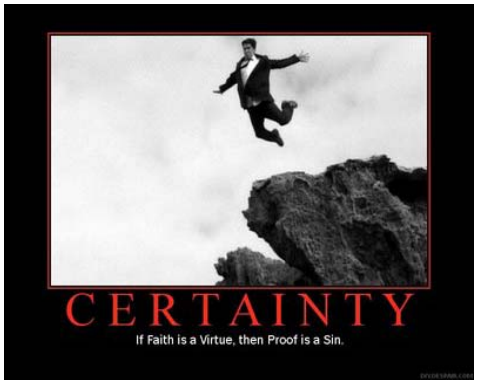
- Managed care programmes
- Integrated health care and social care
- Coordinated discharge planning
- Multidisciplinary case management
- Community-based specialist nurses
- Referral management centres
- Education in self management

Assumption	Comment
Care can safely be transferred from specialists to primary care practitioners	Not necessarily true of minor surgery or GPSI services
Care in the community is cheaper than care in hospitals	Often not the case. Cost evaluation should not focus purely on NHS costs but also on prices charged by providers
Transferring care into the community will not increase overall demand	There is a serious risk that increasing provision may increase demand either because of increased demand from patients or increased referral from GPs
Care in the community is popular with patients and should therefore be encouraged	The general popularity of this policy unlikely to survive loss of quality and efficiency

Conclusions

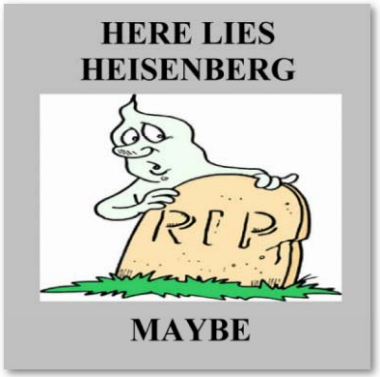
- Evidence for impact of any of these interventions is limited – and likely to remain so.
- Beware of unforeseen and unintended consequences.
- Multiple approaches likely to be required.

Likely to be effective



- Primary care clinics for chronic diseases; discharging hospital outpatients to no follow-up, patient-initiated follow-up or GP follow-up; and direct access by GPs to hospital-based diagnostic tests, investigations and treatments.
- Specialist educational outreach and structured referral sheets reduce GP referrals.
- Appropriately designed P4P schemes.

Uncertain

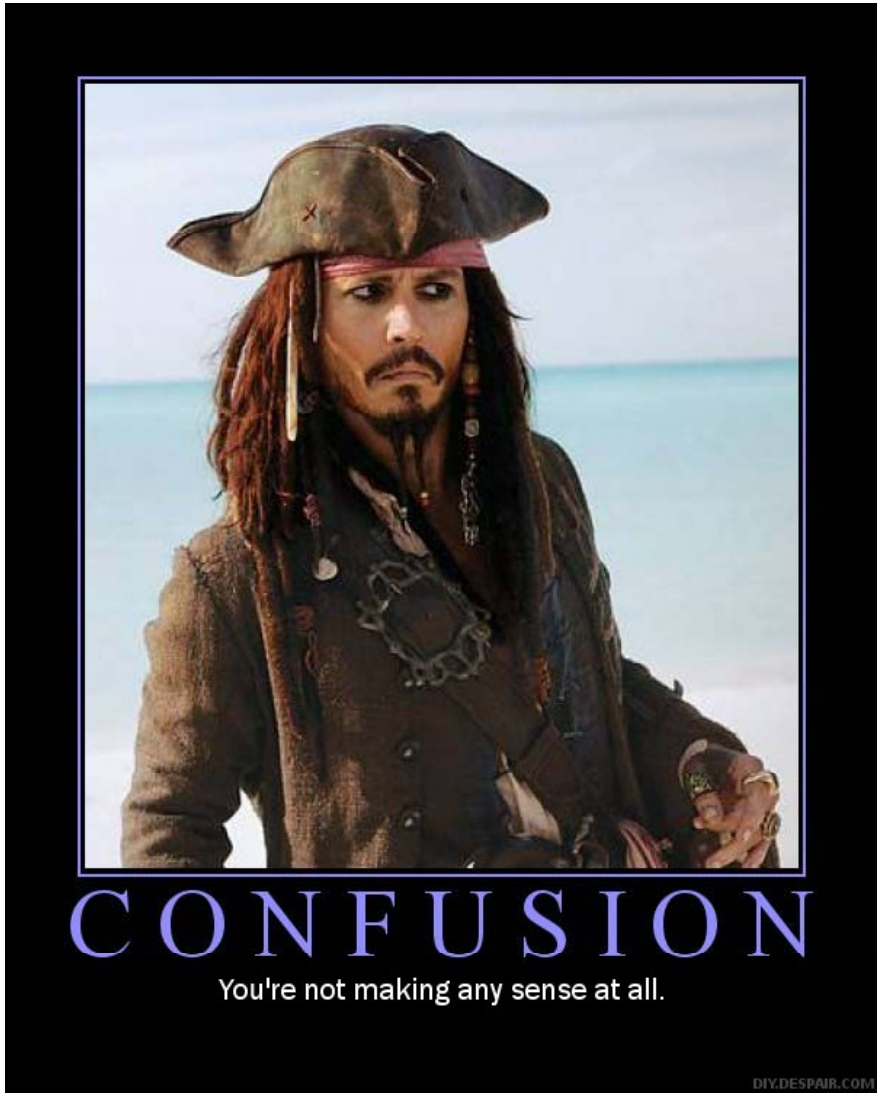


- Relocating specialists into community settings does not reduce outpatient demand but may improve access in remote areas.
- Liaison between primary care and specialists may improve service quality but does not reduce outpatient attendance.
- ‘In-house’ second opinion before referral and GPSI clinics merit further investigation.

Likely to be ineffective

- Passive dissemination of referral guidelines, audit-and-feedback of referral rates; discussion of referral rates with an independent medical advisor.
- Relocation of specialists.

Thank you!



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