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# Defining and evaluating the quality of primary health care using quality indicators

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## 2. Aims of presentation

### **Part 1: Definitions:**

Quality of care, quality indicator, standard

### **Part 2: Evaluating quality of care using indicators**

Clinical, inter-personal care, practice management

### **Part 3: Strengths and weaknesses of indicators**

Evidence of quality / completeness etc

### **Part 4: New GMS contract and responsibilities for doctors**



## 3. Defining quality

### Generic definition: For example

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, USA, 1992)

### Dimensions based definition of quality: For example

Accessibility, effectiveness, efficiency, acceptability, equity (Maxwell 1992).

Two key dimensions – access and effectiveness (Campbell et al 2000)



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# 4. Structure – process – outcome

→ Structure – Process – Outcome

Donabedian 1980



# 5. Structure

## Dimensions of care - structure

<b>Domain</b>	<b>Dimension</b>	<b>Examples of components*</b>
<b>Physical characteristics</b>	Resources	Financial, personnel, buildings, equipment , IT support, educational materials
	Organisation of resources	Provider continuity, clinics hours of operation, location appointment systems, routine booking interval, waiting times, telephones
	Management	Administration  Operational and strategic management services
<b>Staff characteristics</b>	Skill-mix	Skills/knowledge of individuals Disciplinary mix within team
	Teamworking	Team functioning Delegation, role-substitution

\* Indicators developed for components of care



# 6. Process

## Dimensions of care - process

<b>Domain</b>	<b>Dimension</b>	<b>Examples of components*</b>
<b>Clinical care</b>	Problem / needs definition	History taking Physical examination Diagnostic tests/investigations
→ Acute → Chronic → Preventive	Problem / needs management	Diagnosis - Prescribing Procedures/ operations Referral Co-ordination
<b>Inter-personal care</b>	Problem / needs definition	Information exchange Communication
→ Acute → Chronic → Preventive	Problem / needs management	Understanding Doctor-patient relationship Advice / reassurance

\* Indicators developed for components of care



# 7. Outcome

## Dimensions of care - outcome

<b>Domain</b>	<b>Dimension</b>	<b>Examples of components*</b>
<b>Health status</b>	Freedom from disease	Functional status
	Comfort	Symptom relief
	Longevity	Quality of life year (QALY)
<b>User evaluation</b>	Satisfaction	Access
	Enablement	Coping
	HRQOL	Self-esteem

## Indicators developed for components of care



# 8. Defining quality of care

## Dimensions of quality of care for individual patients

### Care

*Health care system  
(Structure)*

**Care  
(Process)**

*Consequences of care  
(Outcome)*

### Quality

*Accessibility*

**Geographic /physical access  
Affordability  
Availability**

**Affordability  
Availability**

**Health status  
User evaluation**

*Effectiveness*

**Effectiveness of Clinical care  
Effectiveness of Inter-personal care**

**Health status  
User evaluation**



# 9. Defining quality of care

## Dimensions of quality of care for populations

### Care

*Health care system  
(Structure)*

**Care  
(Process)**

*Consequences of care  
(Outcome)*

### Quality

*Accessibility*

**Geographic /physical access  
Availability  
Equity**

**Availability  
Equity**

**Health status  
User evaluation  
Equity**

*Effectiveness*

**Effectiveness of Clinical care  
Effectiveness of Inter-personal care  
Equity**

**Health status  
User evaluation  
Equity  
Cost**



# 10. Defining quality of care

3 key areas/questions:

- **Access** – can people access care they need?
- **Effectiveness** (clinical care and inter-personal care) - when accessed is care effective?
- **Desired outcomes** (health status and user evaluation) – does care lead to desired outcomes?

Campbell et al. Defining quality of care. *Social Science and Medicine* 2000; **51**: 1611-1625.



# 11. Definition: quality indicator

## Quality indicator:

Systematically developed, defined and *measurable* item of care, for which there is evidence and/or *consensus that it can be* used to assess the quality, and hence change the quality, of care provided.



## 12. Definition: quality indicator

Effectiveness : clinical care. Examples of Type 2 diabetes indicators:

Past 15 months - record of:

- Blood pressure
- HBA1c
- Weight advice if overweight

→ **Standards** are set for indicators

Campbell SM, Roland MO, Shekelle PG et al. The development of review criteria for assessing the quality of management of stable angina, adult asthma and non insulin dependent diabetes mellitus in general practice. *Quality in Health Care* 1999; **8**: 6-15.



# 13. Definition: standard

## Standards:

The level of compliance with an **indicator**.

A **target standard** is set prospectively and stipulates a level of care that providers must strive to achieve (e.g. 85%).

An **achieved standard** is measured retrospectively and details the level of care achieved (e.g. 80%).



# 14. Defining quality of care

## Different stakeholder perspectives

- Patients (being listened to, access etc)
- Managers (value for money, targets etc)
- Clinicians (effectiveness, symptom resolution etc)



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# 15. Part two

## Evaluating quality of care using indicators



## 16. Evaluating quality: clinical care

### Patient level data – single indicators:

e.g. % of patients with angina on aspirin  
unless contraindicated: 74%

e.g. % of patients with asthma with recorded  
Inhaler technique in the last 5 years 50%

e.g. % of patients with diabetes with cholesterol  
Recorded in the last 5 years 75%

Campbell SM et al. Quality assessment for three common conditions in primary care: validity and reliability of review criteria developed by expert panels for angina, asthma and type 2 diabetes. *Quality and Safety in Health Care* 2002; **11**: 125-130.



# 17. Evaluating quality: condition level

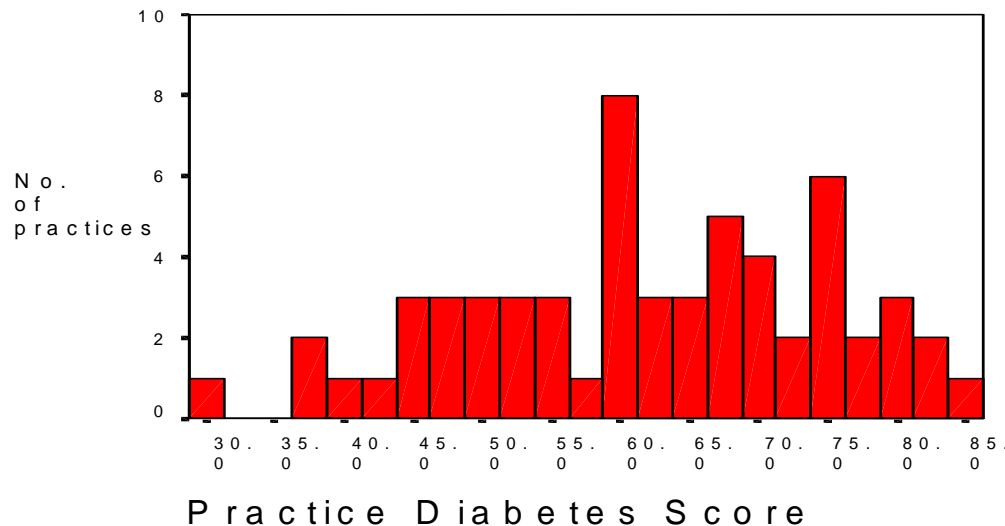
## Audit of angina, adult asthma and NIDDM

- Wide variation in care (n=60 practice scores):

Angina (36% - 70%)

Asthma (20% - 78%)

**Diabetes** (31% - 84%)



n = 1112 patients in  
60 practices. Mean  
practice score = 62.

Campbell et al. Identifying predictors of high quality care in English general practice. *BMJ* 2001; 323: 784-787.



# 18. Variation in care

Worldwide phenomenon. For example, modality of clinical care at aggregate practice level:

## United Kingdom

Preventive: 61.9% (e.g. flu vacc 56%, cervical screen 91%)

Acute: 54.50% (e.g. UTI 53%, acute low back pain 32%)

Chronic: 60.00% (e.g. asthma 61%, depression 52%)

Kirk SA, Campbell SM et al. Assessing the quality of care of multiple conditions in general practice: practical and methodological problems. *Quality and Safety in Health Care* 2003; **12**: 421-427.

## USA

Preventive: 50%      Acute: 70%      Chronic: 60%

Schuster M et al. How good is the quality of health care in the United States. *Millbank Quarterly* 1998; 76: 517-563.



## 19. Inter-personal care

Wide variation in care (n=60 practice scores):

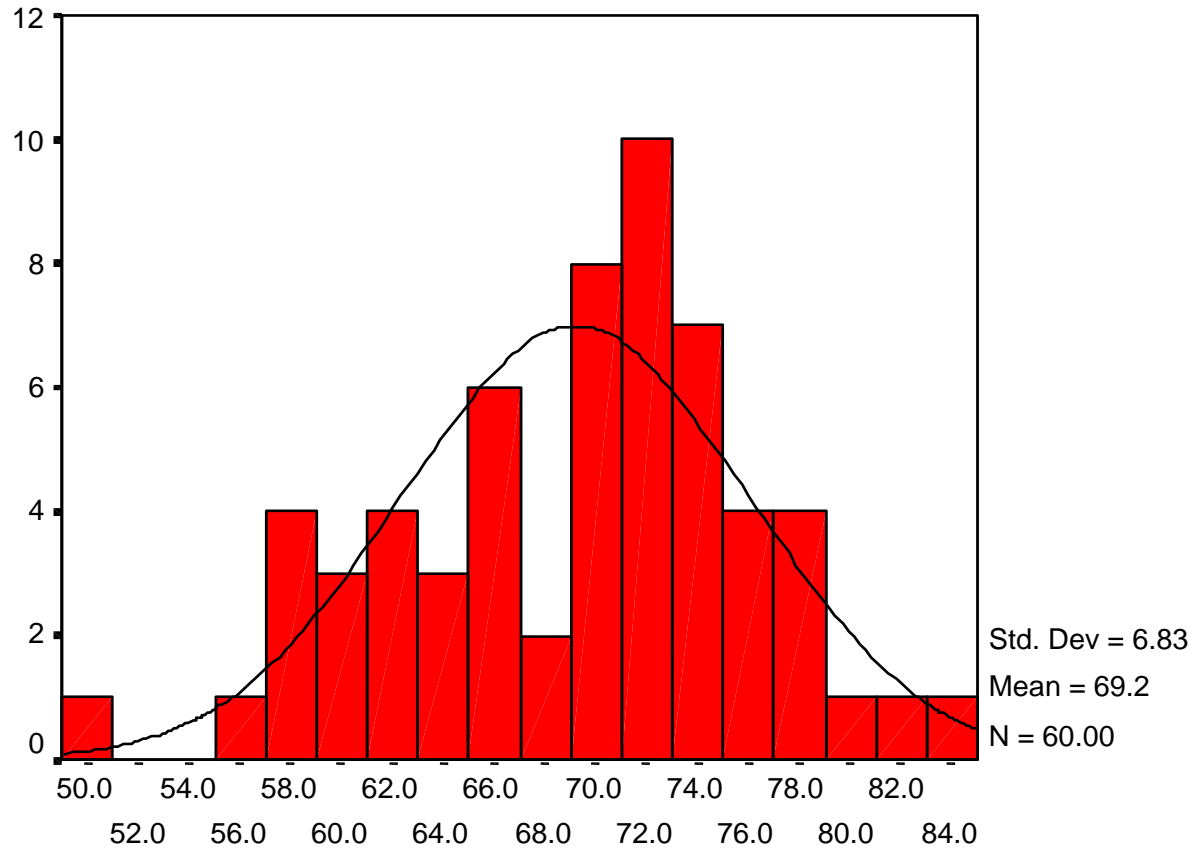


Figure 11.13: Inter-personal care scale. mean practice score



## 20. Evaluating quality: practice management

### Country level indicators (*n=30 practices per country*)

#### Quality and safety (%)

	B	F	G	NI	Sw	UK	All
Infection control procedure	96	92	80	84	<u>22</u>	99	83
Critical incident register	27	<u>3</u>	23	28	25	<u>89</u>	<u>30</u>
Suggestion box for patients	3	2	5	9	9	<u>31</u>	<u>17</u>
Patient complaint procedure	3	3	25	<u>75</u>	25	<u>100</u>	<u>45</u>

#### Infrastructure (%)

	B	F	G	NI	Sw	UK	All
Drugs GP bag <u>out of date</u> (6)	26	<u>48</u>	20	30	16	24	23
Core drugs <u>out of date</u> (12)	17	23	13	11	16	8	11



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# 21. Part three

## Strengths and weaknesses of indicators



## 22. Quality indicators - attributes

**Identify stakeholders:** practice, patient, doctor etc

**Define issues:** literature, policy, focus groups etc

**Identify evidence:** literature, policy, guidelines etc

**Acceptable:** to assessors and assessed

**Feasible:** information available?

**Reliable:** compare like with like, reproducible

**Valid:** Delphi (face valid), (discriminate, predict)

Campbell SM et al. Research methods used in developing and applying quality indicators in primary care. *British Medical Journal* 2003; **326**: 816-819.



## 23. Strengths of indicators

### Evidence of current care & areas for improvement

- Evidence of variation in care
  - Evidence of patients not receiving necessary clinical care
  - Evidence of patients not good inter-personal care
  - Evidence that patients cannot gain access
- More resources
- Education and training / personal learning plans
- Better team work



## 24. GP / doctor responsibility

### Minimum standard / essential services

- Clinical care: diagnosis, tests, treatment, medical history, recording
- Up to date / evidence base
- Patients not receiving necessary clinical care
- Inter-personal care: patients don't always feel listened to
- Patients cannot always access care

### To reflect on care provided by a:

- Health professional / team / organisation



## 25. Weaknesses of indicators

### Weaknesses

- Can everything be measured using indicators?
- Less applicable to less medicalised issues such as mental health?
- More applicable to heart disease, diabetes etc
- Unintended consequences: Does care increase for targeted indicators but decrease if no indicator?



## 26. Weaknesses of indicators

### Weaknesses

- Simply measuring something will not automatically improve it
- Other methods of quality improvement e.g. training
- Need a balance between checking (accountability and quality assurance) and trusting (quality improvement)



## 27. Weakness of indicators?

### Comorbidity

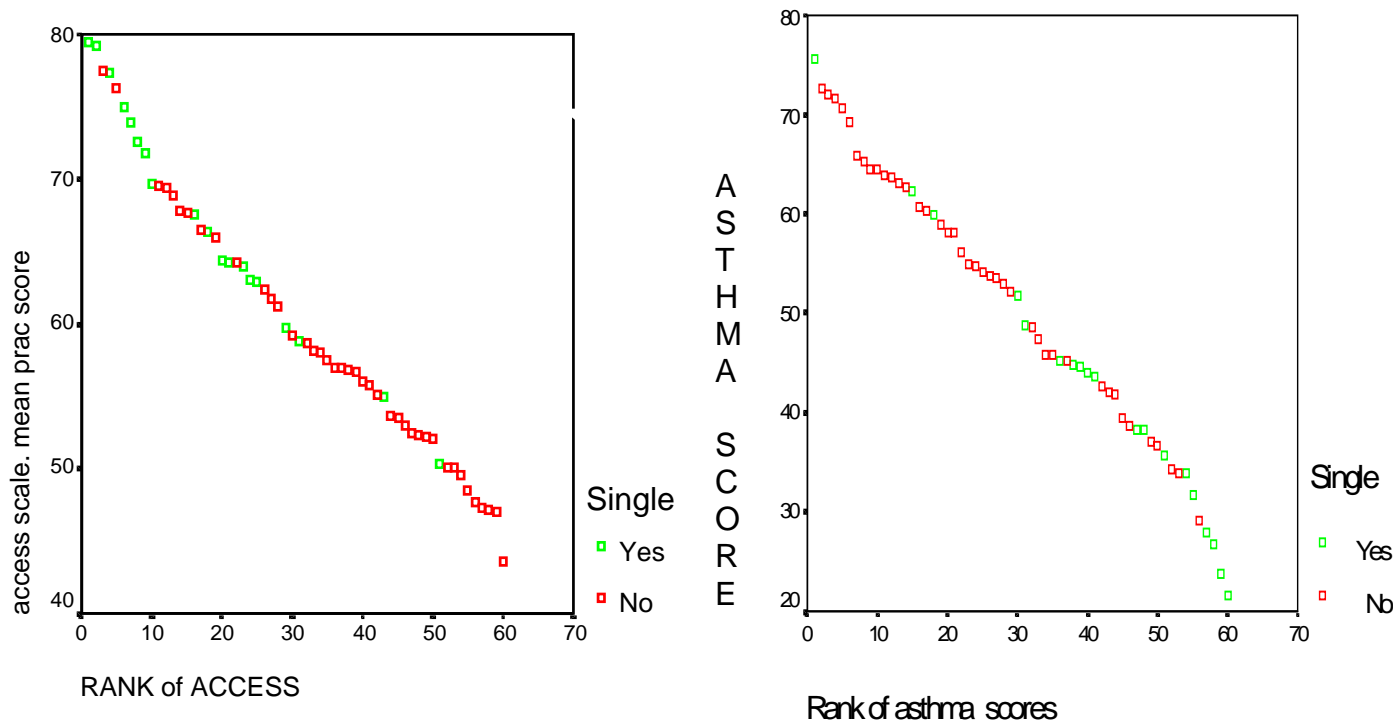
- Most approaches to using quality indicators focus on individual conditions (asthma etc). But this doesn't reflect real life where, particularly among elderly people, most people have more than one condition.
- We know little about how having multiple conditions affects the care patients receive for each individual one.

Ongoing research at NPCRDC, UK / RAND, USA.



## 28. Evaluating quality: No monopoly on quality of care: access & asthma

No type of practice has a monopoly on good or bad care.



Campbell et al. Identifying predictors of high quality care in English general practice. *BMJ* 2001; **323**: 784-787.



## 29. Challenges to using indicators

### Key challenges to using quality indicators:

- Quality of care (measured using an indicator) and quality of life (from patient perspective)
- Population level (indicators) BUT must reflect individual patient contexts and circumstances
- See things through the eyes of patients not just clinical perspective



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## 30. Part Four

- New GMS contract in England



## 31. New GMS contract April 2004

### nGMSc / Quality and Outcomes Framework

1/4/2004 new General Medical Services contract

Up to 30% of practice income relates to **financial incentives** for achieving 146 indicators across 4 domains of quality:

- Clinical
- Organisational / practice management
- Patient experience
- Additional services (cervical screening, child health surveillance, maternity services and contraceptive services)

## 32. NGMS contract

Essential services: [statutory](#)

- Management of patients who are ill or believe themselves to be ill
- Management of chronic disease in the manner determined by the practice and in discussion with the patient

Additional services: [expected to provide but can opt-out](#)

E.g. Cervical screening, contraceptive services, childhood vaccinations and immunisations, child health surveillance, maternity services

Enhanced services: [PCT commissioned](#)

e.g Drug abuse

Out of hours service: 24 hour resp ends by 31 /12/ 2004





## 33. Clinical quality indicators

### Quality and Outcomes Framework: Clinical areas

CHD	Hypertension	Epilepsy	Asthma
Diabetes	Stroke or TIA	COPD	Cancer
Hypothyroidism		Severe mental health	

### **Missing: not everything is included. For example:**

- Coughs, colds, minor illness etc
- Elderly care, care of children etc
- Inter-personal care / patient advocacy / holistic care
- Comorbidity



## 34. GP opinions: FOR QOF

### Result in:

- Quality improvement in the included areas
- Practices acquiring new equipment (e.g. spirometry),
- Recruitment of new staff (mostly either nurses/health care assistants or data entry staff)
- Development of new clinics (e.g. smoking cessation)
- Improved data capture and accuracy

*“Unlike previous contracts it will hopefully reward the better GPs” (GP54)*

Evidence also suggests that financial incentives change doctor’s behaviour



## 35. GP opinions: AGAINST QOF

- Checking-up on practices
- Standardisation of procedures
- More systematic monitoring of CDM
- Poorer care for non-incentivised areas
- Undermine continuity of care
- Devalue generalism within general practice

*“It will improve the management of chronic disease but it will not improve the care for the whole person”  
(gp52).*



## 36. Key messages

- Quality of care can be defined as domains → dimensions → components → indicators
- Indicators can show evidence of quality of care
- Strengths and weaknesses of indicators
- Used as part of a wider quality improvement strategy including education and training