Process evaluation in acute inpatient services: challenges, methods and measures

Bryn Lloyd-Evans
University College London

Overview

- **Why do process evaluation**
- **Approaches to measuring service content**
- **Experiences from The Alternatives Study (NIHR SDO Programme): the development of measures**
- **Implications for future studies**

What is process evaluation

3 types of information for service evaluation (Donabedian 1966)

Structure - the physical and organisational features of services

Process - what is done for patients

Outcome - what is accomplished for patients

Why process evaluation is important

- **To describe services**
- **To understand variation in service outcomes** *(cf ACT research - Burns 2007, 2009)*
- **To develop an empirical basis for service models and quality indicators**

Relevance of process evaluation for inpatient services

- **Inpatient care is not model-driven and is poorly understood: “a black box” (Quirk and Lelliot 2001)**
- **Process evaluation is essential for complex interventions, where service variation is likely and active ingredients are unclear - MRC guidelines (Craig et al. 2008)**

How to measure content of care

- **Pre-select time periods and describe whatever is happening at these times (Time recording)**

- **Pre-select events of interest and record when they occur (Incident recording)**

- **Seek retrospective information about care provided through questionnaires**

Sources of information include: patients, staff, written or electronic records, observation by researchers

What to measure:
A focus on staff-patient contact?

- **Service users emphasise boredom and lack of time to talk to staff on wards**
- **Inpatient care is not just the provision of interventions. Presence, Containment and Authority are also important (Bowers et al. 2009)**

Inpatient services: previous studies

- **Observation by researchers has been most commonly used to assess staff-patient interactions** (Altschul 1972, Sanson-Fisher 1979, Dean and Proudfoot 1993, Tyson 1995, Higgins et al. 1999)

- **Reliable measures have been developed to assess the number of staff-patient interactions and whether they are positive, negative or neutral.**

Problems with observation studies

- **May be unrepresentative: not everything is easily observed**
- **Provides only a researcher perspective on care provided**
- **Provides very limited information about the nature of care**
- **Requires high resources**

But other methods are largely untested in inpatient services

4 new measures

Developed for The Alternatives Study:

- **CaSPAR**
- **CaRICE**
- **CCCQ(S)**
- **CCCQ(P)**

The measures are available and their psychometric properties are reported (Lloyd-Evans et al. 2010)

CaSPAR

- **Uses researcher observation, supplemented by staff-report**
- **28 pre-defined recording points**
- **Provides data for the proportion of all patients in contact with staff**

CaRICE

- Staff-completed log of all contacts with patients during a shift
- Care categorised in 21 types
- Completed by all staff over a 1-week recording period
- Provides data for the minutes of staff contact provided per patient per day
- And the proportion of staff time spent with patients

CCCQ

- Retrospective questionnaire
- Provides individual patient data on range and frequency of care provided
- Uses the same 21 categories of care as CaRICE
- Staff and patient-completed versions

Findings from The Alternatives Study: feasibility

CaSPAR	**Data collected for 99% of patients** (224 recordings)
CaRICE	**94% completion rate** (871 forms collected)
CCCQ(P)	**70% completion rate** (n = 314)
CCCQ(S)	**93% completion rate** (n=433)

Psychometrics 1: CaRICE

- **Good inter-rater reliability (*k* = 0.71) for clinician-rated vignettes using CaRICE categories**
- **Some evidence of convergent validity: CaRICE results for proportion of staff time spent with patients (24%) similar to previous observational studies (Tyson et al 1995, Higgins et al 1999)**

Psychometrics 2: CCCQ-S and CCCQ-P concordance

- **CCCQ data were obtained from the patient and a staff respondent (n=108)**
- **For most categories, concordance was poor ($k < 0.4$) for types and frequency of care received**
- **A consistent trend for patients to report less care than staff reported**

Psychometrics 3: CCCQ-S Inter-rater reliability

- **Two staff respondents completed CCCQ-S for 46 patients**
- **Inter-rater reliability was poor ($k < 0.4$) for most categories**
- **Reliability in reporting care provided was not linked to length of admission**

Inpatient staff do not have an overview of what care is provided to patients?

Psychometrics 4: Convergence of CaSPAR, CaRICE and CCCQ-P

Substantial divergence between measures in results for individual services:

- **Respondents' perspectives?**
- **Variables measured?**
- **Sample and sampling frame?**
- **Psychometric shortcomings?**

The Alternatives Study: what did we find?

There were some useful findings (Lloyd-Evans et al. in press BJPsych)

•Measures consistently showed more psychological care and less medical care at crisis houses compared to inpatient wards…

•But measures all found no difference in overall level of staff-patient contact

•The amount of interaction with staff influenced patient satisfaction more than the types of interventions received

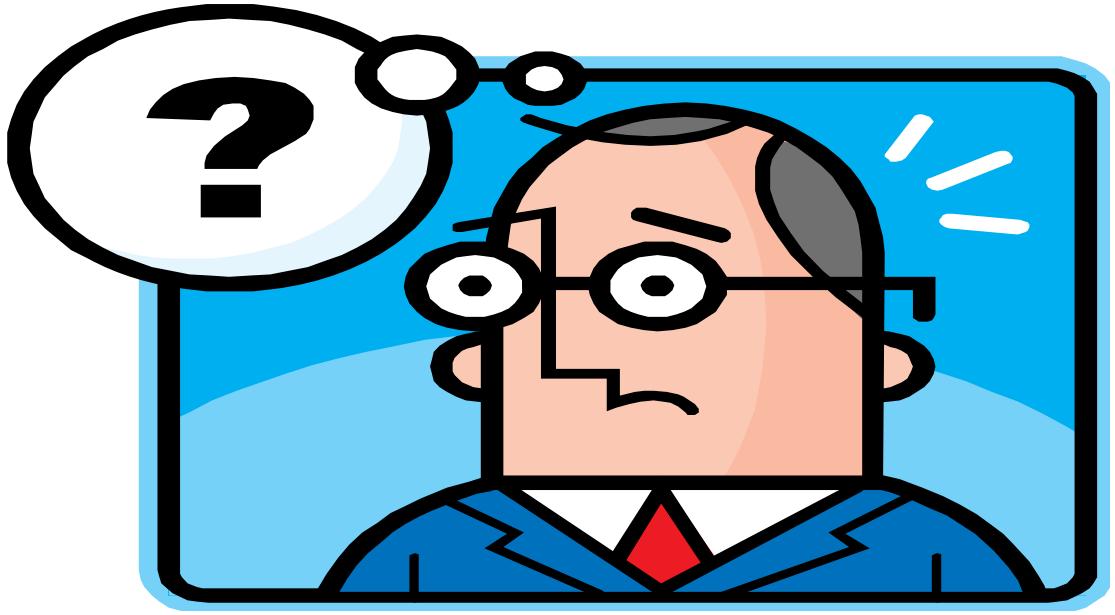
The Alternatives Study measures: conclusions

- **Patients and staff may have different, valid perspectives about care provided: multi-perspective assessment is desirable**
- **The problems of reliability and demand on resources were not wholly resolved**

Directions for future research

- **A single, multi-perspective measure of care with good psychometric properties is desirable (cf measures of needs, ward atmosphere)**
- **Can the scope of observation measures be extended? (Could researchers, through observation, reliably code the nature of care being provided?**

So what now?



A more focused approach?

Measuring a few important (or easily measured) elements of care is not ideal because:

- **It risks missing important aspects of care**
- **It risks over-emphasis on non-causal associations with outcomes**

But it may provide useful information about services

Examples of targeted approaches

- **AIMS (RCPsych standards for inpatient care): focus on structured activity, provision of care plans etc**
- **PERCEIVE (Institute of Psychiatry study of inpatient care): developing a measure of structured activity to inform economic analysis**
- **US Evidence-Based Practice approach (develops models of care, then measures key process variables in fidelity assessment: no inpatient model yet)**

Is the content of interventions what really matters?

- **A modest amount of patient satisfaction was explained by content of care variables in The Alternatives Study**

- **Qualitative interviews suggested the quality of relationships mattered more to patients than the types of care received. An informal, collaborative approach was valued.**

How things are done may be as important as what is done?

Measuring how things are done

- **Ward Atmosphere - eg Ward Atmosphere Scale (Moos 1996)**
- **Therapeutic Alliance – e.g. STAR-P (McGuire-Snieckus et al. 2007)**
- **Continuity of care may also be important**

Process evaluation of acute services in Norway: suggestions

- **No clear “best approach”**
- **Local factors may inform the focus and methods of assessment**
- **The amount of staff-patient interaction is important: established observation measures could be used**
- **Assessment of the style of care/quality of relationships is also desirable**
- **Include staff and patient perspectives if possible**

Good luck!

References

Review of content of care measures

Lloyd-Evans, B., Slade, M. and Johnson, S. (2007) "Assessing the content of mental health services: a review of measures" ***Social Psychiatry and Psychiatric Epidemiology*** **42(8) pp 673 – 682**

Alternatives Study measures

Lloyd-Evans,B.; Slade,M.; Osborn,D.; Skinner,R.; Johnson,S. (2010) "Developing and comparing methods for measuring the content of care in mental health services" ***Social Psychiatry and Psychiatric Epidemiology (February: advance e-publication)***

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