A Systematic Review Of The Impact of Inflammatory Bowel Disease Specialist Nurses

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Background

- IBD directly affects about 1 in 400 of UK population (NACC, 2005)
  - Chronic and enduring condition
  - 'Flare-ups' requiring prompt management and treatment
- Recent UK health policies focused on improving quality of patient care and access to appropriate health care practitioners (DH 2004; 2005)
- Proliferation of advanced nursing roles in UK
  - Expansion of specialist nursing roles (NMC 2007); nurse-led clinics
  - Increased medical functions and responsibilities
- Catalysts for emergence of specialist gastroenterology and IBD nurses, managing patient care in collaboration with clinicians
- However, few studies, particularly in UK, have examined effectiveness of nurse practitioners or scope of practice
- Following a systematic review of literature on effectiveness of IBD specialist nurses (McLaren et al 2006; Belling 2008) commissioned by National Association for Crohn's and Colitis (NACC)
  - Cochrane Collaboration protocol 'Specialist nursing interventions for IBD' (Woods et al 2007)
  - Draft review with Cochrane Inflammatory Bowel Disease and Functional Bowel Disorders Group

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Cochrane Systematic Review

Objective

To identify and evaluate the impact of specialist nursing interventions for improving the care and management patients with inflammatory bowel disease.

Inclusion Criteria

- Randomised controlled trials, controlled before and after studies, interrupted time series studies
- Hospital or community based interventions by gastroenterology and IBD specialist nurses
- Intended to improve access/outcomes for ulcerative colitis and Crohn's disease patients

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Outcome measures

- PRIMARY OUTCOME MEASURES
  - Patients entering remission and in whom remission is maintained.

- SECONDARY OUTCOME MEASURES

  1) Patient compliance or adherence;
  2) Clinical improvement;
  3) Duration of remission;
  4) Utilisation of nurse-led services - number of appointments/contacts with nurses versus access to medical services/physicians;
  5) Psycho-social well-being and health-related quality of life, assessed via standardised and validated scales, e.g. Short Form-36, Hospital Anxiety and Depression Scale (Zigmond 1983); the Self Esteem Scale (Rosenberg 1965); Health Locus of Control (Bundek 1993); Inflammatory Bowel Disease Questionnaire (Irvine 1994);
  6) Patient satisfaction;
  7) Hospital admission;
  8) Outpatient attendance;
  9) Progression to surgery;
  10) Length of hospital stay; and
  11) Cost effectiveness.

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Methodology

- Comprehensive database search including the Cochrane Library, MEDLINE, and British Nursing Index
  - References identified from relevant papers
  - Gastroenterology conference proceedings - additional trials
- Resulted in 5099 initial titles/abstracts
- 3 published studies involved a specialist nurse or advanced nurse practitioner role
  - Two studies evaluated the impact of nurse-led services in managing care of patients with IBD:
    - Nightingale *et al*, 2000 – 1 year Pre and post role implementation audit
    - Pearson *et al*, 2005 – 2 year Pre and post role implementation audit
  - Excluded on basis of study design

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Findings

- Only one study also met inclusion criteria for study type
  - Smith *et al*, 2002 – Randomised controlled intervention study with concealment
  - Aim: To evaluate the impact of a nurse-led counselling service on quality of life in patients with IBD
  - Methodological quality assessed (Downs & Black 1998) – high risk of bias, i.e. one or more criteria not met or undetermined

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Smith et al (2002)

Design/sampling:

- Randomised controlled intervention study with concealment.
- Cohort of 100 IBD patients: 50 ulcerative colitis; 50 Crohn's disease:
  - 25 patients from each disease group received counselling package by IBD nurse; controls received routine follow up in clinic
- Health-related quality of life, physical and psychological assessments made after randomisation at 6 and 12 months.
  - Physical assessment based on Crohn's Disease Activity Index (CDAI)
  - Health-related Quality of Life measured using SF-36
  - Hospital Anxiety and Depression Scale and coping strategies
  - All instruments (except coping strategies) established reliability and validity for IBD patients

Specialist IBD nurse counselling package:

- Booklets and videos on symptoms, drug therapy, diet and surgery.
- Stress management programme adapted for IBD patients using standardised protocol.
- Relaxation exercises and coping mechanisms.

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Smith et al (2002) cont.

Key findings:

- Mean CDAI scores showed trend to improve over time, irrespective of counselling or routine clinic follow up.
- SF-36 scores for patients with ulcerative colitis and Crohn's remained unchanged. Exception of mental health – Crohn's patients who received counselling showed significant improvement at 6 months compared to those receiving routine clinic follow up.
- HAD depression scores remained normal in all groups. No significant differences between treatment and control groups in either disease category.
- Adaptive coping strategies - similar in all groups; no significant changes.
- Maladaptive coping strategies present at randomisation in Crohn's patients only. Statistically significant decline at 6 months, returning to normal levels in both counselled and routinely followed groups.

Conclusions:

- Nurse-led counselling significantly improved mental health dimension of health-related quality of life over a six month period in Crohn's patients only, but improvement not sustained at 12 months.

Limitations:

- Due to small sample size, power of study insufficient to show statistically significant changes over time.
- Study groups not comparable at baseline suggesting selection bias.

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Review Findings

- Single randomised controlled study
- No evidence regarding patient remissions
- Limited evidence nurse-led counselling improves mental health dimension of health-related quality of life in the short term (six months), in Crohn's patients only, but improvement not sustained at 12 months
- High risk of bias in included study (participant selection, small sample size and low statistical power) though acknowledged by study's authors, sadly limits what can be inferred
- Overall lack of good quality studies was disappointing
- Included study reflects only one aspect (counselling) of specialist nurses' varied and complex roles.
- Other aspects including nursing leadership, disease management, management of clinics, helpline provision, patient education and advocacy remain relatively unexplored.

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References

- Belling R, Woods L, McLaren S (2008) Stakeholder perceptions of specialist IBD nurses' role and personal attributes. *International Journal of Nursing Practice* **14**:67-73.
- DH (2004) *The NHS Improvement Plan,* DH, London: UK.
- DH (2005) Creating a patient-led NHS. Delivering the NHS Improvement Plan, DH, London: UK.
- McLaren S, Woods L, Belling R (2006) *A systematic review of the effectiveness of IBD specialist nurses,* Final Report for National Association for Crohn's and Colitis, UK. www.nacc.org.uk
- NACC (2005) National Association for Crohn's and Colitis Disease www.nacc.org.uk
- Nightingale AJ, Middleton W, Middleton SJ, Hunter JO (2000) Evaluation of the effectiveness of a specialist nurse in the management of inflammatory bowel disease. *European Journal of Gastroenterology and Hepatology* 12:967-73.
- Nursing and Midwifery Council (2007) *Advanced nursing practice*. www.nmc-uk.org
- Pearson C (2005) A nurse-led IBD service in a district general hospital. *Gastrointestinal Nursing* **3**(1):33-9.
- Smith GD, Watson R, Roger D, McRorie E, Hurst N, Luman W, Palmer KR (2002) Impact of a nurse-led counselling service on quality of life in patients with inflammatory bowel disease. *Journal of Advanced Nursing* **38**(2):152-60.
- Woods L, Belling R, McLaren S (2007) *Specialist nursing interventions for inflammatory bowel disease* (Protocol), Cochrane Library 2007, Issue 3. www.thecochranelibrary.com

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