Clinical pathways involving general practice – a new approach to integrated health care?

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Abstract

The Mater Mothers' Hospital, South Brisbane recently identified a number of difficulties with the maternity share-care program it runs with 1100 local GPs. This paper describes an integration approach developed at the Mater which has addressed these problems via the use of clinical management guidelines across the whole episode of care, the provision of a patient held record / pathway as a clinical practice prompt, clear communication and information management protocols between hospital and general practice, and the provision of continuing medical education for share-care practitioners.

Introduction

Reports from the international literature document that defined clinical pathways increase the quality and efficiency of clinical care (Dowsey *et al.* 1999, Kitchiner and Bundred 1996, O'Connor *et al* 1996). Clinical pathways are tools that set "locally agreed clinical standards, based on the best available evidence, for managing specific groups of patients" (Kitchiner & Bundred 1999, p. 54). They have been used successfully by HMO groups in the USA, and the NHS in the UK to identify and explain "variance" in clinical management, which can then be analysed for the quality and costs associated with care. A number of guidelines recently evaluated in both the United Kingdom and the USA have included a community management component (Campbell *et al.* 1998, Brickman *et al.* 1998).

Prior to 1999, Queensland Health had identified over six hundred clinical pathways in use across the state. None of these included a general practice (GP) management component (Clinical Improvement Unit 1999). This paper examines the development and implementation of the first pathways in Queensland to include a clinical management component involving GPs: the Brisbane South Antenatal/Postnatal Share-Care Pathways.

Using clinical management guidelines for GP/hospital integration

The Mater Mothers' Hospital, South Brisbane (MMH) shares maternity and postnatal care with 1100 GPs each year. Attention has recently focused on issues at the GP/hospital interface including significant duplication of services, incomplete information exchange, and inappropriate test ordering – particularly for ultrasound examinations. An increasing neonatal role for general practitioners resulting from the expansion of the Early Discharge Program, has also increased the focus on care documentation, protocol and guideline development, and training support. In early 1998, the MMH undertook to involve its local GPs in addressing these issues.

The University of Queensland Centre for General Practice, Mater Hospital, is an onsite academic GP unit committed to enhancing care integration between the hospital and its community. A model for GP / hospital care integration has been developed which is based on the 3 Cs: Communication and access, Cultural change and team work, and Commitment and incentives to integrate.

In April 1998, the hospital utilised this model to address difficulties local GPs and the MMH were experiencing with their existing share-care program. It represented the first application of the "3C's" model of integration. Through this experience the procedural aspects underpinning the model were further developed. These can be summarised by the following six key strategies:

- the use of clear and accessible clinical management guidelines / protocols across the whole episode of care (including a clear articulation of the roles and responsibilities for individual members of the clinical team responsible for the care)
- the provision of a patient held record / pathway as a clinical practice prompt,
- the institution of clear communication and information management protocols between hospital and general practice to underpin these
- the provision of regular training opportunities and continuing medical education for share-care GPs in groups or via electronic access
- a patient or client-centred care focus at all times
- the application of a co-ordinated multidisciplinary approach to care.

These strategies were developed by active involvement of both hospital and GP stakeholders in the design and implementation of activities and programs, a focus on "best practice" and an evidence basis to decision-making, and an educational philosophy supporting adult learning principles – interactive, case-based delivery, promotion of a team approach, and enhanced professional understanding between hospital and general practice.

Development of the pathways and clinician support strategies

A working party was convened to develop the share care pathway and clinical support strategies. Its terms of reference included oversight of the development of shared management guidelines based on the identification of current issues and problems in share care, and current best-available evidence on optimal care delivery.

Invitations to join the Share-Care Working Party were forwarded to local divisions of general practice, the Royal Australian College of General Practitioners (Queensland Faculty), the Mater University of Queensland Centres for General Practice, and Obstetrics & Gynaecology, the MMH staff specialist group, Antenatal Clinic, the Community Midwifery Service, and the Department of Neonatology – all key participants in shared maternity care. All groups provided a representative for the Working Party, with experience in the existing share-care program. The MMH Director of Obstetrics and Gynaecology, and the Director of the Hospital's University Centre for General Practice jointly chaired the group.

The Working Party identified current issues and problems in share-care from both the hospital and community perspective, as well as their impact on the quality and efficiency of patient care. Current best-available evidence on optimal share-care, and potential new approaches to achieving improved patient care goals, were discussed. Consideration was given to new or changed provider roles and responsibilities required to achieve such goals, and the necessary changes to information management, training and clinician support to underpin them.

Draft antenatal and postnatal clinical pathways incorporating share-care changes proposed by the Working Party group were then developed by smaller subcommittees and taken back to the main Working Party for comment and revision. Three clinical pathways / clinician prompts were created, which formed the key elements of the hospital's patient-held record. This provided a clear link between the clinical pathway and the recording and documentation process, essential to information transfer in multiple provider care. The pathways / prompts were designed to clearly present "best-practice" in share-care, be easy to follow and record upon, optimise information sharing between hospital and community, and empower patients by allowing them an understanding of the expected care delivery.

Of equal importance were the information management and education / training strategies supporting the new pathways. Our pathway launch was underpinned by an education / information program for share-care GPs, with all training focussed on the pathway. The pathways and support materials were also made available to southside GPs via the Mater Centre for General Practice Website (http://www.uq.edu.au/cgpmh).

Implementation

The Mater Mothers' / GP Antenatal and Postnatal Share-Care Pathways form the key elements in the Mater Mothers Hospital GP Share-Care Kits, which were circulated to all 1100 GPs sharing care with the MMH in February 1999. (The Antenatal Care Pathway is illustrated in Figure 1. Postnatal Pathways are available from the authors). The Kits also include an overview of the recent changes to the share care program, the MMH share care protocol for antenatal and postnatal care, communication hot-lines, and ten health promotion and patient education leaflets (in easily-photocopied form) for GPs to distribute to patients. The leaflets cover such topics as

diet and exercise in pregnancy, parenting and pregnancy information classes available locally, drug, alcohol and smoking information, amniocentesis and chorionic villous sampling for genetic testing, SIDS prevention and community child health support services.

Five education and information sessions have been run to date with over 200 local share-care clinicians. Local divisions of general practice and the RACGP (Queensland Faculty) have joined with the MMH in promoting and supporting the clinician information evenings, and disseminating information concerning the share-care changes in their newsletters.

Table 1: Clinician perceptions of the pathway

Question	Mean* (n = 164)
The materials provided (leaflets, clinical pathway) will be helpful in my practice	5.94
The shared care pathway and materials will enhance my clinical practice in the following areas:	
a. The first GP visit	5.31
b. Common scanning issues and their management	5.26
c. Screening tests in pregnancy	5.27
d. Hospital/community resources	5.12
e. Complex cases	5.00
f. Postpartum care	5.28

* Note: Likert scale of 1 – 7 used (1 = "strongly disagree, 7 = "strongly agree")

Participants' perceptions of the content and practical relevance of the workshops were assessed by questionnaire at the conclusion of each clinician information evening. As indicated in Table 1, a high level of clinician acceptance of the pathway was demonstrated. Perceptions of the practical relevance of the pathway in particular clinical situations were also sought. Participants believed that the share-care pathway would enhance their clinical practice in all of the areas assessed.

A successful model of integration

We set out 18 months ago to improve the quality of maternity and postnatal share-care via the application of a model for GP/hospital care integration. All our goals have been satisfactorily achieved. The Queensland Health Obstetric and Gynaecology Services Advisory Panel has recently recommended that the Brisbane South Antenatal Share-Care Pathway be used as the template for all antenatal share-care programs throughout the State of Queensland.

The timely and relevant outputs of this project resulted largely from the innovation of our initial Working Party. Despite the heterogeneity of the group, all members showed a genuine desire to improve care, a strong clinical grasp, flexibility, and a commitment to the best interests of the patient. Such an environment allowed rapid progress toward a collaborative agreement on a set

standard for share-care. We suggest that participants in such consensus-building enterprises in future be selected for such qualities. Work examining the sociological aspects of guideline formation in Aberdeen (Pagliari 1999) supports this suggestion. The process itself also allowed an improved understanding of the rationale that drives local decision-making in general or hospital practice. The literature highlights the importance of local clinician acceptance of guidelines or clinical pathways. We support this strongly.

Re-definition of appropriate hospital and general practice roles and responsibilities was seen to be a potentially contentious area. This was approached with regard to the patients' best interests or access, cost-effectiveness and efficiency. Checking the maternal Rubella immunity status, for example, was best performed by GPs, as they saw the patient earliest in the course of the pregnancy, and were able to arrange testing in a location convenient to the patient.

Two key implementation issues included clinician education and support, and regular pathway revision. The Workgroup will now review clinician feedback on the pathway at six monthly intervals, and make recommendations on modifications accordingly. The quarterly clinician evenings have become a feature of the share-care program and will in future be expanded to address issues and skills requested by local GPs.

The pathway has been reproduced prominently on all patient-held records, as a clinical prompt and aide memoir to health providers, and for the information of patients. Patients need to be able to review the pathway, and reinforce or question care described within it. In an environment of patient empowerment, it is critical to have the ability to effect high-quality care by an enhanced partnership between provider and patient.

Our results demonstrate a high level of clinician acceptance of the pathway, with a high level of agreement by information evening participants that the pathway will be helpful in their practice. The practical relevance of the clinical pathway has also been highly rated. Whilst initial clinician acceptability of the pathway is highly important, reaching all 1100 share-care GPs and modifying their traditional share-care practice represents an enormous challenge. Our implementation approach must thus be gradual, consistent and responsive – supported by high quality communication and good clinician access, an improved hospital / community integration culture, and a commitment by all care providers to real continuity of care.

As implementation continues, our challenge is to evaluate the outcome of such a pathway on the eventual quality, cost and patient acceptability of shared antenatal / postnatal maternity care. The initial phases of such an evaluation are being undertaken with financial support from the National Divisions Hospital Integration Program. A grant has been awarded to the Brisbane South Collaboration, of which the Mater Centre for General Practice is a member. Others involved in the Collaboration are the two divisions of general practice on the southside of Brisbane, Brisbane Inner South and Brisbane Southside Central Divisions. At this stage the evaluation covers the implementation of the collaborative model of shared antenatal and postnatal care, and patient care outcomes for pregnant women in the share-care program.

Conclusion

This program has created a prototype for hospitals and GPs seeking to establish a shared approach to care. Our experience has underlined the importance of a collaborative planning environment, clear and accessible clinical management guidelines, supporting records and clinical prompts, and information management and education strategies. Recent large national endeavours such as the Co-ordinated Care Trials, the National Demonstration Hospital Program, and the National Divisions Hospital Integration Program are attempting to address the schism in care across the hospital / community divide. The application of a model such as this could facilitate the required enhanced co-operation, flexibility, evidence-basis, efficiency, and patient-focus.

References

Brickman R, Axelrod R & Roberson D *et al*. 1998, "Clinical process improvement as a means of facilitating health care system integration" *Journal on Quality Improvement*, vol 24, pp 143–153.

Campbell H, Hotchkiss R & Bradshaw *et al*. 1988, "Integrated care pathways" *British Medical Journal*, vol 316, pp 133–7.

Clinical Improvement Unit 1999, Personal Communication *Queensland Health*.

Dowsey M, Kilgour M & Santamaria *et al*. 1999, "A prospective study of clinical pathways in hip and knee arthroplasty" *Medical Journal of Australia*, vol 170, pp 59–62.

Kitchiner D & Bundred P 1996, "Integrated care pathways" *Archives of Disease in Childhood*, vol 75, pp 166–168.

Kitchiner D J & Bundred P E 1999, "Clinical pathways: A practical tool for specifying, evaluating and improving the quality of clinical practice" *Medical Journal of Australia*, vol 170, pp 54–55.

O'Connor G T, Plume S K & Olmstead E M 1996, "A regional intervention to improve the hospital mortality associated with coronary artery bypass graft surgery." *Journal of the American Medical Association*, vol 275, pp 841–846.

Pagliari H, Grimshaw J & Walker A 1999, "Psychosocial Influences on Multidisciplinary Guideline Development" *Association of University Departments of General Practice National Conference Papers, London July 14–16*.

Figure 1: Mater Mothers' Hospital GP Antenatal Share-Care Pathway

Antenatal Care Pathway

(Please tick where appropriate)

FIRST GENERAL PRACTITIONER VISIT

	Discussed		Discussed	Information Given
Risk Assessment	☐	Alcohol	☐	☐
Social factors	☐	Smoking	☐	☐
Physiotherapy/exercise	☐	Models of Care	☐	☐
Dietary Advice	☐	Genetic Screening (if >35)	☐	☐
		Medication	☐	☐

PATHOLOGY ROUTINE SCREENING TESTS

Sent to: (tick applicable) QML ☐ S&N ☐ Mater ☐

Results	
Blood Group	Full blood count
Antibody screen	Rubella Titre
Syphilis Serology	Hepatitis B S Ag:
Cervical smear Date of last smear:	Normal ☐ Abnormal ☐
Other:	

FIRST HOSPITAL VISIT Standard Care as per protocol & Antenatal Sheet:

Confirmed Model of Care ☐ Checked Pathology ☐

Checked Risk Factors ☐ Antenatal Classes Arranged ☐

16 WEEK VISIT Standard Care as per protocol & Antenatal Sheet:

Discussed morphology scan ☐ Result .....

20 WEEK VISIT Standard Care as per protocol & Antenatal Sheet:

Confirmed EDC ☐ Agreed EDC: ...../...../.....

24 WEEK VISIT Standard Care as per protocol & Antenatal Sheet:

Discussed Glucose Challenge Test if age ≥30 ☐ BMI >27 ☐ FH Diabetes ☐

High risk ethnicity ☐ Past Obstetric History ☐

Results if applicable: GCT: ..... GTT: .....

Discussed Breast Feeding ☐

28 WEEK VISIT Standard Care as per protocol & Antenatal Sheet

30 WEEK VISIT Standard Care as per protocol & Antenatal Sheet& Antibody Screen (if Rh Negative) ☐

32 WEEK VISIT Standard Care as per protocol & Antenatal Sheet

34 WEEK VISIT Standard Care as per protocol & Antenatal Sheet:

Discussed Newborn Care ☐ Information Given ☐

36 WEEK VISIT Standard Care as per protocol & Antenatal Sheet:

Full blood Examination ☐ Result: .....

Antibody Screen ☐ Result: .....

37 WEEK VISIT Standard Care as per protocol & Antenatal Sheet:

38 WEEK VISIT Standard Care as per protocol & Antenatal Sheet:

39 WEEK VISIT Standard Care as per protocol & Antenatal Sheet:

40 WEEK HOSPITAL VISIT Standard Care as per protocol & Antenatal Sheet:

41 WEEK HOSPITAL VISIT Standard Care as per protocol & Antenatal Sheet:

Discuss timing of delivery Date of Induction if applicable .....