

What's in a referral letter: does the detail matter?

Abstract

Background: The referral letter is an often-overlooked yet essential element that contributes to the quality of patient care when specialist services are accessed. In the field of maternal-fetal medicine, incomplete referral letters that fail to comprehensively identify pregnancy risk factors can have significant implications for pregnancy management and delivery planning. **Objectives:** To evaluate the quality and completeness of referral letters from general practitioners and obstetricians to the Fetal Medicine Unit (FMU) at The Canberra Hospital and to improve practice through validation of a patient questionnaire with sensitivity for identifying pregnancy risk factors. **Methods:** Self reported information from a questionnaire completed by pregnant women presenting for initial consultation to the FMU was compared with information contained in the written referral letter for that particular patient. Information compared was categorised as mandatory referral information, significant past obstetric or gynaecological history, or other relevant medical history. **Results:** The patient questionnaire was successful in providing clinicians with relevant medical information in addition to that which was contained in professional referrals in 57% (95% confidence interval (CI) 48–67%) of cases. Significantly more risk factors for the current pregnancy were highlighted in the questionnaires than in the referral letters ($P = 0.008$). **Conclusions:** A significant proportion of referral letters received by the FMU during the study period lacked completeness in many key areas. Recommendations to improve this situation include the routine use of patient questionnaires or referral letter templates, the development of local referral guidelines, and regular clinician education.

Keywords: referral and consultation, professional practice, communication, prenatal care

Introduction

It has long been acknowledged that good communication among medical professionals is a key element of any successful healthcare system¹. The referral letter is an essential document to ensure continuity of patient care when specialist services are accessed. The amount and quality of information contained in these letters can have considerable implications for patients². Specialists rely on the information and it has been shown that patient outcomes may be adversely affected by incomplete referral letters³. The need for improvement in the quality of written communication between primary care and specialists has also been recognised^{4,5}. This is especially true when it comes to referral letters and the information that they contain⁶. Previous studies in diverse fields of medicine have highlighted problems with referral letters and their content, often finding recipient dissatisfaction and deficiencies of information in key areas^{7,8,9,10}. While such previous research has served to identify important issues, relatively few strategies or interventions to

improve the quality of referral letters have been studied². The systematic use of form or template letters combined with clinician education does however have the potential to improve the quality of referral letters¹¹.

To date, no studies have examined the quality of patient referral letters in the unique area of Maternal-Fetal Medicine (MFM). MFM is a subspecialty of obstetrics and gynaecology concerned with obstetric, medical and surgical complications of pregnancy and their effect on both mother and fetus¹². The Fetal Medicine Unit (FMU) at The Canberra Hospital (TCH) receives referrals from obstetricians and general practitioners (GPs) for reasons relating to maternal and fetal health during high-risk pregnancies and delivery planning. While the reasons for referral are usually related to a specific indication in the current pregnancy, there are often other risk factors present with the potential to complicate pregnancy or delivery. These additional risk factors are diverse and relate broadly to the areas of past obstetric and gynaecological history or maternal medical history.

The aim of this study was to evaluate the

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Table 1: Summary of study population.

Maternal age (years)	33 (SD 5.6, Range 19–45)
Number of primigravid women	24 (23%)
Gestational age (weeks)	18 (SD 7.3, Range 6–38)
Referral from general practitioner	55 (53%)
Referral from obstetrician	47 (46%)
Referral from midwife	1 (1%)

Table 2: Reason for referral.

Reason	Number of referrals (%)
First trimester screening (FTS)	11 (11)
Fetal anomaly scan (FAS)	9 (9)
Abnormal FTS	13 (12)
Abnormal FAS	9 (9)
Twin pregnancy	6 (6)
Dating or growth ultrasound	8 (8)
Advanced maternal age (AMA)	24 (23)
Maternal factors	20 (19)
No reason for referral given	3 (3)

quality of written referrals received by the FMU and to assess whether a patient questionnaire was sensitive in highlighting additional pregnancy risk factors.

Methods

Pregnant women referred to the FMU between April and July 2009 were approached to participate in the study on their initial consultation. Once information on the study was provided and written consent had been obtained, patients were asked to complete a questionnaire. The information reported by patients in this questionnaire was then compared to information obtained from the referral letter for that particular patient. This process was used as a method of evaluating the quality and completeness of referral letters received by the FMU. The frequency of omission from referral documentation of important aspects of a patient's medical history was noted. The information compared between referral documentation and patient reported questionnaire responses was divided into the areas of mandatory referral information, obstetric or gynaecologic history, and other medical history relevant to the current pregnancy.

Information considered mandatory for inclusion in a referral to the FMU from either a GP or obstetrician was the first area assessed. This included some measure of gestational age of the fetus, either estimated date of delivery (EDD) or date of last menstrual period (LMP), parity and gravidity of the women, and a specific reason for referral.

Information considered significant in the category of past obstetric or gynaecologic history was a previous preterm, small for gestational age (SGA), or large for gestational age (LGA) baby. Neonatal death, stillbirth, and miscarriage or termination of pregnancy due to a fetal anomaly was also included. Maternal factors included in this category were previous cervical procedures for the treatment of intraepithelial neoplasia, greater than three previous caesarean sections (CS), gestational diabetes mellitus or preeclampsia.

Conditions in the category of other medical history must have been relevant to the current pregnancy or delivery planning. They included Body Mass Index (BMI) greater than 30.0, current cigarette smoking, and maternal conditions requiring regular medication such as epilepsy, anxiety, and asthma. Viral illnesses during pregnancy and family history of genetic syndromes were also included in this category.

Statistical analysis

95% confidence intervals (CI) on survey findings of incompleteness of referral letters were calculated to estimate the validity of the result in the entire population of FMU patients in Canberra, Australian Capital Territory (ACT). Chi-square analysis was used as a test of significance for the comparison between handwritten and computer generated referral letters. A two-sample non-parametric test was used to show the significance of the rates of information deficiency between the questionnaires and referral letters.

Ethics approval

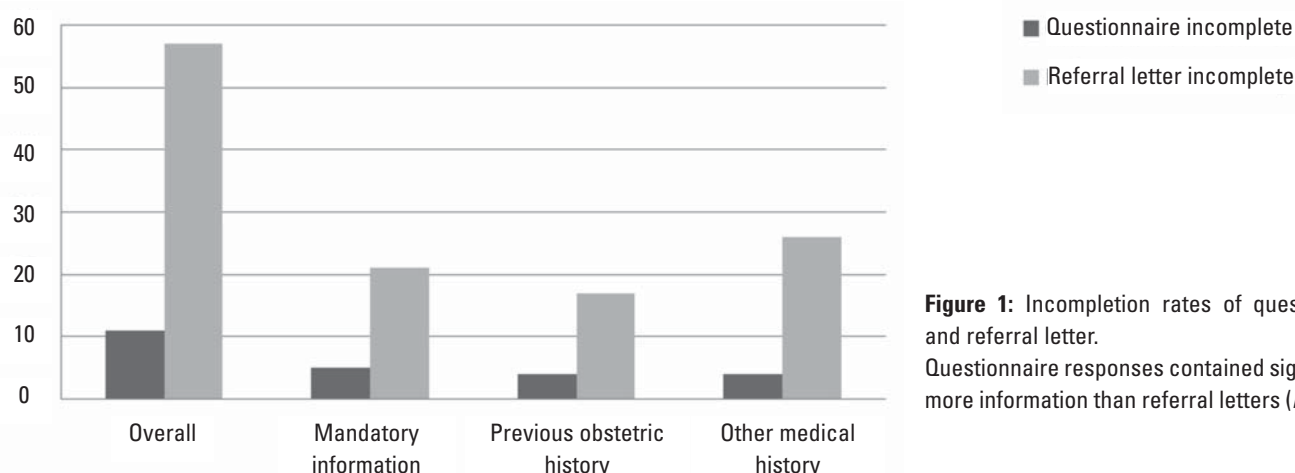
The patient questionnaire used in this study was approved by The Canberra Hospital Survey Resource Group. Ethics approval for the study was obtained from the ACT Health Human Research Ethics Committee (HREC) and the Australian National University HREC.

Results

During the period 1st April 2009–31st July 2009, 392 new patients were referred to the FMU. A total of 103 women (26%) consented and completed the questionnaire. Information on the study population including mean maternal age with standard deviation (SD), gestational age of fetus at time of referral and referral type is summarised in Table 1. The main reasons for referral to the FMU are displayed in Table 2.

Table 3: Summary of results.

	Referral Letter Incomplete (%)	Questionnaire Incomplete (%)
Overall	57	11
Mandatory information	21	5
GP referrals	24	
Obstetrician referrals	19	
Previous obstetric history	17	5
Previous cervical procedures	83	
Other medical history	26	4
Current smoking	100	

**Figure 1:** Incompletion rates of questionnaire and referral letter.

Questionnaire responses contained significantly more information than referral letters ($P = 0.008$).

Mandatory information

Professional referrals to the FMU were deficient in mandatory information in 21% (95% CI 13–29%) of cases. 13 out of 55 GP referrals (24%) and 9 out of 47 obstetrician referrals (19%) lacked information relating to either dating of current pregnancy, parity and gravidity, or reason for referral. The patient questionnaire failed to accurately record this information in only 5% of cases.

Obstetric or gynaecologic history

Information considered to be significant in the area of past obstetric history was not reported in 17% (95% CI 9–24%) of referral letters. The patient questionnaire was missing this information in 5% of cases. Of note in this category was the reporting of previous cervical procedures. Twelve women in the study population had undergone treatment for cervical intraepithelial neoplasia and this information was absent from the referral letter in 10 of those cases (83%).

Medical history

Medical information that was relevant to the current pregnancy was absent from the referral letter 26% (95% CI 18–35%) of the time. Patient questionnaires failed to report relevant medical history in only 4% of cases. Interestingly, six women who were referred to the FMU had a significant history of current cigarette smoking but this fact was not included in any referral letters.

Overall

The patient questionnaire was successful in providing clinicians

with relevant medical information in addition to that which was contained in professional referrals in 57% (95% CI 48–67%) of cases. The study results are summarised in Table 3 and Fig. 1. Significantly more risk factors for the current pregnancy were highlighted in the questionnaires than in the referral letters ($P = 0.008$).

Discussion

Many health care models rely on a referral system to manage patient access to secondary and tertiary care. This important process, in which the health dollar is tested, is seldom evaluated or reviewed². Referral to specialist centres often triggers a cascade of further investigation, therefore small changes in this pattern can lead to significant savings. Incomplete exchange of information can affect the patient, leading to additional visits or redundant costs, and ultimately mutual dissatisfaction for both doctor and patient¹³. Dissatisfied patients are more likely to discontinue treatment, or to seek multiple opinions, alternative treatment, and legal compensation¹⁴.

Most specialists will focus on the specific problem as outlined by the referral letter, however MFM is sometimes referred to as one of the last areas of general medicine. While referral reasons in MFM are usually related to a specific risk factor identified by a GP or obstetrician, additional risk factors that may alter the management of a pregnancy are also often present. It is not practical to investigate for the presence of these diverse factors in an initial FMU consultation that focuses on the specific reason for referral. This information may be uncovered in subsequent appointments, but early awareness of some of these factors can

have implications for the management of the pregnancy and subsequent delivery planning. In this setting, the actual written referral letter assumes a higher level of importance than may be seen in other specialist areas.

This study has shown that relevant medical information was indeed missing from referral letters sent to the FMU in 57% (95% CI 48–67%) of cases. The study has also shown that a patient questionnaire was significantly better ($P = 0.008$) at highlighting those additional pregnancy risk factors than the referral letter.

Two of the most commonly performed procedures in obstetrics and gynaecology are the cone biopsy or large loop excision of the transformation zone (LETZ procedure) for the treatment of intraepithelial neoplasia and the lower segment caesarean section (LSCS). Previous cone biopsies are an important risk factor for preterm delivery¹⁵. Both these procedures, with significant implications for the management of pregnancy and delivery planning, were often omitted from referral letters but almost always included in patient questionnaire responses.

The results of this study and a review of the literature offer some recommendations to improve referral letter quality. The use of an obstetric targeted patient questionnaire similar to the one used in this study would help to identify pregnancy risk factors early in the consultation process. Structured referral letter templates with checklists of pre-referral investigations, management, and important risk factors should be used¹⁰. Local referral guidelines and regular education can affect clinical behaviour with subsequent improvement in referral process or quality of care¹⁶. The use of electronic patient care summaries could also be beneficial. It was noted that computer generated referral letters generally contained more clinical detail than handwritten referrals. However, in this small pilot study a statistically significant difference in terms of overall completeness of the referral letter was not seen ($P = 0.253$). It is important to remember that a high quality and detailed consultant reply letter can also serve to remind referring practitioners of information requirements¹⁷. Lastly, the findings of this study are relevant to other disciplines of medicine such as the medical imaging fraternity who often only get the word *routine* written on a referral form.

Limitations

Limitations of this study are the small sample size and possibility of bias in recruitment. The assumptions of using 95% CIs is that the study population is a true representative sample of population of all pregnant women in the ACT who are referred to the FMU. This seems to be valid as 26% of all new referrals to the FMU during the study period took part and there were no specific exclusion criteria applied. It may be possible that there was a subset of the study population who were less likely to consent and take part in the study due to the nature of the referral indication being particularly acute or distressing. The study results of incompleteness rates of information in referral letters is however consistent with findings in other areas of medicine^{7,8,9,10}.

Conclusion

The future of the specialist referral process likely lies in advances in information technology with possible on-line booking

systems and embedded referral management sheets.² Until this time, the increased pressure on the health dollar will require a healthy service delivery attitude that is supported by a well considered and appropriate referral. This study supports prior research that recognises a need for improvement in the written communication between medical professionals, especially in the area of the referral letter.

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