A mixed growth raises the possibility of a false result from contamination.

There are many good and extensive reviews of the management and consequences of urinary tract infection.¹⁰ Despite the controversy that exists over some aspects, a consensus emerges. Initial treatment consists in plenty of fluid, encouraging frequent micturition, and a 7-10 day course of one of the many cheap, safe, and effective chemotherapeutic agents available which are likely to be effective against *E coli* (sulphadimidine, nitrofurantoin, etc). Subsequent follow-up is essential, for about a third of the patients will have a recurrence within the next year. It is as unreasonable to claim to have cured a urine infection on the basis of a sterile urine two weeks after treatment as it would be to claim to have cured asthma because there is no wheezing after a course of steroids and bronchodilator drugs. In many children the tendency to develop urine infection persists. This is why children who have had a urine infection should be referred for further investigation. Provided there is good evidence of infection, in most cases an intravenous urogram and micturating cystogram will be arranged to seek obstructive lesions or vesicoureteric reflux.

Conclusion

The investigation of urinary tract disorders requires patience and care at all levels. Nevertheless, it is rewarding at all levels. The general practitioner, the school doctor, and the hospital doctor will find many simple causes and cures for distressing

disorders of micturition, many opportunities for reassuring worried parents, as well as opportunities for treating confirmed cases of urine infection. In this way they may justifiably claim to be preventing subsequent scarred kidneys, deviant behaviour, or disordered development—which is what the medical care of children is all about.

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General Practice Observed

Communications to an antenatal clinic

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Summary

When referring pregnant women to an antenatal clinic many general practitioners and midwives presented details of their care in an incomplete and inconsistent manner. As a result, hospital staff often had insufficient basic data from which to work. We recommend that those providing care decide what information they need and make the rationale of collecting this information the subject of a well-evaluated local education programme.

Introduction

For several years the use of hospital care and delivery for pregnant women has been increasing, resulting in 91.9% of all confinements taking place in National Health Service hospitals in 1973.¹ This trend has been accompanied by an increase in the referral rate to antenatal clinics for assessment and booking and the advent of shared antenatal and postnatal care between

hospital staff and community services. As methods of care have changed, the number of professionals providing care has increased, while the need to record and share clinical information has become of even greater importance.

The need for a study of the information provided by general practitioners when making referrals to an antenatal clinic became apparent during discussions in the department of community health about the nature of shared antenatal care: opinions differed between consultants and general practitioners about the information presented by the latter when referring a woman for hospital care. It was therefore decided to monitor all data provided with each general practitioner referral allotted to the professorial unit clinic. Data from all information sources, either sent ahead of the patient or with her on the day of appointment, would be used to complete a structured questionnaire.

Method

Study population—New requests for booking at the antenatal clinic were systematically allocated to the three obstetric firms. Each week about 90 new referrals were allocated as they arrived into three groups, the professorial unit receiving about 30 new cases. Altogether 108 consecutive patients' referral documents were reviewed. Eight sets were excluded from the study when the patient failed to attend on the day, giving a sample population of 100. Information from the sample was collected over eight days during four weeks in November and December 1974.

Organisation of fieldwork and data collection—The objectives of the study were explained to the hospital medical, nursing, and secretarial

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staff, who co-operated fully. All data sent ahead of the referred patient were transferred to the questionnaire before the woman arrived at the clinic. During each clinic session any other data from information sources sent with the patient were recorded, but no verbal information concerning the patient or her pregnancy was included. Those women who did not attend clinic for their appointment after information had been noted down ahead of their arrival were excluded from the study. Also excluded were those patients referred from elsewhere in the hospital, such as the gynaecological department, through the hospital medical staff. Referrals were included from general practitioner/midwifery units.

Results

Information sources—There was an average of two referral documents a patient, a total of 203 being reviewed during the study (table I). Table II shows the frequency with which the documents were used. Documents were not always completed by the general practitioner, midwives contributing information on some of the obstetric booking forms and co-operation cards. The form for requesting general outpatient appointments was completed by both the general practitioner and patient and asked for no details about the pregnancy; when this form was used such details were rarely provided.

TABLE I—Types and numbers of referral documents used as information sources

Referral document	No of documents
GP's letter to hospital	50
Obstetric booking form	56
Request for outpatient appointment form	37
Co-operation card	54
Other	6
Total	203

TABLE II—Frequency with which one or more referral documents were used

No of referral documents used	1	2	3	4
No of referrals	18	62	19	1

Patient's personal details—Of the 92 women who had details of marital state given (table III) eight were identified as being unmarried. The two women who received an appointment without an address being given on written documents probably did so by telephone. In response to specific questions on the obstetric booking form and request for outpatient appointment form, the patient's previous name was mentioned in 43 cases and religion in 33.

Name and address of general practitioner—The general practitioner's name and address were clearly written on the referral documents of 98 women. In 43 cases the general practitioners stated a willingness to share antenatal care giving family planning advice with the hospital consultant staff. The information source in 32 cases was the obstetric booking form, which specifically requests this information; the general practitioner's letter was the document used for the other cases.

Medical history—Details of past and present medical histories were asked for on the booking form but only 33 had a past medical history mentioned on any document; 16 had a present history and eight had both past and present histories mentioned.

Obstetric history—From the information given we concluded that 42 women were primigravid, 42 were multiparous, and 16 were impossible to categorise (table IV). Sufficient information was given to estimate the length of pregnancy at booking for 94 women. The mean length of pregnancy at booking was 20.5 weeks; for primigravid women it was 19.7 weeks, for multiparae 20.9 weeks, and for those with unknown parity 22.2 weeks. For 27 of the 29 multiparae referred on the obstetric

TABLE III—Frequency with which various items of personal information were contained in referral documents

	Name	Address	Age or date of birth, or both	Marital state	Patient's occupation	Country of origin
Percentage of sample	100	98	95	92	38	81

TABLE IV—Frequency with which information was given about obstetric history

Information given as:	Percentage of sample
Parity	10
Gravid state	37
No of abortions	50
No of miscarriages	
No of stillbirths	
No of children living	42
Details of past deliveries	58
Last menstrual period date	32
Expected date of delivery	90
	88

booking form the date and place of the last confinement were given.

Clinical examination and investigation—Since there were variations in the length of pregnancy at booking, four periods of gestation were chosen on or after which it would be feasible for certain signs of fetal progress to be recorded. The period of gestation at the time of referral by the general practitioner and that at the time of appointment at the clinic were compared. Table V refers to those examinations that were possible at the time of referral. There were seven referrals with insufficient information from which to calculate the period of gestation at the time of referral and the time of the appointment at hospital.

TABLE V—Frequency with which uterine size, fetal movement, heart auscultation, and palpation were recorded

Period of gestation (weeks)	Investigations and examinations	Record given	Record not given	Total possible
6 or more	Size of uterus, height of uterine fundus	53	40	93
18 or more	Fetal movements felt	25	9	34
28 or more	Fetal heart auscultation	7	1	8
30 or more	Fetal lie, presentation, and position	2	3	5

The major clinical examinations and measurements (table VI) were all mentioned on one or more of the referral documents. Thirty-two per cent contained information about blood pressure recording, urine analysis results, and the presence or absence of oedema; therefore, for two-thirds of the women no data relevant to the later diagnosis of toxæmia of pregnancy were received. As might have been expected, the presence of data on which to base a diagnosis of toxæmia varied with the period of gestation (table VII). This information was given for only half the women of 20 weeks or more at referral. Of the eight women of 28 weeks' gestation or more at referral, only one had mention of blood pressure, urine analysis, and presence or absence of oedema.

Haematological investigations and records—Information about haematological tests or blood transfusion history, or both, was given for 60% (tables VIII and IX). Patients with blood transfusion histories were more likely to present with blood test information than those without.

TABLE VI—Frequency of recording clinical examinations

Examinations	Percentage of sample
Blood pressure recording	82
Urine analysis result(s)	53
Presence/absence of oedema	37
Weight	76
Height	62
Breasts/nipples	13

TABLE VII—Frequency with which data relevant to diagnosing toxæmia was recorded

Length of gestation at time of referral	Toxæmia data		Total
	No giving data	%	
<20 weeks	20	29	69
≥20	12	50	24
Not known	0	—	7
Total	32	32	100

TABLE VIII—Number of cases when information was given about haematological tests and blood transfusion history

Blood transfusion history	Haematological tests		
	Given	Not given	Total
Given	31	16	47
Not given	13	40	53
Total	44	56	100

TABLE IX—Frequency with which one or more blood tests were recorded

No of blood tests recorded ..	None	1	2	3	4
No of referrals	56	7	6	27	4

Drugs and chemotherapy—For 30 women drug treatment, mainly iron tablets, was noted. Of these 30, two-thirds had their medical history given, whereas among the 70 with no note of drug treatment just under a third had a medical history given.

Other information—Details were requested about radiological examinations and the patient's social circumstances. In both instances information was given for only two patients. For 93 women, other items of information were given. In 21 cases data were difficult to quantify and included, for example, details of cervical smears, pregnancy testing, and the patient's menstrual cycle.

Discussion and recommendations

Referral documents sent to a consultant antenatal clinic may be thought of in at least two ways. Either they are instruments of communication, sent by the general practitioner as the doctor of first contact in the antenatal period, a source of basic data on which the hospital record can build; or they are letters of introduction for the women attending the clinic, a polite acknowledgment between two professional persons. If sharing antenatal care and its concomitant information is to be a reality, the first would seem the more desirable. Indeed, the *Report on Confidential Enquiries into Maternal Deaths in England and Wales, 1967-69*² specifically comments on the need for good communication between the family doctor and the hospital if deaths are to be kept to a minimum.

We have shown that the referral documents more than fulfilled the requirements of an introductory letter but were not always a source of essential basic data. With the exception of five concise detailed letters from general practitioners, the most complete information was given on the specifically designed obstetric booking form.

In the 18% of referrals using both the form for requesting outpatient appointments and the general practitioner's letter as information sources there was a dearth of information presented. Where a co-operation card had been used, there was more information but a wide range of difference in the amount of data that had been consistently recorded. Omissions occurred on all types of referral documents—for example, fetal heart auscultation (table V) and blood pressure recording (table VI).

McMullan and Barr³ found that the type of information of which the general practitioner has unrivalled knowledge, notably the family history and social background of the patient, tended not to be included in referral letters. They suggest that omissions of clinical and social information may not always be significant and that familiarity with such details may make them seem less important. This may explain why the occupation of the married women was recorded in only 35 cases. Information on the partner's occupation, which is necessary to indicate the social class of married women, was recorded in only 4% of cases. The most likely explanation for this is that practitioners were unconvinced of the relevance of the information, which is not surprising since, while the prognostic significance of the information is irrefutable, it is hardly ever used in a formal way clinically.

In the study a medical history was counted as given if any

specific condition was mentioned or any statement of health status was made. We did not accept absence of a statement regarding medical history as an indication of previous good health. For 59 women no details of past or present medical history were contained on the referral documents. The reporting of drug or chemotherapy and x-ray examinations was reviewed in a manner similar to that for medical history. In 30% of the sample some form of drug was noted; this compared favourably with 22.6% obtained by de Alarcon and Hodson.⁴ A survey by Mulcahy,⁵ however, found that information was given for only about 25% of referred patients who were on drug treatment. It is clearly important to have details of medication prescribed by the general practitioner and of self-medication because of the danger of interaction with drugs prescribed in the hospital antenatal clinic and the possibility of adverse effects on maternal and fetal wellbeing.

A summary of the obstetric history was most evident when a specific statement was given about the number of live births, stillbirths, and miscarriages or abortions, because from this the gravid state and parity could be deduced. Unless the obstetric booking form (with a specific request for this information in these terms) was used the obstetric history tended to be incomplete. Parity was impossible to decide in 16% of referrals, and of these, details of obstetric history were not given in four cases.

In this area pregnant women wait from six to seven weeks for a non-urgent appointment at the antenatal clinic. As the average length of pregnancy at booking was 19.7 weeks for primigravida women and 20.9 weeks for multiparae, women were being referred by the general practitioner at about 13 to 14 weeks of pregnancy. There would seem to be a need for general practitioners to refer women earlier and for the waiting time for non-urgent clinic appointments to be reduced.

Pregnancy is a fairly well-defined condition that can be monitored by undertaking certain specific procedures regularly and systematically. Omissions in the presentation of basic data may mean poor documentation, lack of care, or both. In this sample a third of the pregnancies were at 18 weeks or more of gestation, almost halfway through, without the basic data for management being available. In addition, in over half of this sample, records were inconsistently completed and a full history was not presented.

We recommend that: (1) so far as possible a single booking form and a co-operation card should be used for referrals. Each form should be structured so that there is no unnecessary repetition in questions. The utility of these forms should be reviewed periodically; (2) the importance and use of the information on these forms should be a matter for a well-evaluated local educational programme; (3) health care workers should encourage their patients to present early in pregnancy; (4) practitioners should refer patients early for booking in the hospital; (5) antenatal clinics should develop ways to reduce the waiting times for non-urgent appointments.

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ADDENDUM—In the last few months our antenatal clinics have been rearranged as suggested in recommendation (5).

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