# Written advice can provide a safe and acceptable alternative to new patient assessment for selected referrals to haematologists

Peter S Ganly, Helen Keeman, Ruth L Spearing, Mark P Smith, Nigel Patton, Eileen G Merriman and Steve S Gibbons


## ABSTRACT

**Objective:** To measure the safety and acceptability of providing written advice (WA) for selected patients referred to a haematology service, as an alternative to inpatient or outpatient assessment.

**Design, setting and participants:** Review of the initial management and subsequent course of patients newly referred to a tertiary referral hospital in Christchurch, New Zealand, between 16 October 2003 and 8 June 2006. Structured questionnaires were sent to all referring doctors and patients recently managed with WA.

**Main outcome measures:** Numbers and diagnoses of patients managed with WA, early assessment or delayed assessment; re-referral and treatment details; characteristics of WA letters; and opinions of referring doctors and their patients on the WA process.

**Results:** 26% of new referrals (714/2785) were managed with prompt WA, while 16% (455/2785) received the alternative of delayed assessment. After a median follow-up of 23 months (range, 8–40 months), 13% of those managed with WA (91/714) were re-referred back to the same haematologists; 7% (52/714) were assessed in hospital and 2% (15/714) eventually required treatment. There were no deaths due to haematological causes. Over 90% of responding referring doctors said the WA process was rapid and effective, and 77% of recently managed patients were pleased to be treated by their own doctors.

**Conclusions:** Using WA to manage a substantial minority of patients referred to haematologists can be rapid and safe. It is widely accepted by referring doctors.


MJA 2008; 188: 9–12

When a patient is referred to a hospital department from either primary or secondary care, the usual expectation is that the patient will be assessed in the hospital by an appropriate specialist. However, if referral information is sufficiently complete, the specialist may be able to give advice to the referring doctor by letter, allowing the doctor to implement a management plan without the patient actually attending the hospital. This advice would be available sooner than a hospital appointment and could allow hospital resources to be concentrated on the smaller number of patients with a genuine need to be seen by a specialist.

This written advice (WA) to a referring doctor is similar to the letter that follows an outpatient visit, but differs from a telephone consultation that provides no record for subsequent review. Although some patients may value the reassurance of a specialist assessment, others could avoid anxiety associated with such meetings if WA enabled them to be managed by their own doctors instead.

The United Kingdom's National Institute for Clinical Excellence has recommended a structure for management of haematological malignancies, which includes guidelines for referral to secondary care of patients who have or may have these disorders.[1] However, haematologists have a wide range of additional responsibilities, and guidelines for referral in these situations must be worked out locally. Improved access to laboratory investigations, combined with population ageing, means that many patients with minor laboratory abnormalities or early forms of low-grade or premalignant disease, such as chronic lymphocytic leukaemia or monoclonal gammopathy of uncertain significance, are now being identified. No treatment is necessary for many of these disorders and the number of patients far outstrips the available capacity for all to be seen by a haematologist.[2]

Over the past decade, selected referrals to our haematology department have been managed with WA. Here, we examine how every referral was managed over 32 months by a team of five specialists in general and malignant haematology and haemostasis, comparing patients who were managed with WA with others who were assessed in the hospital as inpatients or outpatients. We also review the subsequent progress of patients who were managed with WA and investigate the acceptability of this practice to the referring doctors and their patients.

## METHODS

### Study location

The South Island of New Zealand is about twice the size of Tasmania and has a population of one million. The haematology service in its principal city, Christchurch, provides all haematology services for 50% of this population, intensive treatments such as induction of acute leukaemia for an additional 20%, and haematopoietic stem cell transplantation for the entire population.[3] The five specialist haematologists in the service participate in a roster that triages newly referred patients according to clinical need.

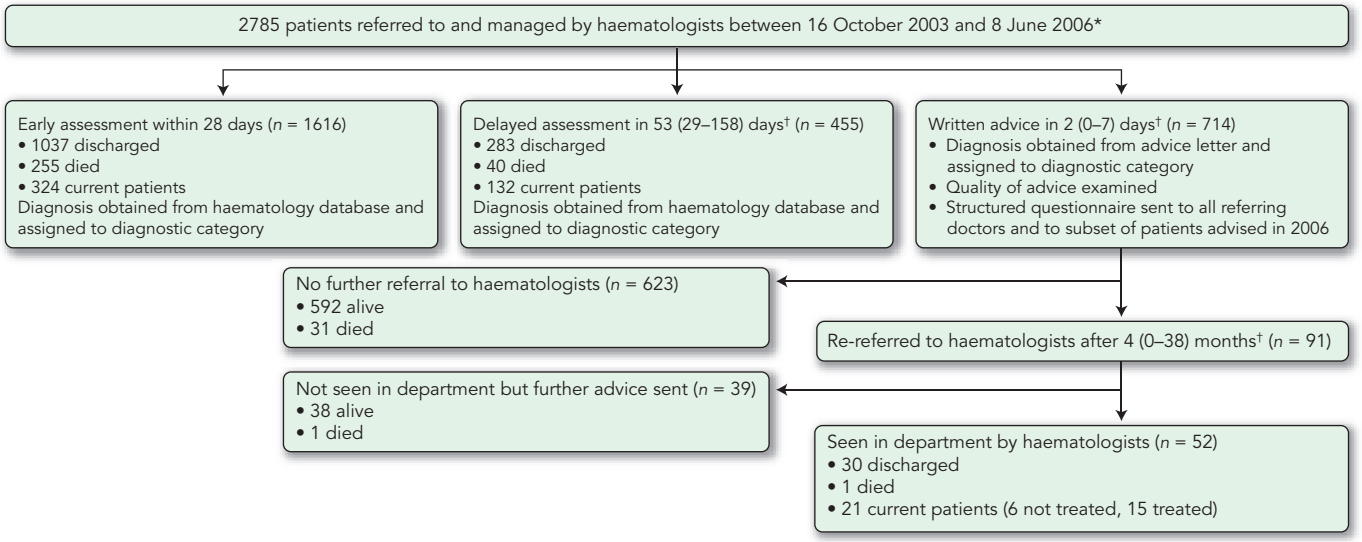
### Study population and design

Successive patients who first presented to the haematology department in the 32 months between 16 October 2003 and 8 June 2006 were followed up until 31 January 2007. Patient information was obtained from computerised records including the hospital patient administration system (which is regularly updated from the national registry of deaths), the haematology database, departmental patient letters, and laboratory and radiology results systems.

Some patients referred to the department by letter were triaged to be seen either: immediately (same day); urgently (within 7 days); semi-urgently (within 28 days); or non-urgently (within 90 days). Patients who had been referred directly from the emergency department, other parts of the hospital or from primary care were seen within 1–2 days.

Other patients with written referrals from primary or secondary care were triaged as not needing to be seen in the hospital, and received prompt WA instead. For the purposes of this study, the actual waiting time between the first contact from the referring doctor and the patient's first assessment or posting of WA was used to classify patients into three management groups: those seen within 28 days (early assessment); those

**1 Patient management and outcomes**




* Patient waiting time (between referral and either specialist assessment or posting of written advice) and status at 31 January 2007 were established from the hospital patient administration system. † Median (range). ◆

seen beyond 28 days (delayed assessment); and those who were managed with WA. Diagnoses were grouped based on previously described categories.[4]

Letters sent as WA were examined for: suggestions for further investigation; a clear opinion with supporting evidence; and an explicit offer of further referral, if required. The subsequent management of patients who had initially received WA and had later been re-referred to the haematology department was also reviewed.

### Structured questionnaires

On 1 January 2007, all referring doctors who had received WA for any of the patients in this study were sent a letter describing the study and containing copies of all WA sent to them. They were asked to complete a structured questionnaire on the process of WA and to indicate if they had referred their patient(s) elsewhere. The study was also explained by letter to the subset of patients who had been managed with WA most recently, between 1 January and 8 June 2006. After giving informed consent, these patients were asked to return a structured questionnaire with their opinions on the WA process.

The study was approved by the Upper South B Regional Ethics Committee.

## RESULTS

Patient outcomes are presented in Box 1. The median follow-up period of those patients still alive was 23 months (range, 8–40 months). Overall, 26% of referrals (714/2785) were managed with WA within a median time of 2 days (range, 0–7 days), while 16% (455/2785) received the alternative of delayed assessment. Patients managed with WA had been referred from both primary care (77%; 550/714) and secondary care (23%; 164/714). Most (87%; 618/714) resided within the district for which the department provides all levels of haematology services.

The diagnostic categories for patients in each management group are presented in Box 2. All patients referred with aggressive presentations, such as acute leukaemia, were managed with early assessment. The most frequent diagnostic category, "thrombosis-related" (34%; 949/2785), largely represented patients who had presented to hospital with venous thromboembolic disease and been discharged for early-stage anticoagulation therapy. Some patients (6%; 164/2785) who had early or delayed assessment were found to have no haematological diagnosis.

Ninety per cent (47/52) of re-referred patients seen in the department were found to have the same diagnosis as had been initially offered in the WA, or had no haematological diagnosis. The other five patients (10%) received clinically important different diagnoses. Thirty-three patients (5%) managed with WA died. There were no primary haematological diagnoses leading to death in 28 of these patients where details could be obtained.

Letters sent as WA varied in length, containing a median of 261 words (range, 73–915 words). Their content included suggestions for further investigations (84%; 603/714), a clearly stated opinion (99%; 704/714), and evidence in support of the opinion (89%; 637/714). Only 40% (289/714) contained an explicit offer of further referral if necessary.

Seventy-two per cent of referring doctors (232/324) returned the questionnaire; their opinions are shown in Box 3. Of the responding doctors, 125 (54%) provided additional comments; two of these pointed out that the process of WA could make it more difficult to access specialist investigations rapidly for patients with non-specific haematological abnormalities. All other comments emphasised satisfaction with the process. Opinions of the 29% of patients recently managed with WA (32/112) who responded to the questionnaire are also presented in Box 3.

## DISCUSSION

We found that a quarter of the patients referred to a comprehensive haematology service in NZ were given prompt WA, and that their referring doctors were overwhelmingly satisfied with this approach.

WA in response to selected referrals has previously been shown to be effective in the

**2 Diagnostic categories of patients by management group**

| Diagnosis | Referrals | Management group | | | Patients managed with written advice and subsequently re-referred | | |
|---|---|---|---|---|---|---|---|
| | | Early assessment | Delayed assessment | Written advice | Re-referred | Seen | Treated |
| Acute leukaemia/aplastic anaemia | 88 | 87 | 1 | 0 | 0 | 0 | 0 |
| Myelodysplastic/myeloproliferative diseases and related presentations* | 218 | 134 | 75 | 9 | 3 | 2 | 1 |
| Lymphoproliferative diseases and related presentations† | 321 | 205 | 82 | 34 | 3 | 2 | 1 |
| Anaemias and related presentations‡ | 209 | 53 | 56 | 100 | 9 | 5 | 3 |
| Blood count and serum electrophoresis abnormalities§ | 488 | 116 | 90 | 282 | 46 | 27 | 9 |
| Bleeding-related | 132 | 74 | 0 | 58 | 12 | 6 | 0 |
| Thrombosis-related | 949 | 822 | 4 | 123 | 12 | 6 | 1 |
| Other diagnoses¶ | 380 | 125 | 147 | 108 | 6 | 4 | 0 |
| Total | 2785 | 1616 | 455 | 714 | 91 | 52 | 15 |

* Myelodysplastic syndromes, chronic myeloid leukaemia, chronic myeloproliferative diseases. † Lymphomas, chronic lymphocytic leukaemia, lymphadenopathy, myeloma, amyloidosis. ‡ Anaemia of chronic inflammation, nutritional anaemias, haemolysis, haemoglobinopathies. § Neutrophilia, lymphocytosis, leukopenia, polycythaemia, thrombocytosis, thrombocytopenia, macrocytosis, paraprotein. ¶ Haemochromatosis, post-splenectomy, other transplant diagnoses, miscellaneous, no haematological diagnosis. ◆

well defined circumstance of one specialist managing one condition (eg, lipid abnormalities[5]). Our findings support those of a review of a general haematology service in the UK, where general practitioners were satisfied with receiving WA from one of their specialists for selected referrals, with 121 of 274 patients referred over 14 months being managed in this manner.[4]

We extended this work to review the subsequent course of patients managed with WA and found that 7% were ultimately seen by a specialist after re-referral. The initial diagnosis occasionally required revision and, overall, 2% of all patients managed with WA went on to receive treatment. Deaths among patients managed with WA occurred less frequently than among patients who received early or delayed assessment (Box 1) and were not due primarily to haematological disease. From the limited information received from patients managed with WA, they shared their doctors' satisfaction with the process.

**3 Frequency of opinions of referring doctors and patients about the written advice process**

| Response (when given) from returned structured questionnaire | Agree/strongly agree |
|---|---|
| *Referring doctors* (n = *232*) | |
| I was not surprised to receive this response about my patient(s) | 70% (156/222) |
| I thought the process was rapid | 92% (206/223) |
| I found the suggestions for management of my patient(s) were helpful | 100% (226/226) |
| My concerns were addressed completely | 93% (211/227) |
| I felt I could easily re-refer my patient(s) to haematology if I thought it necessary | 96% (216/224) |
| I did not have to refer my patient(s) to another service instead | 94% (204/216) |
| I thought that my patient(s) was satisfied with this process | 83% (183/221) |
| I am happy with the way this process is working at present | 96% (217/225) |
| *Patients* (n = *32*) | |
| I knew my doctor had referred me to the haematology department | 84% (27/32) |
| I would have liked to have been seen in the new patient clinic | 23% (7/31) |
| I was satisfied with my care being handled by my referring doctor instead of by the haematologist | 77% (24/31) |

To gauge whether our study had captured the majority of patients we expected to be referred, we estimated the incidence of chronic myeloid leukaemia in our region, on the assumption that all patients with this diagnosis for whom we provide all haematology services should be registered. The incidence of chronic myeloid leukaemia was 0.8, similar to the incidence of 1.1 in south-east England,[6] suggesting our data do include all appropriate haematology referrals, at least for this condition.

The proportion of referrals managed with WA in this study (26%) is lower than that reported in the previous study (44%[4]), but that study only included patients referred for outpatient assessment and not those referred from within the hospital for management of acutely presenting haematological conditions or anticoagulant management. Reanalysis showed that we provided WA to 44% of patients referred for outpatient assessment in 2006 (data not shown). The proportion of patients managed with WA in each diagnostic category was similar to that found previously,[4] however we used WA more frequently for the diagnoses of chronic lymphocytic leukaemia, lymphadenopathy and paraprotein.

We had prepared notes on the management of some common haematological conditions in primary care, and we used these where appropriate to supplement WA. We

have not assessed whether management with WA or these notes has changed referral patterns to our practice.

The key to providing good WA is good referral information, supplemented if necessary by a telephone call to the referring doctor and by additional laboratory data. All these factors are in place at our centre: inadequate referral letters are uncommon, and our entire referral population is served by three easily accessible laboratories.

Our process followed the ethical principle that doctors have a responsibility to provide the best standards of service possible within the limits of the resources available to them.[7] There are no medicolegal reasons why a specialist should not consider other ways of dealing with referrals, when the alternative is to have the patient wait for delayed assessment or indefinitely. We found that WA shortened the time to management by many weeks compared with delayed assessment. Once the advice was offered, the duty of care returned to the referring doctor, and ongoing management was between the referring doctor and the patient. An invitation for re-referral was not explicitly offered in 60% of WA, and we have since changed our practice to automatically include this invitation. Our referring doctors demonstrated that they could safely follow up patients using the advice given, and we are not aware of any patients managed with WA who were not re-referred in a timely fashion when necessary.

Although the preparation of comprehensive and helpful WA is not a trivial undertaking, an advantage of doing so has been that our resources could be assigned to other activities. Over the course of this study, 662 referred patients were not assessed in hospital, avoiding the attendant costs and generation of repeated and additional investigations and allowing us to see other patients with significant haematological disease sooner.

If a team of good referring doctors exists, this system can be generalised to other specialties, where an opinion is required based on clinical information already available and when specialist treatment is unlikely to be needed. Sufficient support is required for the specialist and the secretarial time needed to prepare WA, and this should not be allocated based only on the number of new patients actually seen — which would be a strong disincentive to using WA. Following the success of this process in haematology, a system for referring doctors to request WA, when desired, has been developed throughout our institution.

## ACKNOWLEDGEMENTS

We acknowledge the helpful contributions of Dr Andrew Fairgray and Dr Paul O'Gorman, both general practitioners, to the design of this study. Ms Janine Keats and Ms Melanie Brown provided unstinting help with computerised databases, and Ms Karen Hawke in the Referrals Centre mailed and collated our referring doctor and patient questionnaires. Helen Keeman was supported by a Summer Studentship from the University of Otago while she contributed to collecting and analysing data.

## COMPETING INTERESTS

None identified.

## AUTHOR DETAILS

**Peter S Ganly,** PhD, FRACP, FRCPA, Haematologist[1,2]
**Helen Keeman,** Medical Student[2]
**Ruth L Spearing,** FRACP, FRCPA, Haematologist[1]
**Mark P Smith,** FRACP, FRCPA, Haematologist[1]
**Nigel Patton,** MD, FRACP, FRCPA, Haematologist[1] (Currently[3])
**Eileen G Merriman,** MB ChB, BMLSc, Advanced Trainee[1]
**Steve S Gibbons,** FRACP, FRCPA, Clinical Director of Haematology and Haematologist[1]

1 Department of Haematology, Canterbury Health Laboratories and Christchurch Hospital, Christchurch, New Zealand.
2 University of Otago, Christchurch, New Zealand.
3 Division of Haematology, Institute of Medical and Veterinary Science, Adelaide, SA.

*Correspondence:* peter.ganly@cdhb.govt.nz

## REFERENCES

1 National Institute for Clinical Excellence. Guidance on cancer services. Improving outcomes in haematological cancers. The manual. London: NICE, Oct 2003. http://www.nice.org.uk/nicemedia/pdf/NICE_HAEMATOLOGICAL_CSG.pdf (accessed Nov 2007).
2 Smith AG, Bhavnani M. Haematology: sustainability, modernising, managing capacity and achieving cancer plan objectives. *Bull R Coll Pathol* 2006; 136: 44-46.
3 Guidelines on the provision of facilities for the care of adult patients with haematological malignancies (including leukaemia and lymphoma and severe bone marrow failure). British Committee for Standards in Haematology Clinical Haematology Task Force. *Clin Lab Haematol* 1995; 17: 3-10.
4 Tso A, Harris L, Littlewood T. Are written responses to some referrals to a general haematology clinic acceptable? *BMJ* 2004; 329: 946-947.
5 Stuart W, Smellie A. Do we need lipid clinics? Shifting the balance between secondary and primary care. *Ann Clin Biochem* 2005; 42: 463-467.
6 Phekoo KJ, Richards MA, Moller H, Schey SA; South Thames Haematology Specialist Committee. The incidence and outcome of myeloid malignancies in 2,112 adult patients in southeast England. *Haematologica* 2006; 91: 1400-1404.
7 St George IM. Ethical guidelines for doctors' duties in an environment of competition or resource limitation. In: St George IM, editor. Cole's medical practice in New Zealand. Wellington: Medical Council of New Zealand, 2001: 91.

*(Received 1 Jun 2007, accepted 13 Sep 2007)* ❑