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# Quality and appropriateness of referrals for dementia patients

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## ABSTRACT

**Objective** To evaluate the quality and appropriateness of referrals from general practitioners (GPs) to geriatricians of patients with suspected dementia.

**Design** A retrospective review of referrals from primary health care to a department of geriatric medicine. A data sheet was developed from a review of previous literature. Two GPs and two geriatricians assessed the quality and appropriateness of the referrals.

**Setting** Patient records in the geriatric department were collected, registered and scrutinised.

**Subjects** A total of 135 first-time referrals from January 2002 to December 2002 were evaluated. All patients and relatives were informed that participation was voluntary and anonymity was guaranteed.

**Main outcomes** Assessment of the appropriateness of referrals.

**Results** The mean age of all referred patients was 78.7 years (standard deviation (SD) 7.3; range 42–90 years) and 61.5% were female; 81 (60.0%) referrals were initiated by GPs, 33 (24.4%) by family members, three (2.2%) by community nurses, nine (6.7%) by the patients themselves and referral initiation was not specified for nine (6.7%). The agreement on appropriateness of referrals between the geriatricians was 83.7% (kappa 0.67; 95% confidence interval (CI) 0.55–0.79; $P = 0.03$) and the GPs was 71.1% (kappa 0.21; 95% CI 0.07–35.3; $P < 0.001$). After consensus, the agreement between the geriatricians and GPs was 57.8% (kappa 0.08; 95% CI 0–0.23). This difference was statistically significant ($P < 0.001$).

**Conclusion** There was disagreement between geriatricians and GPs regarding the appropriateness of referrals. It was found that time-consuming tests were infrequently performed or reported, and key medical information was absent from the referral letters.

**Keywords**: assessment, dementia, geriatrics, primary health care, quality, referral

**How this fits in with quality in primary care**

**What do we know?**
A general practitioner's (GP) skill in writing referrals based on clinical, laboratory tests in diagnosing dementia is emphasised.

**What does this paper add?**
The assessment regarding quality and appropriateness of referral information differs between GPs and geriatricians. Knowledge, attitude and time are essential factors in evaluating suspected dementia.

## Introduction

The Norwegian primary healthcare system, which includes community health and nursing homes, cares for all people with dementia disorders. The population is registered with a general practitioner (GP), who is responsible for co-ordinating health services for his/her patients. Specialist services to the GPs are offered by private specialists and hospital-based outpatient clinics. Geriatric specialist services are mainly hospital based. GPs refer patients to specialists for a variety of reasons such as: further diagnosis, investigation, and treatment or confirmation of the GP's diagnosis.[1,2]

Referral to a specialist should be accompanied by a covering letter containing relevant information. It has, however, been reported that the information content of referral letters from the GP is inadequate.[3] Studies show that referral letters frequently lack information such as the reason for consultation, socio-psychological factors, clinical findings, test results and prior treatments.[4–6] Criticism from specialists regarding the quality of referral information may be interpreted as disrespectful by some GPs, whereas similar comments from fellow GPs are more easily accepted.[7]

Dementia assessment is a labour-intensive exercise demanding information from several sources to which specialist services have no immediate access. GPs have a significant advantage in that they often have longitudinal and comprehensive knowledge of individual patients, sometimes also of their family background, and of their premorbid mental and physical state. Conveying this information should be a matter of course, but this is not always the case.

In principle, the diagnosis and treatment of dementia should be carried out by the primary healthcare services. Specialist expertise is needed in cases where, after evaluation by the primary health services, there is a lack of clarity regarding aetiology and treatment. Dementia assessment is an interdisciplinary task which can be performed within a primary healthcare environment.[8] Dementia-related issues have been important topics covered in postgraduate courses for doctors and nurses during the last decade. Hence, the referral letter to a specialist should contain relevant clinical information and details of the outcome of diagnostic efforts.

The purpose of this study was to evaluate the quality and appropriateness of the information contained in GP referral letters to geriatric specialists (geriatricians) regarding assessment for suspected dementia.

## Methods

A retrospective review was conducted of all first-time referrals ($n = 135$) to the geriatric outpatient department at the Haraldsplass Deaconess University Hospital, Bergen, Norway from January to December 2002 with regard to suspected dementia. A referral was considered to have been made when patients attended the geriatric outpatient clinic with a letter from their GP.

Following a review of the literature,[9,10] a short structured questionnaire was developed to document the information contained in the referral letters with regard to the diagnosis, management and the investigations performed by GPs, for the assessment of suspected dementia including clinical and laboratory examinations, neuropsychological evaluation and imaging. Information on age, sex, family history, the person who initiated and reasons for the referral were also recorded. Identification data were removed from the referrals.

The referral letters were independently assessed by a panel of two geriatricians with a special interest in dementia and two GPs with more than 20 years of experience. Each participating physician was asked to assess the quality of information contained in referrals and the appropriateness of GPs' decisions to refer the patient to the geriatric outpatient service. A list of key clinical features was used to produce review criteria for referral letters for patients with suspected dementia.

The quality of information was assessed according to the criteria defined in Table 1. In this context the quality of referrals was based on the assumption that prior to referral for specialist evaluation, the patient had been subjected to diagnostic assessment within the community healthcare system.[8]

**Table 1** Quality assessment criteria

| Quality | Definition |
|---|---|
| Very good | A referral containing comprehensive information showing that the GP has carried out physical and mental examination, including results from laboratory tests, screening tests and imaging studies |
| Good | Objective information was reasonably comprehensive; however some of tests were either missing or not carried out |
| Fair | Scant relevant information |
| Poor | Little information was provided in the referral letter and many tests were either not carried out or were missing |

The appropriateness of referrals was assessed using a two-point scale, appropriate and inappropriate. The referral was considered appropriate if:

- the referral letter was comprehensive and there were difficulties in making a definitive diagnosis
- the referral letter did not contain comprehensive information, but assessment of the patient was not straightforward.

The referral was considered inappropriate if:

- the referral letter was comprehensive and it was evident that the GP should have started treatment, or the patient should have been referred to the psychogeriatric department
- information was incomplete and it was difficult to determine what efforts the GP had made to reach a conclusion, or the referral had merely been treated as a matter of routine.

Each physician rated the 135 referrals so that there were 270 assessments carried out by the two GPs and 270 by the geriatricians. If there was discrepancy between the GPs or geriatricians, an attempt was made to reach consensus with the two geriatricians and the two GPs, respectively.

All statistical analysis was carried out using SAS 9.1 (SAS Institute, Cary, NC, USA). The degree of agreement between raters was assessed by Cohen's kappa statistics. Interpretation of kappa was: $\kappa$ 0.2 = poor, $0.2 < \kappa \leq 0.4$ = fair, $0.4 < \kappa \leq 0.6$ = moderate, $0.6 < \kappa \leq 0.8$ = good, $0.8 < \kappa$ = excellent agreement.[11] A $P$ value of less than 0.05 was considered statistically significant.

# Results

The mean age of all patients included was 78.7 years (standard deviation (SD) 7.3; range 42–90 years); 61.5% were female. Eighty-one referrals (60.0%) were initiated by GPs, 33 (24.4%) by family members, three (2.2%) by community nurses, and nine (6.7%) by the patients themselves. For nine patients (6.7%) this information was missing. A total of 123 referrals were made for suspected dementia. In one case the GP wanted a verification of the diagnosis, and one patient was referred due to an application to a long-term care facility. Ten patients were referred for various additional reasons (epilepsy, urine incontinency, headache, deep venous thrombosis, eating problems and driving licence renewal). The GP's own assessment of the patient was provided for 83 patients (61.5%). Results from computed tomography were reported for 37 patients (27.4%) and magnetic resonance imaging for one patient (0.7%).

## Quality of referrals

Geriatricians evaluated the quality of information contained in 46 (34.1%) referrals as very good/good, 51(37.8%) as fair and 38 (28.2%) as poor, while GPs evaluated 85 (62.9%) as very good/good, 46 (34.1%) as fair and 4 (3.0%) as poor. The agreement in quality of referrals between geriatricians and GPs was 51.9% ($\kappa = 0.26$; 95% confidence interval (CI) 0.15 to 0.36; $P < 0.001$). Geriatricians rated 30.9% of GPs' referrals and 24.1% of those initiated by family members, patient and community nurses as poor. GPs rated the quality of these referrals as poor in only four patients.

## Appropriateness of referrals

Agreement between the two geriatricians and the two GPs before they reached a consensus was 83.7% ($\kappa = 0.67$; 95% CI 0.55–0.79; $P = 0.03$) and 71.1% ($\kappa = 0.21$; 95% CI 0.07–35.3; $P < 0.001$), respectively. After consensus the geriatricians rated 77 (57.0%) referrals

as appropriate and 58 (43.0%) as inappropriate, whereas the GPs rated 106 (78.5%) referrals as appropriate. Agreement between geriatricians and GPs regarding appropriateness of referrals after consensus was 57.8% ($\kappa = 0.08$; 95% CI 0–0.23; $P < 0.001$).

Of the 58 referrals rated as inappropriate by geriatricians, 44 (75.9%) had proper information but a diagnosis was not made. Geriatricians rated 62.9% of the referrals initiated by family members, patient or community nurse as appropriate compared with 53.1% of the referrals initiated by GPs. A similar tendency was also seen among those referrals rated by GPs (83.3% versus 75.3%). These differences were not statistically significant ($P > 0.05$).

## Discussion

This study showed a variation in referral letters in terms of both quality and appropriateness, and also disagreement between geriatricians and GPs, both initially and after consensus discussions.

Our investigation indicates that a limited amount of clinical information and performed laboratory tests were reported in referral letters which is not in accordance with national guidelines.[8,10] Specialists report that GPs often carry out inadequate investigations prior to referral and GPs infrequently use given standards.[12,13] However, other studies have indicated that GPs may have specific reasons for not performing the necessary assessments, such as level of competency, attitude and time schedule.[14–17]

Time-consuming tests, such as the Montgomery–Asberg Depression Rating Scale (MADRS), Geriatric Depression Scale and Mini Mental Status Examination were infrequently performed. Even given the reticence for carrying out the MADRS test in Norway, the absence of testing could indicate that either GPs do not consider it their responsibility or else their workloads are restrictive. According to geriatric medical practice and literature, these tests are routine practice.[9] On the basis of our data, specialists expect GPs to perform these time-consuming tests more often. Although the primary goal for GPs may be to detect the patients' need for specialist attention, it is difficult to defend the lack of information in referral letters. Despite the limited nature of this study we can state that GPs tended to avoid time-consuming examinations, and general information was inadequate.

A total of 24.4% of referrals were initiated by family members through the GPs, though we have no information as to the reason. Families play an important role in bringing suspected cases of dementia to GPs' attention, and it is therefore likely that many referrals initiated by the GPs were based on wishes of the family.[12]

We found significant variation between the GPs in evaluating the appropriateness of referrals. Several reasons, for example patient characteristics (sex, social class), GP characteristics (young, sex, inexperienced, knowledge) and practice characteristics (practice size, location) may have influenced this variation. The disagreement on appropriateness as assessed by GPs and geriatricians could be due to differing expectations in the two groups regarding referral content. For example, while some studies report that GPs are expected to conduct diagnostic evaluation tests and can adequately assess and manage dementia patients,[18–20] Turner *et al* (2004) reported that GPs believed that diagnosing dementia was within the specialists' domain.[21] Furthermore, the GPs participating in the current assessment panel referred their patients to the geriatric outpatient department. Their different views of quality and appropriateness of referrals may therefore mirror variation among GPs more generally. The geriatricians on the other hand, tended to have greater agreement of what should be expected from a referral letter.

There have been few studies published on variation in the quality of referral letters from GPs to specialists in various medical disciplines, and perusal of the literature has not revealed any comprehensive study on the quality of referrals of dementia patients.[3,4] The quality of referral could be improved by standardising the referral form, which includes the reasons for and the objectives of the referral.[4,6] Specialists have reported a lack of central information, and GPs reached the same conclusion.[7] Employing GPs as co-ordinators or advisors at hospital has resulted in improved referrals, e.g. referrals having sufficient information, and relevant laboratory tests being carried out before referral; reorganising the GPs' continuing education, and better communication and co-ordination between GPs and specialists.[22]

This study has some limitations. The sample was derived from a single institution and may suffer from selection bias. Almost 25% of the referrals were initiated by the family members; this could be another source of bias on referral processes. This was a retrospective study and referrals were assessed by only four physicians; this could have caused a bias in the assessment.

## Conclusion

This study revealed disagreement between geriatricians and GPs regarding the quality and appropriateness of referrals for suspected dementia. We found variability in the quality of referrals; time-consuming tests were infrequently performed; more medical information needed to be included. We recommend having GPs linked to hospitals as co-ordinators or advisors to ensure better understanding between GPs and specialists.

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## ETHICAL APPROVAL

This study was approved by the Regional Ethics Committee for Medical Research. All patients and relatives were informed that participation was voluntary; they could refuse use of their data; and anonymity was guaranteed.

## CONFLICTS OF INTEREST

None.

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