Quality improvement report

Effect of a multifaceted approach to detecting and managing depression in primary care

Jan Scott, Alison Thorne, Peter Horn

Abstract

Problem Need to improve the detection and management of depression in primary care.
Design Prospective, before and after study of changes in detection and management following attempts to introduce a chronic disease management approach.
Background and setting Two representative general practices in the north east of England that differed markedly in resources available and populations served.
Key measures of improvement Number of cases on a depression register, number of cases accurately diagnosed, adherence to own clinical management guidelines.
Strategies for change Multifaceted intervention to meet the needs of each practice modified by in-house steering group, including resources to develop a case register, an education and training programme on detection and management agreed by consensus, facilitation of meetings with secondary care staff, and support in developing a practice guideline.
Effects of change Practice A (with six partners and serving a predominantly affluent white British population) improved case detection rate by 23%, reduced prescribing of sub-therapeutic doses of antidepressants by 36%, and adhered to the preferred treatment regimens. At Practice B (with three partners and two surgeries located in deprived urban inner city areas with high levels of unemployment and large ethnic minority populations) improvement in the sensitivity of case detection was accompanied by a reduction in specificity. The practice did not reach consensus on its own guideline and was unable to sustain the model.
Lessons learnt A simple practice based approach improved the detection and management of depression in a team familiar with the philosophy of chronic disease management, with the capacity to commit to the programme, and with a critical mass of team members being open to change. This model failed to affect depression management when staff engagement with the project was passive rather than active and the practice was less well resourced and served an economically deprived and ethnically diverse population.

Background and setting

The prevalence of depression is 3-9%.[1] It is more common than diabetes and asthma and, by 2020, will rank second only to ischaemic heart disease as a worldwide disease burden.[2] About 90% of episodes of depression are managed in primary care. However, case identification and treatment are suboptimal.[3 4] Interventions that focus on any one component of the identification or management process have demonstrable research efficacy but limited clinical effectiveness.[5] Models that target several aspects of depression management simultaneously may be more beneficial.[6] This paper describes attempts to introduce such a multifaceted model.

Newcastle and North Tyneside District Health Authority met the costs of the project and provided a list of five general practices that might participate. From these, we recruited one large practice serving a population with low levels of deprivation and a less well resourced practice serving a more deprived area (see table 1 for details).

Practice A-The first practice had a list size of about 10 000 and served a predominantly affluent white British population. The practice team comprised six partners and 13 other staff, including a counsellor and a psychologist.

Practice B-The second practice had about 5500 registrations. It had two surgeries located in deprived urban inner city areas with high levels of unemployment and large ethnic minority populations. There were three partners, with a series of locums employed to cover one partner's study leave. The surgeries had access to a counselling service for individuals from ethnic minority groups. Each surgery referred cases to different community mental health teams.

The problem

The problem was how to implement effective methods of identifying and managing adult depression in general practice without distorting normal working patterns. We applied a "chronic disease management" approach, aiming to establish an integrated care pathway.[7] A potential barrier to implementation was that primary care teams were under pressure to make other changes and had limited time and resources available.

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Table 1 Characteristics of practices where multifaceted approach to detecting and managing depression was implemented. Values are numbers (percentages) of patients unless stated otherwise

Characteristic	Practice A	Practice B
No of patients aged 18-65 years:	5435	3250
Women	2826 (52)	1918 (59)
No (%) from ethnic minorities	55 (1)	1528 (47)
No of patients aged 18-65 years treated for depression*:	285	52
Aged 40-65 years	194 (68)	31 (59)
Women	205 (72)	27 (51)
With recurrent depression	100 (35)	5 (10)†
With chronic depression (>2 years continuous treatment)	88 (31)	6 (12)†
Case management:		
Prescribed SSRIs	117 (41)	29 (55)
Prescribed subtherapeutic doses of antidepressants	108 (38)	16 (31)
Reviewed within 6 weeks	29 (10)	Not known
Offered counselling‡	46 (16)	7 (13)
Referred to mental health services	63 (22)	21 (40)

SSRI=selective serotonin reuptake inhibitor.
*Estimated from numbers prescribed antidepressants specifically for depression.
†Figures from handwritten case notes and may be an underestimate.
‡Data from practices and counselling services.

We seconded an H grade mental health nurse to facilitate the project, and a specialist registrar provided sessional input.

Key measures for improvement

We used a prospective before and after design to evaluate changes in depression management. We defined five measures of improvement in advance:

- All identified cases of depression to be placed on a register; an appropriate indicator would be if about 6% of patients aged 18-65 years were registered
- Antidepressants to be prescribed at agreed doses for the acute, continuation, and maintenance phases of depression
- Drugs to be prescribed from an agreed practice formulary reflecting clinical and cost effectiveness data (in practice A the drug of choice would be lofepramine[8]) and the "Northern Regional Quality Marker" (which states that selective serotonin reuptake inhibitors should comprise $<25\%$ of prescribed antidepressants)
- A call and recall system to be instituted so that patients newly prescribed antidepressants would be reviewed at two and six weeks
- Referrals to secondary care to be for reasons agreed at the "interface meetings" with mental health services (see below) and would comprise no more than 10% of cases seen.

We assessed staff views of the intervention using a modified version of the client satisfaction questionnaire.[9] This was rated on a 1-4 scale (1=strongly disagree, 4=strongly agree).

Strategies for change

The project facilitator worked alongside a steering group at each practice to devise and deliver

- Staff training to enable reliable detection of cases of depression
- Specific computer codes that flagged cases and their clinical status on a register
- In-house treatment guidelines to aid case management
- Referral and shared care procedures agreed jointly with mental health services.

Intervention

Case register—AT and PH reviewed a 50% sample of case notes at practice A stratified by age and sex to identify patients aged 18-65 years currently being treated for depression. A series of computer codes were used to categorise cases on a practice register (see table 1). This proved difficult at practice B as some data were not computerised. Information was presented to the teams regarding actual versus predicted numbers of cases.

Case detection—With ethical approval, we asked patients attending surgeries held by each general practitioner to complete a hospital anxiety and depression scale questionnaire.[10] We defined patients with a depression subscale score of eight or more as depressed. At practice B, we employed interpreters to facilitate completion of the questionnaire. The general practitioners completed a practice activity card[11] for each patient indicating whether they identified any psychological problems. We presented the sensitivity and specificity findings at a practice meeting and provided each general practitioner with private feedback on his or her case identification skills. We held training sessions on identifying and diagnosing depression, problem based interviewing skills,[12 13] basic support techniques, and psychopharmacology. After training, the case detection exercise was repeated.

Case management—The steering groups drafted practice-specific treatment guidelines using two published evidence based guidelines as a template.[3 4 8 14] Criteria for in-house referrals to counselling were reviewed. This process took practice A staff about two hours. Consensus on the guideline was not achieved at practice B.

Primary and secondary care interface—Audit data were used to inform meetings on referral and shared care procedures with the sector consultant psychiatrist and a community psychiatric nurse. At practice B these meetings were repeated for each of the two sector teams covering the practice. This took about one to two hours of staff time.

We used a quasi-experimental design to explore the immediate impact of introducing the package and the adherence of each team to the agreed practice at six months after the active phase of the project.

Effects of change

Practice A—At baseline, 285 cases of depression were known to practice A, compared with the predicted 399 (95% confidence interval 331 to 414). After intervention, 362 cases (6.6%) were registered (see table 2). Although only 66% (51/77) of new cases of depression were placed on the register, all other aspects of case management improved after the intervention. There was no record of prescribing not in accord with the guideline, and lofepramine comprised 56% of the antidepressants prescribed. The mean client satisfaction questionnaire score for staff (n=9) was 3.3 (SD 0.8).

Practice B—The predicted number of cases of depression for practice B was 208 (95% confidence interval 137 to 292). At baseline, 52 cases (1.6%) were identified, and after the intervention 71 cases were registered (2.2%). An improvement in sensitivity after training was countered by a decrease in specificity

(see table 2). No systematic data were available from the practice after the active phase. The mean client satisfaction questionnaire score for staff (n=5) was 2.9 (SD 0.7).

Lessons learnt and next steps

The results of our intervention might have been easy to predict given the contrasting resources and capacity available in the two practices. Certainly, a key handicap at practice B was the more primitive information technology system and the greater reliance on handwritten information. Familiarity with the philosophy of chronic disease management probably affected engagement with the project. Staff at practice A had previous knowledge and experience of integrated care pathways for hypertension and diabetes; those at practice B did not. The completion of the planned intervention was more difficult at practice B because it was harder to maintain the involvement of the same core staff at each stage. The general practitioners in particular found it difficult to attend training sessions unless locums were provided, and training exercises sometimes had to be repeated. This partly explains the failure to complete the process: it proved impossible for everyone to meet to agree the in-house treatment guideline.

Beyond these tangible barriers, other elements were also important. For example, ownership of the project at practice A clearly extended beyond the steering group. Several individuals, including the practice manager, provided active leadership. Team members seemed committed to the process and showed willingness to review and change their practice. At practice B there was no consensus on how depression should be managed, and difficulties in giving priority to the project meant that a shared understanding never developed. Once the input of the project team was withdrawn, staff at practice B could not sustain their planned work on the register or their guideline.

Practice B is far removed from the research settings where models of primary care management of depression are usually tested. This project suggests that further modifications of the depression management model are needed if it is to help staff and patients in more disadvantaged circumstances. It may not be feasible to introduce this model unless a practice has prior experience of chronic disease management and computerised records are used routinely. If these components are in place, two basic challenges remain—namely, active leadership from within the primary care team and sufficient incentives for a critical mass of team members to engage in the process. Even then, prioritising this work over other commitments is unlikely without a strong steer from primary care trusts and strategic health authorities.

In summary, attempts to implement "whole system" approaches to depression management in primary care produce inconsistent results.[15–17] The key elements for success are probably organisational change combined with individual commitment to behavioural change. However, the basic challenge of creating and maintaining an effective system of management of depression in primary care without the artificial support of a research project remains.[17]

Table 2 Comparison of practices A with B before and after implementation of multifaceted approach to detecting and managing depression

	Practice A	Practice B
Cases of depression		
Predicted No of cases (95% CI)	399 (331 to 414)	208 (137 to 292)
No of cases aged 18-65 years identified after intervention (% of practice patients)	362 (6.6)	71 (2.2)
Case identification		
Before intervention:		
Sensitivity (%)	60	25
Specificity (%)	62	94
After intervention:		
Sensitivity (%)	83	50
Specificity (%)	60	72
Case management after intervention		
No (%) of cases prescribed SSRIs	88/301* (29)	Not known
No (%) of cases prescribed subtherapeutic doses of antidepressants	6/301* (2)	Not known
No (%) of new cases reviewed within 6 weeks	53/77 (69)	Not known
No (%) of new cases referred to mental health services	7/77 (9)	Not known

SSRI=selective serotonin reuptake inhibitor.
*After intervention, 77 new cases were identified, but antidepressants were discontinued for 61 patients.

Key learning points

A simple practice based approach improved the detection and management of depression in a team familiar with the philosophy of chronic disease management

Active ownership of and participation with the project plus external support to develop the depression case register were important elements in implementation

This multifaceted approach failed to affect depression management in a less well resourced practice serving an economically deprived and ethnically diverse population

Creating a sustainable system for the effective management of depression applicable in a wide variety of practice settings remains a challenge

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Contributors: JS designed the project, obtained funding, supervised the work of AT and PH, and wrote the first and final drafts of this article. AT was the key link to the practices, working with each practice steering group on the development of the depression register and the clinical practice guideline on depression, providing training input, and drafting detailed reports for the health authority. PH identified cases of depression and treatments prescribed in each practice and contributed to the training programme and the drafting of reports.

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Comprehensive health care for people infected with HIV in developing countries

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By far the greatest burden of disease from HIV infection is in developing countries, where health services are generally ill equipped to cope. The authors consider how effective HIV services can be delivered in such countries

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HIV infection poses tremendous challenges to healthcare systems globally. Over 90% of the estimated 40 million people living with HIV infection in 2001[1] live in resource poor settings and do not share the improved prognosis now achieved in developed countries.[2] The World Health Organization estimates that in 2002, of the 6 million people in developing countries in need of antiretroviral therapy, only 4% are getting such treatment, half of whom live in Brazil.[2] In 2001 about 900 000 people were infected with HIV in the United States, and over 500 000 (over 55%) were receiving antiretroviral therapy.[1] In sub-Saharan Africa, however, of the more than 28 million people with HIV infection in 2001, fewer than 30 000 (just over 0.1%) were receiving antiretroviral therapy.[1] In 2001, there were about 15 000 deaths from AIDS in the United States (roughly 1.7% annual mortality) and an estimated 2.2 million deaths from AIDS in sub-Saharan Africa (over 7.9% annual mortality).[1] In this article we explore the question of how effective HIV services can be delivered in resource poor countries.

Summary points

- Universal access to comprehensive health services is needed to reduce HIV related morbidity and mortality worldwide
- The World Health Organization's strategy for chronic disease management in resource poor countries could provide a model for delivering comprehensive services to people infected with HIV who have similar healthcare needs
- Developing effective communication and referral systems to closely link primary providers to more specialised HIV services could start to address the need for HIV expertise
- Integration and coordination of services could optimise the use of resources and increase access to HIV care
- Health services research is needed to define the most effective ways to develop a comprehensive system of HIV care
- Partnerships between donors, governments, non-governmental organisations, and local organisations are essential for developing effective and sustainable HIV and AIDS prevention and care programmes

Methods

We performed searches of Medline, AIDS databases, and global HIV and AIDS libraries such as Joint United Nations Program on HIV/AIDS (UNAIDS) publications and website, and we reviewed abstracts of major AIDS conferences including the XIV International Conference on AIDS in Barcelona, July 2002. We also relied on personal experience, research, and capacity-building activities of members of the faculty affiliated with the University of Washington Center for AIDS Research who are funded by the National Institute of Health, US Agency for International Development (USAID), WHO, Centers for Disease Control and Prevention, and Health Resources and Services Administration for work in Africa, the Americas, and Asia.