SUMMARY

Background and objectives of this thesis
Anxiety and depression are the most prevalent mental disorders, the burden of disease is high and these disorders are costly. With approximately 75% of adult patients visiting their general practitioner (GP) at least once a year, the GP is in a good position to recognise and treat anxiety and depression. Clinical practice guidelines are available to provide the best evidence-based mental health care and improve uniformity in performance in general practice. The main recommendations are (i) recognition of anxiety and depression in high risk groups, (ii) diagnosis of patients using the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), (iii) assessment of the severity of anxiety and depression, and (iv) start of a treatment appropriate to the diagnosis and severity, in shared decision making with the patient. Despite the dissemination of guidelines, adherence to recommendations in practice is suboptimal. A variety of factors related to patients, GPs and organisations can influence the recognition and treatment of anxiety and depression according guidelines. Improving compliance with the guidelines is important, because adhering to treatment guidelines will result in better patient outcomes.

In recent decades various strategies for the implementation of guidelines have been developed and applied to improve provider performance and patient outcomes. In this thesis two promising strategies are evaluated, the Breakthrough Series Collaborative (BSC) and tailored interventions. Furthermore, the actual performance of GPs regarding stepped care, and patient and GP characteristics associated with the recognition of anxiety and depression in general practice were examined.

Chapter 1 describes the objectives and research questions of the thesis. The purpose was to provide insight into:
- The actual performance of GPs regarding depression identification, screening, the severity assessment of newly diagnosed depression and stepped care allocation (Chapter 2)
- The influence of the Anxiety Disorders Breakthrough Series Collaborative on the implementation of the guidelines for anxiety disorders in primary care (Chapter 3)
- The effectiveness of tailored interventions, additional to training and feedback on recognition, diagnostics and treatment of patients with anxiety and depression in general practice, compared to training and feedback alone (Chapters 4 and 5)
- The barriers affecting the uptake of guideline recommendations for patients with anxiety and depressive disorders and GPs’ perceived usefulness of the tailored interventions (Chapter 6)
- Which patient and GP characteristics are associated with the recognition of anxiety and depression in general practice (Chapter 7)
**GPs’ actual performance regarding depression**

A survey is presented in Chapter 2, which used a self-administered questionnaire in which GPs were asked about their actual performance concerning: depression identification and screening, assessment of the severity of patients with a newly diagnosed depressive disorder, and delivering stepped care treatment to these patients. All GPs were also asked to indicate the three most important reasons that they did not adhere to the guideline recommendations. Whether GP-related characteristics were associated with their performance was explored.

The study involved 194 GPs (response rate: 39%). Responses indicated that 37% of these GPs paid systematic attention to depression identification, 33% used a screening instrument, and 63% determined the severity of a newly diagnosed depression, generally without using a measurement instrument. Most GPs (72%) indicated that they allocated stepped care treatment to the majority of their patients who were newly diagnosed with depression. Nevertheless, a minority indicated starting with a watchful waiting approach (29%) or (online) self-help interventions (10%) in more than half of these cases, while four out of ten GPs indicated starting with antidepressants or psychotherapy. GPs themselves indicated that patients’ perceived preferences and personal lack of knowledge and skills were the most common reasons to deviate from stepped care treatment allocation. Structural collaboration with mental health professionals was positively associated with assessing severity. Assessing the severity of newly diagnosed depression and clinical experience were positively associated with allocating stepped care. These results showed that delivering stepped care for depression in daily general practice could be further improved since revised guidelines for depression recommend a stepped care approach.

**Strategies for the implementation of guidelines for anxiety and depression**

Different types of collaboration for quality improvement have been developed. A commonly used Quality Improvement Collaborative approach in recent decades is the Breakthrough Series Collaborative. In Chapter 3 the results of the Anxiety Disorders Breakthrough Series Collaborative are presented. The study involved eight multidisciplinary primary care teams, consisting of 59 healthcare professionals of whom 29 were general practitioners (GPs). Screening patients who met high risk criteria using the anxiety subscale of the Four-Dimensional Symptom Questionnaire was new for all teams. The results suggested that GPs succeeded in diagnosing the complexity of the anxiety disorder in 98% (n=179) of their patients. The proportion of patients with a non-complex disorder that received self-help support or brief therapy increased from 44% to 67%. The proportion of patients with a complex anxiety disorder who received cognitive behavioural therapy and/or an antidepressant decreased slightly from 24% to 18%. GPs rarely monitored anxiety symptoms during the treatment. Furthermore, collaboration between professionals improved in all teams. Although the Anxiety Disorders Breakthrough Series Collaborative may improve adherence to the anxiety disorders guideline and collaboration between professionals for patients with anxiety, more insight is required about which strategies...
really contribute to the improvement of the quality of anxiety care. Therefore studies are needed with a more robust research design.

**Tailored interventions to implement guideline recommendations for patients with anxiety and depression in general practice**

In *Chapter 4*, the design and methods of a cluster-randomized controlled trial are described. In this study the implementation strategies training and feedback for GPs was compared to training and feedback supplemented by a tailored intervention, in order to improve the management of anxiety and depressive disorders. The effect of the implementation strategies has been studied on GPs’ performance and patient outcomes. The primary outcome was the proportion of patients with anxiety or depression recognised by the GP. Recognition was operationalised as the registration in the patients’ medical records, during 6 months preceding and after the EK-10 of terms describing: (i) psychological complaints: anxiety, depression, worrying, sorrow or grief, stress, feeling down, disordered sleeping and unexplained somatic symptoms; (ii) the International Classification of Primary Care-1 (ICPC-1) codes for anxiety, depression and related psychological problems i.e. acute stress, feeling anger or irritation, behaving irritably or angrily, neurasthenia or (iii) a completed 4DSQ. Other outcomes at the GP level were number of consultations related to anxiety and depressive symptoms after recognition, prescription of antidepressants and referral to specialist mental healthcare. The patient outcomes were severity of anxiety and depressive symptoms, functional status, patients’ experience of GP provision of care for mental health problems. Outcomes at the patient level were gathered using self-report questionnaires at baseline (T0), and 3 (T1) and 6 (T2) months later.

In *Chapter 5*, the effectiveness of the RCT described in *Chapter 4* were presented. The tailored implementation programme with training and feedback, compared to training and feedback alone led to recognition of a higher proportion of patients presenting with anxiety and depression (42% versus 31%; OR=1.60; 95% CI:1.01-2.53), more consultations after recognition (IRR=1.78; 95% CI:1.14-2.78) and did not lead to greater prescription of antidepressants (OR=1.07; 95% CI:0.52-2.19) or referral to specialist mental health services (OR=1.62; 95% CI:0.72-3.64). Patients in the intervention condition reported better accessibility of care (ES=0.4; p<0.05) and provision of information and advice (ES=0.5; p<0.05). No significant differences between the groups were found on the other patient outcomes. The mean incremental cost effectiveness ratio (ICER) was €6,807 for each additionally recognised patient. This means that providing tailored interventions € 6807, - cost (care and productivity costs) for each additional recognition of anxiety or depression. The conclusion is that a tailored implementation programme may enhance the recognition and treatment of patients with anxiety or depression. Further development and evaluation of the programme is warranted to determine its cost-effectiveness.

*Chapter 6* presents the results of a qualitative study of barriers affecting the uptake of guideline recommendations for patients with anxiety and depressive disorders as perceived by GPs, and the perceived usefulness of the offered tailored interventions
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to these prospectively identified barriers. The most frequently perceived barriers were a lack of knowledge and skills, disagreement with guideline recommendations, negative outcome expectancy, GPs’ low self-efficacy, no consensus with patients, a lack of information about treatments provided by mental health professionals, and waiting lists. Based upon the barriers, peer group supervision and individualised telephone consultations, tailored to the experienced barriers of each individual GP, were chosen as implementation strategies to improve the uptake of the guideline recommendations. For most of the GPs, peer group supervision was supportive in teaching them how to use the 4DSQ in their consultations with patients, how to diagnose different types of anxiety disorders, to determine the complexity and severity of the disorders, and how to share experiences with other GPs. More than half the GPs indicated that individualised telephone consultations were supportive, and worked out as useful reminders and as incentives, to change fixed patterns. The perceived benefit of using the 4DSQ, and the idea of delivering better care, were generally perceived as essential factors for overcoming the identified barriers, and were supportive in the uptake of guideline recommendations.

Patient and GP characteristics associated with the recognition of anxiety and depression

Patient and GP characteristics associated with the recognition of anxiety and depression in general practice are described in Chapter 7. Patients with higher 4DSQ distress scores (OR=1.03; 95% CI 1.00-1.07) and patients who reported a need for care (OR=2.54, 95% CI 1.60-4.03) were more likely to be recognised. In addition, patient anxiety or depression was less likely to be recognised when GPs had less confidence in their abilities to identify depression (OR=0.97; 95% CI 0.95-0.99). Patient age, chronic medical condition, somatisation, severity of anxiety and depression, and functional status were not associated with the recognition of anxiety and depression. Recognition may be improved by quality improvement activities that focus on increasing GP confidence in their ability to identify symptoms of distress, anxiety and depression, as part of a stepped care approach according guidelines.

General discussion

In Chapter 8 the main findings of the studies are discussed as well as the methodological issues. Furthermore, recommendations for future research are given and implications for clinical practice are discussed. The results of the studies in this thesis suggest that the stepped care approach recommended by the guidelines for anxiety and depression can be further improved in general practice. Research into the most effective, efficient, and acceptable stepped care approaches is necessary. The thesis adds to the evidence that tailored interventions may be a solution to improve the uptake of guideline recommendations for anxiety and depression in general practice. More research is needed before large scale tailored implementation can be recommended. Future research should focus on the effects of tailored interventions on patient outcomes and the cost effectiveness.