

# USING MIXED METHODS FOR EVALUATING THE EFFECT OF A QUALITY IMPROVEMENT COLLABORATIVE FOR MANAGEMENT OF SLEEP PROBLEMS PRESENTING TO PRIMARY CARE

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## Context

A Quality Improvement Collaborative (QIC) designed to improve management of sleep problems in primary care settings was established in Lincolnshire, East Midlands, UK.

## Problem

Hypnotic drugs are often inappropriately prescribed for long term use to patients presenting to primary care services. Non-pharmacological treatment measures are rarely implemented in practice despite guidance supporting their use. Possible explanations for this include a lack of training and limited availability of resources for effective sleep assessment and treatment.

## Assessment of problem and analysis of its causes

We used a QIC to introduce practitioners from the eight participating practices to sleep assessment tools and non-pharmacological interventions, primarily cognitive behavioural therapy (CBTi), for insomnia.

## Strategy for change

Bi-monthly meetings with practice teams were held to share learning. We used adult learning techniques including Plan, Do, Study, Act cycles (PDSA) and monthly feedback of prescribing rates and costs of hypnotic drugs using statistical process control (SPC) charts. Data was collected to understand the facilitators, barriers and changes that practices were making as a result of the QIC.

## Measure of improvement

Each meeting with the collaborative practices was audio-taped and transcribed. Thematic analysis was carried out and the nine emerging themes were reviewed by members of the evaluation steering group to assess inter-rater reliability. We used SPC charts and an interrupted time series design to analyse prescribing data for the two year period preceding the collaborative and the six months of its operation.

## Effects of changes

There was a significant reduction in hypnotic prescribing of benzodiazepines and Z drugs in the practices over the six months of the project and this improvement has been sustained since the initiative. The emerging themes from interviews and discussions were:

- **Engagement of staff:** enthusiastic practitioners incorporated changes in their practice, encouraging other members of the practice to become involved by demonstrating use of the tools and reminders during meetings.

*"It's brought up at every practice meeting and so it's always fresh in people minds. It's not something that's then forgotten."*

- **Practitioner views of the tools:** practitioners favoured the sleep diary and Insomnia Severity Index (ISI) over the Pittsburgh Sleep Quality Index (PSQI).

*"Generally we found that the ISI was easy to complete, score and interpret and can be used in general practice."*

- **Patient and practitioner preconceptions:** patient's age and intellect were factors that practitioners thought might affect whether tools were completed correctly or at all.
- **Educational needs of patients and staff:** previously hypnotics had been seen as the solution to most sleep problems by patients and practitioners.

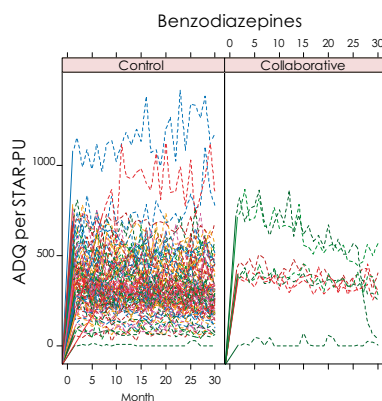
*"When people come in it was so easy to give them a prescription."*

- **Barriers to implementing tools and techniques:** This related to systems, (of care) practitioners and patients.

*"Once the psychiatrist says you should have this, it is really hard as a GP to go against..." Systems*

*"...the cognitive behaviour therapy approach; it's a bit thin on my part, we've not got great skills in that." Practitioner*

**Time series showing change in hypnotic prescribing during a quality improvement collaborative (starting at month 25) comparing collaborative with non-collaborative practices**



*"...the minute you start even trying to approach the subject that the tablets are not really very good, and what about thinking about alternative ways, they will glare very rudely... you have got to approach it in a fresh way to make them thing they are trying something new." Patient*

- **GP-patient treatment and expectations:** practitioners revealed what they thought patients expected, making suggestions of how consultations could be improved to meet patient's needs increasing successful outcomes.
- **Importance of tailored approach:** each patient would need to have treatment tailored depending on the nature of the sleep problem and presence of comorbidities, such as depression, bereavement or pain.
- **Lack of feedback from patients:** some patients did not return for their follow-up consultation or complete their sleep assessment tools. This led practitioners to feel unsure as to whether patients had read and absorbed the information provided to them.

## Lessons learnt

Qualitative research methods were invaluable in understanding the factors which helped bring about change, how change happened and the effect of the change on process of care and patient and practitioner experience.

## Message for others

Quality Improvement Collaboratives benefit from careful analysis using qualitative as well as quantitative methods.

## Further information

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