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ABSTRACT FORM

Title of the abstract:	Effect on hypnotic prescribing of a quality improvement collaborative for primary care of insomnia: segmented regression analysis
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Please indicate your preferred option:	Parallel
Parallel, Poster or Workshop	Poster (display only)

Abstract: *(346 words)*

Introduction
Patients with insomnia commonly present to general practice. Hypnotic misuse and underuse of psychological treatments demonstrates scope for improved care. To explore this, we undertook a feasibility study using a Quality Improvement Collaborative (QIC) across 8 general practices, investigating the effect of implementing sleep assessment and psychological interventions on hypnotic prescribing.

Methods
We used a before-after analysis of the time series of prescribing of benzodiazepines (e.g. diazepam, temazepam, lorazepam) and Z-drugs (e.g. zopiclone, zolpidem, zaleplon) across intervention practices. We contrasted results with those for 8 control practices not subject to the QIC. *Data* were constructed as average daily quantity of hypnotic prescribed per Specific Therapeutic group Age-sex weightings Related Prescribing Unit (STAR–PU) for the period October 2005 to March 2010. *Modelling* was by 2-segment intercept-trend regression performed on the 24 month periods either side of the 6-month operation of the QIC (October 2007 to March 2008). *Estimation* was by either least squares or corrected using the Prais-Winsten method if error serial correlation was present in the errors. We then jointly re-estimated across all intervention practices (repeated on all control practices) using seemingly unrelated regressions to allow for any potential correlations in the models' errors. *Testing* whether the intervention had been successful in inducing a structural break such that post-QIC prescribing of either drug was reduced, we constructed a bespoke test S based on the mean prediction error in the post-QIC period for aggregated intervention practices.

Results
Comparing the two prescribing periods, there was a noteworthy and significant reduction in benzodiazepine prescribing in intervention practices over the shorter post-QIC term of 12 months (S=-2.46, p=0.007), but this was not sustained for the full 24 months post-QIC (S=-0.72, p=0.236). However, for Z-drugs prescribing reductions in intervention practices were sustained into the longer post-QIC period (12 months: S=-1.98, p=0.024; 24 months, S=-1.90, p=0.029). The before-after comparison to control practices showed no significant reduction in prescribing of either drug.

Conclusion
Efficacy of the QIC in reducing hypnotic prescribing was shown, giving support to the need for a full scale trial. Varying length of persistence of outcomes warrants attention.