



Title 'Cut Down to Quit' with Nicotine Replacement Therapies in Smoking Cessation: A Systematic Review of Effectiveness and Economic Analysis

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Aim

To systematically review the clinical effectiveness of 'cut down to quit' (CDTQ) with nicotine replacement therapy (NRT) in smoking cessation; and to review published economic evaluations and undertake a *de novo* cost-effectiveness analysis of CDTQ with NRT in smoking cessation.

Conclusions and results

No systematic reviews of the effectiveness of CDTQ and no randomized controlled trials (RCTs) specifically addressing CDTQ were identified. Seven randomized placebo-controlled smoking reduction trials were included; six of these were industry sponsored. However, sustained smoking cessation was only reported as a secondary outcome in these trials and required commencement of cessation within the first 6 weeks of treatment. Meta-analyses of the study-level results demonstrated statistically significant superiority of NRT compared with placebo. Individual patient data from unpublished reports of five RCTs were used to calculate sustained abstinence of at least 6 months starting at any time during the treatment period (generally 12 months). From this, the meta-analysis indicated statistically significant superiority of NRT versus placebo [relative risk 2.06, 95% confidence interval (CI) 1.34 to 3.15]. The proportions achieving this outcome across all five RCTs were 6.75% of participants receiving NRT and 3.29% of those receiving placebo. The number-needed-to-treat was 29. This measure of sustained abstinence was used for economic modeling. No existing economic analyses of CDTQ were identified.

Recommendations

Meta-analysis of RCT evidence of quit rates in NRT-supported smoking reduction studies indicates that NRT is an effective intervention in achieving sustained smoking abstinence for smokers who declare unwillingness or inability to attempt an abrupt quit. The 12-month sustained abstinence success rate in this population (approximately 5.3% with NRT versus approximately 2.6%

with placebo) is considerably less than that documented for an abrupt quit NRT regime in smokers willing to attempt an abrupt quit with NRT (which according to other systematic reviews is around 16% with NRT vs 10% with placebo). Most of the evidence of effectiveness of CDTQ came from trials that required considerable patient–investigator contact.

Methods

See Executive Summary link at www.hta.ac.uk/execsumm/summ1202.shtml.

Further research/reviews required

Randomized trials in recalcitrant smokers allowing head-to-head comparison of CDTQ delivered with various NRT modalities (eg, inhalator, nasal spray, lozenge, gum, and patch) would be informative. Research is also needed into the best ways of implementing a CDTQ strategy and integrating this with abrupt quit options in the context of all UK smoking services.