The cost-effectiveness of strong, controlled-release opioids for the treatment of chronic non-malignant pain: A probabilistic decision-model

Hawkins N1, Sculpher M1, Morris J2
1University of York, York, UK; 2Napp Pharmaceuticals, Cambridge, UK

OBJECTIVE: To evaluate the cost-effectiveness of available treatments for patients requiring a strong, controlled-release opioid for chronic non-malignant pain. Since patients with chronic pain typically move between treatment options over time, according to analgesic response and tolerability, this evaluation focuses on the cost-effectiveness of therapeutic sequences.

METHODS: A decision-model was constructed to estimate the cost-effectiveness of different sequences of controlled-release (CR) opioids including oxycodone CR, morphine CR, transdermal fentanyl and supportive care. Clinical trials involving these therapies in chronic pain were systematically identified in the literature and reported pain scores were mapped across to utilities. Bayesian meta-analyses were used to compare utilities and adverse events between therapies. These estimates were then incorporated within a decision model along with health care cost estimates, derived using UK prescription data and a survey of UK GPs. Probabilistic methods were used to address parameter uncertainty.

RESULTS: From a total of 57 published trials, 20 met criteria for inclusion in the meta-analysis. Mean quality-adjusted life years (QALYs) relative to supportive care were 0.083 for transdermal fentanyl, 0.100 for morphine CR and 0.101 for oxycodone CR. Mean annual health care costs were estimated at £270 for morphine CR, £854 for transdermal fentanyl and £640 for oxycodone CR. The incremental cost-effectiveness ratio for all therapies, relative to supportive care, was less than £10,000 per QALY gained (morphine £1800, oxycodone £635, fentanyl £9556) suggesting that, if decision-makers are willing to pay up to this value, all therapies should be included in a cost-effective sequence with the most cost-effective order being morphine CR, oxycodone CR, transdermal fentanyl and supportive care.

CONCLUSIONS: Results of this analysis indicate that if decision-makers are willing to pay up to £10,000 per QALY, all three treatments are cost-effective in a therapeutic sequence. The most cost-effective sequence is morphine CR, oxycodone CR, transdermal fentanyl and supportive care.

Burden of illness of patients with neuropathic pain in primary care in the UK

PPN3

Burden of Illness of Patients with Neuropathic Pain in Primary Care in the UK

Makinison GT, Koncz TA
Pfizer Ltd, Tadworth, UK

OBJECTIVE: Neuropathic pain (NeP) results in physical and psychological burdens for patients, and increased health care costs. This research compared primary and secondary care resource utilisation by patients, with and without NeP, in the UK.

METHODS: A large primary care database (DIN-LINK) covering 100 practices (400 GPs) with over 800,000 currently registered patients representative of the UK population was used. A cohort of patients who presented to a GP with NeP at any time during the previous three years was identified. The comparator control cohort included patients with no history of NeP matched by age, sex and GP practice. Patient demographics and resource utilisation data (prescribed medications, number and length of consultations, GP consultations, hospital admissions, sick notes issued) were reported in total, and for NeP-related encounters. The follow-up period for each patient was reported to facilitate comparison.

RESULTS: The database identified 31,801 patients with NeP. There were similar numbers of matched control subjects with the same number of follow-up days. The NeP cohort received 92% more prescriptions in total during follow-up than those in the matched cohort, and 18% of prescriptions were NeP related. The NeP cohort had 77% more GP consultations (21% were NeP related). Patients with NeP received 122% more outpatiet referrals, (33% were NeP related). Hospital admissions were up 107% for NeP patients, (25% were NeP related). Patients with NeP received 186% more sick notes (52% were NeP related) than those without the condition.

CONCLUSION: NeP patients were prescribed more medications and consumed more primary and secondary care resources than the matched patient cohort. The fact that additional resource use was not entirely related to NeP suggests that differences were not attributable solely to this condition, but may be due to co-morbidities associated with NeP.