**Patients concerns inventory (PCI) versus standard treatment pathway in the management of patients with head and neck cancer: a qualitative informed economic evaluation**

*Victory ‘Segun Ezeofor, Llinos Haf Spencer, Simon N Rogers, Anastasios Kanatas, Derek Lowe, Cherith J Semple, Jeffrey R Hanna, Seow Tien Yeo, Rhiannon Tudor Edwards*

**Abstract
Background Head and neck cancer (HNC) patient concerns inventory (PCI) is a condition-specific prompt list that allows patients to raise concerns that might be overlooked. To our knowledge, this is the first economic evaluation of PCI in patients with HNC from a UK National Health Service (NHS) perspective, exploring the cost-effectiveness of the PCI in the treatment of patients with HNC. To triangulate our economic evaluation, we conducted qualitative interviews with a sample of consultants providing care.**

**Methods Alongside a 3-year cluster-randomised controlled trial, we undertook an economic evaluation. The trial start date was April 1, 2017, and it closed on June 30, 2020, while the health economic evaluation commenced in September, 2020. Client Service Receipt Inventory data were collected twice during the trial period, at 6 and 12 months after baseline. Patients were identified by a multidisciplinary team at the trial clinics. This economic analysis compared the PCI intervention (PCI group) with the non-PCI treatment pathway (non-PCI group). We did a probabilistic sensitivity analysis to investigate the cost per quality-adjusted life-year (QALY) gain of the intervention. We also collected qualitative data from seven consultants to corroborate study findings.**

**Findings Our economic model used data from 90 patients in the PCI intervention group and 101 patients in the non- PCI group. The PCI group had 62% male participants while the non-PCI group had 74% male participants. In both groups over 95% of the participants were white British patients . The PCI inventory was low cost at just over £13 per participant. The PCI intervention was cost-effective and cost-saving with an incremental cost difference of £295·91 over the 12-month follow-up period. The QALY values were higher in the PCI group (with a value of 0·79) than in the non-PCI group (with a value of 0·76) . The sensitivity analysis showed that at a Willingness to Pay threshold of £20 000, the PCI intervention had a probability of being cost-effective of 0·85 (95% CI 0·80–0·83). The qualitative results showed that consultants using the PCI reported an enhanced awareness of patients’ overall post-treatment needs.**

**Interpretation The PCI provided an effective means to conduct the clinical consultations by avoiding unnecessary health-care costs and focusing on aspects of care most important to patients. The cost per QALY gain was within the National Institute for Health and Care Excellence guideline threshold. The PCI is a low-cost intervention that generates a cost-effective benefit to patients from an NHS perspective if rolled out as part of routine care.**

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