

PERCUTANEOUS ELECTRICAL NERVE FIELD STIMULATION FOR ADOLESCENTS WITH IRRITABLE BOWEL SYNDROME: COST-BENEFIT AND COST-MINIMIZATION ANALYSIS

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Link: <https://pubmed.ncbi.nlm.nih.gov/38284690/>

SUMMARY:

Percutaneous electrical field nerve stimulation for adolescents with IBS appears to yield significant cost savings to patients' families and insurance. PENFS was associated with **18 added healthy days over one year of follow-up, increased annual parental wages of \$5,802 due to fewer missed workdays to care for the child, and \$4744 in cost savings to insurance.**

- Irritable bowel syndrome (IBS) affects up to 25% of adolescents in the United States. Abdominal pain is a cardinal symptom of IBS that drives missed school days, emergency department visits, and office visits, also leading many parents to miss work to care for their children.
- The model solved for threshold costs associated with PENFS, including both device-related costs alongside reimbursement to place the device in the physician's office. From the patient's family perspective, this included missed wages, transportation, and childcare expenses for other children in the household.
- The base-case analysis evaluated costs and outcomes over a 1-year time horizon, consistent with the typical timeframe for annual health insurance deductible, co-pay, and premium determinations. No discount rate was applied.

RESULTS:

- From the patients' family perspective, PENFS offered the potential to save \$5802 by requiring lower out-of-pocket healthcare expenses and fewer missed days from work to care for patients' abdominal pain related to IBS.
 - Treatment with PNFS added 18 healthy days over a 1-year period compared with usual care without PENFS.
- By reducing healthcare utilization (e.g., office visits, emergency department visits, and diagnostic tests) due to improvement in abdominal pain, PENFS offered the potential to save insurers \$4744 compared to usual care.

RELEVANCE:

- The findings are relevant to adolescents whose gastroenterologist believes that addressing abdominal pain with PENFS would directly improve quality of life and reduce healthcare needs compared to other available options.
- Value estimates are also limited to patients who are expected to sustain improvement in abdominal pain symptoms after four weeks of treatment, noting that product labeling reflects usage for three weeks and that treatment duration and the total number of devices require discussion with the provider.

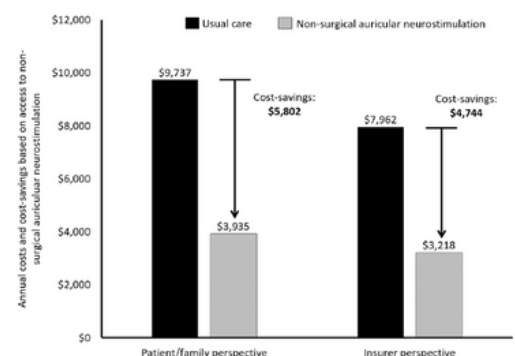


FIGURE 2 Percutaneous electrical nerve field stimulation appears cost-saving to insurers and patients for irritable bowel syndrome-related abdominal pain.