



# EVALUATING INCENTIVES THAT DRIVE MANAGEMENT STRATEGIES FOR UNINVESTIGATED DYSPEPSIA: NATIONAL COST-MINIMIZATION ANALYSIS IN A COMMERCIALY INSURED POPULATION

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## BACKGROUND

- Dyspepsia is a common gastrointestinal disorder affecting roughly 20% of adults characterized by epigastric pain or burning, early satiety, and postprandial fullness
- Practice guidelines promote a routine non-invasive approach to investigating dyspepsia, yet many patients undergo prompt upper endoscopy.
- Clinical uncertainty exists due to differences among strategies in cost, patient satisfaction, and likelihood of symptom relief following management

## AIMS

To assess trade-offs in reimbursement, patient satisfaction, and clinical outcomes of strategies for diagnosis and management of uninvestigated dyspepsia to inform the discrepancy between guidelines and practice.

## METHODS

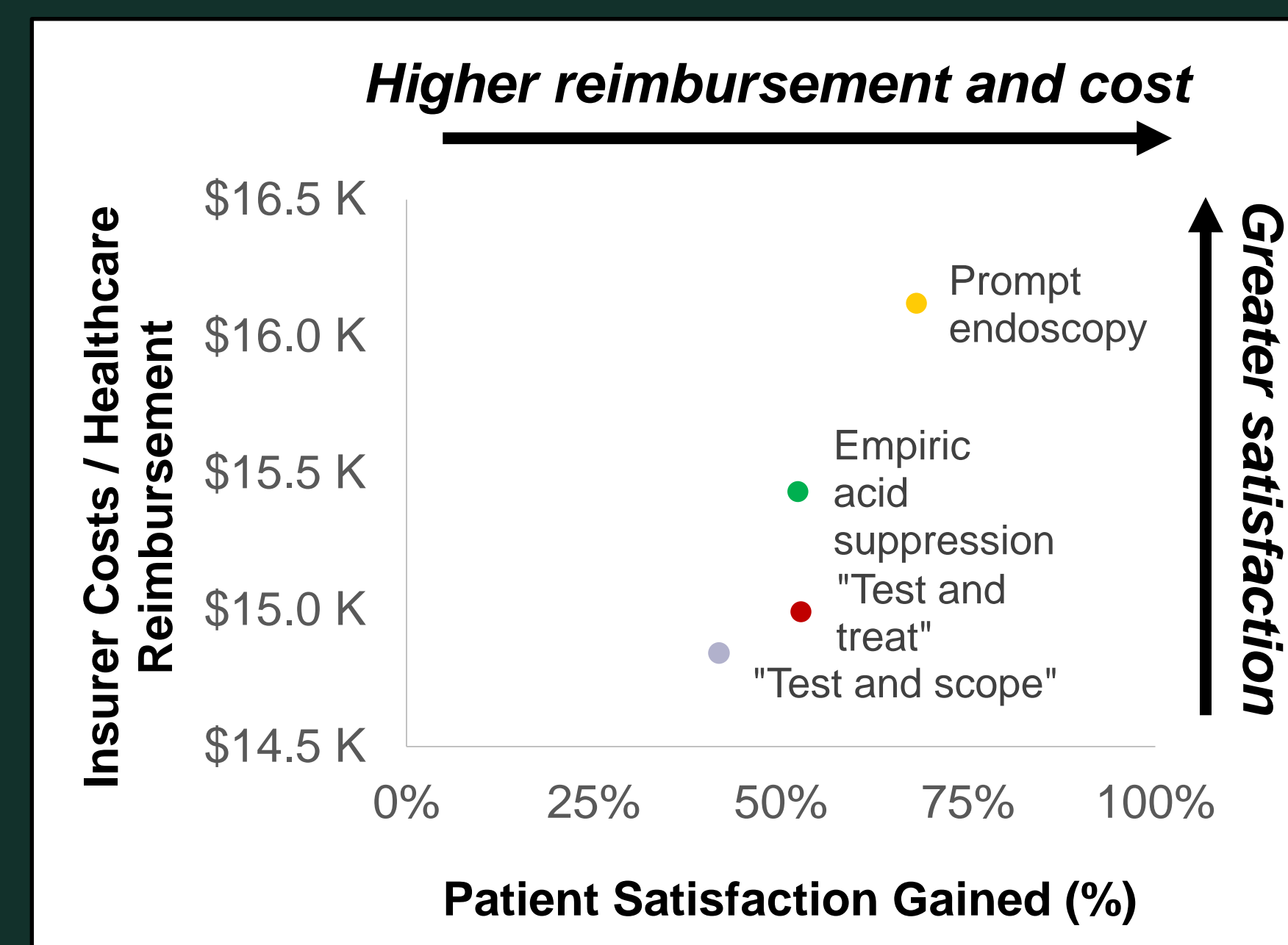
- Study design:** Cost-minimization analysis
- Diagnostic / management strategies:**
  - Prompt endoscopy;
  - 'Test and treat' (test for *H pylori* and prescribe eradication treatment to those who test positive);
  - 'Test and scope' (test for *H pylori* and preform endoscopy in those who test positive); and
  - Empirical acid suppression (8-week PPI trial)
- Base Case:** Healthy, commercially-insured individual <60 years old with uninvestigated dyspepsia without classic GERD symptoms or alarm features presenting to a general gastroenterologist
- Perspectives:** Patient, health system, large employer, and commercial insurance
- Time horizon:** One year, consistent with insurance premium determinations
- Model inputs:** likelihood of clinical response, patient satisfaction with treatment, direct and indirect costs to patients, insurers and employers, quality-adjusted life years gains associated with each strategy
- A RAND/UCLA expert consensus panel of 9 gastroenterologists informed model design

## RESULTS

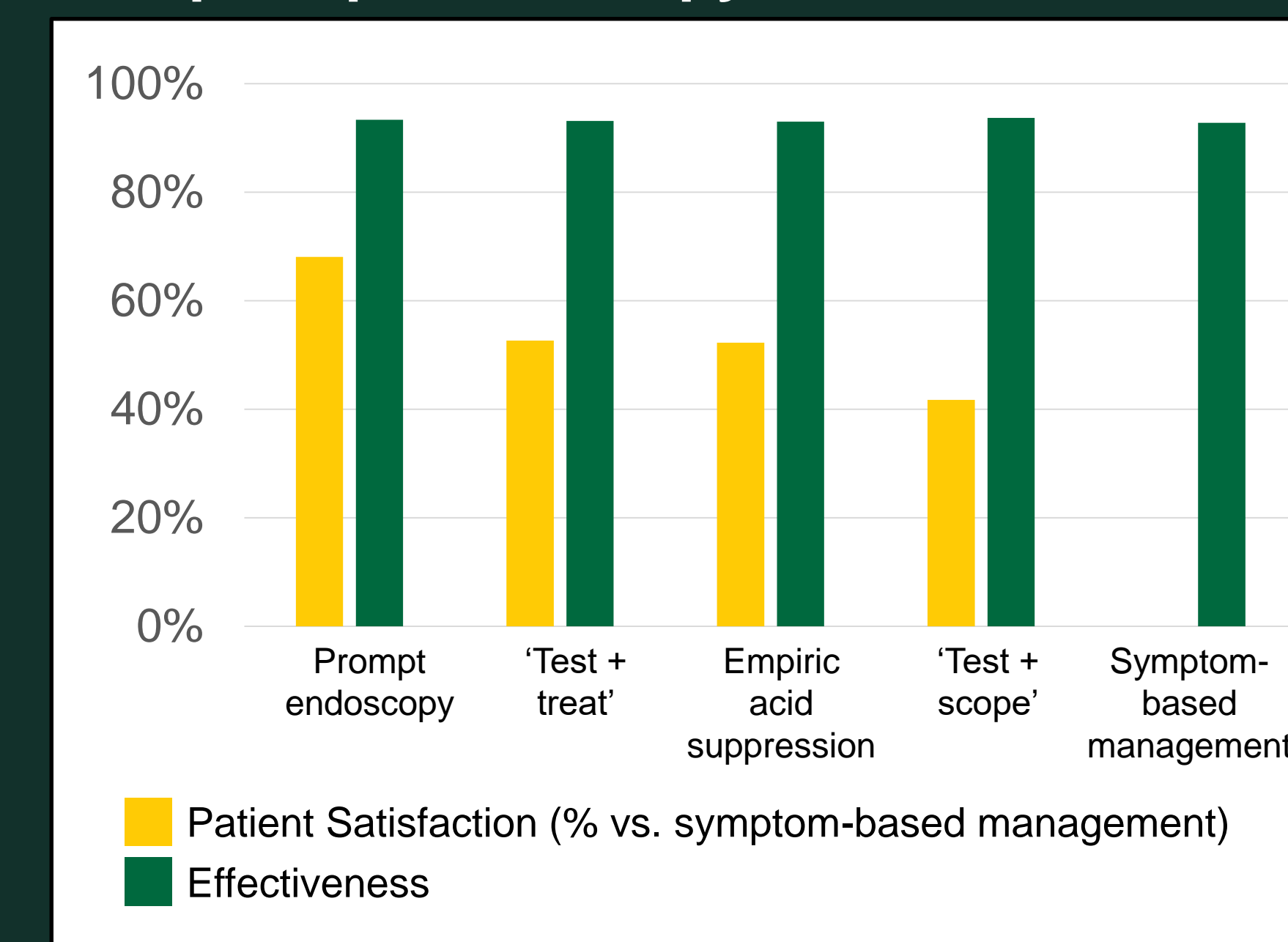
**TABLE 1: Patient satisfaction, health gains, and costs associated with common systematic management strategies for uninvestigated dyspepsia from patient, health system, large employer, and insurer perspectives.**

| Management Strategy      | Patient satisfaction gains (referenced against symptom-based management) | Quality-of-life gains over 1 year (quality-adjusted life years or QALYs) | Costs per year                             |                             |               |   |
|--------------------------|--|--|--|-----------------------------|---------------|---|
|                          |  |  | Patient out-of-pocket costs and lost wages | Health system reimbursement | Insurer Costs | Large employer costs (to pay for insurance and productivity losses) |
| Prompt endoscopy         | +68.1% (preferred)   | 0.934 QALY-gained/year   | \$2,550                                    | \$16,121                    | \$16,121      | \$19,413  |
| 'Test and treat'         | +52.7%   | 0.931 QALY-gained/year   | \$2,558                                    | \$14,992                    | \$14,992      | \$18,374  |
| Empiric acid suppression | +52.3%   | 0.930 QALY-gained/year   | \$2,326                                    | \$15,432                    | \$15,432      | \$18,873  |
| 'Test and scope'         | +41.7%   | 0.937 QALY-gained/year   | \$2,540                                    | \$14,842                    | \$14,842      | \$18,011  |
| Symptom-based management | Reference  | 0.928 QALY-gained/year   | \$2,570                                    | \$15,527                    | \$15,527      | \$19,050  |

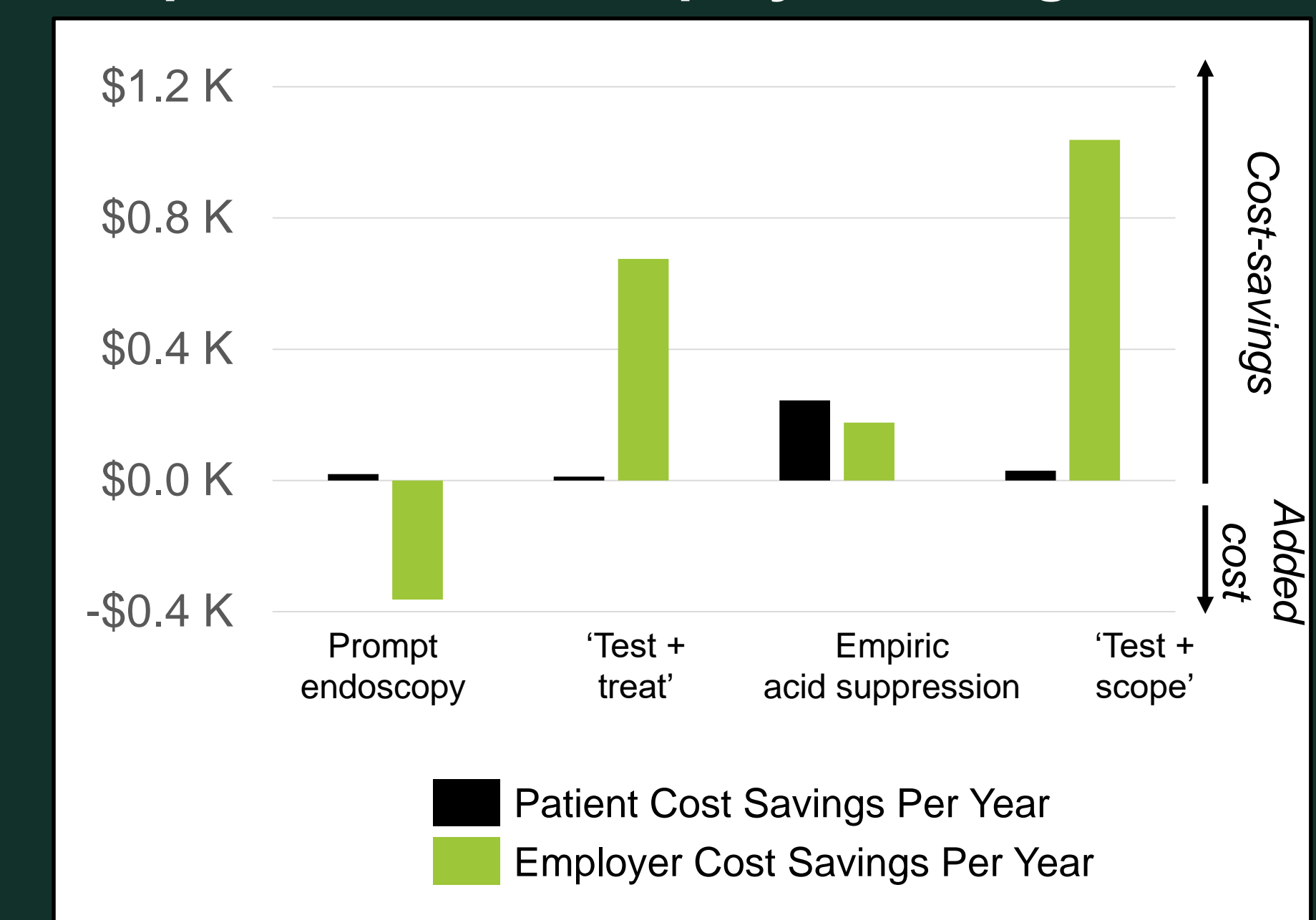
**FIGURE 1: Prompt endoscopy maximizes patient satisfaction and health system reimbursement, but also insurer costs**



**FIGURE 2: Effectiveness is similar across strategies, but patients are more satisfied with prompt endoscopy**



**FIGURE 3: Empiric acid suppression maximizes patient cost savings; 'Test and scope' maximizes employer savings**



## CONCLUSIONS

- In a traditional fee-for-service healthcare setting that incentivizes patient satisfaction, prompt endoscopy was the preferred strategy for uninvestigated dyspepsia management from both patient and health systems perspectives.
- Value-based healthcare transformation efforts should consider the role of patient satisfaction, as this appears to drive the discrepancy between guidelines and practice in managing this common condition.

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