EVALUATING INCENTIVES THAT DRIVE MANAGEMENT STRATEGIES FOR UNINVESTIGATED DYSPEPSIA: NATIONAL COST-MINIMIZATION ANALYSIS IN A COMMERCIALLY 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:
  1) Prompt endoscopy
  2) ’Test and treat’ (test for H pylori and prescribe eradication treatment to those who test positive);
  3) ’Test and scope’ (test for H pylori and preform endoscopy in those who test positive); and
  4) Empiric 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>
<thead>
<tr>
<th>Management Strategy</th>
<th>Patient satisfaction gains (referenced against symptom-based management)</th>
<th>Quality-of-life gains over 1 year (quality-adjusted life years or QALYs)</th>
<th>Patient out-of-pocket costs and lost wages</th>
<th>Health system reimbursement</th>
<th>Insurer Costs</th>
<th>Large employer costs (to pay for insurance and productivity losses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prompt endoscopy</td>
<td>+68.1% (preferred)</td>
<td>0.934 QALY-gained/year</td>
<td>$2,550</td>
<td>$16,121</td>
<td>$16,121</td>
<td>$19,413</td>
</tr>
<tr>
<td>’Test and treat’</td>
<td>+52.7%</td>
<td>0.931 QALY-gained/year</td>
<td>$2,558</td>
<td>$14,992</td>
<td>$14,992</td>
<td>$18,374</td>
</tr>
<tr>
<td>Empiric acid</td>
<td>+52.3%</td>
<td>0.930 QALY-gained/year</td>
<td>$2,326</td>
<td>$15,432</td>
<td>$15,432</td>
<td>$18,873</td>
</tr>
<tr>
<td>suppression</td>
<td>’Test and scope’ +41.7%</td>
<td>0.937 QALY-gained/year</td>
<td>$2,540</td>
<td>$14,842</td>
<td>$14,842</td>
<td>$18,011</td>
</tr>
<tr>
<td>Symptom-based</td>
<td>Reference</td>
<td>0.928 QALY-gained/year</td>
<td>$2,570</td>
<td>$15,527</td>
<td>$15,527</td>
<td>$19,050</td>
</tr>
</tbody>
</table>

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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