Cost-coping Strategies and Perceived Social Isolation in Locally Advanced Head and Neck Cancer

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Background

• 60,000 new cases of head and neck cancer each year in the U.S.

• 80% cure rate at 5 years
  • High morbidity – physical side effects
  • Costly – financial side effects

• Perceived social isolation as barrier to care
  • Social support is important in access to care in breast and colorectal cancers
Method

73 LAHNC patients

Prospective, longitudinal survey (6 months)

Demographics
Loneliness & Social Support
Medication Compliance
Financial Toxicity

Healthcare Utilization (missed appointments and hospital admissions)
Out of pocket costs
Lifestyle-altering coping strategies

Statistical analysis: Multivariate regression models using STATA
**Lifestyle-altering Coping Strategies Used within 6 Months**

- Used all or a portion of savings: 62%
- Borrowed money or used credit: 42%
- Sold possessions or property: 25%
- Had family members work more hours: 23%
- Used at least one of the above strategies: 69%

**Average Total Out of Pocket (OOP) Costs per Month**

- Total OOP costs: $1589.09
- Direct medical costs (e.g. deductible, hospital bills, PT, doctor visits): $1285.77
- Insurance premium: $303.32
### Characteristics Independently Associated with Using More Lifestyle-altering Coping Strategies

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Odds Ratio (95% CI)</th>
<th>p-value</th>
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<tbody>
<tr>
<td><strong>Insurance Status</strong></td>
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<tr>
<td>Private (n = 40)</td>
<td>1 (reference)</td>
<td></td>
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<tr>
<td>Medicare (n = 19)</td>
<td>0.91 (0.19-4.38)</td>
<td>0.005</td>
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<td><strong>Medicaid (n = 14)</strong></td>
<td>42.3 (4.19-4.28)</td>
<td></td>
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<tr>
<td><strong>Total OOP Costs Over 6 Months (by $1,000)</strong></td>
<td>1.07 (1.02-1.11)</td>
<td>0.004</td>
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<tr>
<td><strong>Wealth (by $10,000)</strong></td>
<td>0.95 (0.91-0.98)</td>
<td>0.002</td>
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<tr>
<td><strong>Perceived Social Isolation</strong></td>
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<tr>
<td>Low/Moderate (n = 66)</td>
<td>1 (reference)</td>
<td></td>
</tr>
<tr>
<td><strong>High (n = 7)</strong></td>
<td>11.5 (1.8-73.8)</td>
<td>0.010</td>
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Controlled for significant factors in univariate analyses (p < 0.1)
### Perceived Social Isolation and Healthcare Utilization

<table>
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<tr>
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<th>Days taking less medication</th>
<th>Missed appointments</th>
<th>Inpatient hospital days</th>
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<tbody>
<tr>
<td>All participants</td>
<td>6.99 (18.4)</td>
<td>3.40 (3.81)</td>
<td>28.1 (9.35)</td>
</tr>
<tr>
<td>Low/moderate perceived social isolation (n = 66)</td>
<td>5.45 (16.6)</td>
<td>3.02 (3.27)</td>
<td>27.6 (9.54)</td>
</tr>
<tr>
<td>High perceived social isolation (n = 7)</td>
<td>21.4 (28.5)</td>
<td>7 (6.48)</td>
<td>32.7 (5.99)</td>
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Significance level for high vs. low/moderate

\[ p = 0.0278 \quad p = 0.0077 \quad p = 0.1712 \]

Means and standard deviations calculated over the six-month study period
Conclusions

• A majority of patients rely on lifestyle-altering cost-coping strategies to manage the financial side effects of head and neck cancer care.

• Lack of social support coupled with increased loneliness is a risk factor for sub-optimal medication adherence, missed appointments, and longer length of hospital stay.

• Assessing for factors such as financial burden, loneliness, and social support is imperative to provide optimal care for patients.