A Glimpse of the Science Behind the American Cancer Society Access to Care Campaign

Impact of Being Uninsured or Underinsured on Individuals with Cancer

National Congress on the Un and Underinsured

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Insurance Status among Cancer Patients Under Age 65

Patients Under 65:
• 11% uninsured
• 15% Medicaid or other public insurance

Higher among minorities
• Blacks: 14% uninsured, 33% public
• Hispanics: 20% uninsured, 24% public

1996-1999 data from Thorpe & Howard, Health Affairs 2003
National Cancer Database (NCDB)

- Hospital-based cancer registry jointly sponsored by the American Cancer Society and the American College of Surgeons
- Collects data from approximately 1400 Commission on Cancer hospitals annually
- Receives reports on approximately 72% of the new cancer diagnoses in the United States
  - Patient demographic and clinical characteristics, including insurance status and vital status (at up to five years following diagnosis)
Analysis of NCDB: Insurance status and stage of cancer at diagnosis for women with breast cancer

• Comparisons between patients with early stage disease (stage I) vs. more advanced stage (stage II or stage III/IV combined) at diagnosis

• Insurance status groups:
  – Uninsured, Medicaid, Medicare <65, Medicare 65+, Other Government Insurance, Private
Impact of Insurance on Stage at Diagnosis for Breast Cancer

<table>
<thead>
<tr>
<th></th>
<th>Stage II vs. I (n=484,099)</th>
<th>Stage III/IV vs. I (n=342,824)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR</td>
<td>LCL</td>
</tr>
<tr>
<td>Privately insured (reference)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Uninsured</td>
<td>1.51</td>
<td>1.45</td>
</tr>
<tr>
<td>Medicaid</td>
<td>1.49</td>
<td>1.44</td>
</tr>
<tr>
<td>Medicare &lt; 65 yrs</td>
<td>1.11</td>
<td>1.04</td>
</tr>
<tr>
<td>Medicare &gt;= 65 yrs</td>
<td>0.91</td>
<td>0.89</td>
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Compared to women with private insurance, those with Medicaid or who were uninsured had approximately 50% increase in the likelihood of having stage II disease at diagnosis and a 2.4 to 2.5 fold increase in the likelihood of having advanced stage disease at diagnosis.
Other evaluations of impact of insurance and stage at diagnosis:

- Colorectal cancer
- Prostate
- Lung cancer
- Urinary bladder cancer
- Uterine cancer
- Melanoma of the skin
- Non-Hodgkin Lymphoma
- Kidney
- Thyroid cancer
- Ovarian cancer
- Pancreatic cancer
- Laryngeal & Oropharyngeal cancer
Study Conclusions

• Those who were uninsured or covered by Medicaid were significantly more likely to present with advanced disease than were those with private health insurance.

• Stronger effect in cancers detectable early by screening or symptoms

• Patients from ethnic/racial minorities were also more likely to present with advanced disease.
Impact of Disparities on Receipt of Cancer Treatment

Previous studies have been mixed – some showing significant impact of insurance status, race/ethnicity, age, and other factors or cancer care patterns, others showing no significant differences
ACS HSR Study – Impact of Patient & Facility Characteristics on Receipt of SLNB

• Sentinel lymph node biopsy (SLNB) – lymph node exploration technique accompanying breast cancer surgery

• Involves assessment of “sentinel nodes” linked to cancer site rather than full removal of all nodes using axillary lymph node dissection (ALND)

– If sentinel nodes are positive, full ALND is performed

• SLNB results in substantially decreased patient morbidity (impaired movement, lymphedema) with the same clinical efficacy
## Impact of Insurance on Receipt of Sentinel Lymph Node Biopsy (SLNB) for Breast Cancer

<table>
<thead>
<tr>
<th>Insurance Status (vs. private insurance)</th>
<th>OR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uninsured</td>
<td>0.78</td>
</tr>
<tr>
<td>Medicaid</td>
<td>0.80</td>
</tr>
<tr>
<td>Medicare</td>
<td></td>
</tr>
<tr>
<td>Age less than 65</td>
<td>0.81</td>
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<tr>
<td>Age 65+</td>
<td>1.03</td>
</tr>
<tr>
<td>Other Govt</td>
<td>0.73</td>
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</tbody>
</table>

Uninsured patients and those with Medicaid, Medicare for disabled patients (<65), or other government plans were significantly less likely to receive SLNB compared to patients with private insurance.
Changes in SLNB Rates Over Time – by Insurance Status
Study Conclusions

• Substantial disparities exist with respect to receipt of SLNB, based on age, race/ethnicity, and insurance status

• Disparities by insurance status in receipt of SLNB were minimal in 1998, when this technique was initially used, and have grown substantially over the past seven years
Impact of Disparities on Cancer Survival

• A number of studies have evaluated differences in survival using small populations (e.g., state-level data) or restricted age groups (e.g., SEER-Medicare patients)

• Used NCDB data to assess risk of death by cancer site (or all sites combined) for insured vs. uninsured/Medicaid patients, while controlling for other patient characteristics

• Example = colorectal cancer
Adjusted Colorectal Cancer Survival, All Stages Combined, by Insurance Status, among Patients Diagnosed in 1999-2000 and Reported to the NCDB
Adjusted Colorectal Cancer Survival by Stages and Insurance Status, among Patients Diagnosed in 1999-2000 and Reported to the NCDB
Conclusions from Survival Analysis

• Substantial differences in survival are observed between privately insured and uninsured/Medicaid patients at all stages

• Differences seen for all cancers combined and most individual cancer sites
In Conclusion …

• Analyses to date using the NCDB have indicated significant disparities in stage at diagnosis, treatment patterns, and mortality for cancer patients who are uninsured or covered by Medicaid.

• Improving access to care among uninsured and Medicaid patients with cancer will not remove all disparities, but it is likely to substantially improve many of these findings.