The association between burnout and working with vulnerable populations

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Special Thanks

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Megan Coffman, MS
Melina Taylor, PhD, MPH
Zachary Morgan, MS
Which Physicians Are Most Burned Out?

- Urology 54%
- Neurology 50%
- Nephrology 49%
- Diabetes & Endocrinology 46%
- Family Medicine 46%
- Radiology 46%
- Ob/Gyn 46%
- Rheumatology 46%
- Infectious Diseases 45%
- Critical Care 44%
- Cardiology 44%
- Internal Medicine 44%
- Physical Medicine & Rehabilitation 43%
- Emergency Medicine 43%
- Oncology 42%
- Anesthesiology 41%
- Pediatrics 41%
- Pulmonary Medicine 41%
- Allergy & Immunology 38%
- Plastic Surgery 37%
- Gastroenterology 36%
- Dermatology 36%
- Pathology 36%
- Surgery, General 35%
- Otolaryngology 35%
- Psychiatry 35%
- Orthopedics 34%
- Ophthalmology 30%
- Public Health & Preventive Medicine 29%

www.medscape.com/slideshow/2020-burnout-6012460?faf=1#1
Burnout in Family Physicians-Individual Level Factors

Female family physicians were more likely to report emotional exhaustion in all age groups.

Gap was widest for young family physicians

Difference in reported callousness was significant for younger family physicians

Burnout in Family Physicians-Practice Level Factors


Studies have shown increased stress and dissatisfaction of physicians in safety net settings (Hayashi AS, et al. J Health Care Poor Underserved. 2009 Aug;20(3):597-604)
Burnout and clinic capacity to meet social needs

Perceived clinical capacity to meet social need was inversely associated with burnout.

This association was true regardless of the percent vulnerable population served.
Objective:

1) To explore whether burnout rates differed for family physicians working in vulnerable populations

2) To explore whether the perception of having sufficient clinical resources modified these rates

3) To explore whether there were gendered differences in burnout rate based on the perception of having sufficient resources
Data

Sustaining Women in Medicine Project

Online survey of family physicians in Illinois and California
 ◦ 40 Item Instrument
 ◦ 2 Validated Maslach Burnout Inventory Items
 ◦ Questions on physician demographics and office-based characteristics
 ◦ Questions about potential contributors to stress and burnout
Data

Questions of Interest

◦ To address patients’ social needs, my clinic has the resources and tools, such as dedicated staff and linkages to community programs.
  ◦ Strongly Agree- Strongly Disagree
◦ What percentage of your patient population in your principal practice site is part of a vulnerable group (i.e., uninsured, Medicaid, homeless, low income, non-English speaking, racial/ethnic minority, or otherwise traditionally underserved group)?
  ◦ <10%; 10-49%; >50%
◦ Two Item MBI
Methods

Bivariate analysis of burnout and:
- Gender
- Clinical resources
- Working with vulnerable population

Multivariate Analysis stratified by gender
- Burnout rates and sufficient resources for physicians with 10-49% vulnerable pop and >50% vulnerable population

Logistic Regression
- Controls for gender, age, race, practice site
- Outcome:
  Interaction between sufficient resources and vulnerable patient population
Crosstabulation of Personal/Practice Characteristics with Burnout

<table>
<thead>
<tr>
<th></th>
<th>Burnout</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Total</td>
<td>927</td>
<td>799</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>363</td>
<td>355</td>
</tr>
<tr>
<td>Female</td>
<td>564</td>
<td>444</td>
</tr>
<tr>
<td>Vulnerable Population</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;10%</td>
<td>272</td>
<td>233</td>
</tr>
<tr>
<td>10-49%</td>
<td>339</td>
<td>274</td>
</tr>
<tr>
<td>&gt;50%</td>
<td>316</td>
<td>292</td>
</tr>
<tr>
<td>Sufficient Resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>511</td>
<td>350</td>
</tr>
</tbody>
</table>
| Agree                        | 416     | 449   | 865  | 44.9%          | 56.2%   | 50.1%         

Results

1,726 total respondents (13.8% response rate)

More females in sample
Females reported higher rates of burnout
Working with vulnerable populations nearly even
Having sufficient resources nearly even
Burnout higher in those who disagree that they have sufficient clinical resources
Table 1: Burnout rate by vulnerable group % (Male, Female, All)

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th></th>
<th>Female</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Burnout Rate</td>
<td>N</td>
<td>Burnout Rate</td>
<td>N</td>
<td>Burnout Rate</td>
</tr>
<tr>
<td>Total</td>
<td>718</td>
<td>50.6%</td>
<td>1008</td>
<td>56.0%</td>
<td>1726</td>
<td>53.7%</td>
</tr>
<tr>
<td>Percent of Patient Pop Vulnerable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;10%</td>
<td>216</td>
<td>50.0%</td>
<td>289</td>
<td>56.7%</td>
<td>505</td>
<td>53.9%</td>
</tr>
<tr>
<td>10-49%</td>
<td>286</td>
<td>51.7%</td>
<td>327</td>
<td>58.4%</td>
<td>613</td>
<td>55.3%</td>
</tr>
<tr>
<td>&gt;50%</td>
<td>216</td>
<td>49.5%</td>
<td>392</td>
<td>53.3%</td>
<td>608</td>
<td>52.0%</td>
</tr>
</tbody>
</table>
Table 2: Interaction Between Sufficient Resources and Burnout for Physicians with <10% Vulnerable Pop

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th></th>
<th>Female</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Burnout Rate</td>
<td>N</td>
<td>Burnout Rate</td>
<td>N</td>
<td>Burnout Rate</td>
</tr>
<tr>
<td>Total</td>
<td>216</td>
<td>50.0%</td>
<td>289</td>
<td>56.7%</td>
<td>505</td>
<td>53.9%</td>
</tr>
<tr>
<td>Sufficient Resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>117</td>
<td>53.0%</td>
<td>164</td>
<td>59.8%</td>
<td>281</td>
<td>56.9%</td>
</tr>
<tr>
<td>Agree</td>
<td>99</td>
<td>46.5%</td>
<td>125</td>
<td>52.8%</td>
<td>224</td>
<td>50.0%</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>---------------------</td>
<td>-----------------------</td>
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<td>----------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>Burnout Rate</td>
<td>N</td>
<td>Burnout Rate</td>
<td>N</td>
<td>Burnout Rate</td>
</tr>
<tr>
<td>Total</td>
<td>286</td>
<td>51.7%</td>
<td>327</td>
<td>58.4%</td>
<td>613</td>
<td>55.3%</td>
</tr>
<tr>
<td>Sufficient Resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>131</td>
<td>58.0%</td>
<td>180</td>
<td>62.2%</td>
<td>311</td>
<td>60.5%</td>
</tr>
<tr>
<td>Agree</td>
<td>155</td>
<td>46.5%</td>
<td>147</td>
<td>53.7%</td>
<td>302</td>
<td>50.0%</td>
</tr>
</tbody>
</table>
### Table 4: Interaction Between Sufficient Resources and Burnout for Physicians with >50% Vulnerable Pop

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Burnout Rate</td>
<td></td>
<td>Burnout Rate</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>Rate</td>
<td>N</td>
</tr>
<tr>
<td>Total</td>
<td>216</td>
<td>49.5%</td>
<td>392</td>
</tr>
<tr>
<td>Sufficient Resources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>86</td>
<td>69.8%</td>
<td>183</td>
</tr>
<tr>
<td>Agree</td>
<td>130</td>
<td>36.2%</td>
<td>209</td>
</tr>
</tbody>
</table>
Figure 1: Odds of Burnout based on % vulnerable population (Pop <10% reference)

- 10-49% Vulnerable population - Disagree
- 50% or more Vulnerable population - Disagree
- 10-49% Vulnerable population - Agree
- 50% or more Vulnerable population - Agree

Odds Ratio

0.5 1 1.5 2
Figure 2: Odds of burnout in physicians who report sufficient resources

Percent Vulnerable Populations

- <10%
- 10-49%
- 50% or greater

Odds Ratio

0.2 0.4 0.6 0.8 1.0 1.2 1.4
Limitations

Only California and Illinois
Low response rate
Lower number of male respondents
Binary gender
Self report
Conclusions

- Working with vulnerable populations was not associated with higher/lower rates of burnout for either gender.
- Having sufficient resources was associated with lower rates of burnout regardless of percent vulnerable population.
- When controlling for individual and practice-based characteristics, a perception of having sufficient resources was associated with lower odds of burnout. This association was stronger for greater percent of vulnerable populations.
Thank you!

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