A Nurse-Led Care Model to Improve Access to Rural Survivorship Care

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Rural Cancer Survivors

*Survivorship phases: acute, extended, permanent*

- Longer distance to active cancer care
- Limited PCP education in survivorship
- Lower survival rates, lower quality of life

Traveling for Post-Treatment Care

Rural survivors are less willing to travel for supportive care than for treatment (Lavernge, Pesut, Opie)

*Travel distance is* independently associated with more unmet needs and poorer QoL during survivorship (So)
• Rural survivors do not know how to access survivorship resources once primary treatment is completed
• Rural survivors do not always have supportive care needs recognized/addressed during treatment

✓ How do we connect rural survivors with appropriate care once treatment has concluded?
Survivors May Not Be Ready for SCP Information at the End of Treatment

- SCPs? “...oh that pile of papers”
- At their “end of treatment” appointment, focus on having survived – not what is coming next
- Knowledgeable about medical aspects of survivorship.

- Survivorship assessment and education needs to occur at a time distant from the end of treatment
- Uncoupled from the medical aspects of treatment
Hypothesis: Delivering survivorship care to rural survivors after the end of active treatment, will reduce unmet needs during extended survivorship.
CARING is a telemedicine-delivered nursing visit for cancer survivors delivered several weeks after treatment has been completed. The intervention has three main components: assessment, education, and referral.
Known Barriers to Telemedicine in Rural Areas

• Rural residents’ broadband access
  • Fewer have broadband
  • Fewer places to go if you do not have broadband
  • Less likely to own a smartphone

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Known Barriers to Telemedicine in Rural Areas

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Options for telemedicine visits:

Option 1: Home visit with participant’s equipment
- Home based broadband?
  - Yes → Option 1
  - No → Option 2

Option 2: Telemedicine site visit
- Able to travel to a site?
  - Yes → Option 2
  - No → Option 3

Option 3: Home visit with loaned cellular-enabled tablet
- Home based broadband?
  - Yes → Option 1
  - No → Option 2
HNC Survivors’ Persistent “Unmet Needs”

2nd highest rate of suicide.

- Two-thirds have unmet needs during survivorship
- 3.7 unmet needs per person 4-5 years post-treatment
- Unmet Needs significantly impact HNC survivors’ Quality of Life
### For Measuring Distress

Place circle the number (0-10) that best describes the distress you have been experiencing in the past week including today.

**YES** | **NO** | **Practical Problems**
--- | --- | ---

- Child care
- Housing
- Insurance/financial
- Transportation
- Work/school

**Family Problems**

- Dealing with children
- Dealing with partner
- Ability to have children

**Emotional Problems**

- Depression
- Fears
- Nervousness
- Sadness
- Worry
- Loss of interest in usual activities

- Spiritual/religious concerns

**Other Problems:** ____________________________
Finding #1
*Digital Inclusion Impacts Telemedicine—even when broadband challenges are overcome

*Digital Inclusion includes both broadband access AND digital literacy/skills

Home based broadband?

Able to travel to a site?

Option 1: home visit with participant’s equipment

Option 2: telemedicine site visit

Option 3: home visit with loaned cellular-enabled tablet

• Home use of broadband often led to increased distress among participants when they were unfamiliar with technology.
“It was just not connecting! And you know that’s just nerve wracking when something doesn’t work and you’re trying, you know?”

-rural cancer survivor

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Beyond broadband: digital inclusion as a driver of inequities in access to rural cancer care

Pam Baker DeGuzman, Veronica Bernacchi, C. Allen Cupp, Brian Dunn, B. J. Ferrebee Ghamandi, Ivora D. Hinton, Mark J. Jameson, Debra Lynn Lewandowski & Christi Sheffield

Journal of Cancer Survivorship (2020) | Cite this article
Finding #2

Rural Cancer Survivors with High Distress Refuse Further Intervention

- **90%** had self-identified high distress
- The nurse referred **50%** for further support
  - Intervention was associated with a **13x** chance of a referral!
- **But**, of those offered a psychosocial referral, fewer than one-third accepted the referral.

Examination of a distress screening intervention for rural cancer survivors reveals low uptake of psychosocial referrals

Pam Baker DeGuzman, David L. Vogel, Bethany Horton, Veronica Bernacchi, C. Allen Cupp, B. J. Ferrebee Ghamandi, Ivora D. Hinton, Christi Sheffield & Mark J. Jameson

*Journal of Cancer Survivorship* (2021) | [Cite this article](#)  

1775 Accesses  |  10 Altmetric  | [Metrics](#)
Finding #3
Reluctance to Accept Psychosocial Help Aligns with Known Rural Social Norms

When explaining their reasons for turning down further help, rural survivors minimized their distress, and described stigma associated with seeking help, particularly from those outside their immediate family.

“I don’t want to learn [sic] the appearance that as I’m getting older, I am less able to handle my situation, and that’s a protection on my part. I try not to view anybody else that way, but I tend to view myself more critical [sic].”

—rural cancer survivor

*under review at Journal of Medical Internet Research: Formative
Finding #4
Rural Survivors are Willing to Overcome these Barriers to Discuss Distress with a Nurse over Telemedicine

*under review at Oncology Nursing Forum

<table>
<thead>
<tr>
<th>Telemedicine Satisfaction and Use Questionnaire (scored 1-5)</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>A nurse can get a good understanding of my condition during a visit</td>
<td>4.20</td>
</tr>
<tr>
<td>My nurse answers my questions</td>
<td>4.20</td>
</tr>
<tr>
<td>My nurse deals with my problems</td>
<td>4.27</td>
</tr>
<tr>
<td>My nurse engages me in my care</td>
<td>4.33</td>
</tr>
<tr>
<td>I can explain my problems well enough during a video visit</td>
<td>4.47</td>
</tr>
<tr>
<td>I can always trust the equipment to work</td>
<td>3.00</td>
</tr>
<tr>
<td>My privacy is protected during video visits</td>
<td>4.20</td>
</tr>
<tr>
<td>The telemedicine equipment is easy to use</td>
<td>3.73</td>
</tr>
<tr>
<td>Video visits make it easier for me to contact the nurse</td>
<td>3.73</td>
</tr>
<tr>
<td>Video visits are a convenient form of healthcare for me</td>
<td>3.73</td>
</tr>
<tr>
<td>Video visits save me time</td>
<td>3.87</td>
</tr>
</tbody>
</table>
Survivors explained that the biggest benefit of participating in the visit was being able to speak with the nurse about their distress.

“I appreciated the nurse] taking the time to ask me the questions. And you know, identifying with my needs...It’s good to have someone ask these kinds of questions.”

—rural cancer survivor
Finding #5
A nurse-led telemedicine intervention reduces survivors’ unmet emotional needs.

*Negative number indicates reduction in unmet needs; scale is 1-4

<table>
<thead>
<tr>
<th>Change in Unmet Needs (n=11)</th>
<th>mean</th>
<th>sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>-0.24</td>
<td>0.46</td>
</tr>
<tr>
<td>Information Needs</td>
<td>-0.24</td>
<td>0.84</td>
</tr>
<tr>
<td>Work and Financial Needs</td>
<td>-0.02</td>
<td>0.22</td>
</tr>
<tr>
<td>Access and Continuity of Care Needs</td>
<td>-0.21</td>
<td>0.37</td>
</tr>
<tr>
<td><strong>Coping, Sharing and Emotional Needs</strong></td>
<td><strong>-0.39</strong></td>
<td><strong>0.81</strong></td>
</tr>
</tbody>
</table>
Conclusions

• Consider digital inclusion, not just broadband accessibility when connecting to rural survivors over telemedicine.
• Rural survivors can benefit from discussing distress with a nurse over a virtual connection.
  • Social norms may prevent willingness to speak to other members of the healthcare team
  • They will openly discuss distress with a nurse
• Targeted identification and discussion of distress with a nurse can improve unmet needs.
Next Steps

- Testing *self-affirmation* intervention
  - Will this improve uptake of psychosocial referrals?
- Incorporating *warm hand-off* to social worker
  - Ensures that patients who accept are more likely to connect to help.