The RTT Collaborative
in rural health professions education and training
Growing our own...together

AUBURN AND RUMFORD, MAINE
MAY 15-17, 2019
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Research in Rural Health Professions Education and Training Pre-conference Design and Dissemination Studio

www.ruralprep.org
Rural PREP Rounds

Please give us your suggestions for topics and speakers for either Rural PREP Grand Rounds or our Rural PREP Professional Development Webinars and receive a $25 Amazon gift card if your topic is chosen! See Dawn Mollica at the registration desk for details.
Visit our interactive map of rural Family Medicine residencies!

https://rttcollaborative.net/rural-programs/residency-map/
Our Participating Programs

Participating Program Map

(map showing locations of participating programs across the United States)
Welcome!

- 91 Registrations
- 25 States (Maine – 14; Wisconsin – 11; Colorado - 8; Washington - 7; Ohio – 6)
- 28 of 44 RTT Collaborative Participating Programs, representing active and developing rural programs in medical school and residency
- 25 non-physicians
- 7 resident physicians and 6 students
Announcements

- Please register if you have not already done so.
- WiFi Code for Meeting: Thefalls19
- Post on social media with the hashtag #RTTCAM19 or by tagging @RTT_Collab
- Please send smart phone pictures of our meeting to Dr. Longenecker by text (937-539-7135) or email (longenec@ohio.edu)
- Win a $25 Amazon gift card with a usable idea for Rural PREP Rounds – See registration table
Announcements


- Rural Recognition – Get credit for the percentage of rural graduates from your program! https://rttcollaborative.net/rural-programs/
Congratulations to Our Photo Contest Winners!

- 1st Place – Ash Sampath, Columbia, MO
- 2nd Place – Vickey Haller, Athens, OH
- 3rd Place – Amanda Castillo, Silver City, NM
- Honorable Mention – Benjamin Hammer, Uniontown, OH
- Honorable Mention – Tony Blankers, Twin Falls, ID
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Honorable Mention – Benjamin Hammer, Uniontown, OH
3rd Place – Amanda Castillo, Silver City, NM
2nd Place – Vickey Haller, Athens, OH
Many Hats

Medical students and resident physicians in rural communities, like their rural preceptors, wear many hats.

1st Place - Ash Sampath, Cape Girardeau, MO
Defeating Parkinson’s Disease: A Goal-Oriented, Non-Contact Boxing Program in Southeast Missouri

Photo by Ash Sampath
Purpose

Our aim was to assess the needs of Parkinson’s Disease (PD) patients in a rural community and work to improve their non-motor symptoms through

• A retrospective chart review of PD patients in rural southeast Missouri
• Creation of a goal-oriented, non-contact boxing program
• Creation of a referral network to a movement disorder specialist (MDS)

Background

Parkinson’s disease (PD) is a progressive neurodegenerative disorder that affects one percent of Americans older than the age of 60.1

An internal retrospective chart review found 76 of 78 (97.4%) PD patients in rural southeast Missouri were not diagnosed or managed in accordance to American Academy of Neurology (AAN) guidelines and only 2 (2.6%) patients were followed by a MDS.

The objective of this project was to improve the management of PD through a multifaceted approach. A key part of the initiative was the creation of a goal-oriented, non-contact boxing program. Previous studies have demonstrated that exercise provides short-term and long-term benefits to PD.2

Methods

This study was part of a service-learning project through the rural track clerkship program at University of Missouri School of Medicine. Recruits were identified through two sources:
1) Medical professionals who see patients with PD, and
2) Word of mouth in the PD community.

Patients attended a minimum of two boxing sessions each week for 4 weeks. The 60-minute sessions included a variety of strength, agility, balance, and sequential coordination exercises. Outcomes were measured initially and at 4 weeks. Outcomes assessed both motor and non-motor function and included gait velocity, cadence, stride length, and Unified Parkinson’s Disease Rating Scale (UPDRS). In addition, a neurologist reviewed the patients’ medical records and a referral to a MDS was offered to each patient.

• 3 patients completed the entire 4-week pilot study
• Pre- and post-UPDRS scores for each patient showed improvement in all four areas (I: Mentation, behavior, and mood, II: Activities of daily living, III: Motor examination IV: Complications of therapy)*
• A non-contact boxing program was established in Cape Girardeau, MO with 10+ individuals
• A referral network to MDS was established

Results

<table>
<thead>
<tr>
<th>Patient</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics</td>
<td>84M</td>
<td>67M</td>
<td>72M</td>
</tr>
<tr>
<td>Gait Speed (m/s)</td>
<td>1.16 to 1.30 (+13%)</td>
<td>1.06 to 1.11 (+5%)</td>
<td>.86 to 1.00 (+17%)</td>
</tr>
<tr>
<td>Cadence (steps/s)</td>
<td>1.67 to 1.68 (+1%)</td>
<td>1.55 to 1.66 (+7%)</td>
<td>1.28 to 1.31 (+2%)</td>
</tr>
<tr>
<td>Stride Length (m)</td>
<td>.69 to .77 (+12%)</td>
<td>.68 to .67 (-1%)</td>
<td>.67 to .77 (+14%)</td>
</tr>
</tbody>
</table>

Discussion/Conclusion

• Management of PD in rural southeast Missouri is poor due to the inability to adhere to AAN guidelines
• A sustainable, streamlined approach was established to manage patients with PD
• Currently the program is comprised of 15+ participants, university faculty, and volunteers
• Further studies will determine the effectiveness of specific exercises, success of MDS referral network, and improvement in a PD patients’ quality of life.

Acknowledgments/References

Special thanks to Rebecca Douglas for collecting data, Monica Kearney PhD for advice on exercises, and numerous volunteers.

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