

<b>Project Name:</b>	A Longitudinal Study of Provider Wellness, Collaborative Practice and Career Satisfaction Among Physician Assistants in Oncology
<b>Project Period:</b>	<i>October 1, 2018 – September 30, 2025</i>
<b>Reporting period</b>	<i>October 1, 2024 – September 30, 2025</i>
<b>Report Submission date:</b>	<i>11/26/2025</i>
<b>Section One: Summary</b>	
<p>A longitudinal study will be conducted to understand the characteristics of PAs in oncology and their association with burnout and career satisfaction over time. Prior cross-sectional research has examined burnout and career satisfaction among PAs in several specialties but no data exists that explores burnout and provider wellness over time. This research is novel and will have significant implications for understanding the oncologic workforce.</p> <p>Objectives of the study are to:</p> <ul style="list-style-type: none"> <li>• Annually estimate the rate of burnout in the United States for PAs practicing in oncology using standardized instruments and observe longitudinal changes in burnout</li> <li>• Explore the attitudes of PAs in oncology about their professional role, teamwork, collaboration coping and resiliency and their association with burnout</li> <li>• Identify factors that predict the development of burnout in the future</li> <li>• Conduct a needs assessment regarding attitudes and perceived barriers toward interventions to reduce burnout among PAs in oncology</li> </ul>	
<b>Section Two: Activities and Progress</b>	
<ol style="list-style-type: none"> <li>1. November 9, 2018 – Executed APAO Research agreement sent to APAO</li> <li>2. June 28, 2019 – Protocol approved by Fox Chase Cancer Center IRB; 19-8009: A Longitudinal Study of Provider Wellness, Collaborative Practice and Career Satisfaction Among Physician Assistants in Oncology</li> <li>3. October 5, 2019 – Study opened for accrual</li> <li>4. October 14, 2019 – Full Length survey initiated</li> <li>5. November 25, 2019 – Collaborating Physician survey initiated</li> <li>6. December 17, 2019 – Brief Survey for non-responders initiated</li> <li>7. February 11, 2019 – Abstract submitted for presentation at 2020 ASCO annual meeting</li> <li>8. March 27, 2020 – Abstract accepted for poster discussion session at 2020 ASCO annual meeting</li> <li>9. May 29, 2020 – Poster Presented at 2020 ASCO annual meeting</li> <li>10. October 21, 2020 – Full length survey #2 initiated</li> <li>11. January 23, 2021 – Manuscript #1 submitted to JCO Oncology practice titled “Changes in Burnout Among Oncology Physician Assistants Between 2015 and 2019”</li> </ol>	

12. February 17, 2021 - Abstract submitted for presentation at 2021 ASCO annual meeting titled “Moral distress, organizational climate, and the risk of burnout among oncology physician assistants”
13. April 1, 2021 – Abstract accepted for poster presentation session at 2021 ASCO annual meeting
14. April 28, 2021 – Full Length Survey initiated as part of collaboration with AAPA
15. June 4, 2021 – Poster presented at 2021 ASCO annual meeting
16. June 22, 2021 – Manuscript #1 Accepted for publication in JCO Oncology Practice
17. August 24, 2021 – Manuscript #2 submitted to JCO Oncology Practice titled “Association of Organizational Context, Collaborative Practice Models and Burnout Among Physician Assistants in Oncology”
18. December 21, 2021 – Manuscript #2 accepted for publication in the JCO Oncology Practice
19. May 4, 2022 – Full length survey #3 initiated
20. June 16, 2022 – Full Length survey #3 closed to accrual
21. November 9, 2022 – Manuscript #3 submitted to JCO Oncology Practice titled “Moral Distress, Organizational Climate and the Risk of Burnout Among Physician Assistants in Oncology”
22. January 6, 2023 – Manuscript # accepted for publication in the JCO Oncology Practice
23. February 17, 2023 – Abstract submitted for presentation at 2023 ASCO annual meeting titled “Addressing resiliency and burnout; A quantitative needs assessment of oncology Physician Assistants (PAs)”
24. June 2, 2023 – Poster presented at 2023 ASCO annual meeting titled “Addressing resiliency and burnout; A quantitative needs assessment of oncology Physician Assistants (PAs)”
25. July 18, 2023 – Manuscript #4 submitted to Journal of the Advanced Practitioner in Oncology titled “The Impact of the Covid-19 Pandemic on work-life integration of Physician Assistants in Oncology”
26. November 18, 2023 – Manuscript #4 Accepted for publication in Journal of the Advanced Practitioner in Oncology titled “The Impact of the Covid-19 Pandemic on work-life integration of Physician Assistants in Oncology”
27. September 2023 – Manuscript #5 titled “Addressing resiliency and burnout: A quantitative needs assessment of oncology physician assistants” has been drafted and remains under peer review. This will be the final manuscript for the project.

### Section Three: Outputs and Deliverables

1. PA in oncology Cohorts
  - a. Accrual to Full Length Survey #1
    - i. 917 Potential PA participants were contacted via the REDCAP system
    - ii. 328 PAs consented to participate (35.8%)
    - iii. 234 PA participants completed the full-length survey (25.5%)
    - iv. 87 PA participants completed the brief survey
    - v. 7 incomplete surveys were received
  - b. Accrual to Full Length Survey #2
    - i. 917 Potential PA Participants contacted via REDCAP System
    - ii. 174 PAs consented to participate (18.9%)
    - iii. 155 PA participants completed the full-length survey (16.9%)
    - iv. 21 incomplete surveys were received
  - c. Accrual to Full Length Survey #3
    - i. 1335 Potential PA participants were contacted via REDCAP system
    - ii. 191 PAs consented to participate (14.3%)
    - iii. 171 PAs completed the full-length survey (12.8%)
2. AAPA Collaboration Cohort
  - a. Accrual to Full Length Survey #1
    - i. 3400 Potential PA participants were contacted via REDCAP System
    - ii. 409 PA participants consented to participate (12%)
    - iii. 310 PA participants completed the full-length survey (9.1%)
    - iv. 99 incomplete surveys were received
3. Collaborating Physician Cohort
  - a. 49 PA participants in the PA in oncology cohort study have provided contact information for at least 1 collaborating physician (21% of participants that completed survey #1)
  - b. We have contact information for 71 collaborating physicians in total
  - c. 11 collaborating physicians responded to the survey invitation

#### Section Four: Evaluation

1. Abstract #1 was submitted to the 2019 annual meeting of the American Society of Clinical Oncology (ASCO). The abstract was accepted for a poster discussion and presented during the annual meeting as follows:

**Tetzlaff ED**, Hylton HM, Ruth K, Hasse Z, & Hall MJ. (2020). Burnout among oncology physician assistants (PAs) from 2015 to 2019. *Journal of Clinical Oncology*, 38(15\_suppl), 11009-11009. doi:10.1200/JCO.2020.38.15\_suppl.11009

The poster presentation received media attention (in addition to social media):

Fox Chase Cancer Center – May 20, 2020 – Fox Chase Researchers Find Increase in Burnout Among Oncology Physician Assistants (<https://www.foxchase.org/news/fox-chase-researchers-find-increase-burnout-among-oncology-physician-assistants>)

Cancerworld – June 8, 2020 – The burnout epidemic in oncology, highlights from ASCO 2020 (<https://cancerworld.net/news/the-burnout-epidemic-in-oncology-highlights-form-asco-2020>)

HemOnc today - July 15, 2020 – Burnout on the rise among oncology physician assistants (<https://www.healio.com/news/hematology-oncology/20200715/burnout-on-the-rise-among-oncology-physician-assistants>)

2. Abstract #2 was submitted to the 2019 annual meeting of the American Academy of Physician Assistants but due to the research embargo from ASCO, the abstract submission had to be recalled.
3. Abstract #3 submitted for presentation at 2021 ASCO annual meeting titled “Moral distress, organizational climate, and the risk of burnout among oncology physician assistants.” And presented during the annual meeting

**Tetzlaff ED**, Hylton HM, Ruth K, Hasse Z, Hall M. Moral distress, organizational climate, and the risk of burnout among oncology physician assistants. *J Clin Oncol* 39: 2021 (suppl; abstr 11018)

4. Manuscript #1 was accepted for publication in the JCO Oncology Practice titled “Changes in Burnout Among Oncology Physician Assistants Between 2015 and 2019.” <https://ascopubs.org/doi/full/10.1200/OP.21.00051>

5. **Tetzlaff, E. D.**, Hylton, H. M., Ruth, K. J., Hasse, Z., & Hall, M. J. (2023). Addressing resiliency and burnout: A quantitative needs assessment of oncology physician assistants (PAs). *Journal of Clinical Oncology*, 41(16\_suppl), 11016-11016. [https://doi.org/10.1200/JCO.2023.41.16\\_suppl.11016](https://doi.org/10.1200/JCO.2023.41.16_suppl.11016)
6. Manuscript #3 was accepted to JCO Oncology Practice titled “Moral Distress, Organizational Climate and the Risk of Burnout Among Physician Assistants in Oncology” <https://ascopubs.org/doi/full/10.1200/OP.22.00641>

This manuscript was featured with an editorial in JCO Oncology Practice when initially published:

**Burnout and Moral Distress in Oncology: Taking a Deliberate Ethical Step Forward to Optimize Oncologist Well-Being**

<https://ascopubs.org/doi/10.1200/OP.20.00030>

Media Attention included:

Medpage Today “PA Burnout in Oncology: The Role of Moral Distress.”

<https://www.medpagetoday.com/resource-centers/progress-multiple-myeloma/pa-burnout-oncology-role-moral-distress/4759>

7. Manuscript #4 titled “The Impact of the Covid-19 Pandemic on work-life integration of Physician Assistants in Oncology.” has been accepted for publication in the Journal of the Advanced Practitioner in Oncology was published in the Journal for the Advanced Practitioner in Oncology.

Media Attention included:

Oncology Nursing News: Redeployment Engages Oncology PA Skills, Reduces Burnout

<https://www.oncnursingnews.com/view/redeployment-engages-oncology-pa-skills-reduces-burnout>

8. Manuscript #5 titled “Addressing resiliency and burnout: A quantitative needs assessment of oncology physician assistants” is currently under peer review. This will be the final manuscript for the project.

#### **Section Five: Risks, Issues and Challenges**

No risks, issues or challenges have been encountered that will impact the project at this time.

**Section Six: Financial Statement**

**Eric Tetzlaff**  
**APAO Grant #3274601**  
**Financial Report**  
**For the period ending September 30, 2025**

<b>Cash Receipts</b>	15,000.00
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**Expenses:**

Abstract Submissions	180.00
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Survey License Fee – Mindgarden – Maslach Burnout Inventory	525.00
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Survey License Fee – Mindgarden – Areas of Work life	525.00
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Survey License Fee – Mindgarden – Maslach Online Survey	481.25
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Survey License Fee – Mindgarden – Maslach Online Survey	1,000.00
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Survey License Fee – Mindgarden – Maslach Burnout Inventory	437.00
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CD-RISC Survey Tool	35.00
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ASCO poster printing fee	155.00
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Participant Incentives – Amazon.com gift cards	4,400.00
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Biostatistics Charges	<u>5,672.50</u>
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<b>Total Expenses</b>	<u>13,410.75</u>
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<b>Cash Balance on Hand</b>	<u><u>1,589.25</u></u>
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**Section Eight: Official Requests**

None at this time.

**Section Ten: Final Summary and Impact**

- The final manuscript is currently under peer review. No additional data analysis is planned at this time. As such, this will be the final report for the research project.
- The research team believes the project has been a tremendous success as evidenced by the number of high quality research outputs and the significant impact the research has had on the field of provider well-being and burnout.

Manuscript Citations	Year Published	Citations
Addressing resiliency and burnout: A quantitative needs assessment of oncology physician assistants	In review	--
The Impact of the COVID-19 Pandemic on Work-Life Integration of Physician Assistants in Oncology	2025	--
Moral distress, organizational climate, and the risk of burnout among physician assistants in oncology	2023	9
Association of organizational context, collaborative practice models, and burnout among physician assistants in oncology	2022	12
Changes in burnout among oncology physician assistants between 2015 and 2019	2022	27

Manuscript Attention per Altmetric Attention Score:	Year Published	Percentile
Addressing resiliency and burnout: A quantitative needs assessment of oncology physician assistants	In review	--
The Impact of the COVID-19 Pandemic on Work-Life Integration of Physician Assistants in Oncology	2025	--
Moral distress, organizational climate, and the risk of burnout among physician assistants in oncology	2023	74th
Association of organizational context, collaborative practice models, and burnout among physician assistants in oncology	2022	88th
Changes in burnout among oncology physician assistants between 2015 and 2019	2022	33rd

- This project would not have been possible without the support of the Association of PAs in oncology and the research team will be extremely grateful for the opportunity to complete this project.

**PI Name: Eric Tetzlaff, MHS, PA-C, DFAAPA**

**Signature and date:**

*E. Tetzlaff* | 11/25/25