

# From Lab Tech to Chief PA: Lessons in Leadership

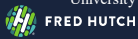
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No disclosures



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## Goals and Aims

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- Describe the role of Advanced Practices Providers (APPs) and leadership opportunities within the medical team.
- Explain the role of national organizations within a medical specialty and APP leadership opportunities within them.
- Describe opportunities within a hospital system for APP leadership.
- Discuss leadership skills, resources available, and the value of mentorship.



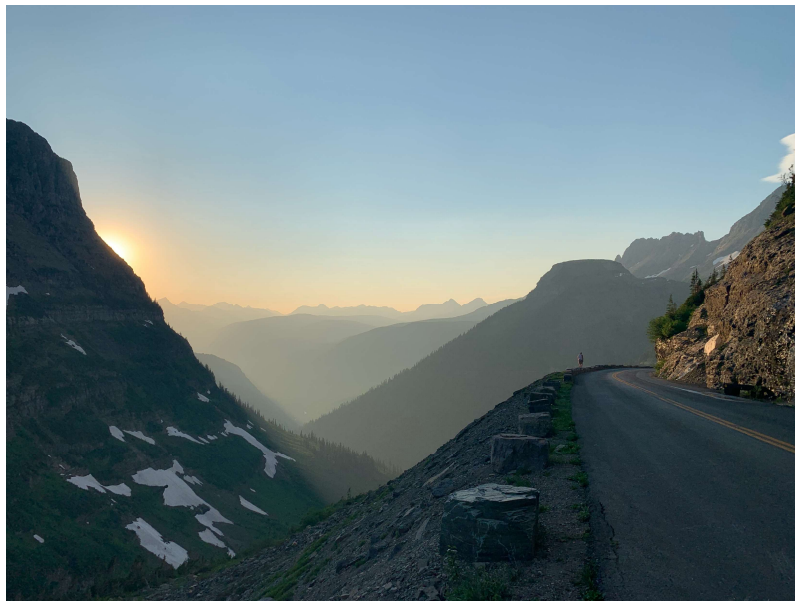
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## The path to leadership

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## Back to my first microbiology class...



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## Working at the Fred Hutch in an HIV Research Lab



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## Microbiology and Medical Laboratory Science

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## A big move to Texas: Baylor Scott and White Hospital

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## From bench to bedside



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## PA School: MEDEX Program at UW



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## Imposter Syndrome

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## Leadership Lesson #1

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Imposter syndrome can be a real and debilitating.  
Find colleagues and mentors who help you see the truth.

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## First ID consult: Harborview Medical Center

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## Capstone: The Role of APPs in Infectious Disease

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## First job!

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GroupHealth®

(Not infectious disease...)

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## Leadership Lesson #2:

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Your great idea may not work out the first time. Do not give up!

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## But where are all the other APPs in ID?



**Alison Beiler, PA-C**  
Harborview Medical Center



Infectious Diseases Society of America

**Special Series**

### Multidisciplinary Care

**Multidisciplinary Cancer Care: Development of an Infectious Diseases Physician Assistant Workforce at a Comprehensive Cancer Center**

*By Candice N. White, MPAS, PA-C, Roy A. Borchardt, PhD, PA-C, Mary L. Mahry, PA-C, Kathleen M. Smith, MPAS, PA-C, Victor E. Madanavick, MD, and Kenneth V. Robison, MD*

The University of Texas M. D. Anderson Cancer Center, Houston, TX

**Introduction**

The primary goal of the recently passed health care reform bill is to increase access to affordable care for Americans. One limitation to achieving this goal is the projected shortages of health care professionals in the future.<sup>1,2</sup> The delivery of cancer care will also be affected by increasing demand caused by an aging population, expanding treatment options, and increased numbers of cancer survivors with complicated medical needs.<sup>3,4</sup> The World Health Organization (WHO) recommended the development of a workforce that includes increased utilization of certified positions such as physician assistants (PAs) and nurse practitioners (NPs) to help alleviate this burden and ensure delivery of quality cancer care.<sup>5</sup> Two reports addressed this idea and reported on the use of PAs and NPs in the field of oncology.<sup>6,7</sup>

Cancer care is delivered not only by oncologists, but by a variety of personnel in multidisciplinary disciplines including infectious disease (ID). Infection is the most common complication of cancer and its treatment.<sup>8</sup> The University of Texas, M. D. Anderson Cancer Center (MDACC) is one of the largest comprehensive cancer centers in the nation. Currently, 18% to 23% of all hospital admissions on this center are infection related. The Department of Infectious Diseases provides inpatient and outpatient consultations to all reporting oncology services. Although MDACC has employed PAs and NPs for over 30 years, with the number of providers increasing annually, until recently, all of the ID services were provided by faculty and clinical fellows. Fellows rotate at several institutions and are not always available to provide support at MDACC. Over the past several years, ID interventions at MDACC have increased substantially (Fig. 1) and put a severe strain on our clinical faculty to meet this demand. The rest of this report details with the development of the ID PA workforce at MDACC.

**The MDACC ID Service**

Before the new hire, the inpatient ID services consisted of hematology ID service, intensive care unit ID service, and solid tumor ID service. One faculty and one fellow, when available, managed each ID service, performed all new consultations, and provided follow-up care. Frequently, there were periods where fellows were not available depending on the rotation schedule.

In addition, each ID faculty performed outpatient consultations and follow-ups one morning a week. Other activities included the development of institutional guidelines for the prevention, diagnosis, and treatment of infections, and interactions with the microbiology laboratory regarding new diagnostic methods, susceptibility testing, and the institutional antibioticogram. The need for developing a multidisciplinary antimicrobial stewardship team was also recognized and initiated through a quality improvement project in 2006 but could not be sustained after completion of the project. Finally, it was recognized that education in the fellowship training program was being negatively affected by increased clinical activity, as was the time available for faculty to conduct research, which is an academic requirement. Consequently, the ID PA workforce was developed and the first PA was hired in February 2006 (Fig. 2).




Fiscal Year	Hospital inpatient	Outpatient consults	Outpatient follow-up
FY06	~4000	~1000	~1000
FY07	~6000	~1500	~1500
FY08	~7000	~2000	~2000
FY09	~8000	~2500	~2500

**Figure 1.** Increases in clinical infectious diseases (ID) activity with the initiation of the ID physician assistant program. Hospital admissions increased by 50% for fiscal year (FY) 06 to 07. In the ID service, a 46% increase was noted for inpatient consults, a 50% increase for inpatient follow-up care, a 74% increase for outpatient consults, and a 145% increase for outpatient follow-up care.

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## The role of APPs in ID and the need for data



9:50

leah yoke, pa-c  
308 Tweets

Tweets Tweets & replies Media Likes

leah yoke, pa-c and 9 others

4 6 37

Show this thread

leah yoke, pa-c @LeahYoke · 12/2/19

#IDTwitter- help us understand the utilization of Advanced Practice Providers (APPs) in ID. Take a quick 2-min survey. Share & R/T. Thx!!

MDs [j.mp/35sKjaN](https://j.mp/35sKjaN)

APPs [j.mp/2D8NFnm](https://j.mp/2D8NFnm)

[@IDSAInfo](#) [@HIVMA](#)

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## Survey

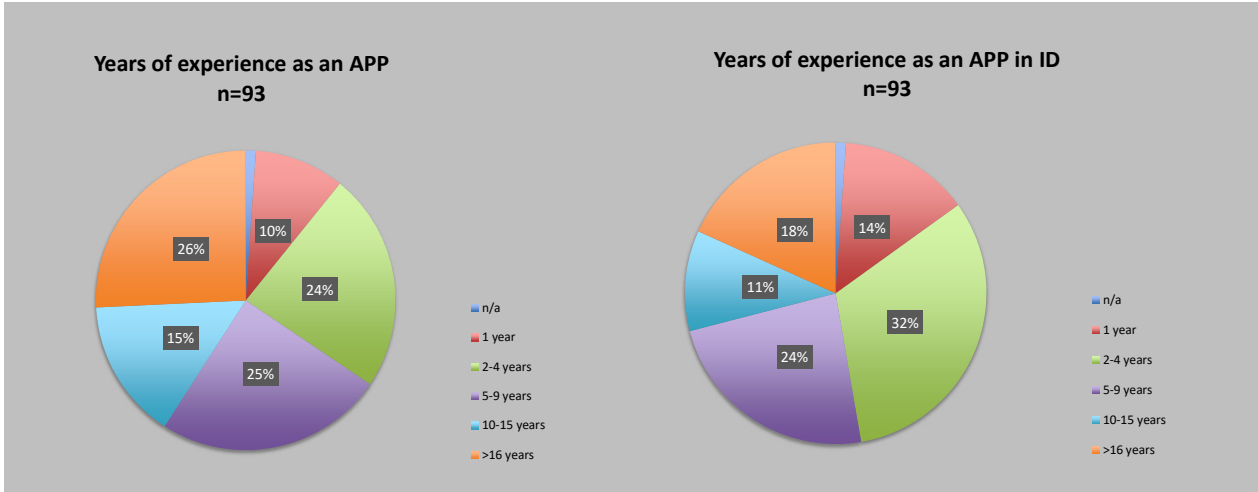
- Two surveys created in RedCap
  - ID Physician survey
  - ID APPs survey
- Distributed between 12/1/2019-1/31/2020
- Advertised by emails to key stakeholders, social media posts, and online community forums within IDSA
- 93 respondents nationwide for the APP survey; 218 respondents nationwide for the physician survey.

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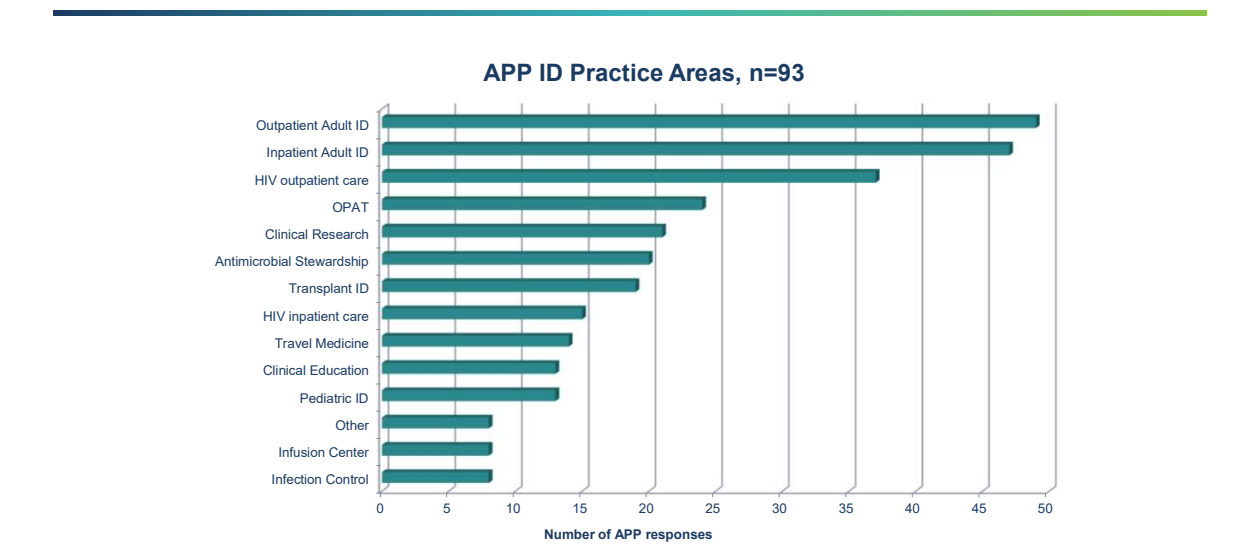
# APPs in ID



Beielser A, Yoke L, Liu C, Pergam S, Wald A, Dhanireddy S. Advanced Practice Providers in the Infectious Disease Workforce: A Nationwide Survey. *Journal of Interprofessional Education and Practice*. June, 2021. <https://doi.org/10.1016/j.xjep.2021.100448>




# ID Practice Areas in ID



Beielser A, Yoke L, Liu C, Pergam S, Wald A, Dhanireddy S. Advanced Practice Providers in the Infectious Disease Workforce: A Nationwide Survey. *Journal of Interprofessional Education and Practice*. June, 2021. <https://doi.org/10.1016/j.xjep.2021.100448>



## The Role of the Advanced Practice Provider in Infectious Disease: Opportunities for Growth



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HARBORVIEW MEDICAL CENTER

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**UW Medicine**  
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### Background

- Advanced Practice Providers (APPs) provide high quality medical care in multiple specialties, including Infectious Diseases (ID)
- ID physician shortages have been a concern voiced by ID organizations
- APPs practicing in ID can act as extenders of patient care, however this provider group role is not well understood or defined
- To better understand these providers, we examined APP years of experience in ID, primary practice settings, and perceived practice barriers from an APP perspective

### Objectives

To describe and better understand the APP workforce within the ID community

### Methods

- Survey created in REDCap
- Distributed between 12/1/2019-1/31/2020 to self-identifying APPs practicing in ID
- Advised by direct emails to key stakeholders, social media, and online IDSA community forums
- Responses captured in RedCap database

### Results

**Figure 2:** APP ID Practice Areas, n=93

**Figure 5:** Perceived Practice Barriers for APPs in ID, n=92

**Figure 3:** Years of experience as an APP, n=93

**Figure 4:** Years of experience as an APP in ID, n=93

**Figure 1: Survey Response by Region**


### Conclusions

- The APP ID workforce is an experienced provider group working in a variety of ID settings and geographic locations in the US.
- APPs can work as extenders of care in multiple settings within ID.
- Creation of directed ID educational opportunities, along with collaborating physician support are significant areas of opportunity and growth.
- APP specific mentorship and training courses will create more opportunities for APPs and further expand the ID workforce.

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## Physician Perspective: Utilization of Advanced Practice Providers (APPs) in Infectious Disease




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### BACKGROUND

- With recent shortfalls in applicants completing formal Infectious Disease (ID) fellowship programs, shortages of ID physicians is a challenge recognized by the clinical workforce.
- More Advanced Practice Providers (APPs) are being used in sub-specialties within ID to expand and extend existing practices.
- APPs clinical scope, roles, and opportunities for education are not well understood, including the number of practicing APPs working in ID.
- There is no formal training, guidance, or national education opportunities for APPs working in ID.
- We developed a physician survey to better understand the APP workforce in ID, the perceived barriers to APP utilization, and educational opportunities.

### METHODS

**Design:** Voluntary anonymous physician survey data  
**Site:** United States, and other locations  
**Survey period:** Dec 1, 2019 – Jan 31, 2020  
**Survey population:**  
- Infectious Disease physicians who completed formal ID training  
Physician survey links were distributed by social media, key stakeholder emails, and IDSA online community forum. Anonymous data were gathered via REDCap data collection survey tool.<sup>1</sup> Below are the physician questions:

- Are you an Infectious Disease Attending, who has completed ID fellowship training?
- To what degree are you familiar with the utilization of APPs working in ID?
- Do you currently work with an APP in your group or practice? If yes, how many?
- If no, what are some reasons you don't have an APP in your practice?
- What services do you provide at your practice?
- What is your primary practice setting?
- What is your ID practice zip code?

### RESULTS, n = 218

Physician Care Provided	n = 218 (%)
Inpatient Adult ID	185 (85%)
Outpatient Adult ID	162 (74%)
HIV Outpatient care	152 (70%)
HIV Inpatient care	137 (63%)
Clinical Education	132 (61%)
Antimicrobial Stewardship	131 (60%)
OPAT	128 (59%)
Clinical Research	111 (51%)
Infection Control	104 (48%)
Transplant ID	93 (38%)
Travel Medicine	79 (36%)
Infusion Center	38 (17%)
Pediatric ID	26 (12%)
Other	4 (2%)

Type of ID practice setting	n = 218 (%)
University/Medical school	104 (48%)
Hospital/Clinic	80 (37%)
Private Practice	28 (13%)
Federal Government	5 (2%)
Prefer not to answer	1 (0%)

### RESULTS, n = 142 (no response, n = 76)

#### Physician Responses

Reported reasons/concerns for not having APPs n = 142 (%)

No concerns	81 (57%)
No standardized ID specific training	22 (15%)
Practice has sufficient staffing	19 (13%)
Amount of time training would take	17 (12%)
Loss of physician revenue	16 (11%)
Not comfortable providing job training	12 (8%)
Legal (malpractice) ramifications	11 (8%)
Concerned about proper billing	10 (7%)
Do not feel equipped to provide oversight	7 (5%)
Other reasons (Open End Responses)	
Knowledge gaps	6 (4%)
Lack of funding	5 (4%)
Lack of weekend/call coverage	4 (3%)
Decision made by other administration	3 (2%)
In process of hiring APP	2 (1%)

#### DISCUSSION AND CONCLUSIONS

- Results of 218 surveys demonstrate collaboration between ID physicians and APPs exists to meet current workforce needs.
- 57% of Physicians reported no concerns with utilizing APPs in ID (n = 142).
- Lack of APP ID specific training is a perceived concern/barrier to utilization of APPs.
- Opportunity exists for formal ID education and resource development both to enhance APPs clinical skills and address perceived knowledge gaps.
- Inclusion of APPs in the ID workforce may allow physicians to expand ID care into more resource limited areas to continue to provide high quality patient care.

### Figure 1: Survey Response by Region

### Figure 2: Do you currently work with an APP in your ID practice?

### Figure 3: Number of APPs the Physician works with

### Figure 4: Familiarity with APPs working in ID

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# Invitation to present at IDWeek 2020



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## Advanced practice providers in the infectious disease workforce: A nationwide utilization survey

Alison M. Beielser<sup>a,\*</sup>, Leah H. Yoke<sup>b,c,\*</sup>, Catherine Liu<sup>b,c</sup>, Steven A. Pergam<sup>b</sup>, Anna Wald<sup>a,b,c</sup>, Shireesha Dhanireddy<sup>a,c</sup>

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## Advanced Practice Providers in Infectious Disease: Educational Needs and Opportunities

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### Background

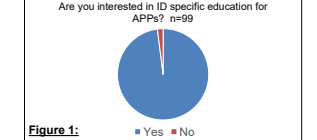
- Advanced Practice Providers (APPs) provide high quality medical care in multiple specialties, including Infectious Diseases (ID)
- There is a paucity of specific and directed educational opportunities available for APPs within ID
- To better understand these providers, we examined specific APP educational needs and how educational programs could create and provide high quality programs for APPs in ID

### Objectives

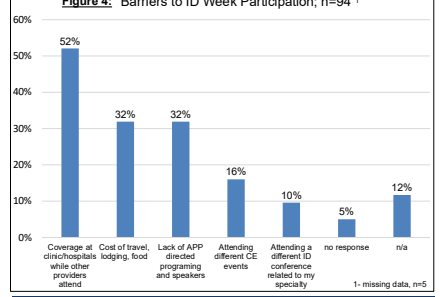
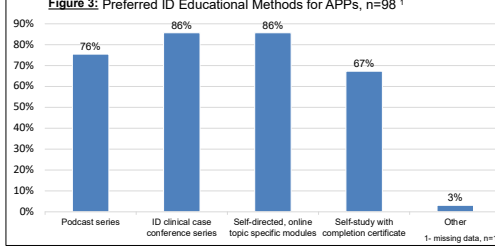
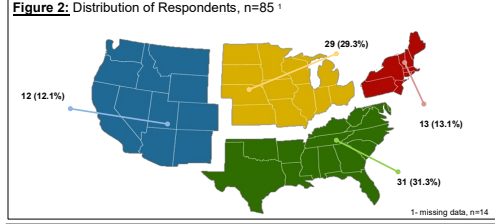
To understand and describe continuing education (CE) needs and opportunities for APPs within ID.

### Methods

- Anonymous survey created in REDCap
- Distributed between 2/15/2021-3/31/2021 to self-identifying APPs practicing in ID
- Advertised by direct emails to key stakeholders, social media, and online Infectious Diseases Society of America (IDSA) community forums
- Responses captured in REDCap database



### Results

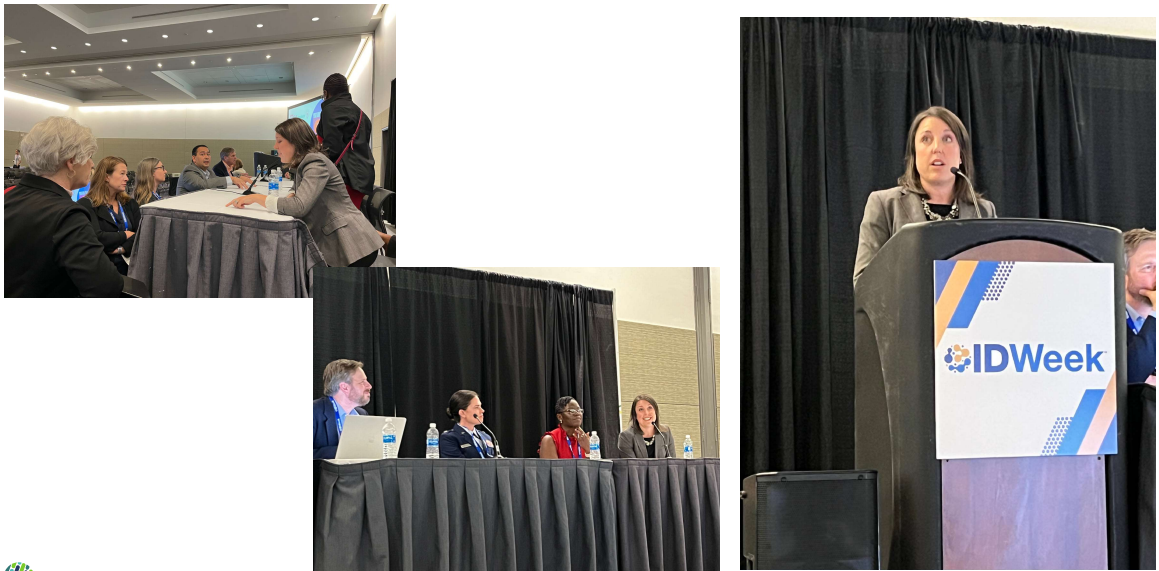


### Conclusions

- APPs in ID provide collaborative and specialized care in a variety of settings.
- Educational opportunities specifically tailored for APPs has been identified as a need.
- The majority of APPs in ID do not attend ID Week, citing clinical coverage and cost being significant barriers.
- Podcasts, online lectures, and self-study certificate programs were identified as avenues for ID teaching and are accessible, alternative methods for training.
- With a growing APP ID workforce, educational opportunities are necessary to support them in their practice

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## IDWeek 2023



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MEETING REPORT | GENERAL MEDICINE, HOSPITAL MEDICINE, INFECTIOUS DISEASES

INFORMING PRACTICE

October 17, 2023

## IDWeek 2023 Meeting Report — Highlights for Hospitalists

Frances Ue, MD, MPH

Important presentations for generalists

IDWeek is a joint annual meeting of the Infectious Diseases Society of America and several other major organizations that focus on infectious diseases. Dr. Frances Ue, a general internist and hospitalist at Cambridge Health Alliance and Harvard Medical School, attended this year's meeting from October 11 to 15 in Boston, Massachusetts. Below are Dr. Ue's summaries of several presentations that are of particular relevance to general medicine hospitalists but also of potential interest to clinicians who practice ambulatory care.

## STRENGTHENING OUR SPECIALTY THROUGH APP RECRUITMENT

(Leah H. Yoke, PA-C, Presentation 991)

ID subspecialists provide essential care; however, two thirds of the U.S. population live in counties with no or below-average ID physician coverage. This workforce shortage was strained further by the COVID-19 pandemic and recent decline in ID fellowship applications. Advanced practice practitioners (APPs; i.e., nurse practitioners and physician assistants) might help meet the need for ID services with prior studies describing models that integrate APPs into ID departments (e.g., *J Oncol Pract* 2010; 6: e31). In 2021, a national survey of ID physicians and APPs showed that perceived barriers to APPs practicing ID as a subspecialty included lack of formal ID education and training and misconceptions about APP practice scope (*J Interprof Educ Pract* 2021; 24:100448). Fifteen percent of ID physicians also cited lack of standardized ID-specific training for APPs as a concern. This new study highlights educational needs and opportunities for APPs in ID practice.



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### IDSA Workforce Development Strategy Approved by the IDSA Board of Directors - August 2023

**Vision:**  
The infectious diseases workforce is a robust, diverse and innovative community that advances scientific discovery and protects and heals the world.

#### Goals & Strategies

Goal	Strategy
<b>Inspire Interest in Infectious Disease</b> Attract and inspire medical students, residents and fellows to pursue a dynamic and rewarding career in ID	<ul style="list-style-type: none"> <li>Increase awareness and excitement about ID across all learners, with a focus on medical students and residents (i.e., developing a recruitment campaign that highlights the diverse breadth and scope of ID and “changes the narrative;” developing and enhancing mentorship and grant opportunities, facilitating attendance at IDWeek)</li> <li>Develop and optimize innovative and effective educational strategies for medical students and residents (i.e., developing slide sets for team-based learning curricula, creating clinical cases to assist with clinical reasoning)</li> </ul>
<b>Develop &amp; Sustain Careers in ID</b> Foster thriving careers for ID professionals that are evolving, rewarding and sustainable	<ul style="list-style-type: none"> <li>Develop more individualized education, training and career development initiatives tailored to ID professionals across career stages, practice types and settings (i.e., expanding mentorship and grant opportunities for ID professionals in areas of particular interest and/or need; expanding clinical practice guidelines and guidance for different hospital/practice teams)</li> <li>Increase recognition of ID as an indispensable resource to healthcare systems, policy makers and payers for optimizing infectious diseases prevention, care and services (i.e., advancing value-based payment arrangements, setting standards for ID professional supply, creating/improving health system metrics)</li> <li>Provide a professional home for all in ID (i.e., increasing professional connections, community, and support for professionals by area of specialty, career stage and practice type)</li> <li>Strengthen and expand ID-led interprofessional team-based care (i.e., creating standards delineating scope of practice and how to work together, developing business case scenarios to justify APP employment, creating education and training resources to onboard APPs)</li> </ul>
<b>Expand &amp; Promote Equitable Access to a Diverse ID Workforce</b> Ensure the ID workforce is accessible to, and reflects the diversity of, the communities it serves	<ul style="list-style-type: none"> <li>Mitigate barriers to careers in infectious diseases for IMGs (i.e., providing opportunities for community and networking, creating clinical rotations and partnerships with international medical schools)</li> <li>Develop a diverse and culturally responsive ID workforce to better serve all communities (i.e., increasing the number of ID professionals from URM backgrounds, creating education and training on cultural awareness for ID professionals)</li> <li>Secure access to ID expertise in underserved areas and populations (i.e., providing clinical support in areas without ID access via telehealth and other vehicles)</li> </ul>

- Provide a professional home for all in ID (i.e., increasing professional connections, community, and support for professionals by area of specialty, career stage and practice type)
- Strengthen and expand ID-led interprofessional team-based care (i.e., creating standards delineating scope of practice and how to work together, developing business case scenarios to justify APP employment, creating education and training resources to onboard APPs)

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## Future work

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- Development of educational opportunities for APPs in ID
- Mentorship for new APPs in ID
- Future directed CME and networking opportunities
- Virtual and “on the go” CME
- Goal of increasing attendance at IDWeek for APPs

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## Leadership Lesson #3:

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Ask a good question... and find the answer!

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# Enter COVID...



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Advanced Practitioner Society for Hematology and Oncology

ABOUT JOIN/RENEW RES



## Development of a SARS-COV-2 Testing Algorithm at a Cancer Center



May 20, 2020

### Development of a SARS-COV-2 Testing Algorithm at a Cancer Center

By Leah Hampson Yoke, MCHS, PA-C, Fred Hutchinson Cancer Research Center and University of Washington School of Medicine



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# COVID at a Cancer Center

## Clinical Features and Outcomes of COVID-19 Infection Among Cancer Patients in Seattle, Washington



Leah H. Yoke, PA-C, MCHS<sup>1\*</sup>; Juhye Lee, PhD<sup>1\*</sup>; Elizabeth M. Krantz, MS<sup>1</sup>; Jessica Morris, MPH<sup>1</sup>; Sara Marquis, MPH<sup>1</sup>; Pooja Bhattacharyya, PA-C<sup>1,2</sup>; Lisa So, PA-C<sup>1,2</sup>; Francis Riedo, MD<sup>3</sup>; Jason Simmons, MD, PhD<sup>2,4</sup>; Ali Raza Khaki, MD<sup>5,6</sup>; Steven A. Pergam, MD, MPH<sup>1,7</sup>; Alpna Waghrane, MD<sup>1,7,8</sup>; Chikara Ogimi, MD<sup>1,7,8\*</sup>; Catherine Liu, MD, FIDCA<sup>1,9\*</sup>

<sup>1</sup>Vaccine and Infectious Disease Division, Fred Hutchinson Cancer Research Center, Seattle, WA; <sup>2</sup>Division of Allergy and Infectious Diseases, University of Washington, Seattle, WA; <sup>3</sup>EvergreenHealth, Kirkland, WA; <sup>4</sup>VA Puget Sound Health Care System, Seattle, WA; <sup>5</sup>Clinical Research Division, Fred Hutchinson Cancer Research Center, Seattle, WA; <sup>6</sup>Department of Pediatrics, University of Washington, Seattle, WA; <sup>7</sup>Department of Pediatrics, University of Washington, Seattle, WA; <sup>8</sup>Pediatric Infectious Diseases Division, Seattle Children's Hospital, Seattle, WA; <sup>9</sup>These authors contributed equally. \*Adult senior authors



Background	Table 1. Baseline Demographics for COVID-19 Positive SCCA Patients	Results																								
<ul style="list-style-type: none"> <li>High morbidity and mortality have been observed with SARS-CoV-2 infection. However, there are limited data on clinical characteristics of COVID-19 disease among cancer patients.</li> <li>Factors such as exposures, coinfections, and antimicrobial use among cancer patients with COVID-19 disease are not well understood.</li> </ul>	<table border="1"> <thead> <tr> <th>Race/ethnicity</th> <th>Number of patients</th> <th>Percentage of COVID-19+ patients</th> </tr> </thead> <tbody> <tr><td>Not stated/missing/other</td><td>10 (14.3)</td><td></td></tr> <tr><td>White</td><td>52 (44.1)</td><td></td></tr> <tr><td>Black</td><td>10 (8.4)</td><td></td></tr> <tr><td>Asian</td><td>9 (7.5)</td><td></td></tr> <tr><td>Hispanic/Latino</td><td>2 (1.7)</td><td></td></tr> <tr><td>Multiple races</td><td>2 (1.7)</td><td></td></tr> <tr><td>Unknown</td><td>2 (1.7)</td><td></td></tr> </tbody> </table>	Race/ethnicity	Number of patients	Percentage of COVID-19+ patients	Not stated/missing/other	10 (14.3)		White	52 (44.1)		Black	10 (8.4)		Asian	9 (7.5)		Hispanic/Latino	2 (1.7)		Multiple races	2 (1.7)		Unknown	2 (1.7)		<p><b>Figure 1. Distribution of COVID-19 Exposures*</b></p> <p><b>Figure 2. Frequency of Symptoms at COVID-19 Presentation Among 71 Patients</b></p> <p><b>Figure 3. 30-Day Mortality by Age Group†</b></p>
Race/ethnicity	Number of patients	Percentage of COVID-19+ patients																								
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Multiple races	2 (1.7)																									
Unknown	2 (1.7)																									
<p><b>Objectives</b></p> <p>To characterize clinical features and outcomes of COVID-19 disease in cancer patients at the Seattle Cancer Care Alliance (SCCA).</p>	<p><b>Methods</b></p> <p>Retrospective chart review</p> <p>71 consecutive patients at the Seattle Cancer Care Alliance diagnosed with SARS-CoV-2 infection by RT-PCR between February 20, 2020 and June 15, 2020.</p> <p>Generalized estimating equations with binomial distribution and logit link were used to test for associations of baseline factors with days alive and out of the hospital in the 30 days after COVID-19 diagnosis.</p>	<p><b>Figure 4. Empiric Antibiotic Use for Pneumonia in 30 Days After Diagnosis</b></p> <p><b>Figure 5. Model estimates for associations with days alive and out of hospital</b></p> <p><b>Conclusions</b></p> <ul style="list-style-type: none"> <li>COVID-19 is associated with significant morbidity and mortality in cancer patients, particularly among older age groups.</li> <li>Half of cases appeared to acquire SARS-CoV-2 from a hospital exposure, indicating potential for infection prevention and testing among admission.</li> <li>Despite low empiric antibiotic use, empiric antibiotic use in patients with COVID-19 diagnosis early on in the pandemic did not increase as time.</li> <li>Greater number of comorbidities significantly associated with lower odds of days alive and out of hospital in the 30 days after COVID-19 diagnosis.</li> </ul>																								



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# COVID at a Cancer Center- in print!

Open Forum Infectious Diseases

MAJOR ARTICLE



## Clinical and Virologic Characteristics and Outcomes of Coronavirus Disease 2019 at a Cancer Center

Leah H. Yoke,<sup>1,2,3</sup> Juhye M. Lee,<sup>1,4</sup> Elizabeth M. Krantz,<sup>1</sup> Jessica Morris,<sup>1</sup> Sara Marquis,<sup>1</sup> Pooja Bhattacharyya,<sup>1,2</sup> Lisa So,<sup>1,2</sup> Francis X. Riedo,<sup>2</sup> Jason Simmons,<sup>2,4</sup> Ali Raza Khaki,<sup>1,4,7</sup> Guang-Shing Cheng,<sup>1,4</sup> Alexander L. Greninger,<sup>1,8,9</sup> Steven A. Pergam,<sup>1,2</sup> Alpna Waghmare,<sup>1,8,11</sup> Chikara Ogino,<sup>1,8,11,13</sup> and Catherine Liu<sup>1,2,8</sup>

<sup>1</sup>Vaccine and Infectious Disease Division, Fred Hutchinson Cancer Research Center, Seattle, Washington, USA, <sup>2</sup>Division of Allergy and Infectious Diseases, University of Washington, Seattle, Washington, USA, <sup>3</sup>EvergreenHealth, Kirkland, Washington, USA, <sup>4</sup>Norwest Atlanta Pagan Sound Health Care System, Seattle, Washington, USA, <sup>5</sup>Clinical Research Division, Fred Hutchinson Cancer Research Center, Seattle, Washington, USA, <sup>6</sup>Division of Oncology, University of Washington, Seattle, Washington, USA, <sup>7</sup>Division of Oncology, Department of Medicine, Stanford University, Palo Alto, California, USA, <sup>8</sup>Division of Pulmonary and Critical Care, University of Washington, Seattle, Washington, USA, <sup>9</sup>Department of Laboratory Medicine and Pathology, University of Washington, Seattle, Washington, USA, <sup>10</sup>Department of Pediatrics, University of Washington, Seattle, Washington, USA, and <sup>11</sup>Pediatric Infectious Diseases Division, Seattle Children's Hospital, Seattle, Washington, USA

**Background.** High morbidity and mortality have been observed in patients with cancer and coronavirus disease 2019 (COVID-19); however, there are limited data on antimicrobial use, coinfections, and viral shedding.

**Methods.** We conducted a retrospective cohort study of adult patients at the Seattle Cancer Care Alliance diagnosed with COVID-19 between February 28, 2020 and June 15, 2020 to characterize antimicrobial use, coinfections, viral shedding, and outcomes within 30 days after diagnosis. Cycle threshold values were used as a proxy for viral load. We determined viral clearance, defined as 2 consecutive negative results using severe acute respiratory syndrome coronavirus 2 reverse-transcription polymerase chain reaction results through July 30, 2020.

**Results.** Seventy-one patients were included with a median age of 61 years; 59% had a solid tumor. Only 3 patients had documented respiratory bacterial coinfection. Empiric antibiotics for pneumonia were prescribed more frequently early in the study period (February 29–March 28, 2020; 12/34) compared to the later period (March 29–June 15, 2020; 2/36) ( $P = .002$ ). The median number of days from symptom onset to viral clearance was 37 days with viral load rapidly declining in the first 7–10 days after symptom onset. Within 30 days of diagnosis, 29 (41%) patients were hospitalized and 12 (17%) died. Each additional comorbidity was associated with 45% lower odds of days alive and out of hospital in the month following diagnosis in adjusted models.

**Conclusions.** Patients at a cancer center, particularly those with multiple comorbidities, are at increased risk of poor outcomes from COVID-19. Prolonged viral shedding is frequently observed among cancer patients, and its implications on transmission and treatment strategies warrant further study.

**Keywords.** antimicrobial use; cancer; clinical outcomes; COVID-19; viral shedding.



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# Equitable Access to COVID19 Therapeutics



The Lancet Regional Health - Americas

Available online 18 May 2022, 100263

In Press, Corrected Proof



Comment

## A call to action: A need for initiatives that increase equitable access to COVID-19 therapeutics

Jacinda C. Abdul-Mutakabbi<sup>a, b, c, d, e</sup>, Elizabeth B. Hirsch<sup>c</sup>, Caroline Ko<sup>d</sup>, Britny R. Brown<sup>e</sup>, Aiman Bandali<sup>f</sup>, Jason Mordino<sup>g</sup>, Leah H. Yoke<sup>h, i</sup>, Taison Bell<sup>j</sup>, Talia H. Swartz<sup>k</sup>, Uzma Syed<sup>l</sup>, Matifadza Hlatshway<sup>m</sup>, Ila M. Saunders<sup>n</sup>

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COVID-19 Test to Treat Locator

Faster, Easier Access to Life-Saving COVID-19 Treatments

View Locations



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# COVID treatment publications

Clinical Infectious Diseases

BRIEF REPORT

Successful Treatment of Prolonged, Severe Coronavirus Disease 2019 Lower Respiratory Tract Disease in a B cell Acute Lymphoblastic Leukemia Patient With an Extended Course of Remdesivir and Nirmatrelvir/Ritonavir

Emily S. Ford,<sup>1,2,6</sup> William Simmons,<sup>1</sup> Ellora N. Karmarkar,<sup>1</sup> Leah H. Yoke,<sup>1,2</sup> Ayodafe B. Braimah,<sup>3</sup> Johnnie J. Orezo,<sup>4,5</sup> Cristina M. Ghiuzeli,<sup>4,6</sup> Serena Barnhill,<sup>7</sup> Coralyann L. Sack,<sup>7</sup> Joshua O. Benditt,<sup>7</sup> Pavitra Roychoudhury,<sup>7,8</sup> Alexander L. Greninger,<sup>7,9</sup> Adrienne E. Shapiro,<sup>1,2,3</sup> Jennifer L. Hammond,<sup>10</sup> James M. Rusnak,<sup>10</sup> Mikael Dolsten,<sup>10</sup> Michael Boeckh,<sup>1,2,4</sup> Catherine Liu,<sup>1,2,4</sup> Guang-Shing Cheng,<sup>2,4,7</sup> and Lawrence Corey<sup>1,2,4,8</sup>

Open Forum Infectious Diseases

BRIEF REPORT

Successful Treatment of Persistent Symptomatic Coronavirus Disease 19 Infection With Extended-Duration Nirmatrelvir-Ritonavir Among Outpatients With Hematologic Cancer

Catherine Liu,<sup>1,2,3,6</sup> Leah H. Yoke,<sup>1,2</sup> Pooja Bhattacharyya,<sup>1,2</sup> Ryan D. Cassidy,<sup>3,4</sup> Guang-Shing Cheng,<sup>3,5</sup> Zahra Kassamali Escobar,<sup>1,6</sup> Cristina Ghiuzeli,<sup>4,4</sup> Denise J. McCulloch,<sup>1,2,3</sup> Steven A. Pergam,<sup>1,2,3</sup> Pavitra Roychoudhury,<sup>1,7</sup> Frank Tverdek,<sup>1,8</sup> Joshua T. Schiffer,<sup>1,2,3</sup> and Emily S. Ford<sup>1,2</sup>

<sup>1</sup>Vaccine and Infectious Disease Division, Fred Hutchinson Cancer Center, Seattle, Washington, USA, <sup>2</sup>Division of Allergy and Infectious Diseases, University of Washington, Seattle, Washington, USA, <sup>3</sup>Clinical Research Division, Fred Hutchinson Cancer Center, Seattle, Washington, USA, <sup>4</sup>Division of Hematology, University of Washington, Seattle, Washington, USA, <sup>5</sup>Division of Pulmonary, Critical Care and Sleep Medicine, University of Washington, Seattle, Washington, USA, <sup>6</sup>School of Pharmacy, University of Washington, Seattle, Washington, USA, and <sup>7</sup>Department of Laboratory Medicine, University of Washington, Seattle, Washington, USA



Clinical characteristics and outcomes of immunosuppressed patients treated with bebtelovimab for COVID-19 infection at an ambulatory cancer center



Eduardo Sanchez MD<sup>1,2</sup>, Elizabeth Krantz MS<sup>2</sup>, Leah Yoke PA-C<sup>1,2</sup>, Molly Gallahe<sup>2</sup>, Pooja Bhattacharyya PA-C<sup>1,2</sup>, Lisa So PA-C<sup>1,2</sup>, Zahra Escobar PharmD<sup>2</sup>, Frank Tverdek PharmD BCPSAQ-ID<sup>2</sup>, Emily Rosen MD<sup>1</sup>, ZZ Quinn<sup>2</sup>, Michelle Swetky MPH<sup>2</sup>, Salma Walji BScN, RN, MPA<sup>2</sup>, Marie Wilson MSN, RN<sup>2</sup>, Brittany McCreery MD, MBA<sup>1</sup>, Denise McCulloch MD, MPH<sup>1,2</sup>, Steve Pergam MD, MPH<sup>1,2</sup>, Catherine Liu MD<sup>1,2</sup>

<sup>1</sup>Division of Allergy and Infectious Diseases, University of Washington, Seattle, WA. <sup>2</sup>Fred Hutchinson Cancer Research Center, Seattle, WA



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# Leadership Lesson #4

Show up, be present, and take calculated risks.



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## Chief PA at UW Medicine

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- Positions created about 20 years ago to help advocate and lead the APP groups across the enterprise (now including Northwest Hospital, UW Medical Center, and the UW clinics)
- Represent APPs on the Medical Leadership Meetings, the Medical Staff Administrative Committee, and other enterprise -wide committees
- Sign all credentialing files for APPs to ensure safety and compliance
- Advocate for the needs of the over 800 APPs across the enterprise.



## September, 2020

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- COVID
- EMR transfer from Cerner to EPIC
- Budget shortfalls
- Burnt out providers

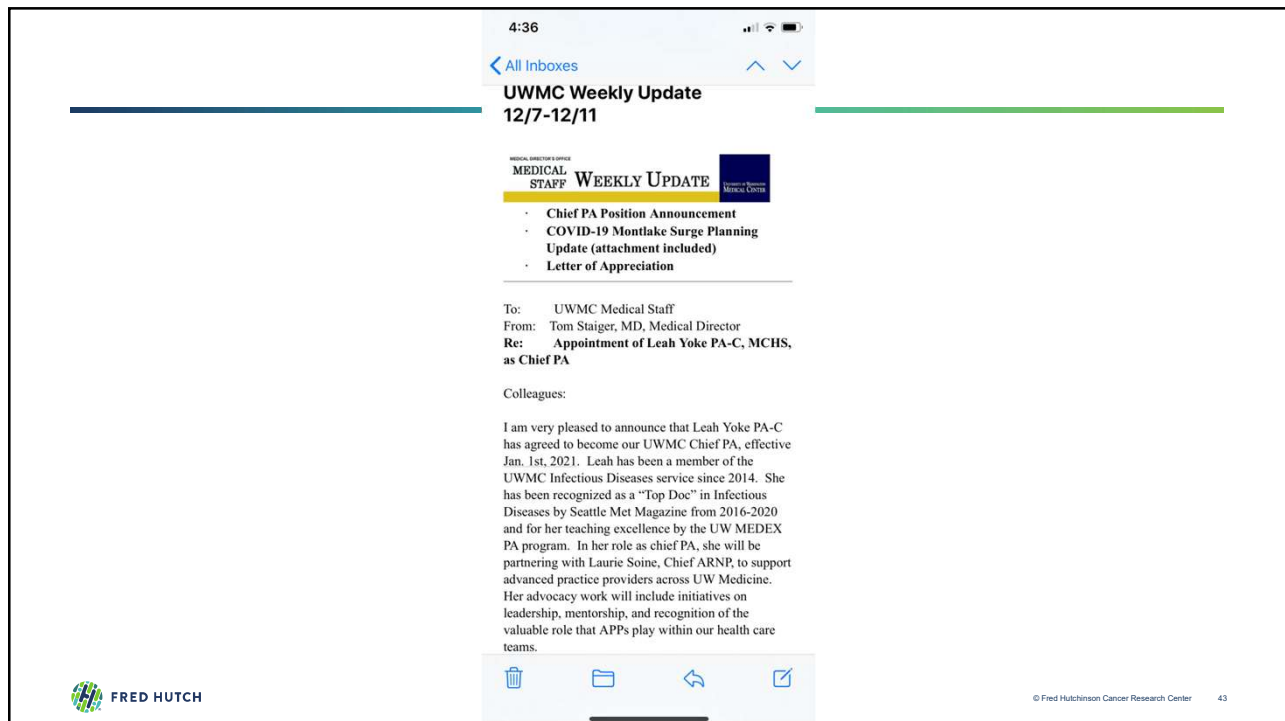


## Leadership Lesson #5

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If you have an opportunity, take it. It might not come back again.

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4:36

< All Inboxes

### UWMC Weekly Update 12/7-12/11


MEDICAL STAFF WEEKLY UPDATE

- Chief PA Position Announcement
- COVID-19 Montlake Surge Planning Update (attachment included)
- Letter of Appreciation

To: UWMC Medical Staff  
From: Tom Staiger, MD, Medical Director  
Re: Appointment of Leah Yoke PA-C, MCHS, as Chief PA

Colleagues:

I am very pleased to announce that Leah Yoke PA-C has agreed to become our UWMC Chief PA, effective Jan. 1st, 2021. Leah has been a member of the UWMC Infectious Diseases service since 2014. She has been recognized as a "Top Doc" in Infectious Diseases by Seattle Met Magazine from 2016-2020 and for her teaching excellence by the UW MEDEX PA program. In her role as chief PA, she will be partnering with Laurie Soine, Chief ARNP, to support advanced practice providers across UW Medicine. Her advocacy work will include initiatives on leadership, mentorship, and recognition of the valuable role that APPs play within our health care teams.

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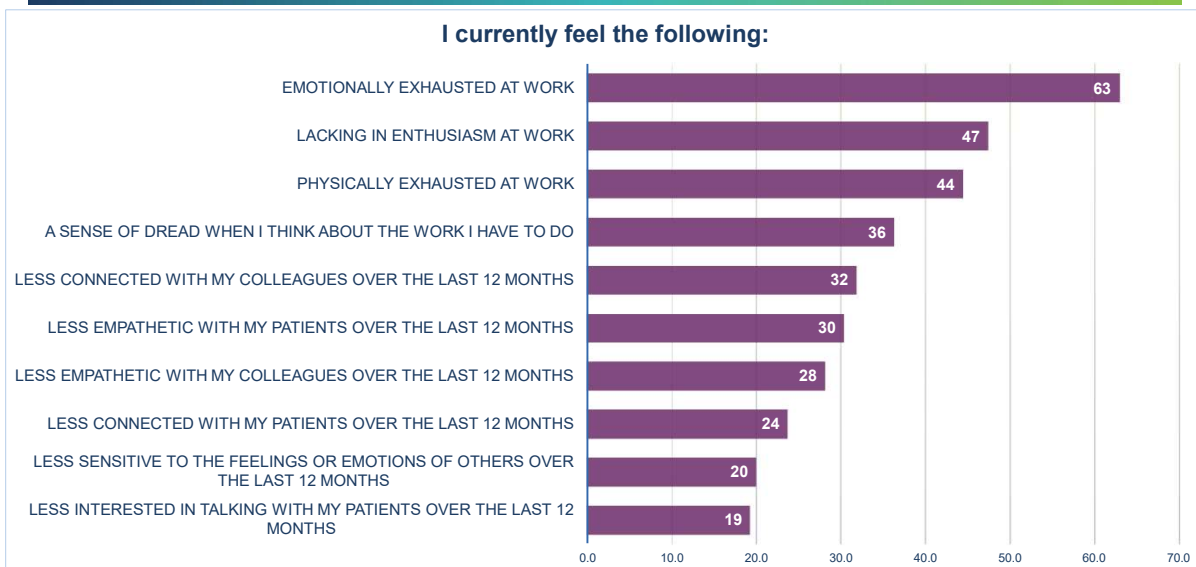
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## First things first- make a survey!

- After a year of difficulty and concern for burn-out, a survey was developed to better assess the state of our APPs
- Survey open May 19, 2021- July 15, 2021
- 158 (25%) APP survey respondents from a variety of specialties across the enterprise

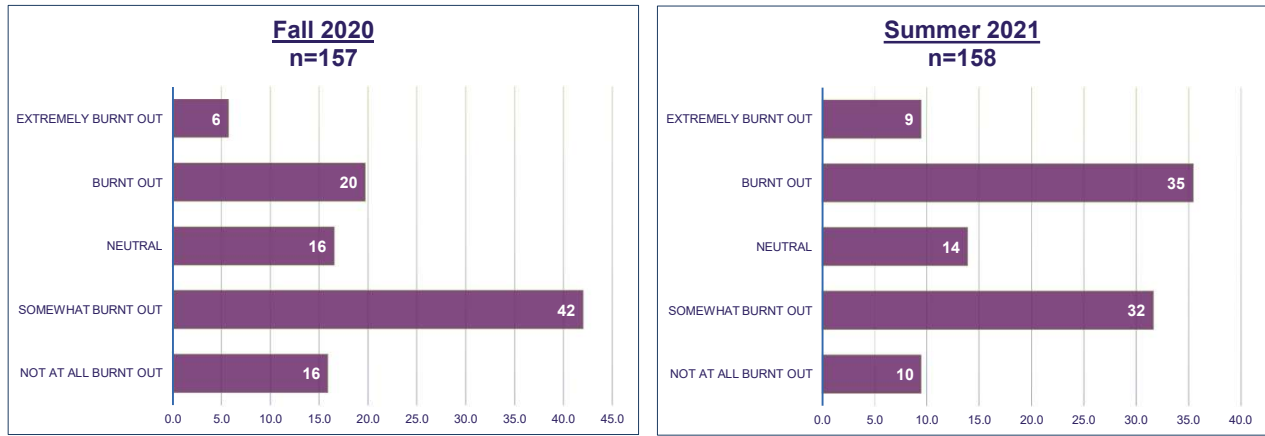
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## Wellness and burnout across UW Medicine



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## Burn-out trajectory



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## The response of UW Medicine Leadership

- Developed a salary equity task force and salary adjustments
- Appointed an APP Task Force to create standards on appropriate use of APPs, staffing, onboarding, recruitment, and ultimately building clinical teams using APPs
- Provided funds for an APP Week



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## Leadership Lesson #6

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Understand the needs of your group and make a plan for action.

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## Current work across UW Medicine

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- APP Task Force
- Salary equity and promotional pathway development
- Collaboration between our physician colleagues and APPs
- Managing continued repercussions from the pandemic response

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## The practicalities...

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- Show up to the meetings.
- Get involved.
- Respond to emails.
- Join Twitter (now X).
- Don't be afraid to speak up.
- Surround yourself with mentors and wise colleagues.
- Do what you love.



## Acknowledgements

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- Gabrielle Zecha, PA-C
- Alison Beieler, PA-C
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- Steve Pergam, MD
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- Rupali Jain, PharmD
- Thomas Staiger, MD
- Santiago Neme, MD
- Thomas Purcell, MD
- Anna Wald, MD
- Laurie Soine, ARNP, PhD
- Jeannine Sanford, ARNP

All my colleagues who continue to inspire me with their hard work and dedication.





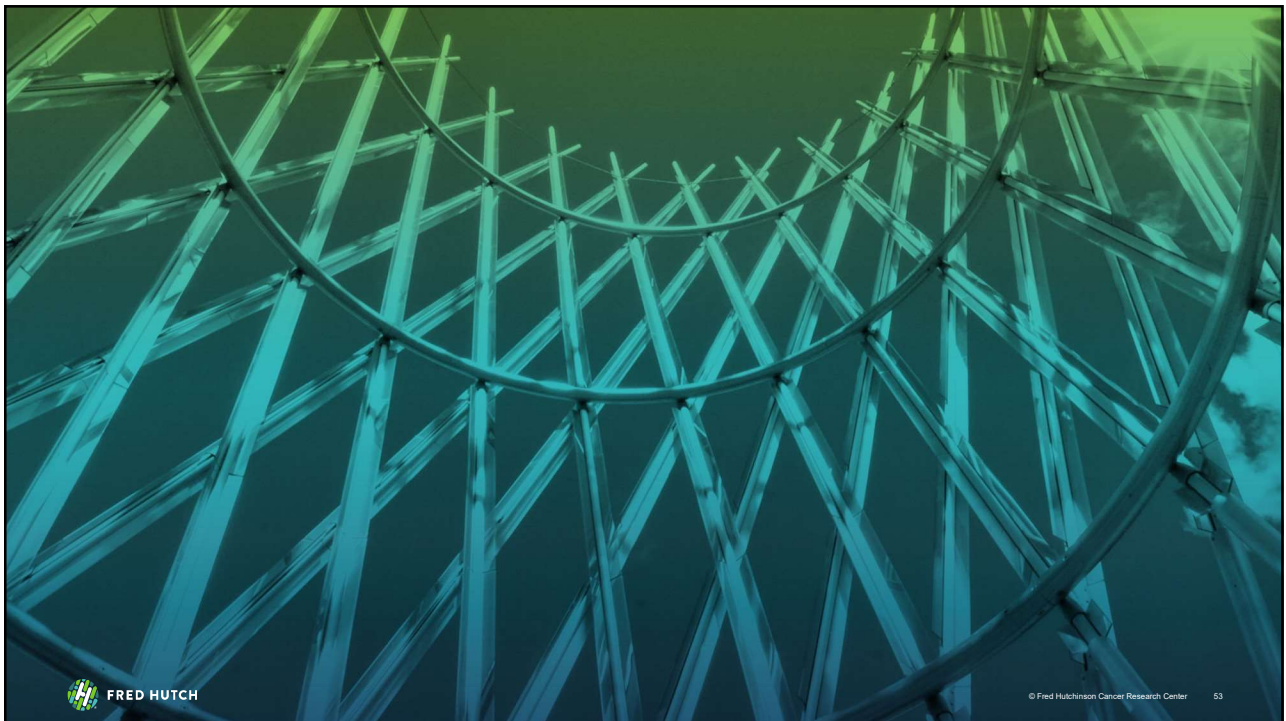
## Questions?

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