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**BRIEF REPORT**

# Academic seminars as tool for clinical and translational science education and dissemination: Perceptions and priorities in the COVID-19 era

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**Abstract**

Academic seminars are an important venue through which investigators in health services research (HSR) and other clinical and translational science disciplines can share their work, gather feedback, and connect with colleagues. However, the format and focus of these seminars shifted abruptly when the coronavirus disease 2019 (COVID-19) pandemic necessitated social distancing and underscored the salience of health equity. Little is known about how contemporary academic seminars are meeting the evolving needs of the HSR community. We surveyed 2021–2022 participants in a virtual HSR seminar series to understand experiences of and priorities for the seminars. We also compared results stratified by self-reported under-represented minority (URM) status. Of 45 respondents (including 26 faculty members, 8 trainees, 9 staff members, and 2 community partners), 38% self-identified as URM. Participants reported high satisfaction with seminar quality, diversity of topics, and audience participation (median  $\geq 4$  for all outcomes in Likert-scaled items where 5 = very satisfied). Knowledge acquisition, understanding of research methods, and collaboration were commonly cited as benefits of seminar attendance. Implementation science content and external collaboration were most often endorsed as priorities for future seminars. URM participants were over three times more likely than non-URM participants to cite learning about engaging community stakeholders and historically excluded populations as a benefit of seminar participation. Virtual academic seminars can be an effective modality for knowledge sharing and collaboration worth continuing after COVID-19 restrictions are lifted. Emphasizing equity, diversity, and inclusion (EDI) values in these seminars may hold potential for advancing academic departments' own EDI goals.

**Study Highlights****WHAT IS THE CURRENT KNOWLEDGE ON THE TOPIC?**

Academic seminars help investigators in health services research (HSR) and other clinical and translational science disciplines share their work, gather feedback,

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and connect with colleagues. However, it is unclear how these seminars are serving the research community amid changes wrought by the coronavirus disease 2019 (COVID-19) pandemic.

#### **WHAT QUESTION DID THIS STUDY ADDRESS?**

What are participants' perceptions of and priorities for HSR seminars in the COVID-19 era, and do these outcomes differ by whether participants identify as under-represented minorities?

#### **WHAT DOES THIS STUDY ADD TO OUR KNOWLEDGE?**

Survey results indicate that HSR seminars conducted with a virtual format and equity, diversity, and inclusion (EDI) theme can produce high participant satisfaction, with knowledge sharing and collaboration as prominent benefits. Participants highlight implementation science and external collaboration as priorities for future seminars. Under-represented minority (URM) participants were more than three times as likely as non-URM participants to cite learning about engaging community stakeholders and historically excluded populations as a benefit of seminar participation.

#### **HOW MIGHT THIS CHANGE CLINICAL PHARMACOLOGY OR TRANSLATIONAL SCIENCE?**

Offering virtual participation options for academic seminars may be a satisfactory strategy for translational science dissemination and collaboration even after the COVID-19 pandemic. Further investigation is needed to understand the potential of emphasizing EDI values in seminars for advancing academic departments' own EDI goals.

## **INTRODUCTION**

Academic seminars have played a longstanding role in helping researchers gather feedback, disseminate their work, and connect with colleagues,<sup>1</sup> positioning them as a potential tool for translating health services research (HSR) into practice. However, the role and form of academic seminars have evolved in recent years. The coronavirus disease 2019 (COVID-19) pandemic mandated a transition from in-person seminars to webinar formats to reduce viral transmission and accommodate new work-from-home models. Meanwhile, health disparities foregrounded by the pandemic brought renewed attention to issues of equity, diversity, and inclusion (EDI) in clinical and translational sciences fields, such as HSR.<sup>2,3</sup> Increasing workforce diversity and expanding research topics and approaches have been flagged as two urgent priorities to redress health inequities created and perpetuated by the structures, practices, and culture of the translational science enterprise itself.<sup>3,4</sup> Whether academic research seminars in their current form are meeting the needs of this evolving field remains unclear. To better understand how academic stakeholders engage with research seminars amid COVID-19-era constraints and demands, we sought to characterize participants' perceptions of and priorities for an HSR seminar series, focusing

especially on concerns relating to research translation, the virtual seminar format, and EDI. To explore opportunities to improve support for a diverse health services workforce, we also examined differences by whether seminar participants identified as an under-represented minority (URM).

## **METHODS**

### **Setting**

The Division of General Internal Medicine & Health Services Research (GIM & HSR) at the University of California, Los Angeles, is affiliated with a large, urban health system and has hosted an academic seminar series since 1993. The main goals of our seminar series, shared at the start of each year by the seminar series leader, are to provide a venue for faculty to communicate their research and for members of our division to collectively examine and discuss examples of how health services are conceptualized, organized, delivered, and experienced by individuals and populations. In the 2021–2022 academic year, our Division conducted 29 virtual seminars covering a variety of topics, including topics related to clinical practice, health policy, health disparities, and COVID-19 (Table 1).

**TABLE 1** Topics and Titles for the GIM & HSR seminar series at the University of California, Los Angeles, Academic Year 2021-2022.

Topic	Title
Clinical epidemiology and/or practice (non-COVID-19-related)	New Interventions for the Treatment of Substance Use Disorders
	Fracture Risk After Traumatic Fracture: Paradigm Shift in Clinical Practice
	Genetics, Within-Subject Variability, and Diabetes Complications
	Using Mixed Methods to Identify Opportunities for Strengthening Uptake and Implementation of Cervical Cancer Prevention Services in Malawi
	The UC Diabetes Prevention Program (DPP) Study
	Frailty Among Older Adults Worldwide
	Improving Access to COPD Care Through Improved Detection and Early Diagnosis
	Behavior Change Among Healthcare Professionals Regarding Goals of Care Communication
COVID-19	Engaging Peer Ambassadors to Promote COVID-19 Vaccine Education and Uptake in Homeless Encampments and Shelters
	MiVacunaLA: A Mobile Phone-Delivered Intervention to Improve COVID-19 Vaccine Behaviors Among Vulnerable Latino Families in East and South Los Angeles
	Patient Experience With Health Care Before and During the COVID-19 Pandemic
	Examining Experiences of Contact Tracing for COVID-19 among Persons Testing Positive in South Los Angeles
	Telehealth Expansion to Deliver VA Primary Care and Mental Health Services During the COVID-19 Pandemic
Health policy	Do We (Still) Need Nonprofit Hospitals? The Role of Ownership for Community Benefits and Medical Services
	Developing Pathways and Policies to Increase Engagement of Indigenous Peoples in Genomic Research
	Effects of the ACA Medicaid Expansion on the Compensation of New Primary Care Physicians
	The Diabetes Health Plan: Adherence & Utilization Effects among Low Income Beneficiaries
Health disparities and structural factors	Social Vulnerability Index and Health Care Utilization among UCLA Health Patients
	The AVID Study: Addressing Structural Racism in Schools Through Academic De-Tracking
	Leveraging Spatial Epidemiology to Reduce Health Disparities
	Race, Ethnicity, and the Utilization of Security Response in a Hospital Setting
	Measuring Health Equity: Methods and Trends
Physician Network Segregation: Concepts, Measures, and Association with Residential Segregation	
Health care provider characteristics	Racial and Ethnic Diversity of the U.S. Physician Workforce
	Effect of Medical School Racial and Ethnic Diversity on Physician Performance
Innovation and trends in health services and health care	Portals of Change: A Meaningful Digital Experience for Patients in the Safety Net
	Use of POLST in California: Implications and Ideas
	Department of Medicine Quality: Discovery, Development, Impact
	Building Upon Lessons Learned from our Seminar's Focus on GIM & HSR: Discovery, Equity, and Impact with a Case Study of Medi-Cal Access at UCLA

Abbreviations: COVID-19, coronavirus disease 2019; GIM & HSR, General Internal Medicine & Health Services Research; UCLA, University of California, Los Angeles.

Hour-long seminars were held weekly at noon. A faculty leader and postdoctoral fellow co-leader organized and moderated the seminars. Division staff provided technical and administrative support, handling scheduling, webinar logistics, event reminders, and speaker evaluations. Most speakers were faculty within our Division, whereas others represented faculty from other divisions, departments, or institutions whose work related to HSR and EDI. The seminar was publicized broadly via email

invitations to Division faculty (including both clinicians and non-clinician researchers), staff, HSR fellows, and other prior attendees, and also via listings in the School of Medicine's research calendar. Speakers selected their presentation topics independently but were encouraged to share work related to a theme of "GIM & HSR: Discovery, Equity, and Impact." Speakers were asked to present for 30 min, leaving 25 min for discussion, during which time seminar leaders prioritized EDI-related comments and

strove to balance participation opportunities across junior and senior faculty, staff, trainees, and community partners. To facilitate audience engagement, the seminar leader shared reflection questions (developed in collaboration with the speaker) at the start of each session following a brief introduction to the speaker. Seminar leaders also invited commentators with complementary expertise, often from outside the Division, to share brief comments to initiate the audience discussion following the main speaker's presentation.

## Seminar participant survey

In consultation with faculty experienced in psychometrics, we developed an anonymous, online survey assessing academic role, self-identified URM status, satisfaction with the seminar series, perceived benefits of seminar participation, helpfulness of audience engagement strategies, and priorities for future seminars. Survey items used Likert-scaled (5=very satisfied or very helpful, whereas 1=very dissatisfied or not at all helpful), dichotomous, and free-text options. The full text of the survey is provided in Supplemental Document S1. We sent survey invitations to all individuals with valid email addresses who attended at least one seminar between January and June 2022. We computed summary statistics and compared outcomes by URM status using Kruskal-Wallis and Fisher's exact tests with two-sided tests ( $\alpha=0.05$ ). After removing personally identifiable comments, we coded free-text responses to explore emergent themes. The University of California, Los Angeles, institutional review board exempted this study from review (IRB #22-001148).

## RESULTS

Forty-five (24%) of 190 seminar attendees completed surveys. Participants included 26 (59%) faculty members, eight (18%) trainees, nine (20%) staff members, and two (4%) community partners (Table 2). In total, 38% identified as URM, 58% as non-URM, and 4% as other (unsure or prefer not to say). Satisfaction with seminar quality, diversity of seminar topics, audience participation, and format was high (median=5, 5, 4, and 5, respectively). Invited commentators and reflection questions were regarded as helpful audience engagement strategies (median=5 and 4, respectively). The majority of participants endorsed enhanced access to new information, ideas, and concepts (89%); understanding new research methods and presentation strategies (58%); and collaboration and networking opportunities (56%) as benefits of seminar attendance. Changes to clinical practice (11%) were least often noted

as a benefit. Priorities for future seminars endorsed by the majority of participants included implementation science topics (56%) and engaging speakers and attendees outside our Division (53%).

A majority of URM participants, but not non-URM participants, agreed that community-partnered participatory research and EDI in HSR (59%), population health and health equity research (53%), and innovative seminar formats (53%) should be prioritized in future seminars (Table 2). The only item with statistically significant differences by URM status concerned whether learning about engaging community stakeholders and historically excluded populations was a benefit of seminar participation, endorsed by 76% of URM versus 23% of non-URM and 0% of other (unsure or prefer not to say) participants ( $p<0.001$ ).

Six respondents provided free-text comments. The most common theme in free-text comments was a request to a return to in-person seminars when possible (Table S1). Other free-text themes included the importance of addressing a breadth of topics in the seminar series, collaboration across disciplines and levels of experience, and strategies for greater inclusiveness.

## DISCUSSION

In this descriptive analysis of a participant survey, a COVID-19-era HSR seminar series appeared to fulfill academic seminars' traditional role in fostering knowledge acquisition and collaboration.<sup>1</sup> Despite the virtual format, most participants were highly satisfied with the seminar series and felt that invited commentators and reflection questions were helpful tools for engaging the online audience. Although we did not survey seminar participants before transitioning to the virtual format, these results support prior research showing that webinar-based learning can be effective and satisfying to participants, equivalent to or even exceeding face-to-face instruction in these domains.<sup>5</sup> In turn, satisfaction in workplace and educational settings has been linked to greater worker and learner engagement, learning, and retention,<sup>6-8</sup> suggesting that a satisfying seminar series could benefit the broader goals of our Division and institution.

The very low proportion of participants reporting that their clinical practice had been changed or enriched as a result of seminar attendance (11%) raises important questions about the objectives and impact of the seminar series. Even though most survey participants (69%) were not practicing clinicians (and thus might have interpreted the question as inapplicable to them), this result could indicate that the seminars are not an effective vehicle for translating research into better patient care. Indeed, the seminar series

**TABLE 2** Survey responses from participants in an academic GIM & HSR seminar series, 2021–2022.

	URM N= 17 (38%) n (%) or median (IQR)	Non-URM N= 26 (58%) n (%) or median (IQR)	Unsure or prefer not to say N= 2 (4%) n (%) or median (IQR)	Total N= 45 (100%) n (%) or median (IQR)	p value
<b>Demographics</b>					
Clinician	5 (29%)	9 (35%)	0 (0%)	14 (31%)	1.00
Researcher	9 (53%)	12 (46%)	1 (50%)	22 (49%)	0.88
Title					0.76
Faculty	8 (47%)	16 (64%)	2 (100%)	26 (59%)	
Trainee (resident or fellow)	4 (24%)	4 (16%)	0 (0%)	8 (18%)	
Staff	4 (24%)	5 (20%)	0 (0%)	9 (20%)	
Community partner	1 (6%)	1 (4%)	0 (0%)	2 (4%)	
<b>Satisfaction<sup>a</sup></b>					
Quality of presentations	5.0 (4.0–5.0)	5.0 (4.0–5.0)	5.0 (5.0–5.0)	5.0 (4.0–5.0)	0.66
Diversity of topics	5.0 (5.0–5.0)	5.0 (4.0–5.0)	5.0 (5.0–5.0)	5.0 (5.0–5.0)	0.69
Audience participation	5.0 (4.0–5.0)	4.0 (4.0–5.0)	4.5 (4.0–5.0)	4.0 (4.0–5.0)	0.44
Seminar format	5.0 (5.0–5.0)	5.0 (4.0–5.0)	4.5 (4.0–5.0)	5.0 (4.0–5.0)	0.39
<b>Helpfulness of seminar components in enhancing audience engagement<sup>b</sup></b>					
Invited commentators	5.0 (4.0–5.0)	5.0 (4.0–5.0)	4.0 (4.0–4.0)	5.0 (4.0–5.0)	0.21
Reflection questions	5.0 (3.0–5.0)	4.0 (3.0–4.0)	4.5 (4.0–5.0)	4.0 (3.0–5.0)	0.23
<b>Benefits of seminar participation</b>					
Access to information, ideas, and concepts	16 (94%)	22 (85%)	2 (100%)	40 (89%)	0.71
Understanding new research methods and presentation strategies	11 (65%)	13 (50%)	2 (100%)	26 (58%)	0.40
Collaboration and networking	10 (59%)	14 (54%)	1 (50%)	25 (56%)	1.00
Learning about engaging community stakeholders and historically excluded populations	13 (76%)	6 (23%)	0 (0%)	19 (42%)	<0.001
Clinical practice changed or enriched	4 (24%)	1 (4%)	0 (0%)	5 (11%)	0.12
<b>Priorities for future seminars</b>					
Implementation science topics	11 (65%)	13 (50%)	1 (50%)	25 (56%)	0.68
Engage speakers and attendees outside GIM & HSR	7 (41%)	15 (58%)	2 (100%)	24 (53%)	0.27
Population health and equity research	9 (53%)	12 (46%)	1 (50%)	22 (49%)	0.88
Innovative seminar format and/or short work-in-progress talks	9 (53%)	11 (42%)	1 (50%)	21 (47%)	0.77
Community-partnered participatory research and EDI in HSR	10 (59%)	10 (38%)	0 (0%)	20 (44%)	0.16

(Continues)



TABLE 2 (Continued)

	URM	Non-URM	Unsure or prefer not to say	Total	
	<i>N</i> = 17 (38%)	<i>N</i> = 26 (58%)	<i>N</i> = 2 (4%)	<i>N</i> = 45 (100%)	
	<i>n</i> (%) or median (IQR)	<i>n</i> (%) or median (IQR)	<i>n</i> (%) or median (IQR)	<i>n</i> (%) or median (IQR)	<i>p</i> value
Emphasis on strengths/weaknesses of research methods	8 (47%)	8 (31%)	2 (100%)	18 (40%)	0.12
Networking opportunities	8 (47%)	6 (23%)	0 (0%)	14 (31%)	0.22
Social media engagement	5 (29%)	2 (8%)	0 (0%)	7 (16%)	0.14

Note: Column percentages are shown. Percentages may not add up to 100 due to rounding. The *p* values were generated via Kruskal-Wallis tests for Likert-scaled items (Satisfaction and Helpfulness of seminar components) and Fisher's exact test for dichotomous items (all others). Bold text highlights *p* values less than 0.05.

Abbreviations: EDI, equity, diversity, and inclusion; HSR, health services research; GIM, general internal medicine; IQR, interquartile range; URM, under-represented minority.

<sup>a</sup>Assessed via 5-point Likert scale, with 1 = very dissatisfied and 5 = very satisfied.

<sup>b</sup>Assessed via 5-point Likert scale, with 1 = not at all helpful and 5 = very helpful.

has been framed as a setting for discussing the practice of HSR, but not necessarily as a direct means of research translation. However, reflection on the different phases of translational science offers another compelling explanation. The wording of the relevant survey item, which asked individual participants whether their clinical practice had changed as a result of seminar participation, might have evoked interactions between individual patients and clinicians (the purview of the T3 phase of translational science<sup>9</sup>). In contrast, much of the work addressed in HSR seminars focuses on implications at the level of health systems, policy, and/or populations (T4 translation)<sup>9</sup> not necessarily captured by the survey. Regardless, survey participants were also enthusiastic about prioritizing implementation science topics in future seminars, perhaps indicating an appetite for applying scientific questions and tools to accelerate research translation, whether at the individual or population level. This interest in implementation science mirrors the discipline's rapid growth in recent years.<sup>10,11</sup> In response, we have placed greater emphasis on implementation and translation in the themes for subsequent years' seminar series (2022–2023 theme: “Health Services Delivery for Individuals and Populations” and 2023–2024 theme: “Translating Theory to Practice” [tentative]), while continuing to address EDI implications during audience discussions.

In comparisons by self-reported URM status, URM participants were more likely than non-URM participants to identify seminar benefits and priorities that aligned with a mission of EDI,<sup>12</sup> including topics related to community participation, population health, and health equity. In particular, URM participants were more than three times as likely as non-URM participants to cite learning about engaging

community stakeholders and historically excluded populations as a benefit of seminar participation. Other differences by URM status were not statistically significant in our small sample. Nonetheless, given that URM personnel in HSR tend to report lower workplace support and belonging,<sup>13</sup> our exploratory findings suggest that using academic seminars as a platform to emphasize and prioritize EDI topics valued by URM personnel in the conduct, translation, and dissemination of research could support the retention of a more diverse workforce. In turn, representation of a wider range of experiences and perspectives may enhance the field's ability to address complex problems and advance health equity.<sup>4</sup> By shaping perceptions of what content is important and worthy of intellectual discussion, a seminar series framed around EDI topics could also serve as a vehicle for antiracism.<sup>14,15</sup> At the same time, our findings emphasize that EDI-themed seminars alone are insufficient to ensure that non-URM stakeholders value EDI, recognize how their privilege may limit their approach to research, and join their URM colleagues in advancing EDI in HSR. Additional investigation is needed to directly probe the influence of HSR seminars on workplace climate, hiring and retention, and research impact and to identify complementary strategies to better engage non-URM personnel in applying an EDI lens to their work.

Notably, holding seminars virtually made it easier not only to maintain infection precautions during the COVID-19 pandemic but also to include commentators from outside HSR as a strategy to increase audience engagement and diversity of perspectives. Virtual seminars have similarly succeeded in other settings at helping researchers overcome time-, cost-, and childcare-related barriers to networking

and professional development opportunities, which may be particularly important for early-career investigators.<sup>16</sup> On the other hand, repeated requests in the free-text field of our survey for a return to in-person seminars suggest that the virtual format may have drawbacks, like social isolation.<sup>2</sup> Continuing to offer virtual seminar participation options even as academic departments shift back to in-person meetings could play a small but important role in advancing EDI values by increasing opportunities for academic teams to interact and partner with others from outside the disciplines and institutions traditionally reached by HSR and translational science education.<sup>17</sup> Increasing community partnership across all aspects of research has been identified as a cross-cutting recommendation to help advance EDI in clinical and translational science.<sup>3</sup>

Limitations of our study include low response rate and single-institution sample. It is also difficult to tease out how the EDI theme and COVID-19 context of this seminar series influenced survey outcomes. However, we are among the first to report empirical data on perceptions of contemporary academic seminars in HSR, and our findings highlight lessons of potential relevance for any clinical and translational research department concerned with EDI. An important strength of our study was the inclusion of perspectives from participants with diverse backgrounds, including trainees, staff, and community partners—not solely faculty—which helps us begin to challenge some of the power dynamics that historically helped entrench a status quo of inequity in the practice and dissemination of HSR.<sup>15,18</sup> The funding renewal process for the National Center for Advancing Translational Sciences' Clinical and Translational Science Award hubs could present an opportunity to assess the generalizability of our results to other departments and institutions and explore how participants experience seminars offered in a hybrid (in-person and virtual) format.

With the recent expiration of the COVID-19 Public Health Emergency,<sup>19</sup> clinical and translational research departments face a decisive moment to shape their long-term organizational strategy. An important step in undoing structural inequity in academia is to acknowledge that existing research practices have played a role in perpetuating health disparities.<sup>20</sup> Continuing to examine how academic seminars, as a means of research examination, translation, dissemination, and networking, influence the field's broader societal impact and meet the needs of diverse stakeholders will be an important step in the disciplinary self-critique necessary for the pursuit of EDI in HSR.<sup>14,18</sup>

## AUTHOR CONTRIBUTIONS

All authors wrote the manuscript, designed the research, and performed the research. K.L.C. analyzed the data.

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## CONFLICT OF INTEREST STATEMENT

Drs. Kahn and Chen were the 2021–2022 co-leaders of the seminar series described in this article. Drs. Kahn and Oronce were seminar series co-leaders in 2020–2021. Ms. Calderón has been a regular participant at the seminar series for many years.

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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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