

Aligning Summer Training Programs with Catchment Priorities: an Example from an Urban Cancer Center

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Abstract

Background: The University of Illinois Cancer Center (UICC) defines its catchment area as Cook County, Illinois. Within the catchment area, UICC has identified a 20-zip-code Special Geographies Area (SGA) - located primarily within the City of Chicago - where the Cancer Center focuses its outreach and programming. The SGA is home to 1.3 million residents, of which 83% identify as minority race or ethnicity. SGA residents experience markedly elevated adverse social determinants of health, environmental exposures, risk behaviors, and cancer outcomes.

Methods: In 2024, UICC's Cancer Research Training and Education Coordination (CRTEC) office hosted the 8-week Cancer Health Equity Summer Scholars (CHES) program for underrepresented minority high school students interested in careers focused on cancer research and other health professions. In addition, the University of Illinois Diversity in Cancer Research (DICR) program provided research-intensive immersion for diverse undergraduate students pursuing careers in biomedical fields, cancer research, and other health professions. Recruitment events for UICC summer training programs are held annually at similar (and some identical) locations. The CRTEC office did not routinely collect zip codes from attendees at these events until recruitment for summer 2024 programs was complete. Therefore, we utilized recruitment data for 2025 summer programs as a surrogate for 2024 summer programs, assuming they were representative of the latter. Residential zip codes were obtained from attendees at recruitment events via electronic surveys, and for summer program applicants and enrollees from information captured from their application form. Only residents in the UICC catchment area were included in this analysis. ArcGIS – a software system that helps users create, analyze, manage, and map data – was used to display geographic data.

Outcomes: There were 91 attendees at recruitment events, as well as 81 applicants and 20 enrollees in the 2024 UICC CHES and DICR summer training programs combined. 56%, 21%, and 45% of UICC summer program recruits, applicants, and enrollees, respectively, reported residing in the UICC SGA. Among these groups, 70%, 50%, and 25% of the 20 SGA zip codes were represented.

Lessons Learned and Future Directions: Results showed that recruitment, application, and selection efforts were somewhat successful at engaging students from the UICC SGA. These results will directly inform the expansion of recruitment efforts for summer training programs into all SGA zip codes, in collaboration with the UICC Community Outreach and Engagement (COE) and Diversity Equity and Inclusion (DEI) offices. Future efforts include continued collection of zip codes and the addition of attendee sex, race, and ethnicity at recruitment events for summer training programs.

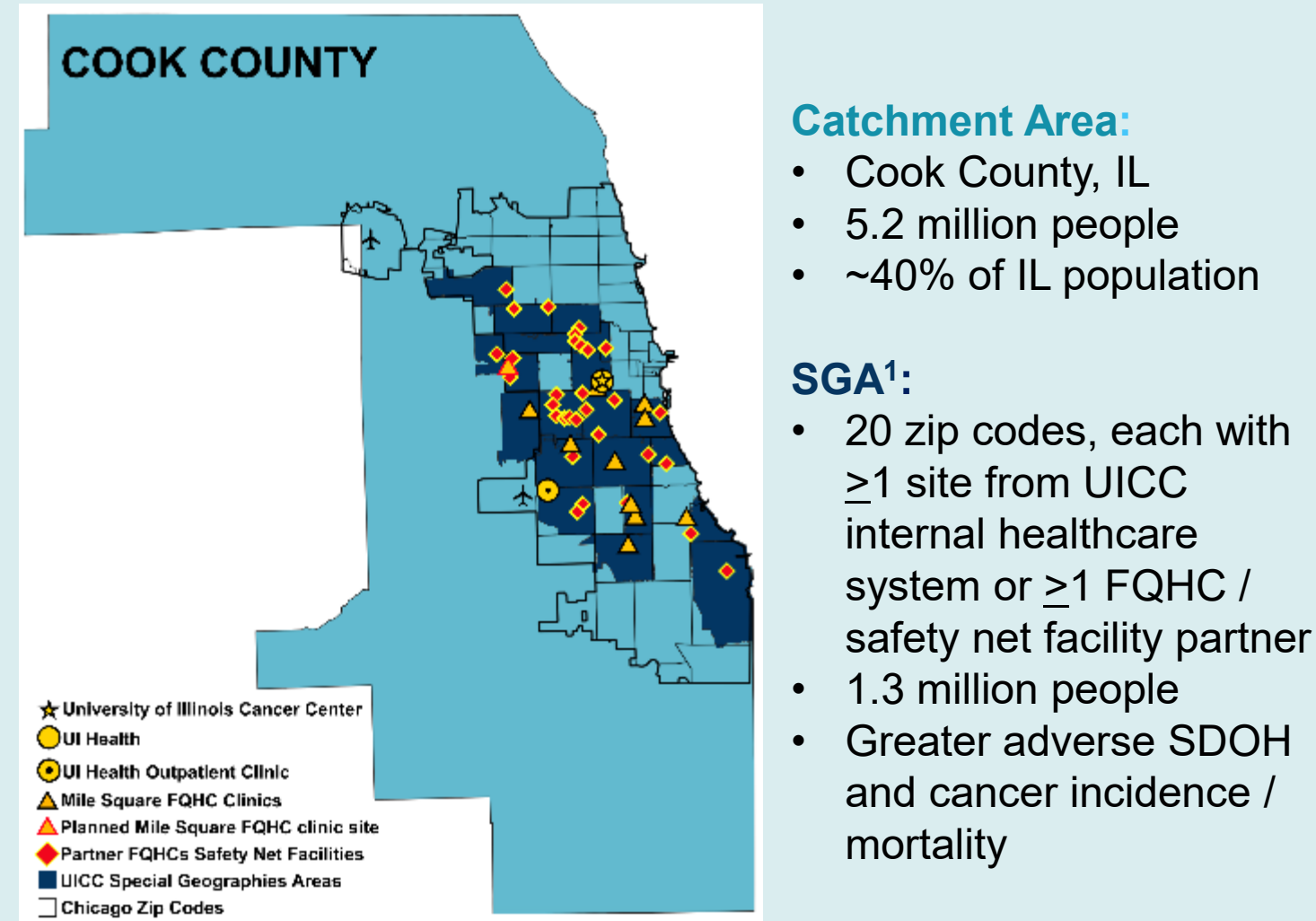
Objectives

In collaboration with the Data Integration Shared Resource (DISR), Community Outreach and Engagement (COE), and the Diversity, Equity, and Inclusion (DEI) office, the CRTEC office sought to

- 1) determine whether recruits, applicants, and enrollees in two summer training programs were representative of the UICC SGA and broader catchment area in terms of residence (geography), race, ethnicity, and sex
- 2) identify geographic areas for targeted recruitment efforts
- 3) identify gaps in current data collection efforts regarding summer training programs

Methods

Figure 1. UICC Catchment Area (Cook County, Illinois) and Special Geographies Areas (SGA)



UICC Summer Training Programs

Eligibility: College students from underrepresented backgrounds that are completing their freshman, sophomore, or junior year

Program Description:

- Students conduct their own cancer research project under the mentorship of a University of Illinois Cancer Center faculty researcher with a focus on healthcare disparities.
- Students participate in skill-building workshops, research symposiums and social functions.
- Students receive \$5,000 for completing the 10-week program.

Eligibility: High school students from underrepresented backgrounds that are completing their sophomore, junior, or senior year

Program Description:

- Students gain hands-on research experience working in a UIC faculty lab on an independent project.
- At the end of the summer, students present their work during the Cancer Center's student research symposium.
- Students attend workshops, lectures, and other activities focused on building research, professional, and academic skills.
- Students receive \$3,000 for completing the 8-week program.

Data Collection and Analysis:

Recruitment information: residential zip code captured via electronic survey from attendees at the Chicago Public Schools Young Women of Color and Young Men of Color Summits

Applicant and enrollee information: race, ethnicity, sex, and residential zip code collected via web-based submission portal

Exclusion criterion: residential zip code outside of UICC catchment area (n=19 recruits, 24 applicants, and 4 enrollees)

Results

Figure 2. Counts of UICC Summer Program Recruits (n=91), Applicants (n=81), and Enrollees (n=20), and Percent Minority Population, by Zip Code Across Chicago

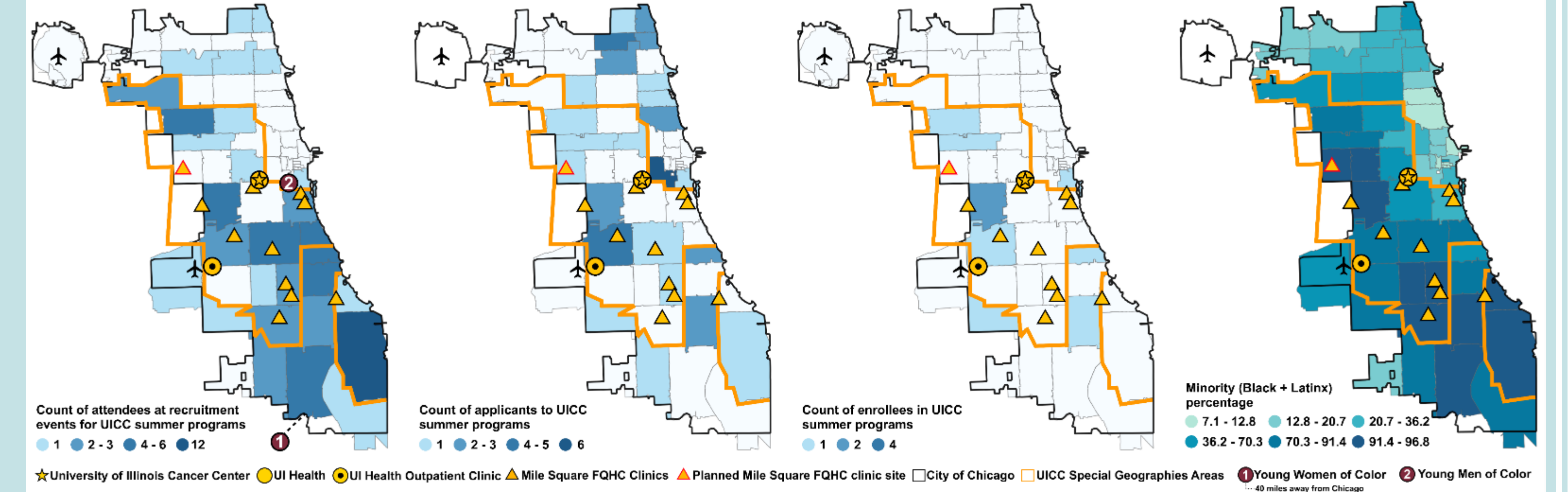


Table 1. Demographic Characteristics of UICC Summer Program Applicants and Enrollees, UICC Special Geographies Areas (SGA) Residents, and UICC Catchment Area Residents

	UICC Applicants (2024)	UICC Enrollees (2024)	UICC SGA Residents (2019-2023)	Cook County, IL Residents (2019-2023)
% White	6.2%	0%	17.2%	40.0%
% Black	27%	35%	30.5%	22.1%
% Asian	32%	10%	4.7%	7.7%
% Hispanic	27%	55%	45.5%	26.5%
% Female	70%	65%	51.2%	51.2%

Table 2. Percent of UICC Summer Program Recruits, Applicants, and Enrollees that Reside within the UICC Special Geographies Areas (SGA)

	UICC Recruits (2025*)	UICC Applicants (2024)	UICC Enrollees (2024)
UICC SGA	56%	21%	45%
Most frequent SGA zip code	60617 (24%)	60632 (29%)	60804 (44%)

* 2025 data used as a surrogate for 2024 data given nearly identical locations of recruitment events in each year

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- Cancer Research Training and Education Coordination (CRTEC): abstract preparation, data collection, project conceptualization
- Data Integration Shared Resource (DISR): abstract preparation, data analysis, data visualization / mapping, project conceptualization
- Diversity, Equity & Inclusion (DEI): abstract review

Conclusions

- 1) There was wide variability in reported residential zip code by UICC summer program recruits, applicants, and enrollees. Most students reported living within Chicago, in areas with large minority populations.
- 2) Summer program applicants were more likely to be Asian or female as compared to the UICC SGA and overall catchment area.
- 3) Summer program enrollees were more likely to be Black, Asian, Hispanic, or female as compared to the UICC SGA and overall catchment area.
- 4) Approximately 1/2 of summer program recruits and enrollees resided in the UICC SGA, whereas less than 1/4 of applicants reported living there.
- 5) 70% of SGA zip codes were represented among summer program recruits, whereas 50% and 25% of SGA zip codes were represented among applicants and enrollees, respectively.
- 6) The most frequently represented zip codes included 60617 (south side of Chicago), 60632 (south side of Chicago), and 60804 (Cicero).
- 7) Future directions include:
 - expansion of recruitment efforts for UICC summer training programs into 11 SGA zip codes that are currently not represented in the applicant pool
 - Addition of sex, race, and ethnicity questions to surveys administered at recruitment events for summer training programs
 - Addition of questions regarding social determinants of health (SDOH) to recruitment surveys and applicant forms

References

¹Y Molina et al., Characterizing the Catchment Area and Identifying Scientific Priorities with Communities: an Example from the University of Illinois Cancer Center. *Prev Oncol Epidemiol*, 2024; 2(1):2381819.