

Creating a sustainable rural health workforce: Addressing the burden of provider educational debt



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Introduction

- Student loan repayment programs aid in retaining a healthcare workforce in medically underserved communities therefore expanding access to health services[1].
- Educational indebtedness among providers contributes to increased psychological distress and burnout rates, impacting the quality of care provided to patients [2].
- Within New England, there is a high cost of living, providers often choose between primary care and paying off their debt[3].

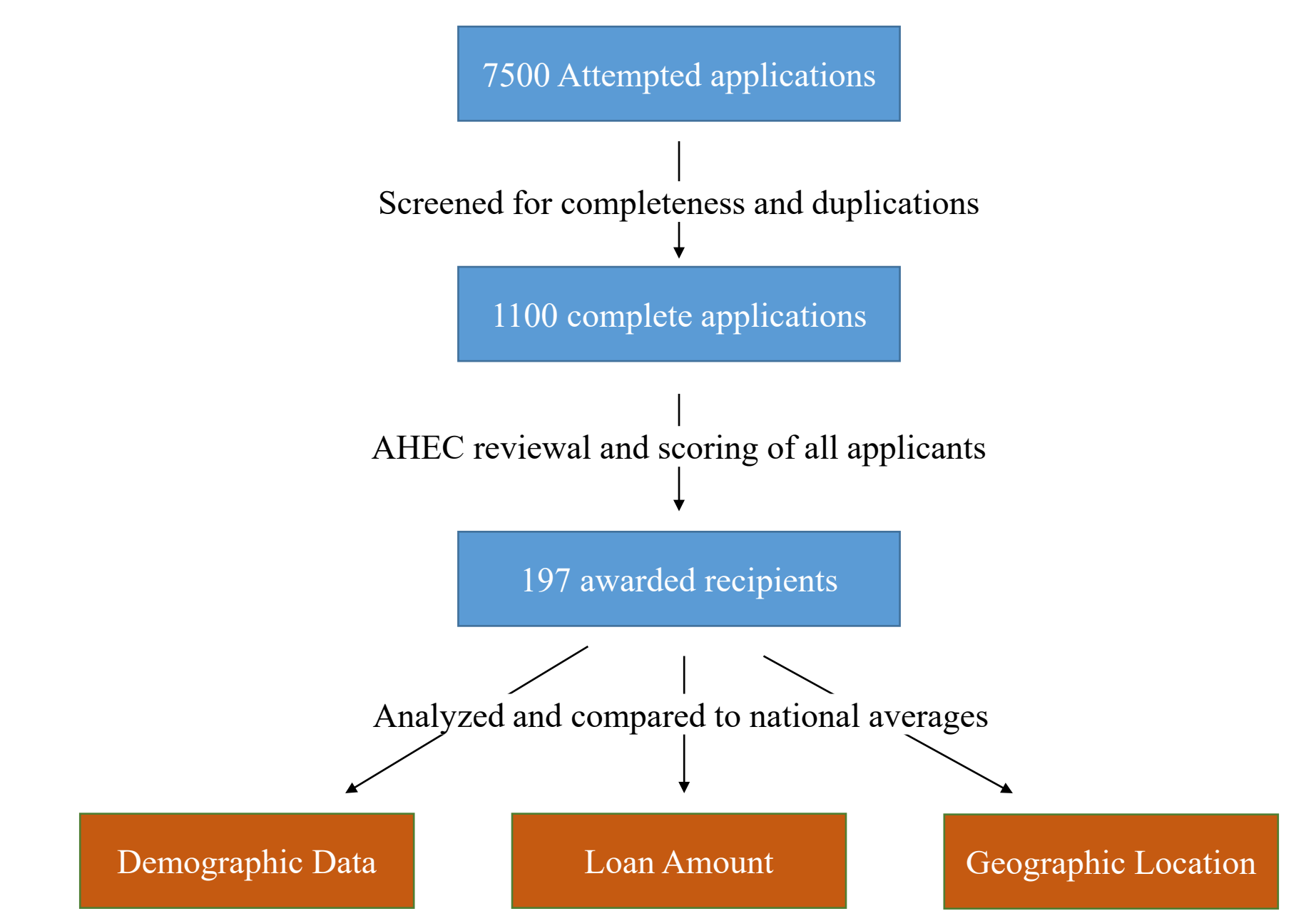
Connecticut Student Loan Repayment Program

Since 2009, Connecticut has lacked a student loan repayment program. The Connecticut Student Loan Repayment Program was relaunched in 2024 by CT Area Health Education Center and Department Public Health. We are reviewing deidentified data from the applicants and recipients to gain more insight into the burden of provider educational debt. This program is dually funded by the Health Resources and Services Administration and the American Rescue Plan.

Objective

The objective of this study is to describe the burden of educational debt among primary care providers in Connecticut and how it varies by clinical discipline and geographic region.

Methods



- Primary variables were provider demographics (gender, race, ethnicity), clinical discipline, geographic locations, loan amounts.
- The secondary variables were national loans averages by clinical discipline and earnings.
- Our main outcome was debt-earnings ratio.
- Analysis conducted using IBM SPSS 29 for Windows (64-bit)
 - Used Multivariate Regression Model
- Compared applicant and recipient data to annual wages of occupation from CT Department of Labor OES

The burden of educational debt on providers is substantial, and disproportionately impacts certain clinical disciplines and geographic areas.

Figure 1: CT SLRP Recipients Average Current Loan Balance vs. Expected Annual Earnings

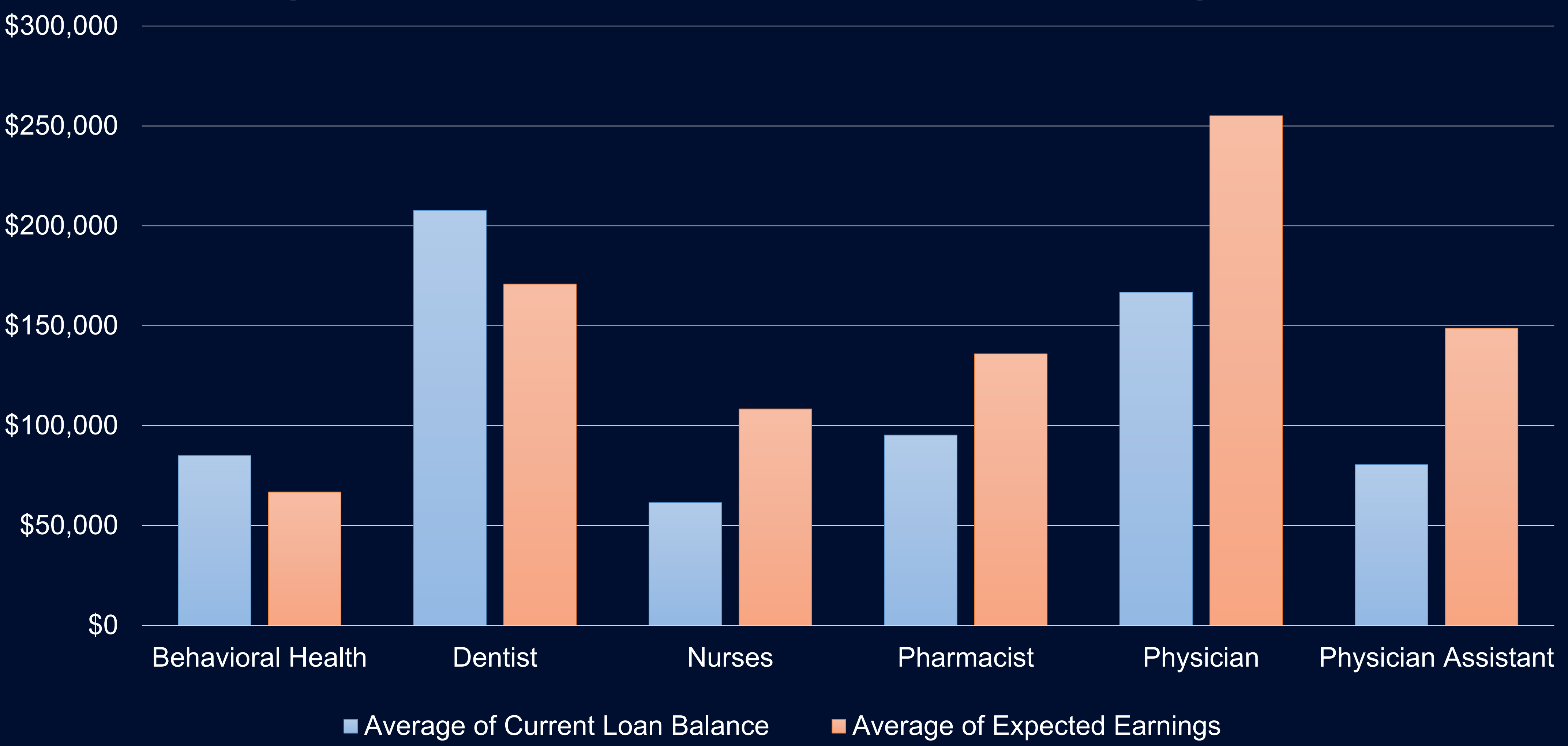
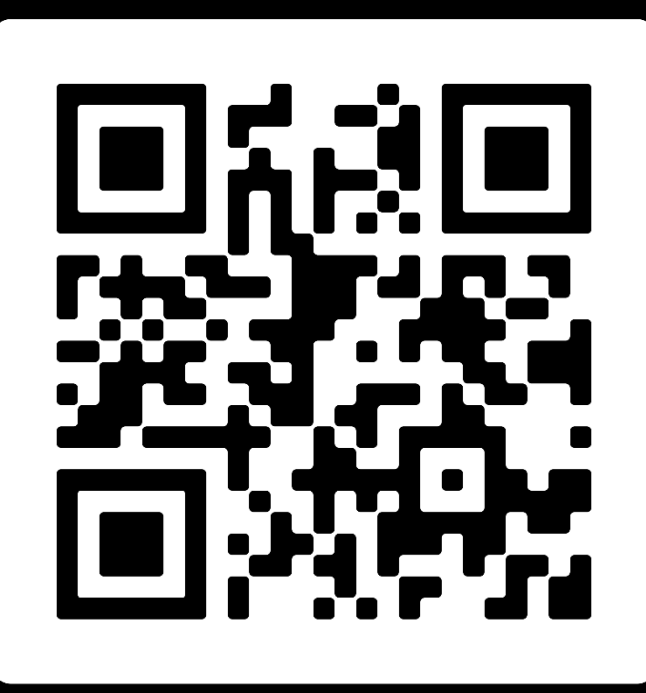
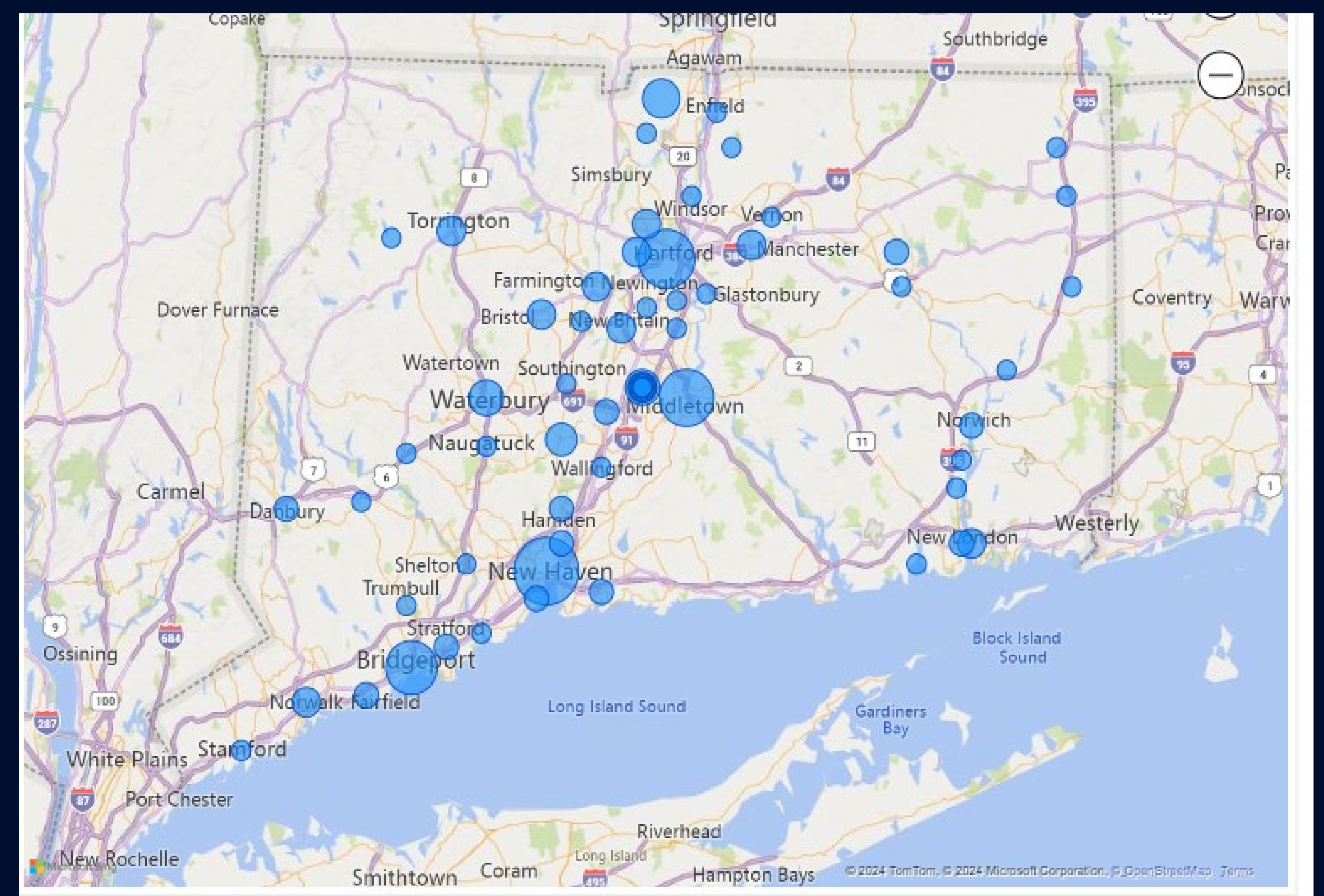


Figure 2: CT SLRP Recipients Employment Locations



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Figure 3: Modeling Demographic Indebtedness Disparities

Variables	Type III Sum of Squares	Mean Square	F	p-value
Age	0.01	0.01	0.01	0.83
Race	3.09	0.62	7.04	0.00***
Ethnicity	0.10	0.05	0.59	0.55
Clinical Discipline	11.73	1.95	22.27	0.00***
Current Loan Balance	47.61	47.61	542.26	0.00***
Award Amount	0.03	0.03	0.36	0.55

Conclusions

- The impact of educational debt varies by clinical discipline, showing that there may be an unequal burden primary care for some disciplines which affects health services allocation in underserved communities. (Figure 1)
- The substantial debt burden on healthcare providers shows the importance of a geographic expansion of loan repayment programs to grow a sustainable healthcare workforce. (Figure 2)
- CT SLRP recipients are located statewide, in both rural and urban areas, which will aide in creating a sustainable workforce in underserved areas (Figure 3)
- There is a disproportionate impact of educational debt by clinical discipline (*Dentistry and Behavioral Health*), race (*black*), and current loan size which calls for targeted interventions for respective providers and by loan type (Figure 3). *

Limitations

- Limited Generalizability:** The data set is restricted to applicants of the 2024 Connecticut Student Loan Repayment Program (CT SLRP). Consequently, the findings may not be broadly applicable to healthcare providers in Connecticut or the wider New England region.
- Loan Burden:** Given that the primary motivation for application was loan repayment, it is likely that the applicants have a higher loan burden compared to other similar populations. However, the racial and discipline disparity of educational indebtedness aligns with national trends.
- Small Sample Size for Dentists:** The data includes only two recipients classified as dentists. This small sample size limits the ability to draw robust conclusions about this subgroup.
- Rural Representation:** Connecticut does not have any federally designated rural areas. However, the two community health centers with a rural health designation in the state are represented in this dataset by a recipient from these organization. This absence might restrict applicability of the findings to rural healthcare disparities.

***Policy Impact:** After an advocacy research memo, legislative interpretation has determined that the tuition assistance and loan repayment awards are tax exempt in the state for health professionals extending health services in underserved communities.

References

- Davis, C. S., Meyers, P., Bazemore, A. W., & Peterson, L. E. (2023). Impact of Service-Based Student Loan Repayment Program on the Primary Care Workforce. *Annals of Family Medicine*, 21(4), 327–331.
- Galiana, L., Kowalczyk, K., & Sansó, N. (2022). Editorial: Psychological Distress, Burnout, Quality of Life, and Wellness Among Healthcare Workers. *Frontiers in Psychology*, 13.
- AAMC Research and Action Institute. "The Complexities of Physician Supply and Demand: Projections from 2018 to 2033." Association of American Medical Colleges, 2020.

Disclaimer

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