

BACKGROUND

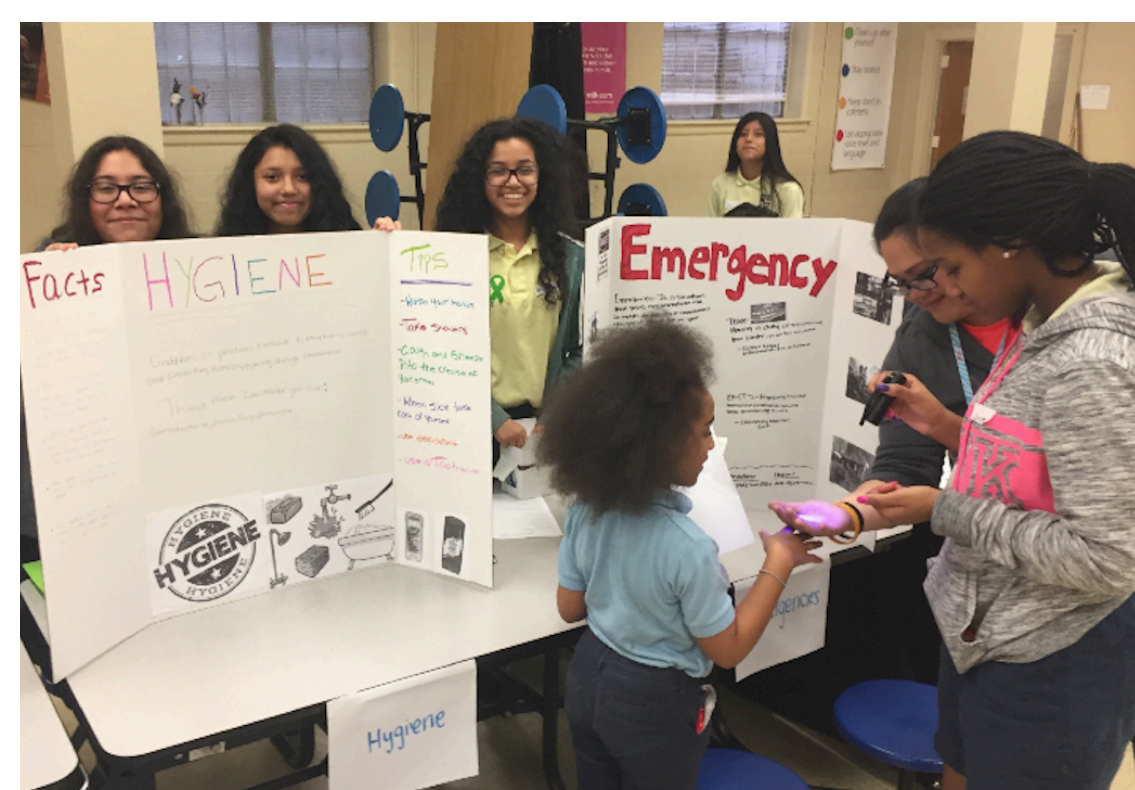
- Lower levels of health literacy are correlated with worse status for many conditions, including diabetes, heart failure, cancer, and HIV.
- Only 12% of Americans are found to have proficient health literacy.^{1,2}
- While the quality of care in Durham is high relative to the rest of North Carolina, significant socioeconomic, racial and ethnic health care disparities exist.³
- Durham Health Literacy Initiative (HLI) represents a collaboration between Durham educators and middle school students, and Durham graduate health students from Duke Health and North Carolina Central University

AIMS

- 1) Strengthen the health literacy of Durham youth
- 2) Empower Durham youth to be health literacy ambassadors
- 3) Enhance the communication skills of Duke Health students
- 4) Initiate Sustainability Plan

PROJECT DESCRIPTION

- Durham HLI was launched in 2016 with the support of the Duke Health Chancellor's Service Fellowship and was expanded and sustained with the support of the 2018-2019 NC Albert Schweitzer Fellowship
- Program students include 6th-8th graders from Healthy Start Academy and Student U in Durham
- Volunteer teachers include Durham graduate health volunteers come from Duke Health and North Carolina Central University's nursing, physician assistant, physical therapy, social work, speech pathology and medical specialties.
- The program's eight-part curriculum incorporates a wide-variety of topics such as nutrition, chronic illness, mental health, substance abuse, and emergency medicine.



- Completion of the program is celebrated with a Health Fair, hosted by the education sites and HLI volunteers, with health organizations and resource groups invited from the community.

RESULTS STATEMENTS

- 24 of 28 middle school students enrolled in HLI scored "high health literacy" in at least one of the three scales measured on the Health Literacy Assessment Scale for Adolescents (HAS-A) after program completion. 22% scored "high health literacy" in all three scales, and 56% scored "high health literacy" in at least two scales.
- 67% of students served by HLI with a pre-program HAS-A score of "low health literacy" in all three scales measured (Communication, Confusion, Functional Health Literacy) saw an improvement in their HAS-A score to "high health literacy" in at least one of the three categories measured.
- 7 volunteer teachers completed retrospective pre- and post-program survey. All surveyed teachers participated in at least 3 in-class sessions, with 57% participating in 5 or more.
- All teachers surveyed reported that "[they] understood the health concerns of Durham youth" better after HLI than before. About half of our teachers reported feeling more comfortable "socializing," "educating," and "discussing health with pediatric patients" after HLI.
- 71% of teachers surveyed reported that HLI improved their ability to communicate with peers from other health professions.
- All teachers surveyed said they would consider volunteering again

TABLE 1: SUMMARY STATISTICS

	Scale 1: Communication		Scale 2: Confusion		Scale 3: Functional Health Literacy	
	Pre	Post	Pre	Post	Pre	Post
Mean Score						
7 th grade (n = 14)	14.4 (Border)	15.7 (High)	9.1 (Low)	9.8 (Low)	10.3 (High)	10.6 (High)
8 th grade (n = 14)	13.2 (Low)	14.4 (Border)	8.6 (Low)	9.4 (Low)	8.9 (High)	8 (High)
Class (n = 28)	13.8 (Low)	15.1 (High)	8.9 (Low)	9.6 (Low)	9.7 (High)	9.3 (High)
Median Score						
7 th grade	15 (High)	16 (High)	8.5 (Low)	9.5 (Low)	11 (High)	11 (High)
8 th grade	12.5 (Low)	14.5 (Low)	8 (Low)	9 (Low)	8.5 (High)	7.5 (High)
Class	15 (High)	15 (High)	8.5 (Low)	9 (Low)	10 (High)	8.5 (High)
#, % Low Health Literacy						
7 th grade	5, 0.36	3, 0.21	9, 0.64	9, 0.64	6, 0.43	5, 0.36
8 th grade	8, 0.57	7, 0.50	8, 0.57	10, 0.71	4, 0.29	3, 0.21
Class	13, 0.46	10, 0.36	17, 0.61	19, 0.68	10, 0.36	8, 0.29
#, % High Health Literacy						
7 th grade	9, 0.64	11, 0.79	5, 0.36	5, 0.36	8, 0.57	9, 0.64
8 th grade	6, 0.43	7, 0.50	6, 0.43	4, 0.29	10, 0.71	11, 0.79
Class	15, 0.54	18, 0.64	11, 0.39	9, 0.32	18, 0.64	20, 0.71

HAS-A (%)	
Scale 1: communication	
High health literacy	15-20
Low health literacy	0-14
Scale 2: confusion (%)	
High health literacy	0-7
Low health literacy	8-16
Scale 3: functional health literacy (%)	
High health literacy	0-11
Low health literacy	12-24

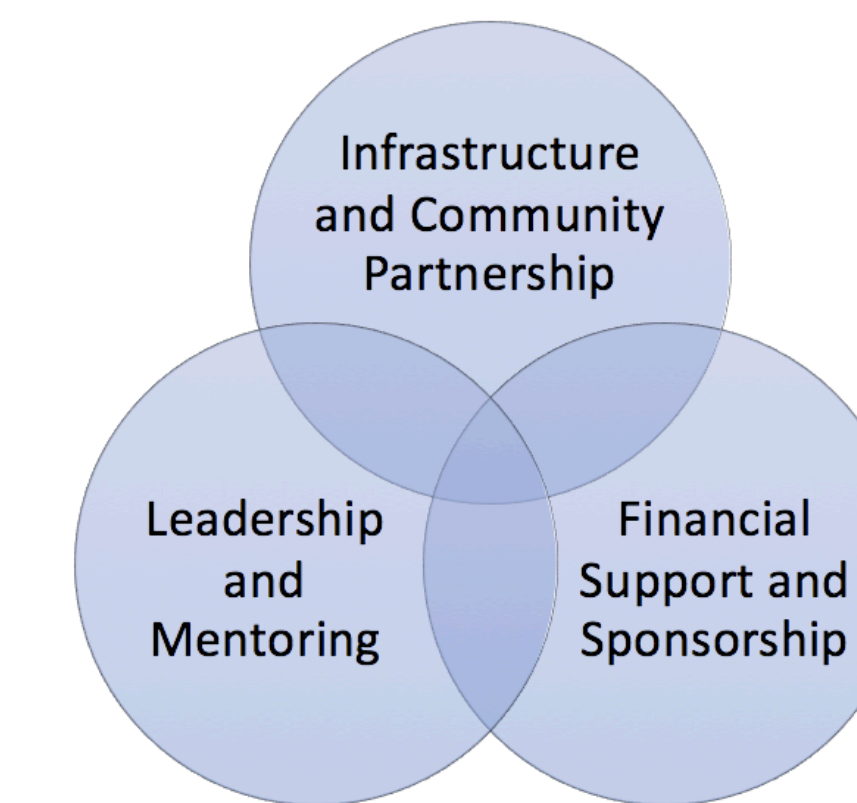
CONCLUSIONS

- On average students of all ages enrolled in Durham HLI saw an improvement in their Communication Scale and Functional Health Literacy Scale as measured by the HAS-A from "Low" to "High Health Literacy."
- Positive improvements in HAS-A scores were more notable among 7th grade students than 8th grade students.
- At baseline, students scored best on the Functional Health Literacy Scale of the HAS-A and worst on the Confusion Scale.

LIMITATIONS

- Small sample size (n = 28)
- Standardized health literacy scale
- Some inflation in pre-program survey scores may be expected, resulting in apparent worsening in HAS-A scores.

SUSTAINABILITY PLAN



Infrastructure and Community Partnership

- Durham HLI will partner with the Duke School of Medicine Multicultural Resource Center (MCRC) and Office of Diversity and Inclusion for leadership and organizational support.

Leadership and Mentoring

Student Steering Committee

Program Coordinator, Operations Lead, Teaching Team Lead, Curriculum Development Lead, Health Fair Lead

Stakeholder Advisory Board

Anh Tran, Kim Nichols, Maureen Cullins, Diana McNeill, Paula Alford
Duke University School of Medicine
Aronda Hill, Alex Quigley, Magun Lacson, Luke Carman, April Warren
Healthy Start Academy and Student U



Financial Support and Sponsorship

- Durham HLI secured sustainability funding from Duke SOM's Multicultural Resource Center and the Albert Schweitzer Sustainability Initiative.
- HLI secured a Fund Code through the Duke SOM MCRC, to solicit and direct tax-deductible donations to Duke University to the program. As of June 2019, \$2500 have been raised.

ACKNOWLEDGEMENTS

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REFERENCES

- 1 Kutner, M., Greenberg, E., Jin, Y., & Paulsen, C. (2006). *The health literacy of america's adults: Results from the 2003 national assessment of adult literacy*. U.S. Department of Education. Washington, DC: National Center for Education Statistics.
- 2 Sorensen, K., Van den Broucke, S., Fullam, J., Doyle, G., Pelikan, J., Slonska, Z., & Brand, H. (2012). Health literacy and public health: A systematic review and integration of definitions and models. *BioMed Central*, 1-13.
- 3 Durham County Community Health Assessment: submitted to the North Carolina Department of Health and Human Services, Division of Public Health, Office of Healthy Carolinians: final report, December 2014. (2014). Durham, NC: The Dept.