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A Teen-Led Initiative on a Health Literacy Intervention in Greater Houston



BACKGROUND

Health literacy refers to how well an individual understands how to obtain and use basic health information.

- 9 out of 10 adults in the U.S. struggle with health literacy
- Low health literacy contributes to more costs, use of more health services, greater risk for adverse outcomes such as medication errors, hospital readmissions, and death
- At risk populations are non-whites, low socioeconomic status, and those with limited English proficiency
- Healthy People 2030, declared health literacy as a foundational principle and overarching goal for our nation's public health

WHY TEENS?

Youth leadership is a driving force behind some of the most significant social, environmental, and political movements, championing change by leveraging adolescents' passion, fresh perspectives, and technological skills to advocate for meaningful social change.

- Teens are leading grassroots movements by challenging the status quo and demanding change on issues directly affecting their futures.
- A Nemours Foundation survey indicated that 80% of young adolescents said they were interested in learning more about health, and 22% indicated that health information was hard to understand.
- Teens would be a captive audience to learn health literacy concepts and skills, leading them to influence changes that will promote a more accessible and understandable health care system.
- There is very limited research on teens and adolescents teaching health literacy and their impact in the community.

TEENS FOR HEALTH LITERACY

Teens for Health Literacy (THL) is a city-wide club in Houston, TX, founded, led, and consists of teens passionate about learning more about our healthcare system and then imparting that knowledge to others with the hope of improving healthcare literacy in our communities, leading to a healthier Houston.

- High school grades 9-12, from private and public schools
- Consists of 7 core members representing different parts of the city
- Members recruited by word of mouth and by contacting regional school counselors
- Health literacy education provided during meetings by local healthcare providers like physicians, pharmacists, public health workers

PROJECT AIM

- Create a one-hour presentation that is easy to understand and simplifies complex healthcare topics of general access to insurance, health insurance terminology, healthcare provider communication and medication instructions
- Assess the impact of the intervention by a pre and post health literacy education survey. A knowledge and confidence survey will gauge improvement on general insurance access to care, health insurance terminology, asking appropriate questions during physician visits and understanding how to take medications. Our goal is to improve health literacy in these 4 aspects.

INTERVENTION

In partnership with Health Literacy Lab at University of North Texas Health Science Center, City of Houston Health Department, US National Library of Medicine and health care professionals, the THL club members developed a 1-hour presentation and interactive activities focused in 4 areas:

- **Healthcare terminology, how to get access to care, questions to ask when visiting a healthcare provider, better understanding both over-the-counter and prescription medications.**

Intervention: 1-hour presentation and interactive stations to reinforce the areas of focus
Interactive stations only

Interactive station activities

- Practice reading prescriptions/OTC directions
- Practice with oral suspensions
- Understand sample medical bills
- Understand explanation of benefits (EOB)
- Role play a doctor's visit with what questions to ask during visit



Participants have a chance to test and improve on their label reading skills with mock prescription bottles and over-the-counter (OTC) label.

- Practice with varying directions for pills
- Liquid medications directions based on age
- A tip sheet provided for them (right).



Participants have a chance to role play a doctor's visit.

- What questions to ask during visit based on the illness selected from the board
- Four ailments given to choose from
- Tools needed to stay organized about their treatment plan



Participants have a chance to decipher medical bills.

- Adapted from CMS.org explanation of benefits (left)
- Real life medical bills to decipher
- Review the healthcare terms related to medical bills and insurance benefits

Locations planned: Local health fairs, library sessions, and community events with Houston Health Department

Survey: Knowledge and confidence survey was administered before and after the educational presentation/interactive stations.

Please check the box below that best describes your answer.

1. I know how to sign up for health insurance.

Strongly Disagree Disagree Neutral Agree Strongly Agree

2. I understand the bills I get from my health insurance.

Strongly Disagree Disagree Neutral Agree Strongly Agree

3. I know what to ask when I talk to my doctor.

Strongly Disagree Disagree Neutral Agree Strongly Agree

4. I understand the instructions on my medicine label.

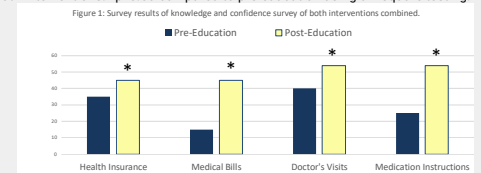
Strongly Disagree Disagree Neutral Agree Strongly Agree

RESULTS/FINDINGS

Surveyed participants (1-hour presentation and interactive stations combined) (N=55)
demographic data as follows:

- Age range: 13-48 years
- Race: Blacks 36.4%, Hispanic 36.4%, Asian 18.2%, White 9.1%
- Language spoken at home: English 72.7%, Spanish 27.3%
- Insured: Yes 72.7%, No 27.3%
- Survey results of *strongly agree* for any question showed 24% improvement in the post interactive stations compared to 50% post the 1-hour presentation.

Figure 1: Survey results of *strongly agree* before and after the education of both interventions. * $p < 0.05$ compared to pre-education using chi-square testing.



ANALYSIS

- Short health literacy intervention showed significant improvement in knowledge and confidence on the topics presented.
- 1-hour presentation showed more improvements in the survey as it goes in more in depth than interactive stations, but the participant must commit to 1 hour of their time vs 15min.
- Teens were successful in attracting young and adult participants to the presentation. Some noted that they came out of curiosity of what the teens were doing and to show support.

Limitations:

- Potential discrepancy between self-reported confidence and actual knowledge
- Some younger participants (age <18) marked higher pre-education knowledge but after the education realized that their knowledge was lacking thus post-education knowledge was marked lower on the survey.
- Question phrasing could influence response based on how the question is worded.

PRACTICE INNOVATION

Most health literacy is targeting longer teaching and training interventions using healthcare professionals and community workers. Using adolescents to educate is an interesting concept as they may seem more approachable to both younger and older community members. Teens are exploring and seeking their roles in society in the social causes they believe in and engaging them in health literacy efforts maybe be rewarding all around.

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