Health Literacy Needs Assessment at a Community Health Care Center: A First Step toward Helping Providers and Patients Speak the Same Language

APHA Annual Conference 2007
Poster Session 4090.0: Cultural Competency and Health Literacy
Tuesday, November 6th

Presenters

Laura Frye, BA, MPH Candidate 2008 (laura.frye@yale.edu)
Ligia Gómez, BS, MPH Candidate 2008 (ligia.gomez@yale.edu)
Elena Gore, BS, MPH Candidate 2008 (Elena.gore@yale.edu)

Background

Setting:
The Hill Health Center (HHC) is a federally qualified community health center (FQHC) established in 1968 through a collaboration between the community and Yale Medical School. The first community health center in Connecticut, the HHC has a long history of serving New Haven neighborhoods, which are among the poorest in the state. As their mission, the HHC is committed to providing accessible, comprehensive and quality primary and behavioral health care to low income and underserved residents in the Greater New Haven area.
Some characteristics of the Hill Health Center:

- Served 27, 262 patients annually
- Largely publicly insured population
- 63% of patients who visited in 2004 were below the poverty level
- Racially and ethnically diverse
    - 35% of the patients reported themselves as being African American, 30% Latino, 22% White, and 13% multi-racial.

Purpose:
The purpose of the collaboration with the Hill Health Center was to conduct a health literacy assessment of a representative sample of the center's patient population. The goal was for this initial assessment to provide the center, both at the administration and provider levels, real data about the health literacy levels of patients which could then be used to raise awareness of the issue within the clinic. Furthermore, the data from this preliminary assessment would also be used to strengthen grant applications to fund health literacy interventions.

Methods

I) Preparation
1. Literature Review
    a. Assessment methodologies
    b. Existing interventions
2. Key Informant Interviews
    a. Feasibility of data collection
    b. Priority areas for providers

II) Tool Selection and Development

1. Test for Functional Health Literacy in Adults, short form (S-TOFHLA)
    a. Key Attributes
        i. Quick administration in clinical setting (12 Minutes)
        ii. Available in Spanish
        iii. Literacy and numeracy considered
        iv. Validated
2. Exit Survey
    a. Areas of Interest
        i. Perceived understanding
        ii. Suggestions for improving communication
    b. Process for development
        i. Based on key informant interviews
        ii. Prioritized plain language over grammatical correctness or precise terms
        iii. Likert scale used
        iv. Piloted and revised
        v. Division into components of interaction: medications, lab tests, referrals, future appointments
        vi. Show cards for sensitive information and clarity

III) Data Collection

- 95 Interviews in the Internal Medicine Department
- Post-triage administration of S-TOFHLA
- Post-appointment exit survey
- 84% response rate
- No personal identifiers were collected
- Research protocol received exemption from the Yale University Human Investigations Committee

IV) Analysis

- Data was entered into a Microsoft Access database and analyzed using Statistical Analysis Software (SAS) version 9.13.
- Univariate analysis of entire sample
- Comparison of sample to population to ensure representativeness
- Bivariate Analysis of demographics and perceived understandings by S-TOFHLA category
- Separation of English and Spanish Speakers

Limitations

Time*:* During data collection, our time with patients was restricted to the interval between triage and provider entry into the exam room. Due to the limited amount of time spent with each participant, it was extremely difficult to build a sufficient level of trust that would enable the patient to see the connection between the research being done, the responses they were providing, and the possibility for positive change within the clinic. The issue of rapport with patients must be taken into account because it affects the quality of answers obtained from the participants. Therefore, it is difficult to gauge whether participants were providing honest and thoughtful answers to the survey questions.

Generalizability*:* For this study we only approached patients in the Internal Medicine department of the Hill Health Center. For this reason it is not known whether the findings are

generalizable to the other departments.

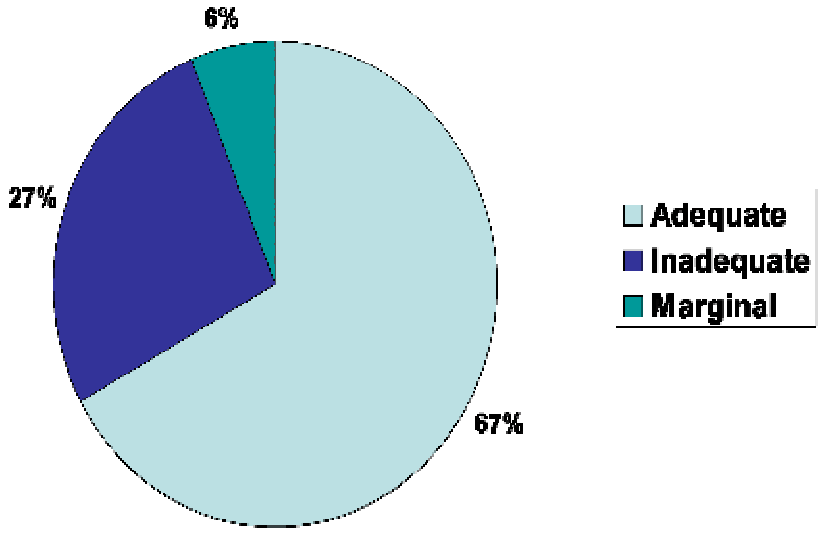
Data Collection: The patients interviewed had different types of appointments – some were seeing their regular providers for follow-up and others were walk-ins. The kind of appointment influences the responses to the exit survey. Patients coming in for regular follow-up appointments were usually seeing providers with whom they have a long-standing relationship, and, most likely, have developed some sort of communication system with which both sides are comfortable. On the other hand, walk-in patients would see the available provider at the clinic, regardless of whether they had interacted with them previously or not. Therefore, there may have been a higher likelihood that walk-ins encountered communication problems with their appointed provider that would affect their assessment of subjective understanding.

Cultural Issues: Working in culturally diverse settings there is always the concern that the tools used do not incorporate different understandings of health. Many of the subgroups with whom we dealt may have interpreted our questions differently or had different reporting behaviors. We account for this limitation in our interpretation of our findings.

Findings and Recommendations

Thirty-two percent of our sample had marginal or inadequate health literacy.

Finding #1: Thirty-two percent of our sample had marginal or inadequate health literacy
S-TOFHLA scores are determined by adding the number of correct responses. Patients with inadequate or marginal health literacy are likely to have significant difficulties with elements of clinical care such as prescription labels, appointment slips, self-care instructions and health education brochures.



Recommendations:

- There is an obvious need to dedicate further efforts and funding to the health literacy issue at the Hill Health Center.

Finding #2: Numeracy items were particularly difficult for the HHC patient population.
There has been a strong focus on the prose component of health literacy. These findings clearly show a need to look into numeracy skills for this patient population, particularly considering the pervasiveness of numbers in medical information – medical prescriptions and instructions, test

results, etc.

Prompt 1

GARFIELD IM 16 Apr 93
FF941858 Dr. LUBIN, MICHAEL
PENICILLIN VK
250MG 40/0
Take on tablet by mouth four times a day

•(4 of 40)

If you take your first tablet at , when should you take the next one?	Right	N= 66	69.47%
	Wrong	N= 29	30.53%

Prompt 4

Normal blood sugar is 60-150. Your blood sugar today is 160.

If this were your score, would your blood sugar be normal today?	Right	N= 55	57.89%
	Wrong	N= 40	42.11%

Prompt 5

CLINIC APPOINTMENT
CLINIC: Diabetic LOCATION: 3rd Floor

a.m.
DAY: Thurs. DATE: April 2nd HOUR: 10:20
p.m.

Issued by
YOU MUST BRING YOUR PLASTIC CARD WITH YOU

When is your next appointment?	Right	N= 62	65.26%
	Wrong	N= 33	34.74%

Prompt 8

. GARFIELD IM 16 Apr 93
FF941857 Dr. LUBIN, MICHAEL
DOXYCYCLINE
100 MG 20/0
Take the medication on empty stomach one hour before or two to three hours after a meal unless otherwise directed by your doctor.
02 11 (0 of 20)

If you eat lunch at 12noon…, what time should you take it?	Right	N= 47	49.47%
	Wrong	N= 48	50.53%

Recommendations:

- Provide more detail when giving medication instructions (specific times, hang on daily routines)
- Do not expect patients to understand and draw conclusions based on numerical ranges (visual aids, emphasize main message)
- Involve the pharmacy staff in reinforcing instructions on medications

Finding #3: Patients reported understanding the overall components of the appointment but not specific pieces of information.

Nearly all the patients reported that they understood medications, lab tests, referrals and return visits) either 'well' or 'very well'. However, when researchers asked specific questions about what was understood for each component, some misunderstanding arose. In general, providers seem to check patient understanding of medical information with general questions and towards the end of the visit. Missing specific points of confusion has serious implications for patient compliance with medical instructions, both in terms of doing what has been recommended by the physician and carrying out the instructions accurately. Referrals seem to be the most problematic component of the medical visit.

How well do you feel you understood the information and instructions that you talked to your doctor today about medical referrals (i.e. having to make appointments with another doctor)?

Very Well	14	60.87%
Well	8	34.78%
A little bit	1	4.35%
Somewhat	0	0%
Not at all	0	0%

REFERRALS			
Understand which doctor you need to go to			
	Yes	18	75.00%
	No	5	20.83%
Understand how to make appointment with this doctor			
	Yes	19	79.17%
	No	4	16.67%
Understand why you need to go see this doctor			
	Yes	21	87.50%
	No	2	8.33%

Recommendations:

- Test patient understanding frequently and emphasize specific vs. general questions.
- Do not wait until the end of the visit to check patient understanding
- Clarify information regarding patient referrals—purpose, process, which doctor, why, how to make the appointment

Finding #4: There was little consensus on patient suggestions for improving communication.

To inform future health-literacy related interventions, we tried to assess how patients felt their providers could better communicate with them. These findings were not extremely informative. There may have been many factors contributing to the lack of consensus regarding how to make patient-provider communication better. It may have been due to the way in which the questions were asked or the number of options we provided. Perhaps all patients do need different types of interactions. This may also point to the need to better integrate cultural considerations or to promote patient ownership in the overall understanding of health and health care.

Which of the list would be most helpful		
Talk slow	10	13.70%
Use simpler words	7	9.59%
Use picture	4	5.48%
Use shorter sentences	1	1.37%
Repeat instructions clearly at end of visit	5	6.85%
Ask you to repeat instructions at end of visit	2	2.74%
As if you were understanding/ questions more frequently	10	13.70%
Answer questions more thoroughly	6	8.22%
Give list of medications	3	4.11%
Give a care plan	3	4.11%
Review written materials with you during visits	2	2.74%

There was little consensus on patient suggestions for improving

Recommendations:

- Further explore patients' understanding of the patient-provider relationship, the patient role in the medical visit and the factors that contribute to effective communication.

Finding #5: Patients with unanswered questions access information through oral and not written means.

As part of our attempt to identify where future health literacy interventions should focus, we wanted to obtain information from patients about the resources they actually use for medical information. Many health literacy experts advocate lowering the reading level of written materials, but our findings showed that HHC patients did not refer to these at all. Patients

Variable	Category	Frequency	Percentage
Had unanswered questions after the visit			
	Yes	5	6.41%
	No	73	93.59%
How will/would you get this missing information			
	Contact doctor	57	73.08%
	Talk to nurse	6	7.69%
	Contact CHW	1	1.28%
	Read written materials	1	1.28%
	Read prescription information	1	1.28%
	Search the internet	3	3.85%
	Wait until the next appointment	7	8.97%

with unanswered questions access information through oral and not written means.

Recommendations:

- Ensure the clinic phone systems are easy to navigate and facilitate timely communication between patients and providers
- Further explore why written materials are being underutilized

Finding #6: Comfort levels with speaking, understanding, reading and writing English were not predictive of health literacy score in the patient's native language.

The HHC is currently dealing with an identified shortage of fluent Spanish-speaking providers and lack of coordination in their interpretation system. Within this context, it is important to address any assumptions regarding the health literacy levels of Spanish-speaking patients and to view this issue from an organizational angle. Comfort

Variable	Total N	% Adequate	% Marginal or Inadequate	p-value
Comfort Understanding English				0.3146
Not at all/Somewhat	17	52.94%	47.06%	
Very Well	7	42.86%	57.14%	
Comfort Speaking English				0.3416
Not at all/ somewhat	19	52.63%	47.37%	
Very Well	5	40.00%	60.00%	
Comfort Reading English				0.2427
Not at all/ somewhat	18	44.44%	55.56%	
Very Well	6	66.67%	33.33%	
Comfort Writing English				0.2484
Not at all/ somewhat	20	45.00%	55.00%	
Very Well	4	75.00%	25.00%	

levels with speaking, understanding, reading, and writing English were

Recommendations:

- Focus on providing adequate interpretation services

Finding #7: Existing interventions relevant to addressing the health literacy issue at the Hill Health Center are being underutilized.

One of the solutions provided by administration, the Language Line, had not been widely promoted among providers. Those providers who were aware of this option did not support it, and, consequently, did not integrate it into their practice. In our key informant interviews, providers mentioned the need for instituting a process in which patients' first language was identified clearly on medical charts. During data collection we became aware that a form for this purpose existed and was included in medical charts, but it was not effectively used by providers and staff. The key informant interviews also demonstrated that there are pockets of expertise on health literacy strategies among the providers. Existing interventions relevant to addressing t

Recommendations:

- Administration should focus on obtaining input on intervention decisions from providers, and, subsequently engage in more effective promotion and dissemination strategies for resources put into place.
- Create a forum for sharing provider strategies to address health literacy.