

# **Is a Picture Really Worth a Thousand Words?**

## **The Use of Pictograms for Health Literacy and Medication Compliance**

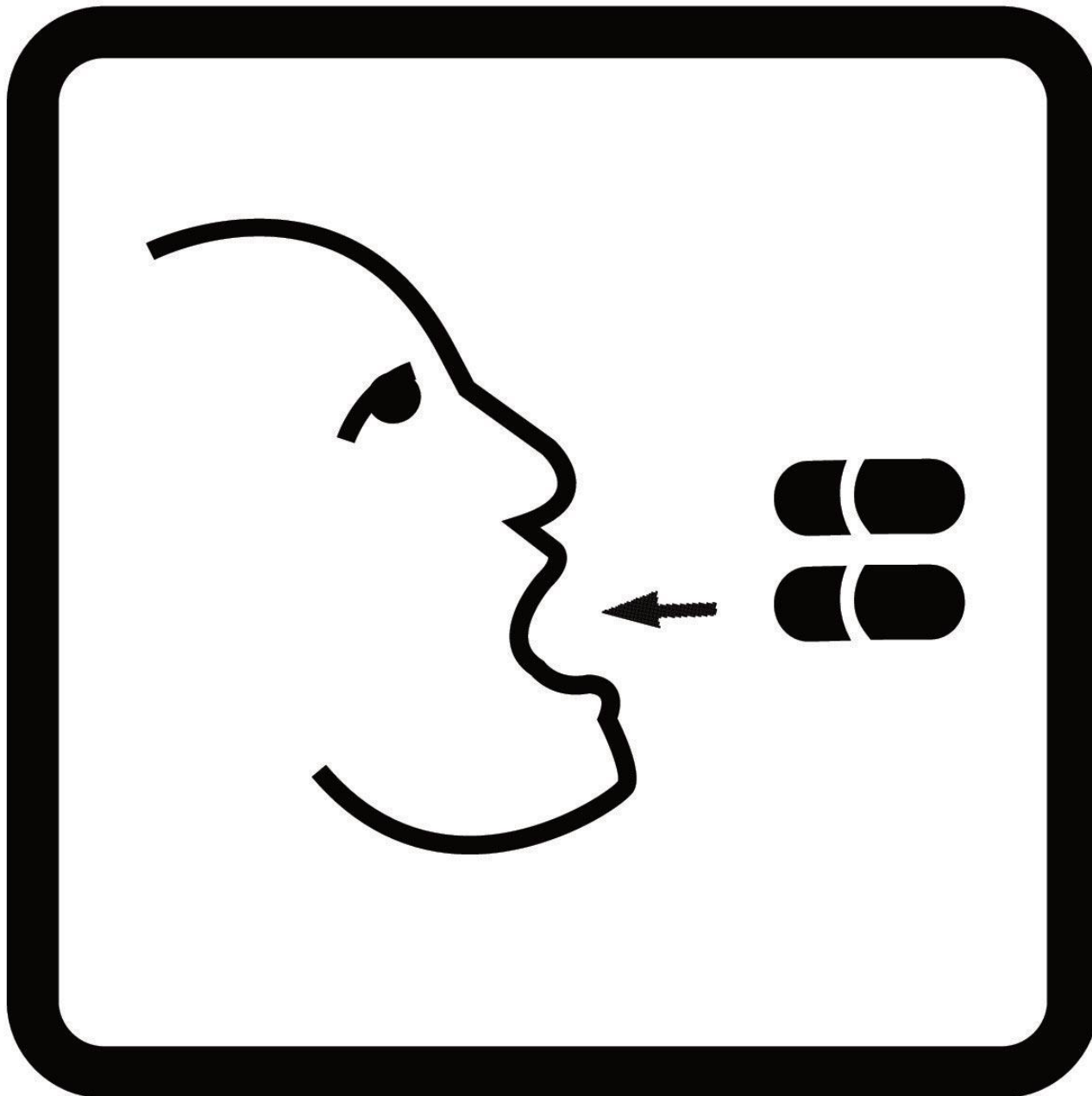
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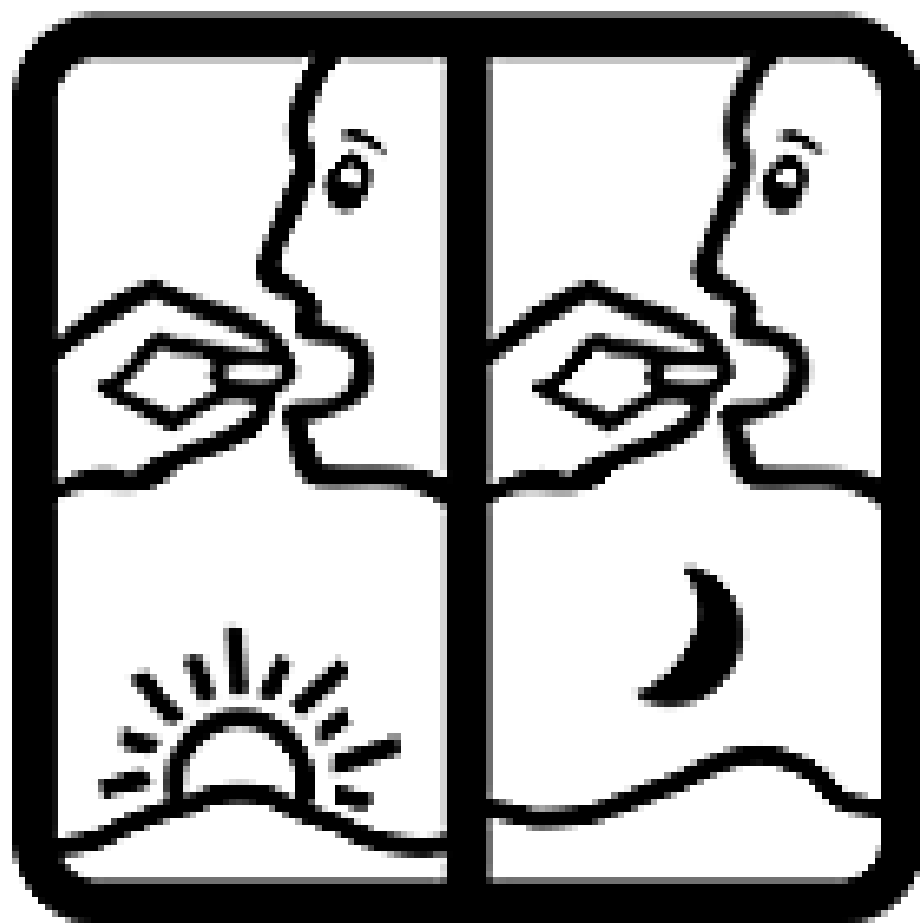
Doctor of Pharmacy Student

March 13, 2014











# Health Literacy

“Ability to **access, comprehend, evaluate** and **communicate** information as a way to promote maintain and improve health in a variety of settings across the life-course”

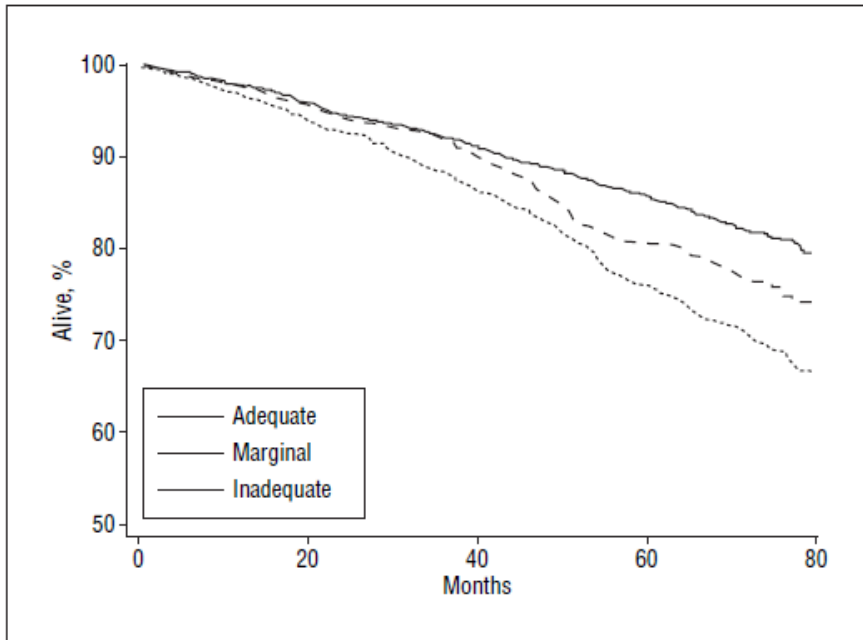
# Health Literacy

- Who isn't health literate?
  - ~60% of adults
  - 88% of seniors
- What does that mean?
  - Difficulty using routinely available everyday health information



# Why do we care?

- Increased mortality



Adjusted for Age, sex, race, socioeconomic status

- Adequate = Reference
- Marginal HR 1.28 (1.03-1.59)
- Inadequate HR 1.70 (1.46-1.99)
- After adjusting for IADLs, chronic conditions, self-reported physical and mental health
  - Marginal HR 1.13 (0.90-1.41)
  - Inadequate HR 1.52 (1.26-1.83)

# Why do we care?

- Increased risk of hospitalization
  - Adjusted RR 1.29 (1.07-1.55)
- Health behaviours
  - Lower scores on proper MDI techniques
- Conflicting evidence for adherence
  - 1 study found OR 3.9 (1.1-13.4) for poor adherence
  - 1 negative

# Risk Factors for Limited Literacy

- Elderly
- Low income
- Unemployed
- Did not finish high school
- Minority ethnic group
- Recent immigration
- English as a second language

# Methods for Assessing Health Literacy

## Gold Standard

- TOFHLA
  - 50 items
  - Score /100
  - Numeracy and reading comprehension
  - Requires 20-30 m

**Table 8. Some methods for assessing literacy skills**

Methods	Description	Validated In		Length (minutes)
		English	Spanish	
Single question screens <sup>36,37, 38</sup>				
	"How often do you need to have someone help you when you read instructions, pamphlets, or other written material from your doctor or pharmacy?" (positive answers are "sometimes," "often," or "always")	Yes	No	≤1
	"How confident are you filling out medical forms by yourself?" (positive answers are "somewhat," "a little bit," or "not at all")	Yes	No	≤1
Assessment instruments				
Newest Vital Sign <sup>39</sup> ( <i>www.NewestVitalSign.org</i> )	Screening instrument for use in clinical settings. Patients review a nutrition label and answer 6 questions about the label.	Yes	Yes	3
Rapid Estimate of Adult Literacy in Medicine <sup>40</sup>	Used in both clinical and research settings. Word recognition list. Patients read list of 66 words and are scored on correct pronunciation.	Yes	No	2
Short Assessment of Health Literacy for Spanish-speaking Adults <sup>41</sup>	Patient is presented with 50 words, each with a correct and incorrect meaning, and patient must select correct meaning.	No	Yes	5
Short Test of Functional Health Literacy in Adults <sup>42</sup>	Used mostly in research. Patients questioned about 4 numerical items and 2 prose passages about medical issues from which specific words have been deleted, and patient must select appropriate words from a list of multiple-choice options.	Yes	Yes	8

Weiss BD ed. Health Literacy and Patient Self-Management. Help Patients Understand. AMA 2007.

# Newest Vital Sign Example

Nutrition Facts			
Serving Size		½ cup	
Servings per container		4	
Amount per serving			
Calories	250	Fat Cal	120
			%DV
Total Fat 13g		20%	
Sat Fat 9g		40%	
Cholesterol 28mg		12%	
Sodium 55mg		2%	
Total Carbohydrate 30g		12%	
Dietary Fiber 2g			
Sugars 23g			
Protein 4g		8%	

\*Percentage Daily Values (DV) are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

**Ingredients:** Cream, Skim Milk, Liquid Sugar, Water, Egg Yolks, Brown Sugar, Milkfat, Peanut Oil, Sugar, Butter, Salt, Carrageenan, Vanilla Extract.

- 1) Total calories
- 2) 60g of carbohydrate snack, how much can you eat?
- 3) You eat 42g of saturated fat each day which includes 1 serving. If you stopped eating this, how much saturated fat will you eat each day?
- 4) If you eat 2,500 cal per day, if you eat one serving, what percentage of your daily calorie intake will you be eating?

You are allergic to peanuts and penicillin

- 5) Is it safe for you to eat this ice cream?
- 6) Why?

**Score 0-1** >50% likelihood of limited literacy

**Score 2-3** = possibility of limited literacy

**Score 4-6** indicates adequate literacy

# Clinical Question

<b>P</b>	In any patient or care giver	
<b>I</b>	Pictogram assisted counselling	
<b>C</b>	Verbal or text based counselling	
<b>O</b>	Efficacy	Health literacy outcomes <ul style="list-style-type: none"><li>• Knowledge</li><li>• Recall</li></ul> Medication adherence (refills rates) Medication compliance
	Safety	QoL ADEs

# Search Strategy

<b>Databases</b>	EMBASE, Medline, Pubmed, Google Scholar, Cochrane library, international pharmaceutical abstracts, clinicaltrials.gov	
<b>Search Terms</b>	Pictogram, visual aid, picture, semiotic, medication illustration Health literacy, medication compliance	
<b>Limits</b>	-	
<b>Results</b>	<b>Studies after exclusion</b>	<b>17</b>
	Meta-analysis/Systematic review	1
	RCT	12
	Observational	4

# To Be Covered

Systematic Review	RCTs		
<p>The use of pictograms in health care: A literature review</p> <p>Res Social Adm Pharm 2013; e-pub ahead of print</p>	<p>Teach back and pictorial image educational strategies on knowledge about diabetes and medication/dietary adherence among low health literate patients</p> <p>with type 2 diabetes</p> <p>Primary Care Diabetes 2013; 7: 111-118</p>	<p>Effects of pictograms in education 3 distinct low-literacy populations on the use of postoperative cataract medication</p> <p>Can J Ophthalmol 2011; 46(3): 276-281</p>	<p>Randomized controlled trial of a pictogram-based intervention to reduce liquid medication dosing errors and improve adherence among caregivers of young children</p> <p>Arch Pediatr Adolesc Med 2008; 162(9): 814-822</p>



# The use of pictograms in the health care: A literature review

Barros et al. / *Research in Social and Administrative Pharmacy* ■ (2013) 1–16

<b>Design</b>	Systematic review without meta-analysis	
<b>P</b>	Patients	
<b>I</b>	Use of pictograms for health professionals in patient education	
<b>O</b>	1) Geographic location 2) Study design 3) Number of pictograms used 4) Education	5) Sample size 6) Age of participants 7) Function of the pictograms 8) Limitations described in the literature evaluated
<b>Articles Included</b>	24 articles	

# Barros 2013

	Results
<b>Design</b>	<ul style="list-style-type: none"><li>• 6 RCTs</li><li>• 18 observational</li></ul>
<b>Patients</b>	<ul style="list-style-type: none"><li>• Education: 66.6% of subjects completed or were still in elementary school</li><li>• Literacy ranged from illiterate to high</li><li>• Age of participants = 6-96 years</li></ul>
<b>Geographic Location</b>	<ul style="list-style-type: none"><li>• 50% based in Africa</li></ul>
<b>Setting</b>	<ul style="list-style-type: none"><li>• 12 not reported</li><li>• 6 hospital</li><li>• 4 health units</li><li>• 2 outpatient</li></ul>

# Barros 2013

<b>Intervention</b>	<ul style="list-style-type: none"><li>• 13 (54.1%) used local pictograms</li><li>• 5 (20.8%) used USP-DI</li><li>• 4 (16.6%) used both</li><li>• Pictogram comprehensibility on average was 70.6%</li></ul>
<b>Outcomes</b>  <b>(increased understanding, adherence or recall of information)</b>	<ul style="list-style-type: none"><li>• 13 (54.1%) reported efficacy<ul style="list-style-type: none"><li>• 5 of 6 RCTs showed efficacy</li><li>• 8 of 18 observational trials showed efficacy</li></ul></li><li>• 7 (29.1%) did not report on the effectiveness</li><li>• 4 (17%) reported no efficacy</li></ul>

# Critical Appraisal

Critical Appraisal	
Databases searched	EBSCO, Embase, LILACs, Pubmed, Scopus, SciELO, PsycINFO
Unpublished studies	
Additional published/unpublished data	
Trial Eligibility	Pictograms for health professionals in patient education Flow chart provided
Risk of bias within trials	“Limitations” that were reported within the trial
Clinical and methodological heterogeneity	RCTs and observational or “not reported” trials
Clinical importance of results and completeness of results	Effective or not effective
Generalizability	50% of studies done in Africa Large variation in patients

# Teach back and pictorial image educational strategies on knowledge about diabetes and medication/dietary adherence among low health literate patients with type 2 diabetes

PRIMARY CARE DIABETES 7 (2013) III-III8

Design	Randomized, controlled, active comparison trial
<b>P</b>	<p>Setting: Tehran Diabetic clinic</p> <p>Follow up: 6 weeks</p> <p>Low health literacy &lt; 59/100 on full TOFHLA, type 2 diabetes <math>\geq</math> 6 months no former education trial participation</p> <p>Average patient: 50 years old, 52% male, 80% had completed primary education, 15% completed secondary education, 5% completed college</p> <ul style="list-style-type: none"> <li>• Health literacy 39/100 (TOFHLA)</li> <li>• Knowledge 27/44 (self-structured, validated)</li> <li>• Medication adherence 4.5/8 (Morisky medication adherence scale)</li> <li>• Dietary adherence 4.6/9 (self-structured)</li> </ul>
<b>I</b>	<p>Pictorial image educational strategy 3 x 20 min sessions per week</p> <ul style="list-style-type: none"> <li>• Validated educational package using simple, realistic pictures with limited content</li> </ul> <p>Teach back education strategy 3 x 20 min sessions per week</p> <ul style="list-style-type: none"> <li>• Goal of 1-3 key points per session</li> </ul>
<b>C</b>	Usual diabetes education by endocrinologist, educational brochure and health sessions as requested

# Negarandeh 2013

	Knowledge		Medication Adherence		Dietary adherence	
	Before	After	Before	After	Before	After
<b>Pictogram</b>	27.3	34.7	4.3	6.7	4.6	5.9
<b>Teach back</b>	26.7	35.3	4.4	7.0	4.8	6.1
<b>Control</b>	27.6	29.4	4.5	4.3	4.7	3.6
	Out of 44		Out of 8		Out of 9	
<b>MCID</b>	?		2		?	

- All groups were significantly improved from baseline in all categories
- Interventions were significant vs placebo

# Critical Appraisal

	<b>Primary Care Diabetes 2013; 7(2): 111-118</b>
<b>Randomization</b>	Computer generated
<b>Allocation concealment</b>	Identity numbers to enrolled patients
<b>Baseline characteristics even?</b>	Yes
<b>Blinded?</b>	Not blinded
<b>Attrition bias present?</b>	No (9% LTFU)
<b>Statistical analysis</b>	Tukey HSD, ANOVA between all groups, Paired t-test, Chi-square test, Fishers exact test
<b>Intention-to-treat or per-protocol?</b>	ITT
<b>Power calculation?</b>	No
<b>All patients accounted for</b>	Yes
<b>Important outcomes considered?</b>	Dietary adherence questionable, A1c, QoL, ADRs
<b>Generalizable?</b>	Tehran, "2° care level diabetes clinic"
<b>Funding source?</b>	Tehran University of Medical Sciences
<b>Other</b>	400 patients contacted, 262 did not meet criteria (not described)

# Negarandeh 2013

## Conclusions

- Teach-back = pictorial based education > control
  - ↑ knowledge
  - ↑ medication adherence
  - ↑ dietary adherence
- Remaining questions
  - No hard endpoints
  - Clinical importance of knowledge and dietary gains
  - No example of pictorial method (but said it fell within pictogram development recommendations)



# Effects of pictograms in educating 3 distinct low-literacy populations on the use of postoperative cataract medication

CAN J OPHTHALMOL—VOL. 46, NO. 3, JUNE 2011

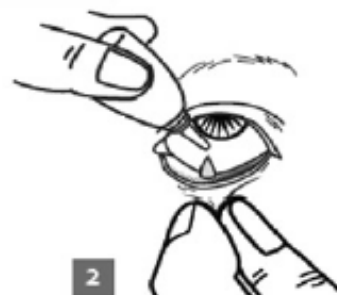
Design	Randomized, controlled, active comparison trial
<b>P</b> n=225	Eye surgery candidates in India <ul style="list-style-type: none"><li>• Average patient: Female, no other medications, no previous surgery, 0 years of education</li></ul>
<b>I</b> n=75 each	EG 1 = Oral instruction (tape) + pictogram during clinic education EG 2 = Oral instruction (tape)+ pictogram sheet to take home
<b>C</b> n=75	Oral instruction (tape)
<b>O</b>	10 point oral exam @ 15 min, POD 7, POD 28 Measurement of eye drop bottles @ POD 28

# WEEK 1

## How to Apply Medicine



First, wash your hands. Grasp the lower eyelid near the margin with the thumb and index finger and pull outward to create a pouch in the lower cul-de-sac



Then, without touching the dropper tip to any ocular structures, position it above the eye by direct visualization. Just before releasing a drop, look upward



Allow the drop to settle by gravity into the lower cul-de-sac before releasing the eyelid



With the drop in place, close the eyelids and apply pressure to the nasal end of the eye or force eyelid closure for 2 minutes to minimize drainage and systemic absorption

Fig. 3—Pictogram of medicine administration. Tape-recorded instructions were played in the patients' native language to maintain consistency of explanation for patients and aid patients who had difficulty reading. Minor written instructions used to complement the pictograms were in native languages.

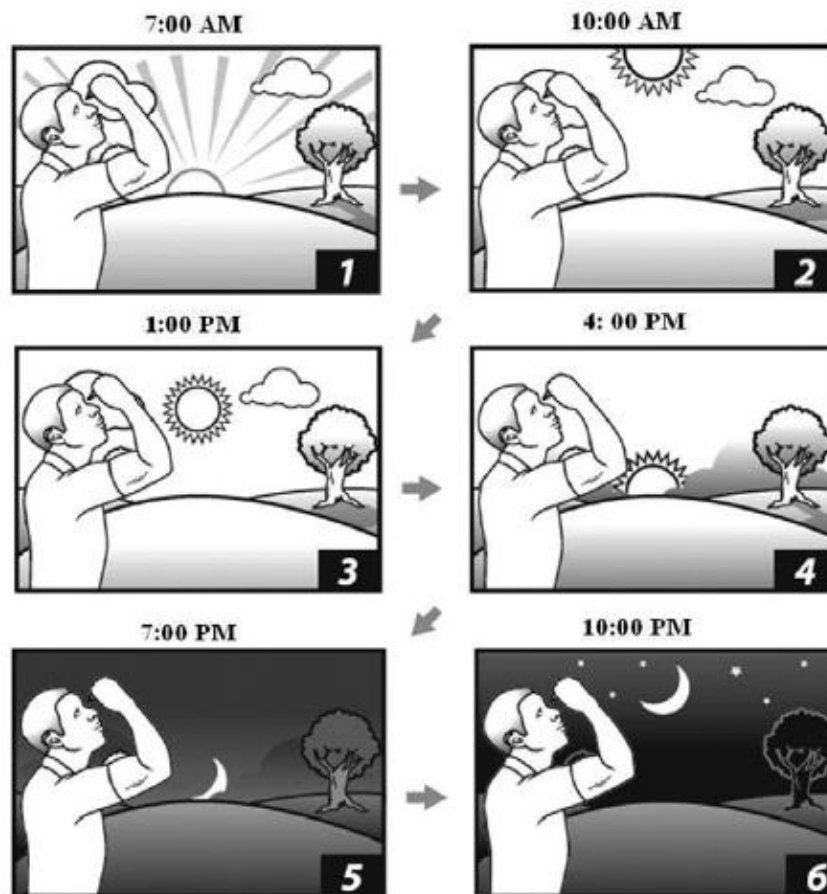


Fig. 2—Pictogram for dosing frequency. For the first postoperative week, the drops were to be applied 6 times per day. There were separate pictograms to illustrate the QID, TID, and BID dosing for weeks 2, 3, and 4, respectively.

# Braich 2011

**Table 1—Questions posed to patients in each test**

1. How many times per day should the eyedrops be used during week 1? (1 point)
2. How many times per day should the eyedrops be used during week 2? (1 point)
3. How many times per day should the eyedrops be used during week 3? (1 point)
4. How many times per day should the eyedrops be used during week 4? (1 point)
5. How do you administer the eyedrops? (Please demonstrate) (4 points)
6. Why are the eyedrops necessary? (2 points)

## Oral exam scores

	Control	EG 1	EG 2 (pic home)	P-value
<b>15 min</b>	8.7 (1.5)	8.9 (1.3)	8.9 (1.4)	• NS
<b>POD 7</b>	5.8 (2.7)	7.3 (2.0)	7.6 (1.9)	• EG 1 and EG2 vs control $p < 0.001$ • NS EG1 vs EG2
<b>POD 28</b>	4.4 (2.3)	5.4 (3.5)	7.2 (2.7)	• EG2 vs EG1 $p < 0.01$ • EG1 vs control $p < 0.01$

Mean (SD); scores out of 10

Oral exam scores were significantly related to higher medication consumption

# Critical Appraisal

	Can J Ophthalmol 2011; 46(3): 276-81
Randomization	"Randomly divided"
Allocation concealment	Not reported
Baseline characteristics even?	Patient characteristics not reported
Blinded?	Single blinded (assessor)
Attrition bias present?	No LTFU
Statistical analysis	ANOVA, 2-way ANOVA, Tukey's HSD
Intention-to-treat or per-protocol?	ITT
Power calculation?	None done
All patients accounted for	
Important outcomes considered?	Surgical outcomes and compliance Bottle weight as measure of adherence not an accurate method (141/225 assessed)
Generalizable?	Africa, low literacy
Funding source?	No support
Other	

# Braich 2011

## Conclusions

- ↑ oral exam scores
  - Composite of knowledge, skills
  - ?clinical meaning
- ↑ adherence
  - Bottle measurement
- Remaining questions
  - MCID of oral exam
  - Better surgical outcomes?

# Randomized Controlled Trial of a Pictogram-Based Intervention to Reduce Liquid Medication Dosing Errors and Improve Adherence Among Caregivers of Young Children

*Arch Pediatr Adolesc Med. 2008;162(9):814-822*

Design	Randomized, controlled trial
<b>P</b> n=245	<ul style="list-style-type: none"><li>• Setting: Urban, public, pediatric ED</li><li>• Caregiver of child 1 month to 8 years old, prescribed short course (&lt;14d of a liquid medication)</li><li>• Average patient: Child was 3.7 years old, caregiver (mom) 30 years old, 75% Latino, 65% non-US born, caregiver health literacy (TOFHLA) adequate 70%, marginal 18%, inadequate 12%</li><li>• Follow up: 3-5 days and within 1 day of Rx end</li></ul>
<b>I</b> n=124	<ul style="list-style-type: none"><li>• Pictogram: HELPix, 1.5 to 3 minute intervention and teach-back</li></ul>
<b>C</b> n=121	<ul style="list-style-type: none"><li>• Control: Pediatric nursing staff in ED but filled by a pharmacist</li></ul>
<b>O</b>	<ul style="list-style-type: none"><li>• Medication knowledge</li><li>• Reported and observed dose (dosing accuracy within 20%)</li><li>• Adherence measured by total number of doses (within 20%)</li></ul>

Name: Alexander

Information on your prescription for:

**Amoxicillin**  
250MG/5ML

To treat an infection of the ear

**2 capsules by mouth**  
**2 times a day for 10 days**

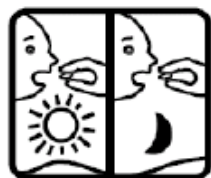
Nombre: Alexander

Información sobre su receta para:

**Amoxicillin**  
250MG/5ML

Para tratar una infección en el oído

**2 cápsulas por la boca**  
**2 veces al día por 10 días**



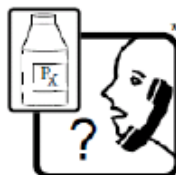
Take 2 times a day by mouth  
Tome 2 veces al día por la boca

Take by mouth with  
a glass of water  
Tome por la boca con  
un vaso de agua

Keep out of reach of children  
Keep at room temperature  
Mantenga fuera del alcance  
de los niños y a temperatura  
ambiente



Give this medicine for 10 days,  
even if your child is feeling better  
Dé esta medicina por 10 días,  
aunque su niño se sienta mejor



If you have questions call  
(212) 562-5524 day or night  
Si tiene preguntas llame  
(212) 562-5524 día o noche

Keeping track of Alexander's  
Amoxicillin

**2 capsules by mouth**  
**2 times a day for 10 days**

Anotando las dosis de Alexander  
de Amoxicillin

**2 cápsulas por la boca**  
**2 veces al día por 10 días**





Your child's dose is 2 capsules  
La dosis de su niño es 2 cápsulas

\* Date of first dose May 12, 2008

Parents: Please check (✓) the correct box  
each time you give your child the  
medicine, 20 checks (✓) total.

Fecha de la primera dosis Mayo 12, 2008

Padres: Por favor, marquen con (✓) la casilla  
correcta cada vez que den la medicina  
a su niño, total de 20 marcas (✓).

DAY / DIA		
Time/Hora:		
Monday / Lunes		
Tuesday / Martes		
Wednesday / Miércoles		
Thursday / Jueves		
Friday / Viernes		
Saturday / Sábado		
Sunday / Domingo		
Monday / Lunes		
Tuesday / Martes		
Wednesday / Miércoles		
Thursday / Jueves		

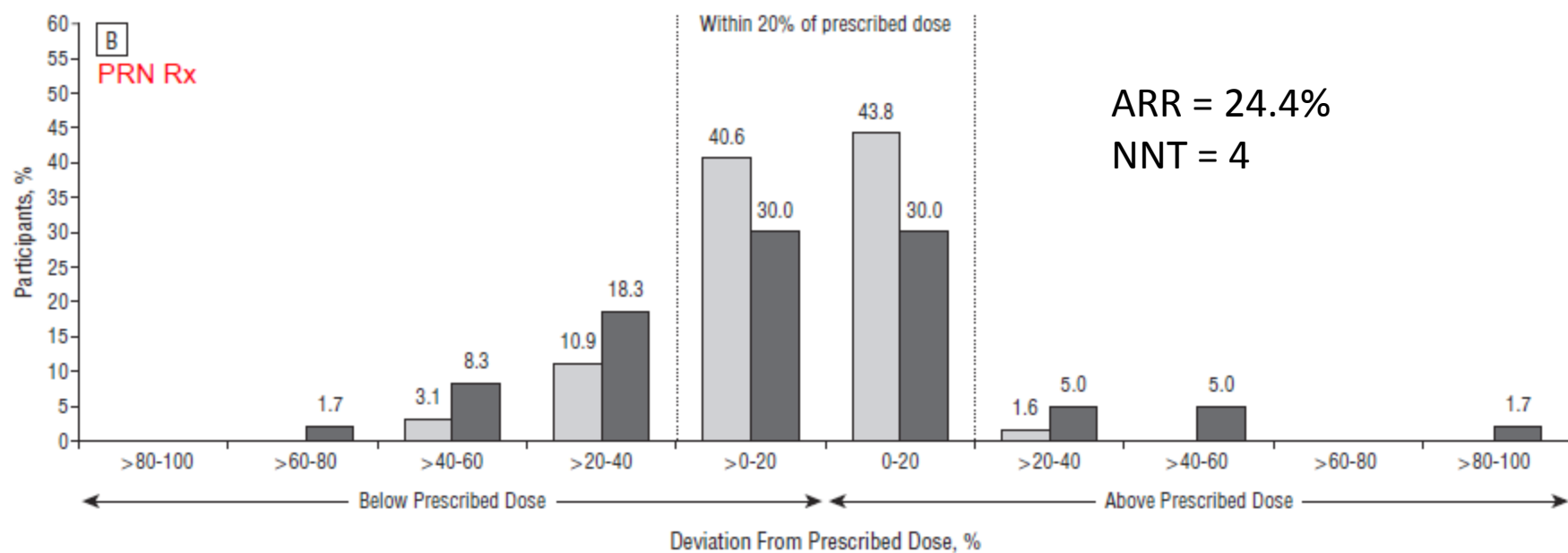
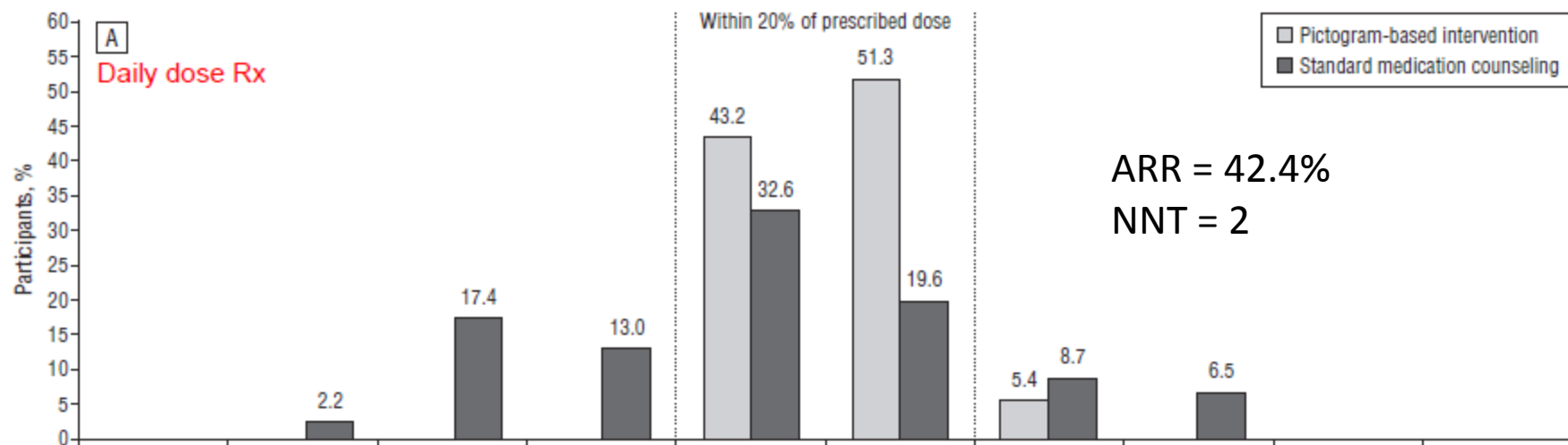
\* Pediatrician: Please circle the starting dose and ending dose.



**Table 3. Medication Knowledge and Related Practices: Error Rates<sup>a</sup>**

	Pictogram-Based Intervention	Standard Medication Counseling	RR (95% CI)	RRR (95% CI), %	ARR (95% CI), %	NNT (95% CI)	<i>P</i> Value <sup>b</sup>
Daily dose medication, No.	46	53					
Name	3 (6.5)	7 (13.2)	0.5 (0.1 to 1.8)	50.6 (−46.6 to 144.5)	6.7 (−6.2 to 19.1)	... <sup>c</sup>	.33
Indication	2 (4.3)	5 (9.4)	0.5 (0.1 to 2.3)	53.0 (−68.0 to 173.4)	5.1 (−6.4 to 16.4)	... <sup>c</sup>	.45
Frequency	0	8 (15.1)	0.0 <sup>d</sup>	100.0 (29.9 to 179.2)	15.1 (4.5 to 27.1)	7 (4 to 22)	.007
Preparation	5 (10.9)	15 (28.3)	0.4 (0.2 to 1.0)	61.6 (5.2 to 113.3)	17.4 (1.5 to 32.1)	6 (3 to 68)	.04
Storage	5 (10.9)	10 (18.9)	0.6 (0.2 to 1.6)	42.4 (−35.6 to 116.2)	8.0 (−6.7 to 21.9)	... <sup>c</sup>	.40
As-needed medication, No.	79	79					
Name	7 (8.9)	6 (7.6)	1.2 (0.4 to 3.3)	−16.7 (−138.6 to 104.2)	−1.3 (−10.5 to 7.9)	... <sup>c</sup>	>.99
Indication	7 (8.9)	2 (2.5)	3.5 (0.8 to 16.3)	−250.0 (−586 to 53.8)	−6.3 (−14.9 to 1.4)	... <sup>c</sup>	.17
Frequency <sup>e</sup>	21 (26.6)	20 (25.6)	1.0 (0.6 to 1.8)	−3.7 (−56.6 to 49.5)	−0.9 (−14.5 to 12.7)	... <sup>c</sup>	>.99
Preparation	17 (21.5)	34 (43.0)	0.5 (0.3 to 0.8)	50.0 (16.1 to 81.1)	21.5 (6.9 to 34.9)	5 (3 to 14)	.006
Storage	22 (27.8)	23 (29.1)	1.0 (0.6 to 1.6)	4.4 (−43.5 to 51.9)	1.3 (−12.7 to 15.1)	... <sup>c</sup>	>.99





# Yin 2008

**Table 5. Medication Nonadherence Rates<sup>a</sup>**

Category of Adherence	Pictogram-Based Intervention	Standard Medication Counseling	RR (95% CI)	RRR (95% CI), %	ARR (95% CI), %	NNT (95% CI)
No. of subjects	43	50				
% Deviation above or below total doses prescribed						
>20	4 (9.3)	19 (38.0)	0.2 (0.1-0.7)	75.5 (30.1-114.9)	28.7 (11.4-43.7)	3 (2-9)
>40	0	10 (20.0)	0 <sup>c</sup>	100.0 (40.0-165.2)	20.0 (8.0-33.0)	5 (3-12)
Last dose of medication administered						
Incorrect last day	12 (27.9)	29 (58.0)	0.5 (0.3-0.8)	51.9 (17.1-80.9)	30.1 (9.9-46.9)	3 (2-10)
>1 d Before or after correct last day	2 (4.7)	15 (30.0)	0.2 (0.04-0.6)	84.5 (33.4-131.7)	25.4 (10.0-39.5)	4 (3-10)

# Critical Appraisal

<b>Randomization</b>	Randomized blocks of 25
<b>Allocation concealment</b>	Sealed envelopes
<b>Baseline characteristics even?</b>	Yes
<b>Blinded?</b>	Could not maintain blinding
<b>Attrition bias present?</b>	> 90% follow up
<b>Statistical analysis</b>	T-test, chi-squared, Fisher exact
<b>Intention-to-treat or per-protocol?</b>	PP
<b>Power calculation?</b>	N=245 required and enrolled
<b>All patients accounted for</b>	
<b>Important outcomes considered?</b>	No clinical outcomes
<b>Generalizable?</b>	US ED
<b>Funding source?</b>	CDC grant, NYU research fund, Pfizer fellowship in health literacy
<b>Other</b>	Enrollment incentive: \$5/intake; \$20/follow up

# RCT Conclusions

		Negarandeh 2013	Braich 2011	Yin 2008
Efficacy	Health literacy outcomes <ul style="list-style-type: none"> <li>• Knowledge</li> <li>• Recall</li> </ul>	Self-structured questionnaire (validated)	“Oral exam”	Better frequency, and preparation knowledge
	Adherence or compliance	MMAS +2	Bottle measurement	Total doses Dosing accuracy
Safety	QoL			
	ADEs			
Cost			Pictogram sheet home	1.5-3 min intervention














# Pictogram Tools

- International Pharmaceutical Federation (FIP)
  - Free
  - Culturally sensitive
- USP-DI
  - Free
- HELPIx (upcoming)

# 药历: 3

日期:  
Thu Mar 13 00:02:43 PDT 2014

患者病案号:  
号码 3

	 早上	 中午	 晚上	 夜里	可能的 副作用	注意事项
<b>Rampiril 5 mg</b>  适应症 评论: For blood pressure. May also cause coughing.				 1粒	 体位性低 血压  头晕	
<b>Tylenol 500 mg</b>  Muscle Pain 适应症 评论: For osteoarthritis pain. Take 2 tablets every 4-6 hours as needed for pain. Maximum 8 tablets per day.	 2片	 2片	 2片			 请勿与酒 同服



# Upcoming Trials ([clinicaltrials.gov](https://clinicaltrials.gov))

- Improving parent understanding of instruction about asthma care
- PlainLanguageRx: Improving medication labels to reduce health disparities
- Improving communication of medication instructions to parents (HELPix)



# Pictogram Tool Links

- FIP
  - <http://www.fip.org/pictograms>
- USP-DI
  - <http://www.usp.org/usp-healthcare-professionals/related-topics-resources/usp-pictograms>