Lehigh Valley Health Network

LVHN Scholarly Works

The Implementation of a PictureRx Pill Card to Improve Medication Comprehension in a Refugee Population

Lauren Skudalski
Columbia University

Timothy M. Daly DO
Lehigh Valley Health Network, Timothy_M.Daly@lvhn.org

Nicole Defenbaugh PhD
Lehigh Valley Health Network, nicole.defenbaugh@lvhn.org

Katarzyna Jabbour PharmD, BCPS
Lehigh Valley Health Network, Katarzyna.Jabbour@lvhn.org

Brian Stello MD
Lehigh Valley Health Network, Brian.Stello@lvhn.org

Follow this and additional works at: https://scholarlyworks.lvhn.org/research-scholars-posters

Let us know how access to this document benefits you

The Implementation of a PictureRx Pill Card to Improve Medication Comprehension in a Refugee Population

Lauren Skudalski, RA; Tim Daly, DO; Nicole Defenbaugh, PhD. Katarzyna Jabbour, PharmD, BCPS; Brian Stello, MD

Department of Family Medicine, Lehigh Valley Health Network, Allentown, Pennsylvania

Background

- The National Assessment of Adult Literacy demonstrated that 14% of Americans have below average health literacy skills.[1]
  - Does not account for yearly increase of 58,179 Refugees with below average health literacy due to language barriers.[2]

- PictureRx was developed in order to create a visual medication list to improve medication understanding and adherence.[3]

Objective

- To assess the effectiveness of implementing the PictureRx pill card among a patient population made up of primarily Refugees with below average health literacy skills to improve medication comprehension.

Method

1. Identification of the patient population.
   - Adult Refugee patients taking 1-5 medications
   - Normal hearing, visual acuity at least 20/50, no dementia
2. A pre-survey was administered.
3. A PictureRx pill card was created for each patient using their original pill bottles.
4. After 3 weeks of using the pill card, a post-survey was administered.
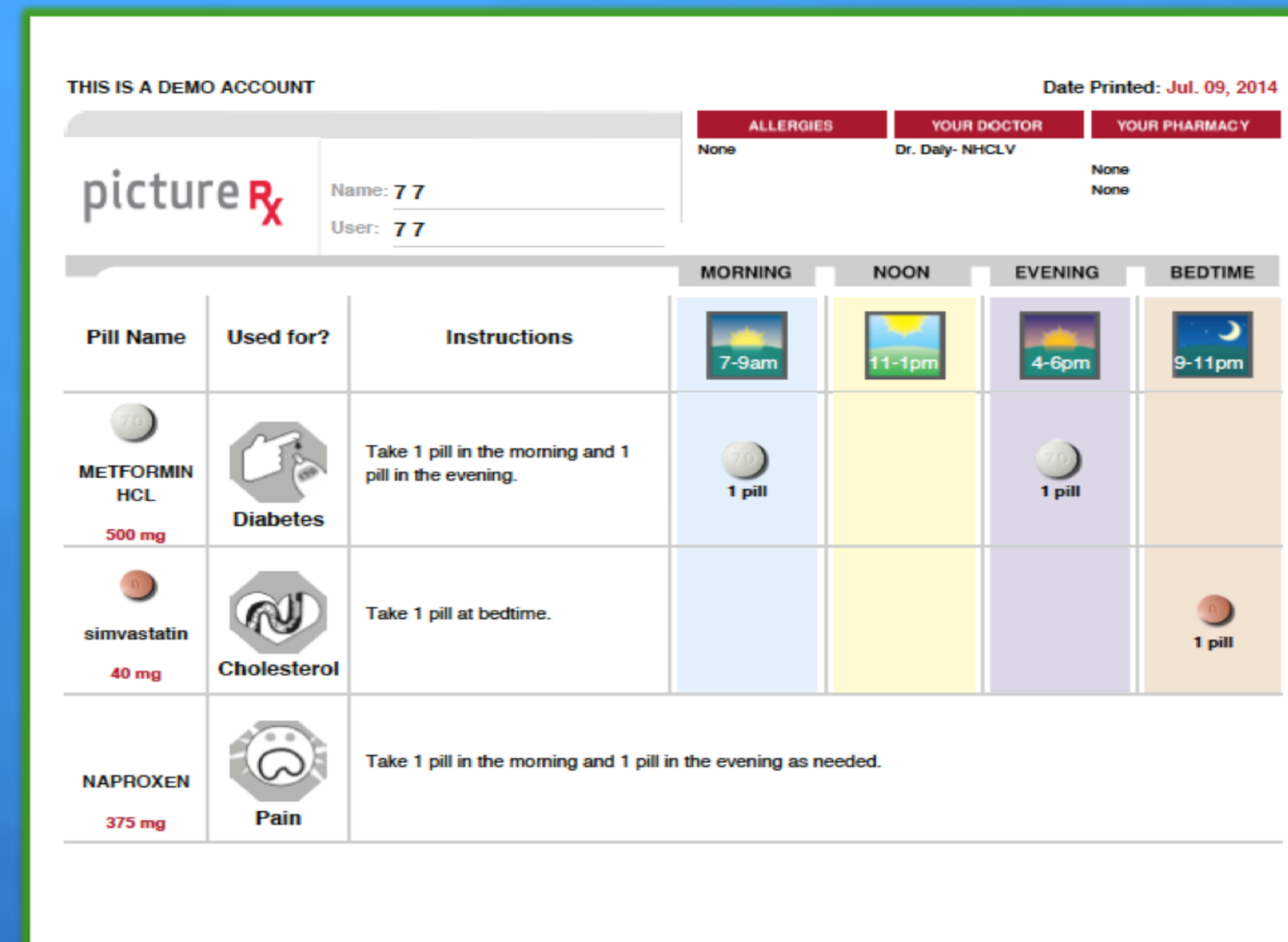

Figure 1: PictureRx. Copyright © 2008-2014, PictureRx. All rights reserved. PictureRx is a trademark of SAI Interactive, Inc.

Results

The PictureRx pill card resulted in a statistically significant increase in patients' understanding of the directions for their medications (Z=-2.242, p=0.25).

Patient	Pre-Survey How confident are you taking your medications after your visit with your physician?	Post-Survey How confident are you to take your medications with PictureRX?	Pre-Survey How well do you understand your directions for your medications?	Post-Survey How well do you understand the directions for your medications with PictureRx?
1	5	5	3	5
2	3	5	5	5
3	5	5	1	5
4	5	5	5	5
5	3	5	1	5
6	3	5	3	5
7	5	5	5	3
8	3	5	5	5

Table 1: Table Comparing Participants Pre- and Post Pill Card Responses

Screening Question	Scale	Pre- Survey Frequency of Response (%) n=10
How confident are you filling out medical forms by yourself?	Not Confident	3 (30)
	Somewhat Confident	4 (40)
	Very Confident	3 (30)
How confident are you taking your medications after you visit with your physician?	Not Confident	0 (0)
	Somewhat Confident	6 (60)
	Very Confident	4 (40)
How well do you understand the directions for your medications?	Not Well	3 (30)
	Well	2 (20)
	Very Well	5 (50)

Table 2: Pre-PictureRx Survey Responses

Screening Question	Scale	Post-Survey Frequency of Response (%) n=8
How confident are you to take your medications with PictureRX?	Not Confident	0 (0)
	Somewhat Confident	0 (0)
	Very Confident	8 (100)
How well do you understand the directions for your medications with PictureRx?	Not Confident	0 (0)
	Somewhat Confident	1 (12.5)
	Very Confident	7 (82.5)
Would you like to continue to use a PictureRx pill card to help you understand your medications in the future?	Yes	7 (87.5)
	No	1 (12.5)

Table 3: Post-PictureRx Survey Responses

Limitations

- Language Barrier
  - Use of 3-point Likert scale, limiting range of responses
  - Significant more time needed for patient calls and appointments

- Socio-Economic Status of Patients
  - Constrained population size (limited transportation and non-visit access), limiting further statistical analysis

Conclusion

- The participants' enthusiasm toward the pill card and the increased understanding of their medications indicated that the PictureRx pill card was beneficial in a multi-linguistic, multi-cultural population to improve medication comprehension.

Future Implications

- Provide PictureRx pill cards for the entire Refugee population at NHCLV
- Future studies seeing if improvement of medication comprehension improves medication adherence

REFERENCES
1. Kutner, M. (2006). The health literacy of America's adults: results from the 2003 National Assessment of Adult Literacy.
2. Patrick, E. (2004, June 1). The U.S. Refugee Resettlement Program. Retrieved July 8, 2014: http://www.migrationpolicy.org/article/us-refugee-resettlement-program#3
3. Mohan, A., Riley, B.M., Boyington, D., & Kripalani, S. (2012). PictureRX: Illustrated medication instructions for patients with limited health literacy. Journal of the American Pharmacists Association, 52(5), e123-e126.

Lehigh Valley Health Network
A PASSION FOR BETTER MEDICINE.