

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

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

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## Background

- The National Assessment of Adult Literacy demonstrated that 14% of Americans have below average health literacy skills.<sup>1</sup>
  - Does not account for yearly increase of 58,179 Refugees with below average health literacy due to language barriers.<sup>2</sup>
- PictureRx was developed in order to create a visual medication list to improve medication understanding and adherence.<sup>3</sup>

## 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

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

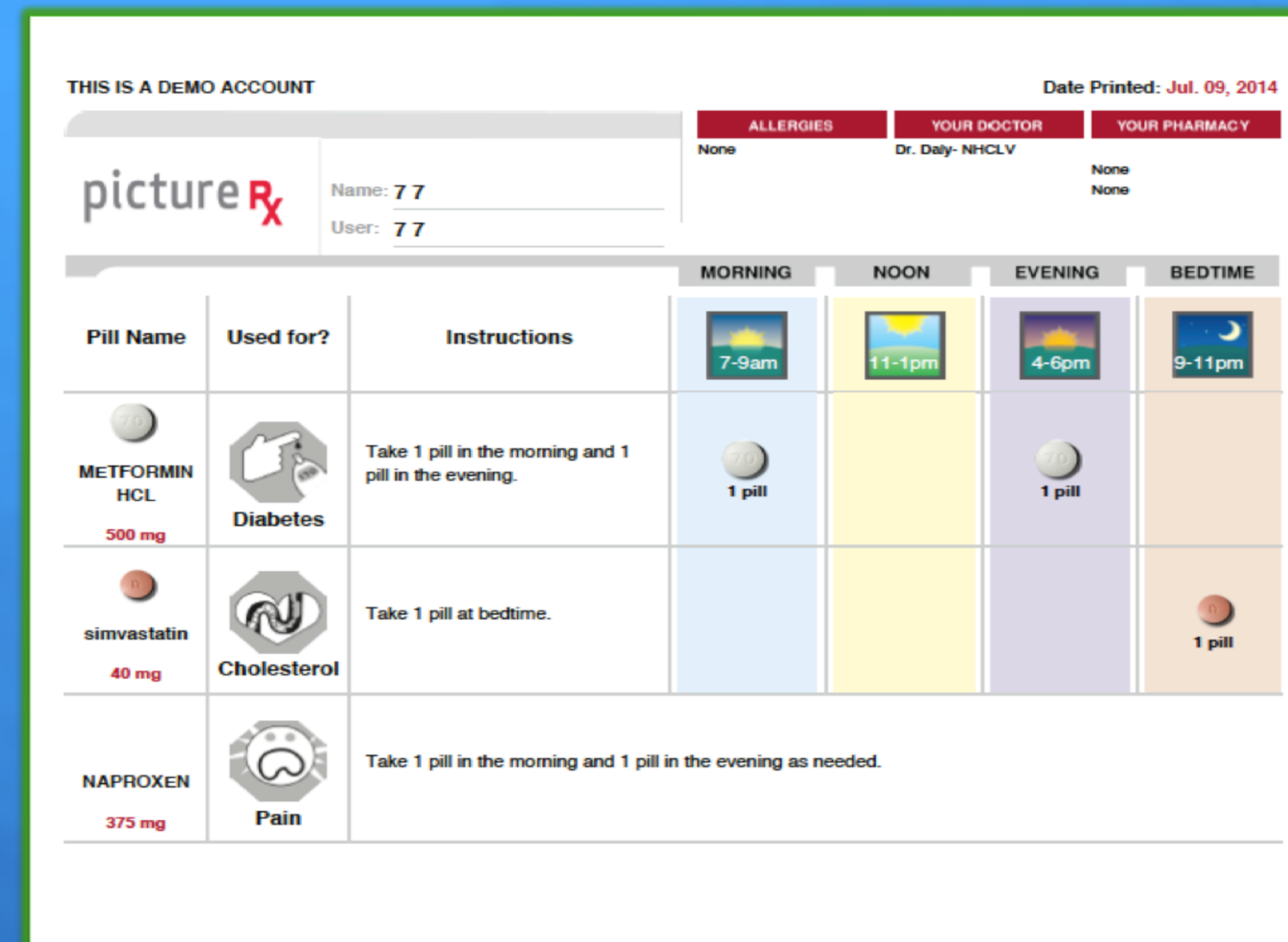


Figure 1: PictureRx. Copyright © 2008-2014, PictureRx. All rights reserved. PictureRx is a trademark of SAI Interactive, Inc.

## Results

The PictureRx pill card resulted in a statistically significant increase in patients' understanding of the directions for their medications ( $Z=-2.242, p=0.025$ ).

	Pre-Survey	Post-Survey	Pre-Survey	Post-Survey
Patient	How confident are you taking your medications after your visit with your physician?	How confident are you to take your medications with PictureRX?	How well do you understand your directions for your medications?	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 (87.5)
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

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