Medication Instructions That Any Patient Can Understand

Lori McLean, CEO Polyglot
July 2016 FHIR Roundtable
What is Low Health Literacy?

Health Literacy is the ability to:

1) Gather
2) Understand
3) Act

Low Health Literacy is a stronger predictor of health than age, income, employment status, and race.

90M+ Americans are Low Health Literate
Challenges for Low Health Literacy

FURTHER REFERENCES:RISK FACTORS - ORAL - Stat-TRK annual report (all or none)

CHALLENGED BRANDS

Adolescents

Hands, serious somnolence or fatigue: immediate breathing problems may occur in people with arrhena who are receiving drugs such as amoxicillin for the long lengths of time. If there is any clinical improvement in the patient's condition, the drug should be discontinued as soon as possible.

PRECAUTIONS

This patient is used as control and to prevent symptoms such as bronchospasm, angina, epigastric pain, or hemoptysis. If there is any clinical improvement in the patient's condition, the drug should be discontinued as soon as possible.

Pregnancy

Hands, serious somnolence or fatigue: immediate breathing problems may occur in people with arrhena who are receiving drugs such as amoxicillin for the long lengths of time. If there is any clinical improvement in the patient's condition, the drug should be discontinued as soon as possible.

MISDEWEED

Adolescents

Hands, serious somnolence or fatigue: immediate breathing problems may occur in people with arrhena who are receiving drugs such as amoxicillin for the long lengths of time. If there is any clinical improvement in the patient's condition, the drug should be discontinued as soon as possible.

STOMACH

Adolescents

Hands, serious somnolence or fatigue: immediate breathing problems may occur in people with arrhena who are receiving drugs such as amoxicillin for the long lengths of time. If there is any clinical improvement in the patient's condition, the drug should be discontinued as soon as possible.

MEDICATION

COMON BRAND NAME(S)

NIFEDIPINE- ORAL

PRECAUTIONS

Using the medication as prescribed can significantly increase your dose. Follow your doctor's instructions carefully.

AVOIDANCE OF DRUGS AND LIFESTYLE

Avoidance of drugs and lifestyle factors can significantly increase your dose. Follow your doctor's instructions carefully.
Medication Adherence

Drugs don’t work in patients who don’t take them.  
-C. Everett Koop, M.D.

50% Medications Not Taken As Instructed

25% Prescriptions Never Filled

70,000 ER Visits / Yr Pediatric Med Overdoses

Health Literacy + Language Barriers = Adherence Challenges

Meducation® Addresses Low Health Literacy with Personalized Medication Instructions

Easy to Understand

- 1 line per instruction
- 5th to 8th grade reading level
- Visual spacing to reduce cognitive overload
- 5 font choices, up to 18 point font
- Select from more than 20 languages
Meducation® Changes Adherence Behavior with Personalized Medication Instructions

Side Effects

Cautions

Please tell your doctor and pharmacist about all the medicines you take. Include both prescription and over-the-counter medicines. Also tell them about any vitamins, herbal medicines, or anything else you take for your health.

If you have diabetes and use urine glucose tests, this medicine may cause incorrect results. Please check with your doctor before making any changes to your diabetes treatment plan.

This medicine may decrease the effectiveness of some birth controls which use hormones (such as birth control pills and patches). Use an extra form of birth control, such as condoms, while on this medicine.

Cautions

Tell your doctor and pharmacist if you ever had an allergic reaction to a medicine. Symptoms of an allergic reaction can include trouble breathing, skin rash, itching, swelling, or severe dizziness.

Do not use the medication any more than instructed.

Please tell your doctor if you have moderate to severe diarrhea while on this medicine. Do not treat the diarrhea with over-the-counter diarrhea medicine.

Tell the doctor or pharmacist if you are pregnant, planning to be pregnant, or breastfeeding.

Ask your pharmacist if this medicine can interact with any of your other medicines. Be sure to tell them about all the medicines you take.

Do not start or stop any other medicines without first speaking to your doctor or pharmacist.

Do not share this medicine with anyone who has not been prescribed this medicine.

Always keep medicine out of reach of children and pets.

Side Effects

- diarrhea
- stomach upset or abdominal pain
## Adherence – Meducation® RS

**Multilingual Regimen Summaries**

**EVERY DAY:** Medicine you need to use every day.

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Morning</th>
<th>Noon</th>
<th>Evening</th>
<th>Bedtime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspirin Enteric Coated Tablet 81 mg</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accupril Tablet 10mg</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humalog Insulin Solution 100 IU/mL</td>
<td>12 units</td>
<td>14 units</td>
<td>16 units</td>
<td></td>
</tr>
<tr>
<td>Biaxin Oral Suspension 125mg/5 mL</td>
<td>10 mL</td>
<td>10 mL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lipitor Tablet 40 mg</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

- **Take by MOUTH.**
  - For heart.
  - For high blood pressure.
  - For diabetes.
  - For infection. Use for 10 days.
  - For high cholesterol.

**AS NEEDED:** Medicine you should use as needed.

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Dosage</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProAir HFA Inhaler 90 mcg/inh</td>
<td></td>
<td>Use the medicine every 3 to 4 hours. Inhaline one to two (1-2) puffs each time. BREATHING medicine. For asthma attack. Use the medicine as needed for your symptoms.</td>
</tr>
</tbody>
</table>

If you take any medication that is not on this list, please tell your healthcare provider.

**Video demo content access via QR code**

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Mederation® Font and Language Choices

Individualized Medication Instructions

Offers 5 font sizes

More than 20 languages

- English
- Spanish
- Arabic
- Bengali
- Burmese
- Cantonese
- Farsi
- French
- Haitian Creole
- Italian
- Karen
- Korean

- Mandarin - Simplified
- Mandarin - Traditional
- Polish
- Portuguese (Brazilian)
- Russian
- Somali
- Swahili
- Tagalog
- Vietnamese
- Yiddish

Human Translation
Personalized medication instructions reduce medication errors.

Videos demonstrate proper medication administration techniques.

Regimen Summary improves medication adherence.

Personalized medication instructions reduce medication errors.
8% of patients receiving Meducation® and counseling at discharge were readmitted within 30 days (compared to the control group where 26% of patients receiving standard medication instructions and counseling at discharge were readmitted within 30 days)

*Preliminary results, not yet peer-reviewed
Improved Medication Adherence at the VA
Three-month study of Meducation®

Patients “Agree or Strongly Agree that I ...

- 65% ...Sometimes forget to take my heart medicines"
- 43% ...Am sometimes careless with how I take my heart medicines"
- 39% ...Have trouble remembering what my medicines are for"
- 21.7% ...Forgot to take my heart medicine yesterday"

Baseline - 36% - 43% - 39% - 21.7%
90 days later - 25% - 18% - 22.7% - 10.5%

56% Overall Reduction
77% improvement

Published in Peer Reviewed Journal: “Patient Education and Counseling”
Meducation® Technical Integration

Orders

Screen

Meducation

FHIR web service, with SMART on FHIR as the secure launch mechanism

Discharge Screen

- Drug ID or FD
- Sig may be free text or codified

Dynamic interface (iframe or browser window)

- Complete any missing data (e.g. indications)
- Play, print, and deliver instructions and videos
Real World Users and Results

- **San Francisco General Hospital**
  - Readmissions reduced from 26% to 8%

- **University of Connecticut**
  - HCAHPS Improvement
  - 1st, 4th, 4th Percentiles to 85th, 98th, 52nd Percentiles

- **VA**
  - 77% Improvement, Remember to Take Meds
Thank You – Questions?

Lori McLean
lmclean@pgsi.com
919-653-4387