Pictorial/Visual Representation in Mobile Health

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HAVE YOU SEEN THESE?
DO YOU KNOW THESE?

STOP

ADA SIGNS
AMERICANS with DISABILITIES ACT

ADA SIGNS

MEN
WOMEN
RESTROOM
RESTROOM
WOMEN
WOMEN
WOMEN
MEN
RESTROOM
GIRL8
HOW ABOUT THESE?

- Phone
- Hungry
- Toilet
- Thirsty
- Tired
- Read
- Music
- Drive
- Watch
- Feel Cold
- Feel Hot
- Pain
DO YOU KNOW THESE?
YOU GET THE DRIFT!

The Issue

- Mobile platforms have become consumers’ preferred means for communication
- Mobile devices are a big driver of consumer engagement in management of their health
- Mobile apps present an opportunity to facilitate monitoring consumer safety and wellbeing, promoting maximal independence
- Standardized graphics promote safety
The Need

- Literacy / language differences represent a significant risk of adverse events / outcomes
- Imperative to think proactively about mobile graphic messaging standards
- A major difficulty is defining intuitive symbols for the abstract concepts that convey healthcare information
Standards for Symbols

- Standards exist to enable rapid, non-verbal communication in domains such as transportation and occupational safety
- No analogous standards exist for the health care domain
- ISO has multiple standards guiding choice of text size, colors, shapes, and placement, among other things.
ISO Standards
Graphical Symbols

- ISO/TC 8
- ISO/TC 20
- ISO/TC 22
- ISO/TC 23
- ISO/TC 36
- ISO/TC 38
- ISO/TC 44
- ISO/TC 70
- ISO/TC 72
- ISO/TC 85
- ISO/TC 96
- ISO/TC 106
- ISO/TC 110
- ISO/TC 127
- ISO/TC 130
- ISO/TC 145
- ISO/TC 150
- ISO/TC 184
- ISO/TC 188
- ISO/TC 210
- ISO/TC 214
- ISO/TC 215
- ISO/IEC JTC 1/SC 35
Standards Development

- Is there a perceived need to develop a standard for pictorial representation of health-related concepts?
- If so, the HL7 Mobile Health workgroup is the logical place to start:
  - Small form factor
  - Changing form factor - wearables
  - AR/VR (Augmented Reality/Virtual Reality)
Potential applications#1

- Mobile devices could enable symbols related to healthcare needs to be accessed even on a locked screen.
Potential applications #2

- Initial applications:
  - Aging Communities
  - Behavioral health
  - School health
  - Child health
Work done so far

- Small team looking into this
  - Gora Datta – Chair HL7 Mobile Health WG
  - Mlynda Ownes, RN
  - Igor Yuabov, PhD and his team
    - @ Children's Hospital of Philadelphia
      - Manager Patient & Family Relations, Family Hospitality Navigator, Manager Spiritual Care and Language Services, Facilities Planner, Linguist Expert

- Define end-users and business need
- Continue research into this area
- Explore partnership with external entities
Next Steps

- Propose ISO/TC215:WG3 New Work Item
- Looking for Experts from NMB
- Collaborators
Additional Resources

- **Americans with Disabilities Act (ADA)—** A law that regulates sign usage, placement, colors, type, etc.
- **Civil Rights Act—** A law that prohibits discrimination or exclusion
- **International Organization for Standardization (ISO/TC 145)—** Defined internationally accepted requirements for symbols
- **United States Pharmacopeia (USP)—** Standardized graphic images to convey information about medications
- **American National Standards Institute (ANSI)—**
THANK YOU!

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