



LWC + HILL-ROM
**LIVING IN PLACE
WITH ALZHEIMER'S**

Living in place with Alzheimer's

medmail

A service system for
managing medication for
Alzheimer's patients and
their caregivers

The direct and indirect **costs** of Alzheimer's and other dementias amount to more than **\$148 billion annually**, which is more than the annual sales of any retailer in the world excluding Wal-Mart.

By **2030**, an estimated **8.6 million** people will have **Alzheimer's** disease.

-- Alzheimer's Association, 2007



Research: Understanding the Opportunity

Picking-Up Medication



Sorting



Distributing



Taking



Stakeholders

Doctor
&
Pharmacist

Caregiver
&
Patient

Caregiver
&
Patient

Patient

Key Insights and Opportunities

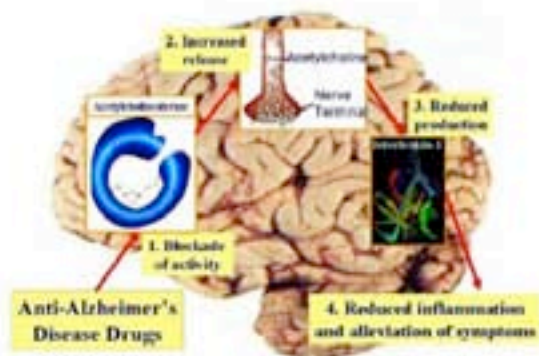
- The growth of the 70+ age segment is an emerging medical challenge.
- There is not a cure for AD yet. All 5 FDA approved medications only slow down the progression of the disease.
- Most medication is taken twice a day in the AM and PM, while the caregiver is present with the patient.
- Patients rely on caregivers' assistance with medication intake in all if not most cases.
- Some combinations of medications and supplements (vitamins & minerals) can be dangerous.
- There are cognitive and behavioral issues with patients.
- Most of the existing products (\$700 is the most expensive) for dispensing medication are technology based with a move toward more complex technology and increased features. They assume that the caregiver or patient can adapt to such solutions.
- Assisted living costs an extra \$750 to \$2,200 per month for dementia patients.

The ideal situation for the caregiver and the patient is for the patient to stay at home, instead of moving to a health care facility. The longer the patient can stay home which is possible through medication compliance, the simpler it is to keep in touch with their family and the less money is spent on healthcare. Most importantly, the dignity and independence of the patient is also maintained.

Research: Understanding the Opportunity

Alzheimer's Disease affects patients' **cognitive** abilities. There are currently five FDA-approved medications to relieve symptoms, for example: Aricept, Exelon, Razadyne, Cognex, Namenda

A review of these medications should occur every three months.



Alzheimer's Disease Medications



Alzheimer's Disease affects both **cognitive and behavioral** conditions, and can take other medications for them.

The medications must be used carefully and are most effective when combined with non-drug approaches.

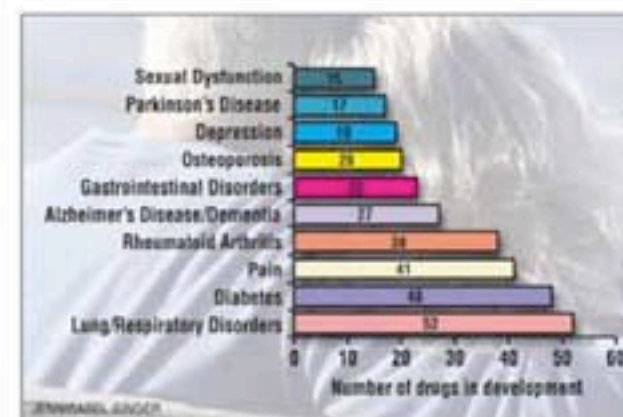


AD-Related Medications



Aside from Alzheimer's Disease, there are **other health conditions** that affect elderly which require medication management.

Nutrition and vitamins management is also important.

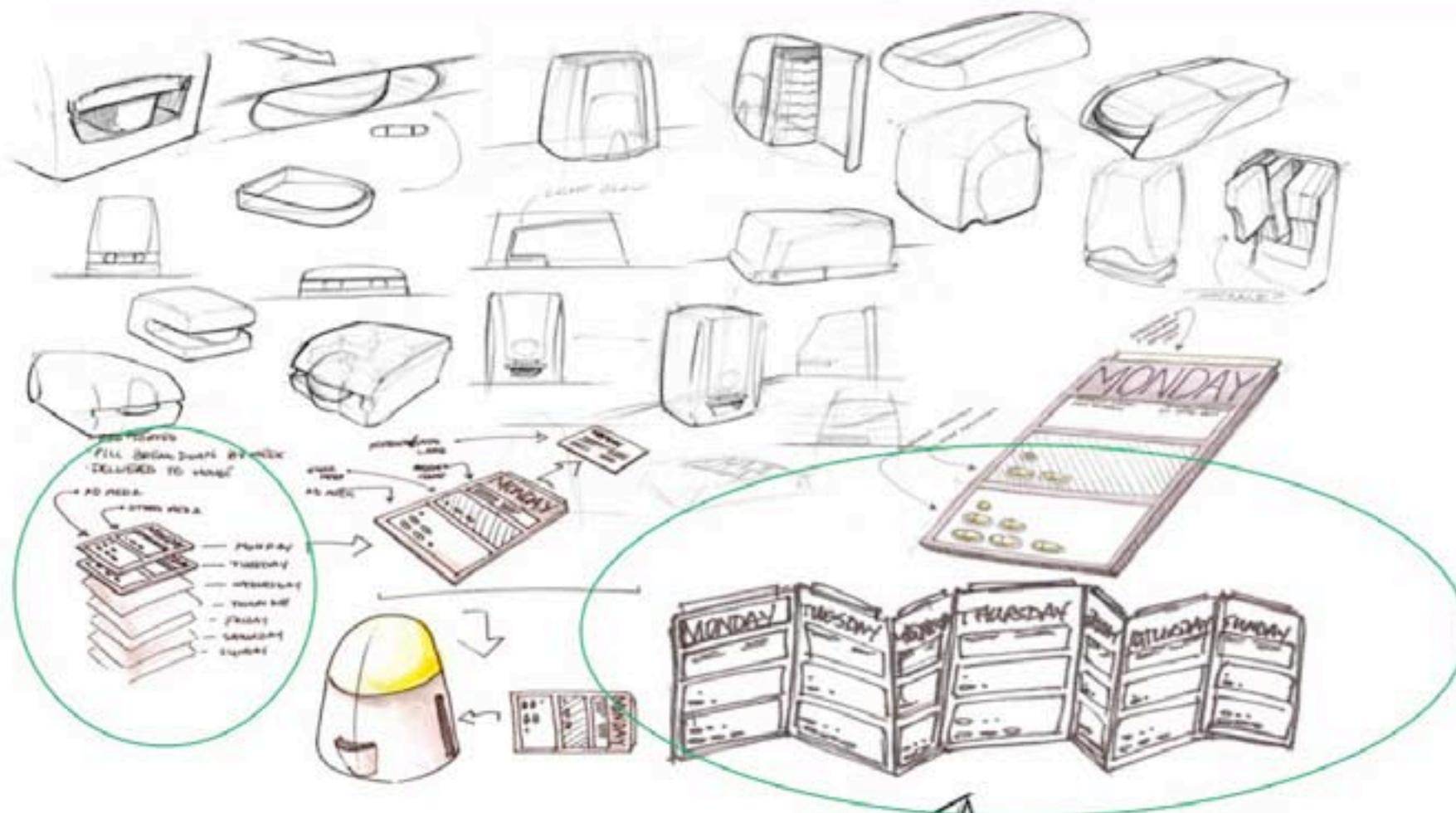


Other Health Conditions

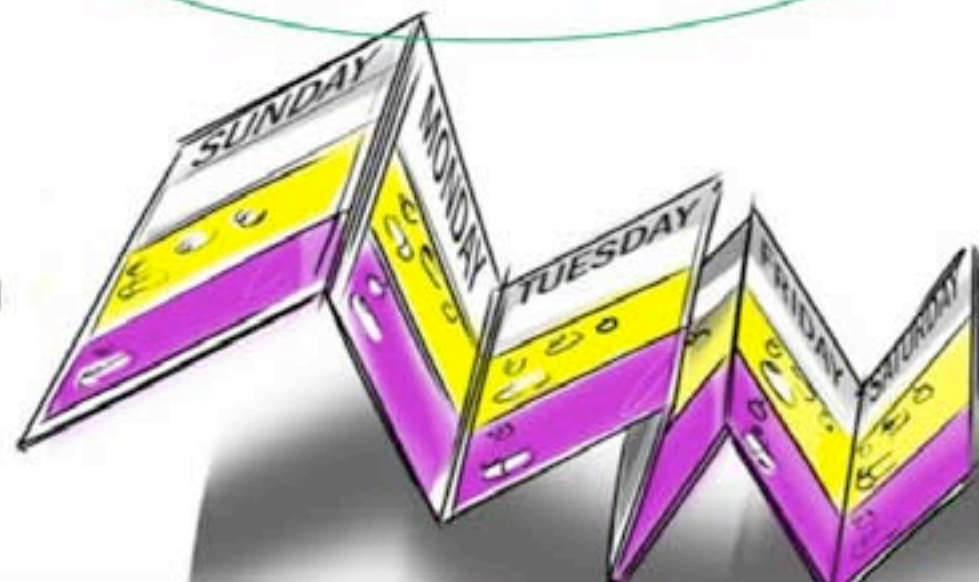


Conclusion: The opportunity lies in developing one system solution that integrates all of the AD patients medication needs.

Conceptualization, Feedback and Refinement: Comprehensive Visualizations for Medicine Management Solutions



Concept **medmail** was identified as an ideal solution. The doctor prescribes, the pharmacy packages, and patient receives their customized medicine prescription.



Scope of Resources

Interdisciplinary Student Teams

Industrial Design
Digital Design
Product Development
Business (Finance/Marketing)
Bio-Medical Engineering

Interdisciplinary Faculty Team

Industrial Design
Digital Design
Business (Finance/Marketing)
Bio-Medical Engineering

Medical Staff Support

Nursing Consultants

Concept Evaluation & Refinement

International Strategic Marketing
Director for International Post Acute
Care

International Alzheimer's Research
Team

Professor of MED-Family Med-
Geriatrics

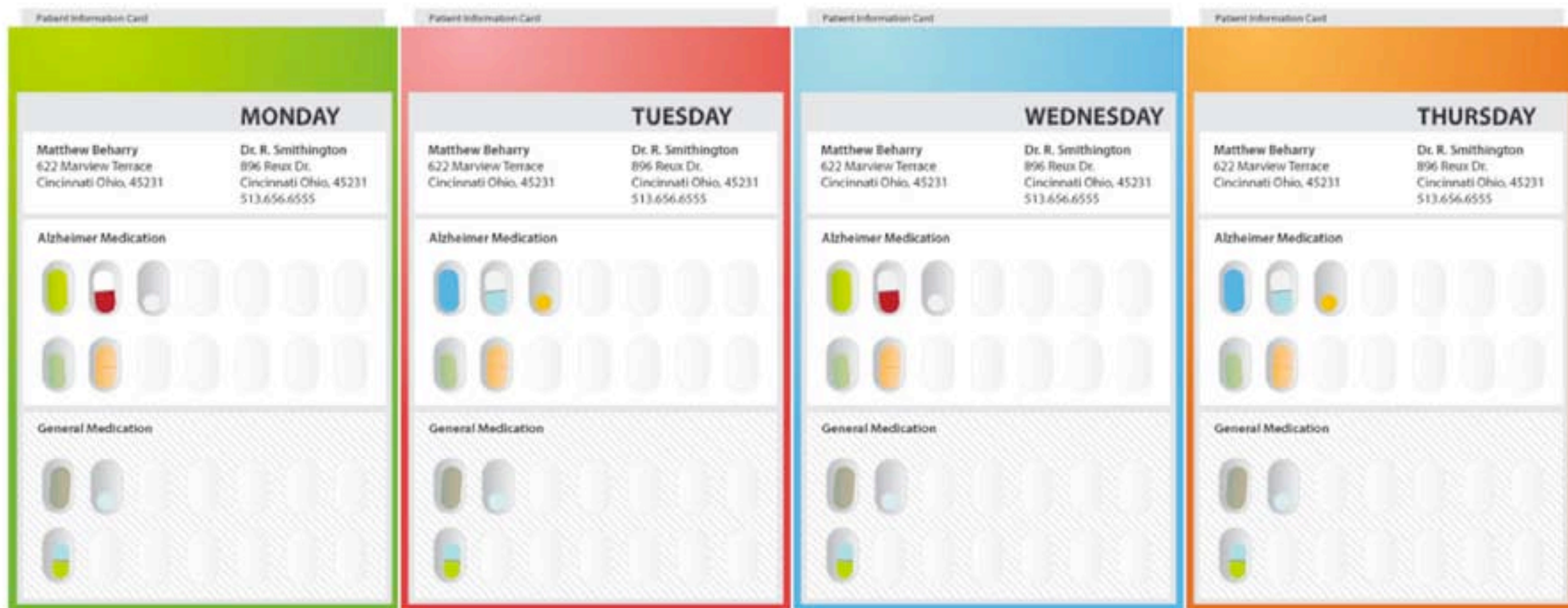
Center for Aging with Dignity Director
Professor Pharmacy & Family Medicine
Professor Rehabilitation Sciences

Universal Design Expert

Director of Local Alzheimer
Association

Final Concept Refinement: Voice of Consumers

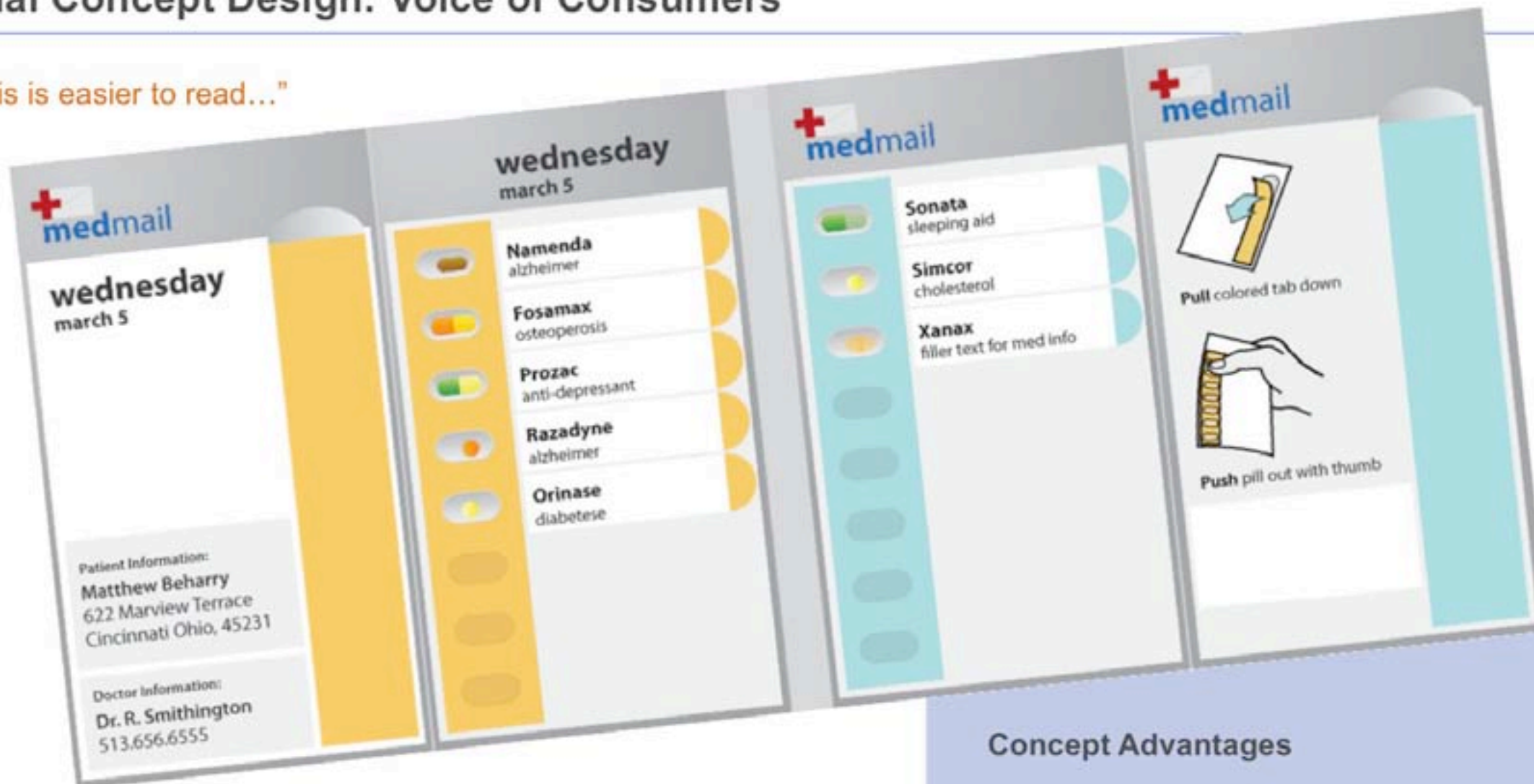
"The **simplifications** it would bring to **medication time** would be **invaluable.**"



"Would make it much **easier** for me to **take my medications.**"

Final Concept Design: Voice of Consumers

"..this is easier to read..."



"...now I know what my doctor prescribed..."

"..easier to remove my pills, one at a time, even with my arthritis..."

Concept Advantages

Ease of use

Reduction of stress

Medicine Compliance:
Allows patient staying at home longer

Increased communication between stakeholders

Streamlined prescription process

Medmail Service Medicine Management: Interactive Digital Interface

Digital interface would link all stakeholders to a comprehensive system approach.

Its like Netflix for medicine!

The digital interface would serve as the vehicle for direct communication between the pharmacist, doctor, caregiver and patient. All stakeholders can check online specific information about the medications and track it much closer, along with many other opportunities. Also, a mail delivery service could serve as a potential partner for the solution, as well as other businesses who can contribute to streamline the process and delivery.



log in:

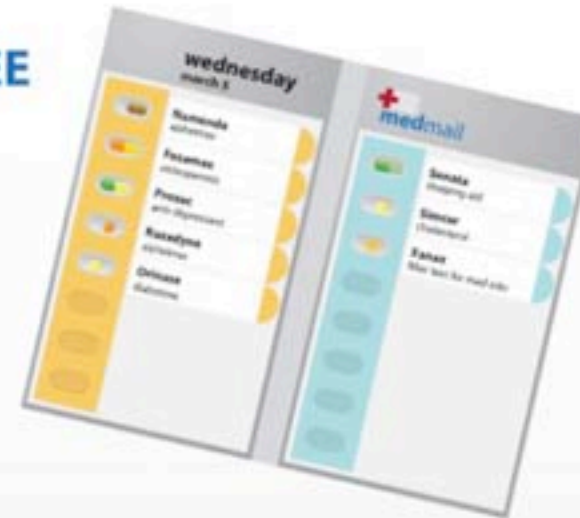
about medmail

how it works

sign up

my account

Sign up today & try medmail for FREE



- pharmacists organize medications
- pre-sorted & easy to use packaging
- no more organizing medication
- no more running to the pharmacy
- & free shipping both ways

How MedMail Works:

1 Over 100,000 medications

2 Free weekly delivery

3 Pre-Sorted & easy to use

4 Prepaid return packaging

Get started:

medmail Living in place with Alzheimer's

A service system for managing medication for Alzheimer's patients and their caregivers



THANK YOU.