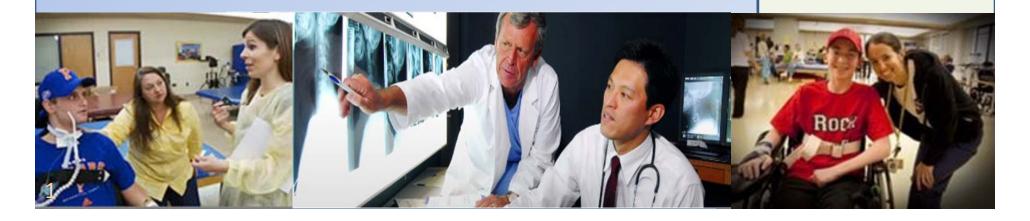


# Paradigm Network Services Summit

Shepherd Center, Atlanta GA
October 9-11, 2011









## Smartphone Apps for Injured Workers and Case Management

#### **John Morris**

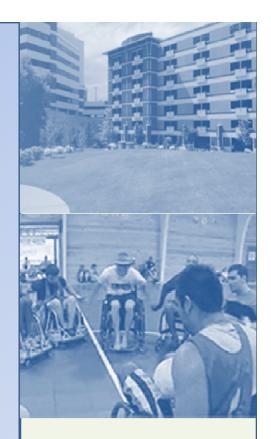
Research Scientist, Crawford Research Institute Program Manager, Wireless RERC

#### **Ben Lippincott**

Director of Industry and Consumer Relations
Wireless RERC

#### **Tracey Wallace**

Speech Language Pathologist Shepherd Pathways









# Rehabilitation Engineering Research Center for Wireless Technologies (Wireless RERC)

- Funded by the U.S. Department of Education
- National Institute for Disability and Rehabilitation Research
- Mission:
  - Promote equitable access to wireless technology
  - Promote Universal Design in future generations of wireless technology
- 5-year funding cycle
- Just renewed for our 3<sup>rd</sup> cycle of funding
- Multiple research, development and training projects, including an Apps Factory



#### **Objectives**



#### At the conclusion of this training, participants will be able to:

- Know how to download and install smartphone applications.
- Name three wireless applications that are available in each of the following categories to assist either the case manager or injured worker and his /her family:
  - a. Patient/family education
  - b. Patient self management and independent living
    - Including: Patient security and emergency lifelines
  - c. Cognitive training
- Identify at least one application they feel can be of value in their case management activities.



#### **Agenda/Contents**



- Patient & Family Education, Reference
- Patient Self Management and Independent Living
  - Pill Identifiers
  - GPS/Location
  - Organization/Notes
  - Emergency/Security
- Cognitive Training, Games



#### **Patient and Family Education**



#### Brain, skeletal and nervous system

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FINR Brain Atlas558 Mb, All, \$1.99

Brain Tutor 3D1.4 Mb, All, Free

- 3D Brain 49.6 Mb, All, Free

Nervous system

Nervous System iPhone Edition
 36.5 Mb, All, \$2.99

Miniatlas Central Nervous System 132 Mb, All, \$9.99

Skeletal system

Skeleton System Pro II (Nova Series)372 Mb, All, \$9.99

- mLumbar Anatomy 64.2 Mb, All, \$3.99



#### **Patient and Family Education - Brain**



#### **FINR Brain Atlas**

Publisher: Florida Inst. for Neurologic Rehab

■ Size: 558 Mb

• Cost: \$1.99

Platforms: iPhone, iPod Touch, iPad;

Version: iOS 3.2 or later



- "Explore the anatomy of the brain and common brain injuries in a 3D model. Injury illustrations include: aneurysm, anoxic/hypoxic encephalopathy, cerebral contusion, cerebral infarction/stroke, diffuse axonal injury, intraventricular hemorrhage, penetrating head wound, subarachnoid hemorrhage, and subdural hematoma."
- Notes:
  - Lots of views of the brain (rotations, cutaways), with useful text
  - Very large file size, navigation can be complex



#### **Patient and Family Education - Brain**



#### Nervous System iPhone Edition

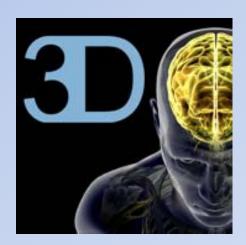
Publisher: 3D4Medical.com

• Size: 36.5 Mb

• Cost: \$2.99

Platforms: iPhone, iPod Touch, iPad;

Version: iOS 4.0 or later



- "Explore the anatomy of the brain and common brain injuries in a 3D model. Injury illustrations include: aneurysm, anoxic/hypoxic encephalopathy, cerebral contusion, cerebral infarction/stroke, diffuse axonal injury, intraventricular hemorrhage, penetrating head wound, subarachnoid hemorrhage, and subdural hematoma."
- Notes:
  - Lots of views of the brain (rotations, cutaways), with useful text
  - Intuitive navigation



#### **Patient and Family Education – Nervous System**



#### Miniatlas Central Nervous System

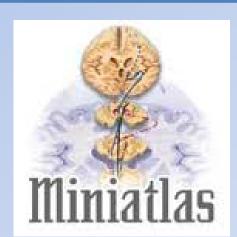
Publisher: Licitelco

Size: 132 Mb

• Cost: \$9.99

Platforms: iPhone, iPod Touch; iPad in future

Version: iOS 4.0



- Detailed images of nervous system, with explanation in Eng/Spanish
- Zoom with fingers, and email any image or section of image
- Images of: Central, peripheral, and autonomic nervous systems;
   senses and principal routes of nerve conduction; nervous system diseases; and pain
- Notes:



#### **Patient and Family Education – Nervous System**



#### mLumbar Anatomy

Publisher: Anatomate-apps,

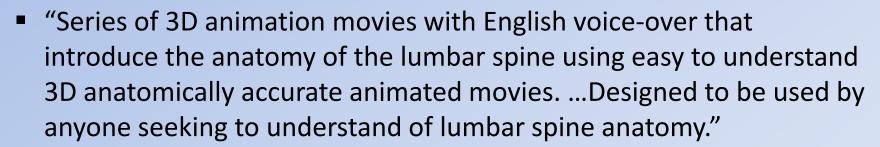
Size: 64.2 Mb

Cost: \$3.99

Platforms: iPhone, iPod Touch, iPad; iOS 3.0 or

later

#### **Description**



#### Notes:

- Nice interface
- Simple, limited information



#### **Patient and Family Education – Skeletal System**



#### Skeletal Systems Pro II (NOVA Edition)

Publisher: 3D4Medical.com

Size: 372 Mb

• Cost: \$9.99

Platforms: iPhone, iPod Touch, iPad;

Version: iOS 4.0 or later



- "The Skeletal System Pro II (NOVA Series) is a cutting edge app built on our NOVA technology. This is the most in depth 3D skeleton ever developed, the ability to rotate, cut and get superior/inferior views all with the simple stroke of the finger."
- Notes:
  - Lots of views of the skeleton (rotations, cutaways), useful text
  - Extremely large file size, navigation intuitive, customizable



#### **Patient Self Management**





### Pill Identifiers/Managers/Reference

Pill Identifier Lite by Drugs.com
 7.8 Mb, All, \$0.99

iPharmacy, Sigmaphone7.8 Mb, All, Free

Pocket Pharmacist, Danike Inc. 1.8 Mb, All, \$1.99

Pillboxie, Jared Sinclair
 31.2 Mb, All, Free

iMed Reminder, John Jaimovich 0.8 Mb, All, \$0.99

#### Also:

- MobilePDR Prescribers Edition
  - available only to MDs, DOs, Residents, NPs and Pas



#### Patient Self Management – Pill Identifier/Manager/Reference



#### Pill Boxie

Publisher: Jared Sinclair

Size: 31.2 Mb

Cost: Free

Platforms: iPhone, iPod Touch, iPad;

Version: iOS 4.0 or later



- "Pillboxie is the easy way to remember your meds. Other med reminder apps are either too complicated or just downright boring. Pillboxie is easy because it lets you visually manage your meds. Scheduling a reminder is as easy as dropping a pill into a pillbox."
- Notes:
  - Simple and intuitive
  - Not a drug reference, no database of existing drugs
  - Just shapes, colors, and ability to attach labels and notes



#### Patient Self Management – GPS/Location





#### **GPS / Location**

- FourSquare
- Google Latitude
- Find my iPhone
- Parking Mobility
- CitiRoller

- 6.3 Mb, All, Free
- 8.9 Mb, All, Free
- 5.3 Mb, All, Free
- 3.9 Mb, All, Free
- 0.4 Mb, All, Free



#### **Patient Self Management - GPS/Location**



#### foursquare

Publisher: Naveen Selvadurai

Size: 6.3 Mb

Cost: Free

Platforms: iPhone, iPod Touch, iPad; iOS 3.0 or later

Languages: Multiple

- "While on the go you can easily tell friends where you are, share pictures, get their comments, get insider tips."
- Notes:
  - Can be used by patient and caregiver to keep track of eachother
  - Many downloads, high user ratings



#### **Patient Self Management - GPS/Location**



#### Google Latitude

Publisher: Google Mobile

Size: 8.9 Mb

Cost: Free

Platforms: iPhone, iPod Touch, iPad; iOS 4.0 or later

Languages: Multiple

- "Lets you stay in touch with your friends and family by making it easy to share where you are, and see each other on a map.
- Notes:
  - Can be used by patient and caregiver to keep track of each other
  - Multiple languages
  - Some reviews mentioned drain on battery was excessive



#### **Patient Self Management - GPS/Location**



#### **Parking Mobility**

Publisher: Coal Harbour Group

Size: 3.9 Mb

Cost: Free

Platforms: iPhone, iPod Touch, iPad; iOS 3.1.3 or later



#### **Description**

- Parking Mobility is a community-based non-profit effort to bring citizens and their cities together to address disabled parking abuse.
- Take a picture of the violating vehicle parked in an accessible parking spot, and a picture of the license plate and send to Parking Mobility.
- Parking Mobility sends violating vehicle's pictures to the appropriate city who then ticket violator.

Notes: Lets user community build and update database of accessible parking anywhere in the world; crowdsourcing



#### Patient Self Management – GPS/Location



#### CitiRoller

Publisher: PapaProcuct, LLC

Size: 0.4 Mb

Cost: Free

Platforms: iPhone, iPod Touch, iPad; iOS 3.1 or later



- CitiRoller is a tool to help people in wheelchairs locate:
  - Accessible public transportation
  - Accessible restrooms
  - Accessible restaurants, cafes
  - Wheelchair supply and repair shops
- Only available for New York City and Boston
- Developed with support from the Christopher and Dana Reeve Foundation

#### **Patient Self Management - Organization**



## **Organization / Notes**



Remember the Milk

Evernote

Corkulous

10.3 Mb, All, Free

12.9 Mb, All, Free

18.2 Mb, iPad, \$4.99



#### **Patient Self Management - Organization / Notes**



#### Remember the Milk

Publisher: Remember the Milk Pty Ltd.

Size: 10.3 Mb

Cost: Free, may be periodically upgraded

Platforms: iPhone, iPod Touch, iPad; iOS 3.1 or later



- RTM connects with popular online service of the same name
- Syncs with Outlook, iCal, Google Calendar, Gmail, Twitter, etc.
- Organize by priorities, due dates, time estimates, repeating, lists, tags and more



#### **Patient Self Management - Organization / Notes**



#### **Evernote**

Publisher: Evernote

Size: 12.9 Mb

Cost: Free, may be periodically upgraded

Platforms: iPhone, iPod Touch, iPad; iOS 3.0 or later



- Capture Anything Save your ideas, things you like, things you hear, and things you see.
- Access Anywhere Evernote works with nearly every computer, phone and mobile device out there.
- Find Things Fast Search by keyword, tag or even printed and handwritten text inside images.
- Notes:
  - Can record audio notes, many downloads, high user ratings



#### **Patient Self Management - Organization / Notes**



#### Corkuolous

Publisher: Appigo, Inc.

Size: 18.2 Mb

Cost: \$4.99, may be periodically upgraded

Platforms: iPad; iOS 3.2 or later

- Corkulous follows the metaphor of a cork board where users can arrange notes, labels, tasks, contacts, and photos to visualize ideas.
- Related ideas can be easily placed together and aligned using automatic guides.
- As ideas grow, users can create new boards and group related ideas in separate virtual spaces.



#### **Patient Self Management**





#### **Emergency / Safety**

Close Calls0.3 Mb, All, Free

■ SmartICE 3.5 Mb, All, \$1.99

iSOS! - GPS emergency locator.0.3 Mb, All, \$0.99

Silent Bodyguard1.7 Mb, All, \$9.99

American Red Cross Shelter View 0.2 Mb, All, Free



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#### **Patient Self Management - Emergency/Safety**



#### iSOS – GPS Emergency Locater

Publisher: Zorilla de San Martin Juan

Size: 0.8 Mb

Cost: Free

Platforms: iPhone, iPod Touch, iPad; iOS 3.0 or later



- Car crash? Kidnapped? Heart attack? Earthquake? iSOS! reports your position to police, medical services, family and others (firemen, friends, etc.).
- E-mails sent with your personal pre-configured data (name, age, document number, mobile number) and a link to Google Maps with your GPS position.



#### **Patient Self Management - Emergency/Safety**



#### Silent Bodyguard

Publisher: Fun at Work

Size: 1.7 Mb

Cost: Free, with \$9.99 upgrade

Platforms: iPhone, iPod Touch, iPad; iOS 3.0 or later



- "A secret panic button/location tracker that sends a silent SOS with your location to your emergency contacts – without alerting the onlooker or attacker."
- Standard alert features are free, with an one-time charge to upgrade.
- Notes:



#### **Patient Self Management - Emergency/Safety**



#### American Red Cross: Shelter View

Publisher: VisionLink, Inc

Size: 0.2 Mb

Cost: Free

Platforms: iPhone, iPod Touch, iPad; iOS 3.0 or later



- Be Prepared When disaster strikes know when and where shelters have been opened to provide assistance.
- Map View View shelter details: the agency managing the shelter, capacity of the shelter and current population, shelter address and location, and the associated disaster event.
- Notes:
  - Regularly updated shelter information is updated every 30 minutes. Current populations updated every noon and midnight.

#### **Cognitive Training / Games**



PARADIGM OUTCOMES

### Memory building games

Unblock me17.0 Mb, All, Free

Rush Hour6.8 Mb, All, Free

Braintrainer3.9 Mb, All, Free

MemoryBlock5.6 Mb, All, Free



#### **Cognitive Training/Games**



#### **Unblock Me**

Publisher: Kirakorn Chimkool

Size: 17 Mb

Cost: Free, can be upgraded

Platforms: iPhone, iPod Touch, iPad; iOS 3.0 or later



- "A simple and addictive puzzle game. The goal is to get the red block out of the board by sliding other blocks out of the way."
- 4 difficulty levels ranging from Beginner to Expert. 4200 puzzles.
- Two modes: Relax Mode and Challenge Mode
- Hint system to guide you through the puzzle.
- Notes:
  - Many downloads, high user ratings



#### **Cognitive Training/Games**



#### MemoryBlock

**Publisher: Category 5 Games** 

Size: 5.6 Mb

Cost: Free for Lite ver., \$0.99 for Pro ver.

Platforms: iPhone, iPod Touch, iPad; iOS 3.0 or later



- Train your brain by keeping track of the sequence of 5 lights on the screen,
   then match it sequence for sequence by tapping the appropriate lights.
- Test and improve your reflexes with the new Speed Mode!
- Watch and listen as the computer shouts out colors for you to tap.





# Thank You! Questions?

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