Bringing medicine, patients and community-based services together.

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Connecting the Home to Healthcare

The need for interoperability and standardization

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- Purpose is practice change in community services and healthcare to improve health and quality of life for adults with chronic conditions
- Innovators in evidence-based programs bridging home, self-care, and healthcare
- HomeMeds—High-level evidence-based intervention to enable social workers to use software for medication reconciliation and risk-screening in the home.

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The Punchline

- When dual eligibles go to managed care, the emphasis will be on lower-cost home and community-based services – NOT nursing home
- Hands-on oversight is less in the home, so technology needs to enable consumers, caregivers and social service agencies to maximize health and safety
  - Health Happens at Home!
- Standardization, e.g., prescription barcodes, would help speed accurate data collection
- Certification standards need to connect software used in home and community to healthcare providers' EHRs and vice versa
  - Licensed Medicare/Medicaid service providers are only part of the picture.

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Health-related Community Services – Current Software Use

- Medicaid waiver – local server-based software
- Adult day health – local server-based software
- Self-management classes (Stanford, etc.) – Excel spreadsheet & SalesForce system
- Care Transitions – Excel and new cloud-based system
- HomeMeds – Cloud-based system
- Caregiver resource center – self-built server-based data system
- Older Americans Act Services – SAMS – unconnected to healthcare; Excel/local database

None tied to each other nor to healthcare providers

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Lost Data…Lost Opportunities

- Typical in-home assessment includes
  - Comprehensive medication list & adherence info
  - Depression and cognitive screen
  - ADLs – functional abilities & needs
  - Information about falls, dizziness, confusion
  - Home safety assessment
  - Caregiver and other psychosocial information
- How many doctors have access to this information in their EHR? **Close to 0.**

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HomeMeds

- Medication issues uncovered by **social workers** using HomeMeds in the home!
- Embedded in existing programs and home visits
  - Care transitions
  - Case management
  - Assessment
  - Qualifying participants for homecare
- Plus targeted home visits for high risk patients

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What do we find in the home?

- Across all programs 40%+ have at least 1 medication problem targeted by HomeMeds
  - Unnecessary therapeutic duplication
  - High-risk use of pain medications related to gastric bleeding
  - Psychoactive medications w/falls or confusion,
  - Cardiac med issues (low pulse, orthostasis, low SBP)
- Meals on Wheels – Ft. Worth – 1,500 patients
  - 70% had potential medication-related problems.
  - 45% had at least one fall in last 3 months.
- 250 post-acute medical group patients
  - 66% had med issues pharmacist referred to prescriber

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Typical Medication Problems in Community-Dwelling Elders

- 90 y/o falling – Valium refilled by physician asst.
- Patient with dizziness taking **2** beta blockers.
- Patient >80 taking **3** meds that increase risk of gastrointestinal bleeding
- Patient taking **4** narcotic pain killers
- Patient fell…taking **5** meds that increase risk of falls
- Avg. 11 meds – up to 28

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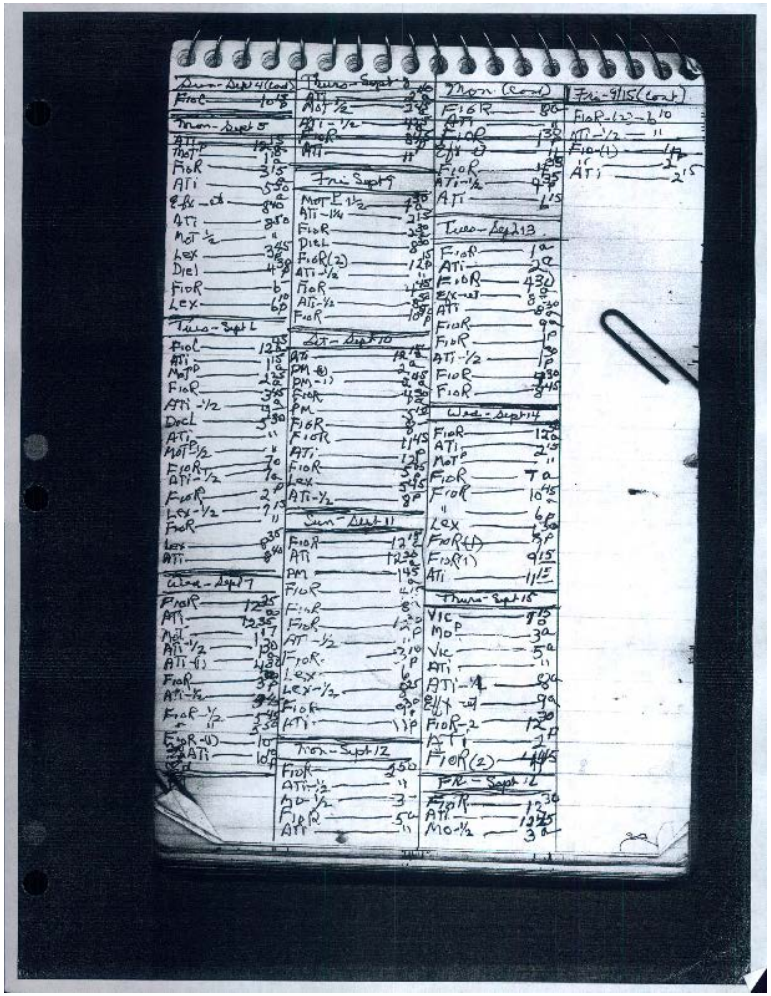
Complex Patients Need Help

Tues – Sept 6- Margaret's med log

1:15 AM ……Ativan
2:25 AM…….Motrin PM
4:00 AM…….Ativan ½ tab
5:30 AM ……Ativan
5:30 AM ……Motrin PM 1/2tab
6:00 AM…….Diclofenac
7:00 AM ……Ativan ½ tab
…
7:15 PM…….Lexapro ½ tab
8:35 PM…….Lexapro
8:40 PM…….Ativan



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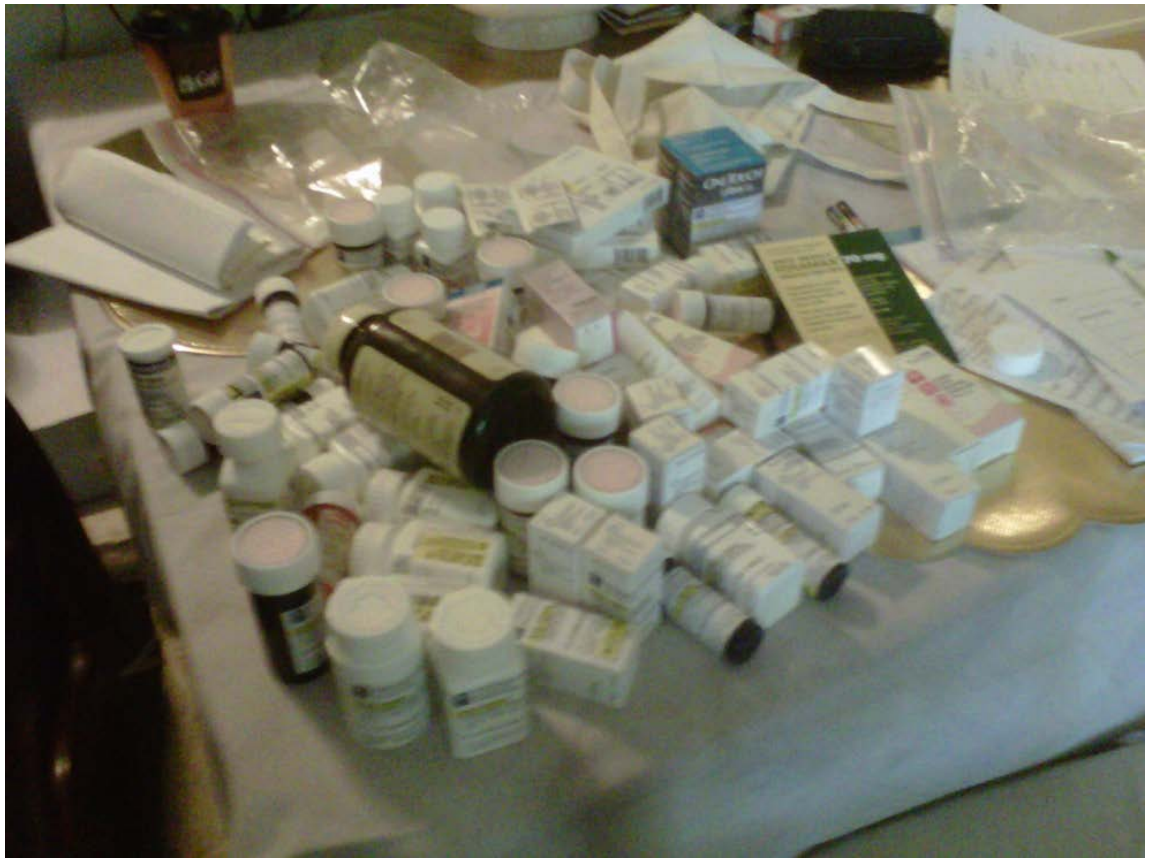
Confused Patients Need Help!



- Patient on pharmacy's refill system.
- Cognitive status impaired(MMSE 12/30).
- Says "yes" every time pharmacy calls re: refills.
- She had only 4 active prescriptions!

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Non-English-speaking Patients Need Help!

- Patient could not read English labels;
- Neighbor placed bottles on pieces of paper with time of day…
- …but they don't stay on the paper reminders.

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Caregiver Example

- 19 different Meds, including prescriptions, OTC, supplements, etc.
- Mom not feeling well – needed weekly meds put into dispenser.
  - No idea what is taken when and how – labels not specific about schedule; some PRN; some split
- Complex medication regimen
  - 6 scheduled times: Before breakfast, with breakfast, with lunch, 4 PM, with dinner, bedtime
- Medicare Part D enrollment – manually enter all meds

Isn't there an app for this?

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Care Transitions Example

- Patient does PHR – by hand
  - Many patients now computer users
  - Many have tablets, cell phones &/or smartphones
  - Coaches could help them with iPad
- In-home coach observes many things that should be reported to providers
- Not much time in the home – needs to be spent on coaching for self-management
- Coaches document medications and use HomeMeds for risk screening
  - Important, but it takes a lot of time

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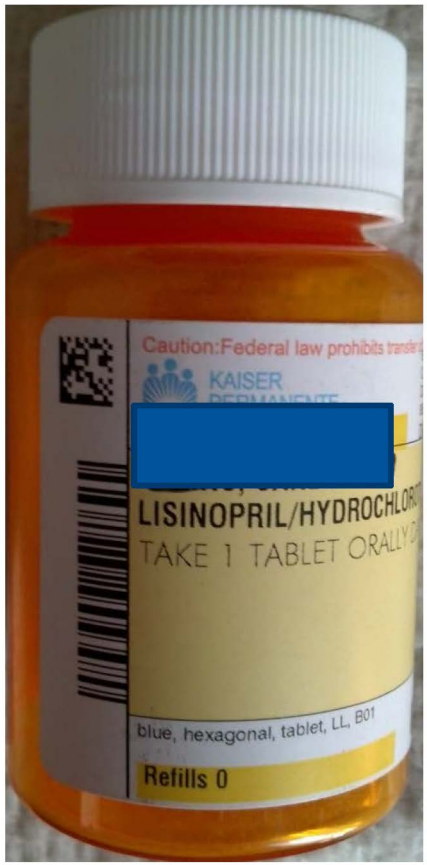
One bottle…3 codes…none readable



Why aren't there national standards across pharmacies?

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This needs to be easier!

- **Collecting medication info should be a zap of smartphone barcode reader**
  - **Patients could do it**
  - **Caregivers could do it**
  - **Community health workers could do it**
- HomeMeds and other evidence-based algorithms enable real time reconciliation and risk screening, alerting patient, caregiver, and providers
- Downloads from discharge record & EHR would eliminate 60% of data entry
- Upload to EHRs would improve care coordination and quality of care

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And it needs to be better

- Certification needs to drive improvements
  - Consumer app/widget back-end needs to be current and evidence based
    - Updated high-risk medications, American Geriatrics Society
  - Update drug databases
  - Use data to target appropriate tools for the population (e.g., age, multiple chronic conditions) and the use.
- Much hospital-based med rec would have missed what social workers find with HomeMeds
  - It's not medication reconciliation until you've included the home.

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And it needs to be affordable

- Community agencies' funding cut by sequester
- CMS care transition rates include no IT or indirects
- Cannot afford to build EHR integration for every system

Certification and interoperability, coupled with sufficient volume to be affordable to nonprofits, are essential to coordination across providers and locations— hospital, office, home, caregiver!!

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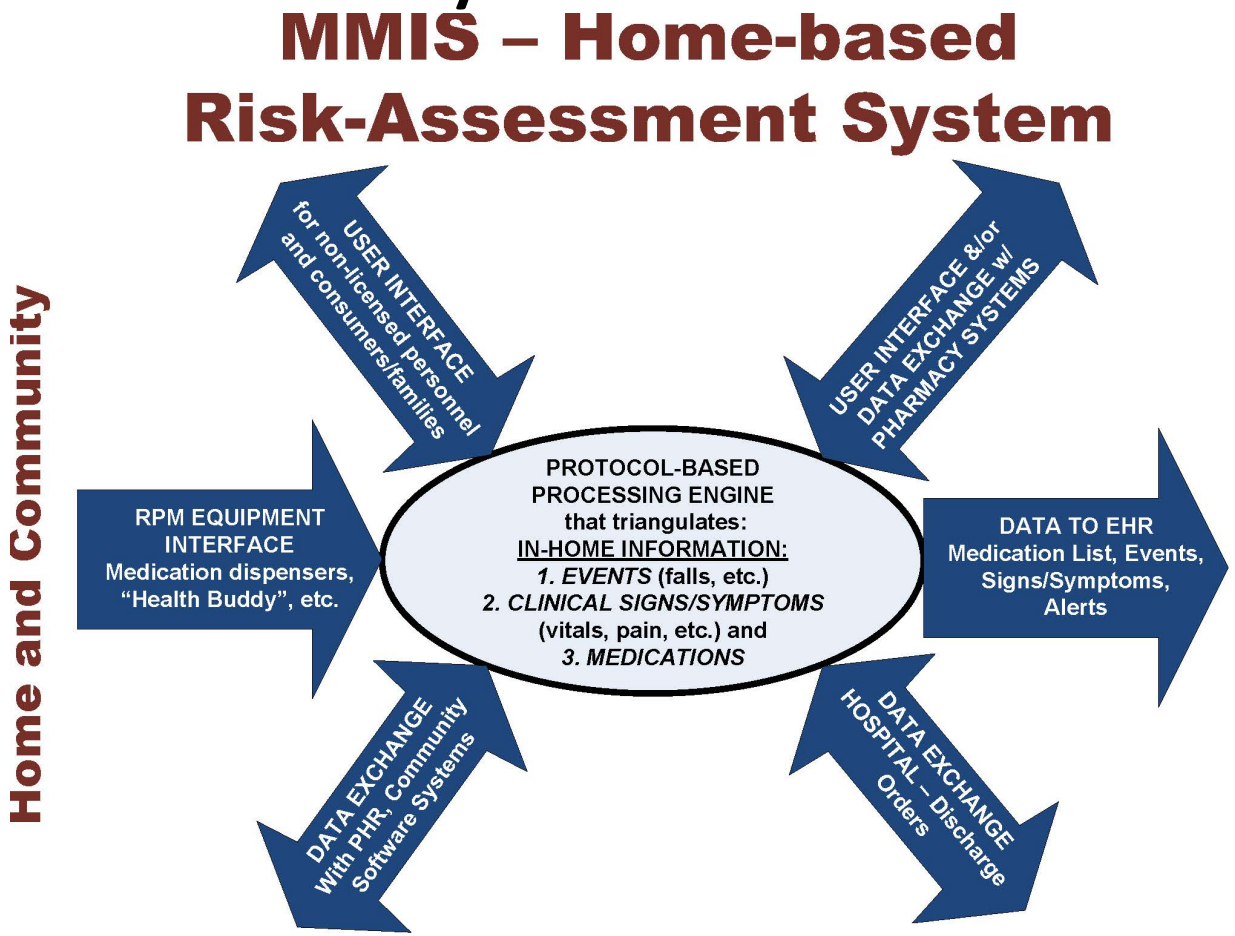
Linking HomeMeds Across Systems for Efficiency and Coordination



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