



Announcing the New CIN Website

www.chcf.org/cin



CALIFORNIA HEALTHCARE FOUNDATION
SUPPORTING IDEAS & INNOVATIONS TO IMPROVE HEALTH CARE FOR ALL CALIFORNIANS

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California Improvement Network

California Improvement Network

Better Ideas for Care Delivery

About the CIN

CIN is a community where you can learn better ideas for care delivery through webinars, workshops, and quarterly meetings focused on techniques to improve the patient experience and the health of populations, while lowering the cost of health care.

[Learn More](#) [Partners](#)

REGISTER FOR UPDATES

Sign up to be notified about future CIN webinars and other updates.


TEAM

Giovanna Giuliani, MBA, MPH
Senior Program Officer

Emma Dugas
Communications Officer

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Program Associate

RECENT WEBINAR

CIN Webinar: 

How Community Outreach Workers Can Care for Members with Complex Needs

REQUIRED READING

Need to get up to speed quickly on a topic? We've compiled key resources in three areas where CHCF has supported work over time to provide a knowledge base:

- Complex Care
- Palliative Care
- Patient Experience

CARE DELIVERY IN THE NEWS

S.F. Alzheimer's Pilot Results Released
Jul 16, 2013

Medical Home Bill Closer to Passage
Jul 9, 2013

Disease Management Not Enough To Curb Health Care Costs, Study Finds
Jun 25, 2013

UPCOMING EVENTS

Workshop — ABCs of Quality Improvement
Tuesday, July 23, 2013
8:30 to 4:00 Pacific

Webinar — HomeMeds: An Innovative Approach to Medication Safety
Wednesday, July 24, 2013
12:30 to 1:30 Pacific

Workshop — Using Measurement for Quality Improvement
Thursday, October 17 to Friday, October 18, 2013

[View All Events](#)

NOTES FROM THE FIELD

Complex Care Management
July 11, 2013

Patients with chronic conditions often have multiple issues, see an average of 11 providers, and take numerous medications. Their cases require advanced care coordination.

[Read More](#)

"There is a grey zone between where primary care ends and specialty care begins — initiatives to improve collaboration and dialogue among primary and specialty care physicians allow this grey area to be more

Webinars

Hear from those who have implemented successful programs. CIN webinars, held the fourth Wednesday of each month, feature innovations in care delivery and "how to" advice for adopting them.

Workshops


CIN in-person workshops are recurring one- or two-day seminars that cover the fundamentals of quality improvement methodology.

Quarterly Partner Reports

CIN partner organizations meet quarterly to share ideas and lessons from their work. Read about their top priorities and how they are responding to new demands in the health care environment.

Action Groups

These micro networks connect organizations to explore and experiment with new ideas in care delivery and to put them into practice. Check here often to learn about new action groups as they form.



California Improvement Network
Better Ideas for Care Delivery

Today's Speaker



Sandy Atkins, MPA

Project director/VP

Institute for Change, Partners in Care Foundation



An Innovative Approach to Medication Safety

**California Improvement Network Webinar
July 24, 2013**

Partners in Care Foundation
June Simmons, CEO
Sandy Atkins, VP, Institute for Change



The Problem

Medication errors are:

- **Serious:** Over 700,000 people go to ED each year for adverse drug events
- **Costly:** Drug-related morbidity/mortality > \$170 billion (*ER, hospital/readmissions, SNF use, etc.*)
- **Common:** Up to 48% of community-dwelling elders have medication-related problems
- **Preventable:** At least 25% of all harmful adverse drug events are preventable

The Solution: HomeMedsSM

- *HomeMedsSM* is designed to enable *community agencies* to keep people at home, out of hospital and nursing home, by addressing medication safety.
- Consensus panel (including Mark Beers) chose **target problems** for significance, accessibility to in-home staff, and likelihood of positive prescriber response.
- *HomeMedsSM* focus is to look for potential adverse effects (falls, vitals, confusion) and then determine if medications may be part of the cause.

Core Components

- ❖ In-home collection of a **comprehensive medication list** with notes on how each drug is being taken, plus vital signs, falls, symptoms, and other indicators of adverse effects
- ❖ **Use of evidence-based protocols** and processes to screen for risks and deploy consultant pharmacist services appropriately
- ❖ **Computerized medication risk assessment** and alert process with comprehensive report system
- ❖ **Consultant pharmacist** addresses problems with prescribers



“Any symptom in an elderly patient should be considered a drug side effect until proved otherwise.”
(Gurwitz et al. 1995)

HomeMeds: Bridge from Home to Healthcare



Why Should Non-Healthcare Agencies Work on Medication Safety?

- To thrive, CBOs need to play a new role connecting the home with the healthcare system
 - Meds are major factor in **readmissions**
 - **Home** provides unique perspective otherwise unavailable to healthcare providers
 - New focus on **population health** – identifying and proactively addressing health for **high-risk patients**
 - **Quality measures** for health plans and providers relate to issues such as medication use and fall prevention
 - Home medication reconciliation is a **national patient-safety goal**

Medications & Care Transitions

- ~20% of discharged patients suffer an adverse event – 72% of which are med-related
- Med reconciliation and risk assessment – core element of every care transitions program



- But **why wait** for a hospitalization?
- Why not **intervene earlier**?

Home Visit Uncovers Many “Secrets”

Prescribers May Not Know About

- OTCs – Over-the-counter medications
- Prescriptions from other providers
- Adverse effects such as falls, dizziness, confusion
- Adherence issues
- Out-of-system meds: Drugs from other countries, borrowed, Wal-Mart \$4

Quality Measures Now Tied to \$\$\$

- **Star Ratings – Medicare Advantage**

- Yearly review of all medications and supplements being taken
- Yearly pain screening or pain management plan
- Controlling blood pressure
- Reducing risk of falling
- Readmission to a hospital within 30 days of being discharged

- **HEDIS for physicians**

- Percentage of Medicare members 66+ who received at least one high-risk medication
- Fall Risk Management: Discussion & Management
- Potentially Harmful Drug-Disease Interactions

HomeMeds: Saves Money, Saves Lives

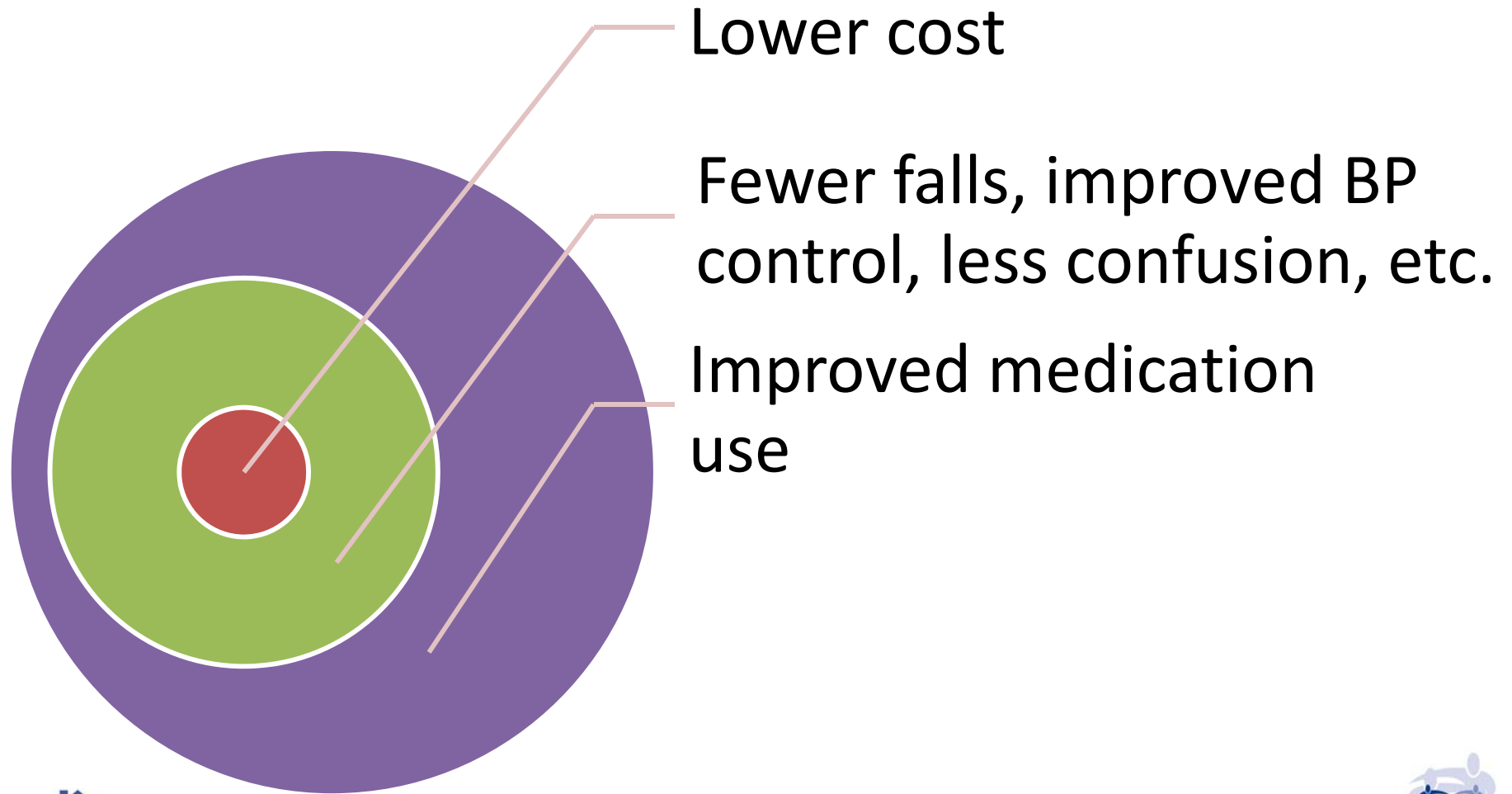
- Falls and other adverse effects improved through collaboration between pharmacists and members of the care team
- 46.7% of older adults screened in 14 sites from 2007 to 2010 had risk for medication-related injury
- Estimated savings from 7,000 screenings: Up to \$1.5 million. ROI similar to MTM (4:1 or better)¹



¹Clinical and economic outcomes of medication therapy management services: the Minnesota experience. [Isetts BJ](#), [Schondelmeyer SW](#), [Artz MB](#), [Lenarz LA](#), [Heaton AH](#), [Wadd WB](#), [Brown LM](#), [Cipolle RJ](#). *J Am Pharm Assoc*, 2008 Mar-Apr;48(2):203-11.



Expected Results





What's It All About?



The first and most important step...

- Treasure hunt – find “hidden” meds
- Transcribe accurate information from the bottle/box
- Inquiry – For each medication ask client:
 - What they take it for
 - How and when they take it
 - How much they take
 - What happens when they take it (Is it effective? Side effects?)
- Assess for common side effects
 - Falls
 - Confusion
 - Dizziness, shakiness, feeling light headed
 - BP/pulse

Evidence-Based Origins

- Vanderbilt University – John A. Hartford Foundation Funds
 - RCT proved efficacy in home health
 - Pharmacist-nurse collaboration to identify and resolve errors
 - Results:
 - 19% had potential medication problems
 - Medication use improved in 50% of patients, (compared to 38% of controls) when pharmacist collaborated with home health staff



HomeMeds: Further Evidence

AoA Funds and USC Evaluation



- **In Medicaid Waiver for Dual Eligibles** (nursing-home eligible, living at home)
 - Social workers and nurses collected data
- **Results^{1,2}: 49% had *potential* medication problems**
 - After pharmacist review 29% of all waiver clients required physician intervention
 - Medication use improved in 61% of clients



¹ Prevalence of Potential Medication Problems in Dually-Eligible Older Adults in Medicaid Waiver Services. Alkema GE, Wilber KW, Enguidanos SM and Frey D. *The Annals of Pharmacotherapy*. 12/07, V 41.

² The Role of Consultant Pharmacists in Reducing Medication Problems Among Older Adults Receiving Medicaid Waiver Services. Alkema G, Enguidanos S, Wilber K, Trufasiu M and Frey D. *The Consultant Pharmacist*. Feb-2009, V.24, No. 2.



Evidence-based Recognition

- AoA recognition as an evidence-based prevention program – **Highest Level of Evidence**
- ACL Aging & Disability Evidence-based Programs and Practices(http://acl.gov/Programs/CDAP/OPE/docs/HomeMeds_InterventionSummary.pdf)
 - Quality of research: **3.2/4**
 - Readiness for dissemination: **4/4**
- US Agency for Healthcare Research and Quality (AHRQ) Innovation Exchange
 - **Strong** evidence rating



<http://www.innovations.ahrq.gov/content.aspx?id=2841>



Evidence-based Protocols

- Identified by national ***expert consensus panel***¹
 - Targets problems that can be identified and resolved in the home:
 - Positive response by prescribers
 - *Minimize “alert overload”: based on signs/symptoms*
1. Unnecessary therapeutic ***duplication***
 2. Use of psychotropic drugs in patients with a reported recent ***fall*** and/or ***confusion***
 3. Use of non-steroidal anti-inflammatory drugs (***NSAID***) in patients at risk of peptic ulcer/***gastrointestinal bleeding***
 4. ***Cardiovascular*** medication problems
 - High BP, low pulse, orthostasis and low systolic BP

HomeMeds Flow & Fidelity



Home Visit
Med Inventory &
Assessment



Enter meds/clinical info
into computer



An alert is generated



Confirm med is
currently used by client



Document changes
to meds/conditions;
resolve alerts



Pharmacist tracks status
and MD response



Pharmacist faxes/calls in
med list/recommendation
to MD, documents
intervention



TRIAGE:
Pharmacist
Review/Consult – contacts
MD/case manager/patient



Roles of the Pharmacist



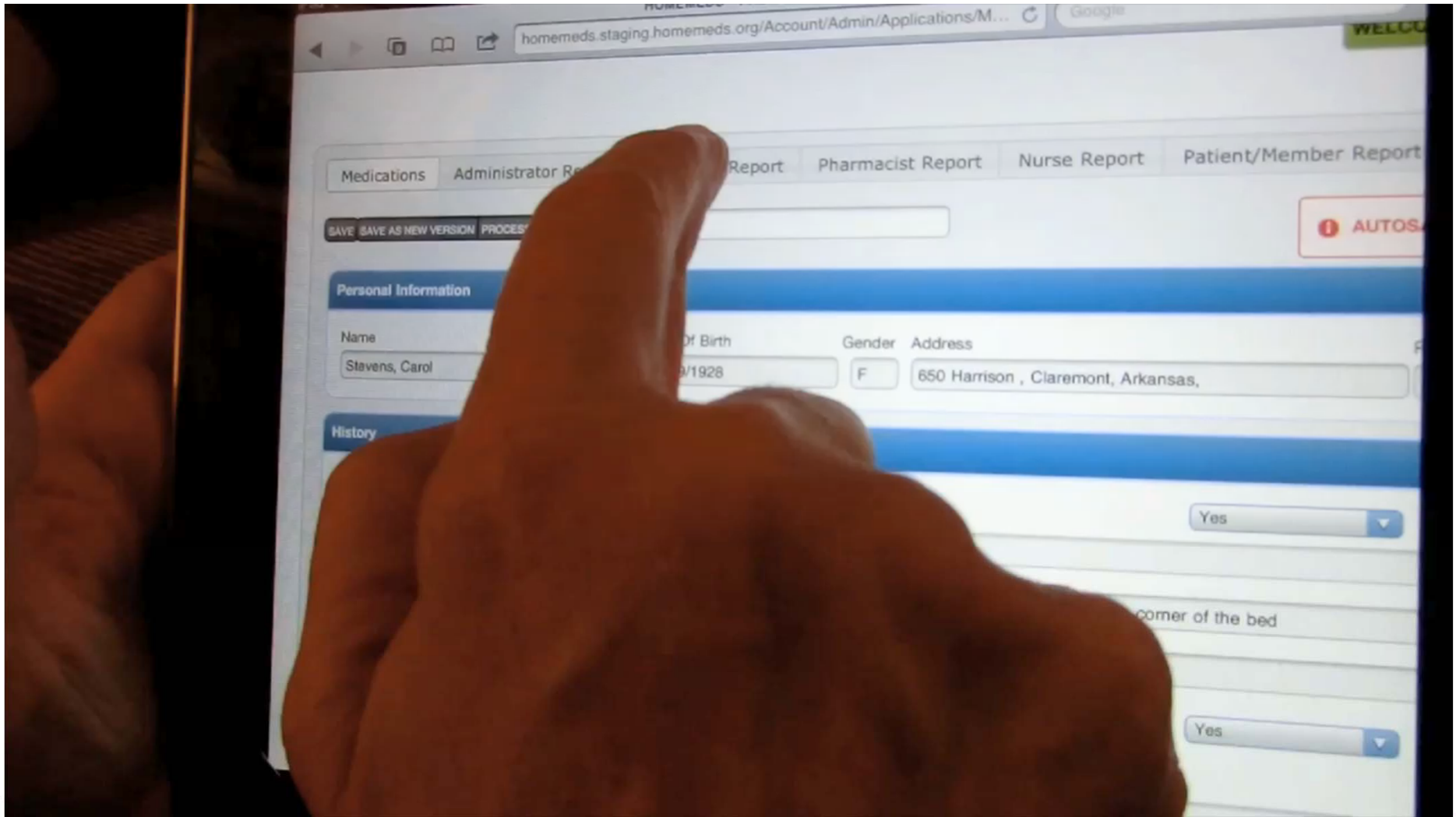
- Screen alerts to confirm problems
- Communicate with prescribers
- Consult with staff
- Identify problems beyond protocols
- Assist with complex cases
- Educate staff about medications and risks
- Average 20 min./client



HomeMeds Risk-Screening Software: Ask for a Demo



Web-based: Use with PC or Tablet



HomeMeds Software: Dashboard



The dashboard header features the Partners in Care Foundation logo, which includes a stylized heart icon and the text "Partners in Care FOUNDATION" with the tagline "changing the shape of health care". Below the logo is a navigation bar with the following tabs: Dashboard, Assessments, Administrators, Supervisors, Patients, Nurses, Physicians, Pharmacists, Manage Criteria, and Drugs. Below this is a secondary navigation bar with tabs: Products, Brands, Classes, Interactions, and Pickers. An "EDIT PAGE" button is located below the secondary navigation bar. Below the navigation bars is a section titled "ACTIVITY, ACTIONS AND ALERTS SUMMARY" with a green button labeled "WELCOME SATKINS !" and two other buttons labeled "GUIDE ME" and "LOG OUT".

Dashboard Assessments Administrators Supervisors Patients Nurses Physicians Pharmacists Manage Criteria Drugs

Products Brands Classes Interactions Pickers

EDIT PAGE

ACTIVITY, ACTIONS AND ALERTS SUMMARY

WELCOME SATKINS ! GUIDE ME LOG OUT

To enter a new patient or change an existing patient record, click on **Patients** on the navigation bar above.

Activity Summary (patients)								
Total Patients	Medication Assessments	Assessments With Medication Entered	Processed Assessments	Assessment With Alerts	Assessment Reviewed By Pharmacist	Assessment Atlest One Resolutions	Unresolved Assessments	Assessments With Contact MD
100	50	37	44	1214	0	0	1	0

Alerts Summary (patients)	
Criteria	Total
Falls and Psychotropic Medication Use	180
NSAIDs and Age 80 or Older	159
Low Pulse & Bradycardic Agents	183
Orthostasis	166

HomeMeds Software: Risk Assessment

Have you had a fall in the past three months?

Yes ▾

How many times?

3

How did the fall happen (if more than one, record most serious fall)?

Can't remember

Did you have any injuries other than bruises?

Cut on elbow

Do you often feel dizzy or light-headed when you get up from a chair or your bed?

No ▾

Have you felt unusually confused at any time in the past three months (i.e. couldn't think straight)?

Yes ▾

Have you been in a hospital or nursing home or visited the ER in the past 3 months?

Yes ▾

Assessment Status

How much Pain have you experienced recently?

Moderate ▾

On average, how many days a week do you drink alcoholic beverages (beer, wine, liquor)?

7

On a typical day when you drink, how many drinks do you have?

2

Vital Signs

Blood Pressure - Lying down:

145

/

95

Pulse:

50

Date/time taken:

07/01/2013



HomeMeds Software: Medications

Drug Selection

- ☒ 16. warfarin 2 mg oral tablet
- ☒ gabapentin 300 mg oral capsule

Type the name of the drug you would like to find:

ADD SELECTED DRUGS

SELECT ALL

CLEAR ALL

- ☐ gabapentin compounding powder
- ☐ pregabalin 225 mg oral capsule
- ☐ gabapentin 100 mg oral capsule
- ☒ gabapentin 300 mg oral capsule
- ☐ gabapentin 400 mg oral capsule
- ☐ Gabitril 4 mg oral tablet
- ☐ Gabitril 12 mg oral tablet
- ☐ Gabitril 16 mg oral tablet
- ☐ Gabitril 20 mg oral tablet
- ☐ tiagabine 4 mg oral tablet

MEDICATIONS LIST

Drug	Frequency	Prescriber	Pharmacy	Notes
1. aspirin 81 mg oral tablet	1 tablet every day	N/A	Costco	
2. calcium carbonate 1250 mg (500 mg elemental calcium) oral tablet	2 tablet(s) 2 time(s)/day	Sharma	Costco	prescribed as 1200mg
3. Coenzyme Q10 30 mg oral capsule	1 capsule every day	N/A	Costco	
4. Fish Oil 1000 mg oral capsule	1 capsule every day	Sharma	Costco	prescribed as 1200mg
5. levothyroxine 75 mcg (0.075 mg) oral tablet	1 tablet every day	Sharma	CVS mail	
6. <u>LORazepam</u> 0.5 mg oral tablet	1 tablet every day	Gonzalez	CVS mail	

Other drugs and medications not listed: Stool Softener 100mg 1 PRN. Case Manager: Rosa Ruiz

SELF-REPORTED HEALTH CONDITIONS AND SURGERIES	ALLERGIES
<ol style="list-style-type: none"> 'Osteoporosis' Other conditions submitted were: Thyroid and spinal problems Surgeries: cataract. 	

POTENTIAL MEDICATION-RELATED PROBLEMS

- Patient reports at least one recent fall and concurrent use of the following medication(s), which can increase risk of falls, especially in older adults: (LORazepam 0.5 mg oral tablet,). Recommend re-evaluation of drug(s)/dosage.
- Patient reports recent pattern of dizziness upon standing. Recommend reviewing for possible cause, including medication-related factors and to reduce risk of falling.

DUPLICATE THERAPIES

- atenolol 25 mg oral tablet**
 - and Metoprolol Tartrate 25 mg oral tablet shares therapy: **beta blockers**

DUPLICATE INGREDIENTS

- Ativan 2 mg oral tablet**
 - and lorazepam 1 mg oral tablet has duplicate drug lorazepam
- Coumadin 4 mg oral tablet**
 - and warfarin 2 mg oral tablet has duplicate drug warfarin

Typical Problems in Community-Dwelling Elders

- Patient with dizziness taking 2 beta blockers.
- Patient >80 taking 3 medications that increased risk of GI bleed
- Patient who fell taking 5 meds that increased risk of falls
- Patient taking 4 narcotic pain killers:
hydromorphone, hydrocodone+acetaminophen,
fentanyl, hydrocodone
- Average 11 meds – up to 28!

Consumer Feedback...



Mr. Johnson went from 20 meds to just 8.
*“You have saved us money on monthly refills
and my life! We cannot thank you enough!”*


Clinician Feedback



"I called the MD's office and Dr. A actually answered the phone! He was very concerned about the 96-y/o client, and definitely wants to follow-up with her. He really appreciated knowing about the falls, especially given aspirin and Advil use because of the potential for bleeding with falls."

- Pharmacist consultant also found that PA was refilling Valium without MD awareness

User Feedback: Lessons Learned

- Seniors living at home without supports received the greatest benefit
- Home “treasure hunt” best 
- Positive feedback on having a comprehensive med list
- Hospitals, health plans & community providers recognize the problem and understand value of this service

Interesting where people keep meds... and some are taking their spouse's meds once in awhile. They will often “remember” a bottle in the medicine cabinet or night stand. You wouldn't get that info unless you are in the home and can talk about it.

Feedback from Ft. Worth AAA

- **Caregivers have positive response**
 - Beneficial to gain better understanding of their loved one's medications and provides confidence when accompanying them to doctors visits
- Don Smith, Director, Tarrant County AAA:
 - *"HomeMeds is the easiest of all evidence-based programs to implement. We can see results -- decrease in number of medications, decrease in falls pre and post."*

Who's Implementing HomeMeds?

- Medicaid programs for Dual Eligibles
- Care Transition programs
- CBOs under contract with medical groups
- Area Agencies on Aging & Senior Centers
- Meals on Wheels
- Home Health/Homecare Agencies
- Assisted Living & Affordable Housing
- Native American Tribal Community

Innovative Applications

- Contract with at-risk medical group
- Targeted one-time home visit by social worker
- HomeMeds screening and general safety assessment (ADLs, environment, cognitive status, caregiver/family support, PHQ-2/9)
- HomeMeds pharmacist intervention
- Reports to Case Manager, PCP, EHR system
- Care plan and referrals

Targeting Criteria for a Home Visit

1. Age 65+ and
2. ED/hospital use in past year, plus:
 - a) Five or more prescribed meds; or
 - b) Warfarin/antiplatelet or insulin/diabetes meds; or
 - c) Dx CHF, COPD, depression, anxiety, bipolar, psychosis; or
 - d) Mild cognitive impairment; or
 - e) Recent treatment for fall or confusion; or
 - f) Age 80+; or
 - g) Any patient there is a concern about

HomeMeds in Tarrant County, TX

- Local Fall Prevention Coalition
 - Fire Dept. mapped frequent fallers
 - Target MOB classes and HomeMeds outreach
 - Provide alternative to 911
- MOW targets 1,500 clients
 - Pharm Tech doing data entry
 - 80% had alerts
 - 180/400 had at least one fall in last 3 months and a number had dizziness related to the fall

“HomeMeds integrates really well with CDSMP and MOB. Each has a module on medication management and HomeMeds reinforces this and integrates and is easy to refer people to.”



Our Process: Planning & Decisions

- Readiness assessment (online SurveyMonkey)
 - Executives show higher readiness than supervisors and those who must implement
- Champions & staff
 - Internal mentor – clinical & computer
- Data entry variations
 - Real-time data entry or person who collected data best

Planning for Challenges

- Fear of liability by social service staff
 - Social work role is in-home information gathering and communication
- Individual consents from clients/patients
 - Review and update contracts
 - Avoid a separate consent if possible
 - Provide an opt-out, rather than an opt-in choice
 - Consumer brochure “Your doctor will thank you.”

What Does It Cost?

- Planning, setup, consultation, support:
 - \$3,000 one-time fee
- Software license
 - From \$200/month for up to 50 new clients created/month
 - Negotiate shared licenses for smaller sites
- Training
 - \$5,000 on-site plus travel (shared multisite OK)
 - \$250 per refresher webinar (after year 1)

Covering the Cost

- Software, startup and pharmacist
 - Older Americans Act Title III-D
- Pharmacist coverage alternatives
 - Pharmacy School – students & supervision
 - Waiver purchase-of-service dollars
 - Volunteer community pharmacist
 - Medicare MTM: Medication Therapy Management (through local pharmacy or patient's Part D plan)

Conclusion

HomeMeds is a proven tool for improved medication safety, health, and well-being for older adults.

It is an affordable, evidence-based program that is a perfect bridge for partnerships between community agencies and healthcare.





HomeMeds: Call or email us

Email us at HomeMeds@picf.org

HomeMeds Website: www.HomeMeds.org

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Thank you for joining our call today!

For more information about the California Improvement Network, go to

www.chcf.org/cin

Today's webinar slides and recording will be available at that site within a week.