

# GOOD MEDS GONE BAD: Medication Risk Screening and Problem Solving in Care Management -Nationwide



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# Partners in Care Foundation

- Los Angeles, CA
- Changing the shape of health care
- Collaboration \* Innovation \* Impact
- Design, develop and pilot new programs that will serve as replicable models of care

# Why is med management worth the effort?

## Medication-related problems and errors are:

- Serious: 1.5 million preventable Adverse Drug Events (ADEs) annually; 7,000 deaths per year. <sup>1,3</sup>
- Frequent: Up to 48% of community dwelling older adults have medication-related problems <sup>2</sup>
- Costly: Drug-related morbidity/mortality for seniors > \$170 billion (incl. hospital and SNF admissions)
- Preventable:  $\geq 25\%$  of ADEs in ambulatory settings

1. IOM (1999) *To err is human: Building a safer health system*. Kohn, L., Corrigan, J., Donaldson, M. (Eds.) National Academy Press, Washington D.C.
2. Zhan C, Sangl J, Bierman AS et al. Potentially inappropriate medication use in the community-dwelling elderly: findings from the 1996 Medical Expenditure Panel Survey. *JAMA*. 2001; 286:2823-9.
3. IOM (2006) *Preventing Medication Errors*.



# Pillars of Fall Prevention

- Environmental assessment & mediation
- Physical activity
- Assistive devices (glasses, hearing aids, walkers, etc.)
- *Medication Management*



# Medication Management System: Evidence- Based Origins

Vanderbilt University Study mid-1990s – Funded by John A. Hartford Foundation

- VNA-LA (now Partners) and VNS-NYC tested for Medicare beneficiaries aged 65+
  - RCT proved efficacy in home health agencies
  - Pharmacist-nurse collaboration to identify & resolve errors
- Results: Up to 19% had potential medication errors using criteria developed for home health (30% including Beers)
  - Medication use improved in 50% of patients, (compared to 38% of controls) when pharmacist helped home health staff



# Evidence-based Protocols

- Identified by expert panel – in-home intervention
  - unnecessary therapeutic duplication
  - use of psychotropic drugs in patients with a reported recent fall and/or confusion
  - use of non-steroidal anti-inflammatory drugs (NSAID) in patients at risk of peptic ulcer.
  - cardiovascular medication problems
    - High BP, low pulse, orthostasis and low systolic BP





# Results in Waiver Programs

## Medication Problems and Change Rates at 3-Month Follow-Up

Total Screened: 615 Potential Problems: 49% (299)  <i>Medication Problem</i>	Confirmed Problems		Medication Change (N=162)	
	<i>N</i>	<i>% Prevalence</i>	<i>N</i>	<i>% Change</i>
All confirmed problems	162	26.3%	99	61.1%
Therapeutic Duplication	79	12.8%	49	62.0%
Psychotropic – All	59	9.6%	32	54.2%
-Confusion	34	5.5%	23	67.6%
-Falls	37	6.0%	16	43.2%
Cardiovascular Problems	24	3.9%	11	45.8%
NSAIDs	44	7.2%	22	50.0%

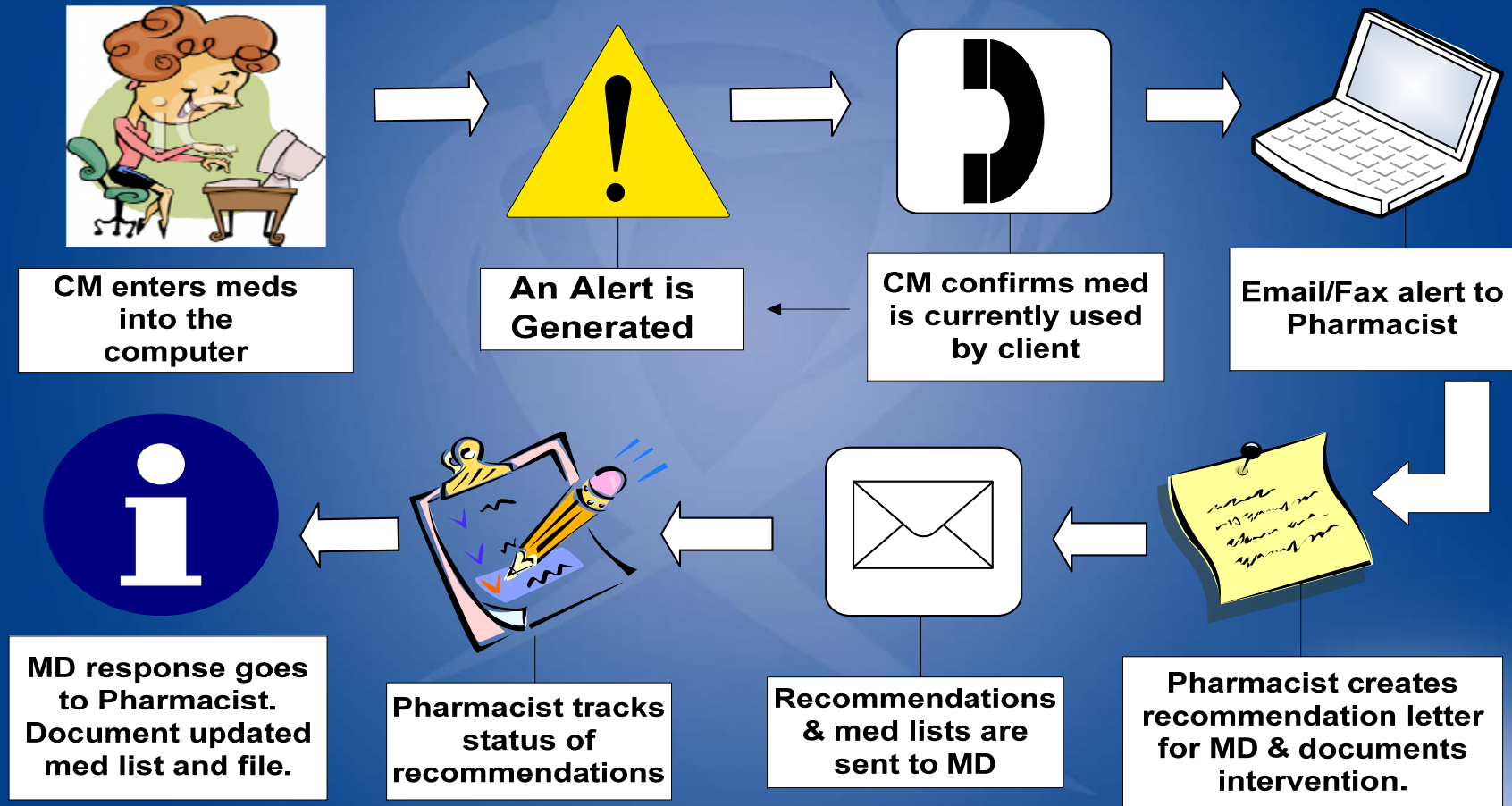
# Results in waiver program:

- *49% at least 1 potential medication problem vs. 19% in home health*
- Pharmacist recommended change in meds for 29% of clients
- *61% of recommendations implemented by MD/client*
- The highest problem prevalence was *unnecessary therapeutic duplication*
- Greatest predictor of problems: *# of medications*

*“As a social worker I became aware of potential dangers of or complications of some medications; I now look at all medications my clients are taking”*



# Intervention – From Alerts to Action



# Why Use Care Managers (CMs)?

- Role is consistent with resource coordination and communication functions of care managers – non-medical
- Already visit frail seniors at home and collect medication and other clinical assessment information
- Focused on maintaining health and functioning, delaying institutionalization, and improving linkages with medical & community resources
- In Waiver Programs, CM can authorize purchase of health-related services to supplement Medicaid



# Role of the pharmacist

- Review medication list per evidence-based criteria
- Screen alerts to confirm problems in light of dose/frequency, diagnoses, symptoms, other medications, etc.
- Consult with care manager to develop care plan
- Communicate with client's MD(s)
- Identify medication-related problems beyond protocols. Assist with complex cases, e.g. home safety or frequent utilization issue
- Educate staff about medications/risks
- Avg. 15 minutes per client



# Source of Pharmacist

- Hired consultant (American Society of Consulting Pharmacists ([www.ascp.org](http://www.ascp.org)))
- College professor/students
  - <http://www.acpe-accredit.org/standards/default.asp>
  - <http://www.aacp.org>
- Local chain or independent pharmacy
- Affiliated or local health system
- Hospital community benefit outreach
- Part D Plan

# Fidelity to core components

- Room-to-room medication inventory & inquiry;
- Ask each call (falls, dizziness, confusion, changes);
- Risk screening per protocols;
- Review alerts & clinical by a medication consultant, preferably a pharmacist;
- Written recommendations by the pharmacist/ medication consultant to prescribers;
- Follow through with MD and/or client;
- Documentation of all actions and results.



# Evolution of MMIS



- Phase 1: 1993-2003 HOME HEALTH AGENCY
  - Vanderbilt Univ. randomized controlled trial to improve medication use; developed, tested, disseminated and adopted
- AOA Evidence-Based Prevention Initiative, 2003-2007
  - Community-Based Medication Intervention
  - Model successful in Medicaid waiver programs
- Current Phase, 2006–2010, John A. Hartford Foundation
  - Taking meds management statewide (CA) first; then nationwide in care management!



# Implementation: CA and Other States

## California

- *Program Type:* Waiver sites
- *Roll out:* To all CMs
- *Which clients:* All – at assessment &/or reassess
- *Source of Pharmacist:* Consulting Pharmacists; Contractor
- *Software Integration:* Use MSSPCare

## Other States

- *Program Type:* Waiver only, integrated CM, AAA CM, Transition from hospital
- *Roll out:* Pilot with few CMs; use MIS for data entry; All CMs
- *Which clients:* only reassessments; new and reassessed clients
- *Source of Pharmacist:* local community; Volunteer + intern
- *Software Integration:* Online MMIS – Separate from usual CM software; Hope to embed online tool in planned integrated software



# Implementation: CA and Other States

## California

- *Pharmacist contact after alert:*  
In person 1-2x/week
- *Follow-up by CM:* Quarterly visits to client – re-check meds
- *Follow-up by Pharmacist:* send MD letters; access to system
- *Funds:* local grant; through operating budget; waiver purchase of service funds

## Other States

- *Pharmacist contact after alert:* Fax &/or Email
- *Follow-up by CM:* Re-check meds at next visit (3 or 6 mo.)
- *Follow-up by Pharmacist:* Access to system & call MD; send MD letters
- *Funds:* local grants for start-up; using agency and Older Americans Act funds



# Unique Characteristics

- California
  - Pharmacist contracted by MSSP
  - Hired Intern to follow-up with CMs and enter MD updates
  - Piloted project on paper till IT issues resolved
- Other states
  - Small county where pharmacist knows MDs
  - Small pilot before rolling out to complete staff
  - Big county with many CMs and using MIS dept for data entry



# Medication Management Improvement System in East Central Illinois

A Presentation for the  
2010 ASA/NCOA Conference  
Session WE 159

March 17, 2010; Time: 10:00 a.m. -11:30 a.m.



# East Central Illinois (Area 05)



- Area 05 includes 16 counties in Illinois
- Population 60+: 141,799
- MMIS target area: Champaign, DeWitt, Douglas, and Piatt Counties
- Target Population: Comprehensive Care Coordination clients 60+
- Target Area: Champaign, DeWitt, Douglas, and Piatt Counties in Illinois
- Cumberland Associates Case Coordination Unit case load: 400

# Problem Statement



- ▶ Champaign-Urbana Public Health District terminated their Senior Wellness Program, which employed 5FTE nurses conducting wellness checks for older adults including organizing their prescription drugs.
- ▶ Carle Foundation Hospital conducted a focus group to identify priority needs of older adults in Champaign County in 2007
- ▶ ECIAAA identified medication management as a high priority unmet need in Champaign County
- ▶ The Illinois Council of Case Coordination Units identified medication management as a high priority unmet need across Illinois.

# Solution: MMIS



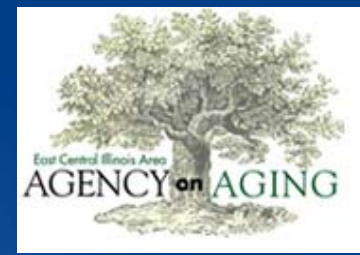
- ▶ Carle Foundation Hospital awarded a grant to ECIAAA to disseminate the Medication Management Improvement System to CCU clients in Champaign County
- ▶ MMIS Project Partners include:
  - Cumberland Associates CCU
  - St. Joseph Apothecary
  - UIC College of Nursing
  - Champaign County Senior Wellness Coalition
  - ECIAAA
  - Partners in Care Foundation
  - Carle Foundation Hospital

# MMIS Project Components

- ▶ Comprehensive Assessment and Care Plan
- ▶ MMIS software license and training of users
- ▶ Training Case Managers about medications
- ▶ Messaging to clients
- ▶ Obtaining client consent
- ▶ Client enrollment
- ▶ Collection of health status & Rx information
- ▶ Entering data into MMIS
- ▶ MMIS alerts to St. Joseph Apothecary for review and messaging to physicians
- ▶ Managing MMIS information
- ▶ Providing feedback to clients
- ▶ Continuous evaluation



# Additional MMIS Project Options



- CCU can refer clients to Addus Healthcare for home visit by Registered Nurse to assist in medication management activities;
- CCU can refer clients to St. Joseph Apothecary for telephone consulting with pharmacist to assist client in managing medications (including customized packaging)
- CCU can arrange for installation of medication dispensing technology in the client's home



# Progress Report



- ▶ As of March 1, 2010, MMIS Partners reported:
- ▶ 17 CCU clients enrolled in MMIS
- ▶ 15 new referrals to MMIS
- ▶ 4 MMIS alerts being reviewed by pharmacist
- ▶ 6 medication dispensing machines installed
- ▶ 1 referral to RN
- ▶ Key success factors:
  - CCU must sustain messaging on medication management during every client contact
  - CCU must build and maintain trust with clients to accept MMIS and other medication management options





# Policy Recommendations

- Older Adult Services Advisory Committee (OASAC) published a white paper to address Medication Management in Illinois.
- ECIAAA recommends that Illinois Department on Aging include MMIS as a service for clients eligible for the Community Care Program.
- ECIAAA recommends that Illinois Department on Aging integrate the MMIS into the Comprehensive Assessment and Case Management Information System (CMIS).

# MMIS Project Contacts in Area 05

- ▶ Mike O'Donnell, Executive Director
- ▶ Susan Real, Planning & Program Manager
- ▶ Susan Evens, Planning & Program Specialist

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# What does it take to implement MMIS ?

- Dedication to providing high-quality care for clients
- Staff open to enhancing standards/scope of practice
- Culture values continuous quality improvement and evidence-based practice
- Staff use computerized client assessment system.
- CMs document clients' medications, work with pharmacist, inform families, update records
- \$100+/month for online medication screening tool.
- Avg. 15 minutes of pharmacist time per client.



# Sustainability – Pharmacist Review

- California
  - Using waiver purchase-of-service dollars
  - Pharmacist time budgeted within site budget
- Nationwide
  - Older Americans Act Title III-D, General AAA and other agency funds
  - Pharmacy school interns under supervision
  - Waiver funds
  - Volunteer pharmacist and community outreach for commercial pharmacy
  - Potential to coordinate with Part D plans.



# Sustainability – Risk Screening Tool

- California
  - Embedded in comprehensive care management software – no *extra* fee
- Other states
  - Using online tool parallel to existing systems
  - Modest fee for hosting/subscription
- Nationwide
  - Investigating practicality of programming into SAMS and enabling integration with other local and statewide information systems



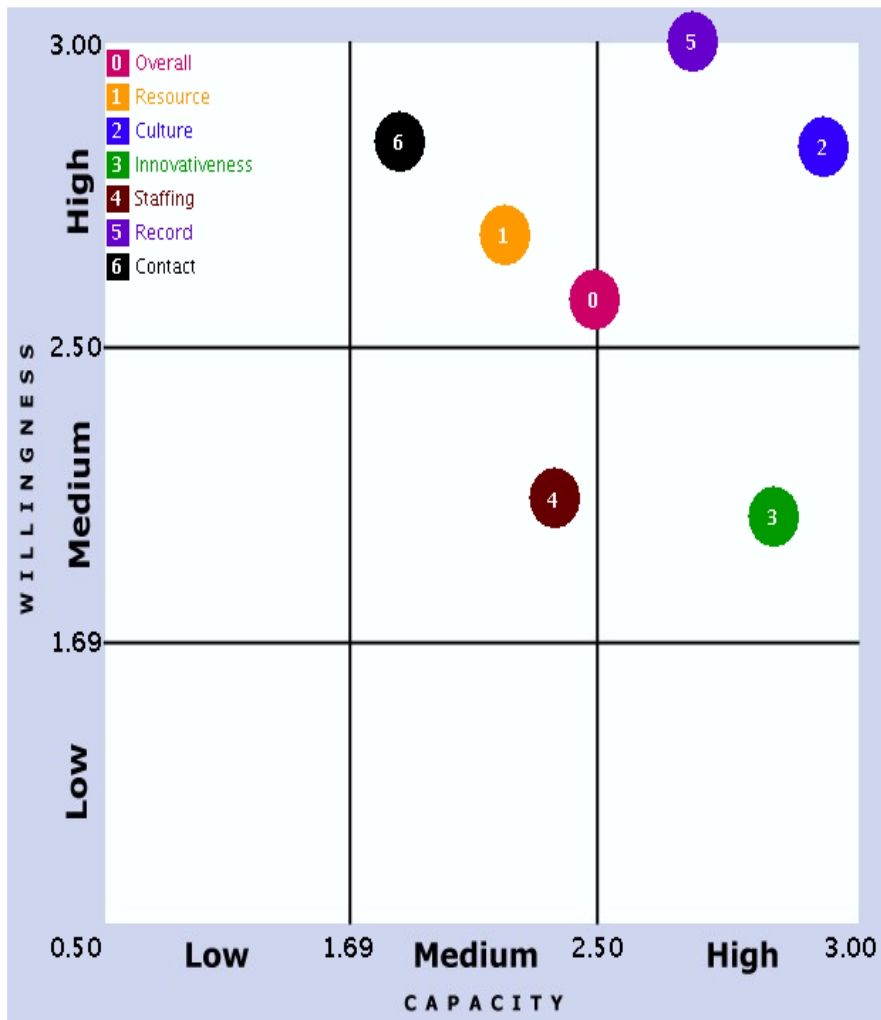


# Lessons Learned

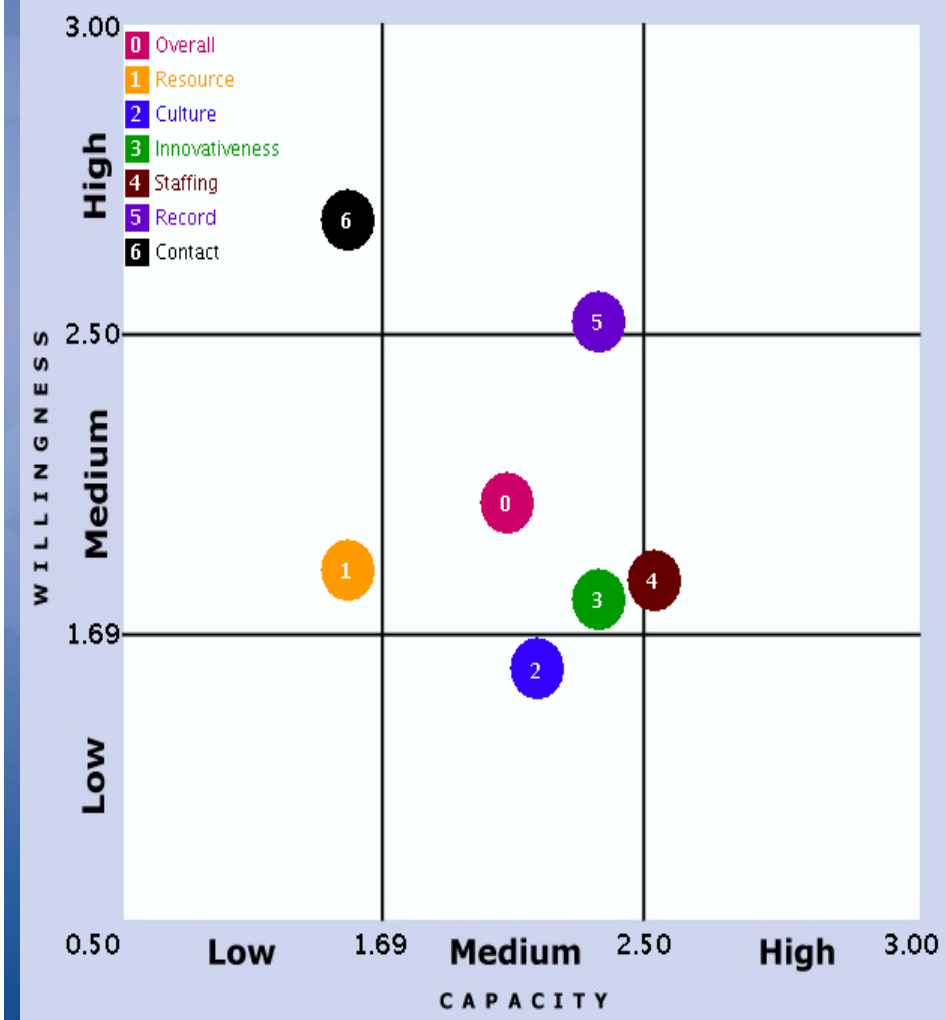
- *There must be a "felt need"*
  - A sense of the importance and urgency of the problem
  - A desire to do something to solve the problem
- *There must be a champion*
  - Pull others along, learn systems, mentor others, serve as an example, and cheerlead when there are successes.
- *There must be underlying stability*
  - Staff turnover minimal
  - Recovery time since last big change.

# Readiness – Different Time/Role

## Champion – Agency Director



## Supervisor – New Director



# Readiness Survey: Resource Section

- Nurses on staff
  - None
- Time to implement MMIS
  - Champion – Software integration in planning and viewed as feasible
  - Supervisor – Integration not possible because CM software to be changed, double entry of medications and other information
- Undergoing any capacity changes
  - Champion – retired
  - Supervisor – new director; slower roll-out

# Benefits of Becoming a Site

- Protect clients from potential for adverse drug events
- Comprehensive training for staff;
- Detailed manuals, protocols on medication management;
- Use of a modestly-priced, secure on-line medication risk screening and management tool;
- Consultation to adapt for your agency's needs;
- National prominence as part of the vanguard in making this AoA evidence-based disease prevention program a new national standard of care for care management.

# Requirements for Participating Sites

- Log on to [www.HomeMeds.org](http://www.HomeMeds.org) and take MMIS/NCOA Readiness Survey on our 'Become a Site' tab
- Make decisions about local procedures, contracts, etc.
- Attend training
- Use the system's medication library, alert, and assessment features consistently
- Follow through on alerts and pharmacist recommendations and document actions taken and their outcomes
- Share baseline operational information, summary data from online system, and feedback



# A Few Questions Before Taking the Survey

- # clients in full caseload \_\_\_\_\_
- Average # clients served PER MONTH, over the past 3 months: \_\_\_\_\_
- Number of supervisors: \_\_\_\_\_
- % turnover for care managers (including supervisors) in the last year: \_\_\_\_\_
- Number of total care management staff: \_\_\_\_\_
  - # RNs, LVNs, LPNs: \_\_\_\_\_
  - # MSWs: \_\_\_\_\_
  - # other Master's level staff: \_\_\_\_\_
  - # other care managers: \_\_\_\_\_



# The Next Stage – True Integration

- **GOAL:** Medication risk screening and pharmacist review will become a standard of practice in care management throughout the US
  - Duplication of effort is not what this is about
  - Integration of medication risk screening tools into CM software (e.g. SAMS and other national-standard systems)
  - Inclusion of pharmacist reimbursement in all waivers
  - Coordination with Part D and other systems
  - Contracts enable CM to communicate with MD



# Are You Ready? Next Steps

- For more information: [www.Homemedics.org](http://www.Homemedics.org)
  - NCOA/MMIS Readiness self-assessment tool available on “Become a Site” page
  - Comprehensive toolkits, presentations, etc.
- Contact the Medication Management Improvement System team c/o:
  - Iya Kahramanian at 818.837.3775 x112, [ikahramanian@picf.org](mailto:ikahramanian@picf.org)



# For More Information:

- Please visit us at: [www.HomeMeds.org](http://www.HomeMeds.org) and [www.picf.org](http://www.picf.org)



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