

Overview of Medication Management

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OVERVIEW

- > Significance of the topic
- > Prescribing, Dispensing, Administration
- > Translating research to policy and practice



SIGNIFICANCE

- > Medications in a “Social Model”...
 - > Balancing priorities
- > Increased focus on errors
- > Person-centered care



SOME ISSUES

- > Prescribing
- > Dispensing
- > Administration



TRANSLATING RESEARCH INTO POLICY AND PRACTICE

Medication Management in Assisted Living

- > *Funding: WA and OR: National Institute of Nursing Research; NJ: Robert Wood Johnson Foundation, Assistant Secretary for Planning and Evaluation, DHHS; IL: Sarah S. Fuller Memorial Scholarship, NIU School of Nursing Illinois Department of Healthcare and Family Services, Medicaid Advisory Committee, Long-Term Care Subcommittee*





FOCUS OF THIS SYMPOSIUM

- > Overview of policy variation across 4 states
- > Medication delivery systems
- > Medication aide and RN/LPN roles in assisted living
- > Medication errors and strategies to prevent errors
- > Conclusions and Implications



STUDY INVESTIGATORS

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DESIGN AND METHODS

- > Descriptive, multiple methods
 - > Medication Administration Observations (n=4802 medications)
 - > Focused interviews with RNs/LPNs, med aides, administrators, physicians and nurse practitioners, pharmacists (n=113)
 - > Resident record review (n=187)



THE SETTINGS

Fifteen assisted living settings in Washington, Oregon, New Jersey & Illinois

- > 4 in OR, WA & NJ; 3 in IL
- > 10 rural and 5 urban

STATE ASSISTED LIVING VARIATION: Oregon and Washington

Oregon

Most are for-profit
All part of a chain
Higher Medicaid, some
private pay
Focus on frail older adults,
retain longer

Washington

3 profit/1 non-profit
Chain/stand-alone
Favor private pay, some
Medicaid
Lighter level of care



STATE ASSISTED LIVING VARIATION: New Jersey and Illinois

New Jersey

Chain/stand-alone

Favor private pay, some Medicaid

Focus on frail older adults

Illinois

Chain/stand-alone

Two Programs:

> Assisted Living (AL; private pay, lighter level of care)

> Supportive Living Facilities (SLF; Medicaid waiver, nursing home alternative)

STATE POLICY VARIATION: Oregon and Washington

Oregon

>25 yrs delegation

Specific delegation for
injections and finger sticks

No certification

Teaching to a group for most
medications

On the job training at
discretion of RN, guided by
statute

Washington

>10 yrs delegation

Specific delegation (not
insulin) + supervise self-
admin of meds

Registered NA (28 hr
fundamentals)

Delegation training (9 hrs)
BON approved course with
RN follow-up in facility

STATE POLICY VARIATION: New Jersey and Illinois

New Jersey

>10 yrs delegation

Specific delegation including
pre-filled insulin; no self-med
supervision

Certified med aide

(3 days) BON approved course
with written competency
exam

Delegation training in facility
by RN

Illinois

Medication administration by a
licensed health care
professional (AL)

Medication set-up, follow-up
and administration by
licensed nurse (SLF)

No Med Aides in AL or SLF

CNA's can do med reminders

Policy note * Med Aides allowed in Community
Independent Living Facilities (CILF) for
Developmentally Disabled and Mentally Ill

FACILITY CHARACTERISTICS

| | OR | WA | NJ | IL | Overall Average |
|------------------------------|------|------|------|-------|-----------------|
| Licensed Capacity (#) | 95 | 73.8 | 110 | 108.3 | 95.9 |
| Actual Occupancy (#) | 80.7 | 60 | 94.5 | 85.3 | 79.8 |
| Occupancy (%) | 84.9 | 81.8 | 85.9 | 81.2 | 83.6 |
| % Private Pay | 52.7 | 65 | 82.5 | 72.3 | 67.6 |
| % Medicaid | 47.3 | 35 | 11 | 27.7 | 30.9 |
| # admissions/year | 20 | 25.3 | 48.5 | 13 | 27.7 |
| Annual Resident turnover (%) | 21.6 | 36 | 43.7 | 11.7 | 29.4 |
| Annual Staff Turnover (%) | 57.0 | 88.0 | 28.6 | 15.9 | 49.7 |



RESIDENT CHARACTERISTICS

(n=187)

80% female

Average age = 81.8, range 50-103

73.1% private pay

Average length of stay = 1.7 years

59.7% alert/oriented



MEDICATION USE

77.5% of residents needed assistance with medications

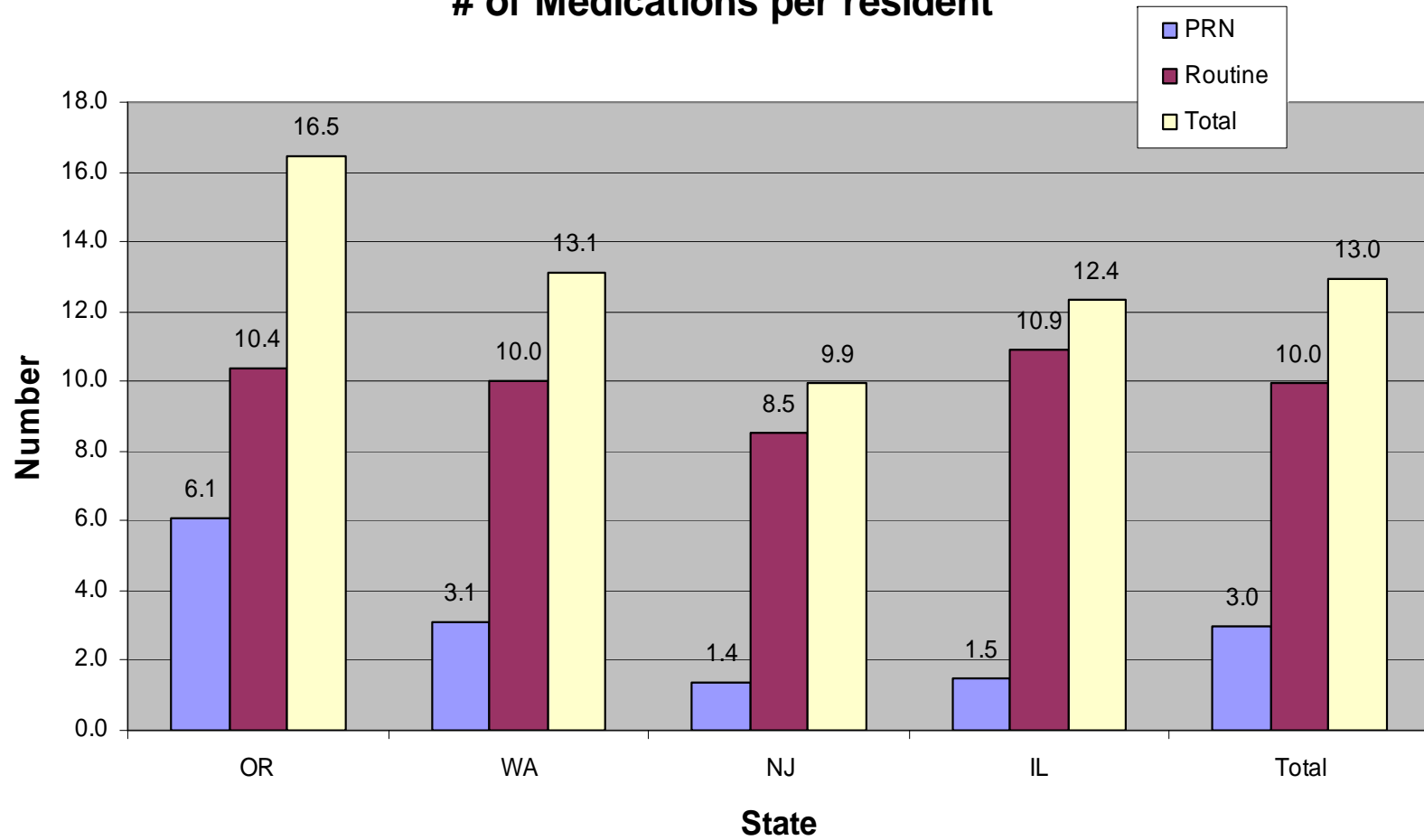
Residents were taking an average of:

10 routine medications

3 PRN medications

13 total medications

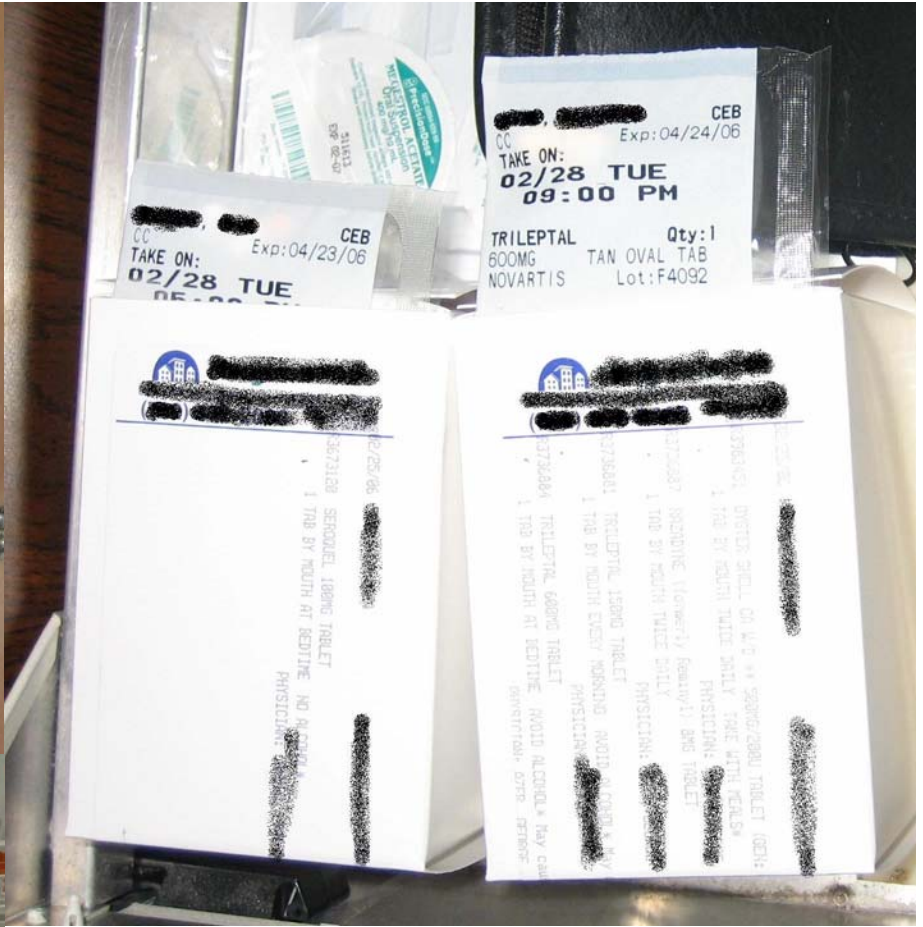
of Medications per resident





DELIVERY SYSTEMS

- > Corporate assisted livings used corporate pharmacies primarily, local pharmacies for back-up
- > Stand-alone assisted livings used local pharmacy
- > Most facilities in OR and WA used bingo cards, one used cassettes, NJ and IL favored multi-drug packs
- > OR used med trays, WA and NJ used med carts, in IL medications were in each resident room



Med Packaging

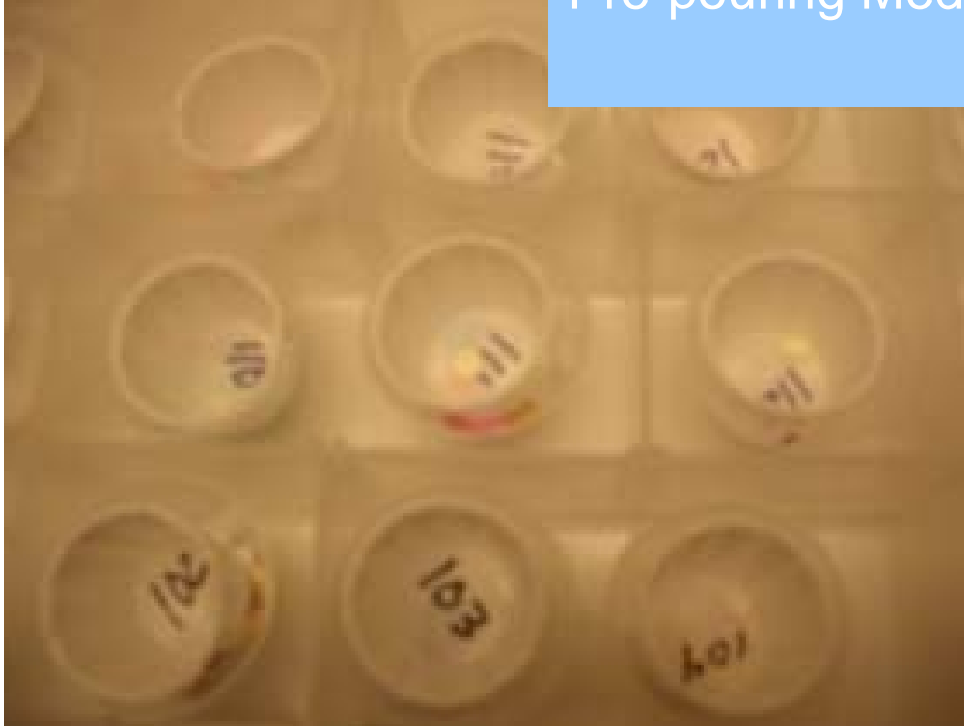


Med Storage





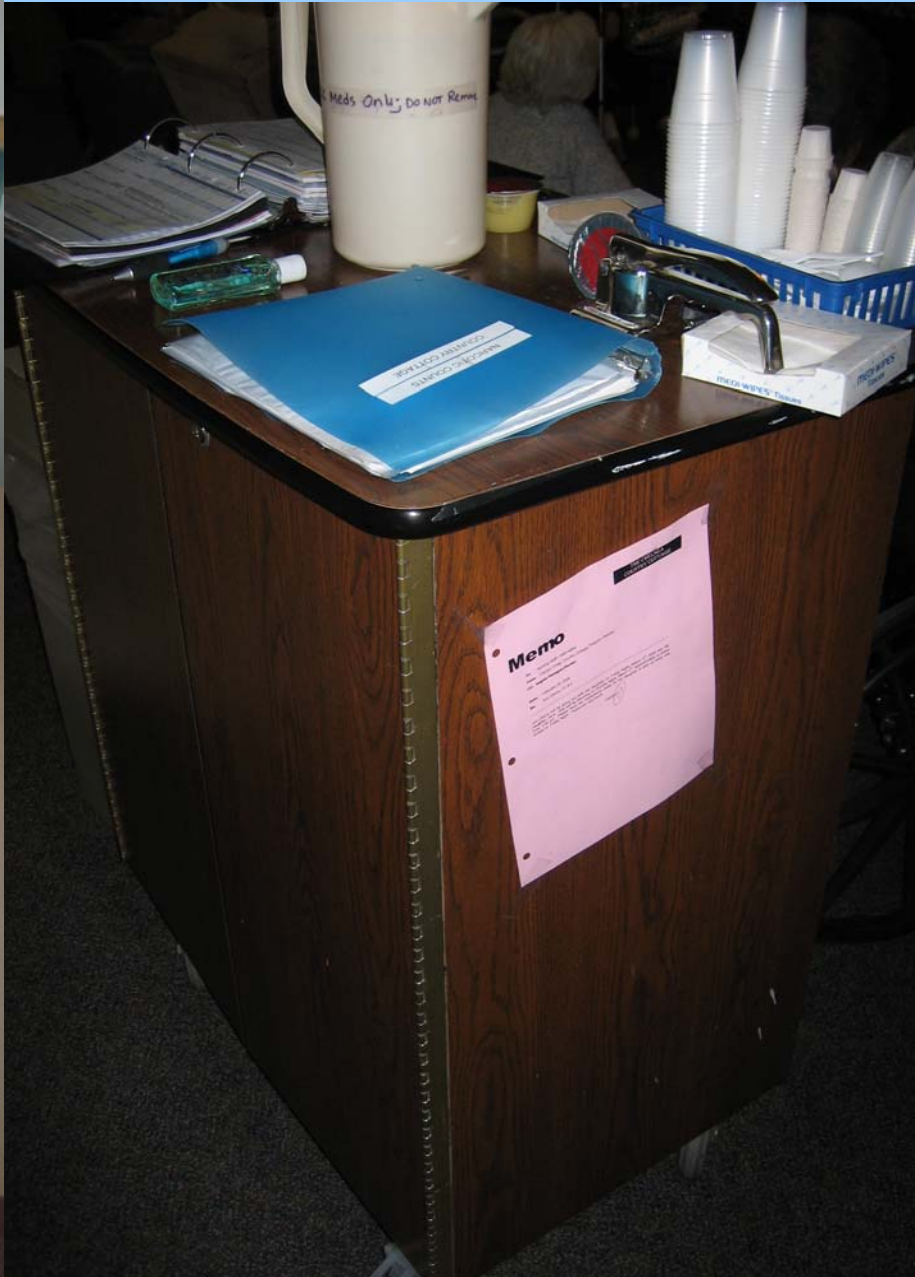
Pre-pouring Meds



MED ADMIN PROCESS

- > Identifying residents varied (cups with room # or name or picture, MAR with picture, verbal ID)
- > OR: Mass pre-pouring into trays
- > WA: Individual pouring from carts (1 site converted to in room storage and delivery)
- > NJ: Some pre-pouring/pulling, some individual
- > IL: Individual delivery in resident room
- > Documentation varied – some when pill was popped, others after pill was given
- > Privacy was in issue for 11 facilities

Med Carts

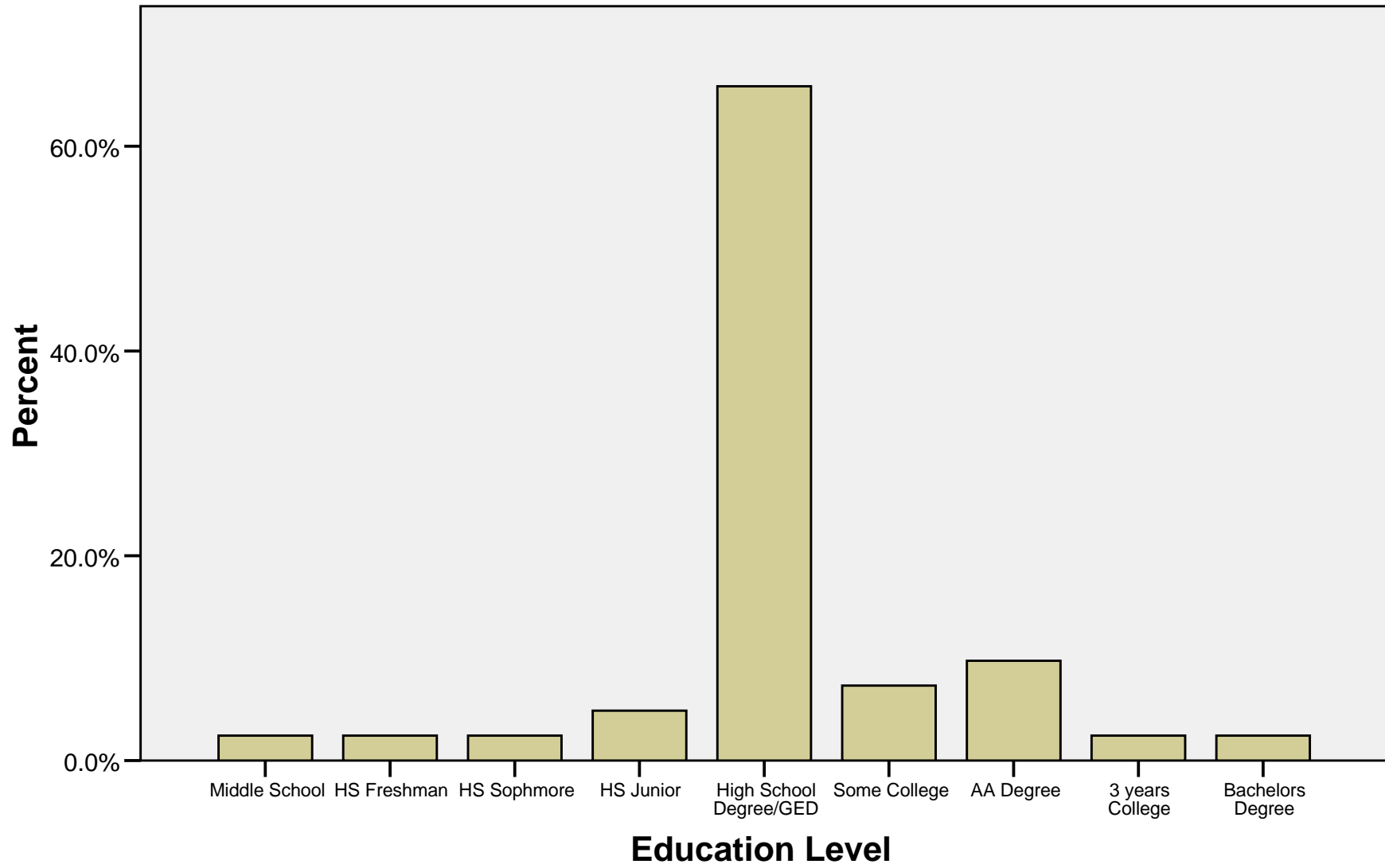


MEDICATION AIDES

Med Aide Employment



Med Aide Education by Degree





MED AIDE TRAINING (self-reported)

| | |
|----------------|-----------------|
| On the Job (%) | 53 |
| In-Service (%) | 5 |
| Course (%) | 20 |
| CAN/CMA (%) | 30 (WA, NJ, IL) |



FOCUSED INTERVIEWS

- > Data were analyzed using constant comparative analysis
- > This analysis focuses on
 - > Perceptions of the role of UAP's involved in med administration
 - > Perceptions of training needs for UAP's involved in med administration
 - > Perceptions of the role of RNs in assisted living
 - > Conclusions and implications for UAP and RN roles



PERCEPTIONS OF THE UAP ROLE IN MEDICATION ADMINISTRATION

- > Medication administration tasks, including those delegated, many time constrained
- > Medication stocking, delivering tasks
- > Communicating
- > Problem solving
- > Team participation and leadership
- > Systematic quality monitoring
- > Multi-tasking in sometimes chaotic environment



UAP ROLE: IMPLICATIONS

- > In all settings, UAPs were involved in med services
- > All parties were generally satisfied with the outcomes of UAP delivering/assisting with meds
- > Careful definition of scope of practice/service (Individual and Facility)
- > Rewards and recognition
- > Systematic organizational support
- > Training opportunities



PERCEPTIONS OF THE RN ROLE* IN ASSISTED LIVING

- > Delegation
- > Clinical oversight of resident health and care
- > Coordination of admission, discharge and ongoing service plans
- > Administrative/system role
- > Coordination with PCPs, residents & families

* Selected RN role functions were being done by LPNs in some settings studied



RN ROLE RELATED TO MED MANAGEMENT IN ASSISTED LIVING

- > Error management
- > Consultation to UAPs
- > Teaching
- > Quality monitoring and supervision of med aid performance and med admin accuracy
- > Accountability
- > Records



RN ROLE: IMPLICATIONS

- > RN role is complex-linking multiple intersecting parties and systems
- > Strong leadership, supervision and monitoring components to role
- > Role priorities are heavily influenced by state regulations
- > Role emphasis predominantly on task oriented (e.g. delegation) or reactive situations (a problem) rather than a proactive role in which monitoring and management of high-risk situations and community health promotion is central.

RN ROLE: CRUCIAL, YET UNEVENLY ENACTED ACROSS STATES

- > Consistent role of overseeing med management program and monitoring resident health (all 4 states)
- > Inconsistent comprehensive review of total resident medication regimens with attention to med reduction by facility nurses, PCPs & pharmacists (NJ and select WA facilities strongest)
- > Med administration-day to day-IL RNs most involved
- > NJ-RN role most consistently evolved RN role with higher staffing requirements, expectation to monitor high-risk residents and focus on medication reduction

NURSE DELEGATION

- > OR-RN role most limited and focused on delegation (mostly of insulin and blood glucose testing)
- > WA – One aspect of RN role, delegation of oral and topical medications, blood glucose testing
- > NJ – One aspect of RN role, delegation of oral medications, insulin, blood glucose testing
- > IL- no delegation



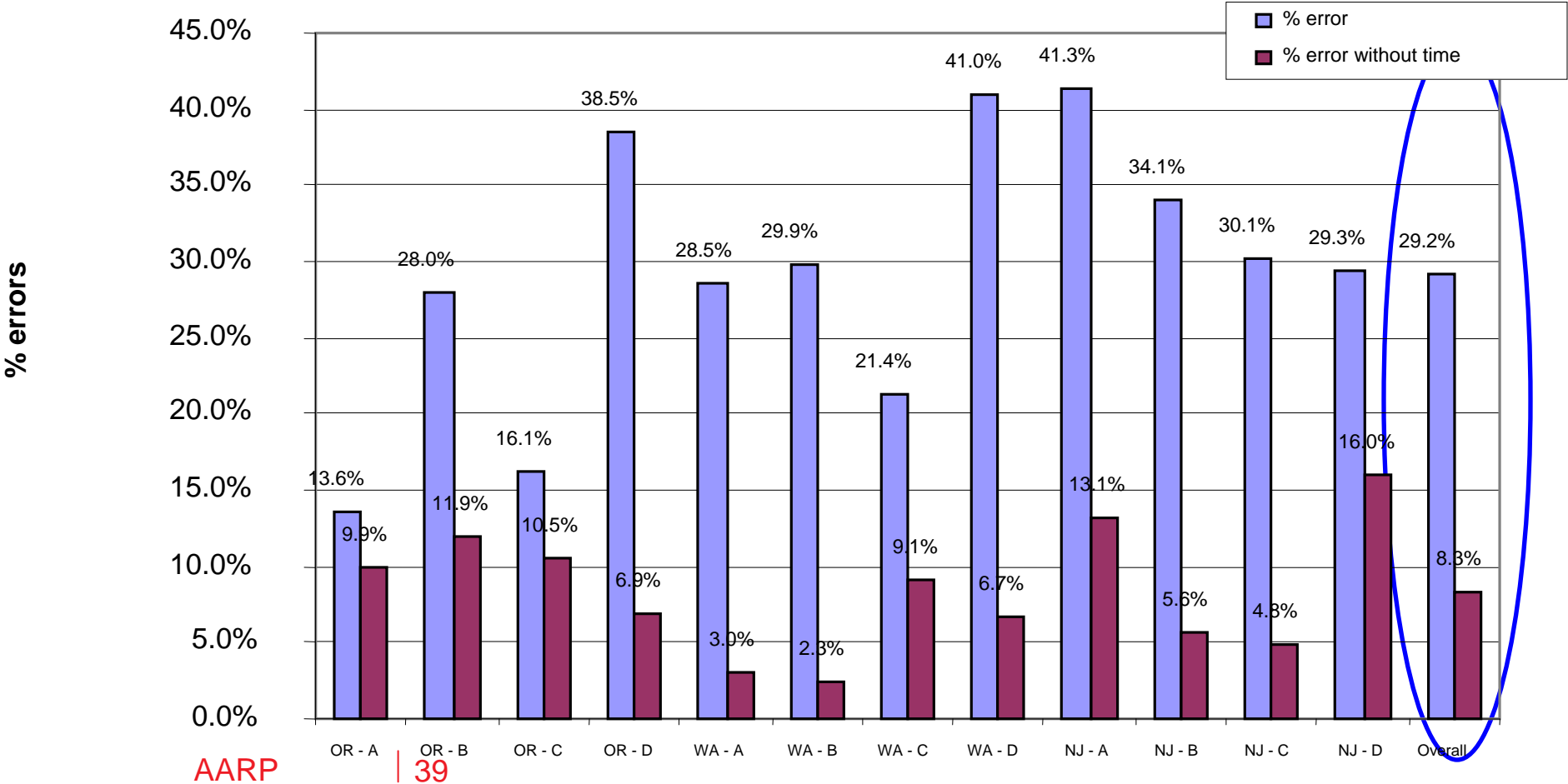


MEDICATION ADMINISTRATION OBSERVATIONS

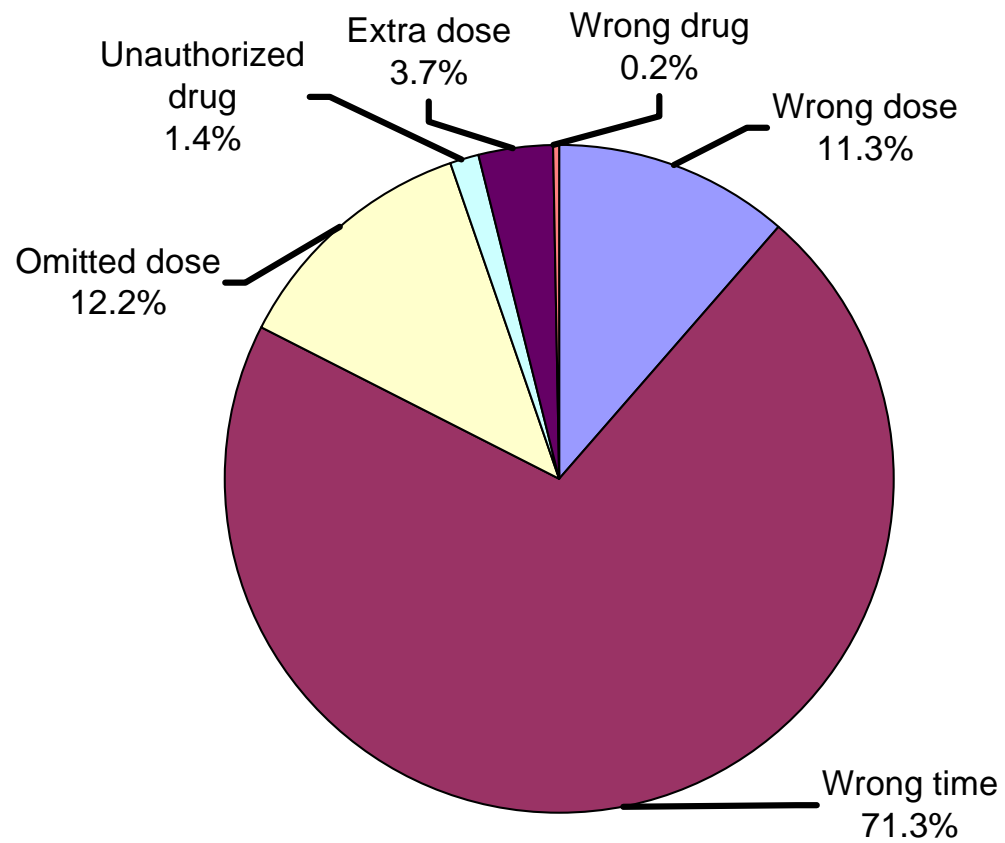
- > 29 medication aides
- > 56 medication passes
- > 510 residents
- > 4802 medications

Observations followed by record review

MEDICATION ERRORS (WITH AND WITHOUT TIME)



TYPES OF ERRORS



CLINICAL SIGNIFICANCE OF ERRORS

- > 1402 errors were analyzed for clinical significance by geriatrician, GNP, and geriatric pharmacist
- > Two ratings: likelihood of causing harm and severity of potential harm
- > ***No errors were judged to be highly likely to cause severe harm***
- > 2 errors were judged to potentially cause symptoms

SUMMARY OF ERRORS RATED < 8

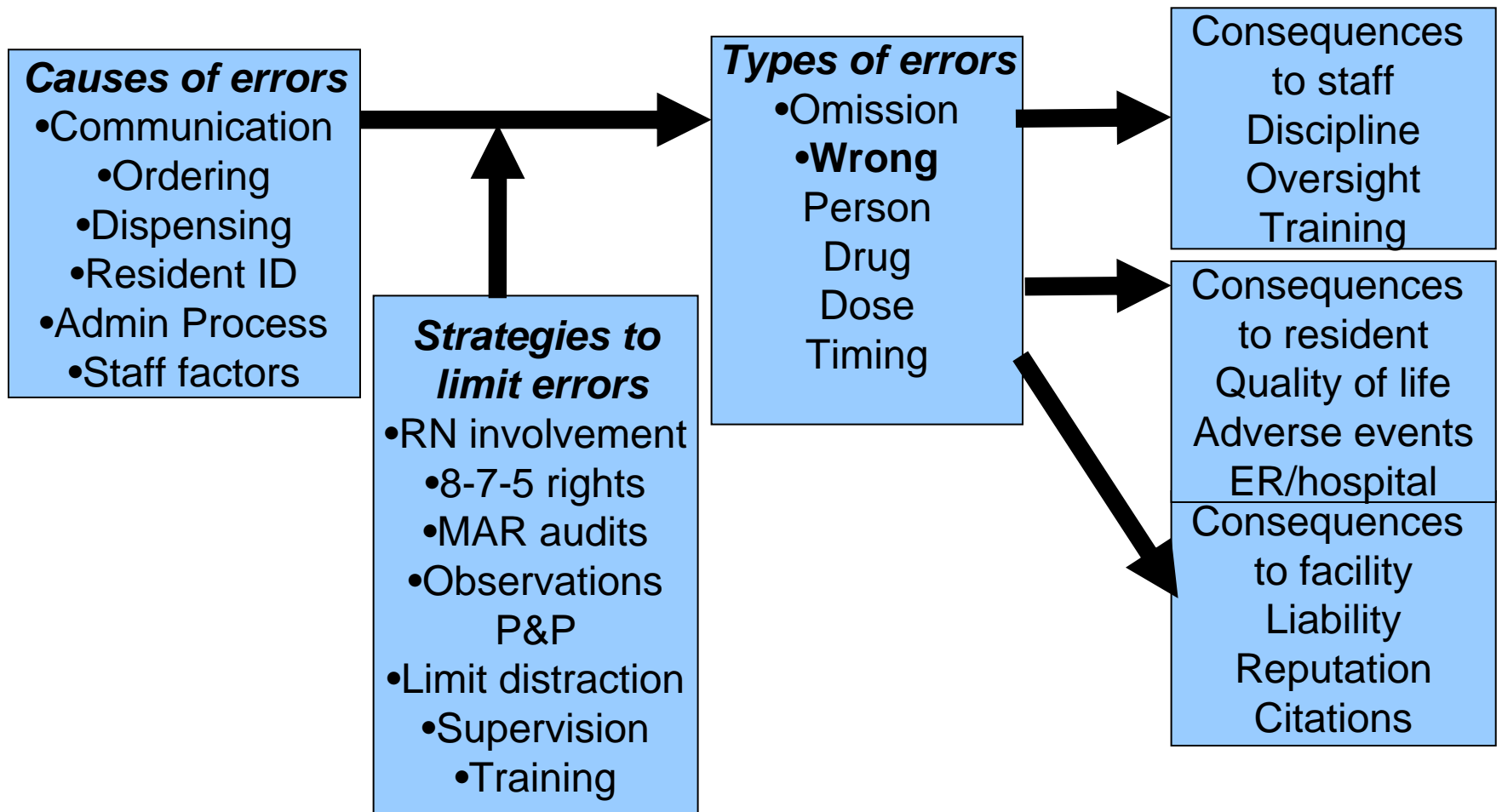
(score below 6 is clinically significant)

| Ordered | Given | Likelihood of harm + Severity Score |
|------------------------|------------------------|--|
| No order | Diazepam 10 mg | 4.0 |
| No order | Novolin 26 units | 4.0 |
| Humalog 10 units | Humalog 18 units | 6.0 |
| Humulin 70/30 42 units | Humulin 70/30 68 units | 6.3 |
| Lasix 80 mg qd | Lasix 80 mg bid | 7.0 |
| Lasix 80 mg qd | Lasix 80 mg bid | 7.0 |
| Glipizide ER 10 mg qd | Glipizide ER 10 mg bid | 6.6 |
| Coumadin 4 mg | Coumadin 8 mg | 7.0 |
| Lasix 80 mg qd | Lasix 80 mg bid | 7.0 |
| Humalog 25 units | Humalog 32 units | 7.7 |

ERROR RATES FOR HIGH RISK DRUGS

| <i>Drug</i> | <i>Total observations</i> | <i>Total errors</i> |
|--------------------|----------------------------------|----------------------------|
| Insulin | 24 | 7 |
| Coumadin | 48 | 2 |
| Lasix | 89 | 28 |

STRATEGIES TO LIMIT ERRORS



A photograph of a white sign mounted on a wire mesh door. The sign is rectangular and features the text "PLEASE... DO NOT DISTURB..." in large, bold, multi-colored letters. Below this, in smaller black letters, it says "I AM BUSY WITH YOUR MEDICATIONS". A circular light fixture is mounted on the door above the sign. The door has a diamond-shaped wire mesh pattern. The sign is held in place by a metal strip at the top.

PLEASE...
DO
NOT
DISTURB...

I AM BUSY WITH YOUR MEDICATIONS



OVERALL IMPRESSIONS

- > High volume of meds – high demands on med aides
- > Compressed time frame for medication administration
- > Bulk of meds are low risk, routine – need to focus on high risk meds/residents
- > Very few errors pose potential for harm
- > Med aides generally do remarkably well with level of training and preparation



OVERALL IMPRESSIONS

- > Residents are assessed more with change of condition – not proactively or by risk
- > Lack of comprehensive review of total medication regimen – med reduction
- > Minimal trending/big picture/system issues
- > RN role is crucial, and unevenly enacted



OVERALL IMPRESSIONS

- > MD/NP on-site involvement makes a difference in appropriateness of meds, resident assessment, problem solving, overall health management
- > Reimbursement is an issue for PCP and pharmacy

IMPLICATIONS

- > Acuity of AL residents increasing and so is the complexity of medication management
- > Medications management is both a person and a system issue
- > Timing is a major issue – relevance of 2 hour window?
- > RNs play a vital role in resident assessment, and training, supervision of med aides – potential for resource is not fully realized

