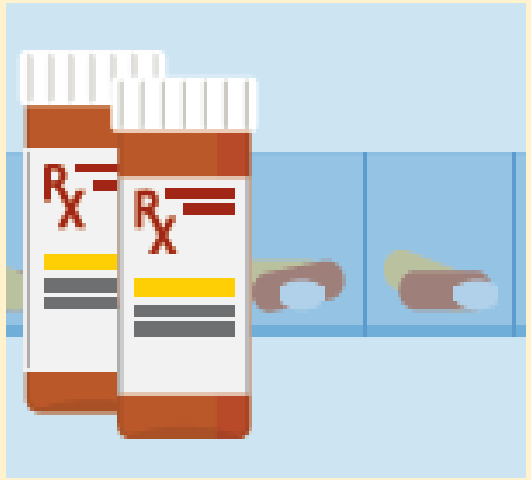
Medication problems and the need for medication reviews in older adults during transitions of care



Toni Coe, PharmD, PhD
Assistant Professor
Department of Clinical Pharmacy
College of Pharmacy
University of Michigan
tonicoe@med.umich.edu

Claiming Credit

Submit Attendance

1. *If you have **not participated in a VCU Health CE program** in the past:*
   - Go to vcu.cloud-cme.com to create an account – make sure to add your cell phone number
2. If you **have participated before:**
   - Text the course code to (804) 625-4041.
     The course code for this event is: **22209-18313**

Complete Evaluation & Claim Credit

1. Go to https://vcu.cloud-cme.com OR
2. Sign in using email address used above
3. Click “My CE”

Open the CloudCME app on device
Click “My Evaluations”
Click the name of the activity to Click “Evaluations and Certificates”

ceinfo@vcuhealth.org

VCU Health
Continuing Education

Center for Pharmacy Practice Innovation (CPPI) Seminar

Medication problems and the need for medication reviews in older adults during transitions of care - 10/25/2021

Provided by Center for Pharmacy Practice Innovation/Department of Pharmacotherapy and Outcomes Science

Speaker(s): Antoinette B Coe, PharmD, PhD

Topic: CPPI invites various health care professionals from around the country and globe to speak on issues relating to innovation in the health care space.

Please contact the Center for Pharmacy Practice Innovation to request a meeting password by clicking here.
Please click here to join the webinar
Meeting ID: : 972 0552 6057

Objective(s):
Location: NA
Specialties: Cardiovascular Disease, Endocrinology, Diabetes and Metabolism, Family Practice, General Practice, Nutrition, Pharmacist, Public Health, Academic/Research, Dietitians, Pharmacy Technician, Cardiology

Faculty Disclosures:
Antoinette B Coe, PharmD, PhD (Nothing to disclose - 10/01/2021)
Download Handout

Purpose or Objectives: At the conclusion of this activity, the participant will be able to:
1 Review changes in health care delivery that likely impact pharmacy practice.

2 Describe current trends in contemporary pharmacy practice as they relate to interprofessional collaboration.

3 Discuss practice innovations designed to improve health outcomes.

4 Discuss role delineation for pharmacists on the interprofessional health care team.

Date/Time: 10/25/2021 12:00:00 PM

Accreditation:

In support of improving patient care, VCU Health Continuing Education is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Credit Designation(s):

0.75 ANCC contact hours.

This activity provides 0.75 contact hours of continuing education credit. ACPE Universal Activity Number (UAN): Pharmacist: JA4008237-0000-21-044-L01-P Technician: JA4008237-0000-21-044-L01-T

NOTE FOR PHARMACISTS: Upon closing of the online evaluation, VCU Health Continuing Education will upload the pharmacy-related continuing education information to CPE Monitor within 60 days. Per ACPE rules, VCU Health Continuing Education does not have access nor the ability to upload credits requested after the evaluation closes. It is the responsibility of the pharmacist or pharmacy technician to provide the correct information [NABP ePID and DOB (in MMDD format)] in order to receive credit for participating in a continuing education activity.

Disclosure of Commercial Support:
We acknowledge that no commercial or in-kind support was provided for this activity.

Disclosure of Financial Relationships:
The following planners, moderators or speakers have the following financial relationship(s) with commercial interests to disclose:

Name of individual	Individual's role in activity	Name of commercial interest/Nature of relationship
Dave Dixon, PharmD, FACC, FCCP, FNLA, BCACP, BCPS, CDE, CLS	Activity Director	Contracted Research-Boehringer Ingelheim Vetmedica GmbH - 08/04/2021
Antoinette B Coe, PharmD, PhD	Faculty	Nothing to disclose - 10/01/2021
Dana Burns, DNP	Planning Committee	
Teresa Salgado	Planning Committee	
Evan Sisson, Pharm.D., MSHA, BCACP, CDE, FAADE	Planning Committee	Nothing to disclose - 05/18/2021
Madeleine Wagner, BA	Planning Committee	

Disclosures

- No potential conflicts of interest
- Active funding:
  - National Institutes of Health, National Institute on Aging
    - K08 AG071856 (PI: Coe): Improving Medication Use and Outcomes in Older Adults with Dementia after Hospitalization: Effectiveness of Medicare Programs
    - P01 AG027296 (MPI: Shireman/Bynum) Project 4, Co-I: Behavioral Control and Alzheimer's Disease: Policies, Medication Use, and Health Effects Across Care Settings
    - P30 AG066582 (PI: Bynum): Center to Accelerate Population Research in Alzheimer's (CAPRA)
      - Pilot (PI: Coe) Impact of Medicare Part D Medication Therapy Management Programs on Medication Use in Older Adults with AD/ADRD: Are there Disparities by Race and Gender?
  - Region VII Area Agency on Aging
  - University of Michigan

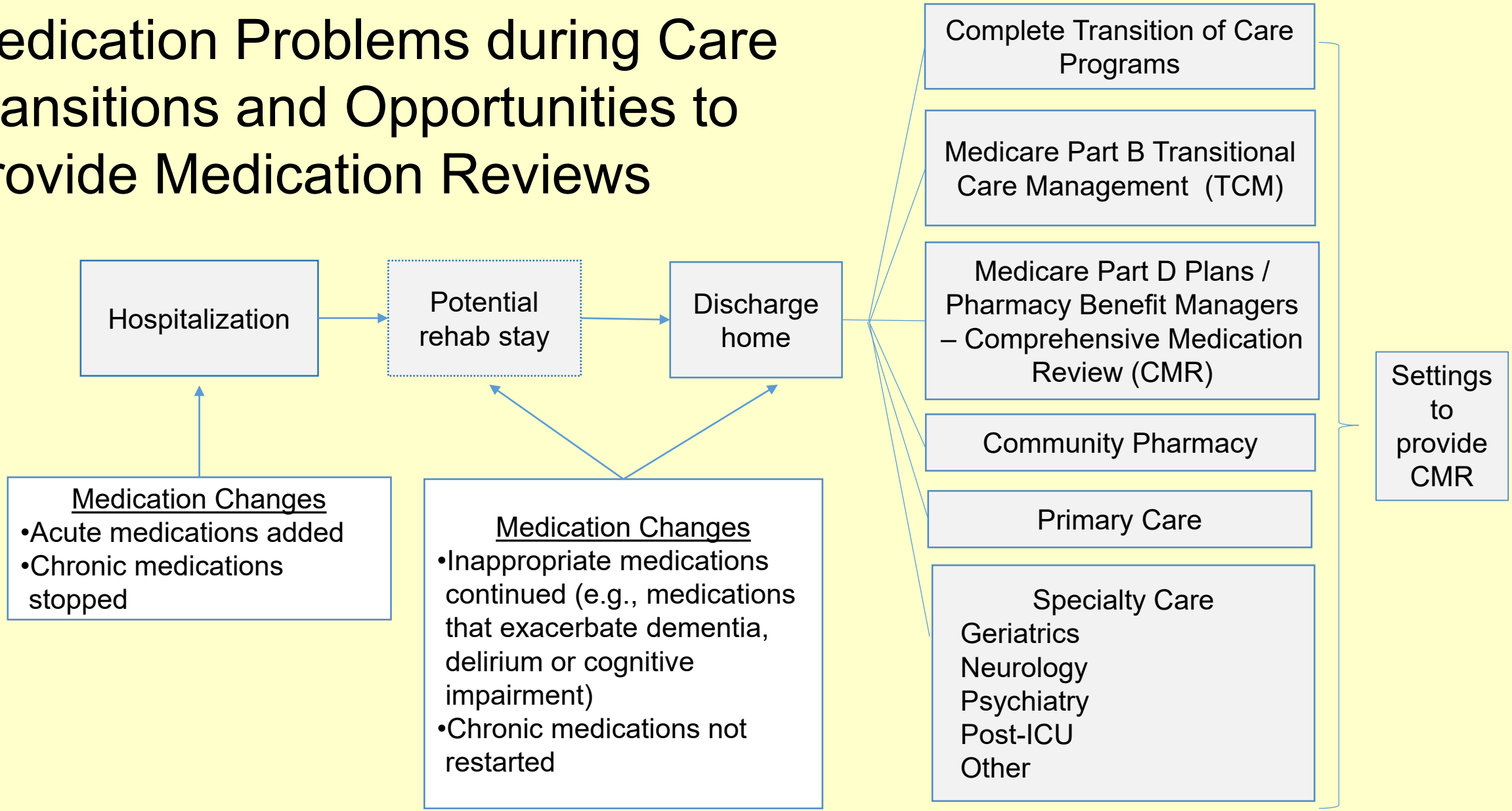
Learning Objectives

- Review changes in health care delivery that likely impact pharmacy practice.
- Describe current trends in contemporary pharmacy practice as they relate to interprofessional collaboration.
- Discuss practice innovations designed to improve health outcomes.
- Discuss role delineation for pharmacists on the interprofessional health care team.

Outline

- Medication problems in older adults
- Care transitions and medication problems
- Opportunities, policies, and settings to provide medication reviews
- Summary

Medication Problems during Care Transitions and Opportunities to Provide Medication Reviews



Medication Problems in Older Adults

- **High risk for adverse drug events due to:** [1,2]
  - Increasing polypharmacy (≥ 5 prescription medications in past month)
    - 1999 – 2002: 27.1%
    - 2015 – 2018: 41.9%
  - Age-related physiological changes
  - Greater number of comorbidities
  - Frailty

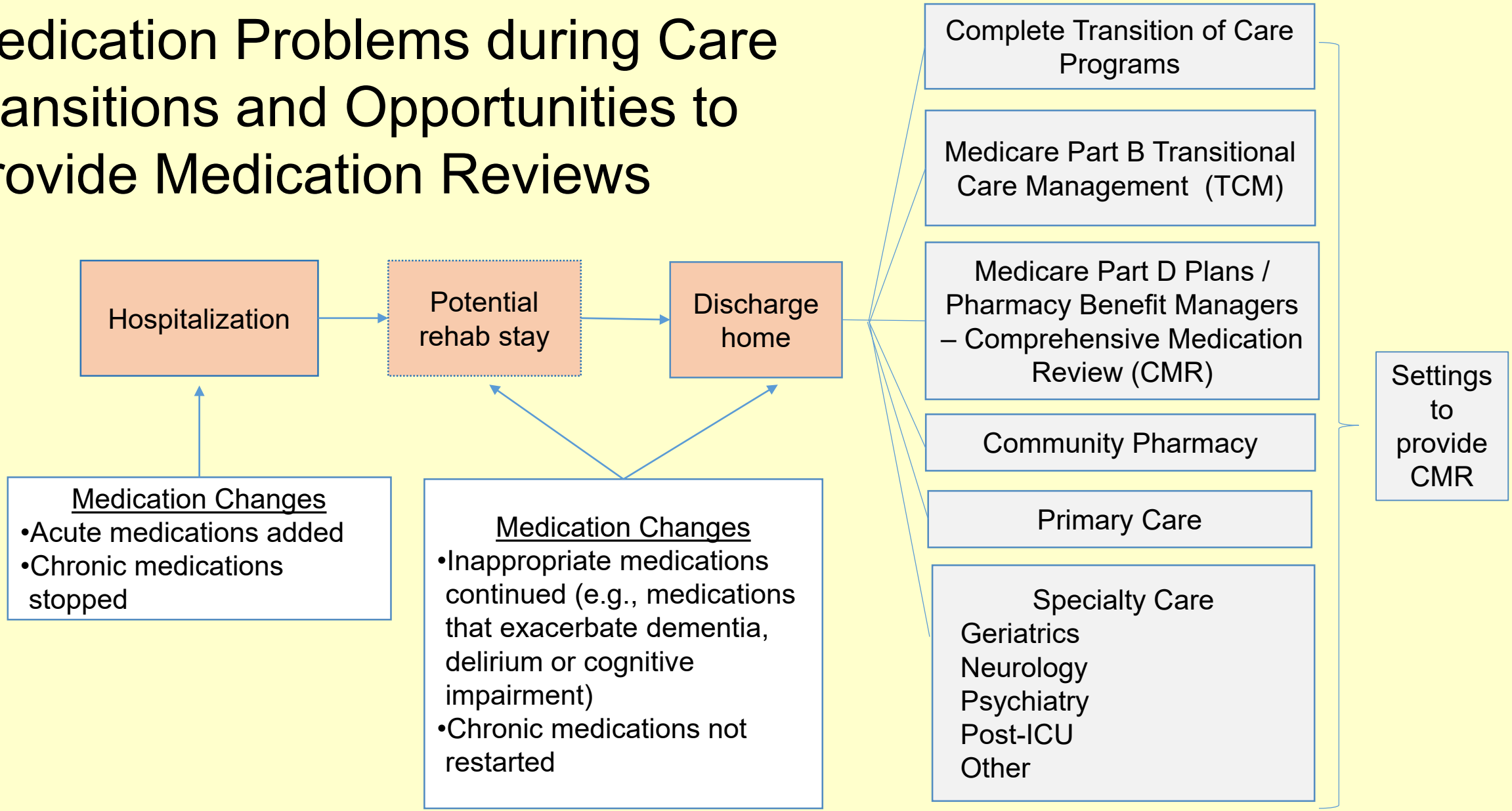
1. Centers for Disease Control and Prevention. National Center for Health Statistics. Therapeutic Drug Use. Last reviewed 10/20/2021. https://www.cdc.gov/nchs/fastats/drug-use-therapeutic.htm
2. ElDesoky ES. Pharmacokinetic-pharmacodynamic crisis in the elderly. Am J Ther. 2007;14(5):488-498.

Medication Problems in Older Adults

- **Increased risk of poor outcomes**[1-3]
  - ED visits for adverse drug events (ADEs)[1]
    - 5.2 per 1000 in 2005-6 to 9.7 per 1000 in 2013-14
  - 37.5% of ED visits for ADEs required hospitalization[2]
    - 48.1% of all ADE hospitalizations - adults ≥ 80 years
    - 4.6 hospitalizations per 1000 in age ≥ 85 years vs. 1.3 per 1000 in age 65-69 years
  - 66% of adverse events after hospitalization were medication-related [3]

1. Shehab N, Lovegrove MC, Geller AI, Rose KO, Weidle NJ, Budnitz DS. US Emergency Department Visits for Outpatient Adverse Drug Events, 2013-2014. JAMA. 2016;316(20):2115-2125.
2. Budnitz DS, Lovegrove MC, Shehab N, Richards CL. Emergency hospitalizations for adverse drug events in older Americans. NEJM. 2011;365(21):2002-2012.
3. Forster AJ, Murff JH, Peterson JF, Gandhi TK, Bates DW. The incidence and severity of adverse events affecting patients after discharge from the hospital. Ann Int Med. 2003;138:161-167.

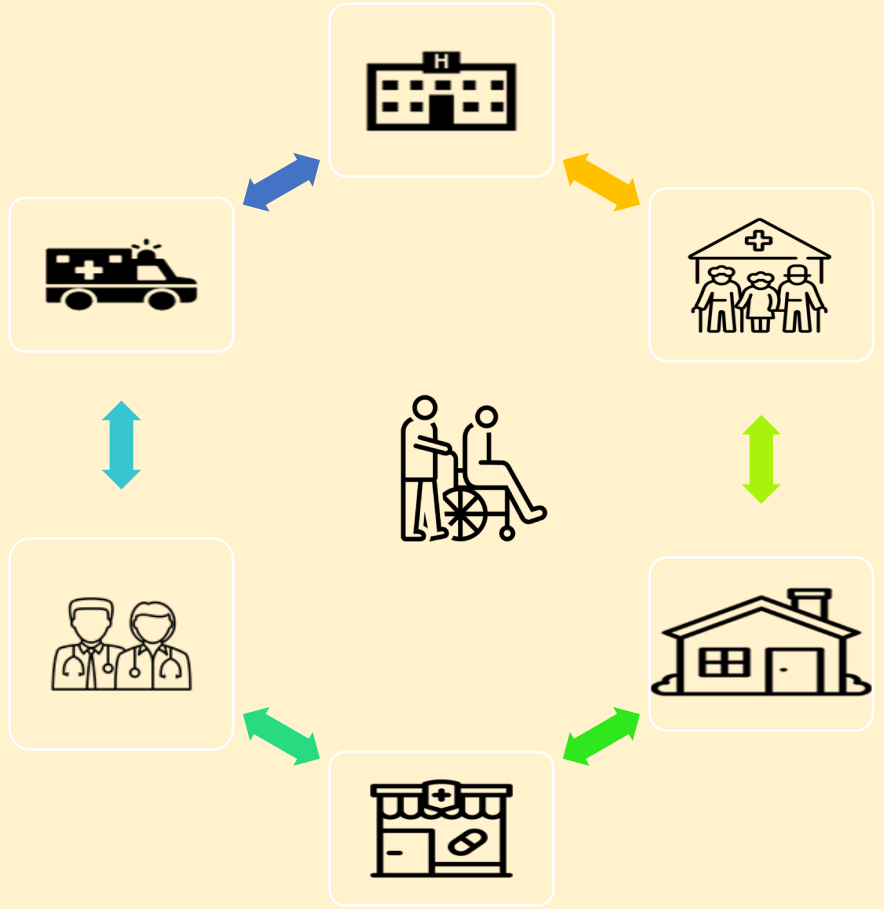
Medication Problems during Care Transitions and Opportunities to Provide Medication Reviews



Transitions of Care

- **Problems after hospitalization**
  - Progressive physical decline
  - Adverse drug events
  - 19.6% readmitted within 30 days
  - 34.0% readmitted within 90 days
  - Increased mortality after hospitalizations

- **Medication-related problems**
  - Increased medication regimen complexity
  - New self-management responsibilities after the return home
  - Potentially inappropriate medications prescribed at discharge
  - Acute medications continued
  - Chronic medications discontinued

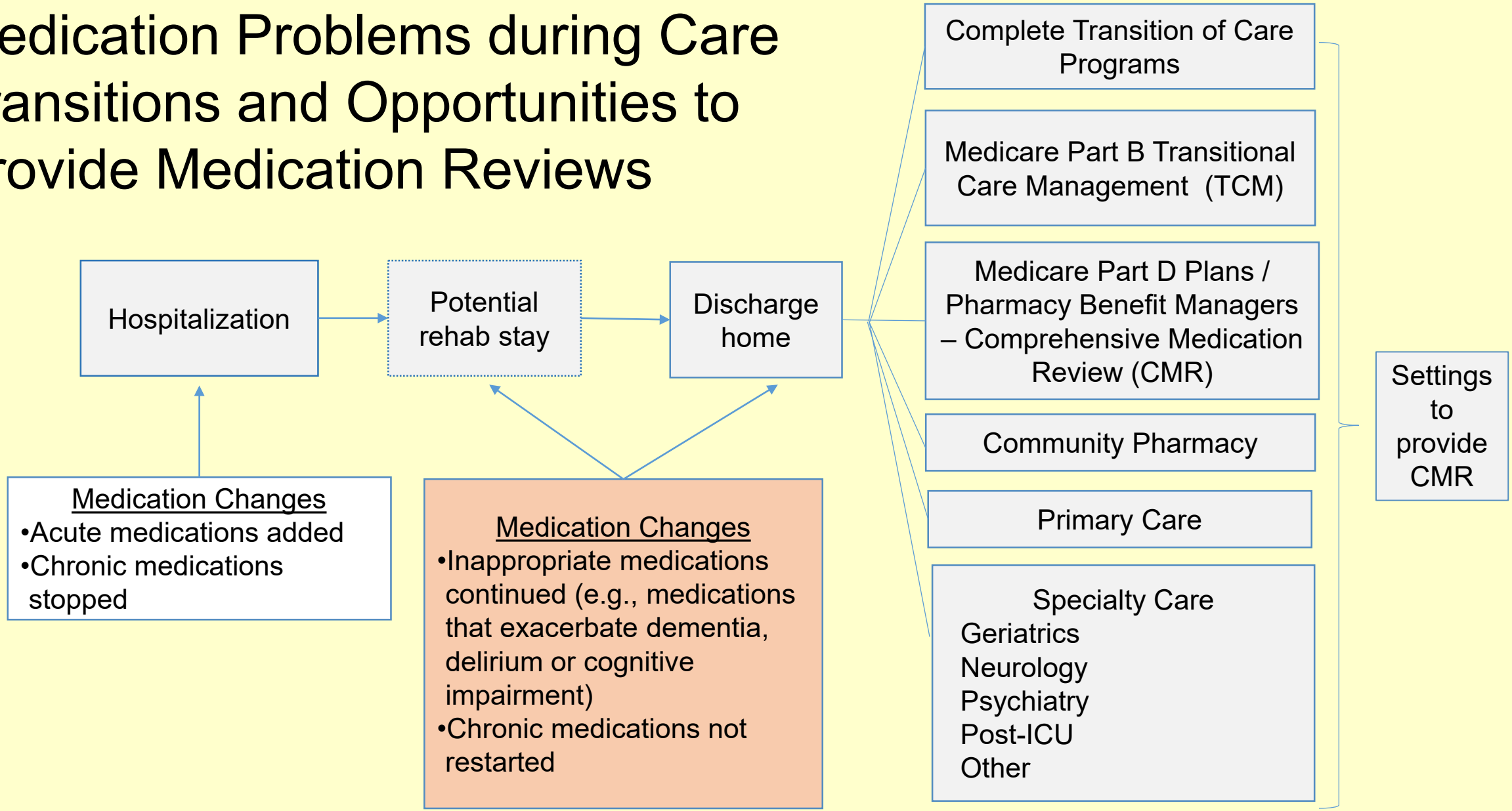


1. Creditor MC. Hazards of hospitalization of the elderly. Ann Intern Med. 1993;118(3):219-23.
2. Forster AJ, Clark HD, Menard A, Dupuis N, Chernish R, Chandok N, Khan A, van Walraven C. Adverse events among medical patients after discharge from hospital. CMAJ. 2004;170(3):345-9..
3. Forster AJ, Murff HJ, Peterson JF, Gandhi TK, Bates DW. The incidence and severity of adverse events affecting patients after discharge from the hospital. Ann Intern Med. 2003;138(3):161-7..
4. Jencks SF, Williams MV, Coleman EA. Rehospitalizations among patients in the Medicare fee-for-service program. N Engl J Med. 2009;360(14):1418-28.

1. What are potential consequences of ineffective care transitions from hospital to home?

a. Lack of receiving medications
b. Hospital readmissions
c. Acute medications continued
d. Problems with disease self-management
e. All of the above

Medication Problems during Care Transitions and Opportunities to Provide Medication Reviews



Statin discontinuation and new antipsychotic use after hospitalization

- **Study Design**
  - Retrospective cohort study
- **Data Source**
  - Data from the Veterans Affairs Adult Patient Database (VAPD)[2]
    - Patient characteristics, information from inpatient admissions, hospital level characteristics
    - Linked to outpatient VA medication data
- **Cohort Identification**
  - Inpatient VA hospitalization (1/1/14-12/31/16)
  - Survival at least 180 days post-discharge
  - ≥ 1 medication within 365 days before hospital admission and within 365 days post-discharge
- **Analysis**
  - Descriptive and bivariate statistics, multilevel logistic regression models with hospitalizations nested within hospitals

1. Coe AB, Vincent BM, Iwashyna TJ. *PLoS One*. 2020;15(5):e0232707
2. Wang XQ, Vincent BM, Wiitala WL, Luginbill KA, Viglianti EM, Prescott HC, et al. Veterans Affairs patient database (VAPD 2014-2017): Building nationwide granular data for clinical discovery. BMC Med Res Methodol. 2019;19(1):94.

PLOS ONE

Statin discontinuation and new antipsychotic use after an acute hospital stay vary by hospital

Cohort inclusion: Statin medication claim within 180 days prior to hospital admission

Outcome - Statin discontinuation: No statin dispensed within 180 days following discharge

Exposure groups:

1. Direct ICU admission and sepsis
2. Direct ICU admission, no sepsis
3. Hospitalization, no ICU stay

520,187 hospitalizations with prior statin use

1. ICU and sepsis	2. ICU with no sepsis	3. No ICU stay
5,939 (1.1%)	76,303 (14.7%)	437,945 (84.2%)
Statin discontinued	Statin discontinued	Statin discontinued
899 (15.1%)	7,611 (10.0%)	50,357 (11.5%)

Statin Discontinuation	AOR (95% CI)
ICU admission, sepsis diagnosis	Ref.
ICU admission, no sepsis diagnosis	0.83 (0.77, 0.90)
Hospitalization, no ICU	1.01 (0.93, 1.08)

Coe AB, Vincent BM, Iwashyna TJ. *PLoS One*. 2020;15(5):e0232707

PLOS ONE

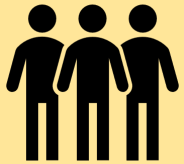
Statin discontinuation and **new antipsychotic use** after an acute hospital stay vary by hospital

Cohort inclusion: No antipsychotic medication claim within 180 days prior to hospital admission

Outcome – New antipsychotic medication use: Any antipsychotic fill within 180 days following discharge

Exposure groups:

1. Direct ICU admission and sepsis
2. Direct ICU admission, no sepsis
3. Hospitalization, no ICU stay



910,629 hospitalizations with no antipsychotic use prior

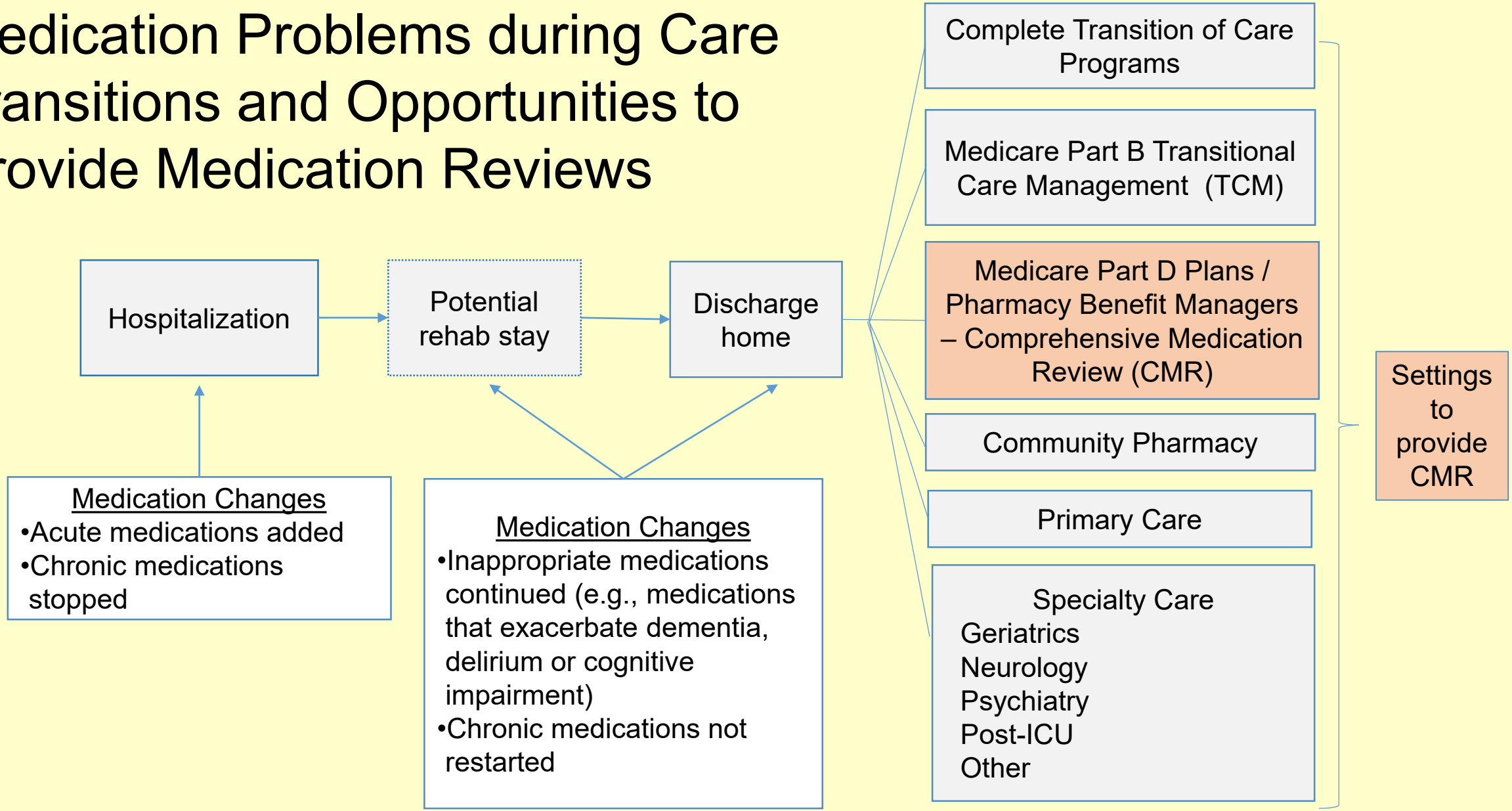
1. ICU and sepsis	2. ICU with no sepsis	3. No ICU stay
10,167 (1.1%)	124,832 (13.7%)	775,630 (85.2%)
New antipsychotic fill	New antipsychotic fill	New antipsychotic fill
361 (3.6%)	2,917 (2.3%)	21,703 (2.8%)

New Antipsychotic Fill	AOR (95% CI)
ICU admission, sepsis diagnosis	Ref.
ICU admission, no sepsis diagnosis	0.76 (0.68, 0.85)
Hospitalization, no ICU	0.91 (0.81, 1.01)

Coe AB, Vincent BM, Iwashyna TJ. *PLoS One*. 2020;15(5):e0232707

PLOS ONE

Medication Problems during Care Transitions and Opportunities to Provide Medication Reviews



Medication Therapy Management (MTM) Programs

- **MTM program design**: [1-3]
  - Optimizes therapeutic outcomes through improved medication use
  - Reduces the risk of adverse events
  - Furnished by pharmacists or other qualified providers
  - Distinguish between ambulatory or institutional setting
  - Developed in cooperation by pharmacists and physicians

CMS Eligibility Criteria	2021	2022
Annual Part D drug costs	$4,376	$4,696
Minimum number of chronic diseases	2-3	2-3
Minimum number of medications	2-8	2-8
At-Risk Beneficiaries (ARB) under a Drug Management Program	-	YES

1. CMS. Fact Sheet. Summary of 2019 MTM Programs. September 25, 2019. https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovContra/Downloads/CY2019-MTM-Fact-Sheet.pdf Accessed 10/15/21.
2. CMS. 2021 Medication Therapy Management Program Information and Submission Instructions. May 22, 2020. https://www.hhs.gov/guidance/sites/default/files/hhs-guidance-documents/memocy2021mtmp_05222020_22.pdf Accessed 10/15/21
3. CMS. Correction to Contract Year 2022 Part D Medication Therapy Management Program Information and Submission Instructions dated April 30, 2021. August 31, 2021. https://www.cms.gov/files/document/memo-contract-year-2022-medication-therapy-management-mtm-program-submission-v-083121.pdf Accessed 10/15/21

Medication Therapy Management (MTM) Programs

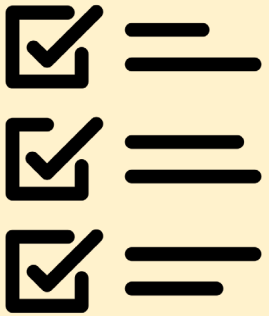
- **CMS final rule (86 FR 5864)** [1]
  - New additions beginning January 1, 2022
    - Include At-Risk Beneficiaries (ARBs) (42 CFR § 423.100) under a Drug Management Program (DMP)
    - Provide all MTM enrollees with information about safe disposal of controlled substances
    - Include a separate section or page about MTM on website

- **Required services for targeted beneficiaries** [1]
  - Interventions for beneficiaries and prescribers
  - Annual **Comprehensive Medication Review (CMR)** with CMS Standardized Format written summary
  - Quarterly Targeted Medication Reviews (TMR) with follow-up when needed
  - Information about safe disposal of controlled substances

1. CMS. Correction to Contract Year 2022 Part D Medication Therapy Management Program Information and Submission Instructions dated April 30, 2021. August 31, 2021. https://www.cms.gov/files/document/memo-contract-year-2022-medication-therapy-management-mtm-program-submission-v-083121.pdf Accessed 10/15/21

Comprehensive Medication Reviews (CMRs)[1]

- "*Systematic process of collecting patient-specific information, assessing medication therapies to identify medication-related problems (MRPs), developing a prioritized list of MRPs, and creating a plan to resolve them with the patient, caregiver and/or prescriber*"



- Person-to-person or telehealth in real-time between the patient and/or other authorized individual
  - Improve patients' knowledge of their prescriptions, OTC medications, herbal therapies and dietary supplements
  - Identify and address patient problems or concerns
  - Empempower patients to self-manage their medications and their health conditions

1. CMS. Correction to Contract Year 2022 Part D Medication Therapy Management Program Information and Submission Instructions dated April 30, 2021. August 31, 2021. https://www.cms.gov/files/document/memo-contract-year-2022-medication-therapy-management-mtm-program-submission-v-083121.pdf Accessed 10/15/21

NATIONAL POLL ON HEALTHY AGING
UNIVERSITY OF MICHIGAN

- Nationally representative household survey conducted using Ipsos KnowledgePanel®
- Administered online
- Randomly selected, stratified group of older adults aged 50-80 (n=2,048)
- Weighted to reflect US Census population figures

Older Adults' Experiences with Comprehensive Medication Reviews, National Poll on Healthy Aging, October 2020, http://hdl.handle.net/2027.42/163318

INSTITUTE FOR HEALTHCARE POLICY & INNOVATION
UNIVERSITY OF MICHIGAN

AARP Real Possibilities

MICHIGAN MEDICINE
UNIVERSITY OF MICHIGAN

Prescription Medication Use & Comprehensive Medication Review

AMONG ADULTS AGE 50–80

23% take five or more prescription medications

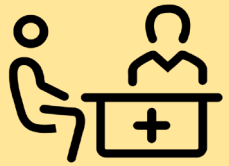
Of those, **29%** have had a Comprehensive Medication Review

Comprehensive medication review: New poll indicates interest but low receipt among older adults

Polypharmacy is common

- 23% reported taking ≥ 5 Rx medications
- 32% of those on ≥ 5 Rx medications also took ≥ 5 non-Rx medications

CMR receipt is low



- 24% received a CMR
- 1 in 4 older adults with a Medicare Part D plan

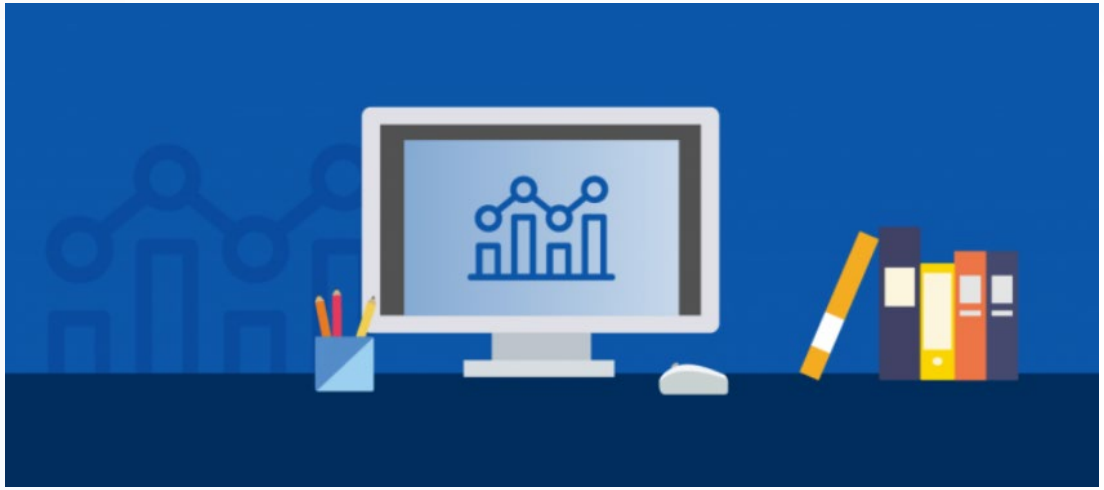
Many interested in a future CMR with a pharmacist

- 36% interested in a future CMR with a pharmacist
- 86% not aware of possible insurance coverage

Coe AB, Bynum JPW, Farris KB. *JAMA Health Forum*. 2020;1(20): e201243

JAMA Health Forum™

NPHA Data Available



- Past waves of the survey data available for public use to help advance research on aging and health
- Download through the University of Michigan National Archive of Computerized Data on Aging Open Aging Repository, funded by the NIA
- Part of the Inter-university Consortium for Political and Social Research (ICPSR), a unit within the Institute for Social Research (ISR)
- Stata, SAS, SPSS formats

ICPSR
Sharing data to advance science

NACDA National Archive of Computerized Data on Aging

https://www.healthyagingpoll.org/reports-more/data

Medicare Part D MTM in Older Adults with AD/ADRD

- Older adults with AD/ADRD are at high risk for medication-related problems
- Gap: It is unknown if older adults with AD/ADRD receive MTM and CMRs
- Aims: In older adults with AD/ADRD
  - (1) Generate estimates of Medicare Part D MTM eligibility and CMR receipt
  - (2) Identify potentially inappropriate medication use and impact of a CMR
- Data Source: Health and Retirement Study (HRS) data and Medicare linked claims and summary files, including Part D MTM files
- Included: 2014 HRS respondents, age ≥ 65 years, with fee-for-service Medicare Parts A, B, and D, no HMO

Medicare Part D MTM in Older Adults with AD/ADRD

Table 1. Demographics and MTM receipt in 2014 HRS respondents, age ≥ 65 years, with fee-for-service Medicare Parts A, B, and D

Variable	Older adults overall (%) 100%	Older adults no AD/ADRD (%) 80.5%	Older adults with AD/ADRD (%) 19.5%
Age, years, mean (SE)	75.3 (0.18)	73.7 (0.16)	82.1 (0.44)*
Male	38.1	38.6	35.9
Race/Ethnicity*			
White	85.5	87.9	75.6
Black	7.2	5.8	12.9
Hispanic	5.5	4.4	10.1
Other	1.8	1.9	1.4
MTM enrollment, yes	15.6	14.1	22.0*
CMR offered, yes	15.4	13.9	21.3*
CMR received, yes	2.6	2.6	2.6

* $p < 0.0001$, overall weighted N = 15,534,698, CMR = comprehensive medication review, MTM = medication therapy management

Table 2. Predictors of Medicare Part D CMR receipt in 2014 HRS respondents, age ≥ 65 years, with fee-for-service Medicare Parts A, B, and D

Variable	Adjusted Odds Ratio (95% CI)*
AD/ADRD	0.85 (0.40, 1.81)
Age, years	
75 - 84	0.88 (0.51, 1.50)
≥ 85	1.11 (0.49, 2.51)
Male	1.12 (0.59, 2.11)
Race/Ethnicity	
Black	1.96 (1.00, 3.92)
Hispanic	0.11 (0.02,0.62)*
Other	1.81 (0.54, 6.12)
Physical health conditions, sum	1.48 (1.26, 1.74)*
ADL/IADL limitations	
Mild-moderate (1-3)	1.73 (1.004, 2.98)*
Severe (4+)	1.07 (0.33, 3.40)
Lives in nursing home	0.22 (0.05, 0.99)*

* Reference groups: ADRD = no, age = 65-74 yrs., sex = female, race/ethnicity = White, ADL/IADL limitations = none, lives in nursing home =no. Part D low-income subsidy, dual eligible status, marital status, highest education level, and receives help with ADL/IADL were not significant predictors of CMR receipt.

Potentially Inappropriate Medication (PIM) Use in Older Adults with AD/ADRD

Tables. PIM use in 2014 HRS respondents, age ≥ 65 years, with fee-for-service Medicare Parts A, B, and D

Variable	Overall (%)	PIMs - No, (%)	PIMs - Yes, (%)
AD/ADRD (yes)	19.5	15.8	21.1*
Age, years, mean (SE)	75.3 (0.18)	75.4 (0.36)	75.3 (0.22)
Male	38.1	46.4	34.6*
Race/Ethnicity			
White	85.5	86.5	85.0
Black	7.2	7.5	7.1
Hispanic	5.5	4.0	6.2
Other	1.8	2.0	1.8
Part D LIS, yes	20.6	17.8	21.7*
Physical health conditions, mean (SE)	3.5 (0.03)	2.9 (0.06)	3.7 (0.04)*
Nursing home residence, yes	4.5	2.3	5.4*

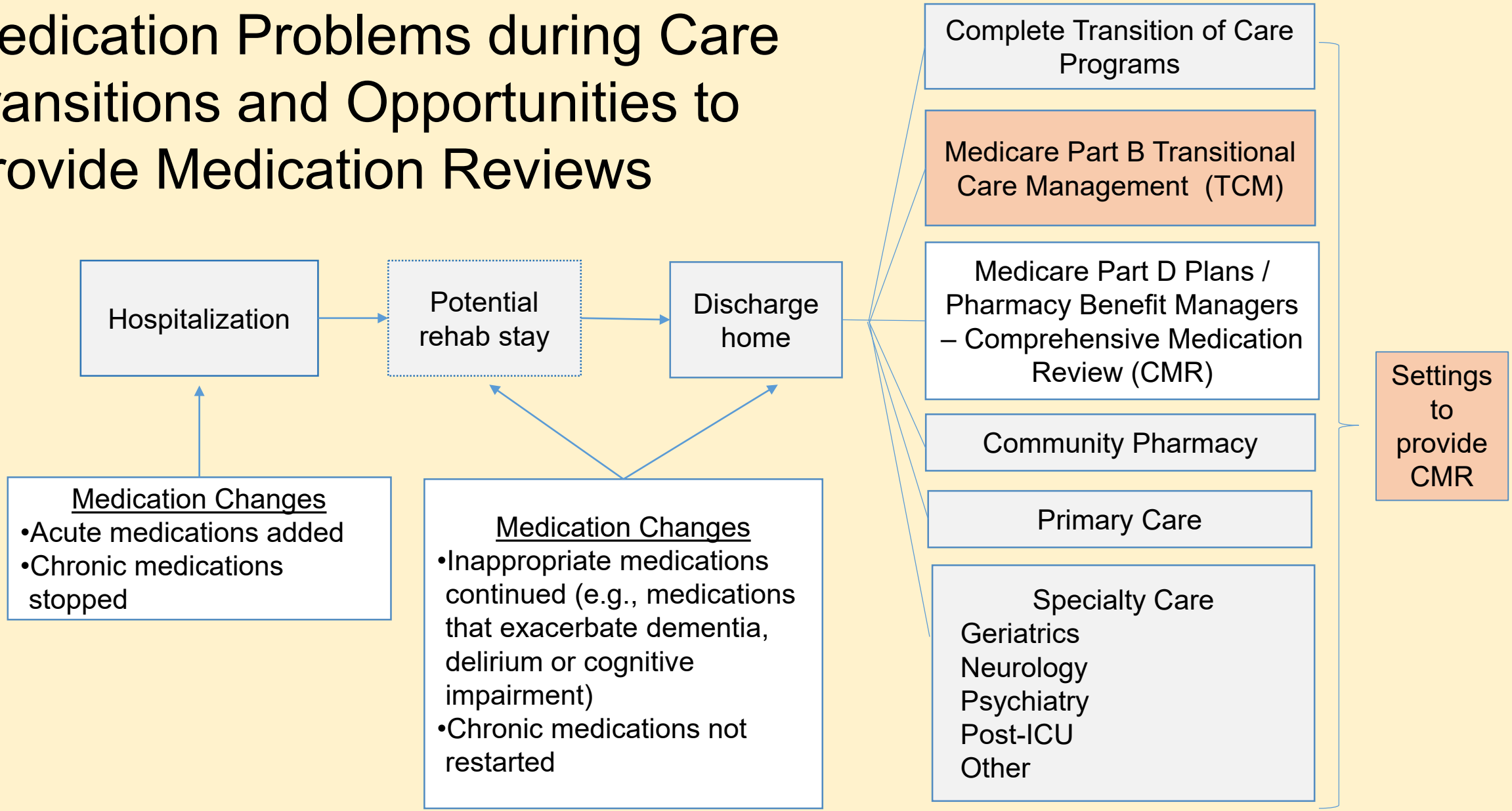
Variable	Overall (%)	PIMs - No, (%)	PIMs - Yes, (%)
Highest level of education**			
Less than high school	17.8	15.0	19.0
High school	53.9	53.3	54.2
Some college and above	28.2	31.7	26.8
ADL/IADL limitations*			
None (0)	62.4	69.4	59.5
Mild-moderate (1-3)	23.8	21.7	24.7
Severe (4+)	13.8	8.7	15.8
Receive help with ADL/IADL, yes	22.3	15.5	25.1*
MTM enrollment, yes	15.6	5.7	19.8*
CMR offered, yes	15.4	5.7	19.4*
CMR received, yes	2.6	1.1	3.3*

*p < 0.0001, overall weighted N = 15,534,698, CMR = comprehensive medication review, MTM = medication therapy management, ** p = 0.02, PIM determined by 2019 Beers Criteria®

2. Which of the following are true about Medicare Part D MTM programs?

a. Aim to optimize therapeutic outcomes through improved medication use
b. Aim to increase the risk of adverse events
c. Developed in cooperation by pharmacists and physicians
d. Inform eligible beneficiaries about safe medication disposal
e. A, B
f. A, C, D
g. All of the above

Medication Problems during Care Transitions and Opportunities to Provide Medication Reviews



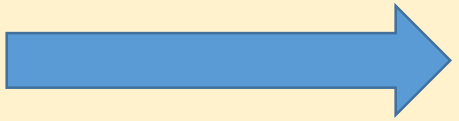
Transitional Care Management (TCM)

- Required patient TCM services
  - Support patient's transition to the community setting
  - Health care professionals (HCPs) accept patient care at post-facility discharge without service gap and take responsibility for patient's care
  - Moderate or high complexity medical decision making for patients with medical or psychosocial problems

Inpatient or partial hospital settings

- Inpatient acute care hospital
- Inpatient psychiatric hospital
- Long-term care hospital
- Skilled nursing facility
- Inpatient rehabilitation facility
- Hospital outpatient observation or partial hospitalization
- Partial hospitalization at a Community Mental Health Center

Care Transition



Community Setting

- Home
- Domiciliary
- Nursing home
- Assisted living facility

https://www.cms.gov/outreach-and-education/medicare-learning-network-mln/mlnproducts/downloads/transitional-care-management-services-fact-sheet-icn908628.pdf

Non-face-to-face TCM services	
Services - Physicians or NPPs	**Services – Auxiliary Personnel under Physician or NPP Supervision**
Review discharge information	Communicate with the patient
Review need for or follow-up on diagnostic tests and treatments	Communicate with agencies or community service providers that the patient uses
Interact with other HCPs who may assume or reassume care for system-specific problems	**Assess and support treatment adherence including medication management**
Educate patient, family, guardian, caregiver	Educate patient, family, guardian, caregiver to support self-management, independent living, ADLs
Establish or re-establish referrals, community resources	Identify available community and health resources
Help schedule required community providers and services follow-up	Help patient and family access needed care and services

3. Which of the following are true about Medicare Part B Transitional Care Management services?

a. Support patient's transition to community setting
b. Patient must have a need for moderate or high complexity decision making
c. Interactive contact with patient or caregiver within 2 days of discharge
d. Medication reconciliation and management is required
e. All of the above

Community-based TCM program

- Ongoing community-academic partnership
- Region VII Area Agency on Aging, Bay City, MI
- Region VII AAA Pharmacist – Nathaniel Bergman, PharmD
- Program evaluation of their Community Care Transition Initiative (CCTI)
  - Retrospective chart review – process outcomes
  - Semi-structured interviews – facilitators and barriers to implementation, strategies for dissemination

REGION VII AREA AGENCY ON AGING

Community Care Transition Initiative (CCTI)

- Collaboration with Ascension Mid-Michigan Hospital
- Pilot funding from Michigan Health Endowment Fund
- Goals:
  - Conduct a care transition visit in the home to Medicare beneficiaries
  - Improve care transitions and quality of care
  - Reduce 30-day readmission rates
  - Increase number of clients who see PCP within 7 days of discharge

REGION VII AREA AGENCY ON AGING

Community Care Transition Initiative (CCTI)

- **Components**
  - Community Health Worker (CHW) – home visit after transition from hospital to home
    - CHW is uniquely trained as a pharmacy technician
  - Pharmacist - telehealth comprehensive medication review
  - Mobile physician service, then hired own PCP
- **Electronic Medical Records (EMR)**
  - Hospital access
  - Region VII AAA - Athena
- **3-step process**
  1. In-hospital visit by CHW
  2. In-home care transition visit by CHW with pharmacist telehealth visit
  3. Follow-up

REGION VII AREA AGENCY ON AGING

Community Care Transition Initiative (CCTI)

- **Eligibility criteria:**
  - Medicare insurance
  - Diagnosis or history of CHF, DM, COPD, MI
  - LACE score ≥ 5

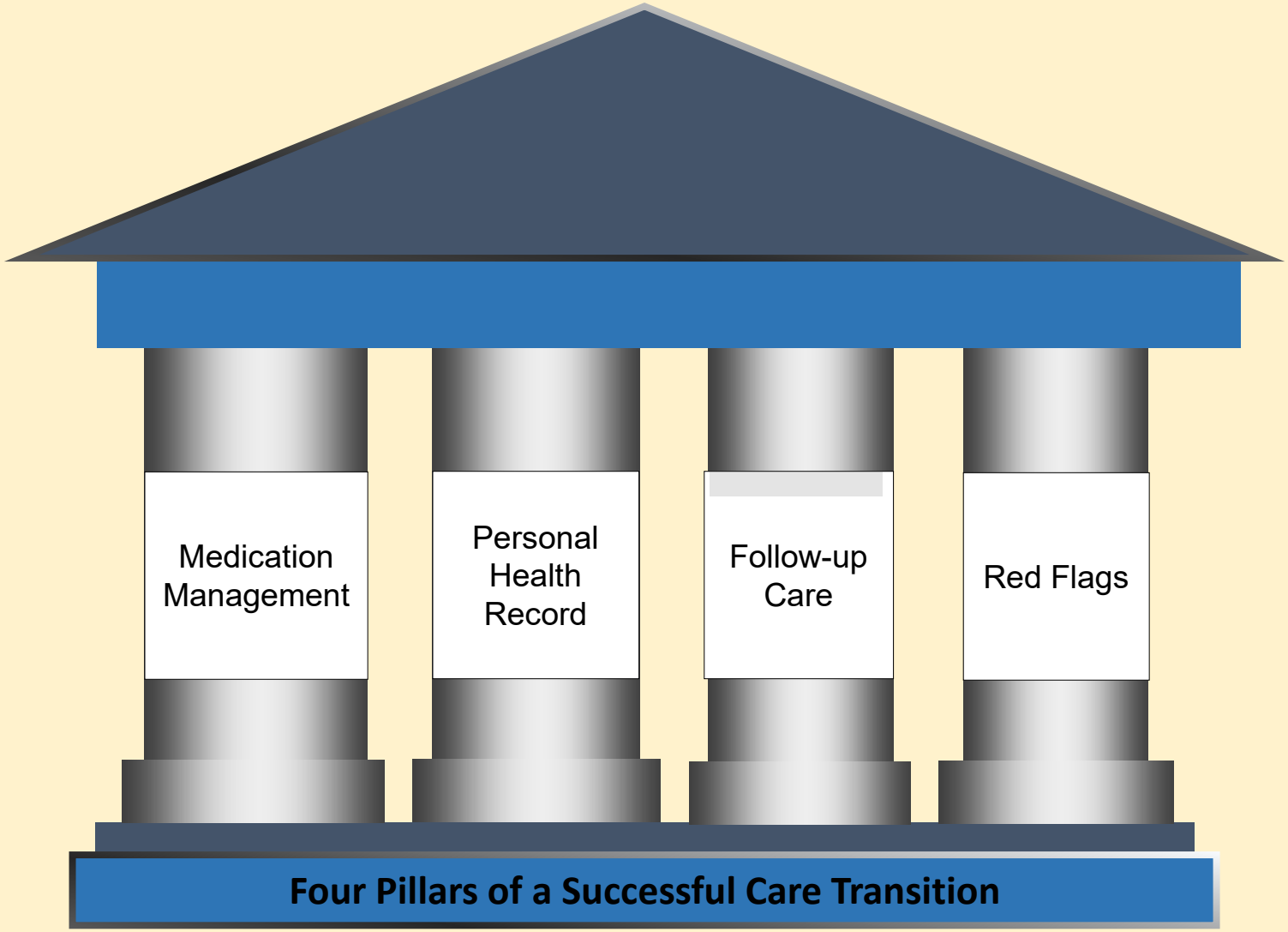
- **Recruitment: Community Health Worker**
  - Meets with eligible client in hospital
  - Describes program
  - Client accepts or declines participation
  - Sets up home visit within 3 days of hospital discharge

*Scores (range 1-19): 1-4 low, 5-9 moderate, 10-12 high, 13-19 highest risk for readmission

Van Walraven C, Dhalla IA, Bell C, et al. Derivation and validation of an index to predict early death or unplanned readmission after discharge from hospital to the community. CMAJ. 2010;182(6):551-557.

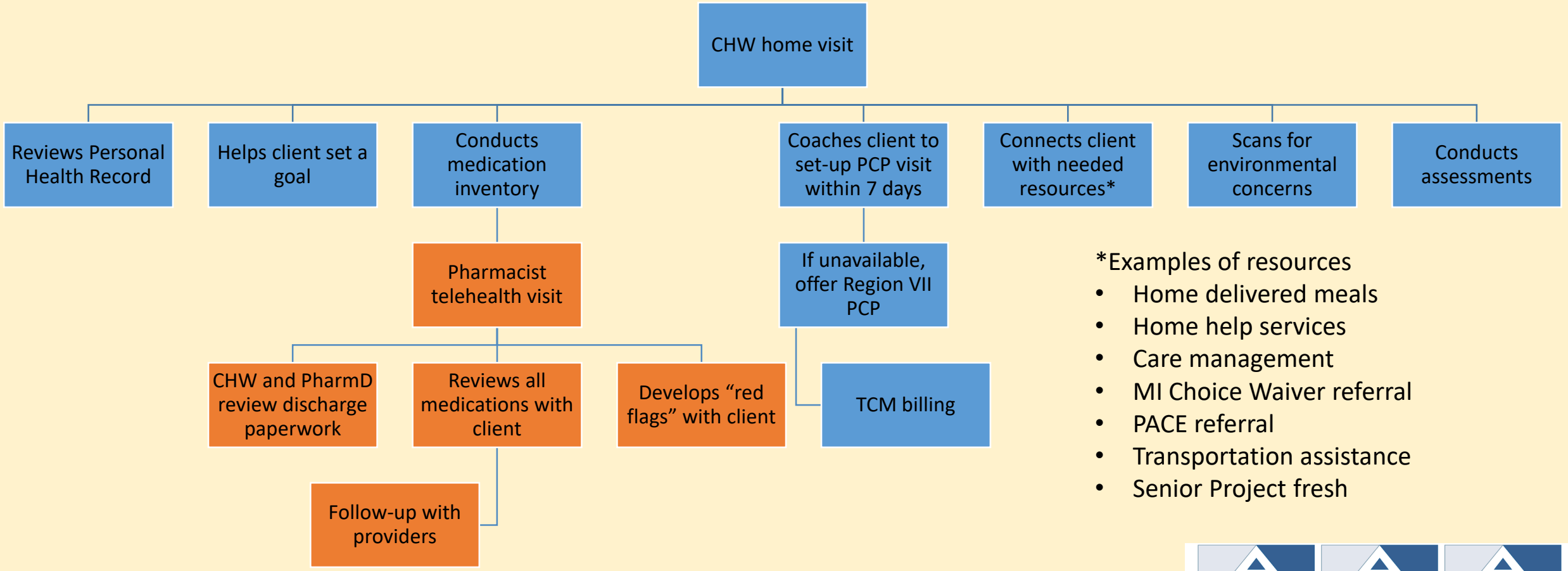
REGION VII AREA AGENCY ON AGING

Coleman's Care Transitions Intervention[1,2]



1. Coleman EA, Parry C, Chalmers S, et al. The Care Transitions Intervention. Results of a randomized controlled trial. *Arch Intern Med.* 2006;166:1822-28.
2. Parry C, Coleman EA, Smith JD, et al. The Care Transitions Intervention: A patient-centered approach to ensuring effective transfers between sites of geriatric care. *Home Health Care Serv Q*. 2003;22(3):1-17.

Community Care Transition Initiative (CCTI)



*Examples of resources

- Home delivered meals
- Home help services
- Care management
- MI Choice Waiver referral
- PACE referral
- Transportation assistance
- Senior Project fresh

REGION VII AREA AGENCY ON AGING

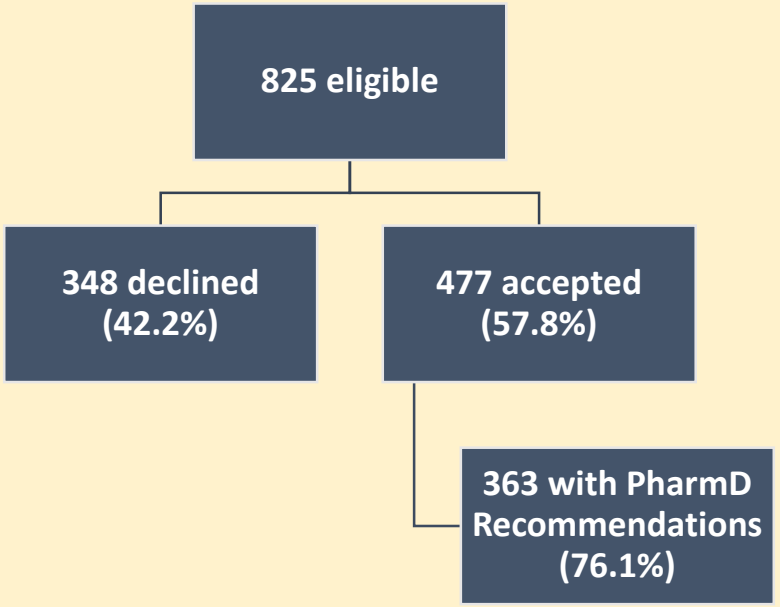
Community Care Transition Initiative (CCTI)

- **Follow-up**
  - CHW weekly phone calls for first 30 days
  - CHW monthly phone calls for 1-year post-visit
  - Reviews:
    - Current health, ensure follow-up visits are occurring
    - Red flags and progress towards patient-set goal
  - Addresses questions, concerns, and patient needs
  - Referrals as needed

REGION VII AREA AGENCY ON AGING

Community Care Transition Initiative (CCTI)

- **Cross-sectional study**
- **Retrospective chart review**
  - AAA EMR
  - Hospital EMR
- **Inclusion criteria**
  - Met AAA CCTI eligibility criteria, discharged from hospital to home January 2018-December 2019
- **Primary outcomes**
  - 30-day hospital readmission
  - Medication Therapy Problems (MTPs)
- **Secondary outcomes**
  - PCP visit completion within seven days
  - Barriers to care, self-management, and social needs of CCTI participants



REGION VII AREA AGENCY ON AGING

Community Care Transition Initiative (CCTI)

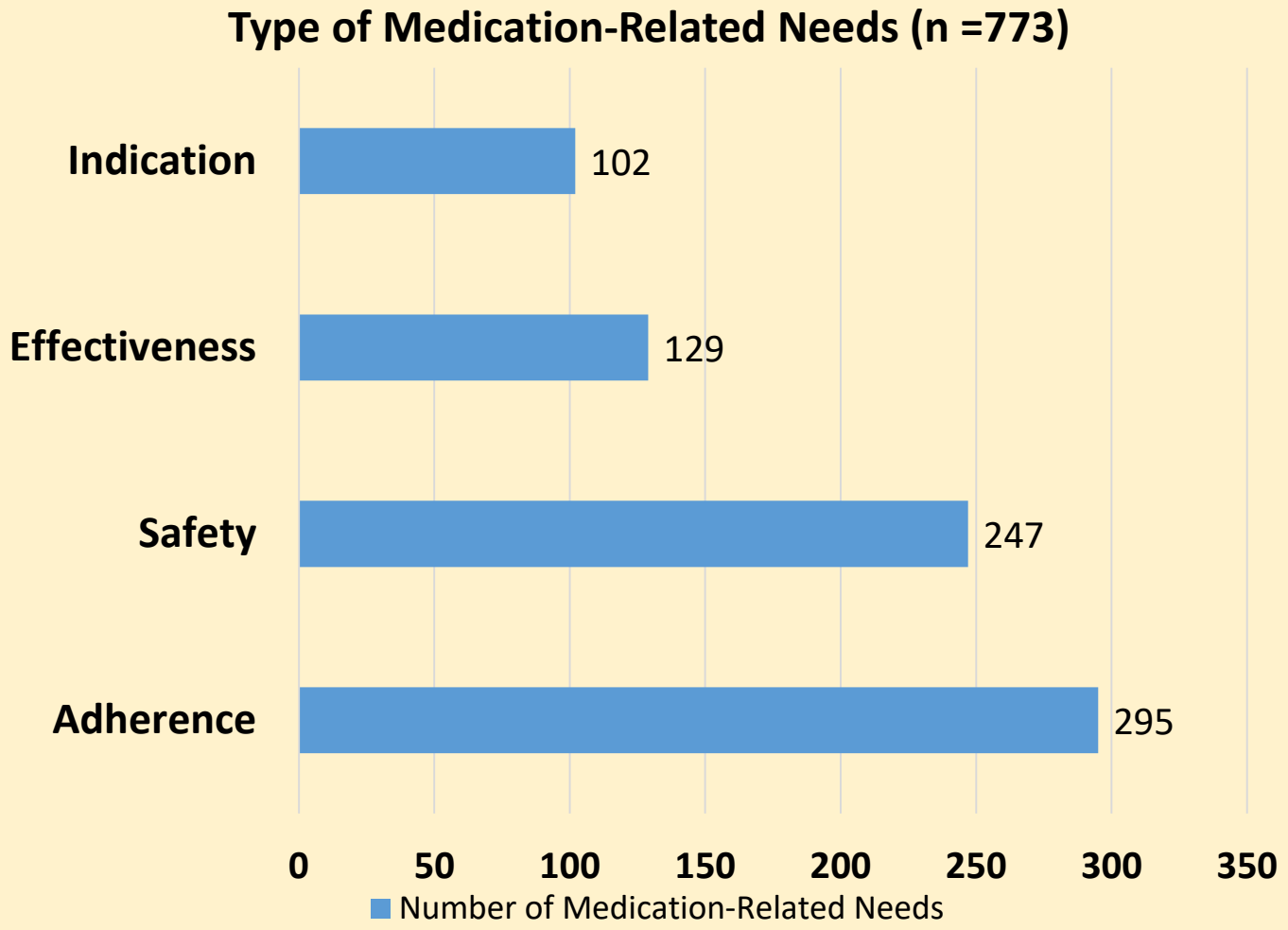
	Overall N = 825	Clients N = 477	Declined N = 348	p-value
Age (years), Mean (SD)	74.0 (9.5)	73.7 (9.7)	74.5 (9.2)	0.25
Female, n (%)	429 (52.0)	250 (52.4)	179 (51.4)	0.78
Hospital length of stay (days) , Mean (SD)	5.3 (3.9)	5.0 (3.7)	5.6 (4.1)	0.04*
30-day readmission, n (%)				
Yes	111 (13.5)	55 (11.5)	56 (16.1)	0.058
No	714 (86.6)	422 (88.5)	292 (83.9)	
PCP visit within 7 days (yes), n (%)		165 (34.5)		
PCP visit after 7 days (yes), n (%)		202 (42.3)		

- New physical health problem (43.3%), new mental health problem (7.6%), cognitive issues (2.1%)
- Current Medicaid waiver did not meet needs (17.2%)
- Lack of home health / paid caregiver (11.6%)
- Lack of independent living skills (6.2%), inability to manage physical health or illness in the community (2.6%)
- Lack of sufficient financial resources (3.6%)
- Disengagement/loss of motivation (3.6%)

Medication Therapy Problems (MTPs)

- MTPs per visit, Mean (SD), range:
  - **2.1 (1.4), 1-14**
- Medication-related needs identified: **773**
- Categorized by the Pharmacy Quality Alliance MTP Categories Framework

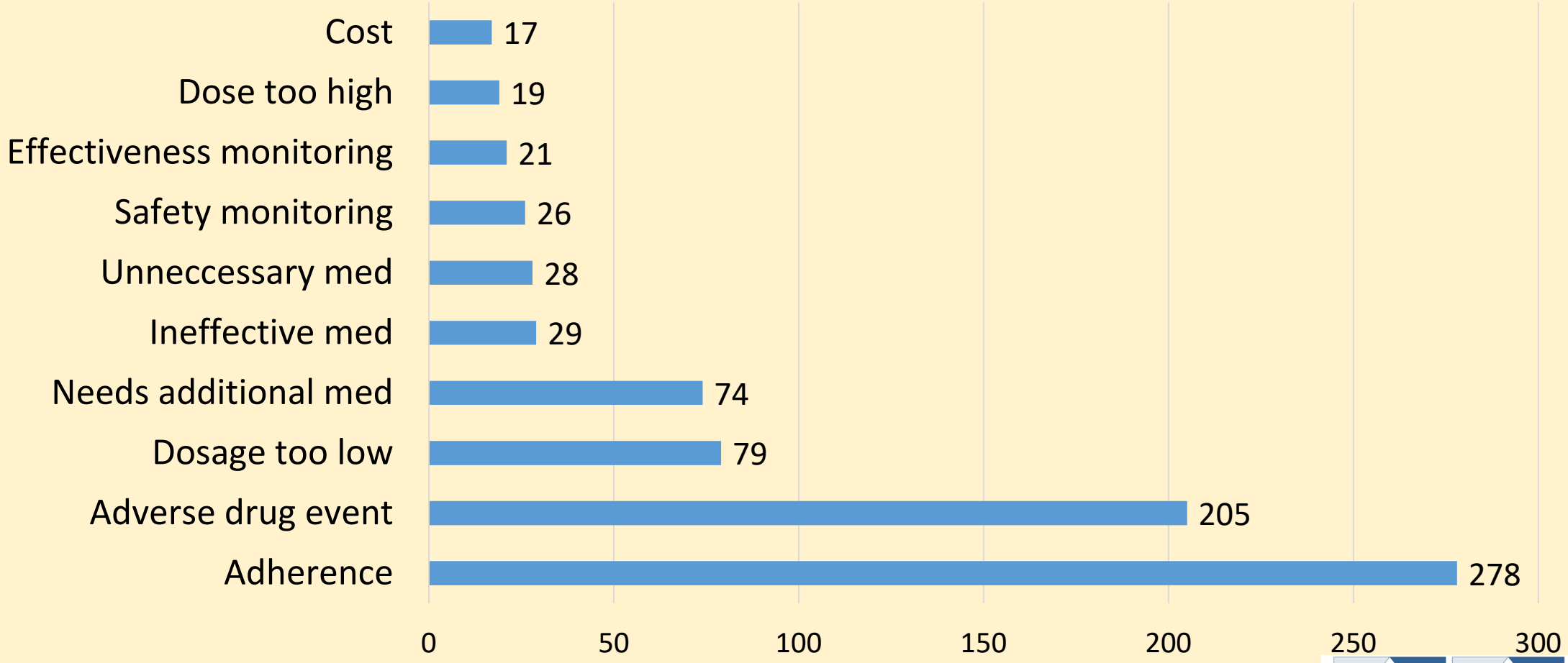
https://www.pqaalliance.org/medication-management-services



REGION VII AREA AGENCY ON AGING

Medication-Related Needs Identified

Breakdown of Types of Medication-related Needs (n = 773)



*Preliminary results

REGION VII AREA AGENCY ON AGING

4. Which was the most common category of medication therapy problems identified in the pharmacist telehealth medication reviews?

a. Safety
b. Efficacy
c. Adherence
d. Indication

Summary

- Medication problems are common in older adults and can lead to poor outcomes
- Care transitions are a high-risk time for medication-related problems to occur
- Pharmacist-provided medication reviews are a strategy to improve medication use
- Roles for the pharmacist in interdisciplinary teams (e.g., TCM)
- Examples of Medicare policies that include medication reviews, Medicare Part B TCM and Medicare Part D MTM

Thank you!

- Research team
  - Paige Whittaker, PharmD student
  - Andy Ross, PharmD student
  - Tk Nguyen, PharmD student
  - Jonathan Martindale, MHI
  - Brigid Rowell, MA
- Mentors and collaborators
  - Karen B. Farris, PhD, MPA
  - Julie P.W. Bynum, MD, MPH
  - Nathaniel Bergman, PharmD
  - Chiang-Hua Chang, PhD
  - Theodore J. Iwashyna, MD, PhD

Claiming Credit

Submit Attendance

1. *If you have **not participated in a VCU Health CE program** in the past:*
   - Go to vcu.cloud-cme.com to create an account – make sure to add your cell phone number
2. If you **have participated before:**
   - Text the course code to (804) 625-4041.
     The course code for this event is: **22209-18313**

Complete Evaluation & Claim Credit

1. Go to https://vcu.cloud-cme.com
2. Sign in using email address used above
3. Click “My CE”

OR

Open the CloudCME app on device
Click “My Evaluations”
Click the name of the activity to Click “Evaluations and Certificates”

ceinfo@vcuhealth.org