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Beyond Competency: Medication Management in Care Transitions for Medical Students, Residents, and Other Health Care Practitioners: Orientation and Introduction to Medication Management Competency

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Improving Patient Safety and Transitions of Care through INTERPROFESSIONAL COLLABORATION

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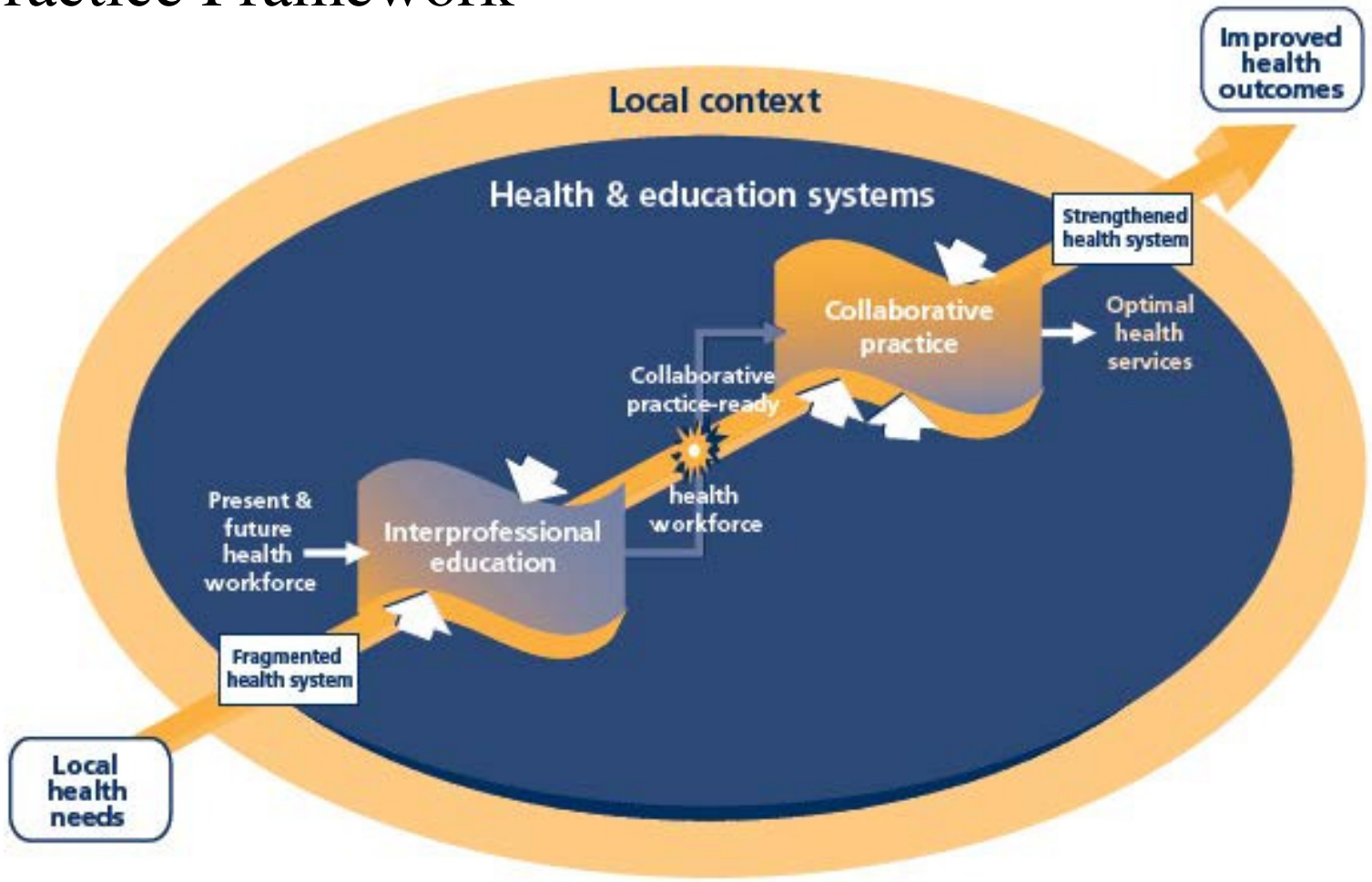
Beyond Competency in Medication Management

- 85 y.o. F brought in by paramedics
- Found on street
- Confused, combative
- BP: 210/100
- BS: 350 mg/dl
- Purse: Prescription bottle of tramadol

Medication Management Challenges

- What is the cause of the patient's condition?
  - Role of medications – too much or too little?
    - Prescription, Over-the-Counter, Alternative, Illicit drugs
- What medications should be given?
  - At the Emergency Room
  - In the hospital
  - Upon discharge
  - Transition to outpatient clinic
- Whose responsibility is Medication Management?

WHO Interprofessional Education & Collaborative Practice Framework



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World Health Organization (WHO). (2010). Framework for Action on Interprofessional Education & Collaborative Practice. Geneva: WHO

Problem: Adverse Drug Events

- Incidence rates of adverse drug event range from 2 to 7 per 100 admissions[1]
- Medication errors are one of the leading causes of injury to hospital patients
- Up to 60% of patients will have at least 1 discrepancy in their admission medication history[2]
- Geriatric patient are often high utilizers of medications

1. Michels R, Meisel S. Program using pharmacy technicians to obtain medication histories. American Journal Health System Pharmacy, 2003, Oct: 60:1982-6.
2. Cornish P, et al. Unintended medication discrepancies at the time of hospital admission. Arch. Internal Medicine, 2005, Feb: 165: 424

Possible Solutions

- Interprofessional collaboration
  - Physician, RN, Nurse Practitioner, **PharmD**, Physical Therapist, Social Work
- Pharmacist
  - Vital role in care of geriatric population
  - Recognized by Institute of Medicine report on “Retooling for an Aging America”
  - Expertise in medication and pharmacotherapy

Pharmacist Perspective: Medication Management

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Admission Medication History

Primary	Secondary	Tertiary
• Patient • Caregiver • Medication bottles	• Medication List • Friend • Medical record	• Pharmacy records • CURES reports

Complete medication history involves verifying information across a combination of sources

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Medication Safety Reconciliation: Tool Kit. North Carolina Center for Hospital Quality and Patient Safety. 2006, Sept: 5-11

Inpatient Stay

- Pharmacokinetics (ADME)
  - Renal function
  - Hepatic function
  - Therapeutic serum concentrations
- Pharmacodynamics
  - Dose appropriate and clinically effective
  - Drug-drug interactions
  - Adverse drug events
    - Beer's Criteria
- Other
  - Durations of drug therapy

Daily review of medications enhances patient safety!

Discharge Medication Reconciliation

- Medication Review
  - ❑Indicated
  - ❑Dose Appropriate
    - ❑Efficacious
    - ❑Appropriate given renal function
  - ❑Safe
    - ❑ Drug-drug interactions present?
    - ❑Toxicities present?
- Compliance Review
  - ❑Cost affordable
  - ❑Medication available
    - ❑Prior Authorizations needed?
    - ❑Covered by 3rd party insurance formulary
  - ❑Simple and clear regimen

Helpful pneumonic:

Should I call the **I**nvestigational **D**rug **S**ervice or **C**enter for **M**edicare & Medicaid **S**ervices?

Outpatient Medication Reconciliation

- Medication Review
  - ❑Indicated
  - ❑Dose Appropriate
    - ❑Efficacious
    - ❑Appropriate given renal function
  - ❑Safe
    - ❑ Drug-drug interactions present?
    - ❑Toxicities present?
- Compliance Review
  - ❑Cost affordable
  - ❑Medication available
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Discharge medication reconciliation checklist can easily be applied to the outpatient setting with an emphasis on compliance

Learner Take Home Points

- ✓Medications should be reviewed at every transition of care point
  - Admission, inpatient stay, discharge, outpatient
- ✓Multiple sources may be needed to gather an accurate medication history
- ✓A systematic approach to medication reconciliation helps standardize care and minimize mistakes

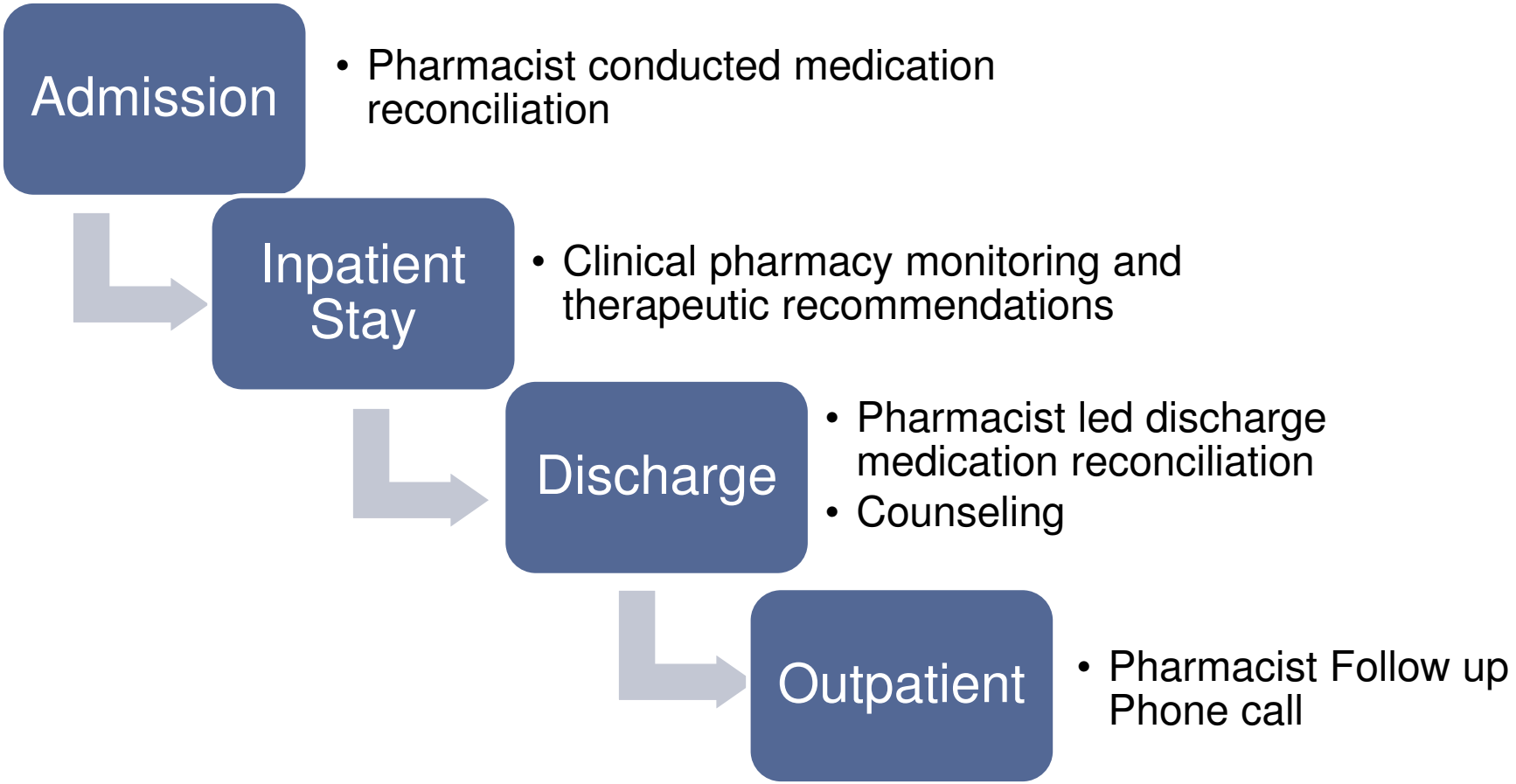
Supplemental Slides

Real World Model: UCLA

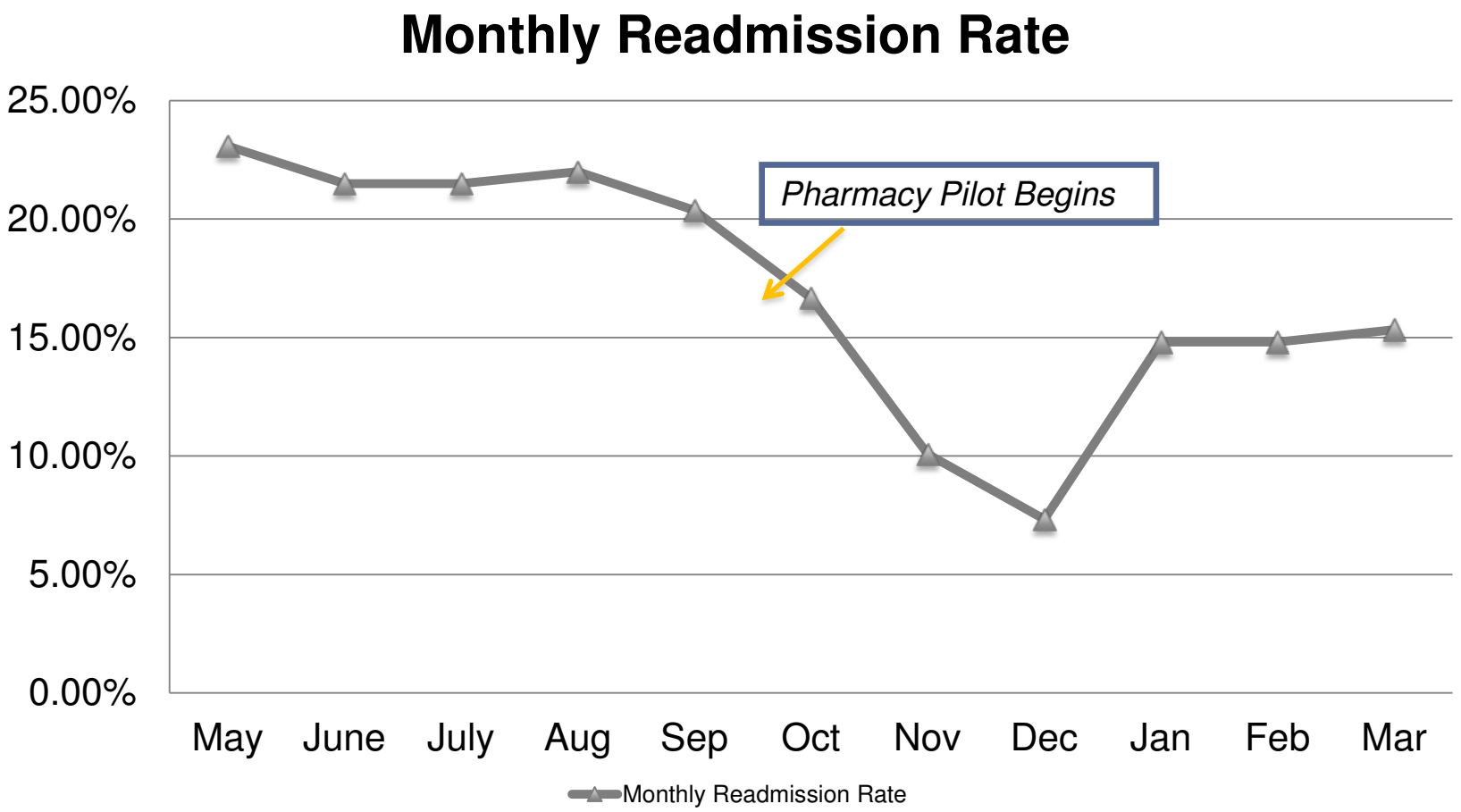
- Geriatric Medicine Special Care Unit
  - 26 beds
  - 2 parallel inpatient teaching services
  - Average daily census: 24
- Multidisciplinary Team Rounds

Physical & Occupational Therapy	Social Work	Nurse Case Management	Nurse
Physician	Speech Therapist	Chaplain	Pharmacist

UCLA Pharmacist Model



30-Day Readmission Rate by Month (2013-14)



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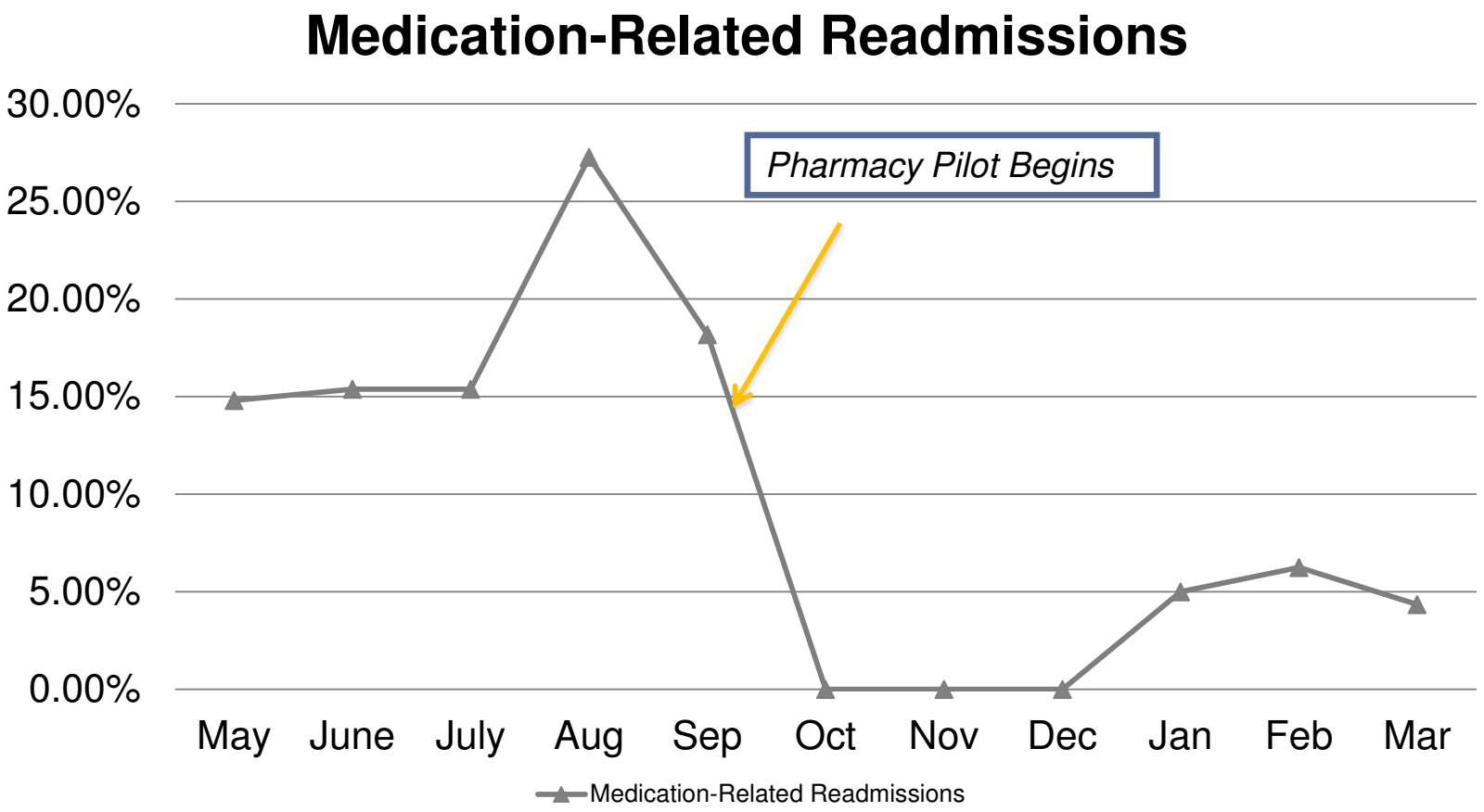
Medication-Related 30-Day Readmission Rate By Month (2013-2014)



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Other successful pharmacist models

- Pharmacist led medication reconciliation[1]
  - Reduction and prevention in medication errors
  - Study group: geriatrics
- Discharge pharmacist[2]
  - Medication reconciliation + counseling
  - Reduction in 30-day readmission rate

1. Beckett RD, Crank CW, Wehmeyer A. Effectiveness and Feasibility of Pharmacist-Led Admission Medication Reconciliation for Geriatric Patients. Journal of Pharmacy Practice. 2012;25(2) 136-141
2. Pal A, Babbott S, Wilkinson ST. Can the Targeted Use of a Discharge Pharmacist Significatntly Decrease 30-Day Readmission