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The Pursuit of Medication Safety

How to Provide Safer Patient Care and Minimize Your Liability

Risk Management and Patient Safety Department

July 27, 2022

Disclosure to Learners

No planner, faculty, or speaker for this activity has any relevant financial relationships with ineligible companies.

Learning Objectives

- Describe the prevalence of medication prescribing and adverse drug events in the United States
- Understand the complexities of the medication process in the ambulatory setting
- Utilize Drug Information Resources for safe medication prescribing
- Identify high risk medications and populations and apply safer prescribing strategies
- Apply risk management measures to improve processes to reduce medication harm

Medication errors: How big of an issue

- Americans are taking more prescription medicines
- In 2018: 5.8 Billion Prescriptions Dispensed
  - Up 2.7% from 2017

Source: IQVIA National Prescription Audit, IQVIA Institute, Jan 2019

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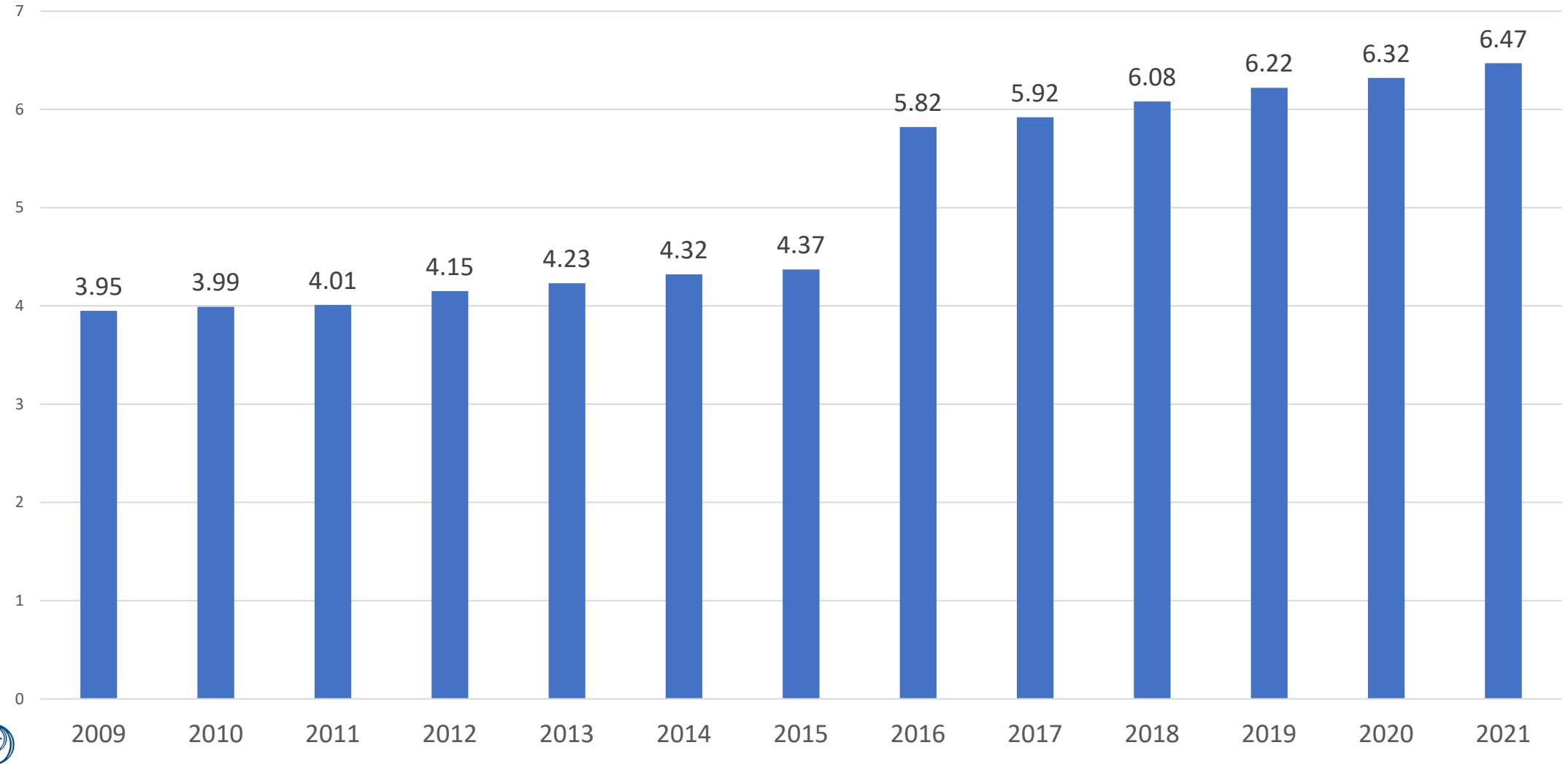
Total Number of Medical Prescriptions Dispensed in the US from 2009-2021 (*in billions*)



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Adverse Drug Events in Adults

- Adverse drug events (ADE) cause approximately 1.3 million emergency department visits annually
- Roughly 350,000 patients requiring hospitalization
- Risk of ADEs increases with age and multiple medications
  - Older adults (65 years or older) visit the emergency department more than twice as often as younger persons
  - Older adults are almost seven times more likely to be hospitalized

Source: Centers for Disease Control and Prevention

Medication Use Process in Office Based Practice

- Complex, various communication pathways between patient, prescriber, pharmacist (pharmacy), and health insurance/prescription plan
  - Prescribing, documenting, dispensing, administering and monitoring
- Chart documentation practices/Medication Reconciliation
  - Updating patient's medication history (Rx's, allergies, body weight at each visit)
    - Include self-treatments, OTCs, alternative products, herbal remedies
- Medications for office use
  - Controlled substances
  - Single dose vials (SDVs)/multi-dose vials (MDVs)
  - Sample medications
  - Vaccine storage and handling
  - Temperature logs

Electronic Health Record: Benefits/error potential

Benefits	Efficiency
	Reduction in errors
	Cost savings
Factors contributing to errors:	Human
	Technical
	Organizational

Source: Esmaeil Zadeh P, Tremblay MC. A review of the literature and proposed classification on e-prescribing: Functions, assimilation stages, benefits, concerns, and risks. Res Social Adm Pharm. 2016 Jan-Feb;12(1):1-19.

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Electronic Health Record: Error potential

Computerized Physician Order Entry (CPOE)	Display	Patient medication lists incomplete
	Drop-down menus; auto-population	
	Vocabulary	
	Default settings	
	Limited ordering capability	Forcing workarounds
	Repeat prescriptions	
	Workflows	
	Clinical decision support systems	Issues with free-text being misinterpreted

Source: Brown CL,2, Mulcaster HL, Triffitt KL, Sittig DF, Ash JS, Reygate K, Husband AK, Bates DW, Slight SP. A systematic review of the types and causes of prescribing errors generated from using computerized provider order entry systems in primary and secondary care. J Am Med Inform Assoc. 2017 Mar 1;24(2):432-440.

Professional Liability

PRIMARY ALLEGATION = MED, ALL SPEC.	CLOSED CLAIMS	PAID CLAIMS	PAID/ CLOSED RATIO	TOTAL INDEMNITY	AVG INDEMNITY	TOTAL ALAE*	AVG ALAE*
2017	463	134	29%	$51,343,426	$383,160	$26,847,215	$57,985
2018	578	147	25%	$48,736,070	$331,538	$29,164,109	$50,457
2019	649	158	24%	$55,338,897	$350,246	$20,518,784	$31,616
TOTAL (2017-2019 CLOSE YR)	1,690	439	26%	$155,418,393	$354,028	$76,530,108	$45,284

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*ALAE-Allocated loss adjustment expenses

Professional Liability

SPECIALTY (PRIMARY ALLEGATION = MEDICATION)	CLOSED CLAIMS	PAID CLAIMS	PAID/ CLOSED RATIO	TOTAL INDEMNITY	AVG INDEMNITY	TOTAL ALAE*	AVG ALAE*
Surgical	276	57	21%	$21,633,489	$379,535	$12,908,157	$46,769
Nonsurgical	1,414	382	27%	$133,784,904	$350,222	$63,621,952	$44,994
TOTAL (2017-2019-CLOSE YEARS)	1,690	439	26%	$155,418,393	$354,028	$76,530,108	$45,284

*ALAE-Allocated loss adjustment expenses

Professional Liability

SPECIALTY (PRIMARY ALLEGATION = MED)	CLOSED CLAIMS	PAID CLAIMS	PAID/ CLOSED RATIO	TOTAL INDEMNITY	AVG INDEMNITY	TOTAL ALAE*	AVG ALAE*
Anesthesiology	220	65	30%	$33,685,141	$518,233	$9,459,197	$42,996
Dermatology	30	11	37%	$4,802,360	$436,578	$1,515,876	$50,529
Internal Medicine	340	83	24%	$31,740,105	$382,411	$12,205,302	$35,898
Three specialties with indemnity payments greater than or equal to $2 million							
TOTAL (2017-2019 CLOSE YEARS)	1,690	439	26%	$155,418,393	$354,028	$76,530,108	$45,284

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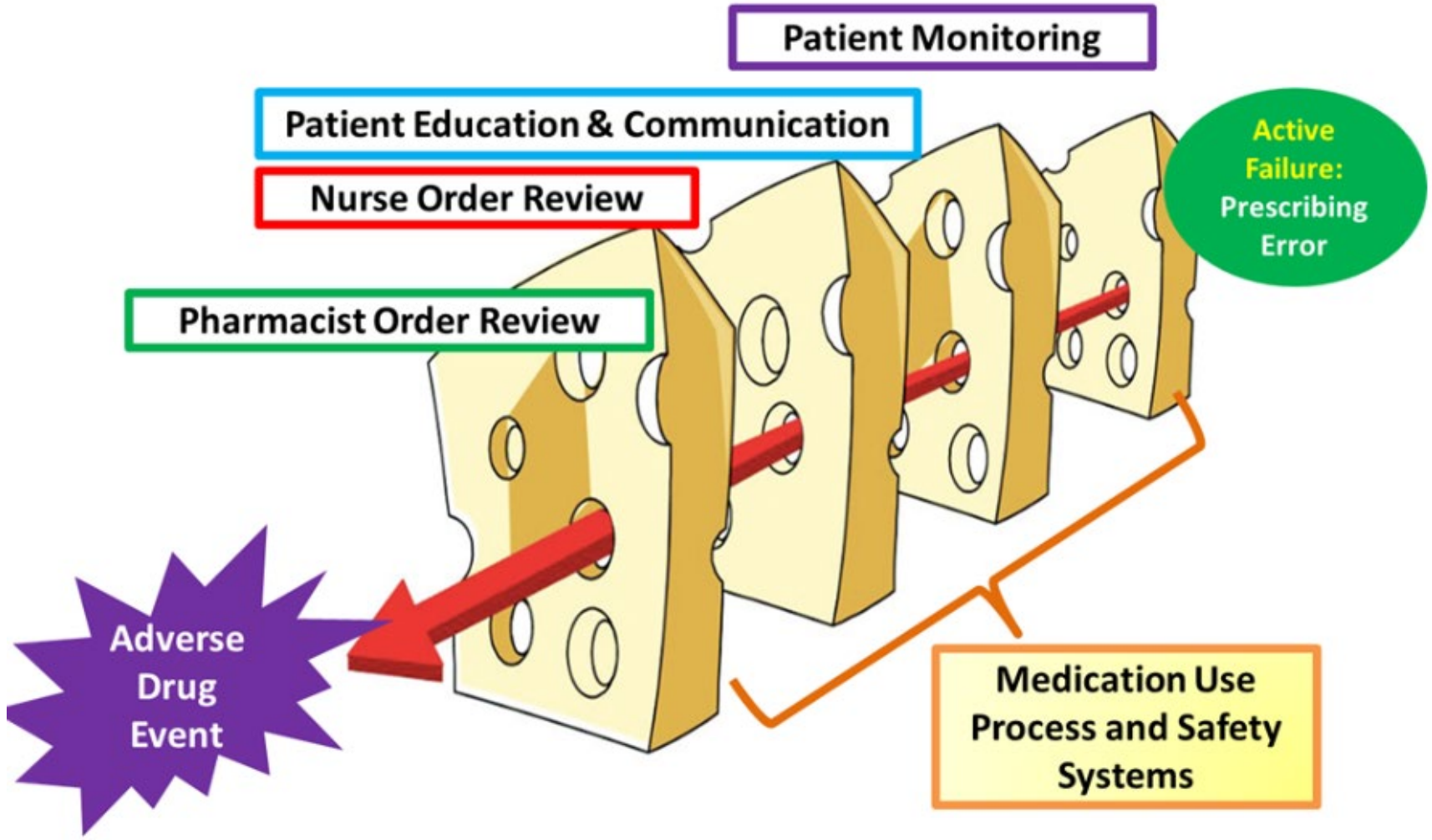
Swiss Cheese Model: Medication Use System



Source: The Swiss cheese model (Reason, 1990)

Implicit Bias in Health Care Research

- Implicit bias has been correlated with:
  - Decreased patient-centered communication
  - Negative patient perception of the health care provider or health care interaction
    - Interpersonal treatment
    - Communication with health care provider
    - Trust in health care provider
    - Health care provider's contextual knowledge (e.g. patient's values and beliefs)
  - Differences in clinical decision making
- Research shows implicit bias towards people based on perceived race, ethnicity, gender expression, age, physical appearance

Implicit Bias

As a physician, take an introspective look at your feelings and behaviors. Ask yourself:

- Do I consistently, without fail, provide the same information to patients, regardless of their race, ethnicity, gender identity or other factors? Or do I knowingly, or unknowingly, spend more time educating patients who are the same race or ethnicity as you?
- Do I use a condescending tone of voice when speaking to patients of a particular group?
- Do I avoid offering certain alternatives to treatment to patients of a particular race or culture because of assumptions about their capability to adhere to a treatment regimen?
- It is important to be aware of your biases, identify how implicit bias may impact the informed consent process, and maintain consistency with the information and education you provide to all patients.

Implicit Bias in Health and Medicine

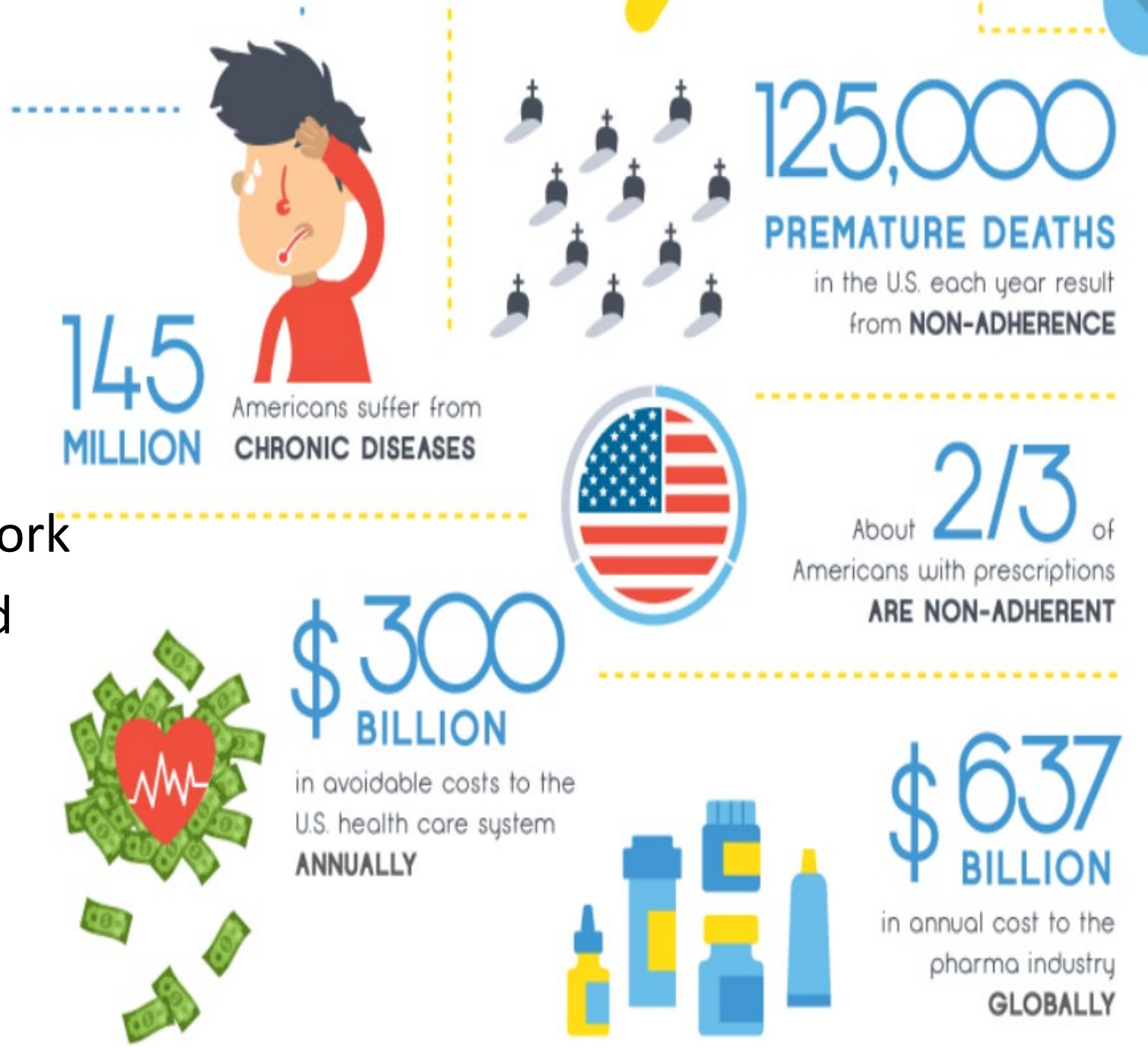
- **Implicit Bias in Medicine**
- "To achieve health equity, health care organizations have a responsibility to mitigate the effect of implicit bias in all interactions and at all points of contact with patients. This is important because implicit bias has the potential to impact not only outcomes of care, but also whether patients will return for services or even seek care at the organization in the first place.“ -*Institute for Healthcare Improvement*

Reducing Harm and Keeping Patients Safe

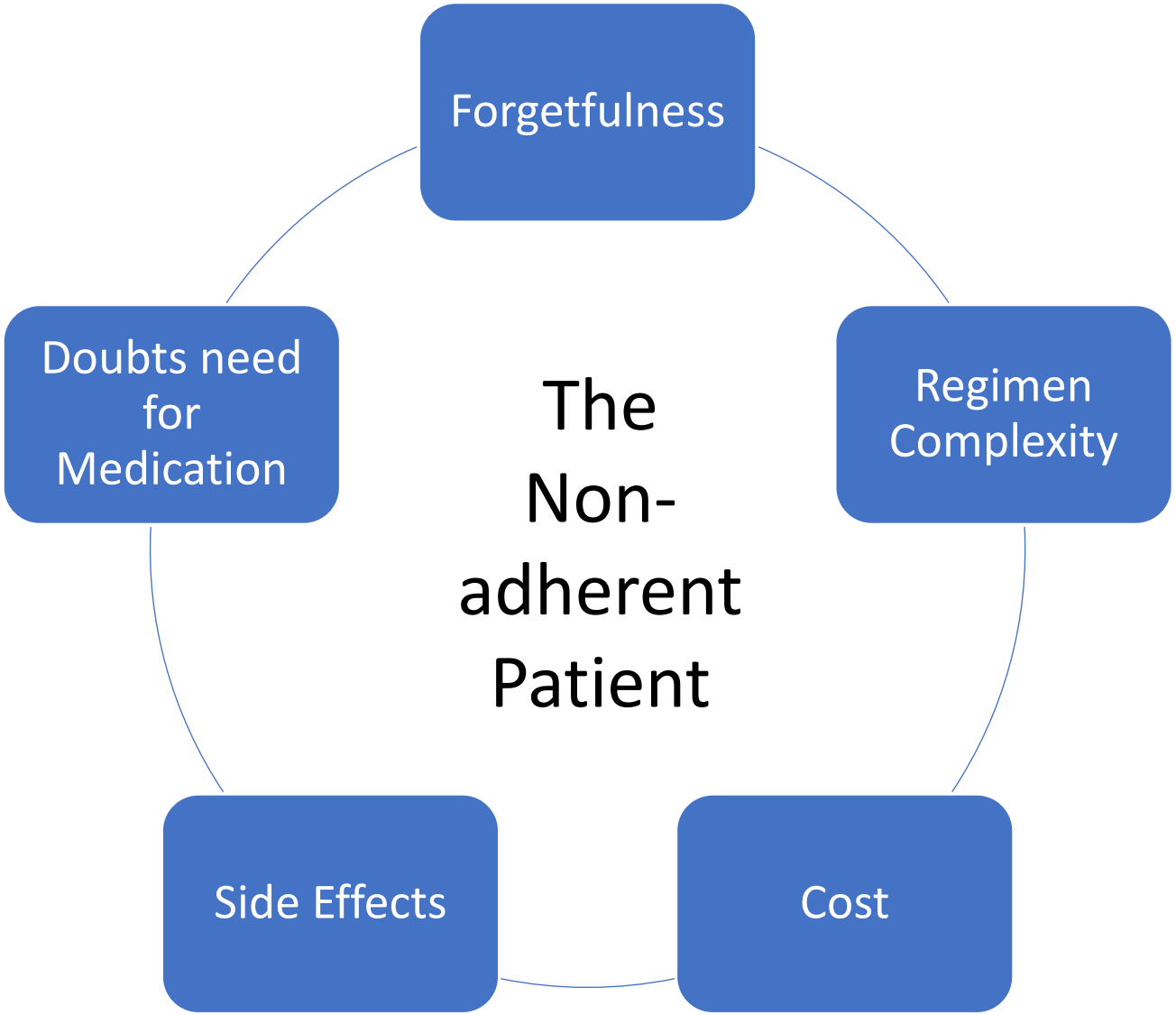
- Additional resources for patient with issues contributing to adverse drug events
  - Non-adherence
  - Multiple comorbidities
  - Conditions requiring high risk, high alert medications
  - Vulnerable populations (elderly, lack of health literacy)
- Drug information resources for safer medication prescribing
- Fill the gaps within the medication use processes

Non-Adherence

- Unwilling or unable to follow the recommended treatment plan
- Does not get necessary lab work
- Does not go to recommended specialist



Source: www.pillsy.com


Forgetfulness
Regimen Complexity
Cost
Side Effects
Doubts need for Medication
The Non-adherent Patient

Patients with Comorbidities

- Patients with chronic diseases usually only take about half the dosage prescribed to them
  - Drug costs
  - Running low, make it last longer
- Patients with silent diseases don’t take their meds because they don’t feel sick
- “Unnatural/Unnecessary chemicals”
- Non-adherence increases when more medicines are prescribed

Source: 8 reasons patients don't take their medications | American Medical Association (ama-assn.org)

High Risk Medications

Examples

- Anticoagulation Therapy and Anticoagulation Reversal
- Antimicrobial Usage
- Opioids
- Chemotherapy
- Restricted Medications
  - Drug Specific Guidelines (methotrexate, IVIG, etc.)

Strategies

- Patient/Family Education
  - Importance of f/u monitoring, compliance issues, dietary restrictions, potential interactions
  - Provide plenty of written material
  - Encourage patients to speak with the pharmacist
  - Refer patients to disease specific support groups/society/ organization
- Lab monitoring
- Follow guidelines

High Risk Population: The Elderly

- Elderly account for 1/3 of prescription drug use, while only 13% of the population
- Average nursing home patient on 7 medications
- Studies report that 89% of seniors take at least one prescription drug, while 54% take 4 or more; and 38% use over-the-counter medications[1]
- Strategies
  - Promote blister packing-local pharmacies
  - Minimize pill burden-combination pills
  - Verify medication list with patients every visit
  - Improve communication across health care sectors
    - EMRs
    - Reviewing hospital discharge plans
    - Pharmacy database
    - Partnering with local pharmacies
    - Resources

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Source: 1) https://www.kff.org/health-reform/issue-brief/data-note-prescription-drugs-and-older-adults/

Drug Information Resources for Safer Prescribing

- Tertiary Resources: Condensed, summarized and digested information from primary and other resources
- Provide rapid access to information
- Limitations:
  - Currency of the resource (i.e., how long ago was that information published?)
  - Accuracy of information, incompleteness
  - Examples include MICROMEDEX®, textbooks, UpToDate®, review articles, and encyclopedias
- Access to record and clinical support resources in the exam room
  - Improved patient care
  - Facilitates patient involvement in their own care

Additional Strategies for Safe Medication Practices

- Include the drug name, strength, instructions for use, duration of therapy and indication of use when possible (document in patient's chart)
- Prepare a prescription label for samples
- Policy/procedure of proper acquisition, storage, inventory and management
- Checking expiration dates
- Separate error prone medications
  - Look alike sound alike
  - Different routes of administration
- Medications are stored in a secured area

Culture of Safety

- Critically evaluate your reporting system
- Increase medication safety incident reporting
- Develop a system for follow-up of reports
- Analyze incident report data
- Provide feedback to staff members

Involving Staff in Medication Safety Initiatives

- Share examples of system-based changes
- Review and summarize past errors
- Identify areas for future quality improvement activities
- Establish a non-punitive culture of openness, transparency
- Make it fun and rewarding

Medication Error Management

- Develop a safety plan
  - Detect, analyze and reduce medication errors
  - All staff are aware of how to respond to a serious medication error
- Post error support
  - Helping involved staff cope with error
- Voluntary reporting to external reporting programs
  - USP Medication Errors Reporting Programs
  - FDA MedWatch Program
  - CDC Vaccine Adverse Reaction Reporting Program
- Error Disclosure
  - Patient, caregiver and/or family
  - CAP cares

Using an Action Plan for Patient Safety Initiatives

- Conduct a Root Cause Analysis
  - Ask questions and write them down (Fishbone diagram)
    - What happened?
    - Why did it happen?
    - What can be done to prevent it from happening again?
- Implement
- Track
- Monitor

FISHBONE DIAGRAM DATE: ____5/2021_____

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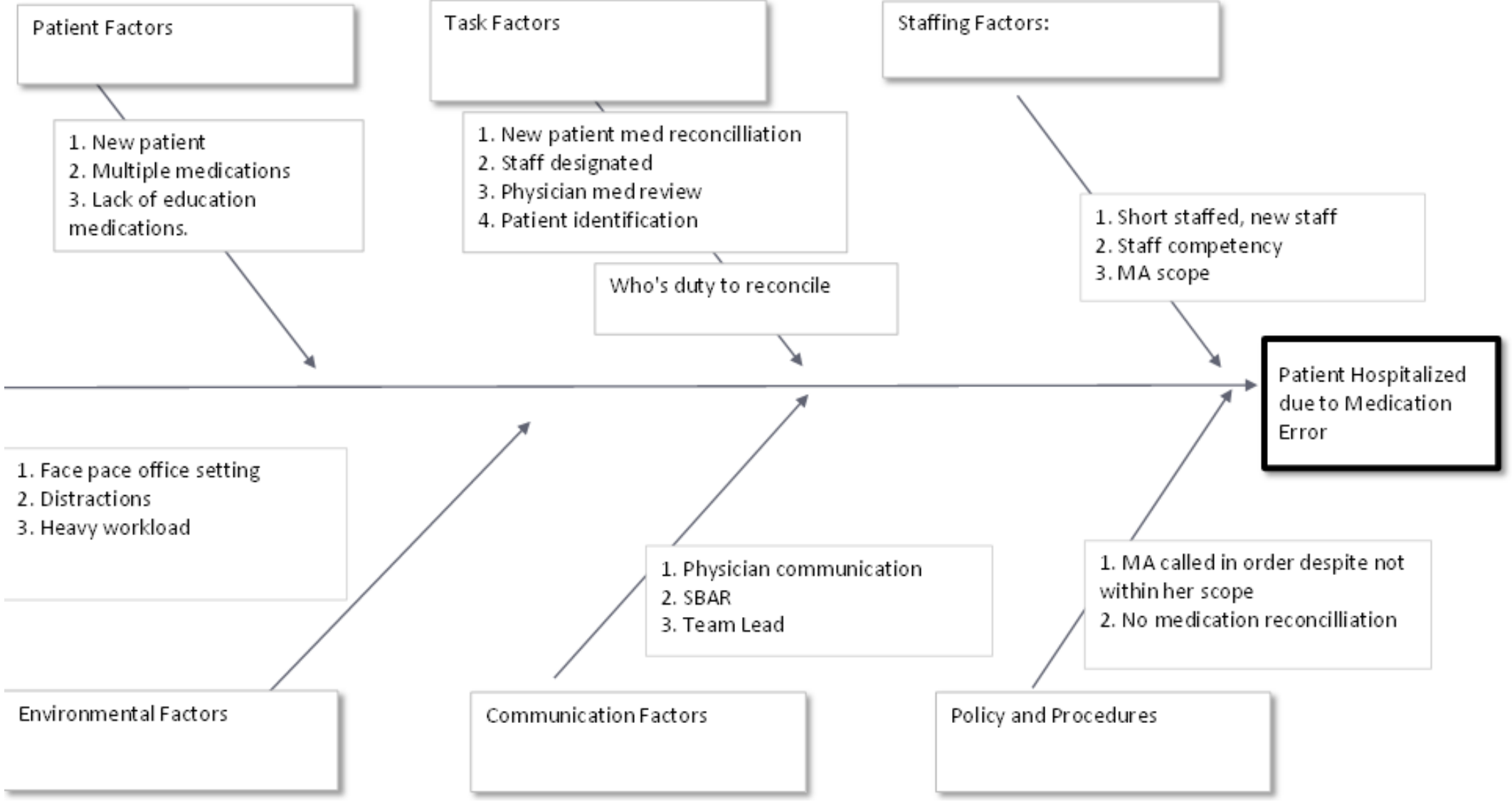
New patient: 49YO male with HTN, CAD, hyperlipidemia. BP in office 180/91. Prescribed Losartin. In ED due to dizziness, admitted with severe hypotension due to multiple BP medications.



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Sample-PATIENT SAFETY ACTION PLAN FOR IMPROVEMENT

GOAL					
Eliminate Medication Errors					
CONCERN	**SAFETY STEPS MISSED**	**FINDINGS**	**ACTION (S) (how effectiveness will be measured – sample size)**	**Date completed**	**RESPONSIBLE PARTY**
Environmental Factors 1.Busy office 2.Distractions 3.Lack of equipment	No item identified				
1. Communications 2. Team Lead 3. SBAR 4. Physician communication	1. Physician not informed patient "forgot" RX bottles for review 2. No delegated staff assigned to medication reconcilliation.	Lack of communication between MA and physician	Create process for medication review with staff and physician. Physician to confirm staffs medication reconcilliation with patient.		Office Manager Physician
Policy and Procedures 1. Medication Policies a. Administration b. Reconcilliation c. New RX and refills		No Policy & Procedure for Medication reconcilliation	Create Policy & Procedure for Medication Reconcilliation for new and current patients. Monthly Chart audit for medication reconciliation process.		Office Manager Physician

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Action Plan Tracking

Prepared by:

Action Items		Month 1	Month 2	Month 3	Month 4	Conclusion, Action, and Follow-Up
ACTION ITEM 1: Patient medication history (PMH) is reviewed at every patient visit # of charts w/ PMH completed / total # of charts reviewed						Conclusion:
	N	150	149	138		2 months at goal, revised medication reconciliation policy appears effective
	D	175	154	143		Action:
		85.71	96.75	96.50	#DIV/0!	Continue to monitor 2 more months to have 4 consecutive months over 90%
ACTION ITEM 2: All new hires will have medication reconciliation process education # of records w/ education completed / of staff records reviewed						Conclusion:
	N	1	2	4		3 months at goal, new hire policy appears effective
	D	1	2	4		Action:
		100.00	100.00	100.00	#DIV/0!	Recommend to stop tracking. Plan to to spot check in 6 months
ACTION ITEM 3: All PMH will be s/o by the physician # of charts w/ physician s/o on PMH / of charts reviewed						Conclusion:
	N	173	152	138		3 months at goal, revised medication reconciliation policy appears effective
	D	175	154	143		Action:
		98.86	98.70	96.50	#DIV/0!	Continue to monitor 1 more months to have 4 consecutive months over 90%

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CAP Risk Management Hotline
800-252-0555

24/7 Risk Management Support for CAP Members

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