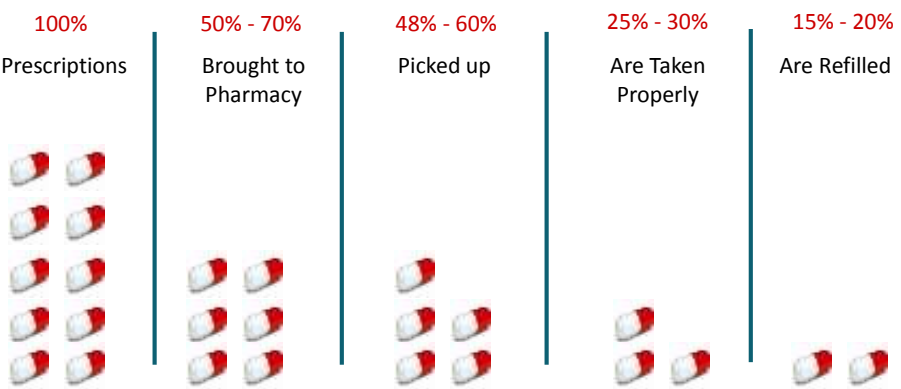
What is UC San Francisco Doing?

Our Focus

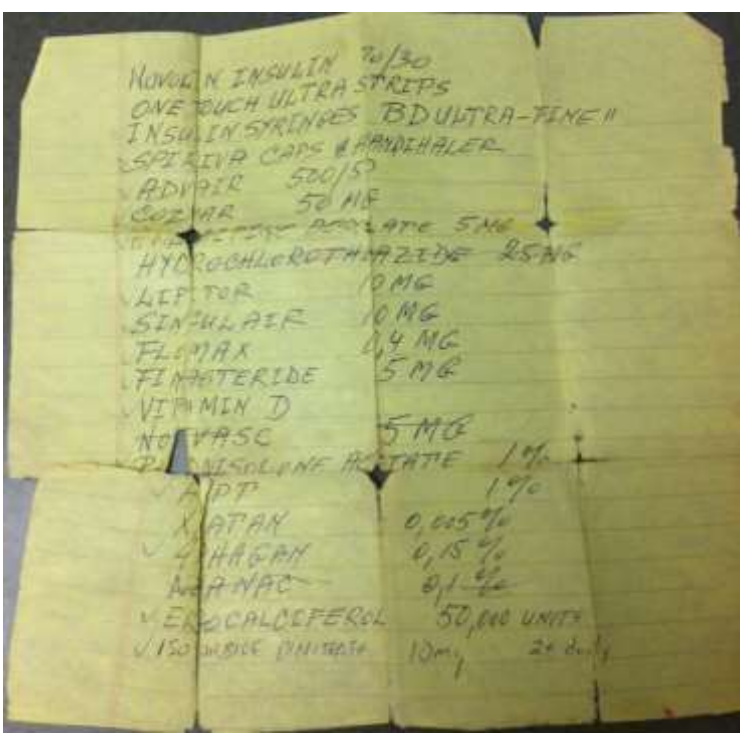
- ***Medication management*** **is critical in achieving desired health outcomes**
  - What are the medication pain points at transitions of care?
  - How do we quantify them?
  - What are their implications?
  - What are the solutions?

Rate of Medication Drop Off – Nearly 1 in 3 Patients Don't Fill

Adherence? Physicians – alignment, connection w/ PCP to hospitalists (handoff)



Source: IMS



The UCSF Experience

- School of Pharmacy looked at developing a transition of care program
- We were opening Walgreen's at UCSF February 2014
- Transitions of care market was already saturated at UCSF
- Evaluated the existing transition market and looked for a fit

5

48-hour Discharge Phone Call Program

- **Nurse-run program**
  - Designed to improve HCAHPS Scores
  - Centralizing, automating and expanding
  - Was there a fit for pharmacy?
    - Design and format of medication-related questions for the discharge survey
    - Integration into the phone call team
      - Interprofessional collaboration
      - Development of escalation protocols
      - Development of documentation systems
      - Study the results

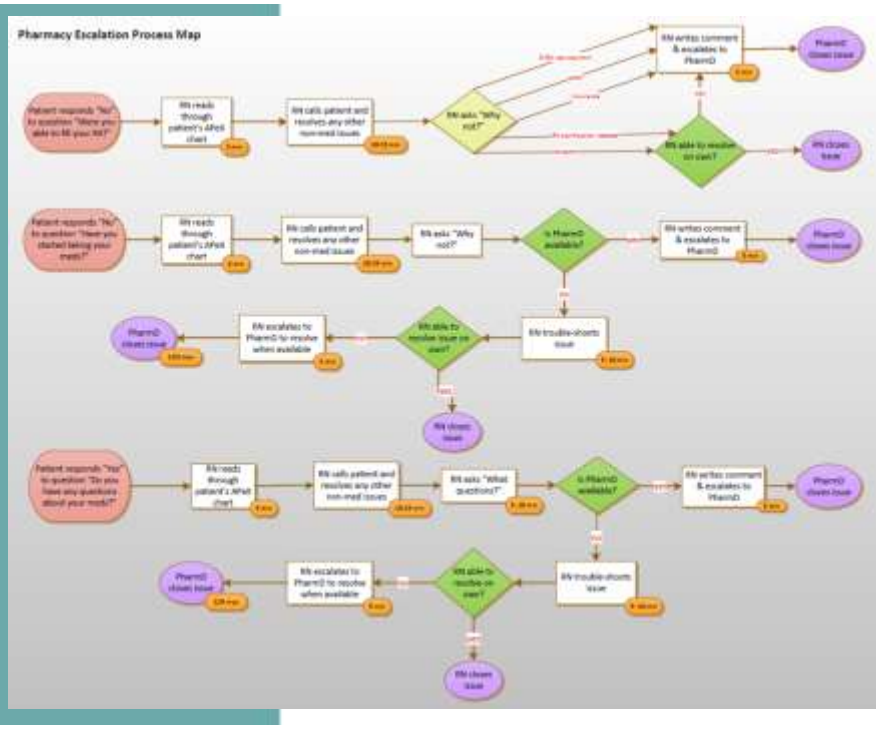
6

UCSF University of California San Francisco

Medication-related Survey Questions

- **IVR technology instituted**
- **Medication Survey questions**
  1. Taking your medications is important for your health. Were you able to fill your prescriptions?
  2. Have you started taking your medications?
  3. Do you have any questions about taking your medications?

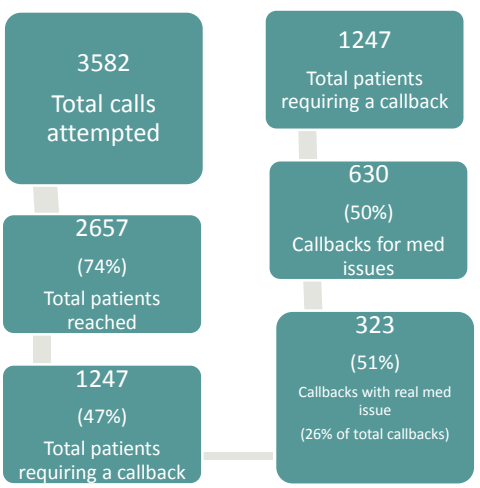
7



Medication-Related Calls
9/20/13 – 2/7/14 (20 weeks)

- **630 call backs for medication issues**
  - 578 (91%) were due to the 3 med prompts
    - 424 were questions about taking medications
    - 220 did not fill their discharge medication
    - 62 did not start their discharge medication (had it)
  - 52 (9%) no med prompt but pts had med-related ?
  - 323 (51%) actually had a medication issue to discuss and resolve

Medication-Related Calls



Medication-Related Issues Evaluated n=323

- **Insurance** (23%)
- **Other medication issues** (23%)
- **Directions (Sig)** (16%)
- **Side effects** (16%)
- **Prescription problems** (11%)
- **Access** (10%)

What's Next?

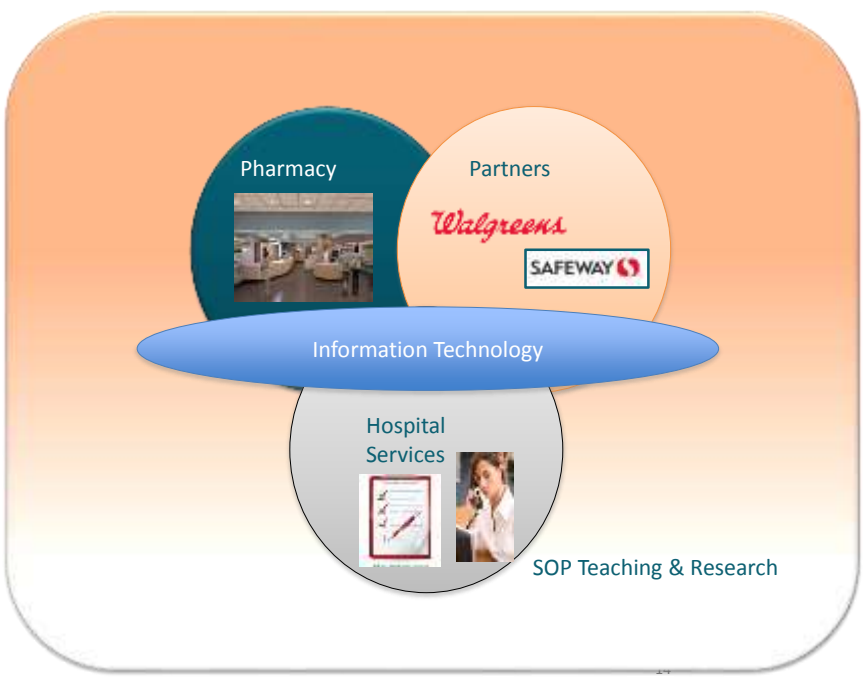
- **Problem resolution**
  - Improved escalation protocols
    - Right calls to right people
  - Meds to Beds program
    - 60% problem resolution
  - Better medication education (MedList Clinic)
    - 40% problem resolution
    - Inpatient or post-discharge????
    - Actionable personalized medication lists

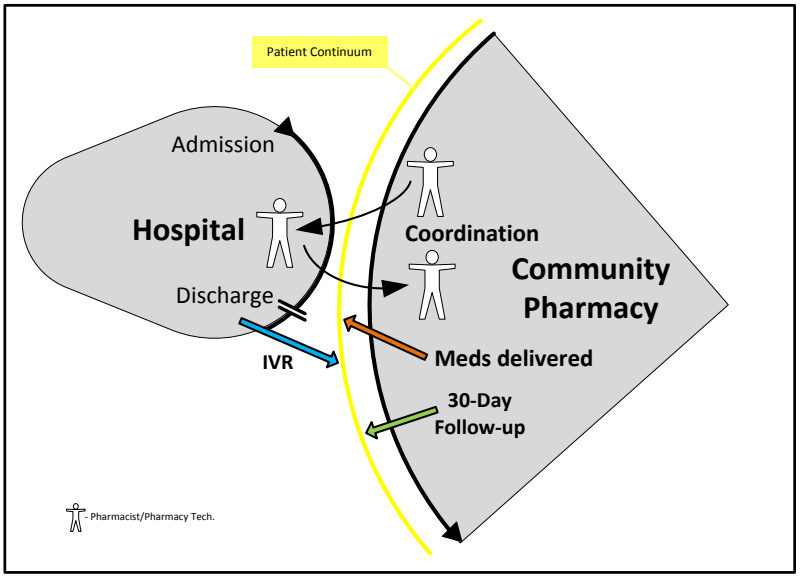
UCSF
University of California San Francisco

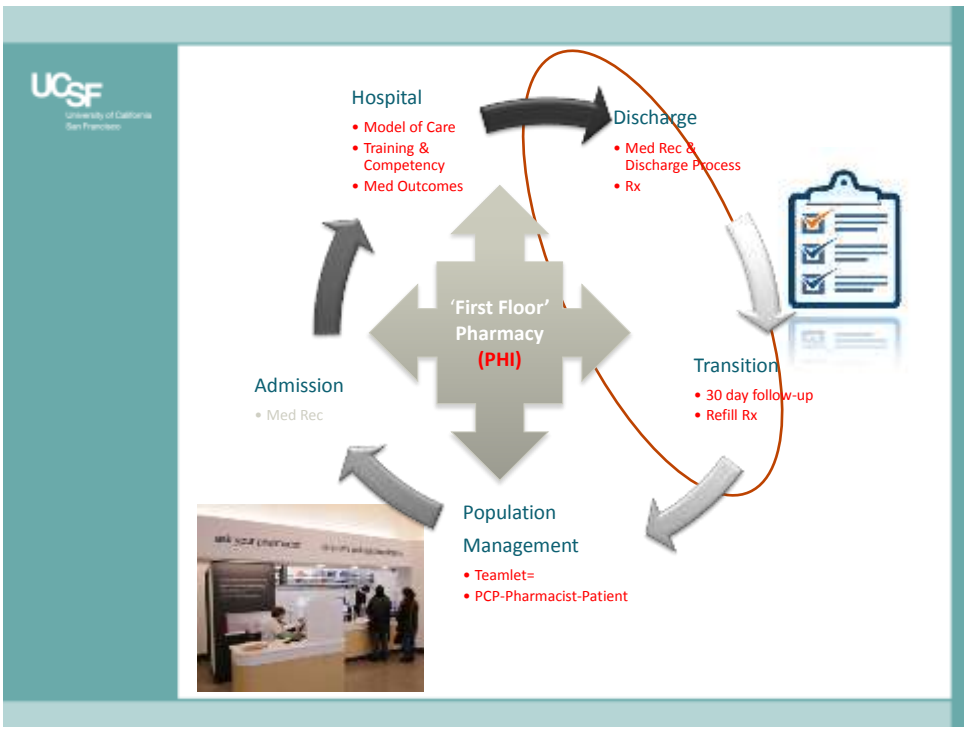
First Floor Pharmacy Project (FFP)

- **Identification of the medication issues in transitions at our institution**
- **Providing safe transitions of patients back to the communities in which they live**
- **Engagement of Community Pharmacists**
- **Pharmacy With Unique Space Design to Promote Health Interactions**
  - Location to pilot innovative programs:
  - Bedside Deliver and the MedList Clinic
- **Tackling the 'actionable' medication list to facilitate health delivery**
  - Hospital Transitions (Discharge) as a starting point
  - Technology (EMR)

13




Patient Continuum
Admission
Hospital
Discharge
Coordination
Community Pharmacy
IVR
Meds delivered
30-Day Follow-up
- Pharmacist/Pharmacy Tech.


UCSF
University of California San Francisco
Hospital
• Model of Care
• Training & Competency
• Med Outcomes
Discharge
• Med Rec & Discharge Process
• Rx
'First Floor' Pharmacy (PHI)
Admission
• Med Rec
Transition
• 30 day follow-up
• Refill Rx
Population Management
• Teamlet=
• PCP-Pharmacist-Patient

17

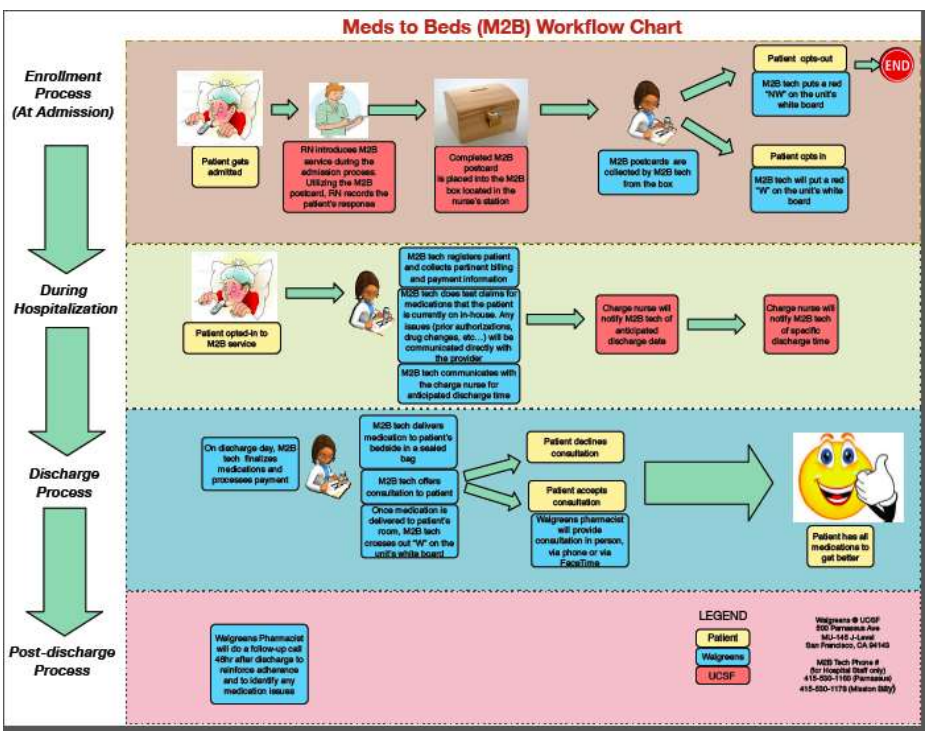
18

UCSF University of California San Francisco

Bedside Delivery at Discharge

- Partnering with the community pharmacy
- **Meds-to-Beds** is a service that delivers medications to a patient's bedside prior to discharge
- It is a **FREE** service to the hospital and to the patient
- Can lead to better short term adherence
- Importance of placing the EMR into the community setting

19



Comprehensive Medication Review (CMR) Post Discharge

- **MedList Clinic**
  - High risk patients identified in the hospital
  - Offered MedList Clinic CMR post discharge
  - Patients contacted post discharge and seen in Our Walgreens pharmacy or telephonically
  - Walgreens had our electronic medical record in place so they HAD INFORMATION!
  - All pt's receive an actionable medication list post visit with patient and provider notes to promote engagement

21

Medication List

Please share this list with all of your healthcare providers

Vince Lambardi

Dr Mark Hough (312-111-1212)

ALLERGIES: Pencillin, peanuts test

Medication	Purpose	8AM	6PM
Metformin Hydrochloride 500mg Tablet Take one tablet by mouth twice a day Take with a meal to avoid stomach upset	**Blood Sugar**	1 Tablet	1 Tablet
Tylenol 325mg Tablet Take one tablet by mouth every 4 - 6 hours as needed for pain	**Back Pain**	Take one tablet by mouth every 4 - 6 hours as needed for pain	
Hydrochlorothiazide 25mg Tablet Take one tablet by mouth in the morning	**Blood Pressure**	1 Tablet	
Lisinopril 20mg Tablet Take one tablet by mouth in the morning Likely causing your dry cough. Discuss with your doctor	**Blood Pressure**	1 Tablet	
Atorvastatin Calcium 20mg Tablet Take one tablet by mouth every morning Additional Meds	**Lowers Cholesterol**	1 Tablet	

22

Provider Notes:
Primary care: Mr. Lombardi is experiencing a dry cough since starting lisinopril. Please consider an ARB in place of the lisinopril
- please see quality screens as pt needs diabetes measure addressed

Cardiology: pt is having flushing with amiodarone and has stopped it. He states that he called your office to alert you of this.

Patient Instructions:
Mr. Lombardi, thank you for meeting with us in the MedList Clinic. Please begin using the med box we povided to help you remember your medications
- the cough you describe (dry tickle) is likely due to your lisinopril. We will contact your doctor but please discuss with him as well.
- please remember to take your metformin after a meal to avoid stomach upset and diarrhea
- your hydrochlorothiazide should be taken in the morning to avoid getting up at night to urinate

2

It is recommended that you get a:
1. A1C diabetes test (once every year)
2. Kidney test (once every year)
3. Eye exam (once every year)
4. There are a number of resources to help you quit smoking:
   A) Talk with your pharmacist about medicines to help you stop smoking
   B) Call the California Smoker's Help Line 1-800-NO-BUTTS (1-800-662-8887)

23

Vince Lambardi **UCSF**
ALLERGIES: Pencillin, peanuts test

Medication	8AM	6PM
Atorvastatin Calcium 20mg Tablet	1 Tablet	
Hydrochlorothiazide 25mg Tablet	1 Tablet	
Lisinopril 20mg Tablet	1 Tablet	
Metformin Hydrochloride 500mg Tablet	1 Tablet	1 Tablet
Tylenol 325mg Tablet	Take one tablet by mouth every 4 - 6 hours as needed for pain	

24

How is UCSF Doing with Med Rec

- **90 patients discharged from the hospital seen for CMR in MedList Clinic.**
  - > 95% discordance between the discharge summary and what the patient is actually taking at home.
- **Common discrepancies include:**
  - Vitamins and supplements that the patient is taking at home that are not on the discharge medication list
  - Dosing discrepancies between home meds and discharge meds
  - Prn meds that are being taken at home that are not listed on discharge summary (inhalers, allergy meds, sleep aids, meds for constipation)
  - Meds on the discharge summary that patient states they are no longer taking and have not been on for a period of time.
  - Duplicate therapy listed on discharge summaries that we clarify and delete

25

Results

- **150 patients accepted CMR service**
- **90 (60%) completed a CMR**
- **Age: 11-103, average 64, median 67**
- **51.3% female, 48.7% male**

26

Results (n=90 patients)

- 182 drug-related problems identified
- 177 interventions made
- 1.97 interventions per patient
- 81 patients (90%) given patient communication
- 68 patients (76%) given provider communication
- All patients provided medication list

27

Drug-related Problems (n=182)

DRP	Percentage
DDI	11%
Adherence	18%
ADEs	22%
Appropriateness/Effectiveness	48%

28

Role of the Pharmacist in Practice Reform

- Play a key leadership role in medication reconciliation
- Be involved in the design and implementation of emerging medication safety technologies
- Assist in evaluating your practice
  - How can I be more collaborative and innovative in my practice to promote patient safety?
- Pay special attention to patients in transition – this is a vulnerable population

Learnings

- Clear goals
- Partnerships & collaborations
- Create opportunity
- Take risk
- Fail fast, pivot and move on!

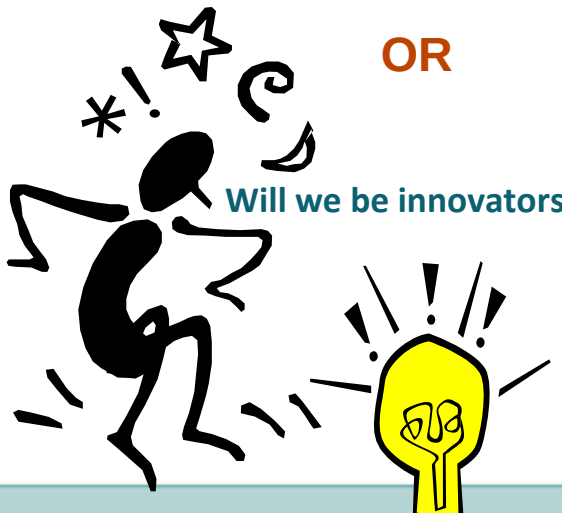
Vision without execution is hallucination – Henry Ford

Pharmacy's Position

Will we be reactionaries?

OR

Will we be innovators?



Self Assessment Questions

1. The single greatest predictor of adverse drug events in a patient is the number of medications used? T
2. Medication reconciliation as a sole intervention has been shown to decrease readmissions and mortality in transitions of care? F
3. TOC initiatives are easily transferable among organizations, settings, jurisdictions and countries? F

32

Questions

UCSF
University of California
San Francisco
advancing health worldwide

References

1. Jencks SF, Williams MV, Coleman EA. Rehospitalizations among patients in the Medicare fee-forservice program. N Engl J Med. Apr 2 2009;360(14):1418-1428.
2. Comette P, D'Hoore W, Malhomme B, Van Pee D, Meert P, Swine C. Differential risk factors for early and later hospital readmission of older patients. Aging Clin Exp Res. Aug 2005;17(4):322-328.
3. Hernandez AF, Greiner MA, Fonarow GC, et al. Relationship between early physician follow-up and 30- day readmission among Medicare beneficiaries hospitalized for heart failure. JAMA. May 5, 2010;303(17):1716-1722.
4. Coleman EA, Parry C, Chalmers S, Min SJ. The care transitions intervention: results of a randomized controlled trial. Arch Intern Med. Sep 25 2006;166(17):1822-1828.
5. Jack BW, Chetty VK, Anthony D, et al. A reengineered hospital discharge program to decrease rehospitalization: a randomized trial. Ann Intern Med. Feb 3 2009;150(3):178-187.
6. Koehler BE, Richter KM, Youngblood L, et al. Reduction of 30-day post discharge hospital readmission or emergency department (ED) visit rates in high-risk elderly medical patients through delivery of a targeted care bundle. J Hosp Med. Apr 2009;4(4):211-218.
7. Kwan JL, Lo L, Sampson M, Shojania KG. Medication reconciliation during transitions of care as a patient safety strategy: A systematic review. *Ann Intern Med*. 2013;158(5):397-403.
8. Hansen LO, Young RS, Hinami K, Leung A, Williams MV. Interventions to reduce 30-day rehospitalization: A systematic review. *Ann Intern Med*. 2011;155(8):520-528.

UCSF University of California San Francisco

References

9. Stewart S, Pearson S, Horowitz JD. Effects of a home-based intervention among patients with congestive heart failure discharged from acute hospital care. *Arch Intern Med*. 1998;158(10):1067-1072.
10. Stewart S, Pearson S, Luke CG, Horowitz JD. Effects of home-based intervention on unplanned readmissions and out-of-hospital deaths. *J Am Geriatr Soc*. 1998;46(2):174-180.
11. Schmader KE, Hanlon JT, Pieper CF, et al. Effects of geriatric evaluation and management on adverse drug reactions and suboptimal prescribing in the frail elderly. *Am J Med*. 2004;116(6):394-401.
12. Schnipper JL, Kirwin JL, Cotugno MC, et al. Role of pharmacist counseling in preventing adverse drug events after hospitalization. *Arch Intern Med*. 2006;166(5):565-571.
13. Schnipper JL, Hamann C, Ndumele CD, et al. Effect of an electronic medication reconciliation application and process redesign on potential adverse drug events: A cluster-randomized trial. *Arch Intern Med*. 2009;169(8):771-780.
14. Scullin C, Scott MG, Hogg A, McElnay JC. An innovative approach to integrated medicines management. *J Eval Clin Pract*. 2007;13(5):781-788.
15. Gillespie U, Alassaad A, Henrohn D, et al. A comprehensive pharmacist intervention to reduce morbidity in patients 80 years or older: A randomized controlled trial. *Arch Intern Med*. 2009;169(9):894-900.
16. Lopez Cabezas C, Falces Salvador C, Cubi Quadrada D, et al. Randomized clinical trial of a postdischarge pharmaceutical care program vs regular follow-up in patients with heart failure. *Farm Hosp*. 2006;30(6):328-342.

35

Insurance

ISSUE	CODE	DEFINITION	Total	sub	ESC	%esc
Insurance	IPAR	Insurance; Prior authorization required	31		10	
	INONE	Insurance; Patient does not have insurance	3		2	
	INSURANCE	insurance issue (not specified in comments; does not include PAR or coverage; other insurance reason not including PAR)	8		1	
	ITOOSOON	Refill too soon due to previous fills before admitting to the hospital	5		1	
	IPRICE	Medication is too expensive even after insurance	2			
	INOCOVE	Insurance; Not covered by patient's insurance	25		7	
Subtotal				**74**	**21**	**28%**

Access

ISSUE	CODE	DEFINITION	Total	sub	ESC	%esc
Access	ANOTRAN	Access; Patient does not have transportation to pick up medication	6			
	ANOSTOCK	Access; Pharmacy is out of stock of medication	12			
	AWRONGPHARMACY	Access; Prescription was sent to wrong pharmacy	3		1	
	ANOCARRY	Pharmacy doesn't carry the medication	4		2	
	ANOFILL	pharmacy would not fill medication	3		1	
	AREFILL	Patient concerned with access of refills of medications (Rx called into pharmacy not in patient's neighborhood after discharge)	1			
	ATOOSICK	Access; Patient too sick to go to pharmacy to pick up medication	1			
	ATOOBUSY	pharmacy was too busy to have Rx ready when patient came in to pick up	1			
Subtotal				**31**	**4**	**13%**

Prescription Issues

ISSUE	CODE	DEFINITION	Total	sub	ESC	%esc
Rx	RNOPRINTRX	Rx; No printed/paper Rx given (controlled RX's)	2			
	RERXFAIL	Rx; e-prescription failed – (pharmacy does not have Rx, Rx was not transmitted)	8		2	
	RNOICD9DX	Rx; No ICD9 or no diagnosis code given with Rx	2		1	
	RDECLINE	Patient was prescribed Rx at discharge but declined it	4			
	RREFILL	Patient almost out of med, needs refill	4			
	RWRONG	wrong Rx sent to pharmacy	1			
	RQUESTION	pt wants to know if Rx was sent/called into to pharmacy; if Rx was already sent out via mail order	2			
	RCANCEL	pharmacy cancelled Rx	2			
	RERROR	mistake or error on prescriptionnot filled	2			
	RNORX	Rx; Patient was not given Rx at discharge (needed Rx never prescribed)	9			
Subtotal				**36**	**3**	**8%**

Side Effects

ISSUE	CODE	DEFINITION	Total	sub	ESC	%esc
Side Effects	SEQUESTION	SE; Question about side effects	11		3	
	SEAFRAID	Patient is not taking medication to avoid side effects	3			
	SEEXPERIENCE	SE; Patient is experiencing side effects	39		6	
Subtotal				**53**	**9**	**17%**

Directions (Sig)

ISSUE	CODE	DEFINITION	Total	sub	ESC	%esc
SIG	SIGFORMULA	SIG; Like Nexium dissolved in solution question	3			
	SIGDIRECTIONS	SIG; Patient does not understand directions (how to follow directions)	22		2	
	SIGTAPER	SIG; How to taper medications	15		7	
	SIGCOUNSEL	SIG; Inhaler, insulin, etc	10		2	
	SIGCHANGE	Patient not aware of the sig change	3			
Subtotal				**53**	**11**	**21%**

Medication Issues

ISSUE	CODE	DEFINITION	Total	sub	ESC	%esc
MED	MEDNOHELP	Medication does not help (in the past, after a few days)	9		1	
	MEDQ	Medication question (how long to use, should new med be started, should med be d/c, missed dose management, general med question)	55		7	
	MEDISSUENOREASON	issues with meds, but no reason given	11		1	
Subtotal				**75**	**9**	**12%**