HANDOVERS: CRUCIAL SKILLS IN HIGH-STAKES HANDOFFS

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No Disclosures

Breakdown of this talk

Define Handovers or Handoffs

Look at Handoffs in the context of patient care and medical costs

Best practice for different types of handovers

- Highlight a few studies

Recap take home points

Questions

Objectives of this Talk

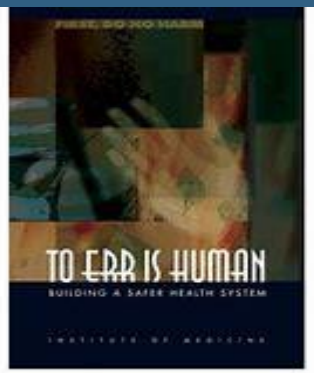
- Reveal why transitions in care are crucial
- Understand the importance of handovers
- Apply best practice to your **inpatient handoffs**
- Apply best practice for your **discharge processes**

Defining Patient Handovers

1. **Transitions of Care**
   - Change in patient location, or provider, or both
   - ED, ICU, discharge, shift change, service change
2. **Handovers or Handoff**
   - The *exchange of information* and *transfer of responsibility* that occurs during a transition of care

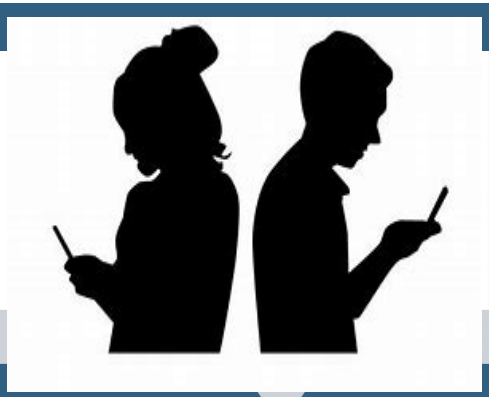
Arora AM, Manjarrez E, Dressler DD, et al. J Hosp Med 2009

A History of Handoffs



1996

JC instituted the sentinel event reporting policy

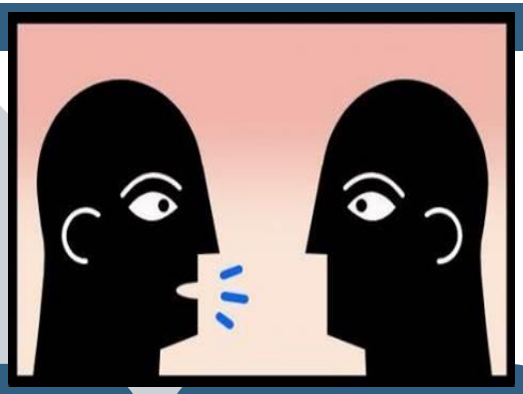


2006

National Patient Safety Goal (NPSG) implemented

2010

NPSG became a requirement for accreditation

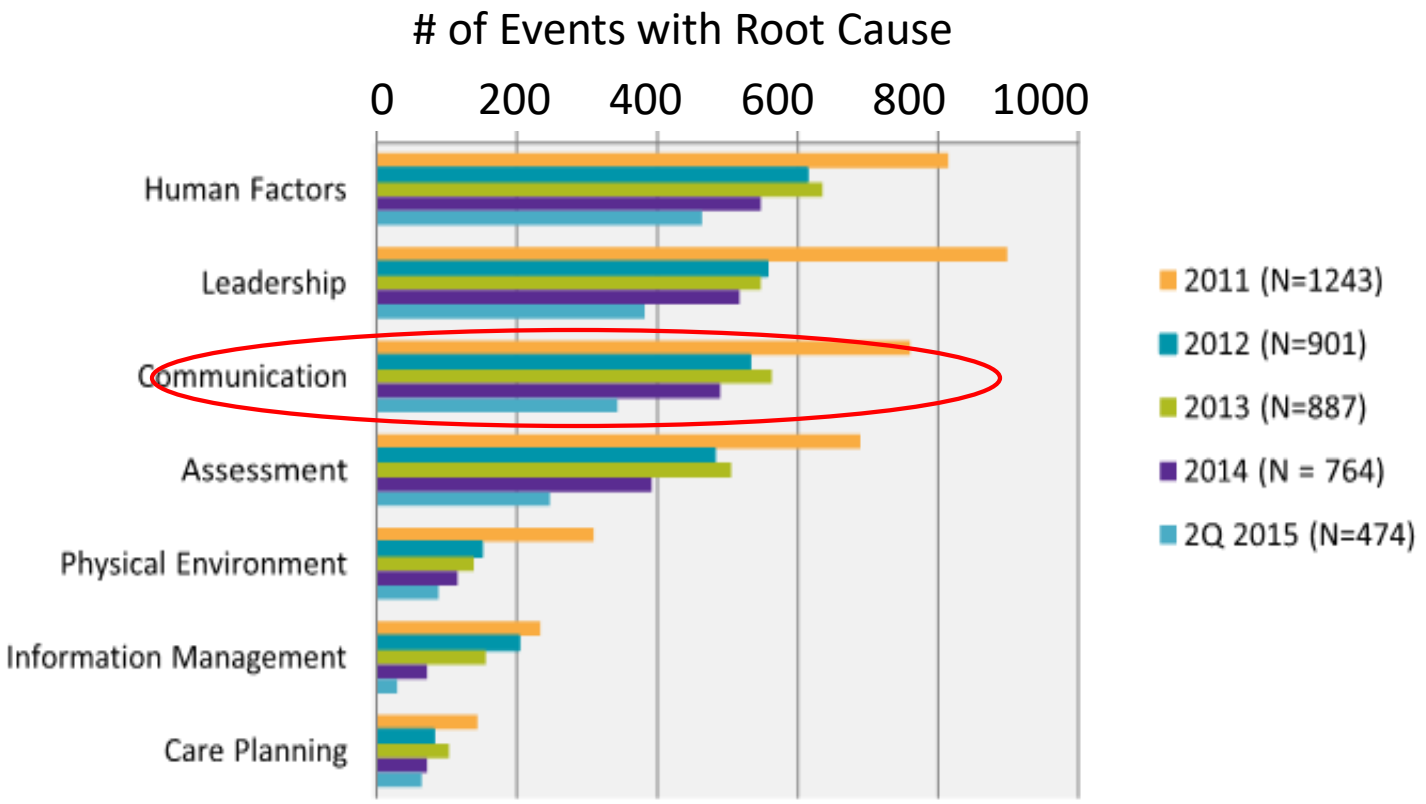


2011

ACGME mandates residency competency in handover communications

Joint Commission

Most Frequently Identified Root Causes of Sentinel Events Reviewed by the Joint Commission (2011-2015)



. . . and Communication Remains an Issue

1,744 deaths and $1.7 billion in malpractice costs over 5 years.

What the Patient Experiences

15 transitions in 5 days

3 different physicians in 1st 24 hrs

Vidyarthi et al. JHM. 2006
Philibert I. QualSaf Health Care. 2009

https://theosophical.wordpress.com

SPECIAL ARTICLE

Changes in Medical Errors after Implementation of a Handoff Program

Amy J. Starmer, M.D., M.P.H., Nancy D. Spector, M.D., Rajendu Srivastava, M.D., M.P.H., Daniel C. West, M.D., Glenn Rosenbluth, M.D., April D. Allen, M.P.A., Elizabeth L. Noble, B.A., Lisa L. Tse, B.A., Anuj K. Dalal, M.D., Carol A. Keohane, M.S., R.N., Stuart R. Lipsitz, Ph.D., Jeffrey M. Rothschild, M.D., M.P.H., et al., for the I-PASS Study Group*

Table 2. Incidence of Medical Errors, Preventable Adverse Events, and Medical-Error Subtypes before and after Implementation of the I-PASS Handoff Bundle.

Variable	Before Implementation (N=5516)	After Implementation (N=5224)	P Value
Overall medical errors			<0.001
Preventable adverse even			<0.001
Near misses and nonharmful			<0.001
Medical-error subtype			
Errors related to dia			<0.001
Errors related to therapy other than medication or procedure	112 (2.0)	77 (1.5)	0.04
Errors related to history and physical examination	43 (0.8)	0	< 0.001
Other and multifactorial errors	239 (4.3)	106 (2.0)	<0.001
Medication-related errors	660 (12.0)	580 (11.1)	0.28
Procedure-related errors	83 (1.5)	85 (1.6)	0.49
Falls	13 (0.2)	8 (0.2)	0.37
Nosocomial infections	15 (0.3)	14 (0.3)	0.79

23% reduction in medical-error rate

30% reduction in rate of preventable adverse events

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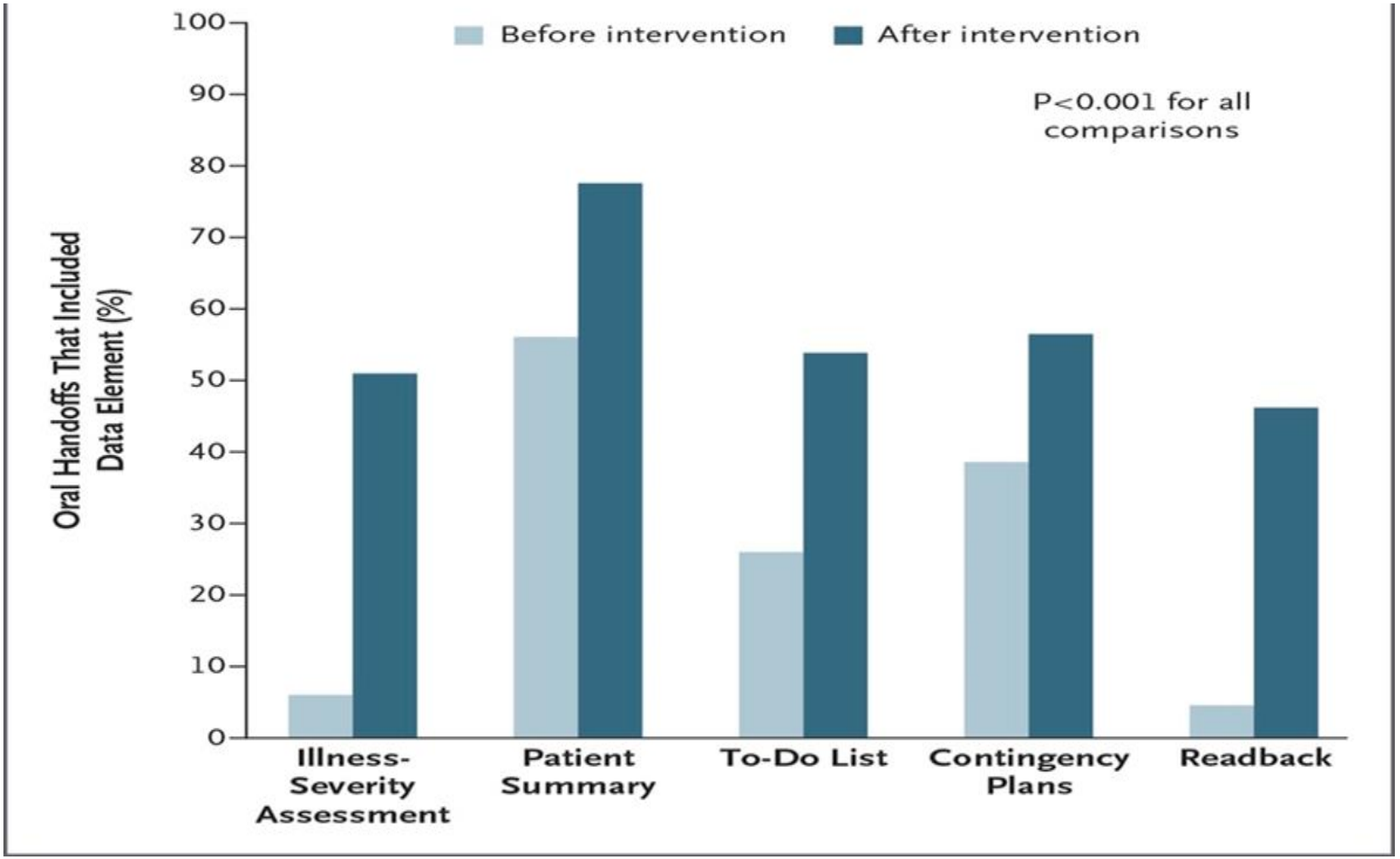

Handoffs We Will Review

Types of Handoffs

- End of Shift
- Service Change
- Discharge

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A Case

- Dr. M is an inpatient internist with a patient census of 15 patients today. She is updating her sign out for the night-time physician: her patients are *stable* but there is a patient w/ a presumed LGIB with a follow up CBC to check.

What information should be included in the sign out and how should it be relayed?

Components of a Strong Verbal Handover

1. **Structured Communication**
   - Both users know what to expect
2. **Dialogue** not Monologue
3. **Close the Loop**

Chu et al., JHM 2010; 5: 344-348.

TABLE 2. Predictors of Sufficient Sign-Out

Predictor		Number of inquiries (%) for which sign-out was sufficient in isolation[†]	p value
Question topic			0.001
	Order reconciliation (oxygen/telemetry)	5/7 (71)	
	Clinical change (vitals, symptoms, labs)	7/24 (29)	
	Medication* (with clinical question)	10/36 (28)	
	Plan of care (discharge, goals of care, procedure)	5/21 (24)	
Clinically important			0.059
	Not at all	8 (50)	
	Somewhat	8 (19)	
	Very	10 (33)	
Days since admission			0.015
	Less than 2 days	21 (40)	
	2 or more days	6 (16)	
Anticipatory guidance and tasks			0.006
	2 or more	3 (60)	
	1	3 (14)	
	0	21 (34)	
Composite score			0.144
	<4	5 (15)	
	4	10 (29)	

*Medication inquiries were inquiries regarding medications with a clinical component. Verification of an order or clarification of an order (i.e. dosing, route, timing) was considered an order reconciliation inquiry.

[†]The sign-out was adequate to answer the query without seeking out any supplemental information

- 124 inquiries for 96 patients
- Sign out referenced for 89 inquiries (74%)
- Sufficient to respond to 27 (30%)
- Primary team did not predict 102 (86%) of inquiries

Effectiveness of written hospitalist sign-outs in answering overnight inquiries.
Fogerty RL1, Schoenfeld A, Salim Al-Damluji M, Horwitz LI. J Hosp Med. 2013 Nov;8(11):609-14

Critical information should be relayed electronically and verbally

Face to face or at least some verbal exchange should take place

Standardized tools should be employed

What information should be included in the sign out and how should it be relayed?

- M… patient…
- …w/ a LGIB, she is actively bleeding but hemodynamically stable…
- She … the 2nd unit of PRBCs
- A f… …en ordered for 9 pm
- If her hb<7 … additional unit and repeat the …
- If she becomes HD u… …U for transfer- both the ICU and G… …e.
- Questions?

Illness Severity/Sickest First

Patient Summary/Active Issues

Action list

Situation Awareness/Anticipatory Guidance

Synthesis by Receiver

Handoffs We Will Review

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A service sign out case

- Dr. M has finished her service days and is now signing out to the oncoming physician. There are 14 patients listed, all of them are stable. She updates her sign out for her colleague and leaves for the day.

- **What information should be included in the sign out and how should it be relayed?**

Service Change Handovers: SHM Guidelines

- Decide on a plan
- Educate people on that plan
- Prioritize anticipatory guidance during verbal communication
- Technology or template should be available for accessing patient data, should be in a centralized location
- To-do list is highlighted for the oncoming hospitalist

Society of Hospital Medicine
Hospitalist Handoffs: A Systematic Review and Task Force Recommendations

Warm Handoffs

- NYU, 99 PGY 2/3 residents trained on warm handoffs, 60 responded
  - 85% perceived warm handoffs to be safer than written/verbal
  - 87% improved knowledge and comfort on day 1
  - 75% spent an extra hour or more
  - 88% worthwhile – 90% perform warm handoffs some of the time compared to 5% pre- intervention

J Gen Intern Med. 2018 Jan;33(1):116-119. 14.

Original research

Assessing the implementation of a bedside service handoff on an academic hospitalist service

Charlie M. Wray [a], Vineet M. Arora [b], Donald Hedeker [c], David O. Meltzer [a, d, e]

24% in the control group. Controlling for the nesting of observations within physicians, IRT analysis found that BHO respondents had statistically significant greater odds of: reporting

incre

patie

patie

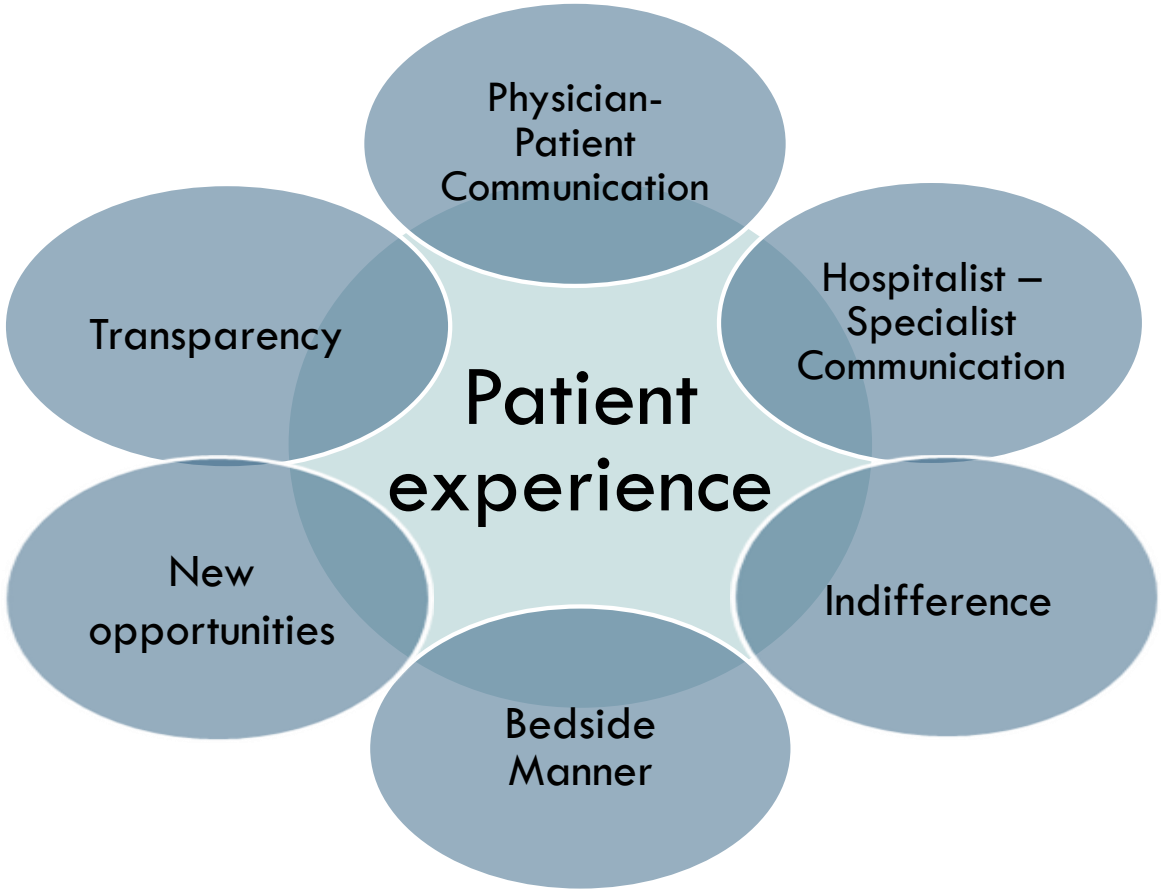
more patient-centered handoff with improved communication that was time-consuming and often logistically difficult to implement

67% of the scheduled BHOs were performed

52% of participants would not or were unsure they would continue

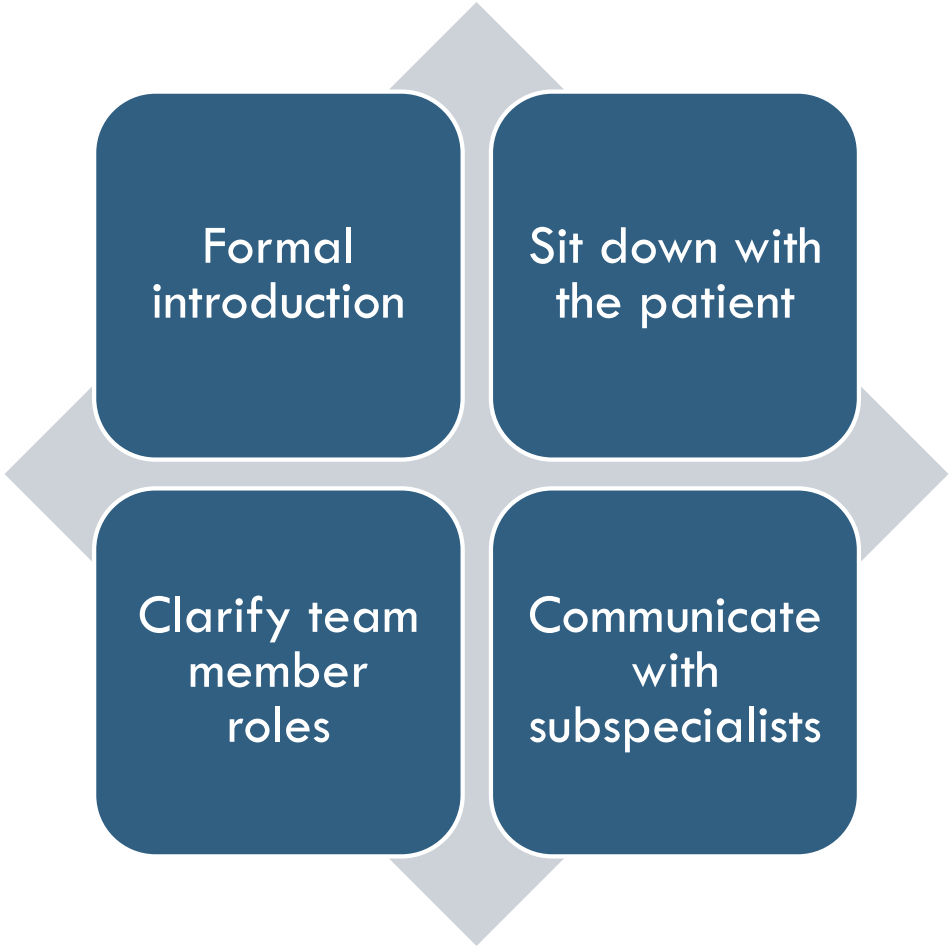
Healthc (Amst). 2018 Jun;6(2):117-121.

What about the patients?



Wray, et al. **A qualitative analysis of patients' experience with hospitalist service handovers.** J Hosp Med. 2016 Oct;11(10):675-681

Service Change Handovers



A Case

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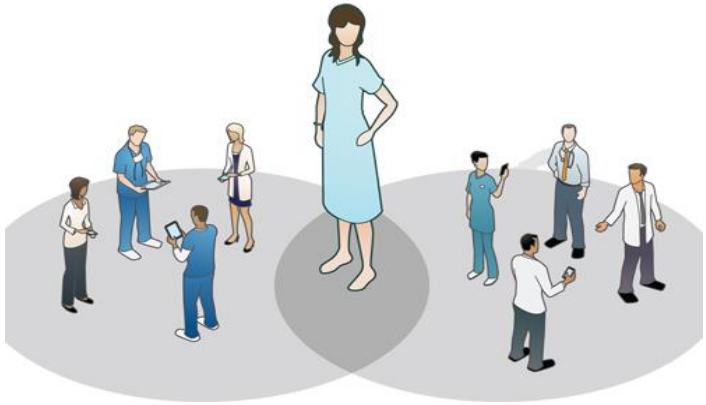


- **What information should be included in the sign out and how should it be relayed?**
- **Everything that is included in shift change handoff in addition to the patients' concerns.**

Handoffs We Will Review

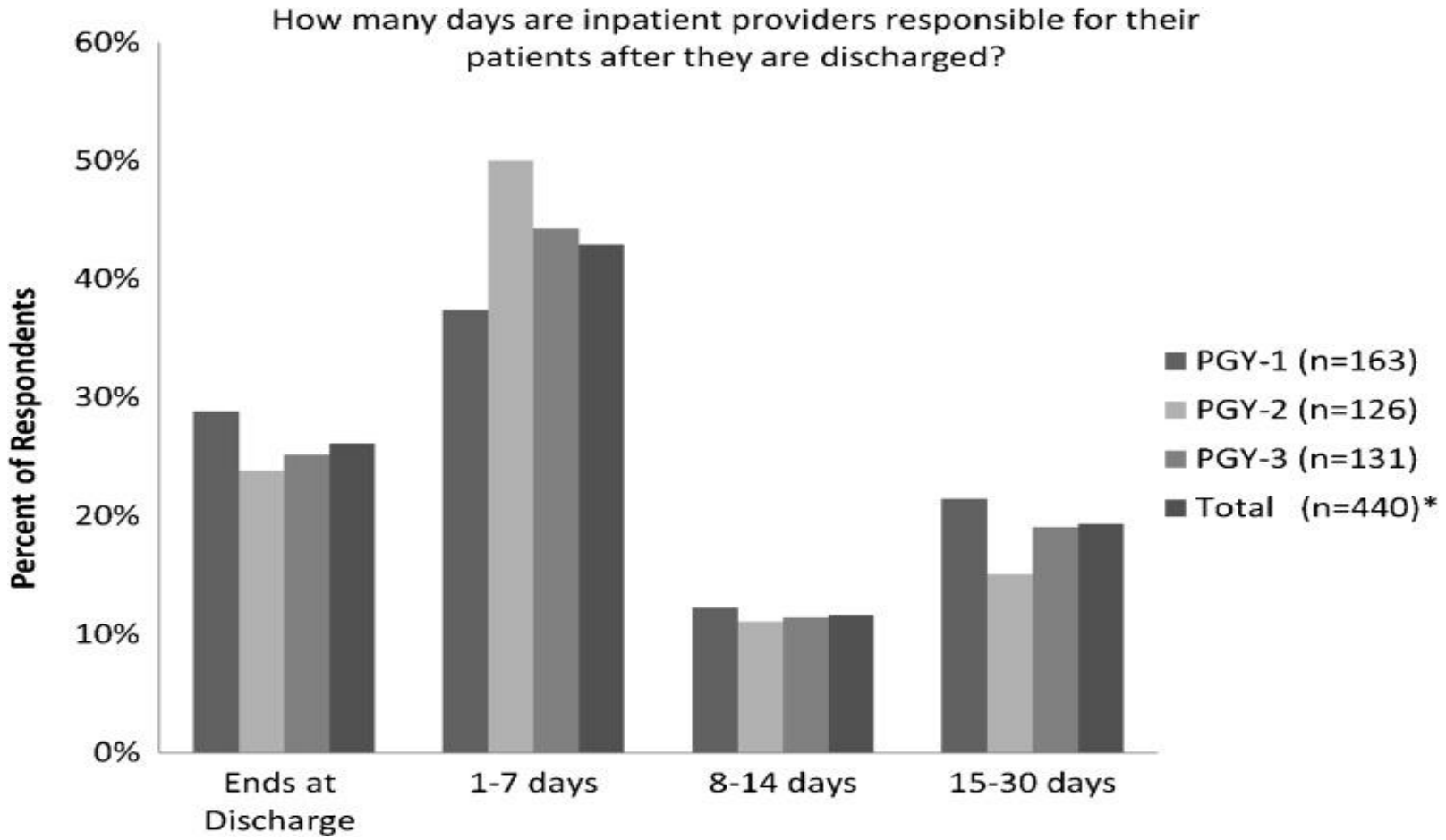
Types of Handoffs

- End of Shift
- Service Change
- Discharge

A case

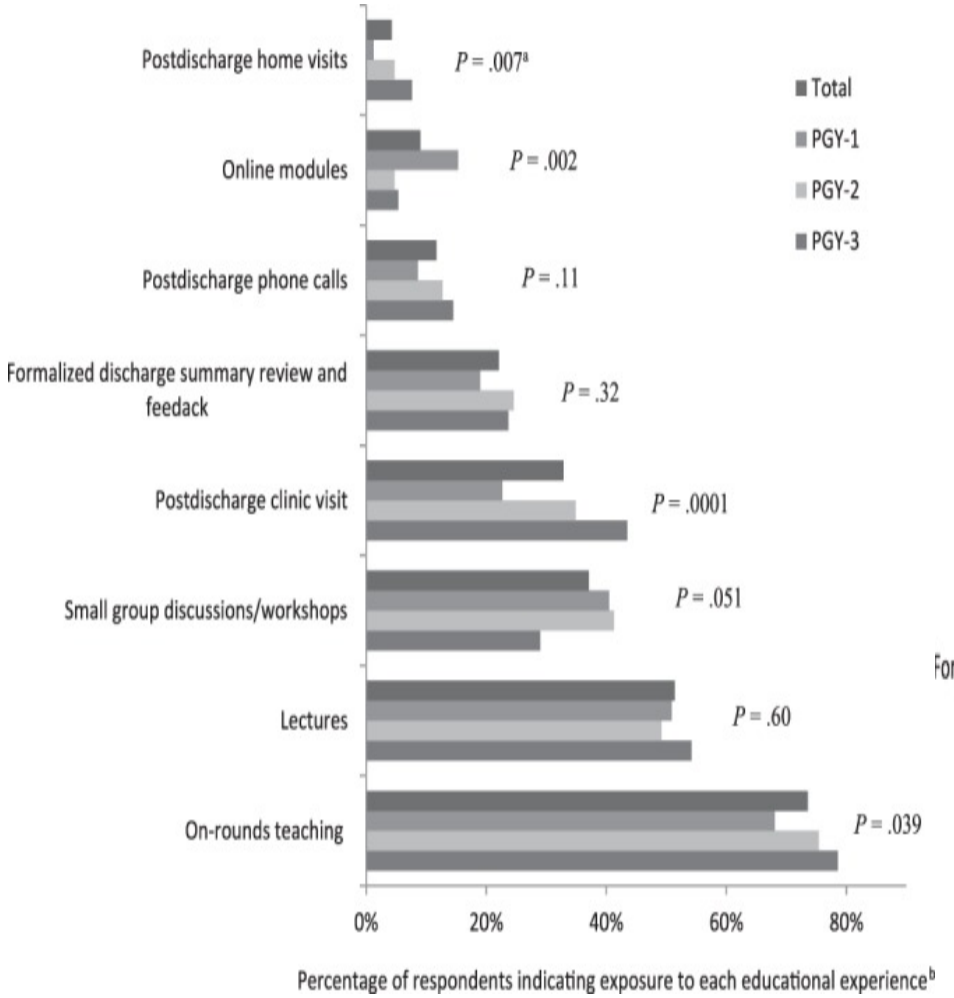
- Mr. S is a 79 yo M w/ hx of mildly elevated PSA and HTN who was admitted to the hospital for fatigue and decreased appetite. He was diagnosed w/a UTI, & his PSA was >100. Urology recommended outpatient follow up for possible prostate biopsy after his UTI treatment was complete. He was discharged w/ outpatient PCP and Urology appointments. He returned to the ER a week later asking about his prostate cancer workup.
- What information should have been given to the patient and how should it have been relayed? Could his ER visit have been prevented?

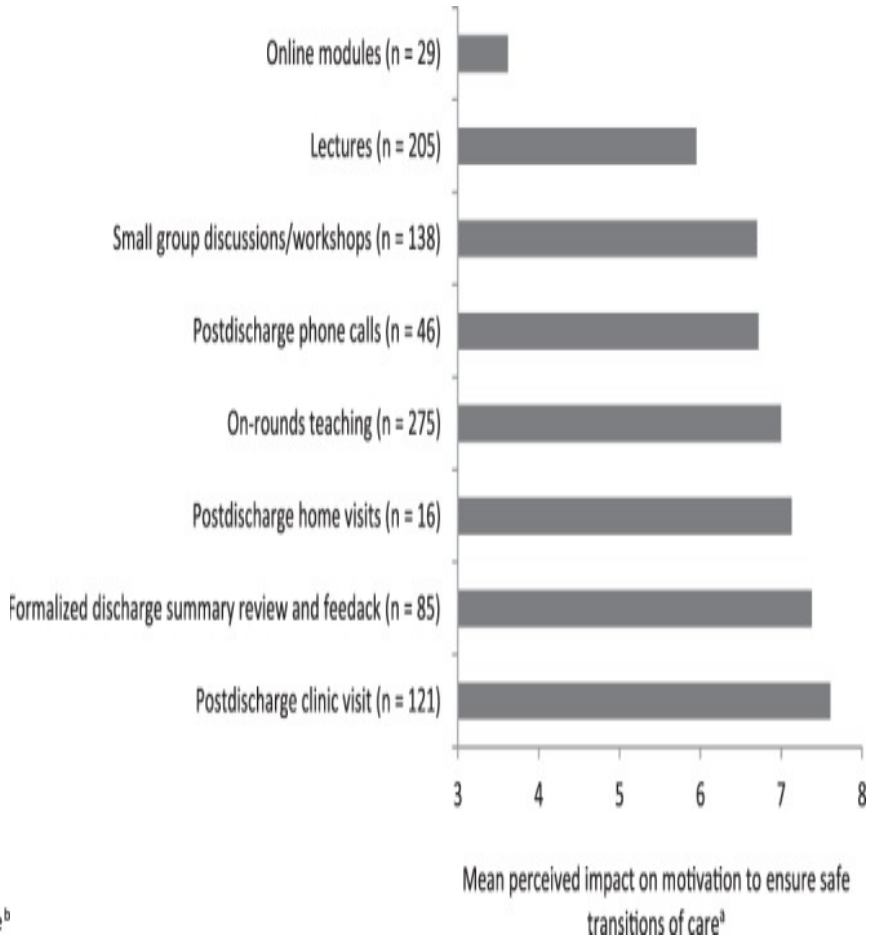
Internal Medicine Residents' Perceived Responsibility for Patients at Hospital Discharge: A National Survey



J Gen Intern Med. 2016 Dec; 31(12): 1490–1495.

Residents' Exposure to Educational Experiences in Facilitating Hospital Discharges





J Grad Med Educ. 2017 Apr; 9(2): 184–189.

The Impact of Readmissions

1/5 Medicare pts readmitted w/in 30 days

2.6 million seniors

Over $26 billion per year

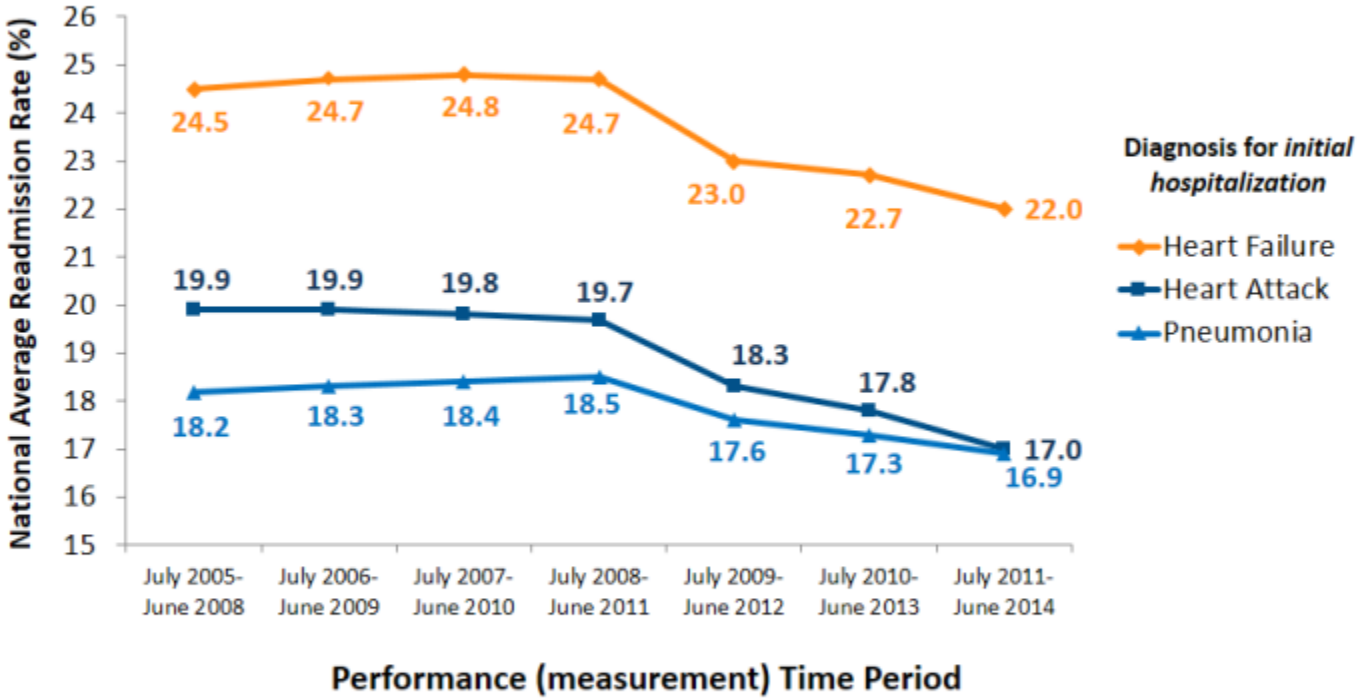
Readmissions Reduction Program (HRRP)

Background

Section 3025 of the Affordable Care Act added section 1886(q) to the Readmissions Reduction Program, which requires CMS to reduce pa readmissions, effective for discharges beginning on October 1, 2012.

Figure 2

National Medicare Readmission Rates Started to Fall in 2012



Notes: National readmission rates include unplanned hospitalizations for any cause within 30 days of discharge from an initial hospitalization for either heart failure, heart attack, or pneumonia. Readmission rates are risk-adjusted for certain patient characteristics, such as age and other medical conditions.

Source: Kaiser Family Foundation analysis of CMS Hospital Compare data files.

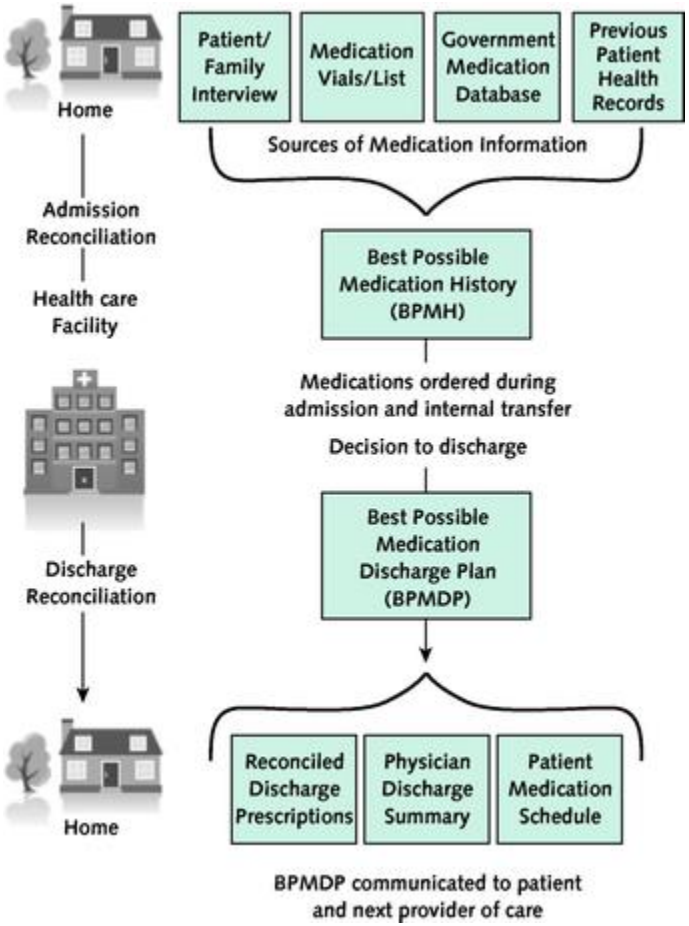
THE HENRY J. KAISER FAMILY FOUNDATION

Discharge Handovers

http://www.creativeblueprintmarketing.com/marketing-packages/

- Medication Reconciliation
- Patient/Family Education
- Interdisciplinary team
- Follow Up

Medication Reconciliation



19% of patients experience adverse events post discharge

30% are preventable

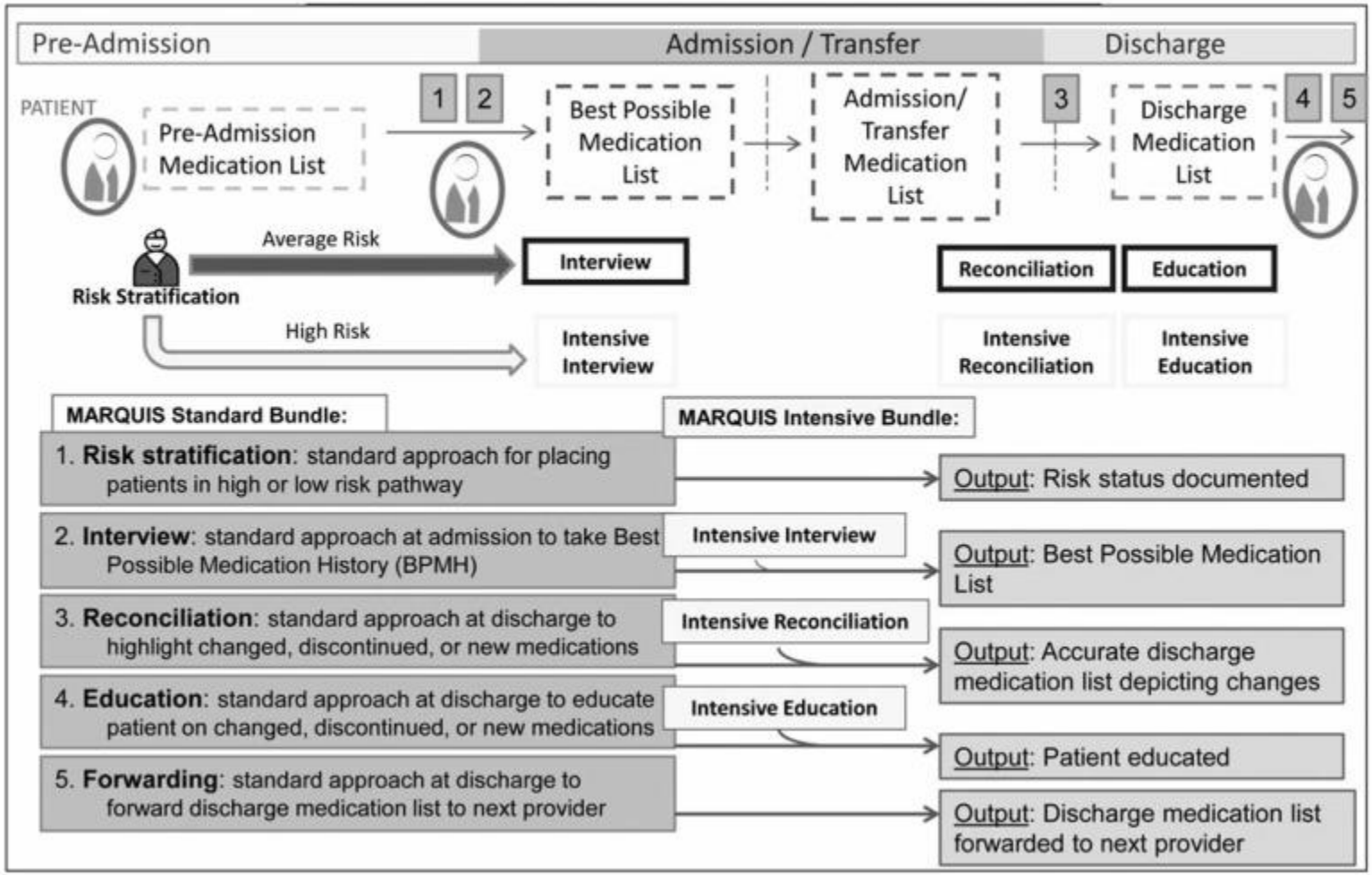
66% related to adverse drug events

Adapted, with permission, from Fernandes OA. Medication reconciliation. Pharmacy Practice. 2009;25:26.

Forster AJ et al., Ann Intern Med 2003; 138:161-7.

A Toolkit to Disseminate Best Practices in Inpatient Medication Reconciliation: Multi-Center Medication Reconciliation Quality Improvement Study (MARQUIS)

Ideal Medication Reconciliation Process



Joint Commission journal on quality and patient safety. , 2013, Vol.39(8), p.371-382

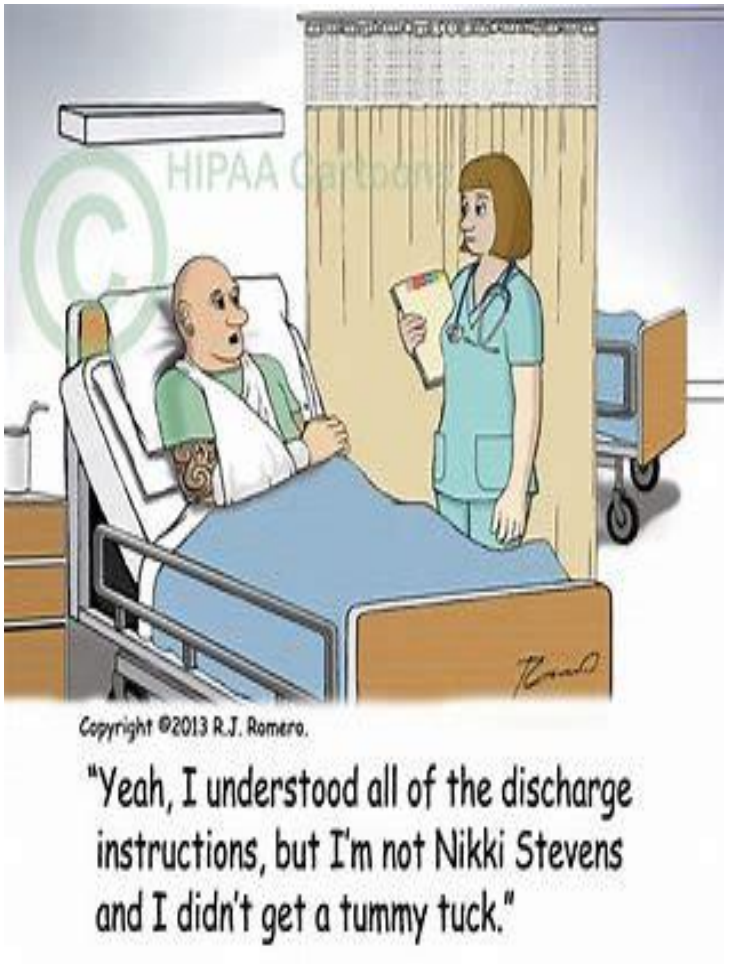
Patient/Family Education

- Reinhard and colleagues revealed
  - 40% of caregivers perform medical/nursing tasks
  - 78% of caregivers manage meds
  - 58% of caregivers serve as care coordinators
- Care Transitions Intervention (CTI)
  - 4-week program that reduces readmissions, offers costs savings
  - Coach visits in the hospital
  - One home visit
  - At least 3 phone calls

J Healthc Qual. 2015 Jan-Feb;37(1):2-11.

What should be communicated?

- Discharge diagnosis
- Red Flags/warning signs
- Medication changes
- Follow Up appointments
- Identify needed home support



Follow Up

- Availability of discharge summary at 1st visit low (12-34%), which affects quality of care in 25% of cases
- CHF f/u should occur w/in 7 days
- All other patients within 14 days unless they have complicated comorbidities

Ibironke et al., JAMA Intern Med, 2013;173 (8): 624-629
Kripalani et al., JAMA, 2007, 297(8): 831-841

Changes in Health Care Costs and Mortality Associated With Transitional Care Management Services After a Discharge Among Medicare Beneficiaries

Table 1. Medicare Beneficiaries With Discharges Eligible for TCM Services, 2013-2015

Characteristic	TCM (n = 975 169)[a]	No TCM		
		Total (n = 17 781 538)	E/M Office Visit (n = 9 279 899)[b]	No E/M Office Visit (n = 8 501 639)
Age, mean (SD), y	76.3 (11.1)	72.3 (13.9)	72.7 (13.2)	72.0 (14.6)
Male, No. (%)	411 328 (42.2)	7 825 952 (44.0)	4 159 441 (44.8)	3 666 511 (43.1)
Medicaid, No. (%)	318 335 (32.6)	4 905 385 (27.6)	2 653 913 (28.6)	2 251 472 (26.5)
Home health care, No. (%)	318 335 (32.6)	4 905 385 (27.6)	2 653 913 (28.6)	2 251 472 (26.5)

Table 4. Mortality 31 to 60 Days After TCM-Eligible Discharge

Type of Visit	Mortality (95% CI), %		
	Unadjusted	TCM vs No TCM, Adjusted[a]	TCM vs No TCM With or Without E/M Office Visit, Adjusted[a]
TCM	1.1 (1.1-1.1)	1.0 (1.0-1.1)	1.0 (1.0-1.0)
No TCM	1.6 (1.6-1.6)[b]	1.6 (1.6-1.6)[b]	NA
E/M office visit	1.4 (1.4-1.5)[b]	NA	1.5 (1.4-1.5)[b]
No E/M office visit	1.7 (1.7-1.7)[b]	NA	1.7 (1.7-1.7)[b]

Abbreviations: E/M, evaluation and management; NA, not applicable; TCM, transitional care management.

[a] Adjusted for age, sex, risk score, Medicare/Medicaid dual status, home health care, type of discharge, and year of discharge. The 95% CIs are derived from SEs adjusted to account for clustering at the hospital service area based on the home zip code of the beneficiary.

[b] Statistically significant compared with TCM ($P < .001$).

eviations: E/M, evaluation and
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ults for TCM vs no TCM,
l vs no TCM and E/M office
, and TCM vs no TCM and no
office visit are all significant at
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ults for no TCM and E/M office
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are all significant at $P < .001$.

entages may not sum to 100
use of rounding.

[d] Higher Hierarchical Condition Category scores reflect greater morbidity.

JAMA Intern Med. 2018;178(9):1165-1171.

Recap!

- Handoffs are important and affect patient care
- Choose a standard sign out method w/ both verbal and written components
- Update clinical status, to do lists and anticipatory guidance daily
- During Service change think about the patient's experience
- Remember the discharge bundle

Resources

- Joint Commission Website
- Agency for Healthcare Research and Quality (ahrq.gov)
- Project Red
- Caretransitions.org
- CMS.org
- Project Boost