

SSMIQ Congrès d'Automne 2018
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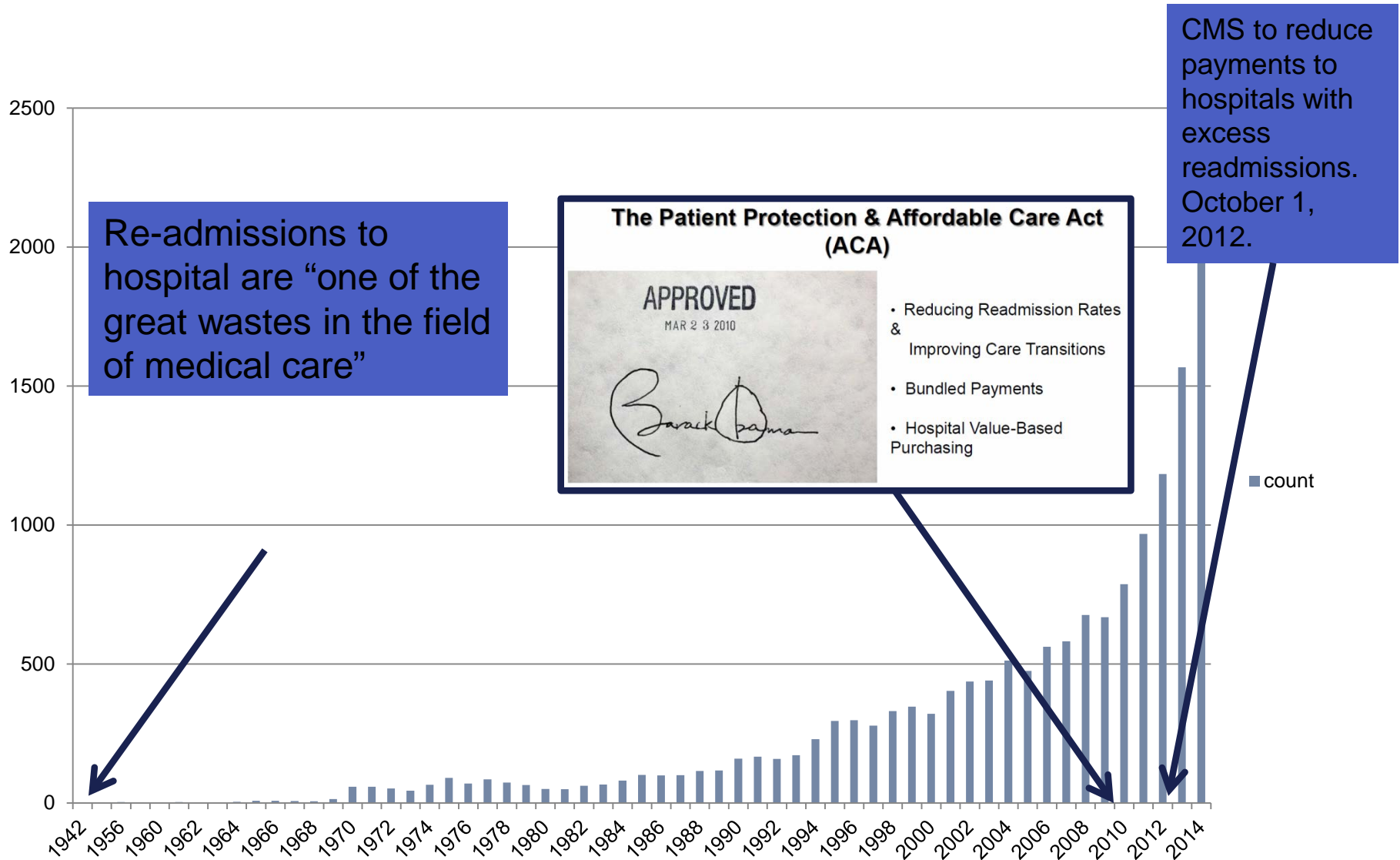
- Workshop 15-

Transistion des Soins & Risque de Réadmission

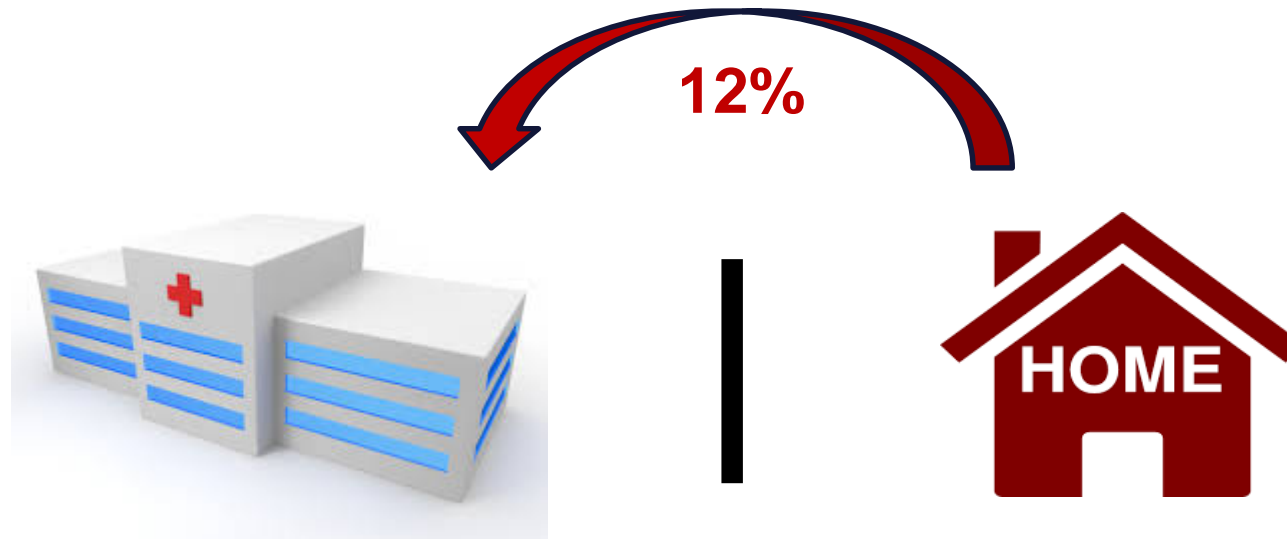
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INTRODUCTION

Importance of readmission



Importance of readmission



Readmissions represent:

- high costs
- new hospital complications
- lost work days
- burden for the patients
- low quality of care

Classification of the Quality Indicators

Mapping selon l'OCDE

	Effectiveness	Safety	Patient centeredness	Accessibility/ costs
Prevention	-Vaccination coverage -Mammography screening		Doctor involving patients in decisions	
Getting better	-Myocardial infarction 30-day mortality -Colorectal cancer 5-year survival	-Postoperative PE or DVT		
Chronic care	-Hospital readmission within 30 days			
End of life				

Importance of readmission

Classification of readmissions

	Related to Initial Admission	Unrelated to Initial Admission
Planned Readmission	A planned readmission for which the reason for readmission is related to the reason for the initial admission.	A planned readmission for which the reason for readmission is not related to the reason for the initial admission.
Unplanned Readmission	An unplanned readmission for which the reason for readmission is related to the reason for the initial admission.	An unplanned readmission for which the reason for readmission is not related to the reason for the initial admission.

Importance of readmission

Systematic review of 34 articles:

- 2/3 of the readmissions may be entirely preventable or ameliorable,
- 20-30% of readmissions being considered as truly preventable.

Financial incentives

- Resources for transitional care services are limited
- In the USA:
 - Financial penalties among Medicare patients for specific diseases.
 - Effect: Reduction of readmission rate 21.5%→ 18.5%
- In CH, the 2012 Swiss-DRG rules:
 - Pressure to avoid readmission:
readmissions occurring within 18 days after discharge within the initial hospital stay are regrouped.
 - Pressure on hospital length of stay.
 - ANQ monitoring

EXERCICE 1 – RISK FACTORS

CAUSES AND RISK FACTORS

TABLE 2. Factors Associated With Readmission Within 30 Days

Covariate	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Age	1.00 (0.99–1.00)	1.00 (0.99–1.00)
Race		
White	Referent	Referent
Black	1.67 (1.47–1.91)	1.43 (1.24–1.65)
Asian	0.99 (0.86–1.14)	0.95 (0.82–1.11)
Other	0.89 (0.76–1.06)	0.84 (0.67–1.06)
Payer		
Medicare	Referent	Referent
Medicaid/medi-cal	1.37 (1.21–1.55)	1.15 (0.97–1.36)
Private	0.83 (0.73–0.95)	0.78 (0.65–0.95)
Other	0.21 (0.14–0.30)	0.23 (0.11–0.45)
Disposition		
To home	Referent	Referent
SNF	1.02 (0.85–1.21)	0.98 (0.82–1.18)
Other	0.58 (0.48–0.70)	0.53 (0.43–0.66)
High-risk medications		
Corticosteroids	1.31 (1.16–1.48)	1.24 (1.09–1.42)
Narcotics	1.49 (1.34–1.65)	1.33 (1.16–1.53)
Anticholinergics	0.64 (0.47–0.87)	0.66 (0.48–0.90)
Comorbidities		
Congestive heart failure	1.39 (1.19–1.63)	1.30 (1.09–1.56)
Neurological disorders	0.69 (0.56–0.86)	0.70 (0.57–0.87)
Renal failure	1.35 (1.19–1.55)	1.19 (1.05–1.36)
Metastatic cancer	1.52 (1.26–1.83)	1.61 (1.33–1.95)
Solid tumor w/o metastasis	1.81 (1.43–2.29)	1.95 (1.54–2.47)
Deficiency anemia	1.41 (1.26–1.58)	1.27 (1.13–1.44)
Weight loss	1.30 (1.08–1.57)	1.26 (1.09–1.47)

Table 4. Variables Considered by Studies in Evaluating the Risk of Hospital Readmission

	No. of Studies		
	Included in Final Model	Evaluated, but Not Included	Not Considered ^a
Specific medical diagnoses or comorbidity index	24 ^{13,25,27-31,34-39}	0	3 ^{12,26,32}
Mental health comorbidities			
Mental illness	9 ^{15-18,20,21,25,27,37}	4 ^{14,24,28,36}	11 ^{12,19,22,23,30-32,34,35,38,39}
Alcohol or substance use	11 ^{15-21,23,25-28}	5 ^{14,24,31,34,37}	8 ^{12,22,30,32,35,36,38,39}
Illness severity			
Severity index	1 ²⁵	1 ³⁵	19 ^{13-19,21,22,24,28,30-32,34,35,37-39}
Laboratory findings	4 ^{18,30,32,34}	1 ³¹	15 ^{13-17,19,21,22,24,28,35-39}
Other ^b	4 ^{2,3,24}	4 ^{18,30,34,37}	11 ^{14-16,21,24,28,31,32,35,38,39}
Prior use of medical services			
Hospitalizations	14 ^{12,13,17,21,25-31,36-39}	1 ³⁵	10 ^{14-16,18,19,22-24,32,34}
Emergency department visits	4 ^{27,32,34,35}	1 ²⁵	17 ^{12,14-16,18,19,21-24,28,30,31,36-39}
Clinic visits or missed clinic visits	3 ^{25,27,39}	0	19 ^{12,14-16,18,19,21-24,28,30-32,34-38}
Index hospital length of stay	4 ^{23,25,35,38}	3 ^{19,30,36}	15 ^{12,14-16,18,21,22,24,26,28,31,32,34,37,39}
Overall health and function			
Functional status, ADL dependence, and mobility	2 ^{29,34}	6 ^{30,35-39}	14 ^{12,14-16,18,19,21-24,26,28,31,32}
Self-rated health, quality of life	3 ^{29,38,39}	2 ^{31,34}	17 ^{12,14-16,18,19,21-24,26,28,30,32,35-37}
Cognitive impairment	7 ^{14-16,18,31,34,37}	5 ^{21,24,36,38,39}	9 ^{12,19,22,23,25,28,30,32,35}
Visual or hearing impairment	1 ²⁹	1 ³⁹	21 ^{12,14-16,18,19,21-24,26,28,30-32,34-39}
Sociodemographic factors			
Age	19 ^{12-22,24,25,27-29,34,37,39}	7 ^{23,25,30,32,35,36,38}	1 ³¹
Sex	15 ^{12-18,20,22,24-28,39}	8 ^{19,21,23,30,32,35,36,38}	1 ³¹
Race/ethnicity	7 ^{12,13,20,23,24,27,28}	8 ^{21,25,30,32,34,36,38,39}	8 ^{14-16,18,19,22,31,35}
Social determinants of health			
SES, income, and employment status	5 ^{13,20,21,26,27}	7 ^{24,28,34,36-39}	10 ^{12,14-16,18,19,22,23,31,35}
Insurance status ^c	6 ^{19,23,24,25,29,38}	1 ³⁴	5 ^{30,32,36,37,39}
Education	0	4 ^{31,35,38,39}	17 ^{12,14-16,18,19,21-24,26,28,30,32,34,35,37}
Marital status and No. of people in home	4 ^{25,31,37,38}	6 ^{19,21,34-36,39}	11 ^{12,14-16,18,22-24,28,30,32}
Caregiver availability, other social support	2 ^{34,39}	1 ³⁸	19 ^{12,14-16,18,19,21-24,26,28,30-32,34-37}
Access to care or limited access (eg, rural area)	5 ^{12,19,21,23,38}	2 ^{24,35}	14 ^{14-16,18,22,25,28,30-32,34,36,37,39}
Discharge location (home, nursing home)	2 ^{23,24}	1 ¹⁹	18 ^{12,14-16,18,21,22,25,28,30-32,34-39}

Abbreviations: ADL, activities of daily living; SES, socioeconomic status.

BMJ Open Performance-based functional impairment and readmission and death: a prospective study

Carole E Aubert,^{1,2} Antoine Folly,² Marco Mancinetti,² Daniel Hayoz,²
Jacques D Donzé^{1,3,4}

- Functional impairment was associated with higher risk of death (OR 2.44, 95% CI 1.15 to 5.18),
- but not with unplanned readmission (OR 1.34, 95% CI 0.84 to 2.15).
- No significant association between functional impairment and the total number of unplanned readmissions (adjusted OR 1.59, 95% CI 0.95 to 2.67).

Causes and patterns of readmissions

Table 2. Highest Rates of Rehospitalization and Most Frequent Reasons for Rehospitalization, According to Condition at Index Discharge.*

Condition at Index Discharge	30-Day Rehospitalization Rate	Proportion of All Rehospitalizations	Reason for Rehospitalization					
			Most Frequent	2nd Most Frequent	3rd Most Frequent	4th Most Frequent	5th to 10th Most Frequent	Less Frequent
	percent		percent of all rehospitalizations within 30 days after index discharge					
Medical								
All	21.0	77.6	Heart failure (8.6)	Pneumonia (7.3)	Psychoses (4.3)	COPD (3.9)	GI problems, nutrition-related or metabolic issues, septicemia, GI bleeding, renal failure, urinary tract infection (17.0)	All other (58.9)
Heart failure	26.9	7.6	Heart failure (37.0)	Pneumonia (5.1)	Renal failure (3.9)	Nutrition-related or metabolic issues (3.1)	Acute myocardial infarction, COPD, arrhythmias, circulatory disorders, GI bleeding, GI problems (14.0)	All other (36.9)
Pneumonia	20.1	6.3	Pneumonia (29.1)	Heart failure (7.4)	COPD (6.1)	Septicemia (3.6)	Nutrition-related or metabolic issues, GI problems, respiratory or ventilation problems, pulmonary edema, GI bleeding, urinary tract infection (14.9)	All other (38.9)
COPD	22.6	4.0	COPD (36.2)	Pneumonia (11.4)	Heart failure (5.7)	Pulmonary edema (3.9)	Respiratory or ventilation problems, GI problems, nutrition-related or metabolic issues, arrhythmias, GI bleeding, acute myocardial infarction (12.5)	All other (30.3)
Psychoses	24.6	3.5	Psychoses (67.3)	Drug toxicity (1.9)	Drug or alcohol misuse (1.6)	Pneumonia (1.6)	Chest pain, nutrition-related or metabolic issues, depression, GI problems, COPD, organic mental conditions (7.0)	All other (20.6)
GI problems	19.2	3.1	GI problems (21.1)	Nutrition-related or metabolic issues (4.9)	Pneumonia (4.3)	Heart failure (4.2)	Major bowel surgery, urinary tract infection, septicemia, GI bleeding, COPD, chest pain (13.4)	All other (52.1)
Surgical								
All	15.6	22.4	Heart failure (6.0)	Pneumonia (4.5)	GI problems (3.3)	Septicemia (2.9)	Nutrition-related or metabolic issues, postoperative infection, placement of cardiac stent, GI bleeding, operation for infection (14.6)	All other (68.7)
Cardiac stent placement	14.5	1.6	Cardiac stent (19.7)	Circulatory diagnoses (8.5)	Chest pain (6.1)	Heart failure (5.7)	Atherosclerosis, acute myocardial infarction, GI bleeding, GI problems, arrhythmias, other vascular surgery (19.4)	All other (40.6)
Major hip or knee surgery	9.9	1.5	Aftercare (10.3)	Major hip or knee problems (6.0)	Pneumonia (4.2)	Postoperative infection (3.1)	GI problems, GI bleeding, heart failure, operation for infection, rehabilitation, nutrition-related or metabolic issues (15.8)	All other (60.6)
Other vascular surgery	23.9	1.4	Other vascular surgery (14.8)	Amputation (5.8)	Heart failure (5.0)	Other circulatory problems (4.4)	Postoperative infection, other circulatory procedures, operation for infection, peripheral vascular disorders, pneumonia, septicemia (19.0)	All other (51.0)
Major bowel surgery	16.6	1.0	GI problems (15.9)	Postoperative infection (6.4)	Nutrition-related or metabolic issues (5.6)	GI Obstruction (4.3)	Pneumonia, major bowel surgery, renal failure, septicemia, operation for infection, GI bleeding (15.4)	All other (52.4)
Other hip or femur surgery	17.9	0.8	Pneumonia (9.7)	Heart failure (4.8)	Septicemia (4.7)	GI bleeding (4.0)	Urinary tract infection, fracture of hip or pelvis, other hip or femur surgery, aftercare, nutrition-related or metabolic issues, major hip or knee problems (20.7)	All other (56.1)

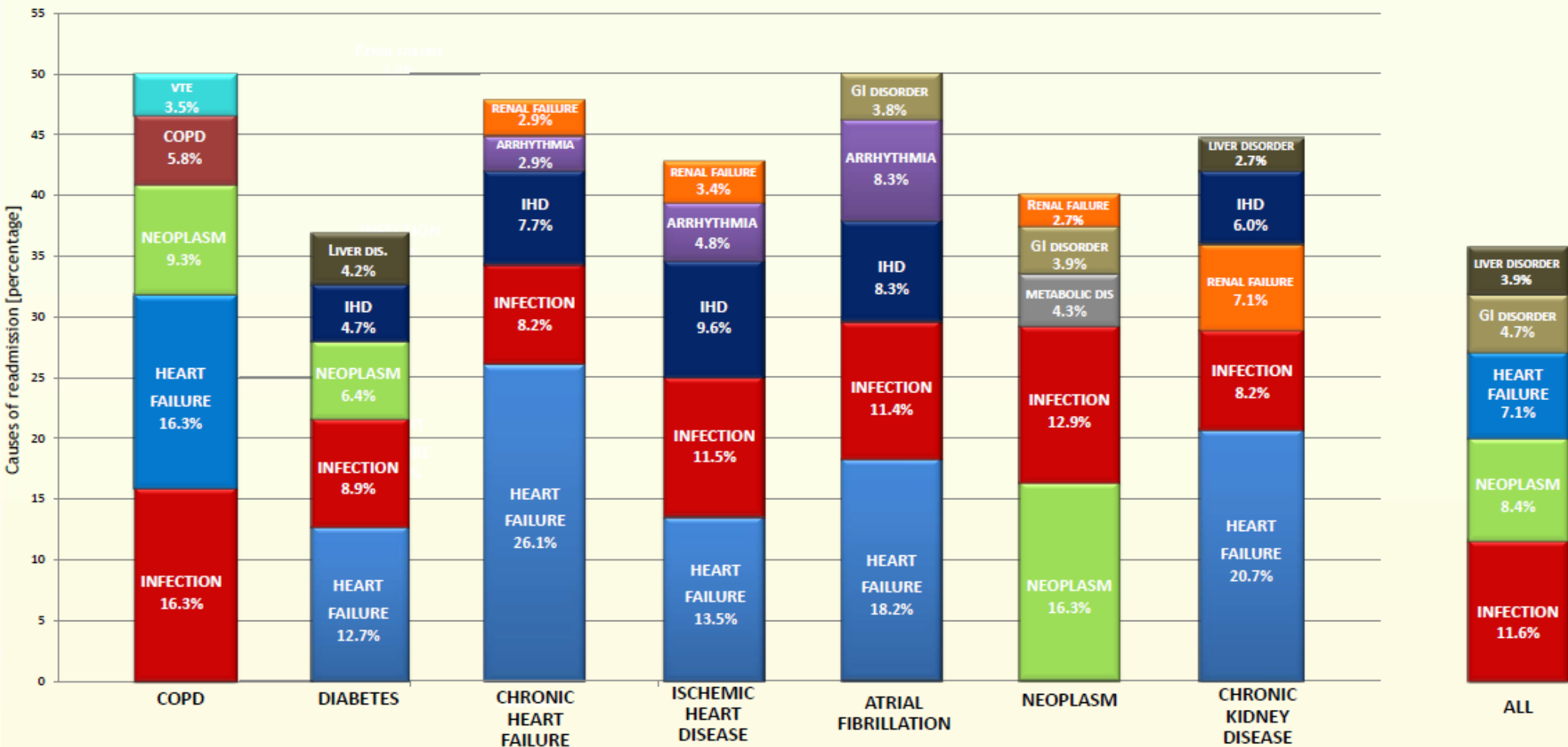
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			Most Frequent	2nd Most Frequent	3rd Most Frequent	4th Most Frequent	
	<i>percent</i>		<i>percent of all rehospitalizations within 30 days after</i>				
Medical							
All	21.0	77.6	Heart failure (8.6)	Pneumonia (7.3)	Psychoses (4.3)	COPD (3.9)	GI problems (3.9)
Heart failure	26.9	7.6	Heart failure (37.0)	Pneumonia (5.1)	Renal failure (3.9)	Nutrition-related or metabolic issues (3.1)	Acute myocardial infarction (3.1)
Pneumonia	20.1	6.3	Pneumonia (29.1)	Heart failure (7.4)	COPD (6.1)	Septicemia (3.6)	Nutrition-related or metabolic issues (3.6)
COPD	22.6	4.0	COPD (36.2)	Pneumonia (11.4)	Heart failure (5.7)	Pulmonary edema (3.9)	Respiratory-related acute renal failure (3.9)
Psychoses	24.6	3.5	Psychoses (67.3)	Drug toxicity (1.9)	Drug or alcohol misuse (1.6)	Pneumonia (1.6)	Chest pain (1.6)
GI problems	19.2	3.1	GI problems (21.1)	Nutrition-related or metabolic issues (4.9)	Pneumonia (4.3)	Heart failure (4.2)	Major bowel bleeding (4.2)

Causes and patterns of readmissions

Top 5 causes of potentially avoidable 30-day readmission by comorbid chronic condition



COPD: chronic obstructive pulmonary disease; DIS: disorder; GI: gastrointestinal; IHD: ischemic heart disease; VTE: venous thromboembolism

Classification of the causes

Main reason for readmission		Overall avoidable	Sometimes avoidables	Overall not avoidable
Complications	Surgical complications		X	
	Adverse drug event		X	
	Other complications		X	
Transition of care	Inadequate diagnosis	X		
	Inadequate therapy	X		
	Premature discharge	X		
	Other discharge-related issue	X		
Post-discharge / ambulatory care	First primary care visit too late	X		
	Late communication	X		
	Inadequate ambulatory care/treatment	X		
	Inadequate home support	X		
	Inadequate patient behavior		X	
Natural evolution of the disease				X
Readmission not justifiable by medical reason		X		

EX 1 PART B – AVOIDABILITY ASSESSMENT

EX 2 – RISK EVALUATION

HOW TO PREDICT

How to identify which patients are at highest risk of readmission?

Basically 3 options:

- Ask the patient
- Ask the clinical providers
- Use clinical prediction rules

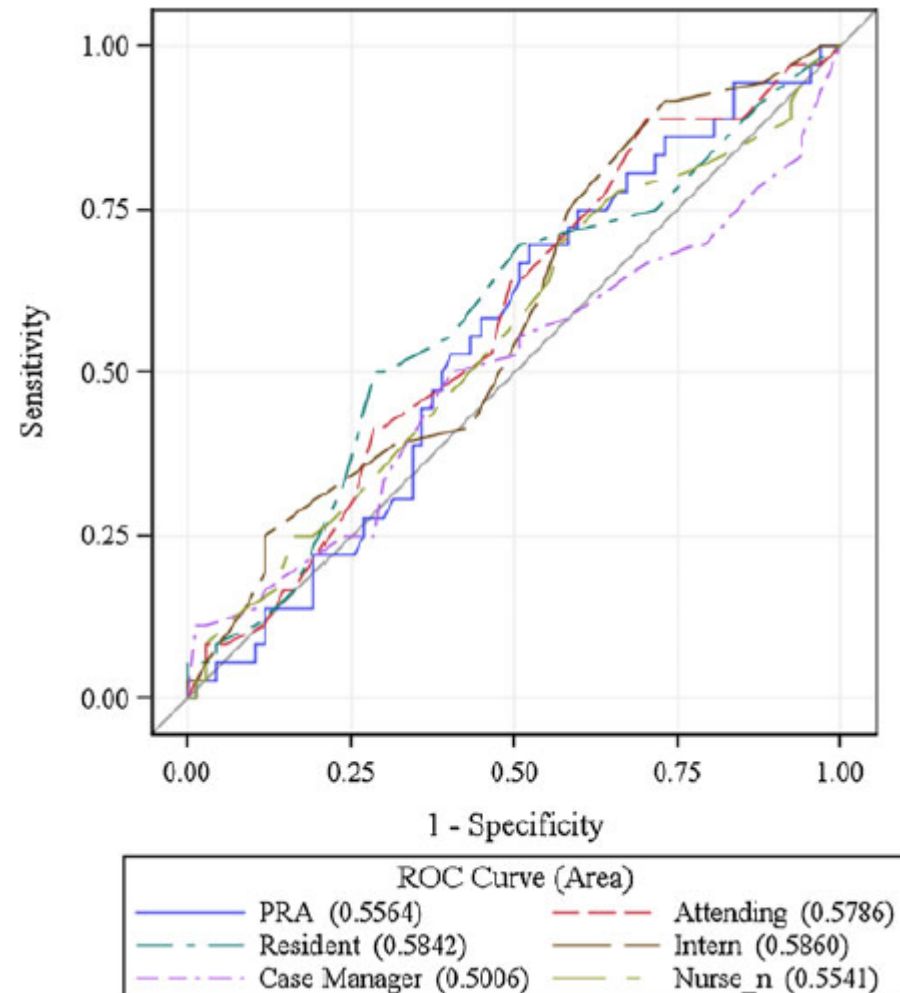


Ask the patient

- Little evidence.
- Prospective cohort study in 7 general internal medicine wards in Canada.
- Patient-reported discharge readiness was measured with an 11-point Likert response scale, with scores < 7 indicating subjective unreadiness.
- The primary outcome was readmission or death within 30 days.
- Patients who reported being unready at the time of discharge did not experience any higher risk of readmission or death in the first 30 days post-discharge, compared with patients who felt ready for discharge.

Ask the clinical providers

- Patients aged ≥ 65 discharged from the general medical service at University of California.
- Of 159 patients, 52 patients (32.7%) were readmitted.
- Prediction of the chance of readmission with a 0–100% scale.
- The ability to discriminate between readmissions and non-readmissions was poor for all provider groups



Overview of existing score for readmissions

Systematic review for Readmission scores:

- 26 scores identified before 2010.
- Most existing score performed poorly.
- Heterogeneity of the population: disease-specific (heart failure only) versus broad-scale patients (surgical and medical).
- Outcome include unavoidable readmissions.

Focus on a few scores

Focus on scores that are known, performant, or used:

- LACE score
- HOSPITAL score

LACE score

Attribute	Value	Points*
Length of stay, d ("L")	< 1	0
	1	1
	2	2
	3	3
	4-6	4
	7-13	5
	≥ 14	7
Acute (emergent) admission ("A")	Yes	3
Comorbidity (Charlson comorbidity index score) ("C")	0	0
	1	1
	2	2
	3	3
	≥ 4	5
Visits to emergency department during previous 6 mo ("E")	0	0
	1	1
	2	2
	3	3
	≥ 4	4

LACE score

Attribute	Value	Points*
Length of stay, d ("L")	< 1	0
	1	1

Table 1. Charlson Comorbidity Index Scoring System

Score	Condition
1	Myocardial infarction (history, not ECG changes only) Congestive heart failure Peripheral vascular disease (includes aortic aneurysm ≥ 6 cm) Cerebrovascular disease: CVA with mild or no residua or TIA Dementia Chronic pulmonary disease Connective tissue disease Peptic ulcer disease Mild liver disease (without portal hypertension, includes chronic hepatitis)
2	Diabetes without end-organ damage (excludes diet-controlled alone) Hemiplegia Moderate or severe renal disease Diabetes with end-organ damage (retinopathy, neuropathy, nephropathy, or brittle diabetes) Tumor without metastases (exclude if >5 y from diagnosis) Leukemia (acute or chronic) Lymphoma
3	Moderate or severe liver disease
6	Metastatic solid tumor AIDS (not just HIV positive)

NOTE. For each decade > 40 years of age, a score of 1 is added to the above score.

Abbreviations: ECG, electrocardiogram; CVA, cerebrovascular accident; TIA, transient ischemic attack; AIDS, acquired immunodeficiency syndrome; HIV, human immunodeficiency virus.

≥ 4

4

LACE score validation studies

Design and setting	C-stat
Derivation study in Canada	0.68
Medical department, tertiary care hospital in Singapore 127,550 patients	0.70
Older UK medical patients, mean age 85 years, N=507	0.57
Heart failure patients in the US, N=253	? No significant difference between ORs for readmission in high risk and low risk

LACE score

Strengths

- Derived in a large population in Canada, large validation in Canada.
- All type of patients.

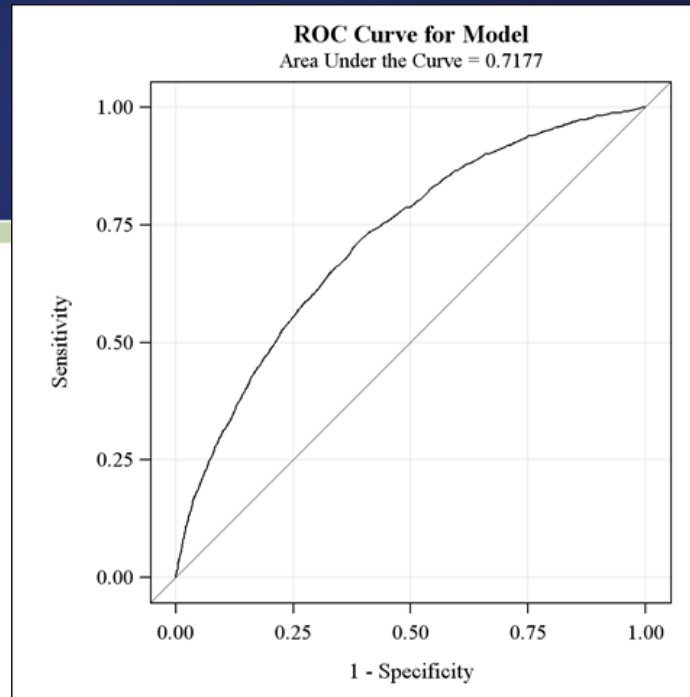
Limitations

- Need to calculate the Charlson score.
- Difficult to calculated before discharge of the patient.
- No threshold determined between low risk and high risk.
- No prospective validation

The “HOSPITAL” Score

<i>Attribute</i>	<i>Points</i>
Low H emoglobin level at discharge (< 12 g/dL)	1
Discharge from an O ncology division	2
Low S odium level at discharge (< 135 mmol/L)	1
P rocedure during hospital stay (any ICD-9 coded procedure)	1
I ndex admission T ype: non-elective	1
Number of hospital A dmission(s) during the previous year	
≤1	0
2-5	2
>5	5
L ength of stay ≥ 5 days	2

C-statistic 0.72

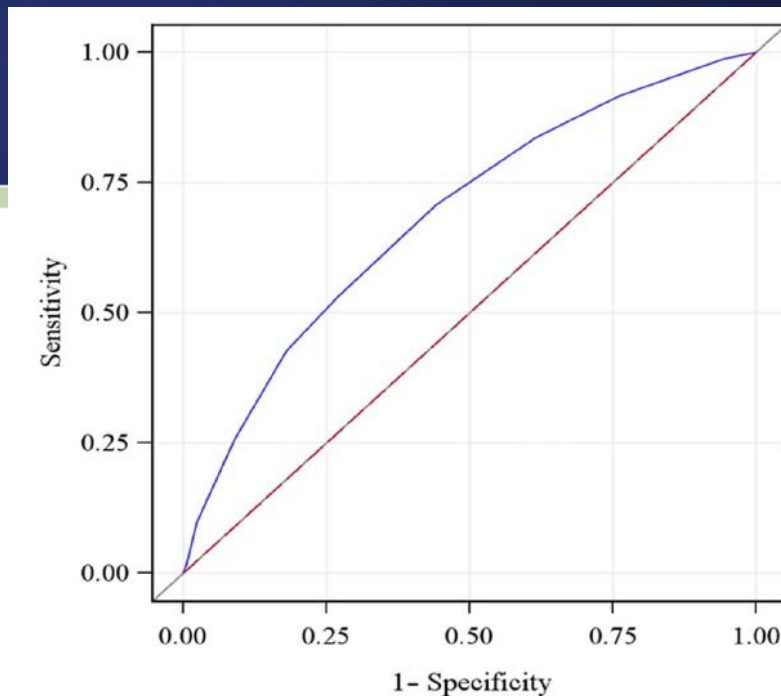


Points	Risk category	Patients in each category, n (%)	Observed proportion of PAR in the validation study, %	Estimated risk of PAR in the validation study, %
0-4	Low	77,896 (63%)	5.8	5.8
5-6	Intermediate	29,239 (23%)	11.8	11.8
≥ 7	High	17,077 (14%)	22.4	22.4

The simplified “HOSPITAL” Score

<i>Attribute</i>	<i>Points</i>
Low H emoglobin level at discharge (< 12 g/dL)	1
Discharge from an O ncology division OR active cancer	2
Low S odium level at discharge (< 135 mmol/L)	1
Procedure during hospital stay (any ICD-9 coded procedure)	4
I ndex admission T ype: non-elective	1
Number of hospital A dmission(s) during the previous year	
≤1	0
2-5	2
>5	5
L ength of stay ≥ 5 days (8 days for Switzerland)	2

C-statistic 0.69



Points	Risk category	Patients in each category, n (%)	Observed proportion of PAR in the validation study, %	Estimated risk of PAR in the validation study, %
0-4	Unlikely	82,383 (70%)	6.4	6.4
≥ 5	Likely	34,682 (30%)	17.3	17.3

Validation Studies - Summary

Design	Setting	Performance
Derivation study Internal validation study	Academic hospital in Boston, MA N=10,701 medical patients	0.71
International external validation study Geographical and time transportability	9 medical centers, 4 countries, N=124,212 medical patients	0.72
External validation in CH Restrospective design	3 academic hospitals	0.67
External validation in CH Prospective design	3 academic hospitals in Ireland, N=436	0.70
External validation in CH Chronic diseases	6 US medical centers N= 9,181	0.68
External validation in Denmark	N= 19,277 medical patients	0.66
External validation in a US moderate sized university hospital	N= 931	0.77
External validation in primary care patients, admitted to any department	N=26,278	0.68

**>235,000 patients, 16 hospitals, 5 countries, and
3 continents
C-statistic: 0.66-0.77**

HOSPITAL score

Strengths

- Easy to use score
- Assessment before discharge
- Does not include non-avoidable readmissions
- All medical patients regardless of their main cause of admission
- International validation with good performance

Limitations

- It remains to be shown what interventions reduce the readmission's risk by these high-risk patients

INTERVENTIONS TO REDUCE READMISSIONS

Preventing 30-day readmission

Table 1. Activity-Based Coding Framework for Discharge Interventions

Label	Activity Observed
Discharge planning	Simply thinking about and formalizing an approach to prepare for discharge when this did not occur in any way in the control arm
Case management	Logistical coordination of care and/or resources not specifically focused on self-management and either not occurring in control arm or occurring to lesser degree
Telephone follow-up	Use of a telephone or videophone for provider-initiated communication after discharge that does not occur in the control arm
Telemonitoring	Use of remote technology designed for the patient to transmit objective measures of health status with or without connected subjective assessment
Patient education	Patient-directed education related to diagnosis or treatment rationale but not focused on encouraging self-management and not occurring in control arm
Self-management	Patient-directed education or coaching directly focused on improving patient's ability to self-manage care needs that does not happen in control arm
Medication intervention	Medication reconciliation or special education aimed at improving medication understanding or adherence; often conducted by a pharmacist but need not be
Home visits	Physical visitation by intervention provider to patient's place of residence when this does not happen in control arm
Follow-up scheduled	Scheduling of a follow-up visit prior to discharge when this is not done in the control arm or is done less reliably

Preventing 30-day readmission

Patient-centered discharge instructions	Some difference in the format or usability of discharge materials to make them more accessible or relevant compared with control
Clinician continuity	Increased provider presence on both sides of the hospital-to-home transition compared with control; may include involvement of PCP in inpatient care or strategic follow-up with inpatient clinician after discharge or "bridging" clinician
Timely follow-up	Postdischarge follow-up visit or communication with patient when this either does not occur or occurs at a later date in the control arm
Timely PCP communication	Engagement with PCP in communication about patient status when this either does not occur or occurs at a later date in the control arm
Patient hotline	Presence of an open line for patient-initiated communication when this either does not exist in the control arm or is more restricted in availability or usefulness
Rehabilitation intervention	Patient-directed rehabilitation efforts that are not entirely diagnosis specific but aimed at improving functional status and do not exist in the control arm
Streamlining	A general streamlining of services provided, often with dedicated assignment of responsibility, when this does not occur in the control arm
Making requisite	Increasing the use or quality of services currently available but underutilized compared with the situation in the control arm
Other	Special situations unique to the intervention (eg, caregiver education, peer mentoring)

Abbreviation: PCP, primary care provider.

Project BOOST

- Different concept: package with risk assessment and intervention.
- BOOST intervention to reduce 30-day readmissions among hospitalized patients.
- Tailored recommendations to local contexts.
- Key Elements:
 - **A Comprehensive Intervention** developed by a panel of nationally recognized experts based on the best available evidence.
 - **A Comprehensive Implementation Guide** provides step-by-step instructions.
 - **Longitudinal Technical Assistance** provides face-to-face training.

Tool for Addressing Risk: A Geriatric Evaluation for Transitions

Risk Assessment: 8P Screening Tool (Check all that apply.)	Risk Specific Intervention
Problem medications (anticoagulants, insulin, aspirin & clopidogrel dual therapy, digoxin, narcotics) <input type="checkbox"/>	<input type="checkbox"/> Medication specific education using Teach Back provided to patient and caregiver <input type="checkbox"/> Monitoring plan developed and communicated to patient and aftercare providers, where relevant (e.g. warfarin, digoxin and insulin) <input type="checkbox"/> Specific strategies for managing adverse drug events reviewed with patient/caregiver <input type="checkbox"/> Follow-up phone call at 72 hours to assess adherence and complications
Psychological (depression screen positive or h/o depression diagnosis) <input type="checkbox"/>	<input type="checkbox"/> Assessment of need for psychiatric aftercare if not in place <input type="checkbox"/> Communication with aftercare providers, highlighting this issue if new <input type="checkbox"/> Involvement/awareness of support network insured
Principal diagnosis (cancer, stroke, DM, COPD, heart failure) <input type="checkbox"/>	<input type="checkbox"/> Review of national discharge guidelines, where available <input type="checkbox"/> Disease specific education using Teach Back with patient/caregiver <input type="checkbox"/> Action plan reviewed with patient/caregivers regarding what to do and who to contact in the event of worsening or new symptoms <input type="checkbox"/> Discuss goals of care and chronic illness model discussed with patient/caregiver
Polypharmacy (≥5 more routine meds) <input type="checkbox"/>	<input type="checkbox"/> Elimination of unnecessary medications <input type="checkbox"/> Simplification of medication scheduling to improve adherence <input type="checkbox"/> Follow-up phone call at 72 hours to assess adherence and complications
Poor health literacy (inability to do Teach Back) <input type="checkbox"/>	<input type="checkbox"/> Committed caregiver involved in planning/administration of all general and risk specific interventions <input type="checkbox"/> Aftercare plan education using Teach Back provided to patient and caregiver <input type="checkbox"/> Link to community resources for additional patient/caregiver support <input type="checkbox"/> Follow-up phone call at 72 hours to assess adherence and complications
Patient support (absence of caregiver to assist with discharge and home care) <input type="checkbox"/>	<input type="checkbox"/> Follow-up phone call at 72 hours to assess condition, adherence and complications <input type="checkbox"/> Follow-up appointment with aftercare medical provider within 7 days <input type="checkbox"/> Involvement of home care providers of services with clear communications of discharge plan to those providers
Prior hospitalization (non-elective; in last 6 months) <input type="checkbox"/>	<input type="checkbox"/> Review reasons for re-hospitalization in context of prior hospitalization <input type="checkbox"/> Follow-up phone call at 72 hours to assess condition, adherence and complications <input type="checkbox"/> Follow-up appointment with aftercare medical provider within 7 days
Palliative care (Would you be surprised if this patient died in the next year? Does this patient have an advanced or progressive serious illness?) Yes to either. <input type="checkbox"/>	<input type="checkbox"/> Assess need for palliative care services <input type="checkbox"/> Identify goals of care and therapeutic options <input type="checkbox"/> Communicate prognosis with patient/family/caregiver <input type="checkbox"/> Assess and address bothersome symptoms <input type="checkbox"/> Identify services or benefits available to patients based on advanced disease status <input type="checkbox"/> Discuss with patient/family/caregiver role of palliative care services and benefits and services available



Tool for Addressing Risk: A Geriatric Evaluation for Transitions

Risk Assessment: SP Screening Tool (Check all that apply.)	Risk Specific Intervention
Problem medications (anticoagulants, insulin, aspirin & clopidogrel dual therapy, digoxin, narcotics) <input type="checkbox"/>	<input type="checkbox"/> Medication specific education using Teach Back provided to patient and caregiver <input type="checkbox"/> Monitoring plan developed and communicated to patient and aftercare providers, where relevant (e.g. warfarin, digoxin and insulin) <input type="checkbox"/> Specific strategies for managing adverse drug events reviewed with patient/caregiver <input type="checkbox"/> Follow-up phone call at 72 hours to assess adherence and complications
Psychological (depression screen positive or h/o depression diagnosis) <input type="checkbox"/>	<input type="checkbox"/> Assessment of need for psychiatric aftercare if not in place <input type="checkbox"/> Communication with aftercare providers, highlighting this issue if new <input type="checkbox"/> Involvement/awareness of support network insured
Principal diagnosis (cancer, stroke, DM, COPD, heart failure) <input type="checkbox"/>	<input type="checkbox"/> Review of national discharge guidelines, where available <input type="checkbox"/> Disease specific education using Teach Back with patient/caregiver <input type="checkbox"/> Action plan reviewed with patient/caregivers regarding what to do and who to contact in the event of worsening or new symptoms <input type="checkbox"/> Discuss goals of care and chronic illness model discussed with patient/caregiver

Study Result

- Implementation in 11 units, comparison to 19 “control” units.
- The average rate of 30-day rehospitalization in BOOST units was 14.7% prior to implementation and 12.7% 12 months later ($P=0.01$), reflecting an absolute reduction of 2%.
- Many study limitations.

BOOST

Strengths

- Interventions linked with the risk assessment

Limitations

- No validation of the risk assessment tool itself.
- Validation study of the package has many limitations.

Interventions to reduce 30-day readmission

Predischarge Intervention	Postdischarge Intervention
Patient education	Timely follow-up
Discharge planning	Timely PCP communication
Medication reconciliation	Follow-up telephone call
Appointment scheduled before discharge	Patient hotline
	Home visit
Intervention Bridging the Transition	
Transition coach	
Patient-centered discharge instructions	
Provider continuity	

Intervention study: Target-Read Study



Merci pour votre participation !

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