

Sample HQI Composite Quality Score calculation for Premier Memorial Hospital

CABG Composite Quality Score:

Patient Level			
CABG	Process Component	Eligible	Actual
Patient 1:	Process measures		
	Aspirin prescribed at discharge	Yes	Yes
	CABG using IMA	Yes	Yes
	Prophylactic antibiotic received < 1 our prior to surgical incision	Yes	Yes
	Prophylactic antibiotic selection for isolated CABG patients	Yes	Yes
	Prophylactic antibiotics discontinued < 24 hours after surgery end time	Yes	No
Total for patient 1		5	4

Opportunities for intervention and actual interventions for all individual measures are aggregated to the patient level.

Hospital Level		
Process Component	Eligible	Actual
CABG Patient 1	5	4
CABG Patient 2	5	5
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CABG Patient n	4	3
Total		167
		141

Patient level values are aggregated to the facility level.

Actual and expected mortality rates calculated

Actual and expected post operative hemorrhage/hematoma rates calculated (Act. post-op H/H rate) and (Exp. post-op H/H rate)

Actual and expected post-operative physiologic and metabolic derangement rates calculated (Actual post-op PMD rate) and (Expected post-op PMD rate)

Composite Quality Score				
Composite Process component:				
Eligible	Actual	Facility rate	Component Weight	Composite Process Score
(Facility rate X Weight X 100)				
167	141	0.84	0.625	52.77
Composite Outcome component:				
		Facility rate	Component Weight	Composite Outcome Score
Actual post-op H/H avoidance rate (1 - Actual post-op H/H rate)		0.9898		
Expected post-op H/H avoidance rate (1 - expected post-op H/H rate)		0.9700		
Post-op H/H avoidance index		1.0204	0.125	12.76
Actual post-op PMD avoidance rate (1 - Actual post-op PMD rate)		0.9760		
Expected post-op PMD avoidance rate (1 - expected post-op PMD rate)		0.9830		
Post-op PMD avoidance index		0.9929	0.125	12.41
Actual survival rate (1 - Actual mortality rate)		0.9564		
Expected survival rate (1 - expected mortality rate)		0.8869		
Survival index		1.0784	0.125	13.48
HQI Composite CABG Quality Score				91.42

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AMI Composite Quality Score:

Patient Level			
AMI	Process Component		
Patient 1:	Process measures	Eligible	Actual
	Aspirin at Arrival	Yes	Yes
	Aspirin at Discharge	Yes	No
	ACEI for LVSD	Yes	Yes
	Smoking Cessation Counseling	No	No
	Beta Blocker at Discharge	Yes	Yes
	Beta Blocker at arrival	Yes	Yes
	Thrombolytics Received Within 30 Minutes of Arrival	No	No
	PCI within 120 minutes of Hospital Arrival	No	No
	Total for patient 1	5	4

Opportunities for intervention and actual interventions for all individual measures are aggregated to the patient level.

Hospital Level		
	Process Component	
	Eligible	Actual
AMI Patient 1	5	4
AMI Patient 2	6	4
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AMI Patient n	7	6
Total	131	120

Patient level values are then aggregated to the facility level.

Actual mortality rate is calculated

Expected mortality rate is calculated

Composite Quality Score				
Composite Process component:				
Eligible	Actual	Facility rate	Component Weight	Composite Process Score
				(Facility rate X Weight X 100)
131	120	0.9160	0.89	81.53
Composite Outcome component:				
	Facility rate	Component Weight	Composite Outcome Score	
Actual survival rate (1 - actual mortality rate)	0.9524			
Expected survival rate (1 - expected mortality rate)	0.8839			
Survival index	1.0775	0.11		11.85
HQI Composite AMI Quality Score				93.38

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Hip and Knee Replacement Composite Quality Score:

Patient Level			
Hip/Knee	Process Component	Eligible	Actual
Patient 1:	Process measures		
	Prophylactic antibiotic received < 1 our prior to surgical incision	Yes	Yes
	Prophylactic antibiotic selection for isolated CABG patients discontinued < 24 hours after surgery end time	Yes	Yes
Total for patient 1		3	3

Opportunities for intervention and actual interventions for all individual measures are aggregated to the patient level.

Hospital Level		
Process Component	Eligible	Actual
HNK Patient 1	3	3
HNK Patient 2	3	2
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HNK Patient n	3	3
Total	312	291

Patient level values are aggregated to the facility level.

Actual and expected 30-day readmission rates calculated

Actual and expected post operative hemorrhage/hematoma rates calculated (Act.post-op H/H rate) and (Exp. post-op H/H rate)

Actual and expected post-operative physiologic and metabolic derangement rates calculated (Actual post-op PMD rate) and (Expected post-op PMD rate)

Composite Quality Score				
Composite Process component:				
Eligible	Actual	Facility rate	Component Weight	Composite Process Score
(Facility rate X Weight X 100)				
312	291	0.9327	0.50	46.63
Composite Outcome component:				
		Facility rate	Component Weight	Composite Outcome Score
Actual post-op H/H avoidance rate (1 - Actual post-op H/H rate)		0.9700		
Expected post-op H/H avoidance rate (1 - expected post-op H/H rate)		0.9600		
Post-op H/H avoidance index		1.0104	0.167	16.87
Actual post-op PMD avoidance rate (1 - Actual post-op PMD rate)		0.9890		
Expected post-op PMD avoidance rate (1 - expected post-op PMD rate)		0.9800		
Post-op PMD avoidance index		1.0092	0.167	16.85
Actual 30-day readmission avoidance rate (1 - actual 30-day readmit rate)		0.9400		
Expected 30-day readmission avoidance rate (1 - expected 30-day readmit rate)		0.9570		
30-day readmission avoidance index		0.9822	0.167	16.37
HQI Composite HNK Quality Score				96.73

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HF Composite Quality Score:

Patient Level				Hospital Level			Composite Quality Score				
HF Patient 1:	Process Component			Process Component			Composite Process component:				
	Process measures	Eligible	Actual		Eligible	Actual	Eligible	Actual	Facility rate	Component Weight	Composite Process Score <small>(Facility rate X Weight X 100)</small>
	LVF assessment	Yes	Yes	HF Patient 1	4	2	185	169	0.9135	1.0	91.35
	Detailed discharge instructions	Yes	No	HF Patient 2	4	3					
	ACEI for LVSD	Yes	Yes	.							
	Smoking cessation Counseling	Yes	No	.							
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				.							
				.							
				HF Patient n	4	4					
	Total for patient 1	4	2	Total	185	169	Composite Outcome component:				
											Composite Outcome Score N/A
							HQI Composite HF Quality Score		91.35		

Opportunities for intervention and actual interventions for all individual measures are aggregated to the patient level.

Patient level values are then aggregated to the facility level.

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CAP Composite Quality Score:

Patient Level				Hospital Level			Composite Quality Score						
CAP Patient 1:	Process Component			Process Component	Eligible	Actual	Composite Process component:						
	Process measures	Eligible	Actual				Eligible	Actual	Facility rate	Component Weight	Composite Process Score		
	Oxygenation assessment within 24 hours prior to or after arrival	Yes	Yes								(Facility rate X Weight X 100)		
	Initial antibiotic consistent with current recommendations	Yes	No										
	Blood Culture collected prior to first antibiotic administration	Yes	Yes				CAP Patient 1	6	4				
	Influenza screening/vaccination	Yes	No				CAP Patient 2	7	6				
	Pneumococcal screening/vaccination	Yes	Yes				.						
	Antibiotic timing: within 4 hours of hospital arrival	Yes	Yes				.						
	Smoking cessation Counseling	No	No				.						
							CAP Patient n	7	5	247	219	0.8866	1.0
Total for patient 1	6	4	Total	247	219	Composite Outcome component:							
						Composite Outcome Score							
						N/A							
						HQI Composite CAP Quality Score 88.66							

Opportunities for intervention and actual interventions for all individual measures are aggregated to the patient level.

Patient level values are then aggregated to the facility level.