



QHi Measures
Last Updated 3/16/2011

Core	QHi MEASURES	CALCULATION
Clinical Quality		
*	Healthcare Associated Infections per 100 inpatient days (formerly Nosocomial Infections)	[Number of Healthcare Associated Infections that occurred during the month / (Acute Inpatient Days + Skilled Swing Bed Days)] x 100 Reported as a rate
*	Unassisted Patient Falls per 1000 inpatient days	[Number of unassisted patient falls reported / (Acute Inpatient Days + Skilled Swing Bed Days)] x 1000 Reported as a rate
*	Inpatients Receiving Pneumonia Immunization - CMS PN-2	[[CMS Pn measure PN-2 numerator] Number of pneumonia patients age 65 or older screened for pneumococcal vaccine status and were administered vaccine prior to discharge when indicated / (CMS Pn measure PN-2 denominator) Total number of patients age 65 and older having had a working diagnosis of pneumonia, who do not have a discharge status of death, transfers to a higher level of care, transfers to hospice (inpatient or home), and left against medical advice or received in from another acute care facility] x 100 Reported as %
*	Pneumonia Patients Receiving Antibiotics Within 6 Hours of Admission - CMS PN-5c	[[CMS Pn measure PN-5c numerator] Number of pneumonia patients who receive their first dose of antibiotic within 6 hours after arrival at the hospital / (CMS Pn measure PN-5c denominator) Total number of patients with a working diagnosis of pneumonia (excluding aspiration or chemical pneumonia) age 18 or older not leaving ED without being seen, not receiving comfort measures or on clinical trials or protocols, and who had not received antibiotics within 24 hours prior to hospital arrival] x 100 Reported as %
	Inpatients Receiving O2 Assessment within 24 hours of admission CMS Pn-1 (Retired by CMS)	[[CMS Pn measure PN-1 numerator] - Number of Pneumonia Patients who had an assessment of arterial oxygenation within 24 hours prior to or after arrival at the hospital / (CMS Pn measure PN-1 denominator) Total number of pneumonia patients age 18 or older with a working diagnosis of pneumonia not transferred to an acute care facility, not discharged in the first 24 hours and not receiving comfort measures of hospital arrival] x 100 Reported as %
	Inpatients Screened for Pneumonia Vaccine Status (Not a CMS measure)	[All patients admitted with a prior diagnosis of Pneumonia screened for Pneumonia vaccine status for the period / All patients admitted with a prior diagnosis of Pneumonia for the same period] x 100 Reported as %
	Discharge Instructions provided to HF patients - Compare to CMS HF-1	[# of HF patients receiving Discharge Instructions / # of HF patients discharged home] x 100 Reported as %
	Evaluation of LVS Function - Compare to CMS HF-2	[# of HF patients receiving LVS evaluation / # of HF patients discharged home] x 100 Reported as %
	ACEI or ARB for LVSD - Compare to CMS HF-3	[# of HF patients with LVSD prescribed an ACEI or ARB at hospital discharge / # of HF patients with LVSD discharged] x 100 Reported as %
	Adult Smoking Cessation Advice/Counseling - Compare to CMS HF-4	[# of HF patients who smoke that receive smoking cessation advice / # of HF patients] x 100 Reported as %
	Percentage of eligible patients who received thrombolytic therapy - Compare to OP-1 and OP-2 Median Time to Fibrinolysis	[Median Time to Fibrinolysis Number of AMI patients with ST segment elevation or LBBB on ECG / Number of AMI patients receiving thrombolytic/fibrinolytic therapy] x 100 Reported as % - Compare to CMS OP-1 and OP-2 Median Time to Fibrinolysis

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	<p>Median Time from Emergency Dept Arrival to Time of Transfer to another Facility for Acute Coronary Intervention -Compare to CMS OP-3</p>	<p>[CMS OP-3] Median time (in minutes) from emergency department arrival to transfer to another facility for acute coronary intervention for patients meeting the following criteria: Reported as minutes</p> <p>Inclusions:</p> <ul style="list-style-type: none"> <input type="checkbox"/> ICD-9-CM Principal Diagnosis Code for AMI as defined in Appendix A, OP Table 6.1, <input type="checkbox"/> E/M Code for emergency department encounter as defined in Appendix A, OP Table 1.0a, and <input type="checkbox"/> ST-segment elevation or LBBB on the ECG performed closest to ED arrival, and <input type="checkbox"/> Patients discharged/transferred to a short-term general hospital for inpatient care, to a Federal healthcare facility, or to a Critical Access Hospital, and <input type="checkbox"/> Patients not receiving Fibrinolytic Administration <input type="checkbox"/> Patients with Transfer for Acute Coronary Intervention <p>Excluded Populations:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Patients less than 18 years of age <input type="checkbox"/> Patients receiving Fibrinolytic Administration (Administration of a pharmacological agent intended to cause lysis of a thrombus (destruction or dissolution of a blood clot). Refer to Appendix C, Table 6.3
	<p>Percentage of AMI patients without aspirin contraindications who received aspirin within 24 hours before or after hospital arrival - Compare to CMS OP-4: Aspirin at Arrival</p>	<p>[Number of AMI patients receiving aspirin / Number of AMI patients] x 100 Reported as % [Rationale: The early use of aspirin in patients with acute myocardial infarction results in a significant reduction in adverse events and subsequent mortality. Aspirin therapy provides a percent reduction in mortality that is comparable to thrombolytic therapy and the combination provides additive benefit for patients with ST-elevation myocardial infarction (ISIS-2, 1988) and is also effective in patients with non-ST-elevation myocardial infarction (Theroux, 1988 and RISC Group, 1990). National guidelines strongly recommend early aspirin for patients hospitalized with AMI (Braunwald, 2002 and Antman, 2004). Despite these recommendations, aspirin remains under-utilized in eligible older patients hospitalized with AMI (Jencks, 2000)] - Compare to CMS OP-4: Aspirin at Arrival</p>
	<p>Percentage of acute myocardial infarction (AMI) or Chest Pain patients receiving ECG (electrocardiogram) within 10 minutes of arrival (performed in the ED prior to transfer). - Compare to OP-5 Median Time to ECG</p>	<p>[Number of AMI or Chest Pain patients receiving ECG (electrocardiogram) within 10 minutes of arrival (performed in the ED prior to transfer) / Number of patients presenting with AMI or chest pain] x 100 Reported as % - Compare to OP-5 Median Time to ECG</p>
	<p>Medication Omissions Resulting in Medication Errors per 100 inpatient days</p>	<p>[Number of incidents where patients did not receive a medication at the time it was ordered and there is no new order to hold the medication or there are no hospital policies or protocol that would support the holding of the medication / (Acute Inpatient Days + Skilled Swing Bed Days)] x 100 Reported as a rate</p>
	<p>Medication Errors Resulting from Transcription Errors per 100 inpatient days</p>	<p>[The number of medication errors that were a result of an error in transcription/ (Acute Inpatient Days + Skilled Swing Bed Days)] x 100 Reported as a rate</p>

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	Percentage of ER Provider Response Times	[Number of times provider failed to respond to ER within required timeframe / Total ER visits] x 100 Reported as %
	Percentage of Readmissions Within 30 Days with Same or Similar Diagnosis	[Patients readmitted to CAH within 30 days with the same or similar diagnosis / Total inpatient discharges] x 100 Reported as %
	Percentage of Return ER Visits within 72 hours with same/similar diagnosis	[Number of ER patients returning with same or similar diagnosis to the ER within 72 hrs of their initial visit / Total ER visits] x 100 Reported as %
	Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision - Overall Rate (CMS SCIP-Inf-1a)	[[(CMS SCIP-Inf-1a numerator) Number of surgical patients with prophylactic antibiotics initiated within one hour prior to surgical incision (two hours if receiving vancomycin, in Appendix C, Table 3.8, or a fluoroquinolone, in Appendix C, Table 3.10) / (CMS SCIP-Inf-1a denominator) All selected surgical patients with no evidence of prior infection] x 100 Reported as %
	Prophylactic Antibiotic Selection for Surgical Patients - Overall Rate (CMS SCIP-Inf-2a)	[[(CMS SCIP-Inf-2a numerator) Number of surgical patients who received prophylactic antibiotics recommended for their specific surgical procedure / (CMS SCIP-Inf-2a denominator) All selected surgical patients with no evidence of prior infection] x 100 Reported as %
	Prophylactic Antibiotics Discontinued Within 24 Hours after Surgery End Time - Overall Rate (CMS SCIP-Inf-3a)	[[(CMS SCIP-Inf-3a numerator) Number of surgical patients whose prophylactic antibiotics were discontinued within 24 hours after Anesthesia End Time (48 hours for CABG or Other Cardiac Surgery) / (CMS SCIP-Inf-3a denominator) All selected surgical patients with no evidence of prior infection] x 100 Reported as %
	Surgery Patients with Appropriate Hair Removal (CMS SCIP-Inf-6)	[[(CMS SCIP-Inf-6 numerator) Surgery patients with surgical site hair removal with clippers or depilatory or with no surgical site hair removal / (CMS SCIP-Inf-6 denominator) All selected surgery patients] x 100 Reported as %
	Urinary Catheter Removed on Postoperative Day 1 (POD 1) or Postoperative Day 2 (POD 2) with Day of Surgery being Day Zero (CMS SCIP-Inf-9)	[[(CMS SCIP-Inf-9 numerator) Number of surgical patients whose urinary catheter is removed on POD 1 or POD 2 with day of surgery being day zero / (CMS SCIP-Inf-9 denominator) All selected surgical patients with a catheter in place postoperatively] x 100 Reported as %
	Surgery Patients with Perioperative Temperature Management (CMS SCIP-Inf-10)	[[(CMS SCIP-Inf-10 numerator) Surgery patients for whom either active warming was used intraoperatively for the purpose of maintaining normothermia or who had at least one body temperature equal to or greater than 96.8° F/36° C recorded within the 30 minutes immediately prior to or the 15 minutes immediately after Anesthesia End Time / (CMS SCIP-Inf-10 denominator) All patients, regardless of age, undergoing surgical procedures under general or neuraxial anesthesia of greater than or equal to 60 minutes duration] x 100 Reported as %
	Surgery Patients on Beta-Blocker Therapy Prior to Arrival Who Received a Beta-Blocker During the Perioperative Period (CMS SCIP-Card-2)	[[(CMS SCIP-Card-2 numerator) Surgery patients on beta-blocker therapy prior to arrival who receive a beta-blocker during the perioperative period / (CMS SCIP-Card-2 denominator) All surgery patients on beta-blocker therapy prior to arrival] x 100 Reported as %

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	Surgery Patients with Recommended Venous Thromboembolism Prophylaxis Ordered (CMS SCIP-VTE-1)	[(CMS SCIP-VTE-1 numerator) Surgery patients with recommended venous thromboembolism (VTE) prophylaxis ordered anytime from hospital arrival to 24 hours after Anesthesia End Time / (CMS SCIP-VTE-1 denominator) All selected surgery patients] x 100 <i>Reported as %</i>
	Surgery Patients Who Received Appropriate Venous Thromboembolism Prophylaxis Within 24 Hours Prior to Surgery to 24 Hours After Surgery (CMS SCIP-VTE-2)	[(CMS SCIP-VTE-2 numerator) Surgery patients who received appropriate venous thromboembolism (VTE) prophylaxis within 24 hours prior to Anesthesia Start Time to 24 hours after Anesthesia End Time / (CMS SCIP-VTE-2 denominator) All selected surgery patients] x 100 <i>Reported as %</i>
Employee Contribution		
*	Benefits as a Percentage of Salary	[Total cost of benefits provided to employees / Total of cost of salary payment to employees (wages only)] x 100 <i>Reported as %</i>
*	Staff Turnover	[Number of employees (excluding temps and PRNs) leaving during the month / Number of employees at the beginning of month (excluding temps and PRNs)] x 100 <i>Reported as %</i>
	Non-Nursing Staff Turnover	[Number of Non-Nursing staff who left / Total number of Non-Nursing Staff] x 100 <i>Reported as %</i>
	Average Time to Hire (All Staff)	Total Days to Fill Positions / Total number of Positions posted <i>Reported as a rate</i>
	Nursing Staff Turnover	[Number of Nursing staff who left / Total number of Nursing Staff] x 100 <i>Reported as %</i>
	Average Time to Hire (Nursing)	Total Days to Fill Nursing Positions / Total number of Nursing positions posted <i>Reported as a rate</i>
	Average Time to Hire (Non-Nursing)	Total Days to Fill Non-Nursing Positions / Total number of Non-Nursing positions posted <i>Reported as a rate</i>
	Salary to Operating Expenses Comparison	[(Total Salary Expense + Contract labor expense) / Operating Expenses] x 100 <i>Reported as %</i>
Financial Operational		
*	Days Cash on Hand	(Cash on hand + investment + Non restricted funds at month's end) / [(Operating expense - bad debt expense - depreciation expense) / 30.4] <i>Reported as a rate</i>
*	Gross Days in AR	AR Balance / Previous 3 months Avg. Daily Charge = AR Days [Previous 3 Month Gross Charges / Number Days in Previous 3 months = Previous 3 months Avg. Daily Charge] <i>Reported as a rate</i>
	Bad Debt Expense	Bad debt expense / Net hospital patient revenue <i>Reported as a ratio</i>
	Charity Care	Reported Charity Care <i>Reported as dollars</i>
	Cost per Patient Day	(Total operating expense - Bad debt expense) / (Acute Inpatient Days + Skilled Swing Bed Days) <i>Reported as a rate</i>

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	Labor Hours per Patient Day	Total labor hours / (Acute Inpatient Days + Skilled Swing Bed Days) Reported as a rate
	Operating Profit Margin	[(Net patient service revenue + Other operating revenue - Total operating expense) / (Net patient service revenue + Other operating revenue)] x 100 Reported as %
	Current Ratio	Current Assets / Current Liabilities Reported as a ratio
	Net Patient Revenue per Patient Days	Net patient revenues / Patient Days Reported as a rate
	Payer Mix - Commercial	[Payer charges-Commercial / Total payer charges] x 100 Reported as %
	Payer Mix - Medicaid	[Payer charges-Medicaid / Total payer charges] x 100 Reported as %
	Payer Mix - Medicare	[Payer charges-Medicare / Total payer charges] x 100 Reported as %
	Payer Mix - Other	[Payer charges- Other / Total payer charges] x 100 Reported as %
	Payer Mix - Other Government	[Payer charges-Other Government / Total payer charges] x 100 Reported as %
	Payer Mix - Self/Private Pay	[Payer charges-Self Private pay / Total payer charges] x 100 Reported as %
	Physical Therapy Labor Hours per Unit of Service	Displayed as a ratio of Labor Hours / Units of Service. For example 29 (hrs) / 24 (units) = 1.16 ratio
	Laboratory Labor Hours per Unit of Service	Displayed as a ratio of Labor Hours / Units of Service. For example 29 (hrs) / 24 (units) = 1.16 ratio
	X-Ray Labor Hours per Unit of Service	Displayed as a ratio of Labor Hours / Units of Service. For example 29 (hrs) / 24 (units) = 1.16 ratio
	Mammogram Labor Hours per Unit of Service	Displayed as a ratio of Labor Hours / Units of Service. For example 29 (hrs) / 24 (units) = 1.16 ratio
	Ultrasound Labor Hours per Unit of Service	Displayed as a ratio of Labor Hours / Units of Service. For example 29 (hrs) / 24 (units) = 1.16 ratio
	CT Labor Hours per Unit of Service	Displayed as a ratio of Labor Hours / Units of Service. For example 29 (hrs) / 24 (units) = 1.16 ratio
	MRI Labor Hours per Unit of Service	Displayed as a ratio of Labor Hours / Units of Service. For example 29 (hrs) / 24 (units) = 1.16 ratio
	Pharmacy Labor Hours per Unit of Service	Displayed as a ratio of Labor Hours / Units of Service. For example 29 (hrs) / 24 (units) = 1.16 ratio
	Nursing Hours per Patient Day	Nursing Hours / Patient Days Reported as a rate



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	Rural Health Clinic Encounters per FTE	Number of Encounters / Number of FTE's <i>Reported as a rate</i>
	Long Term Care Hours per LTC Patient Day	LTC Hours / LTC Patient Days <i>Reported as a rate</i>
	Laboratory Hours per Billed Service	Number of Lab Hours / Number of charged tests <i>Reported as a rate</i>
Patient Satisfaction		
	During this hospital stay, how often did nurses treat you with courtesy and respect? HCAHPS1	Reported as a number from 1 to 4 based on the average of summed responses to the survey question: Never = 1, Sometimes = 2, Usually = 3 and Always = 4.
	During this hospital stay, how often did nurses listen carefully to you? HCAHPS2	Reported as a number from 1 to 4 based on the average of summed responses to the survey question: Never = 1, Sometimes = 2, Usually = 3 and Always = 4.
	During this hospital stay, how often did nurses explain things in a way you could understand? HCAHPS3	Reported as a number from 1 to 4 based on the average of summed responses to the survey question: Never = 1, Sometimes = 2, Usually = 3 and Always = 4.
	During this hospital stay, after you pressed the call button, how often did you get help as soon as you wanted it? HCAHPS4	Reported as a number from 1 to 4 based on the average of summed responses to the survey question: Never = 1, Sometimes = 2, Usually = 3 and Always = 4. Or 9 = I never pressed the call button (#9 responses are not considered)
	During this hospital stay, how often did doctors treat you with courtesy and respect? HCAHPS5	Reported as a number from 1 to 4 based on the average of summed responses to the survey question: Never = 1, Sometimes = 2, Usually = 3 and Always = 4.
	During this hospital stay, how often did doctors listen carefully to you? HCAHPS6	Reported as a number from 1 to 4 based on the average of summed responses to the survey question: Never = 1, Sometimes = 2, Usually = 3 and Always = 4.
	During this hospital stay, how often did doctors explain things in a way you could understand? HCAHPS7	Reported as a number from 1 to 4 based on the average of summed responses to the survey question: Never = 1, Sometimes = 2, Usually = 3 and Always = 4.
	During this hospital stay, how often were your room and bathroom kept clean? HCAHPS8	Reported as a number from 1 to 4 based on the average of summed responses to the survey question: Never = 1, Sometimes = 2, Usually = 3 and Always = 4.
	During this hospital stay, how often was the area around your room quiet at night? HCAHPS9	Reported as a number from 1 to 4 based on the average of summed responses to the survey question: Never = 1, Sometimes = 2, Usually = 3 and Always = 4.
	During this hospital stay, did you need help from nurses or other hospital staff in getting to the bathroom or in using a bedpan? HCAHPS10	Reported as a percentage of Yes responses. (Total Yes Responses / Total Responses) x 100
	How often did you get help in getting to the bathroom or in using a bedpan as soon as you wanted? HCAHPS11	Reported as a number from 1 to 4 based on the average of summed responses to the survey question: Never = 1, Sometimes = 2, Usually = 3 and Always = 4.
	During this hospital stay, did you need medicine for pain? HCAHPS12	Reported as a percentage of Yes responses. (Total Yes Responses / Total Responses) x 100
	During this hospital stay, how often was your pain well controlled? HCAHPS13	Reported as a number from 1 to 4 based on the average of summed responses to the survey question: Never = 1, Sometimes = 2, Usually = 3 and Always = 4.
	During this hospital stay, how often did the hospital staff do everything they could to help you with your pain? HCAHPS14	Reported as a number from 1 to 4 based on the average of summed responses to the survey question: Never = 1, Sometimes = 2, Usually = 3 and Always = 4.
	During this hospital stay, were you given any medicine that you had not taken before? HCAHPS15	Reported as a percentage of Yes responses. (Total Yes Responses / Total Responses) x 100



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	Before giving you any new medicine, how often did hospital staff tell you what the medicine was for? HCAHPS16	Reported as a number from 1 to 4 based on the average of summed responses to the survey question: Never = 1, Sometimes = 2, Usually = 3 and Always = 4.
	Before giving you any new medicine, how often did hospital staff describe possible side effects in a way you could understand? HCAHPS17	Reported as a number from 1 to 4 based on the average of summed responses to the survey question: Never = 1, Sometimes = 2, Usually = 3 and Always = 4.
	After you left the hospital, did you go directly to your own home, to someone else's home, or to another health facility? HCAHPS18	Reported as totals for Own home, Someone else's home and Another health facility. This question is intended to guide the patient through the survey. If the answer is Another Health Facility, the patient is directed to skip to Question 21.
	During this hospital stay, did doctors, nurses or other hospital staff talk with you about whether you would have the help you needed when you left the hospital? HCAHPS19	Reported as a percentage of Yes responses. $(\text{Total Yes Responses} / \text{Total Responses}) \times 100$
	During this hospital stay, did you get information in writing about what symptoms or health problems to look out for after you left the hospital? HCAHPS20	Reported as a percentage of Yes responses. $(\text{Total Yes Responses} / \text{Total Responses}) \times 100$
	Using any number from 0 to 10, where 0 is the worst hospital possible and 10 is the best hospital possible, what number would you use to rate this hospital during your stay? HCAHPS21	Total points for all surveys returned / Number of surveys returned
	Would you recommend this hospital to your friends and family? HCAHPS22	Reported as a number from 1 to 4 based on the average of summed responses to the survey question: Definitely no = 1, Probably no = 2, Probably yes = 3, Definitely yes = 4
	How well staff worked together to care for the patient? QHi1	Scoring: Very Poor = 0, Poor = 25, Fair = 50, Good = 75, Very Good = 100 points. Calculation: $(\text{Total points for all surveys returned} / \text{Number of surveys returned}) \times 100$
	The extent to which the patient felt ready for discharge? QHi2	Scoring: Very Poor = 0, Poor = 25, Fair = 50, Good = 75, Very Good = 100 points. Calculation: $(\text{Total points for all surveys returned} / \text{Number of surveys returned}) \times 100$
Hospital Characteristics		
	Average Inpatient Days	Lists reported Average Inpatient Days by hospitals for a selected month. No calculation.
	Monthly Inpatient Census	Lists Acute Inpatient Days, Observation Days, Skilled Swing Bed Days, Skilled Nursing Facility Days as reported by hospitals for months selected to report. No calculation.
	Average Length of Stay (in hours) Comparison	Lists the reported average length of stay in hours for acute inpatient stays. No calculation.