**Appendix:** "Do the Stars Align? Distribution of High Quality Ratings of Healthcare Sectors Across U.S. Markets"

**Appendix Table 1:** Specific Measures of the Four CMS Star Rating Systems

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| **Sector** | **Measure Domains** |
| **Hospitals** | Mortality: * Acute myocardial infarction (AMI)
* Coronary artery bypass graft surgery (CABG)
* Chronic Obstructive Pulmonary Disease (COPD)
* Congestive heart failure
* Pneumonia
* Stroke
* Serious treatable complications after surgery

Safety of care: * Central line-associated bloodstream infections (CLABSI)
* Catheter-associated urinary tract infections (CAUTI)
* Surgical site infections from colon surgery (SSI: Colon)
* Surgical site infections from abdominal hysterectomy (SSI: Hysterectomy)
* Methicillin-resistant Staphyloccocus Aureus (MRSA) events
* Clostridium-difficile events
* Rate of complications for hip/knee replacement
* Serious complications

Hospital readmissions (30-days): * AMI
* CABG surgery
* COPD
* Congestive heart failure
* Hip/Knee surgery
* Pneumonia
* Stroke
* Hospital wide readmissions

Patient experience: * Nursing communication
* Doctor communication
* Staff responsiveness
* Pain control
* Communication about medications
* Cleanliness
* Quietness
* Discharge information
* Understanding of care
* Overall hospital rating
* Recommendation of hospital

Effectiveness of care:* Flu vaccination of patients
* Flu vacations of staff
* Aspirin within 24hrs of AMI patients
* Proportion of patients who leave ED before being seen
* Percentage of patients in ED with stroke symptoms who received brain scan results within 45 minutes of arrival
* Percentage of patients receiving appropriate recommendation for colonoscopy screening
* Percentage of patient with history of polyps receiving follow-up colonoscopy in the appropriate time frame
* Percent of mothers whose deliveries were scheduled too early (1-2 weeks early) if not medically necessary
* Ischemic stroke patients who got medicine to break up blood clot within 3 hours
* Patients with blood clots who received anticoagulants
* Patients who developed blood clots who did not receive prophylaxis

Timeliness of care* Average (median) time patients spent in emergency department before being admitted to inpatient
* Average (median) time patients spent in ED waiting to get to inpatient floor
* Average (median) number of minutes before outpatients with chest pain or possible heart attack who needed specialized care were transferred to another hospital
* Average (median) number of of minutes before outpatients with chest pain or possible heart attack got an ECG
* Average (median) time patients spent in the ED before leaving from the visit
* Average (median) time patients spent in the ED before being seen
* Average (median) time patients spent in the ED with broken bones had to wait before getting pain medication

Efficient use of medical imaging * Outpatients with low-back pain who had an MRI without trying recommended treatments first, such as physical therapy
* Outpatient CT scans of the abdomen that were “combination” (double) scans
* Outpatient CT scans of the chest that were “combination (double) scans
* Outpatients who got cardiac imaging stress tests before low-risk outpatient surgery
* Outpatients with brain CT scans who got a sinus CT scan at the same time
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| **Home Health Agencies** | Clinical process measures * Timely imitation of care
* Drug education on all medications provided to patient/caregiver
* Influenza vaccine

Outcome measures:* Improvement in ambulation
* Improvement in bed transferring
* Improvement in bathing
* Improvement in pain interfering with activity
* Improvement in shortness of breath
* Acute care hospitalization rate
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| **Nursing Homes** | Health inspections:* Nursing home survey on health deficiencies
* Number of repeat revisits required to confirm correction of deficiencies

Staffing: * Total nursing hours per resident day (RN + LPN + nurse aide hours)
* RN hours per resident day

Quality measures:  Long stay residents:* % residents whose need for help with activities of daily living has increased
* % of residents whose ability to move independently worsened
* % of high risk residents with pressure ulcers
* % of residents who have/had a catheter inserted and left in their bladder
* % of residents who were physically restrained
* % of residents with a urinary tract infection
* % of residents who self-report moderate to severe pain
* % of residents experiencing one or more falls with major injury
* % of residents who receive an antipsychotic medication

Short-stay residents:* % of residents whose physical function improves from admission to discharge
* % of residents with pressure ulcers that are new or worsened
* % of residents who self-report moderate to severe pain
* % of residents who newly received an antipsychotic medication
* % of residents who were re-hospitalized after a nursing home admission
* % of residents who have had an outpatient ED visit
* % of residents who were successfully discharged to the community
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| **Dialysis Centers** | Quality measures * Standardized mortality ratio
* Standardized hospitalization ratio
* Standardized transfusion ratio
* % of adult patients who had enough waste removed from blood during dialysis
* % of pediatric patients who had enough waste removed from blood during dialysis
* % of adult peritoneal dialysis patients who had enough waste removed from blood during dialysis
* % of adult dialysis patients who had hypercalcemia
* % of adult dialysis patients who received treatment through fistula
* % of adult patients who had a catheter left in vein for 90 days or longer for regular hemodialysis treatment
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