

## APPENDIX A1. Local Area Scorecard Data Years and Databases

Indicator	Past year	Current year	Database
<b>ACCESS &amp; AFFORDABILITY</b>			
1 Adults ages 19–64 uninsured	2012	2014	ACS PUMS
2 Children ages 0–18 uninsured	2012	2014	ACS PUMS
3 Adults who went without care because of cost in past year	2011/12	2013/14	BRFSS
4 At-risk adults without a routine doctor visit in past two years	2011/12	2013/14	BRFSS
5 Adults without a dental visit in past year	— <sup>a</sup>	2012 & 2014	BRFSS
<b>PREVENTION &amp; TREATMENT</b>			
6 Adults with a usual source of care	2011/12	2013/14	BRFSS
7 Adults with age- and gender-appropriate cancer screenings	— <sup>a</sup>	2012 & 2014	BRFSS
8 Adults with age-appropriate vaccines	2011/12	2013/14	BRFSS
9 Medicare beneficiaries who received at least one drug that should be avoided in the elderly	2011	2013	5% Medicare enrolled in Part D
10 Medicare beneficiaries with dementia, hip/pelvic fracture, or chronic renal failure who received a prescription drug that is contraindicated for that condition	2011	2013	5% Medicare enrolled in Part D
11 Risk-adjusted 30-day mortality among Medicare beneficiaries hospitalized for heart attack, heart failure, pneumonia, or stroke	07/2010–06/2013	07/2011–06/2014	CMS Hospital Compare
12 Hospital safety composite score	07/2011–06/2013	07/2012–06/2014	CMS Hospital Compare
13 Hospitalized patients given information about what to do during their recovery at home	2013	2014	HCAHPS (via CMS Hospital Compare)
14 Hospitalized patients who reported hospital staff always managed pain well, responded when needed help to get to bathroom or pressed call button, and explained medicines and side effects	2013	2014	HCAHPS (via CMS Hospital Compare)
15 Home health patients who get better at walking or moving around	2012	2014	OASIS (via CMS Home Health Compare)
16 Home health patients whose wounds improved or healed after an operation	2012	2014	OASIS (via CMS Home Health Compare)
17 High-risk nursing home residents with pressure sores	1/2013–9/2013	1/2015–9/2015	MDS (via CMS Nursing Home Compare)
18 Long-stay nursing home residents with an antipsychotic medication	1/2013–9/2013	1/2015–9/2015	MDS (via CMS Nursing Home Compare)
<b>AVOIDABLE HOSPITAL USE &amp; COST</b>			
19 Hospital admissions among Medicare beneficiaries for ambulatory care–sensitive conditions, ages 65–74, per 1,000 beneficiaries	2012	2014	CCW (via CMS Geographic Variation Public Use File)
20 Hospital admissions among Medicare beneficiaries for ambulatory care–sensitive conditions, age 75 and older, per 1,000 beneficiaries	2012	2014	CCW (via CMS Geographic Variation Public Use File)
21 Medicare 30-day hospital readmissions, rate per 1,000 beneficiaries	2012	2014	CCW (via CMS Geographic Variation Public Use File)
22 Short-stay nursing home residents readmitted within 30 days of hospital discharge to nursing home	2010	2012	MedPAR, MDS
23 Long-stay nursing home residents hospitalized within a six-month period	2010	2012	MedPAR, MDS
24 Home health patients also enrolled in Medicare with a hospital admission	2012	2014	OASIS (via CMS Home Health Compare)
25 Potentially avoidable emergency department visits among Medicare beneficiaries, per 1,000 beneficiaries	2011	2013	Medicare SAF
26 Total reimbursements per enrollee (age 18–64) with employer-sponsored insurance	2013	2014	Truven MarketScan
27 Total Medicare (Parts A & B) reimbursements per enrollee	2012	2014	CCW (via CMS Geographic Variation Public Use File)
<b>HEALTHY LIVES</b>			
28 Mortality amenable to health care, deaths per 100,000 population	2010–11	2012–13	CDC NVSS: Mortality Restricted Use File
29 Breast cancer deaths per 100,000 female population	2010–11	2012–13	CDC NVSS: Mortality Restricted Use File
30 Colorectal cancer deaths per 100,000 population	2010–11	2012–13	CDC NVSS: Mortality Restricted Use File
31 Suicide deaths per 100,000 population	2010–11	2012–13	CDC NVSS: Mortality Restricted Use File
32 Infant mortality, deaths per 1,000 live births	2010–11	2012–13	CDC NVSS: Mortality Restricted Use File
33 Adults ages 18–64 who report fair/poor health or activity limitations because of physical, mental, or emotional problems	2011/12	2013/14	BRFSS
34 Adults who smoke	2011/12	2013/14	BRFSS
35 Adults ages 18–64 who are obese (BMI $\geq$ 30)	2011/12	2013/14	BRFSS
36 Percent of adults ages 18–64 who have lost six or more teeth because of tooth decay, infection, or gum disease	— <sup>a</sup>	2012 & 2014	BRFSS

Note: (a) Previous data not available or its definition is not comparable over time.

## Appendix A2. Local Scorecard Indicator Descriptions and Source Notes

- 1. Percent of adults ages 19–64 uninsured:** Authors' analysis of 2012 and 2014 1-year American Community Survey (ACS) Public Use Micro Sample (PUMS) (U.S. Census Bureau, ACS PUMS, 2012, 2014).
- 2. Percent of children ages 0–18 uninsured:** Authors' analysis of 2012 and 2014 1-year American Community Survey (ACS) Public Use Micro Sample (PUMS) (U.S. Census Bureau, ACS PUMS, 2012, 2014).
- 3. Percent of adults who went without care because of cost in the past year:** Authors' analysis of 2011–2014 Behavioral Risk Factor Surveillance System (NCCDPHP, BRFSS 2011, 2012, 2013, 2014).
- 4. Percent of at-risk adults without a routine doctor visit in past two years:** Percent of adults age 50 or older, or in fair or poor health, or ever told they have diabetes or pre-diabetes, acute myocardial infarction, heart disease, stroke, or asthma who did not visit a doctor for a routine checkup in the past two years. Authors' analysis of 2011–2014 Behavioral Risk Factor Surveillance System (NCCDPHP, BRFSS 2011, 2012, 2013, 2014).
- 5. Percent of adults without a dental visit in the past year:** Percent of adults who did not visit a dentist or dental clinic within the past year. Authors' analysis of 2012 and 2014 Behavioral Risk Factor Surveillance System (NCCDPHP, BRFSS 2012, 2014).
- 6. Percent of adults with a usual source of care:** Percent of adults age 18 and older who have one (or more) person they think of as their personal health care provider. Authors' analysis of 2011–2014 Behavioral Risk Factor Surveillance System (NCCDPHP, BRFSS 2011, 2012, 2013, 2014).
- 7. Percent of adults with age- and gender-appropriate cancer screenings:** Percent of adults ages 50–74 who have received sigmoidoscopy or colonoscopy in the past 10 years or a fecal occult blood test in the past two years; a mammogram in the past two years (women ages 50–74 only); or a pap smear in the past three years (women ages 25–64 only). Authors' analysis of 2012 and 2014 Behavioral Risk Factor Surveillance System (NCCDPHP, BRFSS 2012, 2014).
- 8. Percent of adults with age-appropriate vaccines:** Percent of adults age 18 and older who have received a flu shot in the past year and a pneumonia vaccine ever if age 65 and older. Authors' analysis of 2011–2014 Behavioral Risk Factor Surveillance System (NCCDPHP, BRFSS 2011, 2012, 2013, 2014).
- 9. Percent of Medicare beneficiaries who received at least one drug that should be avoided in the elderly:** Percent of Medicare beneficiaries age 65 and older who received at least one drug from a list of 13 classes of high-risk prescriptions that should be avoided by the elderly. Y. Zhang and S. H. Baik, University of Pittsburgh, analysis of 2011 and 2013 5% sample of Medicare beneficiaries enrolled in stand-alone Medicare Part D plans.
- 10. Percent of Medicare beneficiaries with dementia, hip/pelvic fracture, or chronic renal failure who received a prescription drug in an ambulatory care setting that is contraindicated for that condition:** Y. Zhang and S. H. Baik, University of Pittsburgh, analysis of 2011 and 2013 5% sample of Medicare beneficiaries enrolled in stand-alone Medicare Part D plans.
- 11. Risk-adjusted 30-day mortality among Medicare patients hospitalized for heart attack, heart failure, pneumonia, or stroke:** Risk-standardized, all-cause 30-day mortality rates for Medicare patients age 65 and older hospitalized with a principal diagnosis of heart attack, heart failure, stroke, or pneumonia between July 2010 and June 2013 and July 2011 and June 2014. All-cause mortality is defined as death from any cause within 30 days after the index admission, regardless of whether the patient dies while still in the hospital or after discharge. Authors' analysis of Medicare enrollment and claims data retrieved from 4th Quarter 2015 and 4th Quarter 2014 CMS Hospital Compare (DHHS n.d.).
- 12. Hospital Safety Composite Score:** Values are the unweighted average of the region's hospitals' safety composite (PSI 90) score between July 2010 and June 2013 and July 2011 and June 2014. The score includes pressure ulcers, iatrogenic pneumothorax, infection as a result of medical care, accidental puncture or laceration, and postoperative hip fracture, pulmonary embolism or deep vein thrombosis, sepsis, and wound dehiscence. The composite score is scaled such that values < 1 represent lower than expected complication rates and values > 1 represent higher than expected rates. Authors' analysis of Medicare enrollment and claims data retrieved from 4th Quarter 2015 and 4th Quarter 2014 CMS Hospital Compare (DHHS n.d.).
- 13. Percent of hospitalized patients who were given information about what to do during their recovery at home:** Authors' analysis of 2013 and 2014 Hospital Consumer Assessment of Healthcare Providers and Systems Survey data (HCAHPS n.d.) retrieved from retrieved from 4th Quarter 2015 and 4th Quarter 2014 CMS Hospital Compare (DHHS n.d.).
- 14. Percent of hospitalized patients who reported hospital staff always managed pain well, responded when needed help to get to bathroom or pressed call button, and explained medicines and side effects:** Authors' analysis of 2013 and 2014 Hospital Consumer Assessment of Healthcare Providers and Systems Survey data (HCAHPS n.d.) retrieved from retrieved from 4th Quarter 2015 and 4th Quarter 2014 CMS Hospital Compare (DHHS n.d.).
- 15. Percent of home health patients who get better at walking or moving around:** Percent of all home health episodes in which a person improved at walking or moving around compared to a prior assessment. Episodes for which the patient, at start or resumption of care, was able to ambulate independently are excluded. Authors' analysis of 2012 and 2014 Outcome and Assessment Information Set (CMS, OASIS n.d.) as reported in CMS Home Health Compare. Data retrieved from 2nd quarter 2015 and 2nd quarter 2014 CMS Home Health Compare (DHHS n.d.).
- 16. Percent of home health patients whose wounds improved or healed after an operation:** Percent of all home health episodes in which a person's surgical wound is more fully healed compared to a prior assessment. Episodes for which the patient, at start or resumption of care, did not have any surgical wounds or had only a surgical wound that was unobservable are excluded. Authors' analysis of 2012 and 2014 Outcome and Assessment Information Set (CMS, OASIS n.d.) as reported in CMS Home Health Compare. Data retrieved from 2nd quarter 2015 and 2nd quarter 2014 CMS Home Health Compare (DHHS n.d.).
- 17. Percent of high-risk nursing home residents with pressure sores:** Percent of long-stay nursing home residents impaired in bed mobility or transfer, comatose, or malnourished who have pressure sores (Stages 1–4) on target assessment. Authors' analysis of 2013 and 2015 Minimum Data Set (CMS, MDS n.d.) as reported in CMS Nursing Home Compare. Data retrieved from February 1, 2014, and February 1, 2016, CMS Nursing Home Compare data files.
- 18. Percent of long-stay nursing home residents with an antipsychotic medication:** Percent of long-stay nursing home residents that received an antipsychotic medication, excluding residents with schizophrenia, Tourette's syndrome, and Huntington's disease. Authors' analysis of 2013 and 2015 Minimum Data Set (CMS, MDS n.d.) as reported in CMS Nursing Home Compare. Data retrieved from February 1, 2014, and February 1, 2016, CMS Nursing Home Compare data files.
- 19. Hospital admissions among Medicare beneficiaries for ambulatory care-sensitive conditions, ages 65–74, per 1,000 beneficiaries:** Hospital admissions of fee-for-service Medicare beneficiaries ages 65–74 for one of the following eight ambulatory care-sensitive (ACS) conditions: long-term diabetes complications, lower extremity amputation among patients with diabetes, asthma or chronic obstructive pulmonary disease, hypertension, congestive heart failure, dehydration, bacterial pneumonia, or urinary tract infection. Authors' analysis of 2012 and 2014 Chronic Conditions Warehouse (CCW) data, retrieved from the February 2016 CMS Geographic Variation Public Use File (CMS, Office of Information Products and Analytics (OPIDA) 2016).
- 20. Hospital admissions among Medicare beneficiaries for ambulatory care-sensitive conditions, age 75 and older, per 1,000 beneficiaries:** Hospital admissions of fee-for-service Medicare beneficiaries age 75 and older for one of the following eight ambulatory care-sensitive (ACS) conditions: long-term diabetes complications, lower extremity amputation among patients with diabetes, asthma or chronic obstructive pulmonary disease, hypertension, congestive heart failure, dehydration, bacterial pneumonia, or urinary tract infection. Authors' analysis of 2012 and 2014 Chronic Conditions Warehouse (CCW) data, retrieved from the February 2016 CMS Geographic Variation Public Use File (CMS, Office of Information Products and Analytics (OPIDA) 2016).
- 21. Medicare 30-day hospital readmissions, rate per 1,000 beneficiaries:** All hospital admissions among Medicare beneficiaries age 65 and older that were readmitted within 30 days of an acute hospital stay for any cause. A correction was made to account for likely transfers between hospitals. Authors' analysis of 2012 and 2014 Chronic Conditions Warehouse (CCW) data, retrieved

from the February 2016 CMS Geographic Variation Public Use File (CMS, Office of Information Products and Analytics (OPIDA) 2016).

**22. Percent of short-stay nursing home residents readmitted within 30 days of hospital discharge to the nursing home:** Percent of newly admitted nursing home residents (never been in a facility before) who are rehospitalized within 30 days of being discharged to nursing home. V. Mor, Brown University, analysis of 2010 and 2012 Medicare enrollment data and Medicare Provider and Analysis Review (CMS, MEDPAR 2010, 2012).

**23. Percent of long-stay nursing home residents hospitalized within a six-month period:** Percent of long-stay residents (residing in a nursing home for at least 90 consecutive days) who were ever hospitalized within six months of baseline assessment. V. Mor, Brown University, analysis of 2010 and 2012 Medicare enrollment data, Medicare Provider and Analysis Review File (CMS, MEDPAR 2010, 2012).

**24. Percent of home health patients also enrolled in Medicare with a hospital admission:** Percent of acute care hospitalization for home health episodes that occurred in 2012 and 2014. Authors' analysis data from CMS Medicare claims data as reported in CMS Home Health Compare. Data retrieved from 2nd quarter 2015 and 2nd quarter 2014 CMS Home Health Compare (DHHS n.d.).

**25. Potentially avoidable emergency department visits among Medicare beneficiaries, per 1,000 beneficiaries:** Potentially avoidable emergency department visits were those that, based on diagnoses recorded during the visit and the health care service the patient received, were considered to be either nonemergent (care was not needed within 12 hours), or emergent (care needed within 12 hours) but that could have been treated safely and effectively in a primary care setting. This definition excludes any emergency department visit that resulted in an admission, as well as emergency department visits where the level of care provided in the ED was clinically indicated. J. Zheng, Harvard University, analysis of 2011 and 2013 Medicare Enrollment and Claims Data 20% sample, Chronic Conditions Warehouse (CMS, CCW 2011, 2013), using the New York University Center for Health and Public Service Research emergency department algorithm developed by J. Billings.

**26. Total reimbursements per enrollee (ages 18–64) with employer-sponsored insurance:** M. Chernew, Harvard Medical School Department of Health Care Policy, analysis of the Truven Marketscan Database. Total per enrollee spending estimates from a sophisticated regression model include reimbursed costs for health care services from all sources of payment including the health plan, enrollee, and any third-party payers incurred in 2013 and in 2014. Outpatient prescription drug charges are excluded. Enrollees with capitated plans and their associated claims are also excluded. Estimates for each HRR were adjusted for enrollees' age and sex, the interaction of age and sex, partial year enrollment and regional wage difference.

**27. Total Medicare (Parts A&B) reimbursements per enrollee:** Total Medicare fee-for-service reimbursements include payments for both Part A and Part B but exclude Part D (prescription drug costs) and extra centers for Medicare and Medicaid Services (CMS) payments for graduate medical education and for treating low-income patients. Reimbursements reflect only the age-65-and-older Medicare fee-for-service population. Authors' analysis of 2012 and 2014 Chronic Conditions Warehouse (CCW) data, retrieved from the February 2016 CMS Geographic Variation Public Use File (CMS, Office of Information Products and Analytics (OPIDA) 2016).

**28. Mortality amenable to health care, deaths per 100,000 population:** Number of deaths before age 75 per 100,000 population that resulted from causes considered at least partially treatable or preventable with timely and appropriate medical care (see list below), as described in E. Nolte and C. M. McKee (BMJ 2003). Authors' analysis of mortality data from CDC restricted-use Multiple Cause-of-Death file and U.S. Census Bureau population data, 2010–2014 (NCHS, MCD n.d.).

Cause of death	Age range
Intestinal infections	0–14
Tuberculosis	0–74
Other infections (diphtheria, tetanus, septicaemia, poliomyelitis)	0–74
Whooping cough	0–14

Measles	1–14
Malignant neoplasm of colon and rectum	0–74
Malignant neoplasm of skin	0–74
Malignant neoplasm of breast	0–74
Malignant neoplasm of cervix uteri	0–74
Malignant neoplasm of cervix uteri and body of uterus	0–44
Malignant neoplasm of testis	0–74
Hodgkin's disease	0–74
Leukemia	0–44
Diseases of the thyroid	0–74
Diabetes mellitus	0–49
Epilepsy	0–74
Chronic rheumatic heart disease	0–74
Hypertensive disease	0–74
Cerebrovascular disease	0–74
All respiratory diseases (excluding pneumonia and influenza)	1–14
Influenza	0–74
Pneumonia	0–74
Peptic ulcer	0–74
Appendicitis	0–74
Abdominal hernia	0–74
Cholelithiasis and cholecystitis	0–74
Nephritis and nephrosis	0–74
Benign prostatic hyperplasia	0–74
Maternal death	All
Congenital cardiovascular anomalies	0–74
Perinatal deaths, all causes, excluding stillbirths	All
Misadventures to patients during surgical and medical care	All
Ischemic heart disease: 50% of mortality rates included	0–74

**29. Breast cancer deaths per 100,000 female population:** Authors' analysis of mortality data from CDC restricted-use Multiple Cause-of-Death file and U.S. Census Bureau population data, 2010–2013 (NCHS, MCD n.d.).

**30. Colorectal cancer deaths per 100,000 population:** Authors' analysis of mortality data from CDC restricted-use Multiple Cause-of-Death file and U.S. Census Bureau population data, 2010–2013 (NCHS, MCD n.d.).

**31. Suicide deaths per 100,000 population:** Authors' analysis of mortality data from CDC restricted-use Multiple Cause-of-Death file and U.S. Census Bureau population data, 2010–2013 (NCHS, MCD n.d.).

**32. Infant mortality, deaths per 1,000 live births:** Authors' analysis of CDC restricted-use Linked Birth and Infant Death Data, 2010–2013 (NCHS, MCD n.d.).

**33. Percent of adults ages 18–64 who report being in fair or poor health, or who have activity limitations because of physical, mental, or emotional problems:** Authors' analysis of 2011–2014 Behavioral Risk Factor Surveillance System (NCCDPHP, BRFSS 2011, 2012, 2013, 2014).

**34. Percent of adults who smoke:** Percent of adults age 18 and older who ever smoked 100+ cigarettes (five packs) and currently smoke every day or some days. Authors' analysis of 2011–2014 Behavioral Risk Factor Surveillance System (NCCDPHP, BRFSS 2011, 2012, 2013, 2014).

**35. Percent of adults ages 18–64 who are obese (Body Mass Index [BMI] ≥ 30):** Authors' analysis of 2011–2014 Behavioral Risk Factor Surveillance System (NCCDPHP, BRFSS 2011, 2012, 2013, 2014).

**36. Percent of adults ages 18–64 who have lost six or more teeth because of tooth decay, infection, or gum disease:** Authors' analysis of 2012 and 2014 Behavioral Risk Factor Surveillance System (NCCDPHP, BRFSS 2012, 2014).

## APPENDIX B. List of 36 Indicators in the Local Area Scorecard on Health System Performance

Indicator	Change Over Time (No. Local Areas)		U.S. Average Rate		Range of Local Area Performance		2016 Scorecard
	Improved	Worsened	Baseline <sup>a</sup>	2016 Scorecard	Baseline <sup>a</sup>	2016 Scorecard	Best Local Area <sup>b</sup>
<b>ACCESS &amp; AFFORDABILITY DIMENSION SUMMARY</b>							
1 Adults ages 19–64 uninsured	189	0	21%	16%	5%–54%	4%–49%	Springfield, MA, Worcester, MA
2 Children ages 0–18 uninsured	69	15	7%	6%	1%–24%	2%–20%	Boston, MA, Des Moines, IA
3 Adults who went without care because of cost in past year	111	7	15%	15%	7%–36%	6%–31%	Bloomington, IL, Waterloo, IA
4 At-risk adults without a routine doctor visit in past two years	173	22	14%	14%	6%–29%	6%–26%	Boston, MA, Victoria, TX
5 Adults without a dental visit in past year	—	—	—	15%	—	9%–29%	Appleton, WI, Reading, PA
<b>PREVENTION &amp; TREATMENT DIMENSION SUMMARY</b>							
6 Adults with a usual source of care	57	62	79%	79%	56%–90%	56%–90%	Johnstown, PA, Springfield, IL, Worcester, MA, York, PA
7 Adults with age and gender appropriate cancer screenings	—	—	—	70%	—	52%–79%	Springfield, MA
8 Adults with age appropriate vaccines	130	16	35%	35%	23%–44%	20%–49%	Johnson City, TN
9 Medicare beneficiaries who received at least one drug that should be avoided in the elderly	175	4	20%	17%	10%–34%	9%–30%	Mason City, IA, Rochester, MN, St. Cloud, MN
10 Medicare beneficiaries with dementia, hip/pelvic fracture, or chronic renal failure who received a prescription drug that is contraindicated for that condition	177	7	23%	20%	12%–35%	9%–31%	Grand Forks, ND
11 Risk-adjusted 30-day mortality among Medicare beneficiaries hospitalized for heart attack, heart failure, pneumonia, or stroke	209	2	13.2%	12.8%	11.7%–16.5%	11.3%–15.5%	Royal Oak, MI
12 Hospital safety composite score	163	14	0.9	0.8	0.5–1.3	0.6–1.1	13 areas tied
13 Hospitalized patients given information about what to do during their recovery at home	65	19	86%	86%	78%–92%	79%–91%	8 areas tied
14 Hospitalized patients who reported hospital staff always managed pain well, responded when needed help to get to bathroom or pressed call button, and explained medicines and side effects	53	35	68%	68%	57%–77%	58%–76%	Marquette, MI, Monroe, LA
15 Home health patients who get better at walking or moving around	255	1	59%	63%	48%–67%	48%–70%	Altoona, PA, Johnstown, PA
16 Home health patients whose wounds improved or healed after an operation	65	54	89%	89%	82%–96%	78%–96%	Providence, RI
17 High-risk nursing home residents with pressure sores	127	65	6%	6%	2%–12%	1%–11%	San Luis Obispo, CA
18 Long-stay nursing home residents with an antipsychotic medication	197	0	21%	18%	9%–34%	7%–32%	San Mateo County, CA
<b>AVOIDABLE HOSPITAL USE &amp; COST DIMENSION SUMMARY</b>							
19 Hospital admissions among Medicare beneficiaries for ambulatory care–sensitive conditions, ages 65–74, per 1,000 beneficiaries	41	2	29	27	10–64	9–57	San Mateo County, CA
20 Hospital admissions among Medicare beneficiaries for ambulatory care–sensitive conditions, age 75 and older, per 1,000 beneficiaries	61	5	70	66	34–140	33–132	San Luis Obispo, CA
21 Medicare 30-day hospital readmissions, rate per 1,000 beneficiaries	155	0	34	27	10–72	10–56	Honolulu, HI, Salem, OR
22 Short-stay nursing home residents readmitted within 30 days of hospital discharge to nursing home	126	17	22%	20%	11%–33%	12%–31%	Idaho Falls, ID
23 Long-stay nursing home residents hospitalized within a six-month period	71	10	19%	17%	7%–35%	5%–37%	Little Rock, AR, Salem, OR
24 Home health patients also enrolled in Medicare with a hospital admission	188	19	17%	16%	13%–20%	12%–19%	Anchorage, AK
25 Potentially avoidable emergency department visits among Medicare beneficiaries, per 1,000 beneficiaries	67	38	185	181	111–286	122–265	Santa Cruz, CA
26 Total reimbursements per enrollee (age 18–64) with employer-sponsored insurance	22	46	\$4,489	\$4,569	\$2,524–\$7,738	2720–9362	Columbus, GA
27 Total Medicare (Parts A & B) reimbursements per enrollee	1	1	\$8,854	\$8,819	\$5,391–\$13,621	5,593–13,189	Honolulu, HI
<b>HEALTHY LIVES DIMENSION SUMMARY</b>							
28 Mortality amenable to health care, deaths per 100,000 population	2	6	85	84	47–142	47–153	Boulder, CO
29 Breast cancer deaths per 100,000 female population	129	46	24	23	14.9–32.4	12.3–33.3	Bend, OR
30 Colorectal cancer deaths per 100,000 population	118	34	16.7	15.9	11.4–25.9	9.6–23.8	Boulder, CO
31 Suicide deaths per 100,000 population	16	48	12.5	12.9	5.4–25.3	6–29.4	Bronx, NY
32 Infant mortality, deaths per 1,000 live births	65	52	6.1	6	2.8–12.1	2.5–11.2	San Mateo County, CA
33 Adults ages 18–64 who report fair/poor health or activity limitations because of physical, mental, or emotional problems	87	38	25%	25%	19%–42%	13%–41%	Bloomington, IL
34 Adults who smoke	95	23	19%	19%	9%–31%	7%–34%	Provo, UT, San Jose, CA
35 Adults ages 18–64 who are obese (BMI ≥ 30)	29	111	28%	28%	17%–43%	14%–52%	Boulder, CO
36 Percent of adults ages 18–64 who have lost six or more teeth because of tooth decay, infection, or gum disease	—	—	—	10%	—	2%–26%	Santa Cruz, CA

Notes: (a) The baseline period generally reflects two years prior to the time of observation for the latest year of data available. (b) Multiple local areas may be listed in the event of ties.

## APPENDIX C. Similar and Divergent Annual Spending per Enrollee for Employer-Sponsored Insurance (age 18-64) and Medicare (age 65 and older) Populations

Areas low on employer-sponsored insurance spending and low on Medicare spending: ratio to the all-area median			Areas low on employer-sponsored insurance spending and high on Medicare spending: ratio to the all-area median			Areas high on employer-sponsored insurance spending and low on Medicare spending: ratio to the all-area median			Areas high on employer-sponsored insurance spending and high on Medicare spending: ratio to the all-area median		
Local Area	Employer-Sponsored	Medicare	Local Area	Employer-Sponsored	Medicare	Local Area	Employer-Sponsored	Medicare	Local Area	Employer-Sponsored	Medicare
Tucson, AZ	0.78	0.83	Fort Smith, AR	0.81	1.09	Anchorage, AK	1.83	0.70	Hudson, FL	1.23	1.26
Redding, CA	0.86	0.81	Texarkana, AR	0.62	1.17	Contra Costa County, CA	1.15	0.89	Miami, FL	1.10	1.52
San Luis Obispo, CA	0.86	0.78	Macon, GA	0.67	1.09	Modesto, CA	1.17	0.89	Joliet, IL	1.14	1.12
Honolulu, HI	0.77	0.64	Houma, LA	0.83	1.10	Salinas, CA	1.14	0.81	Gary, IN	1.31	1.18
Boise, ID	0.88	0.85	Lafayette, LA	0.83	1.20	San Jose, CA	1.24	0.84	Munster, IN	1.28	1.29
Des Moines, IA	0.87	0.84	Lake Charles, LA	0.87	1.15	San Mateo County, CA	1.15	0.78	Terre Haute, IN	1.18	1.09
Dubuque, IA	0.86	0.82	Metairie, LA	0.89	1.21	Santa Cruz, CA	1.33	0.75	Camden, NJ	1.17	1.12
Traverse City, MI	0.74	0.90	Monroe, LA	0.89	1.37	Stockton, CA	1.13	0.88	Hackensack, NJ	1.23	1.12
Albuquerque, NM	0.87	0.74	New Orleans, LA	0.81	1.15	Grand Junction, CO	1.28	0.70	Newark, NJ	1.12	1.13
Buffalo, NY	0.79	0.88	Slidell, LA	0.82	1.17	Bloomington, IL	1.14	0.86	Paterson, NJ	1.23	1.17
Rochester, NY	0.80	0.84	Detroit, MI	0.88	1.29	Duluth, MN	1.13	0.84	East Long Island, NY	1.32	1.11
Arlington, VA	0.85	0.82	Pontiac, MI	0.88	1.14	Rochester, MN	1.40	0.84	Manhattan, NY	1.17	1.13
Spokane, WA	0.85	0.84	Royal Oak, MI	0.85	1.23	Binghamton, NY	1.12	0.88	Elyria, OH	1.09	1.16
			Gulfport, MS	0.77	1.10	Bismarck, ND	1.16	0.87	Wilkes-Barre, PA	2.12	1.16
			Hattiesburg, MS	0.78	1.16	Bend, OR	1.31	0.70	Amarillo, TX	1.28	1.13
			Jackson, MS	0.82	1.16	Eugene, OR	1.11	0.74	Beaumont, TX	1.21	1.29
			Meridian, MS	0.84	1.25	Medford, OR	1.10	0.75	Dallas, TX	1.25	1.20
			Oxford, MS	0.76	1.13	Rapid City, SD	1.14	0.78	Fort Worth, TX	1.27	1.21
			Johnstown, PA	0.75	1.09	Sioux Falls, SD	1.14	0.88	Houston, TX	1.14	1.21
			Pittsburgh, PA	0.88	1.11	Burlington, VT	1.12	0.83	Lubbock, TX	1.15	1.11
			Harlingen, TX	0.85	1.29	Tacoma, WA	1.13	0.85	Tyler, TX	1.17	1.23
						Green Bay, WI	1.25	0.87	Victoria, TX	1.24	1.16
						La Crosse, WI	1.37	0.80	Wichita Falls, TX	1.25	1.22
						Madison, WI	1.32	0.79			
						Marshfield, WI	1.38	0.87			
						Neenah, WI	1.20	0.86			
						Wausau, WI	1.37	0.82			
						Casper, WY	1.31	0.83			

Note: Areas of low and high spending were determined by whether hospital referral regions (HRRs) fell in the top or bottom quartile on total Medicare (Parts A & B) reimbursements per enrollee or total reimbursements per enrollee with employer-sponsored health insurance (ESI) ages 18–64. Medicare estimates reflect only the age 65+ Medicare fee-for-service population. All-HRR medians were defined separately for ESI and Medicare spending.

Data: Medicare, 2014 administrative claims via Feb. 2016 CMS Geographic Variation Public Use File. Employer-sponsored insurance spending, 2014 Truven MarketScan Database, analysis by M.Chernew, Harvard Medical School. Total per-enrollee spending estimates from a sophisticated regression model include reimbursed costs for health care services from all sources of payment including the health plan, enrollee, and any third-party payers incurred during 2014. Outpatient prescription drug charges are excluded. Enrollees with capitated plans and their associated claims are also excluded. Estimates for each HRR were adjusted for enrollees' age and sex, the interaction of age and sex, partial-year enrollment, and regional wage differences.

## APPENDIX D. Health System Performance in Select Metropolitan Areas

	Total Population	Overall Rank	ACCESS & AFFORDABILITY		PREVENTION & TREATMENT			
			Adults ages 19–64 uninsured	Adults who went without care because of cost in the past year	Adults with age- and gender-appropriate cancer screenings	Elderly patients who received a high-risk prescription drug	Patient-centered hospital care	Home health patients who get better at walking or moving around
<b>NORTHEAST</b>								
MA Boston	4,954,744	26	5%	8%	78%	10%	67%	61%
NY New York City Area								
Bronx	1,407,227	201	18%	20%	76%	13%	58%	52%
Manhattan	5,273,478	131	13%	15%	72%	13%	58%	53%
PA Pittsburgh	2,864,923	139	10%	11%	68%	14%	67%	65%
Philadelphia Area								
Camden	2,801,264	93	13%	13%	69%	14%	66%	63%
Philadelphia	4,205,912	111	12%	13%	70%	13%	66%	59%
<b>MIDWEST</b>								
IL Chicago Area								
Blue Island	820,068	217	18%	15%	67%	15%	64%	59%
Chicago	2,696,084	218	18%	15%	67%	13%	61%	60%
Evanston	937,054	111	17%	15%	67%	12%	65%	62%
Melrose Park	1,291,179	98	15%	14%	68%	13%	65%	61%
MI Detroit	1,771,696	239	14%	17%	70%	18%	65%	66%
MN Minneapolis	3,307,543	9	9%	10%	73%	12%	70%	56%
St. Paul	1,103,848	2	8%	9%	75%	11%	71%	57%
MO Kansas City	2,516,743	172	14%	13%	68%	16%	68%	63%
St. Louis	3,358,756	190	14%	14%	67%	16%	69%	63%
OH Cincinnati	1,671,572	196	12%	16%	67%	18%	68%	59%
Cleveland	2,022,011	186	11%	12%	69%	14%	69%	58%
WI Milwaukee	2,676,401	75	11%	13%	72%	13%	69%	60%
<b>WEST</b>								
AZ Phoenix	3,583,594	180	19%	16%	64%	17%	66%	58%
CA Los Angeles Area								
Orange County	3,402,088	61	17%	14%	72%	17%	62%	59%
Los Angeles	10,101,795	161	22%	16%	70%	16%	62%	63%
San Diego	3,730,706	80	18%	15%	68%	13%	65%	58%
San Francisco Bay Area								
Alameda County	1,645,869	21	11%	13%	76%	12%	60%	63%
San Francisco	1,492,590	7	10%	11%	76%	12%	64%	63%
San Mateo County	865,548	3	10%	10%	76%	10%	68%	62%
CO Denver	3,041,222	50	14%	14%	70%	15%	70%	60%
NV Las Vegas	2,158,588	241	22%	18%	62%	17%	61%	60%
OR Portland	2,782,380	62	14%	13%	70%	15%	67%	57%
WA Seattle	2,975,233	16	10%	12%	70%	14%	65%	57%
<b>SOUTH</b>								
AL Birmingham	2,276,193	242	18%	17%	67%	24%	68%	66%
AR Little Rock	1,544,931	211	17%	20%	63%	18%	68%	63%
DC District of Columbia Area								
Washington	2,784,266	79	10%	11%	74%	14%	60%	64%
Baltimore	2,538,985	95	9%	11%	74%	14%	63%	64%
Arlington	2,428,804	29	13%	14%	76%	13%	65%	61%
FL Fort Lauderdale	2,975,176	182	24%	21%	66%	15%	61%	62%
Orlando	3,816,144	250	24%	20%	69%	17%	64%	65%
Miami	3,309,191	261	29%	23%	66%	18%	67%	68%
Tampa Bay Area								
Clearwater	495,196	158	21%	14%	68%	16%	68%	65%
St. Petersburg	431,227	221	21%	14%	68%	17%	61%	65%
Tampa	1,446,237	260	21%	16%	66%	17%	63%	63%
GA Atlanta	6,532,380	189	21%	18%	73%	19%	66%	63%
KY Louisville	1,767,243	233	13%	16%	67%	19%	70%	66%
LA New Orleans	683,344	237	21%	19%	68%	20%	66%	58%
MS Jackson	1,043,337	301	20%	19%	66%	22%	69%	66%
NC Charlotte	2,594,451	168	19%	20%	69%	19%	67%	62%
Durham	1,341,731	200	19%	17%	71%	19%	67%	62%
Raleigh	2,135,362	164	18%	16%	76%	19%	68%	61%
TN Memphis	1,783,444	278	20%	17%	66%	23%	68%	61%
Nashville	2,890,844	245	16%	16%	67%	21%	68%	63%
TX Dallas	5,176,744	236	24%	18%	67%	21%	69%	54%
Fort Worth	2,287,409	251	23%	16%	68%	23%	70%	54%
Houston	6,963,484	252	26%	18%	67%	20%	68%	54%
San Antonio	2,877,559	219	25%	21%	65%	18%	68%	52%

	AVOIDABLE HOSPITAL USE & COST				HEALTHY LIVES	
	Medicare admissions for ambulatory care-sensitive conditions, ages 65-74, per 1,000 beneficiaries	Medicare 30-day hospital readmissions, per 1,000 beneficiaries	Total reimbursements per enrollee (age 18-64) with employer-sponsored insurance	Total Medicare (Parts A & B) reimbursements per enrollee	Mortality amenable to health care, per 100,000 population	Adults with poor health-related quality of life
<b>NORTHEAST</b>						
MA Boston	28	38	\$4,729	\$9,047	58	22%
NY New York City Area						
Bronx	41	26	\$4,793	\$9,862	113	36%
Manhattan	25	30	\$5,172	\$9,798	85	25%
PA Pittsburgh	36	19	\$3,860	\$9,678	85	27%
Philadelphia Area						
Camden	29	40	\$5,167	\$9,766	81	23%
Philadelphia	28	31	\$4,172	\$9,605	91	26%
<b>MIDWEST</b>						
IL Chicago Area						
Blue Island	31	48	\$4,667	\$10,029	101	26%
Chicago	38	46	\$4,363	\$10,618	102	26%
Evanston	16	33	\$4,397	\$9,042	96	25%
Melrose Park	24	36	\$4,592	\$9,144	80	23%
MI Detroit	50	53	\$3,888	\$11,242	113	29%
MN Minneapolis	20	15	\$4,647	\$7,560	55	20%
St. Paul	17	13	\$4,648	\$7,464	54	20%
MO Kansas City	27	34	\$4,624	\$8,906	81	24%
St. Louis	33	35	\$3,814	\$9,087	95	27%
OH Cincinnati	33	27	\$4,208	\$9,318	92	28%
Cleveland	35	32	\$4,436	\$9,587	99	28%
WI Milwaukee	23	27	\$5,833	\$8,423	76	28%
<b>WEST</b>						
AZ Phoenix	17	21	\$4,388	\$7,877	72	27%
CA Los Angeles Area						
Orange County	14	15	\$4,540	\$9,109	58	23%
Los Angeles	22	21	\$4,622	\$10,617	79	31%
San Diego	15	16	\$4,315	\$8,099	65	26%
San Francisco Bay Area						
Alameda County	19	17	\$4,734	\$7,837	67	25%
San Francisco	15	17	\$4,539	\$7,090	57	23%
San Mateo County	9	13	\$5,091	\$6,785	50	20%
CO Denver	16	15	\$4,791	\$7,940	58	24%
NV Las Vegas	24	23	\$4,102	\$9,098	93	27%
OR Portland	19	13	\$4,572	\$6,737	61	26%
WA Seattle	14	19	\$4,369	\$7,012	56	26%
<b>SOUTH</b>						
AL Birmingham	33	31	\$3,846	\$9,268	115	32%
AR Little Rock	33	37	\$3,223	\$8,687	120	32%
DC District of Columbia Area						
Washington	27	37	\$3,715	\$8,312	86	21%
Baltimore	32	45	\$3,760	\$9,273	102	24%
Arlington	16	28	\$3,768	\$7,128	50	17%
FL Fort Lauderdale	23	29	\$4,353	\$11,150	70	25%
Orlando	32	33	\$4,516	\$10,242	80	29%
Miami	37	25	\$4,848	\$13,189	75	26%
Tampa Bay Area						
Clearwater	25	24	\$4,730	\$11,206	83	27%
St. Petersburg	33	30	\$4,232	\$11,163	83	27%
Tampa	30	27	\$4,460	\$10,679	94	31%
GA Atlanta	26	25	\$3,495	\$8,426	88	24%
KY Louisville	39	35	\$4,056	\$9,077	103	31%
LA New Orleans	40	21	\$3,557	\$9,983	113	28%
MS Jackson	40	39	\$3,596	\$10,041	144	29%
NC Charlotte	28	26	\$4,612	\$8,424	93	27%
Durham	35	30	\$4,127	\$8,199	99	30%
Raleigh	29	31	\$4,153	\$8,446	93	25%
TN Memphis	36	39	\$3,771	\$9,413	140	30%
Nashville	39	32	\$4,343	\$9,036	103	31%
TX Dallas	29	29	\$5,496	\$10,463	91	23%
Fort Worth	31	25	\$5,587	\$10,556	95	26%
Houston	30	28	\$5,041	\$10,524	95	25%
San Antonio	24	22	\$4,268	\$9,232	89	28%