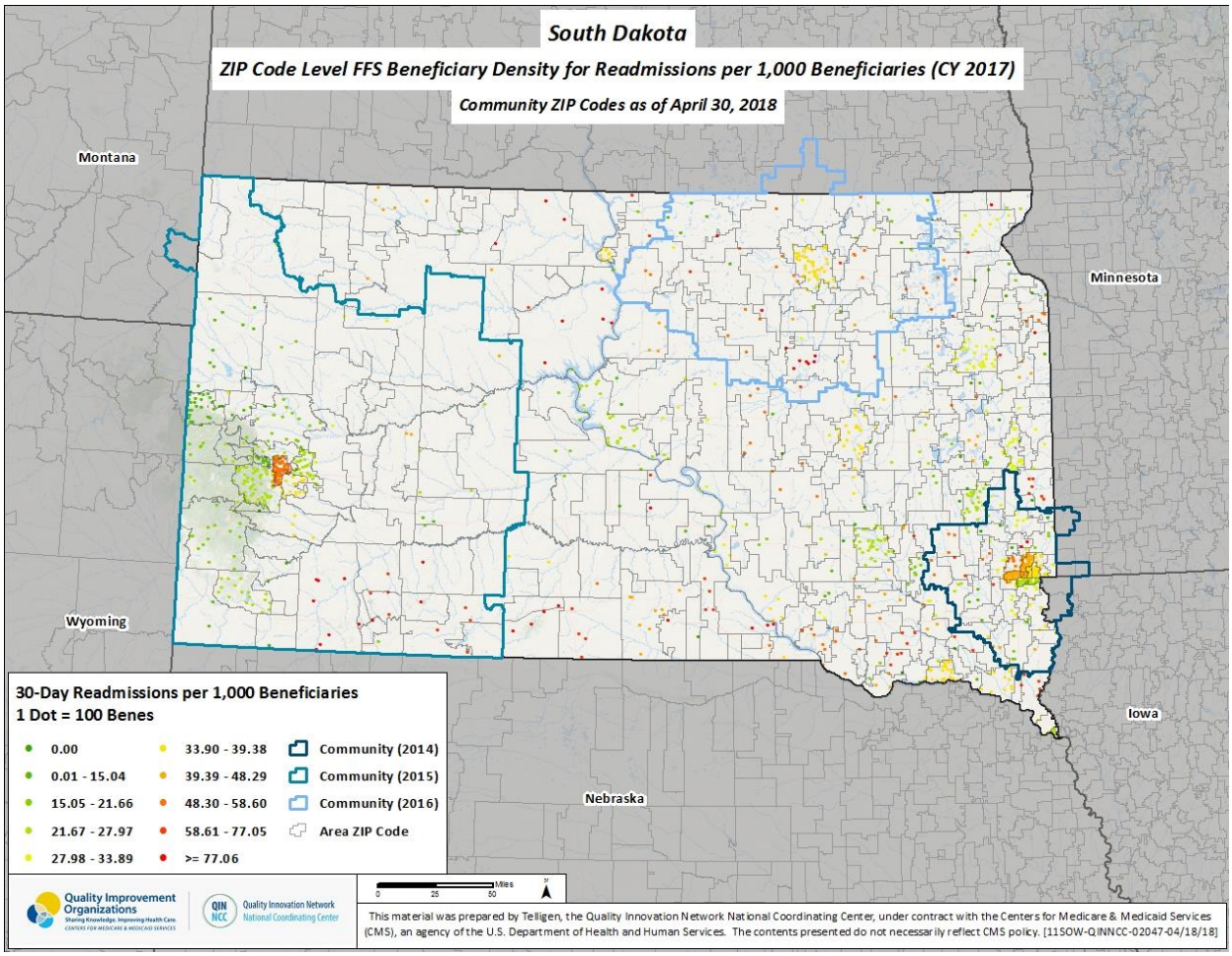
South Dakota Care Coordination Quarterly Report - April 2019

Background

Communities across the Great Plains Quality Innovation Network (QIN) region are collaborating to improve care coordination and medication safety. The Great Plains QIN is the Quality Innovation Network-Quality Improvement Organization (QIN-QIO) for North Dakota, South Dakota, Nebraska and Kansas. The communities across the Great Plains QIN are diverse; however, the goals of the communities are the same. The goals are to reduce avoidable hospital admissions and readmissions, including those caused by high risk medications (HRM) related to adverse drug events (ADE), improve medication safety and increase the number of nights Medicare beneficiaries stay at home. South Dakota Foundation for Medical Care, as a partner in the Great Plains QIN, is sharing data with the communities in South Dakota.

Communities

Communities are identified based on two factors: 1) where each ZIP code's Medicare beneficiaries received most of their care and 2) where most of a hospitals' Medicare patients reside. The areas where these two factors experienced the most overlap resulted in these communities. The map below displays ZIP code level readmissions per 1,000 FFS beneficiaries for all valid ZIP codes in the state/territory. The map includes an overlay displaying all current care coordination communities.



This material was prepared by the Great Plains Quality Innovation Network, the Medicare Quality Improvement Organization for Kansas, Nebraska, North Dakota and South Dakota, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. 11SOW-GPQIN-ND-C3-46/0316 (Revised 04/19)

Data Overview and Definitions

Medicare claims data provided to the Great Plains QIN by the National Coordinating Center (NCC) was used to calculate the measures contained in this report. Readmissions are defined as "all-cause" readmissions to any hospital within 30 days of discharge. We refer to the initial hospital admission as the "index discharge" and the second return admission as the "readmission." None of the measures are risk adjusted.

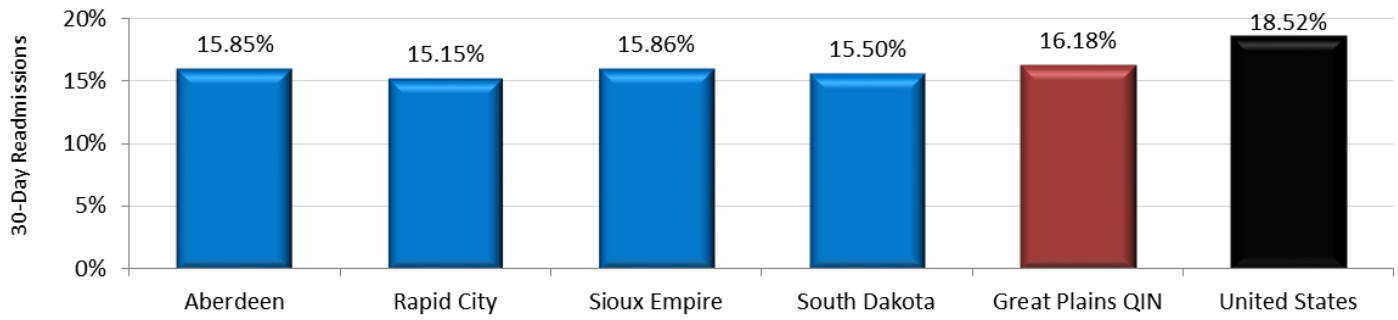
Community-level measures included are:

- **30-day Hospital Readmission Rate and Trends:** The percentage of hospital readmissions within 30 days of discharge
- **Acute Care Utilization Rate**: Hospital Admissions, 30-Day Hospital Readmissions, Emergency Department (ED) Visits (without admission), and Observation Stays per 1000 Medicare FFS Beneficiaries
- **Composite Measure of Unplanned Care:** All Admissions, ED Visits, and Observation Stays per 1000 Medicare FFS Beneficiaries; Includes separate graphs for each acute care setting.
- **Hospital Discharge Rate per Location**: Home (Community), Home Health, Hospice, and Skilled Nursing Facility
- **30-Day Hospital Readmission Rate per Discharge Location**: As Above
- **Top Five DRG Bundles for Admissions**
- **Top Five DRG Bundles for 30-Day Readmissions**
- **Potential Opportunity for Improving End-of-Life Care:** Hospital care utilization of Beneficiaries at End-of-Life
- **Admissions by Drug Class:** Hospital Admissions per 1000 Medicare FFS High Risk Beneficiaries; beneficiaries were identified as high risk if they take three of more medications of which at least one is from the three drug classes of Anticoagulants, Diabetic Agents, and Opioids
- **Readmissions by Drug Class:** 30-Day Hospital Readmissions per 1000 Medicare FFS High Risk Beneficiaries; beneficiaries were identified as high risk if they take three or more medications of which at least one is from the three drug classes of Anticoagulants, Diabetic Agents, and Opioids
- **Composite Measure of Unplanned Care by Drug Class:** All Admissions, ED Visits, and Observation Stays per 1000 Medicare FFS High Risk Medication Beneficiaries; Includes separate graphs for each acute care setting.
- **Timing of Readmission after Potential ADE Discharge**

The measures included in the Care Coordination Quarterly Report may vary from issue to issue depending on data availability and the needs of community partners.

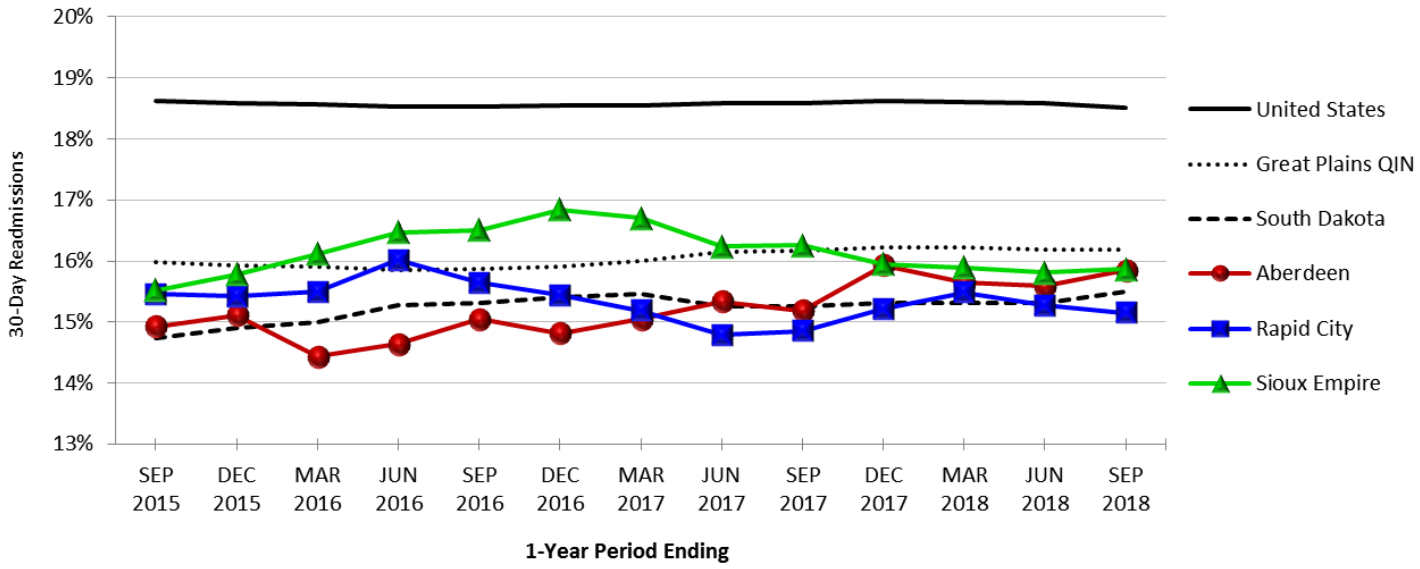
Community Data Highlights

Current Readmission Rates (# of readmissions within 30 days / # of discharges): 10/01/2017 – 09/30/2018



Community	Discharges	30-Day Readmissions	30-Day Readmission Rates
Aberdeen	3,085	489	15.85%
Rapid City	7,506	1,137	15.15%
Sioux Empire	8,366	1,327	15.86%
South Dakota	31,180	4,834	15.50%
Great Plains QIN	240,690	38,947	16.18%
United States	9,694,493	1,794,983	18.52%

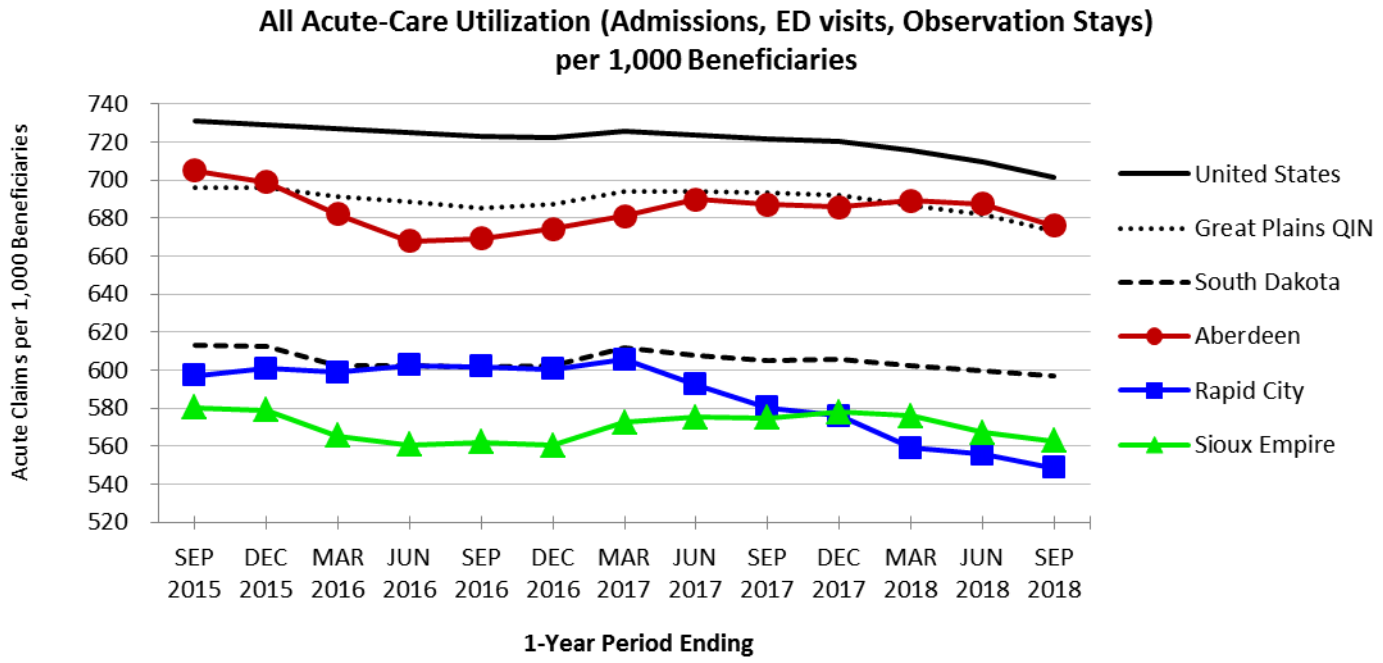
Readmission Rate Trends:

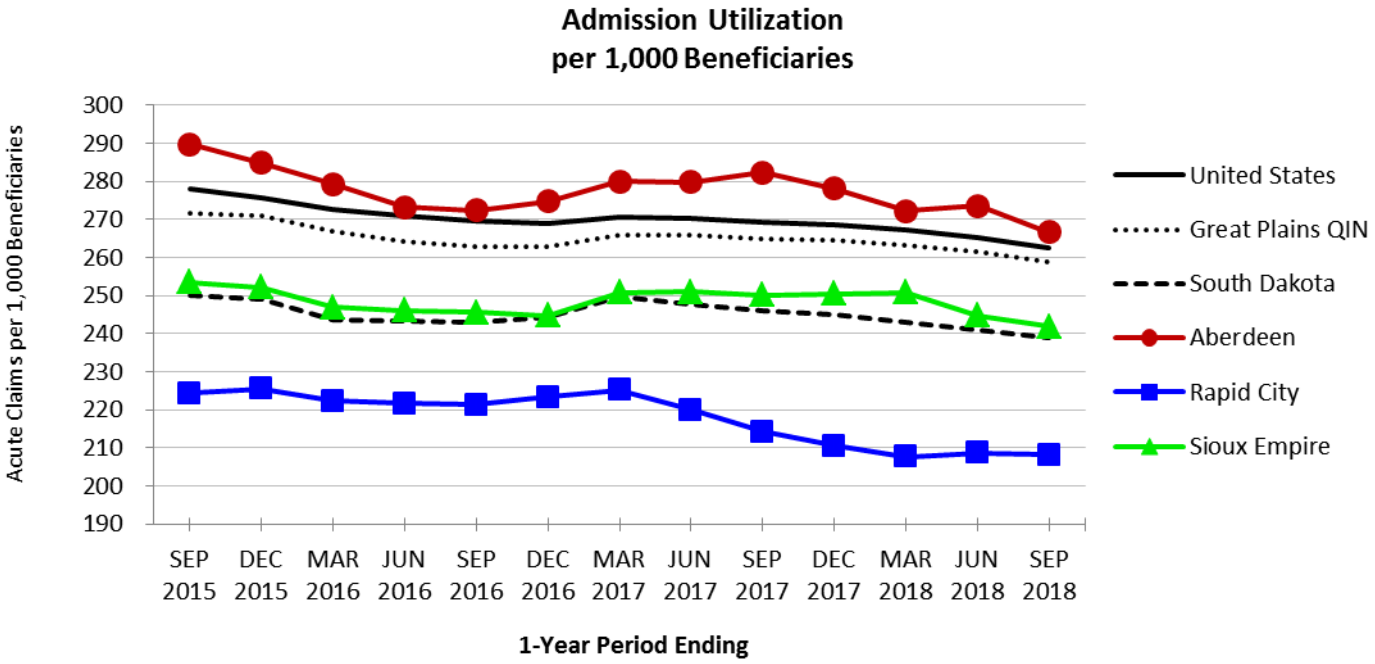


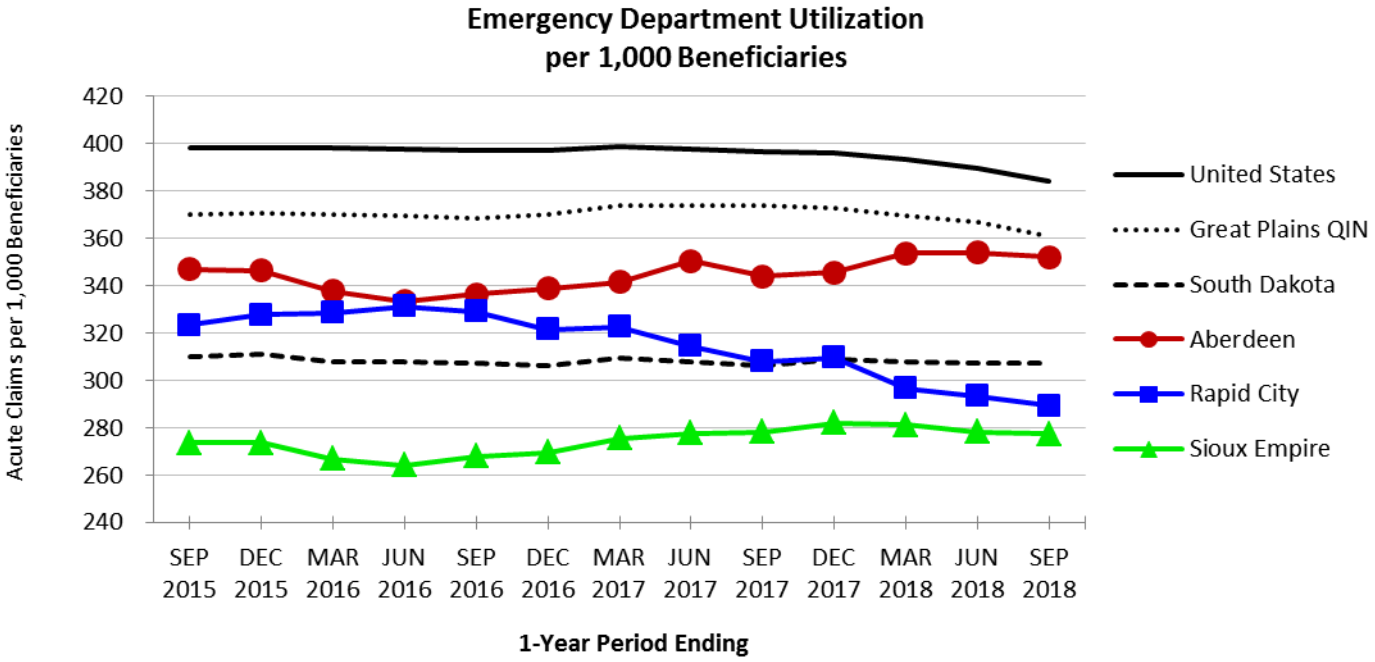
Acute Care Utilization (*per 1,000 Beneficiaries*): 10/01/2017 – 09/30/2018

Community	Benes	Adms	Adms per 1000 Benes	30-Day Readms	30-Day Readms per 1000 Benes	ED Visits	ED Visits per 1000 Benes	Obs Stays	Obs Stays per 1000 Benes
Aberdeen	11,993	3,182	265.32	489	40.77	4,215	351.46	689	57.45
Rapid City	37,076	7,750	209.03	1,137	30.67	10,678	288.00	1,908	51.46
Sioux Empire	35,566	8,539	240.09	1,327	37.31	9,769	274.67	1,539	43.27
South Dakota	134,091	32,070	239.17	4,834	36.05	41,164	306.99	6,809	50.78
Great Plains QIN	957,361	248,351	259.41	38,947	40.68	345,721	361.12	51,255	53.54
United States	38,095,369	10,004,195	262.61	1,794,983	47.12	14,635,153	384.17	2,075,218	54.47

Composite Measure of Unplanned Care: *Counts all the Admissions, ED visits and Observation stays per 1,000 beneficiaries.*




Admission Utilization
per 1,000 Beneficiaries
Acute Claims per 1,000 Beneficiaries
300
290
280
270
260
250
240
230
220
210
200
190
SEP 2015
DEC 2015
MAR 2016
JUN 2016
SEP 2016
DEC 2016
MAR 2017
JUN 2017
SEP 2017
DEC 2017
MAR 2018
JUN 2018
SEP 2018
1-Year Period Ending
United States
Great Plains QIN
South Dakota
Aberdeen
Rapid City
Sioux Empire


Emergency Department Utilization
per 1,000 Beneficiaries
Acute Claims per 1,000 Beneficiaries
420
400
380
360
340
320
300
280
260
240
SEP 2015
DEC 2015
MAR 2016
JUN 2016
SEP 2016
DEC 2016
MAR 2017
JUN 2017
SEP 2017
DEC 2017
MAR 2018
JUN 2018
SEP 2018
1-Year Period Ending
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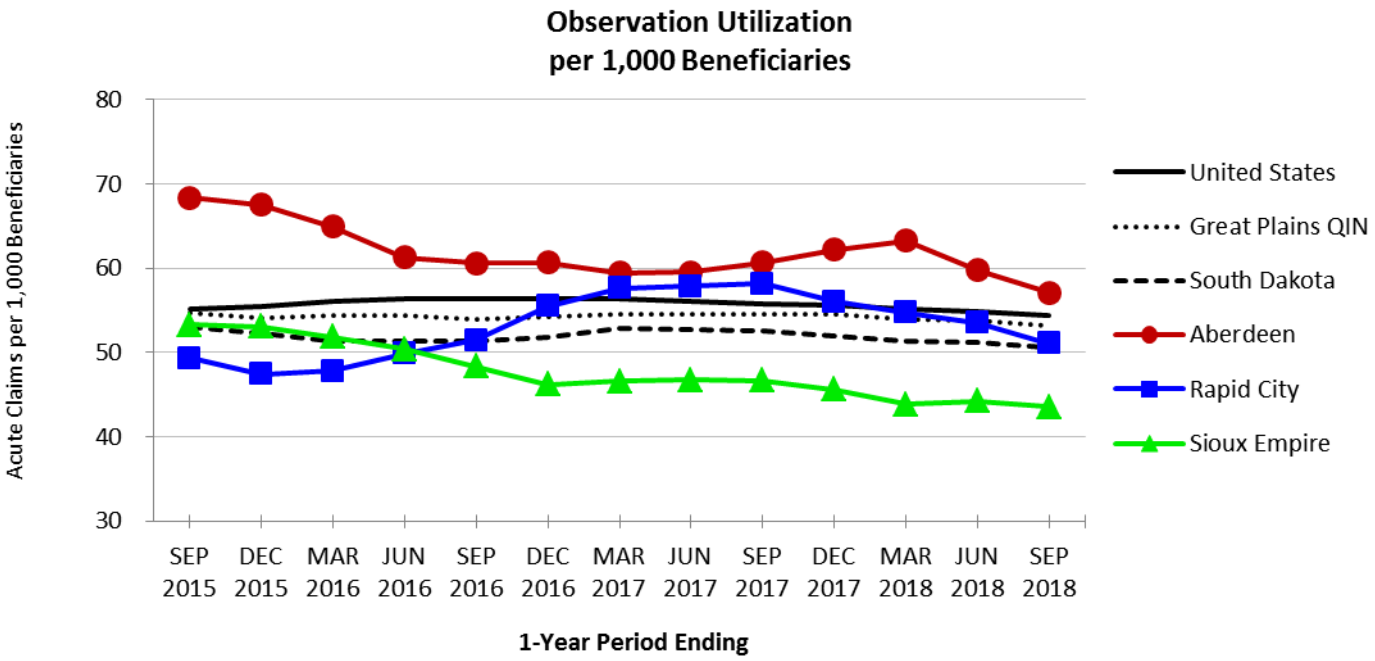
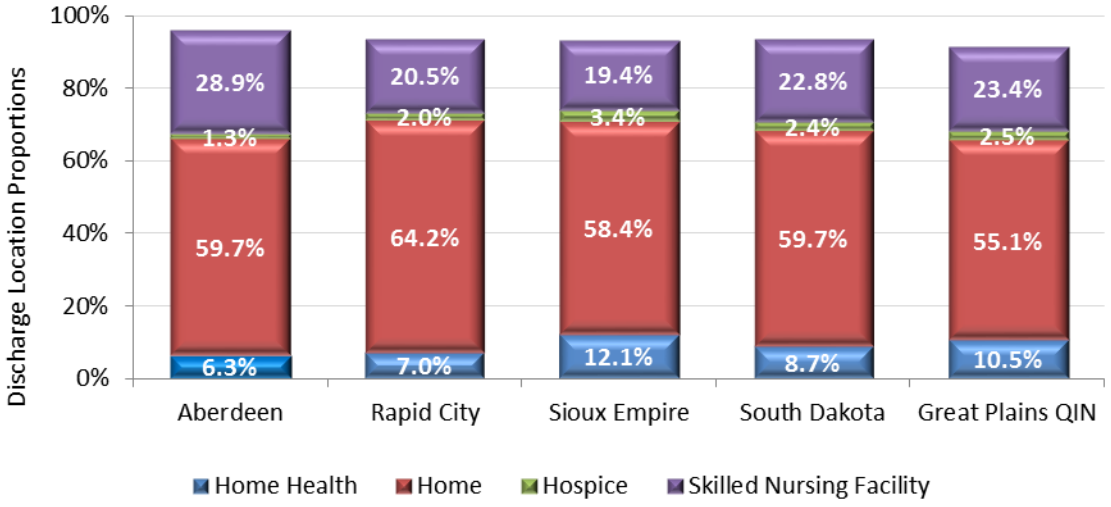
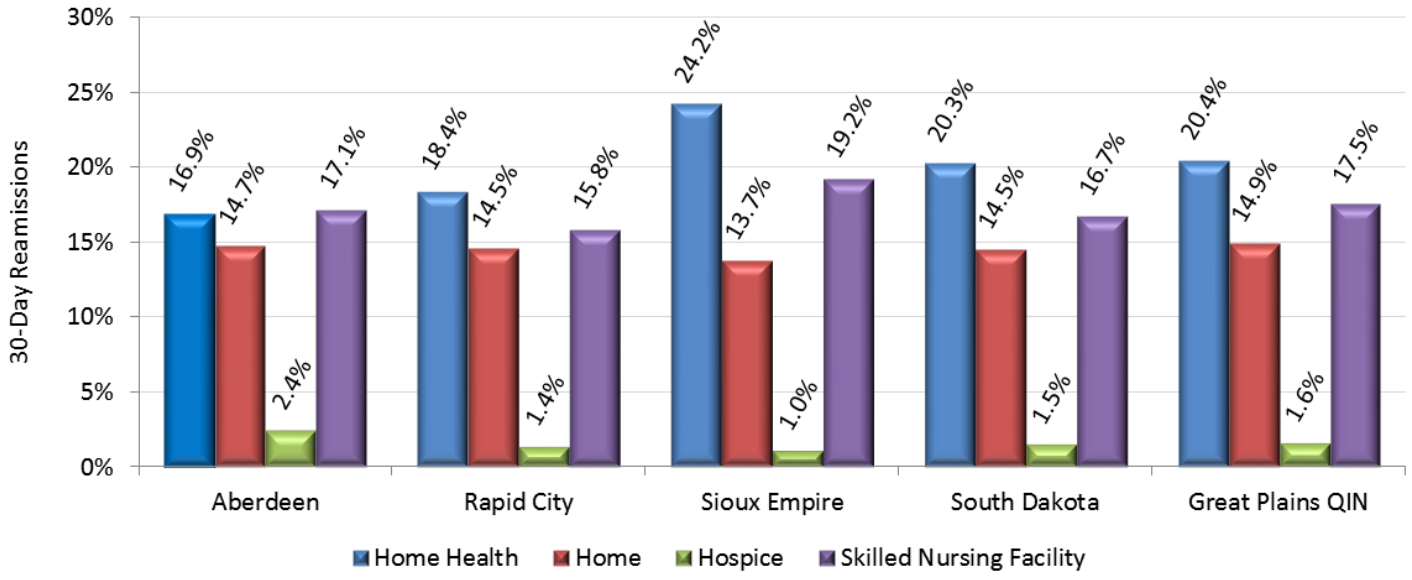


Discharge Locations: 10/01/2017 – 09/30/2018

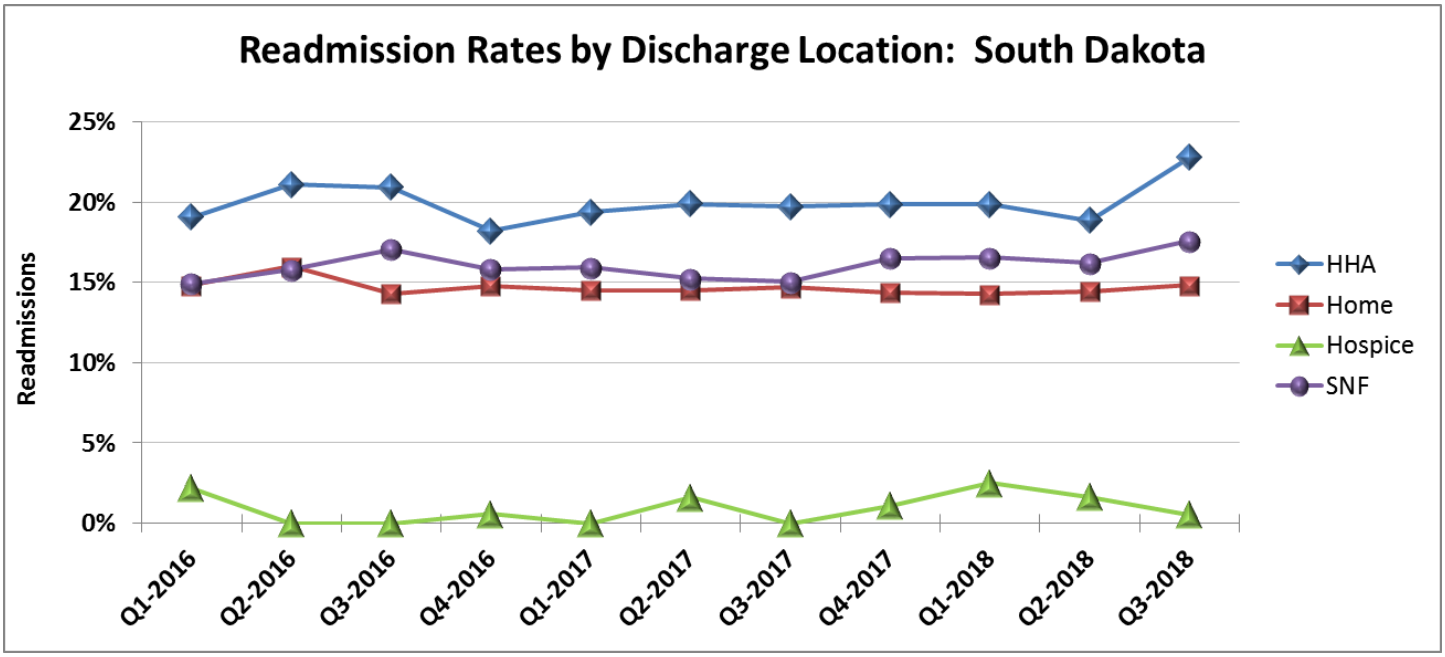


		Discharges							
		Home Health		Home		Hospice		Skilled Nursing Facility	
Community	All	# to Home Health	% to Home Health	# to Home	% to Home	# to Hospice	% to Hospice	# to SNF	% to SNF
Aberdeen	3,085	195	6.3%	1,841	59.7%	41	1.3%	893	28.9%
Rapid City	7,506	522	7.0%	4,819	64.2%	147	2.0%	1,540	20.5%
Sioux Empire	8,366	1,016	12.1%	4,889	58.4%	287	3.4%	1,619	19.4%
South Dakota	31,180	2,703	8.7%	18,599	59.7%	754	2.4%	7,121	22.8%
Great Plains QIN	240,690	25,211	10.5%	132,697	55.1%	6,001	2.5%	56,350	23.4%

Readmission Rates among Discharge Locations: 10/01/2017 – 09/30/2018



	Home Health			Home			Hospice			Skilled Nursing Facility		
Community	**Disch**	**30-Day Readm**	**30-Day Readm Rates**	**Disch**	**30-Day Readm**	**30-Day Readm Rates**	**Disch**	**30-Day Readm**	**30-Day Readm Rates**	**Disch**	**30-Day Readm**	**30-Day Readm Rates**
Aberdeen	195	33	16.9%	1,841	271	14.7%	41	1	2.4%	893	153	17.1%
Rapid City	522	96	18.4%	4,819	701	14.5%	147	2	1.4%	1,540	243	15.8%
Sioux Empire	1,016	246	24.2%	4,889	672	13.7%	287	3	1.0%	1,619	311	19.2%
South Dakota	2,703	548	20.3%	18,599	2,691	14.5%	754	11	1.5%	7,121	1,189	16.7%
Great Plains QIN	25,211	5,148	20.4%	132,697	19,795	14.9%	6,001	96	1.6%	56,350	9,866	17.5%



Top 5 Admission DRG Bundles: 10/01/2017 – 09/30/2018

DRGs that differ only in their level of complications are combined into "DRG Bundles". For example, DRGs 637, 638, and 639 (Diabetes with major complications, with complications, and without complications) are combined into one DRG bundle called Diabetes.

Community	DRG Bundle Description	DRG Bundle Admissions	Community Admissions	Percent of Community Admissions
Aberdeen	MAJOR JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREMITY	309	3,182	9.71%
	SEPTICEMIA OR SEVERE SEPSIS	264	3,182	8.30%
	SIMPLE PNEUMONIA & PLEURISY	184	3,182	5.78%
	HEART FAILURE & SHOCK	158	3,182	4.97%
	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	114	3,182	3.58%
Rapid City	SEPTICEMIA OR SEVERE SEPSIS	681	7,750	8.79%
	MAJOR JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREMITY	617	7,750	7.96%
	HEART FAILURE & SHOCK	361	7,750	4.66%
	SIMPLE PNEUMONIA & PLEURISY	349	7,750	4.50%
	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	213	7,750	2.75%
Sioux Empire	MAJOR JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREMITY	680	8,539	7.96%
	SEPTICEMIA OR SEVERE SEPSIS	629	8,539	7.37%
	HEART FAILURE & SHOCK	382	8,539	4.47%
	SIMPLE PNEUMONIA & PLEURISY	329	8,539	3.85%
	PSYCHOSES	259	8,539	3.03%
South Dakota	MAJOR JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREMITY	2,635	32,070	8.22%
	SEPTICEMIA OR SEVERE SEPSIS	2,468	32,070	7.70%
	SIMPLE PNEUMONIA & PLEURISY	1,626	32,070	5.07%
	HEART FAILURE & SHOCK	1,550	32,070	4.83%
	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	925	32,070	2.88%
Great Plains QIN	SEPTICEMIA OR SEVERE SEPSIS	20,312	248,351	8.18%
	MAJOR JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREMITY	17,679	248,351	7.12%
	SIMPLE PNEUMONIA & PLEURISY	11,721	248,351	4.72%
	HEART FAILURE & SHOCK	11,071	248,351	4.46%
	PSYCHOSES	7,176	248,351	2.89%

Top 5 Readmission DRG Bundles: 10/01/2017 – 09/30/2018

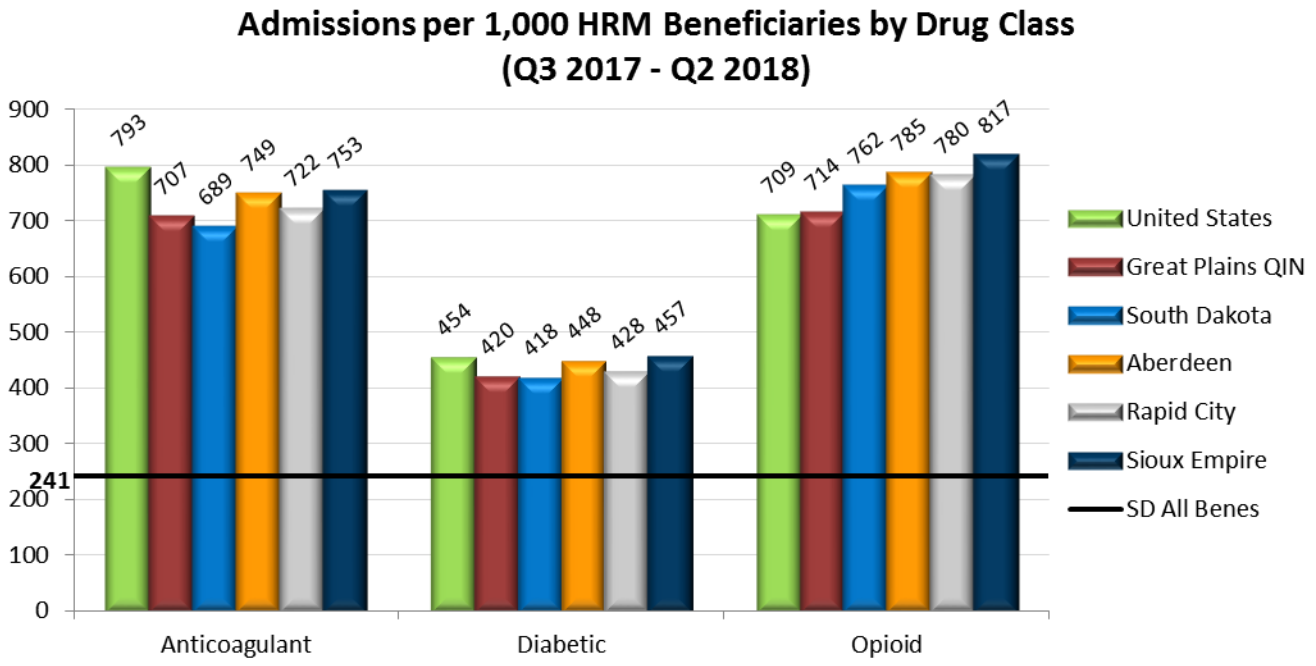
Community	DRG Bundle Description	DRG Bundle 30-Day Readmissions	Community 30-Day Readmissions	Percent of Community 30-Day Readmissions
Aberdeen	SEPTICEMIA OR SEVERE SEPSIS	37	489	7.57%
	HEART FAILURE & SHOCK	31	489	6.34%
	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	22	489	4.50%
	ACUTE MYOCARDIAL INFARCTION	17	489	3.48%
	PERC CARDIOVASC PROC W STENT	17	489	3.48%
	PSYCHOSES	17	489	0.0348
Rapid City	SEPTICEMIA OR SEVERE SEPSIS	105	1,137	9.23%
	HEART FAILURE & SHOCK	82	1,137	7.21%
	SIMPLE PNEUMONIA & PLEURISY	43	1,137	3.78%
	G.I. HEMORRHAGE	38	1,137	3.34%
	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	34	1,137	2.99%
Sioux Empire	SEPTICEMIA OR SEVERE SEPSIS	111	1,327	8.36%
	HEART FAILURE & SHOCK	87	1,327	6.56%
	PSYCHOSES	59	1,327	4.45%
	SIMPLE PNEUMONIA & PLEURISY	49	1,327	3.69%
	RENAL FAILURE	47	1,327	3.54%
South Dakota	SEPTICEMIA OR SEVERE SEPSIS	399	4,834	8.25%
	HEART FAILURE & SHOCK	331	4,834	6.85%
	SIMPLE PNEUMONIA & PLEURISY	218	4,834	4.51%
	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	166	4,834	3.43%
	PSYCHOSES	142	4,834	2.94%
Great Plains QIN	SEPTICEMIA OR SEVERE SEPSIS	3,226	38,947	8.28%
	HEART FAILURE & SHOCK	2,433	38,947	6.25%
	SIMPLE PNEUMONIA & PLEURISY	1,665	38,947	4.28%
	PSYCHOSES	1,594	38,947	4.09%
	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	1,170	38,947	3.00%

Potential Opportunity for Improving End-of-Life Care: 10/01/2017 – 09/30/2018

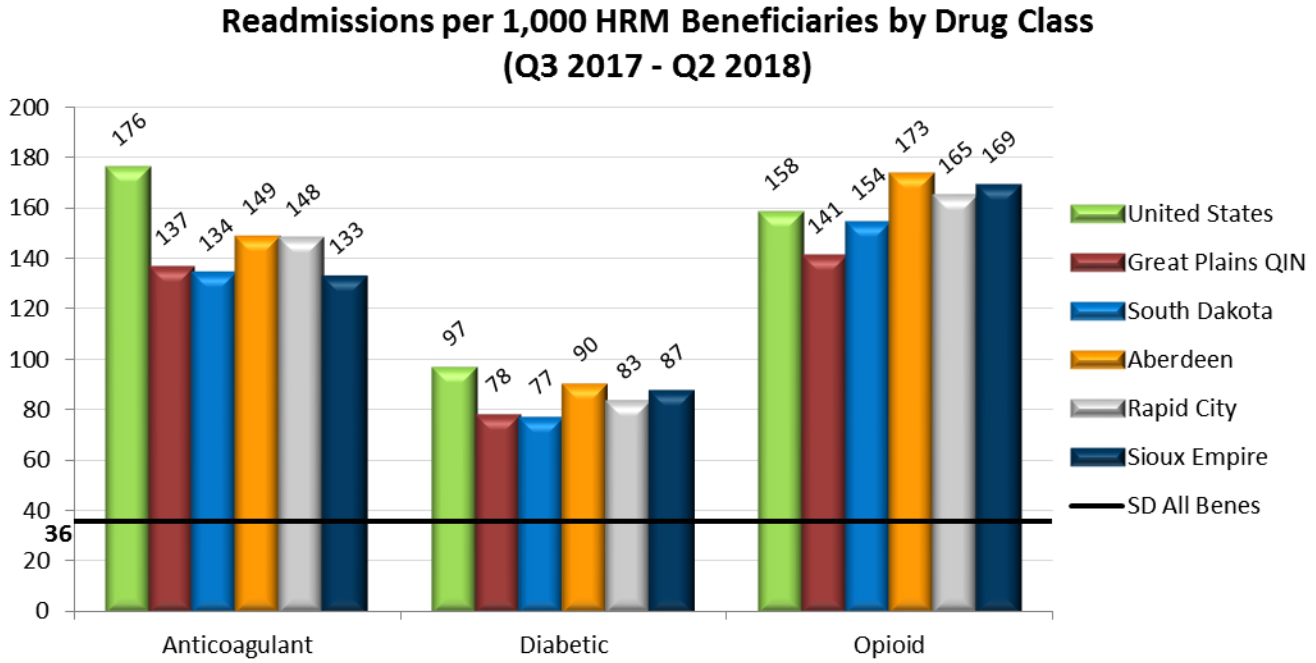
This is a proxy measure to identify opportunities for discussing an individual's preferences for end-of-life care, including where he or she would like to receive that care.

Community	Deceased Bene Total	# of Deceased Benes With at Least One 30-Day Readmission in Last Six Months of Life	% of Deceased Benes With at Least One 30-Day Readmission in Last Six Months of Life	# of Deceased Benes Who Died While Hospital	% of Deceased Benes Who Died While Hospital Inpatient
Aberdeen	562	81	14.41%	82	14.59%
Rapid City	1,593	140	8.79%	207	12.99%
Sioux Empire	1,644	170	10.34%	144	8.76%
South Dakota	6,547	664	10.14%	759	11.59%
Great Plains QIN	48,036	5,708	11.88%	6,809	14.17%

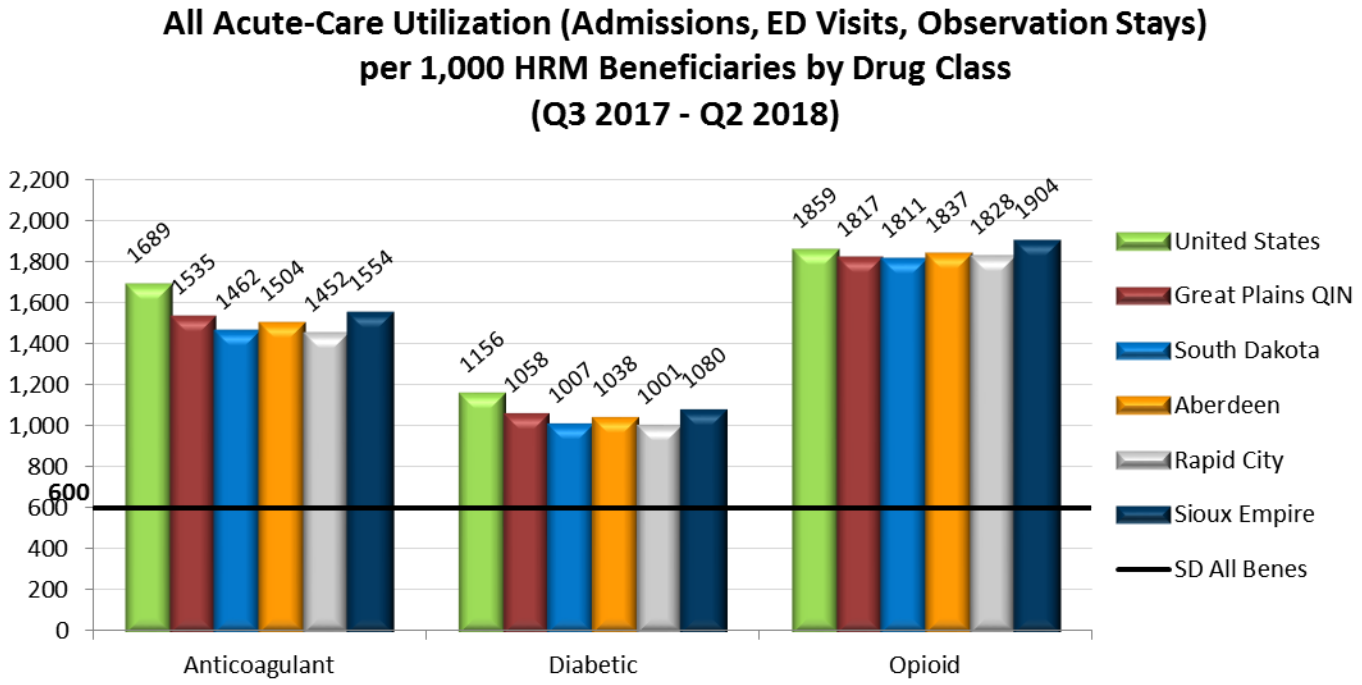
Admissions by High Risk Drug Class: *Counts the admissions per 1,000 FFS high risk medication (HRM) beneficiaries by anticoagulant, diabetic agent, and opioid drug classes and compares to overall admission rates for all Medicare FFS beneficiaries (including those with and without HRMs).*

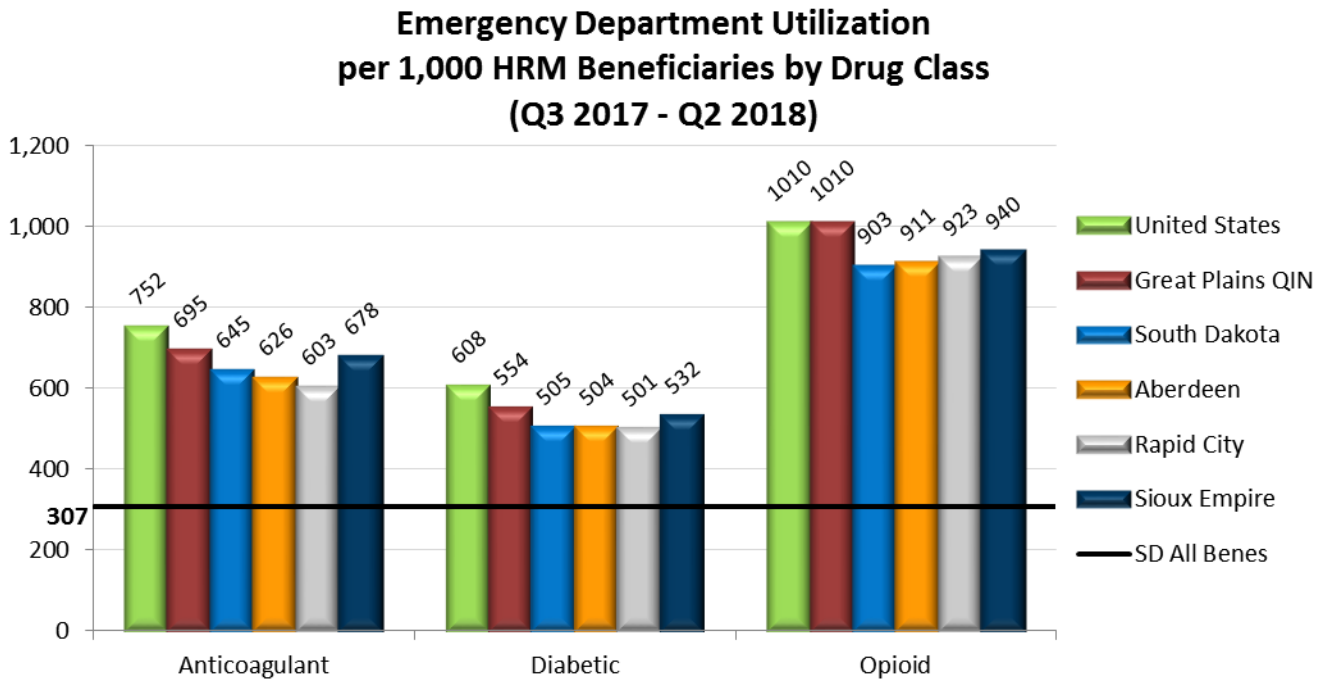


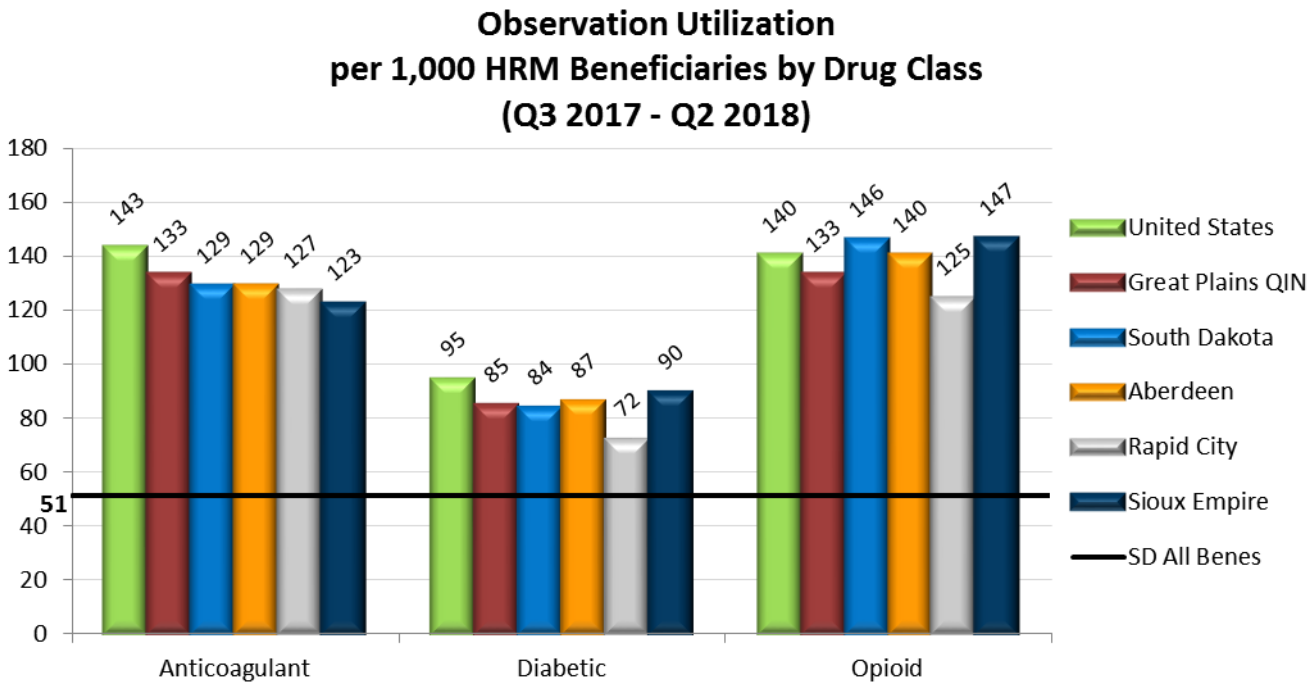
Readmissions by High Risk Drug Class: *Counts the 30-day readmissions per 1,000 FFS high risk medication (HRM) beneficiaries by anticoagulant, diabetic agent, and opioid drug classes and compares to overall 30-day readmission rates for all Medicare FFS beneficiaries (including those with and without HRMs).*



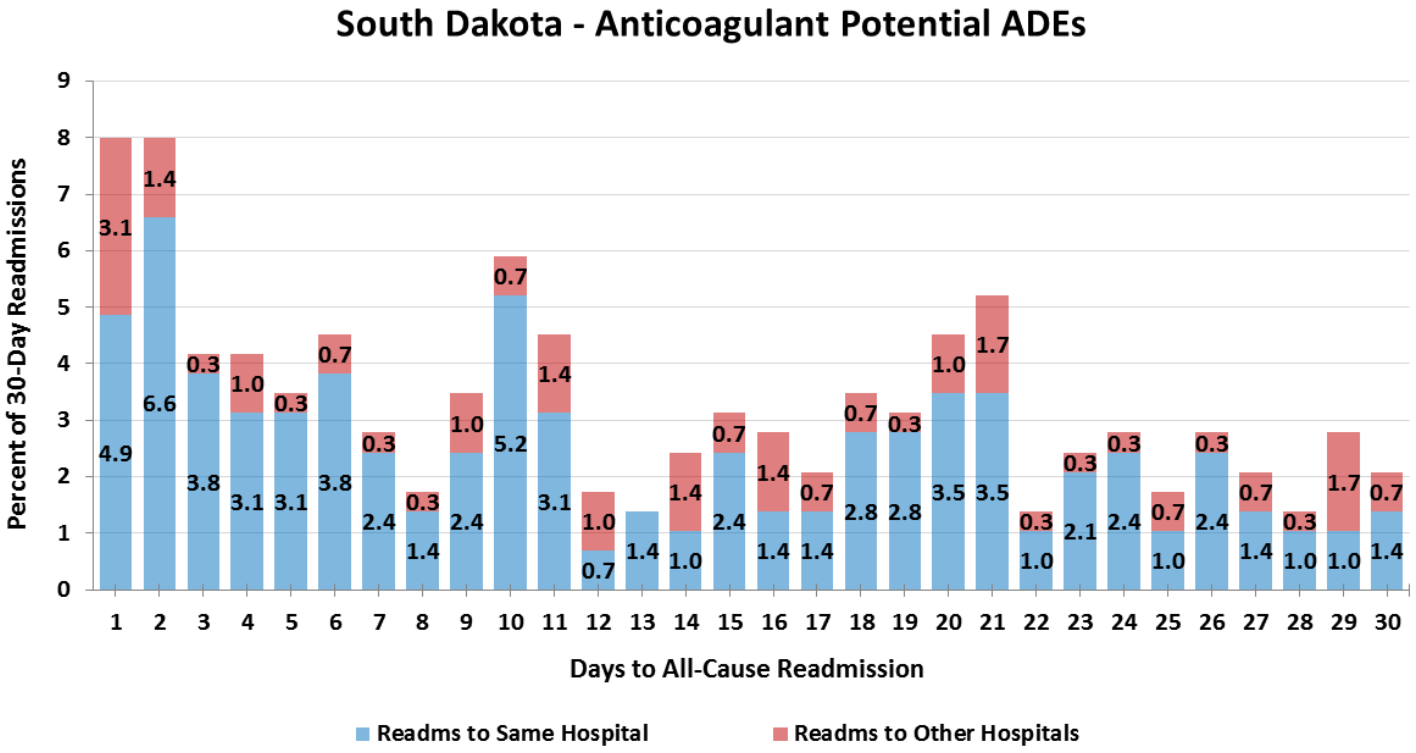
Composite Measure of Unplanned Care by Drug Class: *Counts all the Admissions, ED visits and Observation stays per 1,000 HRM beneficiaries by anticoagulant, diabetic agent, and opioid drug classes and compares to overall rates for all Medicare FFS beneficiaries (including those with and without HRMs).*

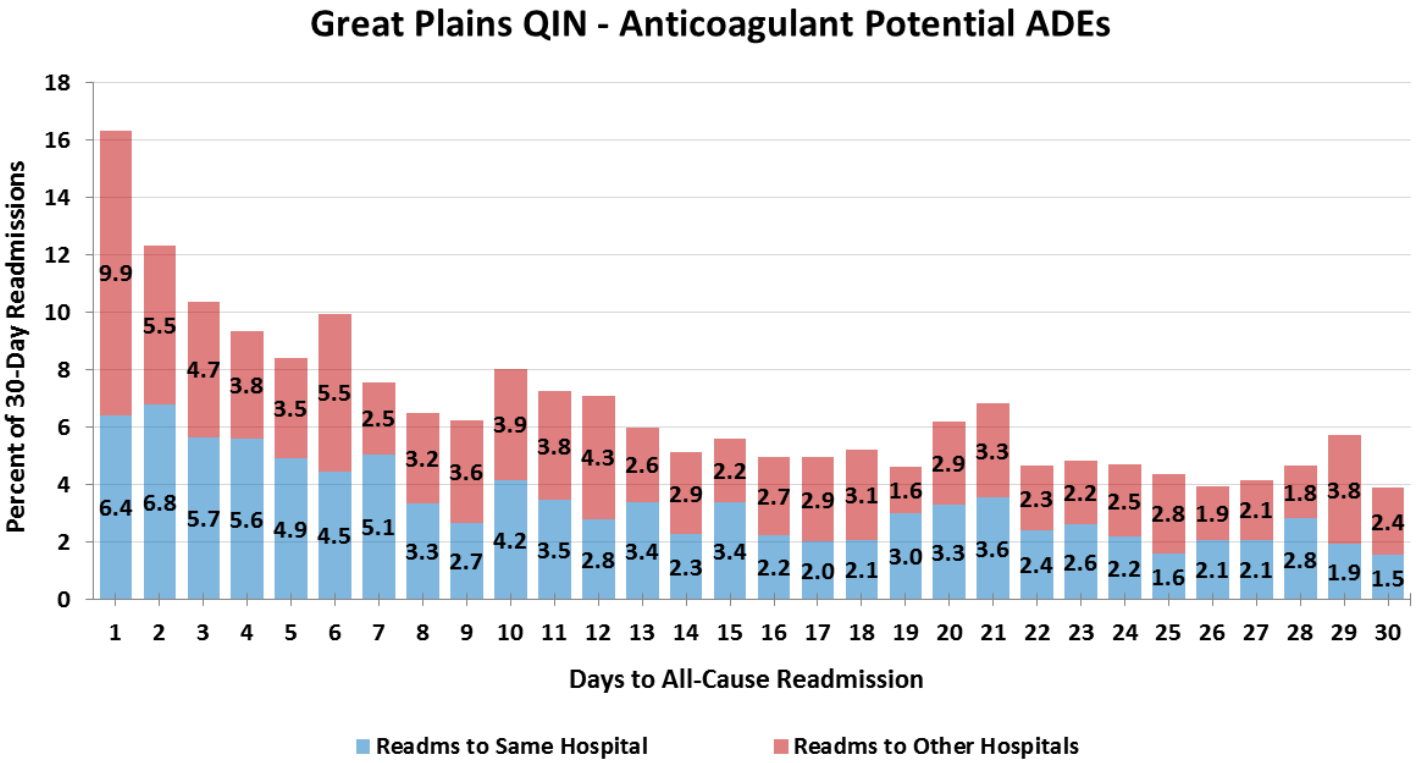




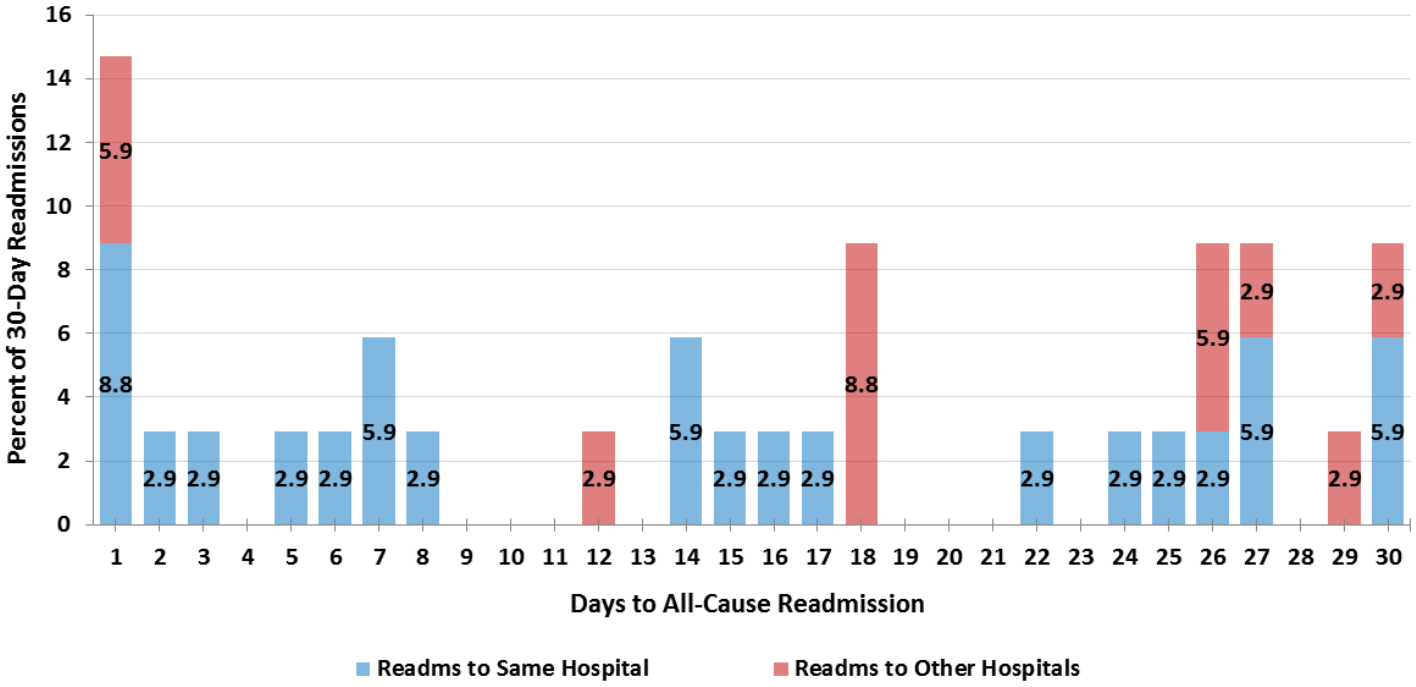

Observation Utilization
per 1,000 HRM Beneficiaries by Drug Class
(Q3 2017 - Q2 2018)
180
160
140
120
100
80
60
40
20
0
51
143
133
129
129
127
123
95
85
84
87
72
90
140
133
146
140
125
147
Anticoagulant
Diabetic
Opioid
United States
Great Plains QIN
South Dakota
Aberdeen
Rapid City
Sioux Empire
SD All Benes

How many days after being discharged with a potential ADE were Medicare Beneficiaries readmitted:
10/01/2017 – 09/30/2018

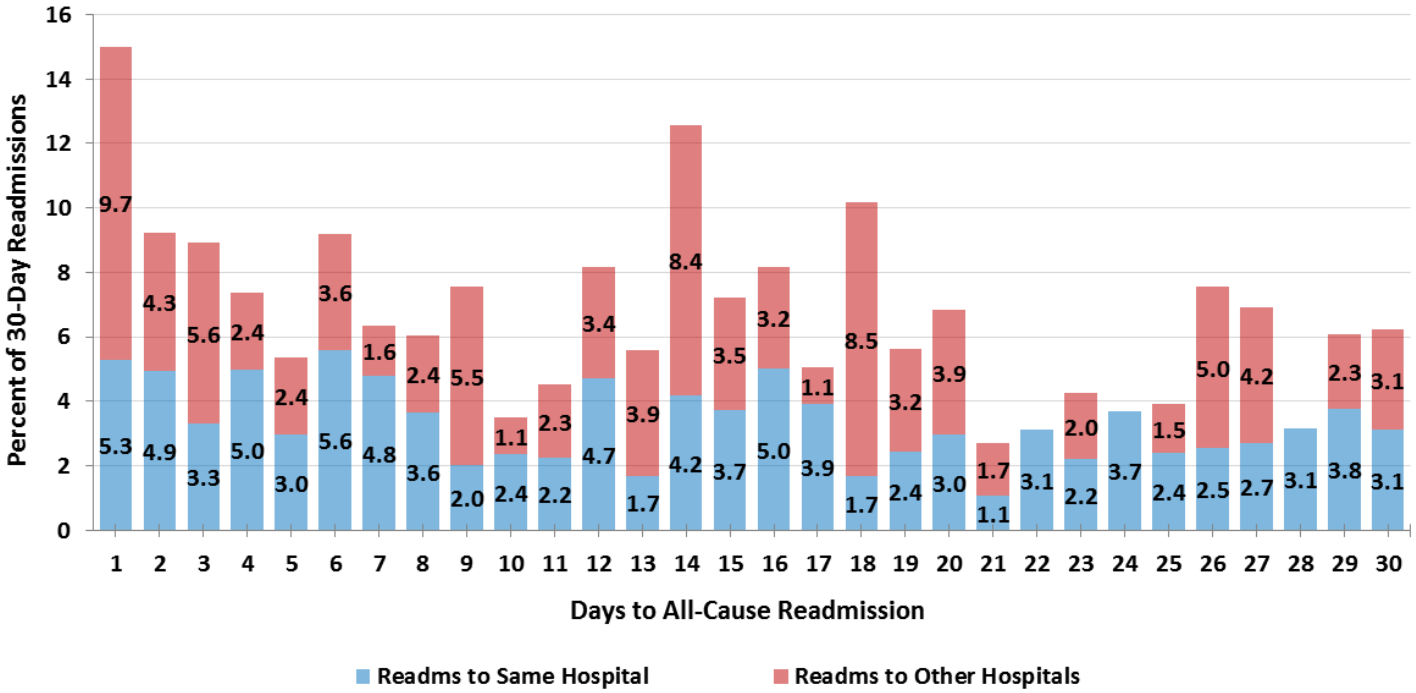




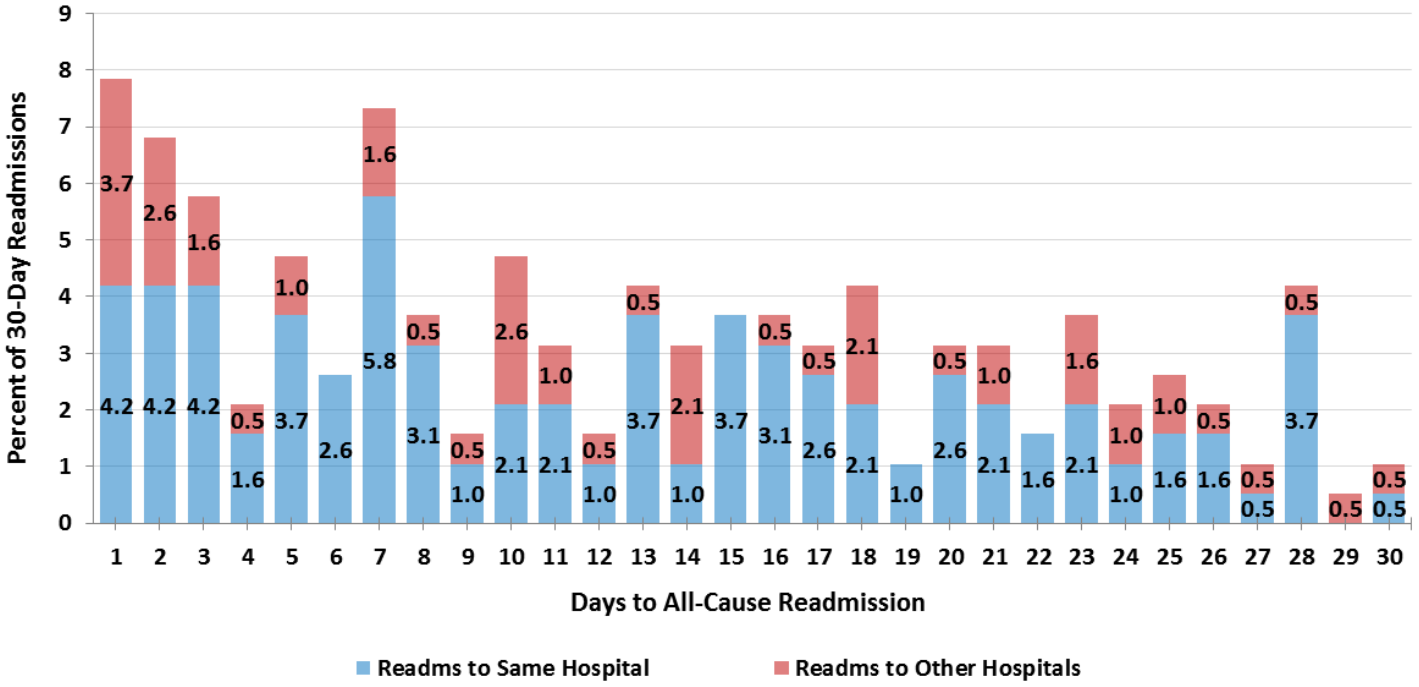
South Dakota - Diabetic Agent Potential ADEs



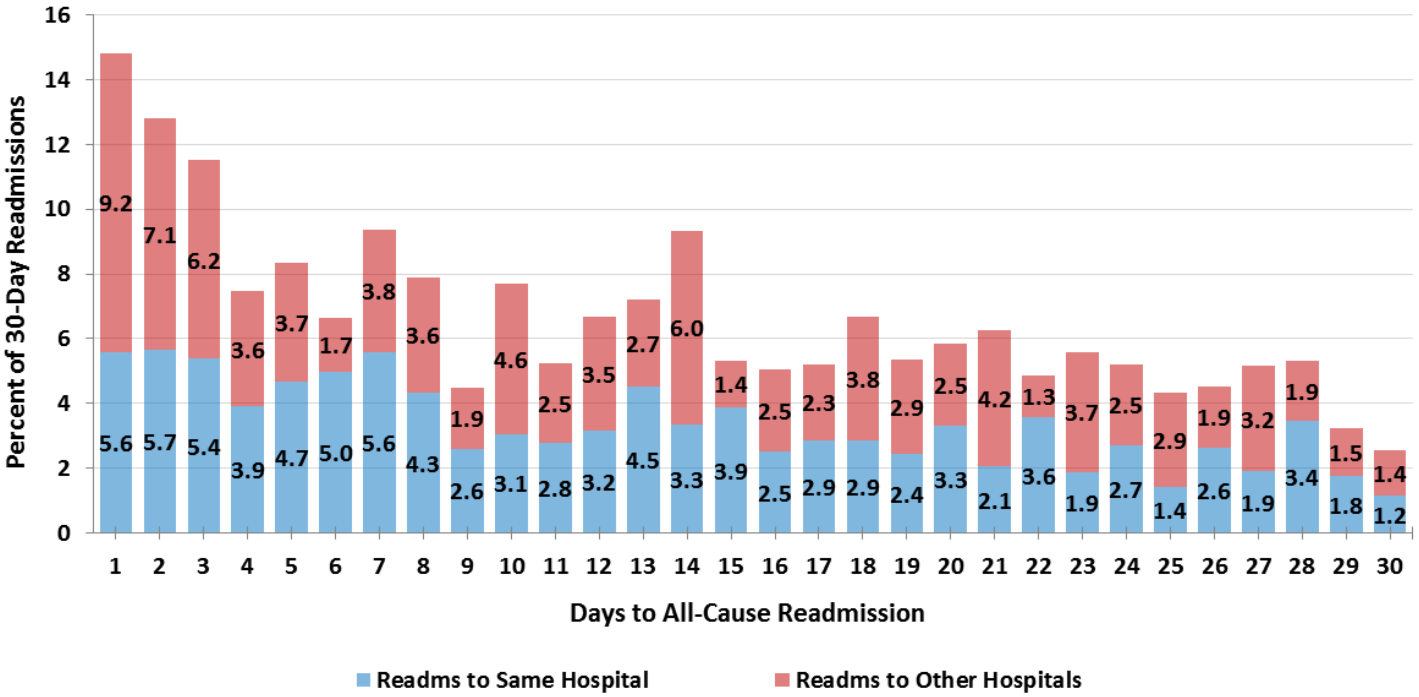
Great Plains QIN - Diabetic Agent Potential ADEs



South Dakota - Opioid Potential ADEs



Great Plains QIN - Opioid Potential ADEs



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