WASHINGTON HEALTH ALLIANCE

Leading health system improvement

Hospital Readmissions and Outpatient Care

A Report on Hospital Readmissions and Post-Discharge Care for Commercially Insured Patients in Washington State

www.wacommunitycheckup.org

Dear community member,

We are pleased to share our first report on hospital readmissions in Washington state. Efforts to reduce hospital readmissions not only improve the health of patients, but can also help control spiraling medical costs.

This report is a first look at hospital readmissions for the commercially insured in our state, but it won't be the last. In December 2014, the 30-day All-Cause Readmission measure we used to produce this report was approved for inclusion in the new Washington State Core Measure Set for Health Care Quality and Cost.

In addition, we compared readmission rates to whether outpatient visits are occurring between hospitalizations. For the first time in our state, we have data supporting the medical view that an outpatient visit soon after leaving the hospital reduces the likelihood of readmission to the hospital.

Our vision at the Alliance is that by 2017, physicians, other providers and hospitals in the region will achieve the top 10 percent in performance nationally in the delivery of quality, evidence-based care and in the reduction of unwarranted variation, resulting in a significant reduction in medical cost trends. Results from this report show that we still have room for improvement in achieving our vision as it relates to reducing hospital readmissions.

We look forward to working with our partners to accomplish this goal.

Sincerely,
Nancy A. Giunto
Executive Director, Washington Health Alliance

January 2015

Table of Contents

Background 4

About this report 4

Key findings 6

Complications and heart disease top diagnostic categories for readmitted patients 7

Outpatient visits linked to reduced likelihood of hospital readmissions 7

Variation exists across both gender and age groups 9

Results by hospitals 10

Results by medical group 12

Recommendations 13

Resources 14

Methodology 14

About the measure 14

Limitations 15

About the data 16

Appendix 17

Appendix 1: Readmission rates by admitting hospital 17

Appendix 2: Readmission rates by primary care medical group 17

Background

Efforts to reduce readmissions not only improve the health of patients, but can also help control spiraling medical costs. Although some readmissions are planned and essential components of patient care, many can be avoided. Readmissions can occur because of differences in patient health status; the quality of care, insufficient discharge planning and post-discharge care coordination and follow-up; access to local primary care; and the threshold for admission at a particular facility.[1]

The goal of any treatment plan is to improve the health of the patient, and to hopefully reduce the need for further treatment, particularly hospitalization. When someone is readmitted to the hospital, it can mean:

1. ***Higher costs.*** Hospital stays are expensive, even for those with insurance. As a point of reference, if we apply the overall readmission rate of 8.7 percent for commercially insured patients to hospital gross charges ("sticker prices") from the 2013 CHARS data,[2] we see an approximate $446 million annual opportunity associated with hospital readmissions.
2. ***Increased risk.*** Readmission to the hospital leads to more tests and treatments, which can sometimes improve the health of a patient, but can also lead to increased medical risk. It also exposes patients to the small but real risk of hospital-acquired infections and other adverse events that occur in hospitals.
3. ***Lost time.*** Patients who are readmitted lose time at home with their families and often lose time at work, meaning potential lost income.

REDUCE READMISSIONS TO IMPROVE HEALTH, DECREASE COST

When someone is readmitted to the hospital, it can mean: higher costs, increased risk and lost time from family and work.

About this report

This report provides a unique analysis of hospital readmission rates in Washington state. We also looked at whether those readmitted patients had an outpatient provider visit within 30 days or within

[1] The Revolving Door: A Report on U.S. Hospital Readmissions, Robert Wood Johnson Foundation.

[2] Inpatient Discharge Database Reports - Washington State Community Hospitals 2013 – 2007.

seven days of the initial discharge. Outpatient visits include exams, consultations and other evaluation and management services provided by any type of provider after initial discharge.

We used the National Quality Forum-endorsed 30-day All-Cause Readmission measure, developed by National Committee for Quality Assurance. The Alliance's Quality Improvement Committee, a group of 19 physician leaders from local health care organizations, reviewed this approach and approved its use. This same measure was also recently approved for inclusion in Washington's Statewide Common Measure Set on Healthcare Quality and Cost.

While there are other publicly available reports on hospital readmissions, most notably reports on readmissions associated with specific conditions such as heart failure or heart attack, this report shares, for the first time in Washington state, a local view of hospital readmissions within 30 days for all causes among *commercially-insured patients*. This report contains information about both Puget Sound region and Washington state hospital readmissions, and when possible, comparison to national benchmarks. Specifically, this report includes:

- Overall observed and expected readmission rates[3] for the commercially-insured in Washington state, by gender and age group.
- How hospitals and medical groups in the Puget Sound region compare for whom we have reportable results.
- Information about how often outpatient visits are occurring, within seven days and 30 days of original discharge, for patients who are readmitted to the hospital.

There are a few limitations to this report. Because the data only covers commercially insured patients who tend to be younger and healthier than Medicare patients, it doesn't represent a complete picture of readmissions in the state. At 8.7 percent, the readmission rate among the commercially insured population of adults 18 and older is significantly lower than what we typically see for the Medicare-aged population where readmission rates were in the 18–20 percent range for this same time period. For this inaugural report, we are only reporting results for hospitals and medical groups that

[3] The **expected** rate is the NCQA risk-adjusted probability of readmission based upon: presence of surgery, primary discharge diagnosis, comorbidities, age and gender. The **observed** rate is the rate of the actual readmissions that occurred.

had 160 or more admissions within the measurement year. We will be considering a lower minimum for future reporting. See the Methodology section for more information about the measure used to produce this report.

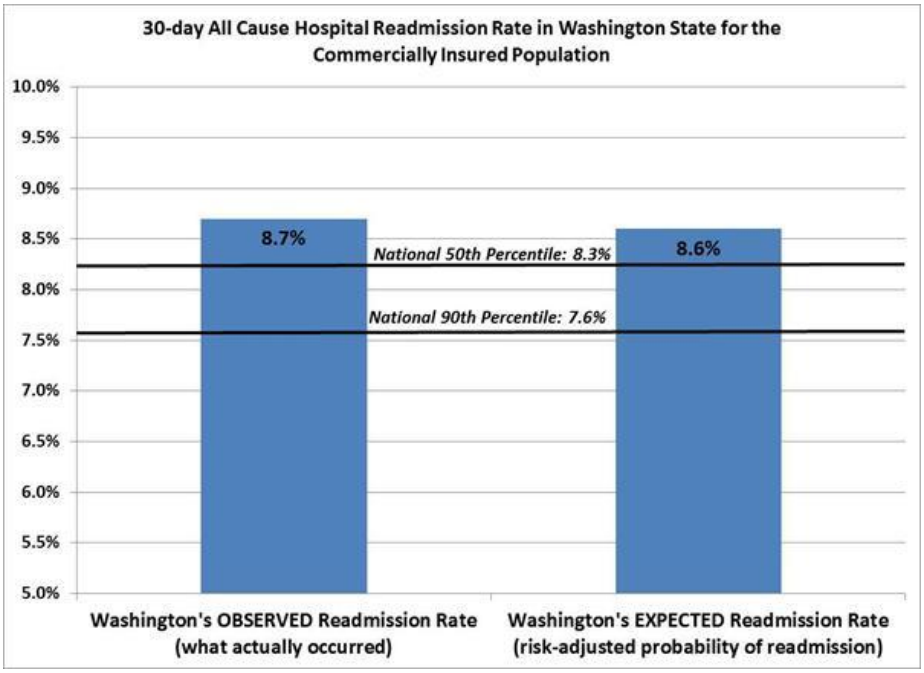
WASHINGTON HAS ROOM FOR IMPROVEMENT

Washington's readmission rates for both commercially insured and Medicaid patients are worse than national benchmarks.

Key findings

Washington has room for improvement. Washington's readmission rate[4] for the commercially insured is 8.7 percent which is higher (worse) than the NCQA 90th percentile rate at 7.6 percent. Washington's readmission rate is slightly worse than the national 50th percentile performance at 8.3 percent, indicating that we have room for improvement. In addition, we see variation when comparing men and women, across age spans and between hospitals and medical groups.

Figure 1. Hospital readmission rates for the commercially insured in Washington state (2011-2012).



[4] When looking at readmission rates, it is important to remember that lower rates are better. This is in contrast to many of the Alliance's other health care quality reports, where higher rates are preferred.

Complications and heart disease top diagnostic categories for readmitted patients

Complications and diseases of the heart represent the most common diagnostic categories for commercially insured patients who have been readmitted in Washington. These two diagnostic groups account for approximately 25 percent of readmissions among the commercially insured population looked at in this analysis. Third on the list are lower gastrointestinal disorders accounting for approximately 6 percent of readmissions and fourth is bacterial infection accounting for 4 percent of readmissions.

Outpatient visits linked to reduced likelihood of hospital readmissions

The days following discharge are a vulnerable period for patients. Care can be complex, complications can arise and it is not uncommon for additions or changes in therapies to occur during and following hospitalization that may have unknown effects for the patient once they are discharged.

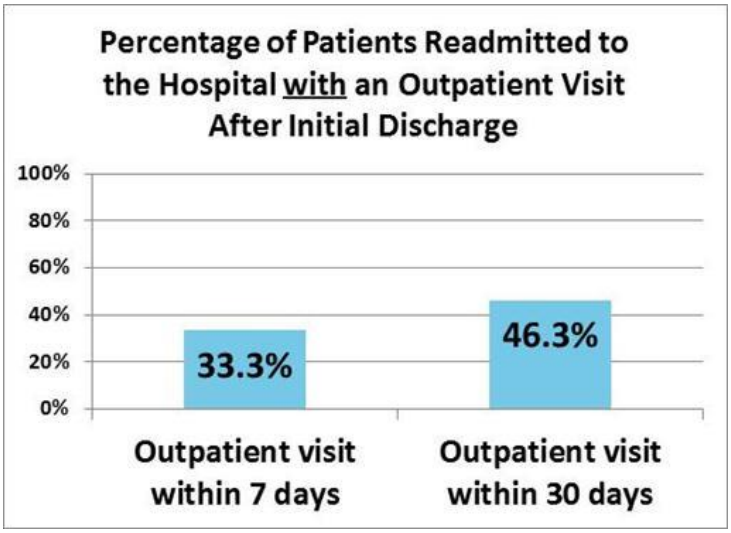
There is general agreement that we can reduce readmissions when hospitalized patients visit their regular outpatient provider soon after discharge (taking steps to ensure that provider has the patient's discharge summary), particularly a provider who is knowledgeable about the patient's medical history and limitations that patient may have in managing their condition(s) at home.

Yet, in this analysis, we see that fewer than one half of readmitted patients had an outpatient provider visit within 30 days of being initially discharged from the hospital, and only about one third of patients had a follow-up outpatient visit within the recommended seven days following discharge.

OUTPATIENT VISITS LINKED TO FEWER READMISSIONS

Patients who were readmitted to the hospital were less likely to have had an outpatient visit soon after their initial discharge.

Figure 2. Percentage of patients in Washington state who were readmitted to the hospital with a follow-up outpatient visit after initial hospital discharge (2011-2012).



To further examine this relationship, we compared hospitals' readmission performance[5] to the likelihood that readmitted patients had a provider visit within 30 days of discharge, or more promptly, within 7 days. For patients who were readmitted, we measured the proportion of patients who had an outpatient visit within either 30 or 7 days after discharge from their initial hospital admission. Before testing for a correlation, we standardized the scores for both readmission and follow-up performance to adjust for differing patient volumes for each hospital.

The results show that as outpatient follow-up improves, so does readmission performance. Put another way, hospitals with poorer readmission performance had lower outpatient follow-up rates among their readmitted patients.

How robust is this effect? We can answer this question statistically by determining how much of the variation in hospital performance can be summarized using a simple linear model of the relationship between readmissions and follow-up visits. If follow-up outpatient visits were the *only* aspect linked with readmissions (which, of course, is an extremely simplistic view), we would see 100 percent of

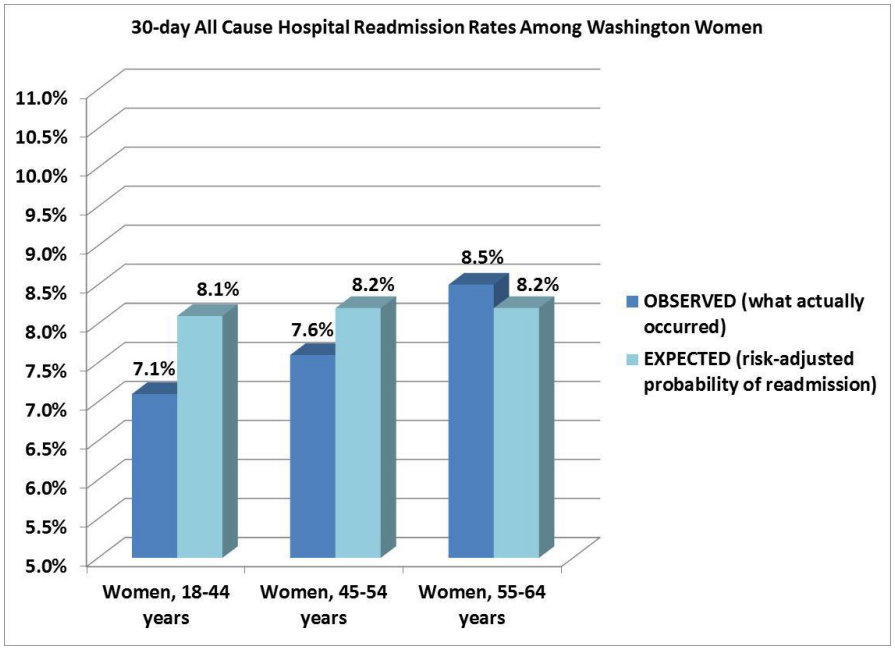
[5] Results are attributed to the hospital where the patient was initially admitted, regardless of where the patient was subsequently readmitted.

the variation accounted for in a linear model. In reality, readmissions are a very complex phenomenon, with many influencing factors at work. Nonetheless, we find that about 19 percent of readmission performance is accounted for by follow-up outpatient visits when using the recommended higher standard of a seven-day post-discharge window. The effect is a little less robust, about 13 percent, when the follow-up outpatient visit occurs within 30 days of discharge.

Variation exists across both gender and age groups

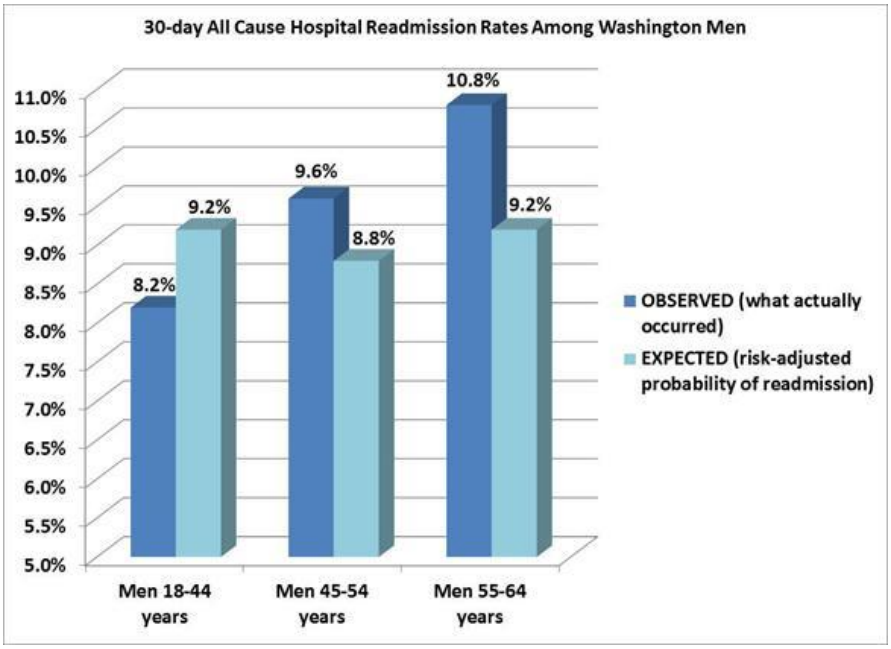
Overall, Washington women who are commercially insured are being readmitted to hospitals at a lower rate than men. In fact, women between the ages of 18 and 44 years old have better rates than the overall national 90th percentile rate, with the observed rate at 7.1 percent. However, women between the ages of 55 and 64 years old had readmission rates worse than expected, with the observed rate of 8.5 percent higher than the risk-adjusted expected rate of 8.2 percent.

Figure 3. Hospital observed and expected readmission rates for commercially insured women in Washington state (2011-2012).



Washington men not only have higher rates than women overall, but men between the ages of 45 and 64 years old also have worse readmission rates than what is expected, as seen in figure four.

Figure 4. Hospital observed and expected readmission rates for commercially insured men in Washington state (2011-2012).



Results by hospitals

Hospitals are ranked based on the difference between their expected and observed rate, adjusting for sample size. Hospitals have been ranked using the results from all hospitals in the state, but only those with 160 or more admissions are displayed in this report. Based upon this ranking, each hospital rate is categorized into one of four quartiles of performance, with the BETTER/first quartile highlighted green and the WORSE/fourth quartile highlighted in red. As seen in figure five, hospitals show variation in performance with the seven top performers for the time period covered in this report including:

- Group Health Affiliated Systems (Multiple locations)
- MultiCare Good Samaritan Hospital (Puyallup)
- Capital Medical Center (Olympia)
- UW Medical Center (Seattle)
- MultiCare Allenmore Hospital (Tacoma)
- MultiCare Auburn Medical Center (Auburn)
- Providence St. Peter Hospital (Olympia)

Figure 5. Readmission rates for hospitals in the Puget Sound region, (2011-2012).

ADMITTING HOSPITAL	RANKING[6]	OBSERVED	EXPECTED
Washington state		***8.7%***	***8.6%***
Puget Sound region[7]		***9.0%***	***8.7%***
Group Health Affiliated Systems*	1st quartile (Better)	7.4%	8.5%
MultiCare Good Samaritan Hospital, Puyallup	1st quartile (Better)	6.6%	8.4%
Capital Medical Center, Olympia	1st quartile (Better)	3.4%	6.3%
UW Medical Center, Seattle	1st quartile (Better)	9.8%	10.9%
MultiCare Allenmore Hospital, Tacoma	1st quartile (Better)	7.5%	9.4%
MultiCare Auburn Medical Center, Auburn	1st quartile (Better)	6.8%	8.7%
Providence St. Peter Hospital, Olympia	1st quartile (Better)	7.5%	8.3%
Overlake Hospital Medical Center, Bellevue	2nd quartile	8.2%	8.5%
St. Joseph Medical Center, Tacoma	3rd quartile	8.8%	9.0%
St. Francis Community Hospital, Federal Way	3rd quartile	8.4%	8.5%
Swedish Medical Center- Edmonds	3rd quartile	10.2%	9.5%
EvergreenHealth Medical Center, Kirkland	3rd quartile	8.0%	7.4%
Valley Medical Center, Renton	3rd quartile	8.1%	7.4%
Multicare Tacoma General Hospital, Tacoma	3rd quartile	8.7%	7.7%
Northwest Hospital & Medical Center, Seattle	3rd quartile	9.5%	8.5%
Swedish Medical Center - First Hill, Seattle	4th quartile (Worse)	9.3%	8.6%
Providence Regional Medical Center, Everett	4th quartile (Worse)	9.1%	7.9%
Swedish Medical Center - Cherry Hill, Seattle	4th quartile (Worse)	10.7%	8.7%
Harrison Medical Center, Bremerton	4th quartile (Worse)	11.8%	8.8%
Highline Medical Center, Burien	4th quartile (Worse)	13.3%	8.6%
Virginia Mason Medical Center, Seattle	4th quartile (Worse)	12.2%	9.8%
Harborview Medical Center, Seattle	4th quartile (Worse)	14.5%	8.8%

RANKING METHODOLOGY

Ranking is based off of a calculation of observed versus expected rates and sample size considerations.

[6] Ranking is based off of a calculation of observed versus expected rates and sample size considerations. Facilities are then ranked within quartiles based on the results of all hospitals in Washington, including a large number of hospitals that are not shown in the report because they fall under the minimum 160 denominator threshold.

[7] The Puget Sound region includes King, Snohomish, Pierce, Thurston and Kitsap counties.

Results by medical group

Although readmissions occur at hospitals, outpatient providers have a crucial role in providing timely follow-up care to ensure medications are correct, provide further instruction and watch for worsening conditions. In light of this, readmissions can be a litmus test for the strength of the local health *system* and care coordination. As we did with hospitals, medical groups are ranked based on the difference between the expected and observed rate of readmissions among patients attributed to their practice. As seen in figure six, medical groups also show variation in performance with the three top performers for the time period covered in this report including:

- Group Health Cooperative
- Valley Medical Center
- The Polyclinic

Figure 6. Readmission rates for primary care medical groups in Puget Sound, (2011-2012).

PRIMARY CARE MEDICAL GROUP	RANKING[6]	OBSERVED	EXPECTED
Washington state		***8.7%***	***8.6%***
Puget Sound region[7]		***9.0%***	***8.7%***
Group Health Cooperative	1st quartile (Better)	8.1%	8.8%
Valley Medical Center	1st quartile (Better)	5.1%	7.9%
The Polyclinic	1st quartile (Better)	6.2%	7.8%
The Everett Clinic	2nd quartile	7.7%	8.4%
Franciscan Medical Group	3rd quartile	8.6%	8.2%
Swedish Medical Group	3rd quartile	8.5%	7.8%
Virginia Mason Medical Center	4th quartile (Worse)	9.3%	8.4%
MultiCare	4th quartile (Worse)	9.0%	8.1%
Northwest Physicians Network	4th quartile (Worse)	9.4%	7.6%

Recommendations

Everyone has a role to play in reducing avoidable hospital readmissions.

- Both **medical groups and hospitals** should continue to collaborate to find ways to improve transitions and care coordination, including an increase in timely access to primary care and urgent care services (including outpatient services offered after regular business hours). The *Reducing Readmissions Care Transitions Toolkit* developed by the Washington State Hospital Association in partnership with the Washington Health Alliance, Qualis Health and other important partners and released in February 2014, provides guidance for how hospitals and community-based providers can work together to improve transitions. The Toolkit describes in detail several recommended processes, some of which include:
    - Readmissions risk assessment
    - Plan of care
    - Medication reconciliation
    - Communication with patient's outpatient provider including timely sharing of the patient's discharge summary.
    - Follow-up phone call with the patient
    - Follow-up outpatient visit in a timely manner
- Newly developing "**accountable communities of health**" will hopefully play an important role in identifying and making connections among other important and related community-based services to support this work.
- **Patients and their families** need to do everything possible to make sure they ask for the information they need to get and stay healthy and avoid being readmitted, and if necessary, see their regular outpatient provider soon after their discharge.
- **Employers and health plans** should pay attention to the quality of transitional care offered by the providers and hospitals in their network.

Resources

Agency for Healthcare Research and Quality

- *Taking Care of Myself: A Guide for When I Leave the Hospital*

Centers for Medicare and Medicaid

- Centers for Medicare & Medicaid's Readmissions Reduction Program

QUALIS

- Readmission rates for selected communities throughout Idaho and Washington
- Readmission rates for hospitals throughout Idaho and Washington

Washington State Hospital Association

- Readmissions
- Washington Partnership for Patients: Health Care Without Harm

Methodology

About the measure

The measure used for these results is based upon the 2012 National Committee for Quality Assurance (NCQA) 30-day All-Cause Readmission measure specification, which is also endorsed by the National Quality Forum (NQF 1768). This measure counts the number of inpatient stays for patients 18 through 64 years old that were followed by a readmission (for any reason) within 30 days during the measurement year.

This count of readmissions is compared to the risk-adjusted predicted probability of an acute readmission, which is done through calculating an expected rate. The **expected** rate is the NCQA risk-adjusted probability of readmission based upon: presence of surgery, primary discharge diagnosis, comorbidities, age and gender.[8] Washington's statewide **expected** readmission rate is then compared to the observed rate, or the actual readmissions that occurred.

[8] To calculate the expected rate, each initial hospitalization receives a base risk weight and then has weights applied for each of the risk adjustment reasons. The denominator is then multiplied by this factor to produce the expected rate. (formula = exp(sum of weights for index stay)/(1+ exp(sum of weights for index stay))

Hospital-specific results are only displayed for those hospitals that had at least 160 admissions within the measurement year.[9] Medical group results are displayed for those groups that had at least 160 admissions among patients attributed[10] to providers in their practice. Hospitals and medical group results are ranked according to the **difference** between the expected readmission rate and the actual observed rate, adjusting for the number of discharges at each hospital.

In addition to measuring readmissions, we also measured the proportion of patients readmitted at each hospital who had a physician office visit within either seven or 30 days after discharge from their initial hospital admission.

This report covers the period from July 2011 to June 2012 and is based on claims data for 2.1 million commercially insured lives in the Alliance's Community Checkup database. This was a new and complex measure to program, particularly given the risk adjustment methodology which we believe is very important when measuring readmissions.

Limitations

The 2012 NCQA measure does *not* exclude planned readmissions,[11] so there are valid reasons for some readmissions included in the results. However, the vast majority of readmissions were unplanned and could have potentially been avoided. Because this report also only covers commercially insured patients, which tend to be younger and healthier than Medicare patients, it doesn't represent a complete picture of readmissions in the state. While the results are limited to the commercial population and NCQA risk-adjustment model corrects for severity of illness, age and gender, these results do not adjust for socioeconomic variations. Furthermore, patients who died after initial discharge are not excluded from these results.

[9] Facilities are ranked within quartiles based on the results of all hospitals in Washington, including a large number of hospitals that are not shown in the report because they fall under the minimum 160 denominator threshold.

[10] The Washington Health Alliance primary care attribution method assigns each patient to the single primary care provider who provided the most evaluation and management visits over the most recent 24-month period covered in the report.

[11] The updated 2014 All-Cause Readmission measure will adjust for planned readmissions. Future reports from the Alliance will use the updated measure specifications.

About the data

Results for the readmission analysis were calculated based on claims data for approximately 2.1 million commercially insured lives in the Alliance's Community Checkup database. Furthermore, the commercial population included in this report represents those who had full insurance benefits in the measurement year from July 1, 2011 to June 30, 2012. Approximately 650,000 commercial enrollees met the NCQA's measure inclusion and exclusion criteria.

Appendix

Appendix 1: Readmission and outpatient visit rates by admitting hospital

ADMITTING HOSPITAL	RATING*	OBSERVED READMIT RATE	EXPECTED READMIT RATE	OUTPATIENT VISIT WITHIN 7 DAYS OF DISCHARGE	OUTPATIENT VISIT WITHIN 30 DAYS OF DISCHARGE
Washington state		***8.7%***	***8.6%***	***33.25%***	***46.32%***
Puget Sound region		***9.0%***	***8.7%***	***32.08%***	***45.23%***
Group Health Affiliated Delivery Systems	1st Quartile (Better)	7.4%	8.5%	38.58%	53.54%
MultiCare Good Samaritan Hospital	1st Quartile (Better)	6.6%	8.4%	26.47%	41.18%
Capital Medical Center	1st Quartile (Better)	3.4%	6.3%	33.33%	33.33%
University of Washington Medical Center	1st Quartile (Better)	9.8%	10.9%	37.63%	53.76%
MultiCare Allenmore Hospital	1st Quartile (Better)	7.5%	9.4%	65.0%	70.0%
MultiCare Auburn Medical Center	1st Quartile (Better)	6.8%	8.7%	45.45%	45.45%
Providence St Peter Hospital	1st Quartile (Better)	7.5%	8.3%	37.14%	48.57%
Overlake Hospital Medical Center	2nd Quartile	8.2%	8.5%	28.85%	32.69%
St Joseph Medical Center	3rd Quartile	8.8%	9.0%	43.14%	64.71%
St Francis Community Hospital	3rd Quartile	8.4%	8.5%	43.48%	47.83%
Swedish Medical Center - Edmonds	3rd Quartile	10.2%	9.5%	22.22%	29.63%
Evergreen Hospital Medical Center	3rd Quartile	8.0%	7.4%	26.42%	35.85%
Valley Medical Center	3rd Quartile	8.1%	7.4%	22.0%	24.0%
MultiCare Tacoma General Hospital	3rd Quartile	8.7%	7.7%	26.09%	60.87%
Northwest Hospital & Medical Center	3rd Quartile	9.5%	8.5%	30.56%	41.67%
Swedish Medical Center - First Hill	4th Quartile (Worse)	9.3%	8.6%	28.46%	45.53%
Providence Regional Medical Center Everett	4th Quartile (Worse)	9.1%	7.9%	31.48%	46.3%
Swedish Medical Center - Cherry Hill	4th Quartile (Worse)	10.7%	8.7%	21.43%	23.81%
Harrison Medical Center	4th Quartile (Worse)	11.8%	8.8%	45.71%	60.0%
Highline Medical Center	4th Quartile (Worse)	13.3%	8.6%	15.38%	26.92%
Virginia Mason Medical Center	4th Quartile (Worse)	12.2%	9.8%	18.95%	38.95%
Harborview Medical Center	4th Quartile (Worse)	14.5%	8.8%	34.25%	41.1%

** Rating was determined using a standardized score that calculates observed versus expected rates, taking into consideration sample size: Green = among 25% of lowest readmission rates; Red = among top 25% of highest readmission rates.*

Appendix 2: Readmission and outpatient visit rates by primary care medical group

MEDICAL GROUP	RATING*	OBSERVED READMIT RATE	EXPECTED READMIT RATE	OUTPATIENT VISIT WITHIN 7 DAYS OF DISCHARGE	OUTPATIENT VISIT WITHIN 30 DAYS OF DISCHARGE
Washington state		***8.7%***	***8.6%***	***33.25%***	***46.32%***
Puget Sound region		***9.0%***	***8.7%***	***32.08%***	***45.23%***
Group Health Cooperative	1st Quartile (Better)	8.1%	8.8%	36.32%	51.71%
Valley Medical Center	1st Quartile (Better)	5.1%	7.9%	11.11%	11.11%
The Polyclinic	1st Quartile (Better)	6.2%	7.8%	31.25%	37.5%
The Everett Clinic	2nd Quartile	7.7%	8.4%	25.81%	35.48%
Franciscan Medical Group	3rd Quartile	8.6%	8.2%	39.29%	50.0%
Swedish Medical Group	3rd Quartile	8.5%	7.8%	20.83%	29.17%
Virginia Mason Medical Center	4th Quartile (Worse)	9.3%	8.4%	23.68%	39.47%
MultiCare	4th Quartile (Worse)	9.0%	8.1%	44.44%	53.33%
Northwest Physicians Network	4th Quartile (Worse)	9.4%	7.6%	52.0%	64.0%

** Rating was determined using a standardized score that calculates observed versus expected rates, taking into consideration sample size: Green = among 25% of lowest readmission rates; Red = among top 25% of highest readmission rates.*

PUBLISHED: January, 2015

ABOUT THE ALLIANCE

The Washington Health Alliance brings together those who give, get and pay for health care to create a high-quality, affordable system for the people of Washington state. The Alliance is a nonprofit, nonpartisan organization that shares the most reliable data on health care quality and value in the state to help providers, patients, employers and union trusts make better decisions about health care. Through innovative strategies and initiatives, we help the entire health care system—from exam room to board room—focus on improving quality and value. We are committed to being the catalyst for change for the health care system in Washington. The Alliance is one of 16 organizations that are part of the Robert Wood Johnson Foundation's Aligning Forces for Quality (AF4Q) initiative.

For more about the Alliance:
www.WashingtonHealthAlliance.org

For the Community Checkup report:
www.WACommunityCheckup.org