

Measuring. Learning. Improving Health Care Together.

A Success Story of Data Access and Use.

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MEASURING AND
REPORTING FOR
LEARNING AND
IMPROVEMENT



Health Quality Council...

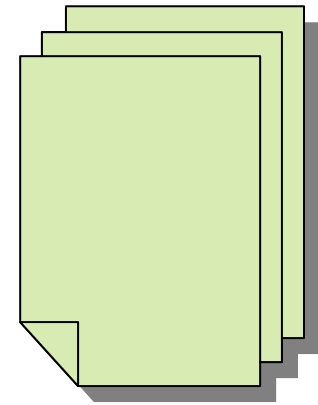
- **Was established as a corporation by the *Health Quality Council Act 2002***
- **Measures and reports on quality of health care**
- **Supports improvement of health care**
- **Aligns its work with health system priorities**



Access to Health System Data

Data Sharing Agreement

- **Terms of access, use, protection**
 - De-identified – unique encrypted ID
 - Use to fulfill Objects of HQC Act
 - Research Ethics Review
 - Physical and policy measures for data security – subject to audit
 - Pre-release review of research products by Ministry



Access to Health System Data

Secure Data Environment

- Data held on HISC server; HQC access via Community Net VPN
- Research data sets held at HQC on isolated network (no internet connection)
- Secure data area – card key limited access
- Privacy policies and procedures



Data Accessed by HQC from MoH

- Hospital discharge abstracts
- Medical billings and provider info
- Drug plan – prescription drugs
- Long-term care (RAI-MDS) & Administrative
- Home care
- Vital statistics
- Person registry (and geography info)



Value-added Data Processing by HQC

- **Data quality checks**
(ranges, completeness)
- **Verified deaths file**
- **Hospitalization episode of care file**

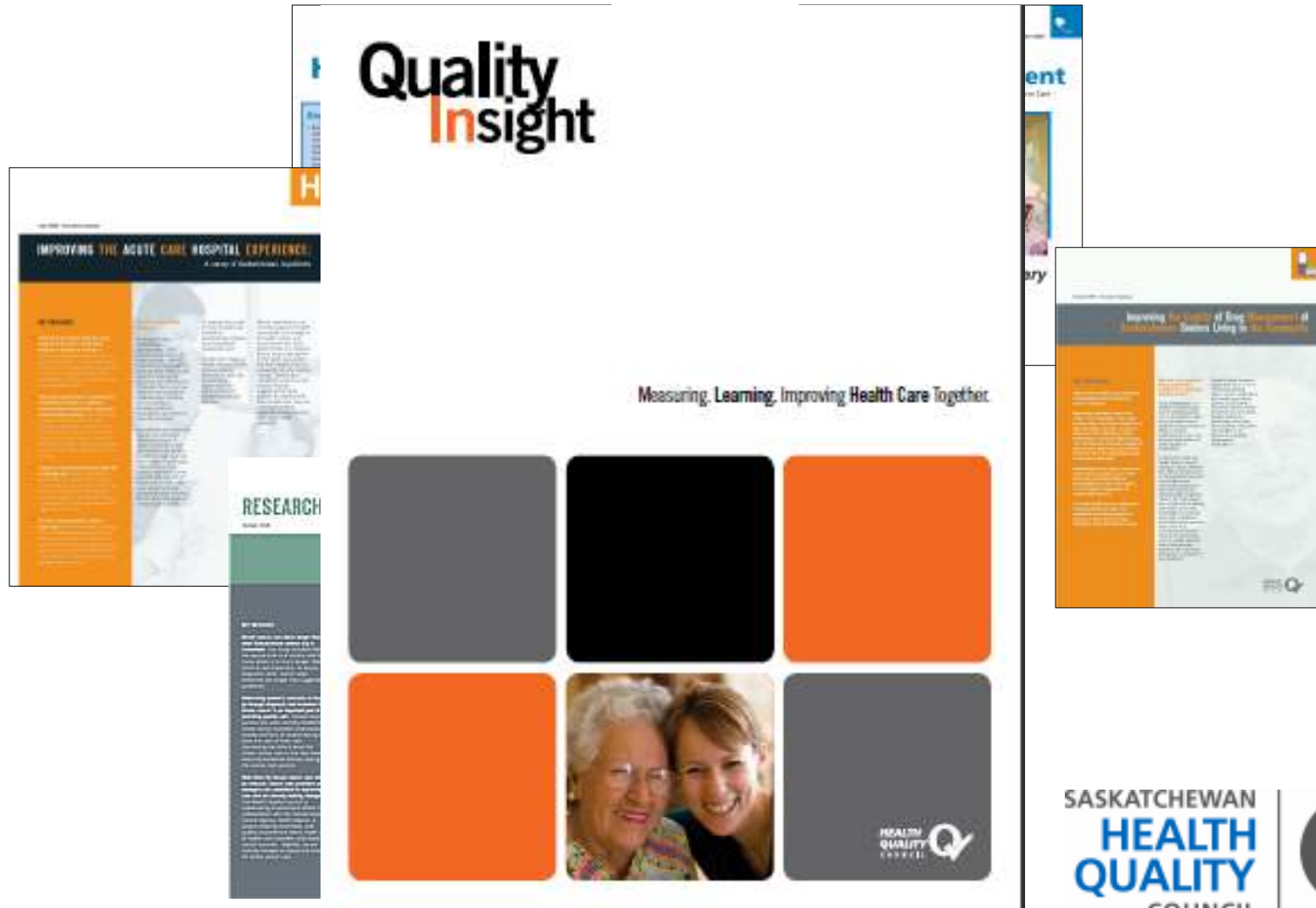


Additional data sources for linkage

- **Medical laboratory test data**
- **Cancer registry data**
- **Cancer screening data**
- **Intervention cohorts**



Reports on Quality of Care



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Quality Insight Online



Example:

**Diabetes Quality of Care
Indicators**



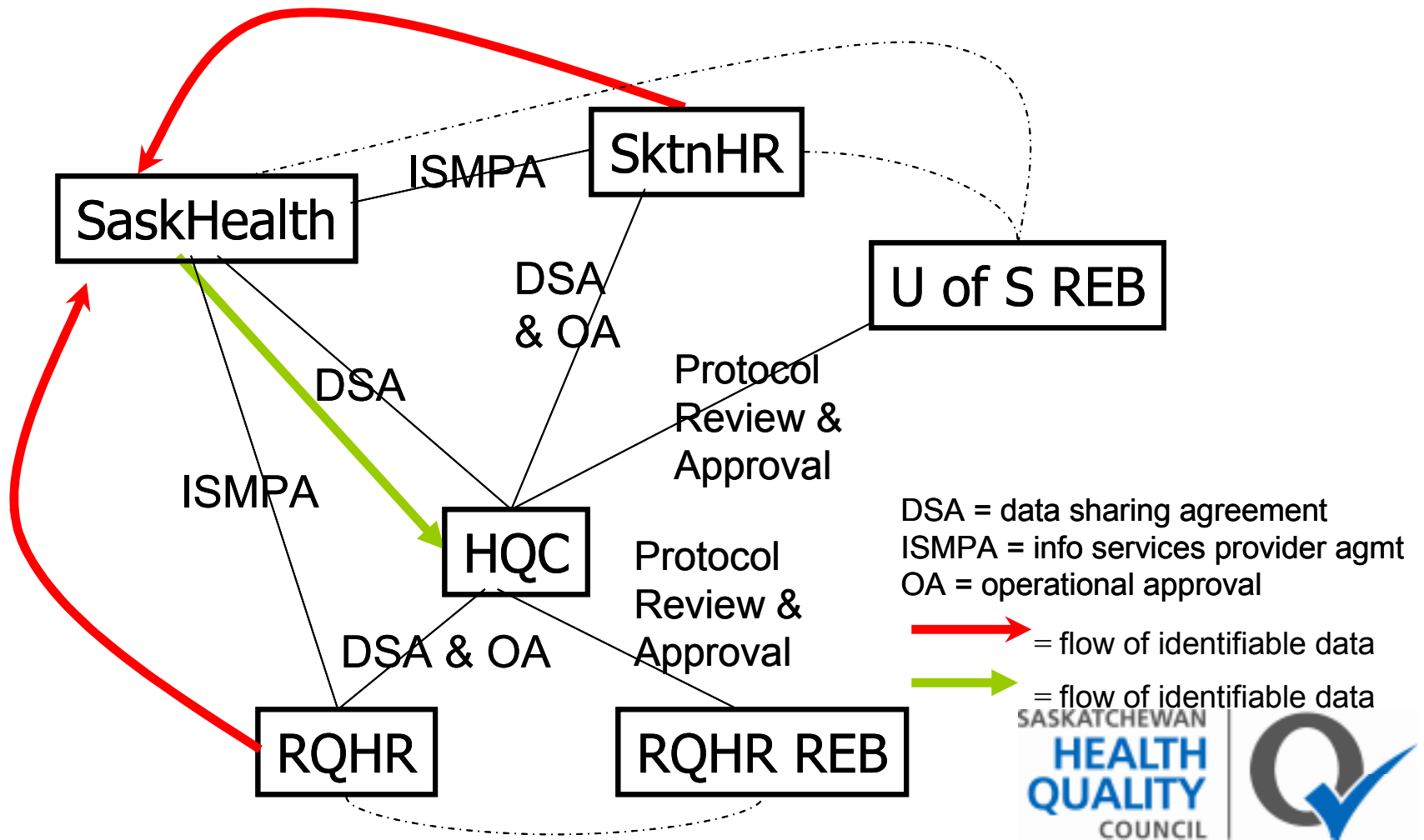
Diabetes Quality of Care Indicators

Can Diabetes Assoc Best Practice Guidelines
 (Can Journal of Diabetes. 2003;27(suppl 2):S1 –152)

Process	Intermed. outcome	Outcome
<p>HbA1c testing</p> <p>Use of recommended medications</p> <p>-anti-hypertensives</p> <p>Anti-lipidemics</p>	<p>Blood glucose control (HbA1c)</p> <p>Cholesterol (LDL) control</p> <p>Kidney function</p> <p>- Microalbuminuria</p> <p>- eGFR</p>	<p>Hospitalizations</p> <p>- hypo/hyperglycemia</p> <p>- Stroke, AMI, amputation</p> <p>End-stage renal disease</p> <p>Mortality (all cause)</p>



Accessing Data



Percentage of people with diabetes \geq 20 yrs old who had \geq 2 HbA1c tests in the year 2008-09

	Numerator (#)	Denominator (#)	Actual rate (%)	Actual rate 95% CI	Risk adjusted rate (%) ^{3,4,6}	Risk adjusted rate 95% CI
All SK	27,118	58,593	46.2	45.9 - 46.7	46.0	45.6 - 46.4
Age						
20-29	158	618	25.5	22.2 - 29.2	25.7	22.3 - 29.4
30-39	822	2,945	27.9	26.3 - 29.6	28.0	26.4 - 29.7
40-49	2,534	7,172	35.3	34.2 - 36.5	35.3	34.3 - 36.5
50-59	5,895	12,870	45.8	44.9 - 46.7	45.8	44.9 - 46.7
60-69	7,505	14,255	52.6	51.8 - 53.5	52.6	51.8 - 53.5
70+	10,204	20,733	49.2	48.5 - 49.9	49.2	48.6 - 50.0
Income Quintile⁶						
1 Lowest	4,863	11,538	42.1	41.2 - 43.1	42.5	41.6 - 43.5
2	5,399	11,845	45.5	44.7 - 46.5	45.4	44.5 - 46.3
3	4,991	10,612	47.0	46.1 - 48.0	46.6	45.7 - 47.6
4	4,499	9,133	49.2	48.2 - 50.3	48.7	47.8 - 49.8
5 Highest	4,013	8,320	48.2	47.2 - 49.3	47.4	46.4 - 48.6
Registered Indian (RI)						
Registered Indian	2,398	7,248	33.0	32.0 - 34.2	34.7	33.6 - 35.9
All Other Saskatchewan Residents	24,720	51,345	48.1	47.7 - 48.6	47.4	47.1 - 47.9
Sex						
Female	12,649	27,933	45.2	44.7 - 45.9	45.3	44.7 - 45.9
Male	14,469	30,660	47.1	46.6 - 47.8	46.6	46.1 - 47.2
Location⁷						
Rural	11,599	26,198	44.2	43.7 - 44.9	43.8	43.3 - 44.5
Urban	15,375	32,113	47.8	47.3 - 48.4	47.7	47.2 - 48.3

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→ Quality Insight

Percentage of people with diabetes \geq 20 yrs old who had \geq 2 HbA1c tests in the year 2008-09, by Region

	Numerator (#)	Denominator (#)	Actual rate (%)	Actual rate 95% CI	Risk adjusted rate (%) ^{3,4,5}	Risk adjusted rate 95% CI
All SK	27,118	58,593	46.2	45.9 - 46.7	46.0	45.6 - 46.4
Regional Health Authorities (RHA)⁶						
Sun Country	1,351	2,958	45.6	43.9 - 47.5	45.0	43.2 - 46.8
Five Hills	1,946	3,720	52.3	50.7 - 53.9	51.5	49.9 - 53.1
Cypress	1,054	2,571	40.9	39.1 - 42.9	40.4	38.5 - 42.3
Regina Qu'Appelle	7,110	14,238	49.9	49.1 - 50.8	49.6	48.9 - 50.5
Sunrise	2,035	4,042	50.3	48.8 - 51.9	49.5	48.0 - 51.1
Saskatoon	6,590	14,261	46.2	45.4 - 47.0	46.0	45.2 - 46.8
Heartland	1,178	2,563	45.9	44.0 - 47.9	45.1	43.2 - 47.0
Kelsey Trail	1,510	3,191	47.3	45.6 - 49.1	47.0	45.3 - 48.8
Prince Albert Parkland	2,316	4,836	47.8	46.5 - 49.3	47.7	46.3 - 49.2
Prairie North	1,221	4,115	29.6	28.3 - 31.1	29.8	28.4 - 31.2
Northern Saskatchewan	795	2,045	38.8	36.8 - 41.0	39.5	37.3 - 41.7

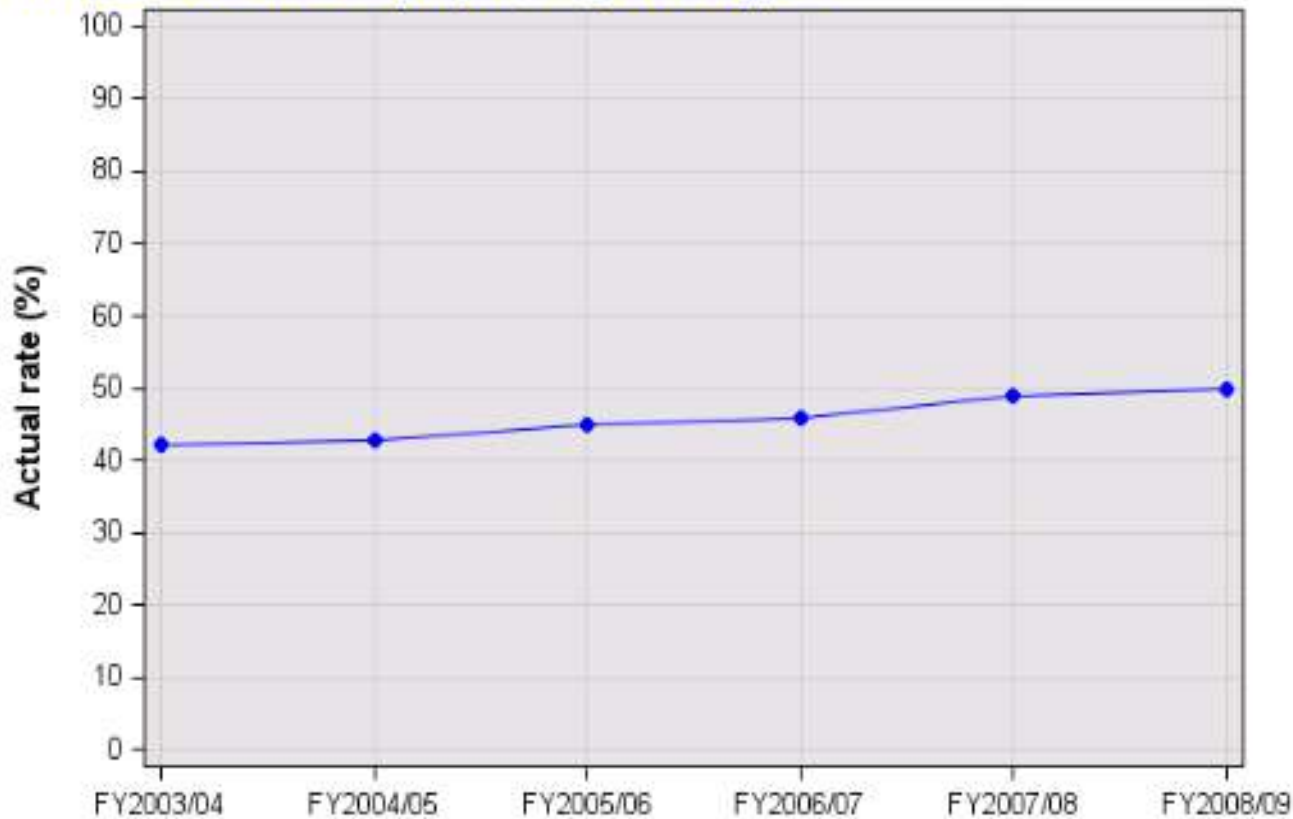
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Time trend for individual regions

Percentage of people with diabetes aged 20 years and over in Saskatchewan with 2 or more A1C tests per year, Regina Qu'Appelle ¹



¹ Includes only persons in the Saskatchewan Diabetes Database who had at least one A1C test done in the measurement year.

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→ Quality Insight



Indicators available for...

- **Asthma care**
- **Diabetes care**
- **Post-heart attack care**
- **Use of medications by elderly**
- **Patient experience of inpatient hospital care**
- **Stroke care**

In Development:

Sooner, Safer, Smarter Surgical Care



Partnering to measure quality

Focus:

- Shared priorities of the health system

Mechanisms:

- **Quality Insight Working Group**
 - Current focus: SK Surgical Initiative
- **Adjunct Scientists**
- **Collaborative quality improvement research**

Thank you!

For further information, contact:

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