Long-Term Care Indicators

There are 10 Common Quality Agenda indicators that are relevant to the long-term care sector. Four of these are sector-specific – accountability for improvement rests within the long-term care sector. These indicators are the same four reported at the provider level on the LTC public reporting website, and were supported through the Residents First initiative. It is anticipated that these same indicators may also be priorities for quality improvement plan (QIP) reporting when LTC is required to complete QIPs. An additional six Common Quality Agenda indicators have shared accountability between long-term care and acute care, primary care and home care sectors.

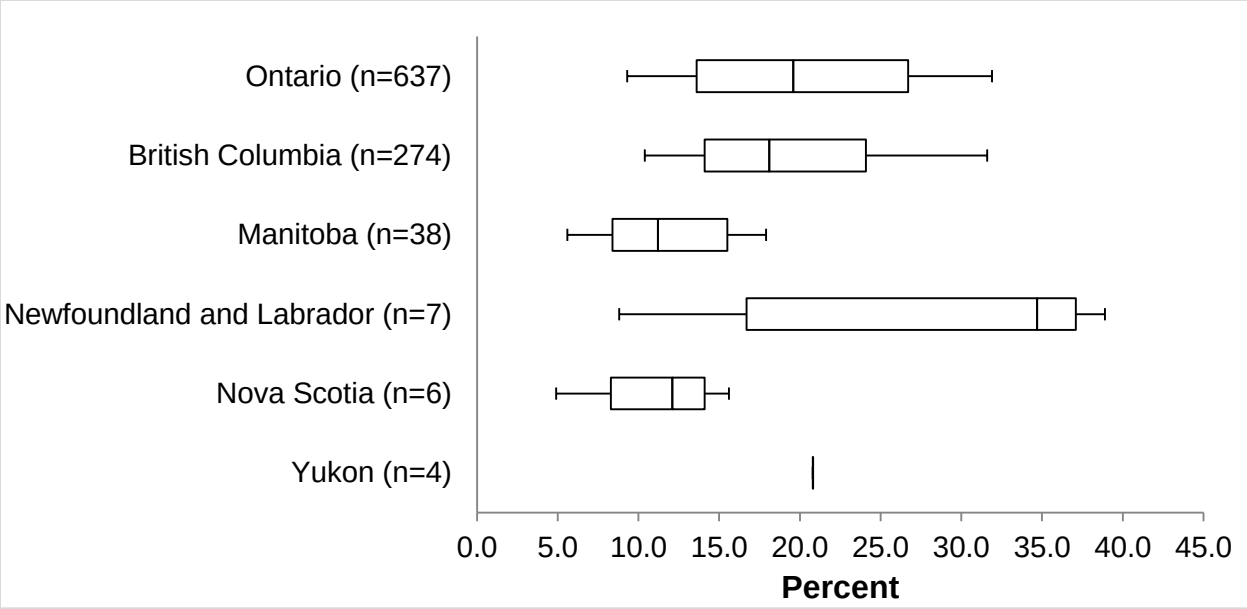
Long-term care indicators	**Accountability**	**Target**	**Target source**
Percent residents whose bladder continence worsened	Long-term care	12%	HQO benchmarking
Percent residents in daily physical restraints	Long-term care	3%	HQO benchmarking
Percent residents with who fell in the last 30 days	Long-term care	9%	HQO benchmarking
Percent residents with a newly occurring stage 2 to 4 pressure ulcer	Long-term care	1%	HQO benchmarking
Admission rates for conditions that are sensitive to outpatient (ambulatory) care delivery (CHF, COPD, diabetes, asthma) (R) (CD)	Hospital/Primary Care/Long-Term Care/Home Care	20% relative reduction year over year	Expert panel consultation
Percentage of ALC days in acute care hospitals (E) (CD)	Hospital/Primary Care/Long-Term Care/Home Care	9.46% - 10% year over year relative reduction	Provincial government
Lost-time and non-lost time injury rates per 100 full-time equivalent health care workers (E) (CD)	Hospital/Primary Care/Long-Term Care/Home Care	Context	Context indicator
Psychiatric rehospitalisation rate within 30 days (R) (MH)	Hospital/Primary Care/Long-Term Care/Home Care	8% (10-15% year over year relative reduction)	Expert panel consultation
Percentage of patients seeing a primary care provider or a specialist within 7 days of discharge after an inpatient stay for a mental health and addictions condition (R) (MH)	Hospital/Primary Care/Long-Term Care	75% (10-15% relative improvement year over year)	Expert panel consultation
Percentage of adults $\geq$65 years who have received influenza vaccine (N) (PH)	Long-Term Care / Primary Care/ Public Health	80% PHAC target	PHAC (federal government)

Percent of LTC residents whose bladder continence worsened	
Indicator description	The percent of long-term care residents whose bladder continence worsened since last assessment. The lower the indicator result, the better. This indicator is jointly developed by interRAI and CIHI. This is reported in the 2013 Quality Monitor and the LTC public reporting website. This indicator is available quarterly as a rolling four quarter average.
Relevance/ Rationale	"Incontinence can have a negative impact on the dignity, health and overall quality of life experienced by residents. Incontinence can lead to a loss of independence and is associated with a higher risk of other health conditions, such as pressure ulcers. The Long-Term Care Homes Act, 2007, requires all homes in Ontario to have a continence care and bowel management program to promote continence and to ensure that residents are clean, dry and comfortable." *Text taken from the LTC public reporting website section "Why is this important to measure?"*
Reporting tool/product	2013 Quality Monitor; LTC Public Reporting website
Attribute	Effective
Type:	Incidence; outcome; core indicator
External Alignment	Sinha Report
Accountability	**Long-term care**
Calculation	***Numerator*** Inclusion: Residents with a greater value for bladder incontinence on their target assessment compared with prior assessment
	Denominator Inclusion: Residents with valid assessments whose bladder continence could worsen (i.e., did not have maximum score on prior assessment) Exclusion: • Residents who were comatose (B1 Comatose) • End-of-life residents (J5c End-Stage Disease, 6 or Fewer Months to Live; P1ao Hospice Care)
Data source / data elements	Data are based on mandatory RAI-MDS 2.0 assessments in the Continuing Care Reporting System database held at CIHI. • The LTC Team under Research Methods (Jonathan Lam & Maaike de Vries) has access to this data through CIHI's online reporting tool, eReports. The following data elements are used: • H1b Bladder Continence This is available at the provincial, LHIN and facility-level.

Timing and frequency of data release	This indicator is available quarterly as a rolling four quarter average (fiscal quarters, starting from Q4 2009/10).
Levels of comparability	This is available at the provincial, LHIN and facility-level.
Targets and/or Benchmarks	Benchmark is set to 12% by an expert panel through a modified Delphi process. Resources about the benchmarking process can be found here: http://www.hqontario.ca/public-reporting/long-term-care/resources-for-long-term-care-homes
Target source	HQO benchmarking process (2013)
Limitations	• While rolling four quarter averages stabilize the rates from quarter-to-quarter variations, especially for smaller facilities, it is makes it more difficult to detect true quarterly improvements • Adjusted rates are censored if the denominator is <30 • Only includes long-stay beds
Adjustment (risk, age/sex standardization)	This indicator is risk adjusted at the individual covariate level and through direct standardization. Individual Covariates • Personal Severity Index*: Subset 1: Diagnoses • Personal Severity Index*: Subset 2: Non-Diagnoses • Cognitive Performance Scale • Resource Utilization Group Case-Mix Index • Age younger than 65 Direct Standardization • Activities of Daily Living Long Form^ *Personal Severity Index is statistically linked to the likelihood of death within six months ^This includes bed mobility, transfer, locomotion, dressing, eating, toileting and personal hygiene self performance
Guidelines, SOPs, Evidence for best practice	The RNAO Best Practices Toolkit for Continence and Constipation (http://ltctoolkit.rnao.ca/resources/continence)
Comments	

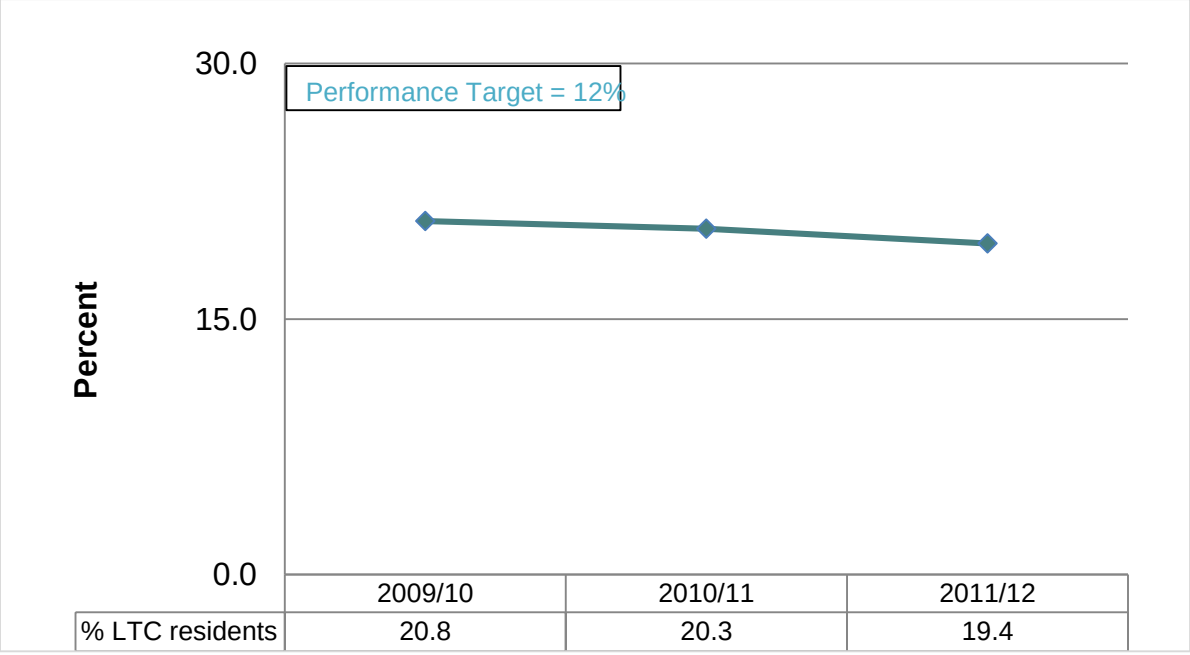
Current Performance

Figure1: Regional distributions of percent of LTC residents whose bladder continence worsened in fiscal year 2011/12



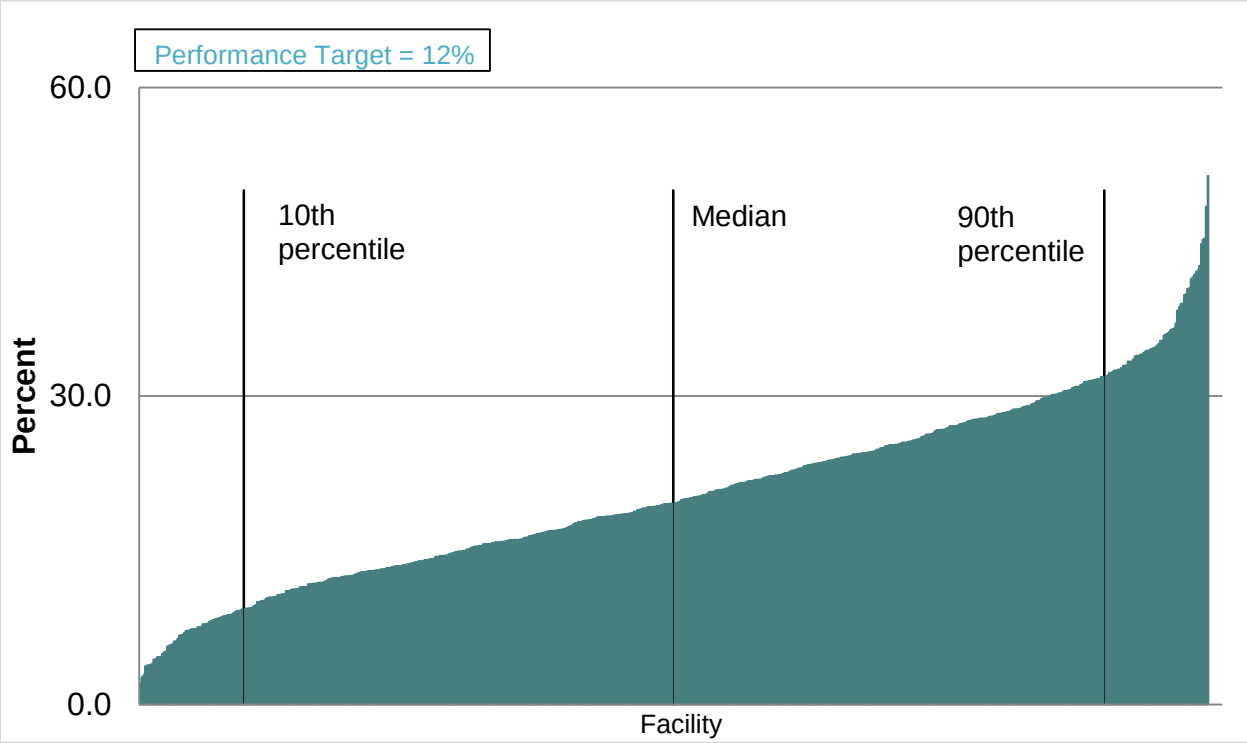
Data Source: CCRS, provided by CIHI
The box-plots show the location of the 10th, 25th, median, 75th, and 90th percentiles.
Note: British Columbia and Ontario capture most LTC homes in each province; Manitoba only captures facilities in the Winnipeg Regional Health Authority; and Newfoundland and Labrador, Nova Scotia, and the Yukon are derived from a small sample of homes.

Figure2: Percent of LTC residents whose bladder continence worsened by fiscal year, FY2009/10 – FY2011/12



Data Source: CCRS, provided by CIHI

Figure3: Percent of LTC residents whose bladder continence worsened by Ontario LTC facility in fiscal year 2011/12



Data Source: CCRS, provided by CIHI

Table1: Facility-level distribution of the percent of LTC residents whose bladder continence worsened in fiscal year 2011/12; Data Source: CCRS, provided by CIHI

Min	5th Percentile	10th Percentile	25th Percentile	Median	75th Percentile	90th Percentile	95th Percentile	Max
0.0	7.2	9.3	13.6	19.6	26.7	31.9	34.9	51.4

Statement of results

- The percent of residents with worsening bladder continence has improved from 20.6% in 2009/10 to 19.4% in 2011/12.
- Despite this improvement, large variation continues to exist among long-term care facilities in Ontario—ranging from 0% to 51.4% in 2011/12.

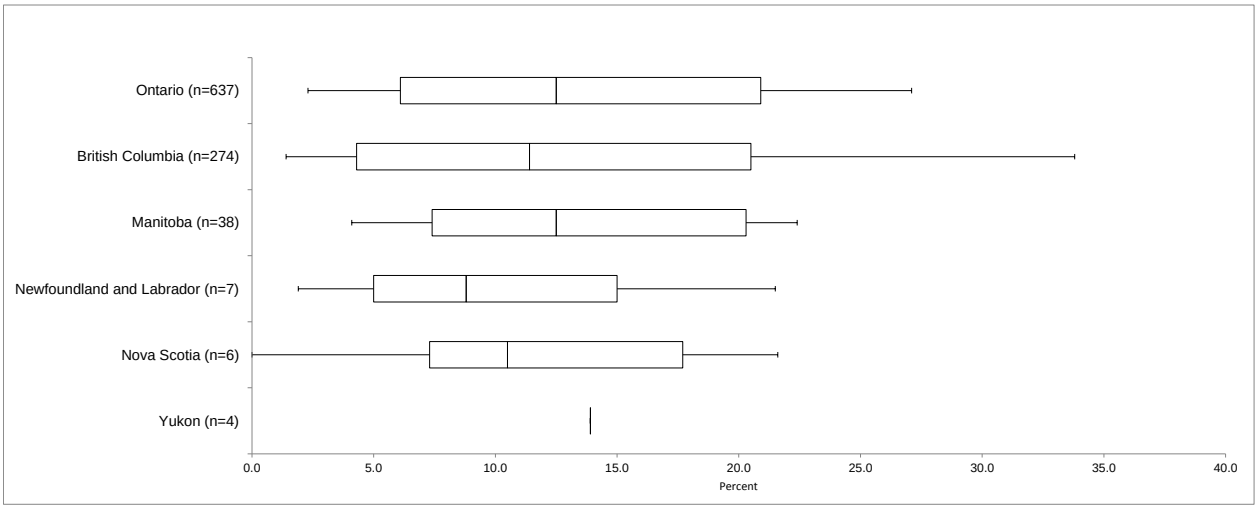
Percent of residents in daily physical restraints	
Indicator description	The percent of long-term care residents in daily physical restraints. The lower the indicator result, the better. This indicator is jointly developed by interRAI and CIHI. This is reported in the 2013 Quality Monitor and the LTC public reporting website. This indicator is available quarterly as a rolling four quarter average. A physical restraint is any manual method, or any physical mechanical device, material or equipment that is attached or adjacent to the resident's body, that the resident cannot remove easily, **and** that restricts the resident's freedom of movement or normal access to his or her body. It is the effect the device has on the resident that classifies it into the category of restraint, not the name of label given to the device, nor the purpose of intent of the device. *This definition is **different** from that of the MOHLTC's physical restraint definition where intent plays an important role*.
Relevance/ Rationale	"Some long-term care homes use restraints as a way of managing potentially harmful resident behaviours, such as wandering or aggression (e.g., hitting). Residents who display these behaviours often have dementia or other cognitive impairments and can sometimes pose a risk to themselves or others. However, restraints are known to cause injury and even accidental death. They are also associated with social isolation and a reduced quality of life. For this reason, it is important to reduce the use of restraints and find alternate ways of managing dementia-related behaviours. The *Long-Term Care Homes Act, 2007,* requires all homes in Ontario to have restraint policies in place. Any necessary restraining must be done in accordance with the requirements under the Act." *Text taken from the LTC public reporting website section "Why is this important to measure?"*
Reporting tool/product	2013 Quality Monitor; LTC Public Reporting website
Attribute	Safe
Type:	Prevalence; outcome; core indicator
External Alignment	Sinha Report
Accountability	**Long-term care**
Calculation	***Numerator*** Inclusion: Residents who were physically restrained daily on their target assessment
	Denominator Inclusion: Residents with valid assessments Exclusion: Residents who were comatose (B1 Comatose) or quadriplegic (I1bb Quadriplegia)

Data source / data elements	• Data are based on mandatory RAI-MDS 2.0 assessments in the Continuing Care Reporting System database held at CIHI.
	  ○ The LTC Team under Research Methods (Jonathan Lam & Maaike de Vries) has access to this data through CIHI's online reporting tool, eReports.
	• The following data elements are used:
	  ○ P4c Trunk Restraint
	  ○ P4d Limb Restraint
	  ○ P4e Chair Prevents Rising
	• This is available at the provincial, LHIN and facility-level.

Timing and frequency of data release	This indicator is available quarterly as a rolling four quarter average (fiscal quarters, starting from Q4 2009/10.
Levels of comparability	This is available at the provincial, LHIN and facility-level.
Targets and/or Benchmarks	Benchmark is set to 3% by an expert panel through a modified Delphi process. Resources about the benchmarking process can be found here: http://www.hqontario.ca/public-reporting/long-term-care/resources-for-long-term-care-homes
Target source	HQO benchmarking process (2013)
Limitations	• While rolling four quarter averages stabilize the rates from quarter-to-quarter variations, especially for smaller facilities, it is makes it more difficult to detect true quarterly improvements • Adjusted rates are censored if the denominator is less than 30 • Only includes long-stay beds • Additionally, there may be some coding variation due to the difference in RAI-MDS physical restraint definition vs the MOHLTC legislated definition. As coding practices improve, the rates of physical restraint use may also improve.
Adjustment (risk, age/sex standardization)	This indicator is risk adjusted via direct standardization using the Activities of Daily Living Long Form. ADL Long Form comprises bed mobility, transfer, locomotion, dressing, eating, toileting and personal hygiene self performance
Guidelines, SOPs, Evidence for best practice	The RNAO Clinical Best Practice Guideline on "Promoting Safety: Alternative Approaches to the Use of Restraints" (http://rnao.ca/sites/rnao-ca/files/Promoting_Safety_-_Alternative_Approaches_to_the_Use_of_Restraints_0.pdf)
Comments	

Current performance

Figure1: Regional distributions of percent of LTC residents in daily physical restraints in fiscal year 2011/12.



The box-plots show the location of the 10th, 25th, median, 75th, and 90th percentiles.
Note: British Columbia and Ontario capture most LTC homes in each province; Manitoba only captures facilities in the Winnipeg Regional Health Authority; and Newfoundland and Labrador, Nova Scotia, and the Yukon are derived from a small sample of homes.

Figure2: Percent of LTC residents in daily physical restraints by fiscal year, FY2009/10-FY2011/12

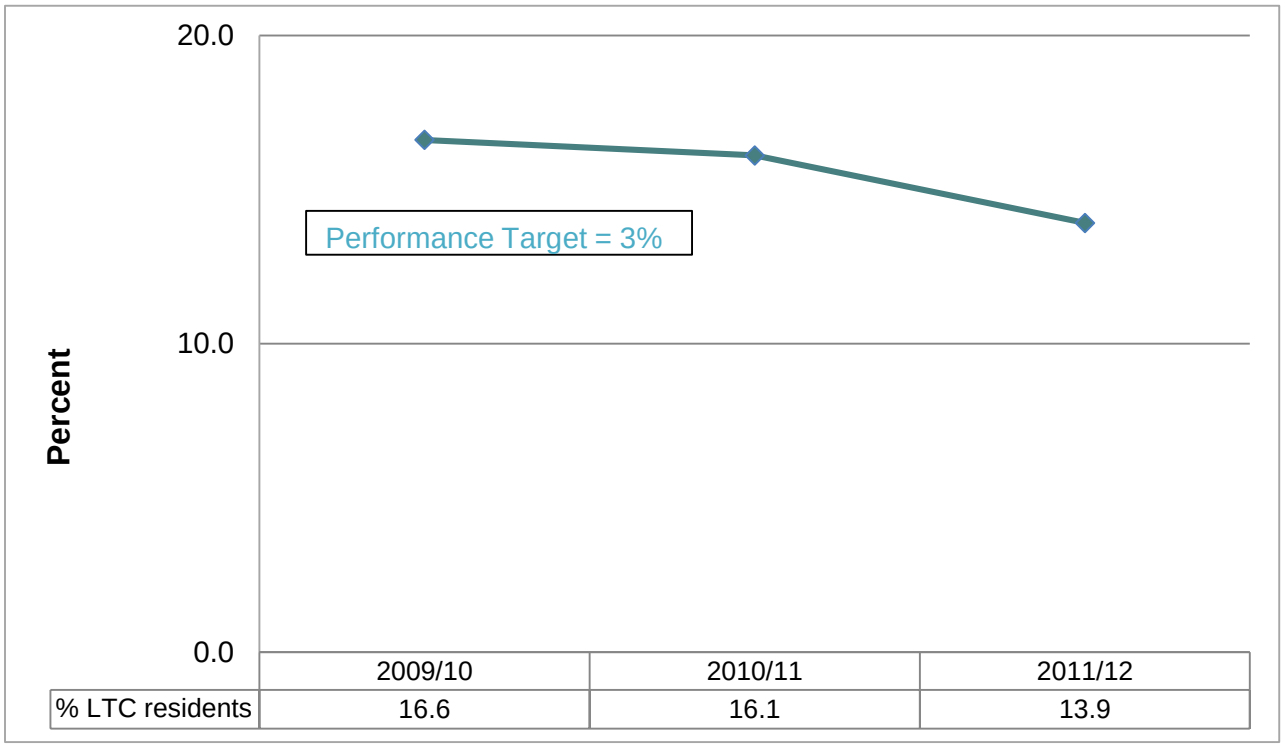


Figure3: Percent of LTC residents in daily physical restraints in fiscal year 2011/12 by Ontario LTC facility in fiscal year 2011/12

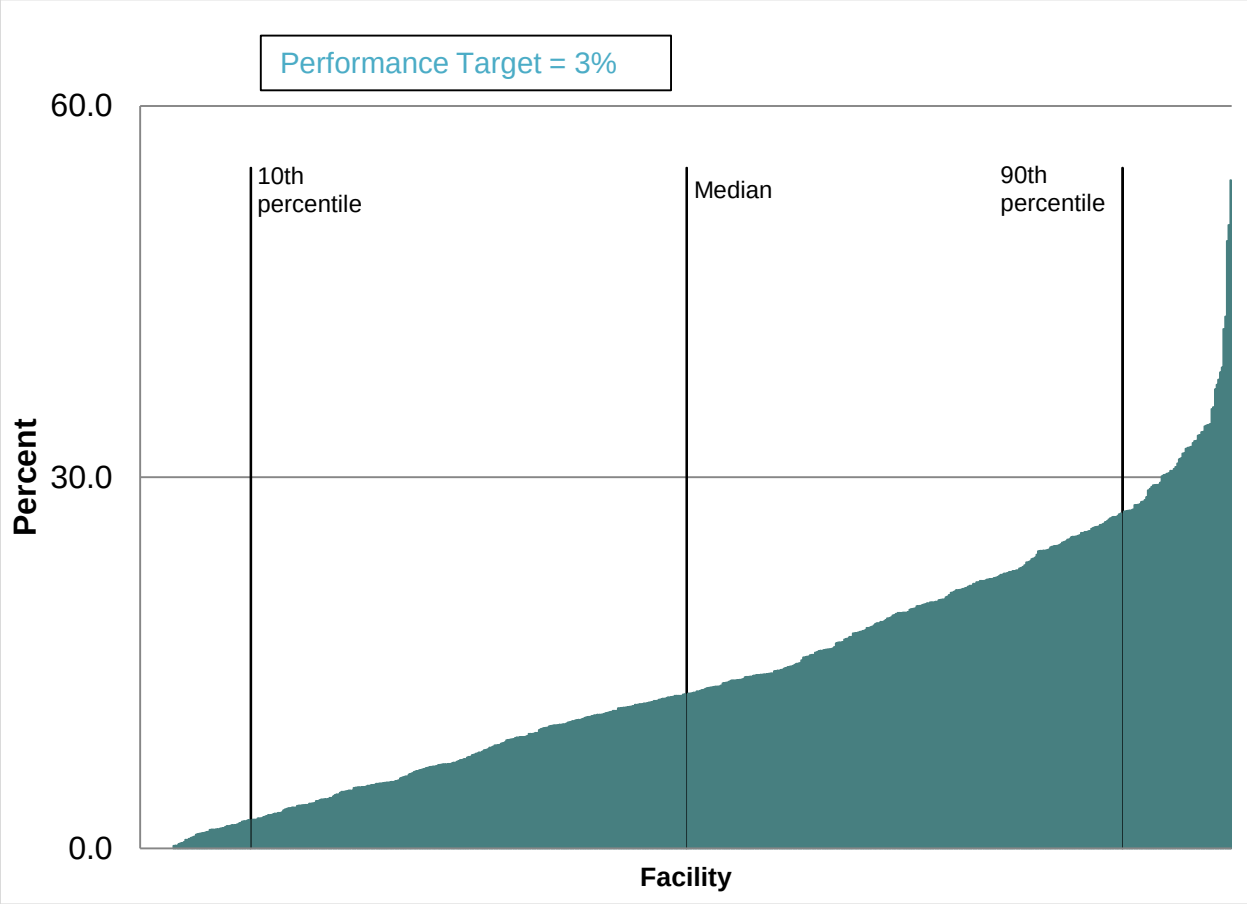


Table1: Facility-level distribution of the percent of LTC residents in daily physical restraints in fiscal year 2011/12

Min	5th Percentile	10th Percentile	25th Percentile	Median	75th Percentile	90th Percentile	95th Percentile	Max
0.0	0.9	2.3	6.1	12.5	20.9	27.1	31.1	54.0

Statement of results

- The percent of residents who were physically restrained has decreased from 17% in 2009/10 to 14% in 2011/12— it is significant that the decrease in restraint use was observed without an increase in percent of fallers, suggesting that with the appropriate policies and the use of best practice, restraint use may be further reduced without increasing the percent of residents who fall. Despite this improvement, restraint use continues to be too high. Given that one in ten homes achieved restraint rates at or lower than 2.3% and the US national average was 2.0%[1] in 2012, there is room for improvement. The variation across LTC homes is large—ranging from 0% to 54%.

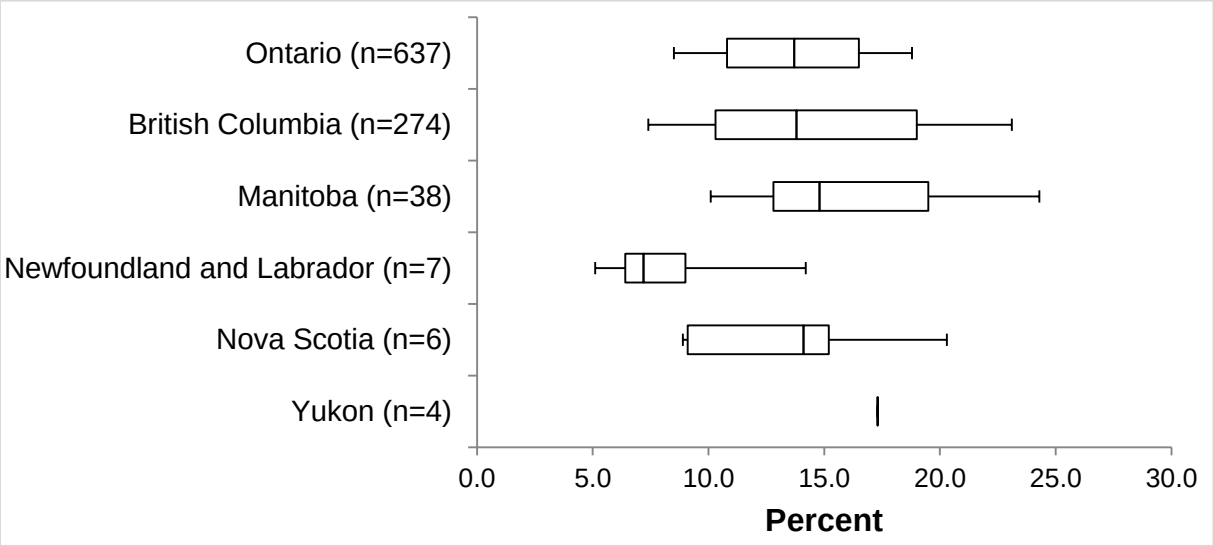
[1] Nursing Home Compare: Medicare Nursing Home Finder (http://www.medicare.gov/nursinghomecompare/search.aspx) (Accessed February 4, 2013).

Percent of residents who fell in the last 30 days	
Indicator description	The percent of long-term care residents who fell in the last 30 days. The lower the indicator result, the better. This indicator is jointly developed by interRAI and CIHI. This is reported in the 2013 Quality Monitor and the long-term care (LTC) public reporting website. This indicator is available quarterly as a rolling four quarter average.
Relevance/ Rationale	"Residents can experience serious consequences after a fall, including injuries that limit their independence and increase their care needs. Falls also have an effect on other parts of the healthcare system, leading to more emergency department visits, hospitalizations and surgeries. The *Long-Term Care Homes Act, 2007,* requires all homes in Ontario to have a falls prevention and management program to reduce the incidence of falls and the risk of injury." *Text taken from the LTC public reporting website section "Why is this important to measure?"*
Reporting tool/product	2013 Quality Monitor; LTC Public Reporting website
Attribute	Safe
Type:	Prevalence; outcome; core indicator
External Alignment	Sinha Report
Accountability	Long-term care
Calculation	***Numerator*** Inclusion: Residents who had a fall in the last 30 days recorded on their target assessment
	Denominator Inclusion: Residents with valid assessments Exclusion: None
Data source / data elements	Data are based on mandatory RAI-MDS 2.0 assessments in the Continuing Care Reporting System database held at CIHI. • The LTC Team under Research Methods (Jonathan Lam & Maaike de Vries) has access to this data through CIHI's online reporting tool, eReports. The following data elements are used: • J4a fell in the past 30 days This is available at the provincial, LHIN and facility-level.
Timing and frequency of data release	This indicator is available quarterly as a rolling four quarter average (fiscal quarters, starting from Q4 2009/10).
Levels of comparability	This is available at the provincial, LHIN and facility-level.
Targets and/or Benchmarks	Benchmark is set at 9% by an expert panel through a modified Delphi process.

	Resources about the benchmarking process can be found here: http://www.hqontario.ca/public-reporting/long-term-care/resources-for-long-term-care-homes
Target source	HQO benchmarking process (2013)
Limitations	• While rolling four quarter averages stabilize the rates from quarter-to-quarter variations, especially for smaller facilities, it is makes it more difficult to detect true quarterly improvements • Adjusted rates are censored if the denominator is < 30 • Only includes long-stay beds
Adjustment (risk, age/sex standardization):	This indicator is risk adjusted at the individual covariate level and through direct standardization. Individual Covariates • Not totally dependent in transferring • Locomotion problem • Personal Severity Index*: Subset 2: Non-Diagnoses • Any wandering • Unsteady gait/cognitive impairment • Age younger than 65 Stratification • Case Mix Index^ *Personal Severity Index is statistically linked to the likelihood of death within six months ^The relative resource use compared to the overall average resource use for all Ontario LTC residents
Guidelines, SOPs, Evidence for best practice	The RNAO Best Practices Toolkit for falls prevention and management (http://ltctoolkit.rnao.ca/resources/falls).
Comments	

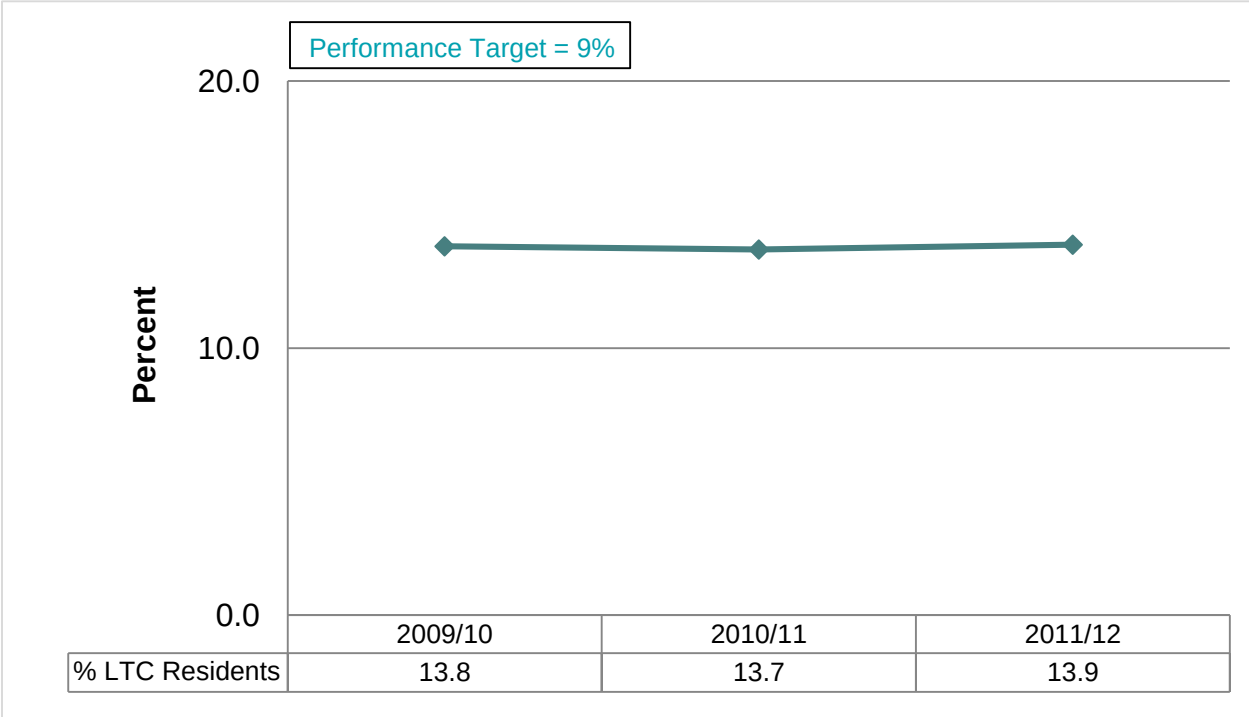
Current performance

Figure1: Regional distributions of percent of LTC residents who fell in the last 30 days in fiscal year 2011/12



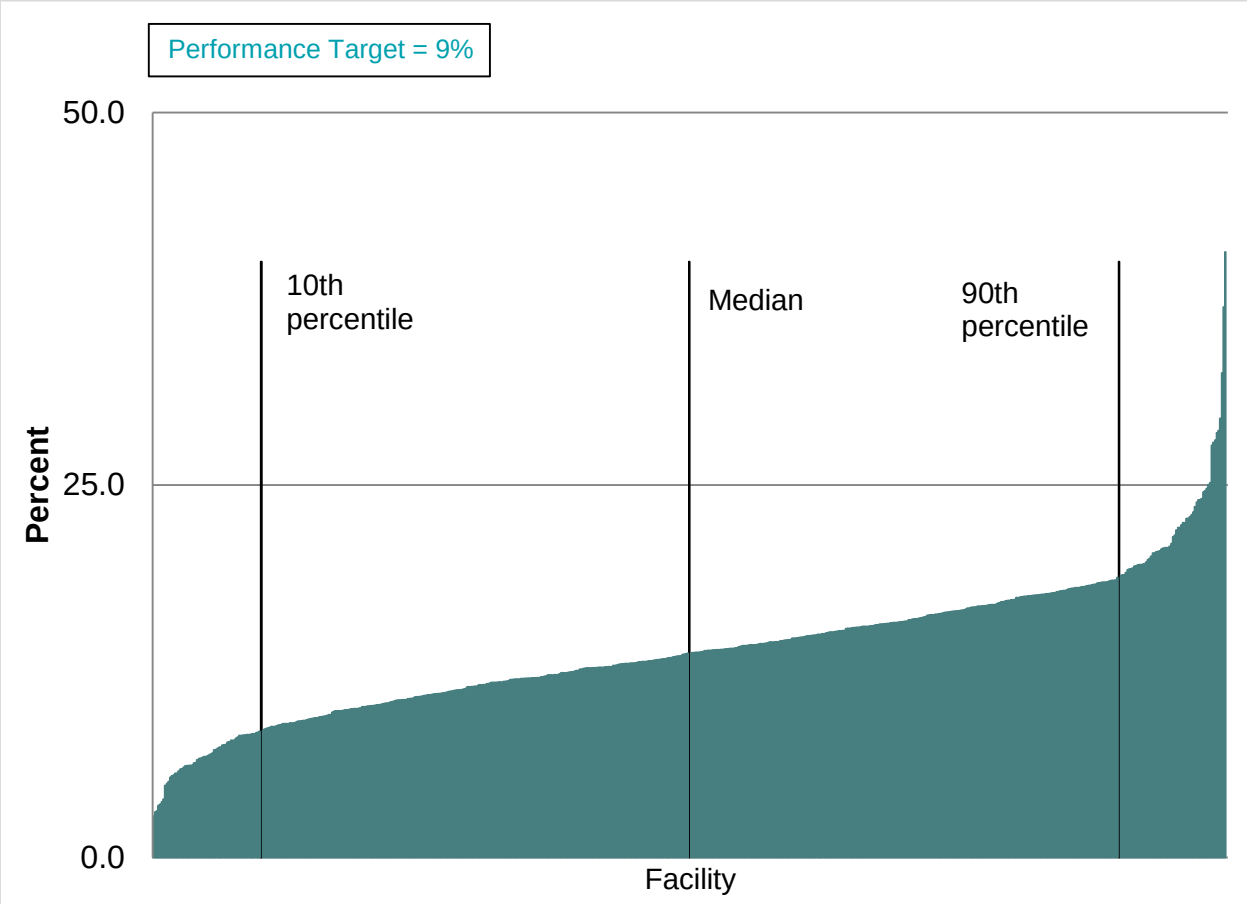
Data Source: CCRS, provided by CIHI
The box-plots show the location of the 10th, 25th, median, 75th, and 90th percentiles
Note: British Columbia and Ontario capture most LTC homes in each province; Manitoba only captures facilities in the Winnipeg Regional Health Authority; and Newfoundland and Labrador, Nova Scotia, and the Yukon are derived from a small sample of homes.

Figure2: Percent of LTC residents who fell in the last 30 days by fiscal year, FY2009/10-FY2011/12



Data Source: CCRS, provided by CIHI

Figure3: Percent of LTC residents who fell in the last 30 days by Ontario LTC facility in fiscal year 2011/12; Data Source: CCRS, provided by CIHI



Data Source: CCRS, provided by CIHI

Table 1: Facility-level distribution of the percent of LTC residents who fell in the last 30 days in fiscal year 2011/12; Data Source: CCRS, provided by CIHI

Min	5th Percentile	10th Percentile	25th Percentile	Median	75th Percentile	90th Percentile	95th Percentile	Max
2.8	6.8	8.5	10.8	13.7	16.5	18.8	21.5	40.6

Statement of results

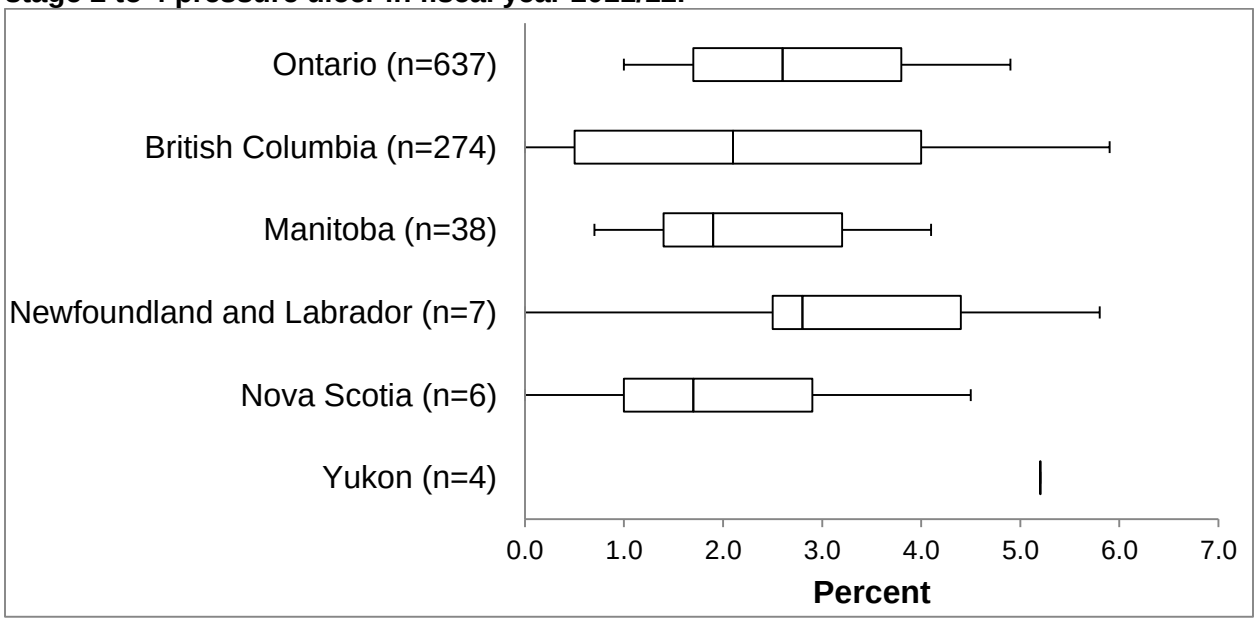
- The percent of residents who fell in the last 30 days has been relatively constant between 2009/10 and 2011/12, ranging from 13.7% to 13.9%.
- As with the other three publicly reported home-level LTC quality indicators, a large performance gap exists between the homes with the best indicator results (10th percentile at 8.5%) and the homes with the worst indicator results (90th percentile at 18.8%). This large performance gap suggests that much improvement can be gained with this particular indicator.

Percent of residents who had a newly occurring stage 2 to 4 pressure ulcer	
Indicator description	The percent of long-term care residents who had a newly occurring stage 2 to 4 pressure ulcer. The lower the indicator result, the better. This indicator is jointly developed by interRAI and CIHI. This is reported in the 2013 Quality Monitor and the LTC public reporting website. This indicator is available quarterly as a rolling four quarter average.
Relevance/ Rationale	"Pressure ulcers are skin wounds that can develop when someone has been sitting or lying down for prolonged periods of time. Residents who develop pressure ulcers are at risk of serious health complications, such as infections and severe pain. Pressure ulcers are also very difficult and expensive to treat. The *Long-Term Care Homes Act, 2007,* requires all homes in Ontario to have a skin and wound care program to promote skin integrity, prevent the development of wounds and pressure ulcers, and provide effective skin and wound care interventions." *Text taken from the LTC public reporting website section "Why is this important to measure?"*
Reporting tool/product	2013 Quality Monitor; LTC Public Reporting website
Attribute	Safe
Type:	Incidence; outcome; core indicator
External Alignment	Sinha Report
Accountability	**Long-term care**
Conclusion	***Numerator*** Inclusion: Residents who had a pressure ulcer at stages 2 to 4 on their target assessment and no pressure ulcer at stages 2 to 4 on their prior assessment
	Denominator Inclusion: Residents with valid assessments excluding those with stage 2 to 4 ulcers on their prior assessment Exclusion: None
Data source /data elements	Data are based on mandatory RAI-MDS 2.0 assessments in the Continuing Care Reporting System database held at CIHI. The LTC Team under Research Methods (Jonathan Lam & Maaike de Vries) has access to these data through CIHI's online reporting tool, eReports. The following data elements are used: M2a Stage of Pressure Ulcer This is available at the provincial, LHIN and facility-level.
Timing and frequency of data release	This indicator is available quarterly as a rolling four quarter average (fiscal quarters, starting from Q4 2009/10).
Levels of comparability	This is available at the provincial, LHIN and facility-level.

Targets and/or Benchmarks	Benchmark is set at 1% by an expert panel through a modified Delphi process. • Resources about the benchmarking process can be found here: http://www.hqontario.ca/public-reporting/long-term-care/resources-for-long-term-care-homes
Target source	HQO benchmarking process (2013)
Limitations	• While rolling four quarter averages stabilize the rates from quarter-to-quarter variations, especially for smaller facilities, it makes it more difficult to detect true quarterly improvements • Adjusted rates are censored if the denominator is less than 30 • Only includes long-stay beds
Adjustment (risk, age/sex standardization)	This indicator is risk adjusted at the individual covariate level and through direct standardization. Individual covariates • Age younger than 65 • Personal Severity Index*: Subset 1: Diagnoses • More dependence in toileting • Resource Utilization Group Cognitive Impairment Stratification • Case Mix Index^ *Personal Severity Index is statistically linked to the likelihood of death within six months ^The relative resource use compared to the overall average resource use for all Ontario LTC residents
Guidelines, SOPs, Evidence for best practice	The RNAO Best Practices Toolkit for pressure ulcer risk prevention and management (http://ltctoolkit.rnao.ca/resources/pressure-ulcer) OHTAC Recommendation: Prevention and Management of Pressure Ulcers (http://www.health.gov.on.ca/english/providers/program/ohtac/tech/recommend/rec_pup_20091020.pdf)
Comments	

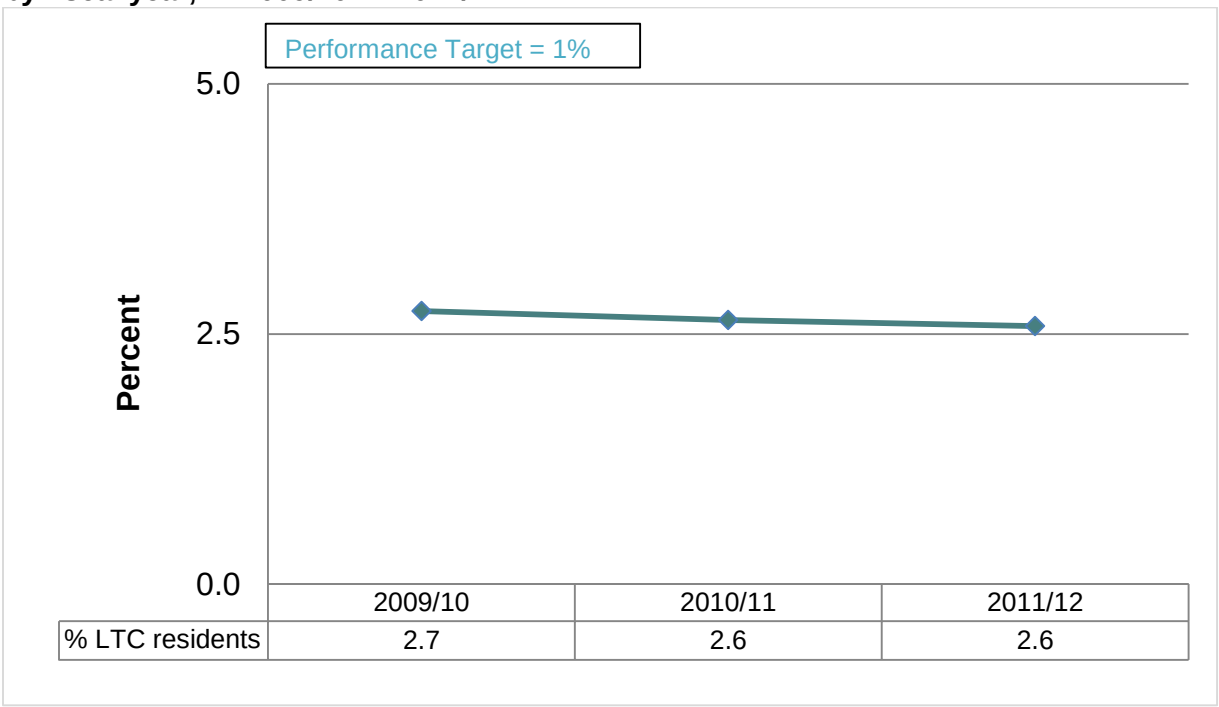
Current performance

Figure1: Regional distributions of percent of LTC residents who had a newly occurring stage 2 to 4 pressure ulcer in fiscal year 2011/12.



The box-plots show the location of the 10th, 25th, median, 75th, and 90th percentiles.
Note: British Columbia and Ontario capture most LTC homes in each province; Manitoba only captures facilities in the Winnipeg Regional Health Authority; and Newfoundland and Labrador, Nova Scotia, and the Yukon are derived from a small sample of homes.

Figure2: Percent of LTC residents who had a newly occurring stage 2 to 4 pressure ulcer by fiscal year, FY2009/10-FY2011/12



	2009/10	2010/11	2011/12
% LTC residents	2.7	2.6	2.6

Figure3: Percent of LTC residents who had a newly occurring stage 2 to 4 pressure ulcer by Ontario LTC facility in fiscal year 2011/12

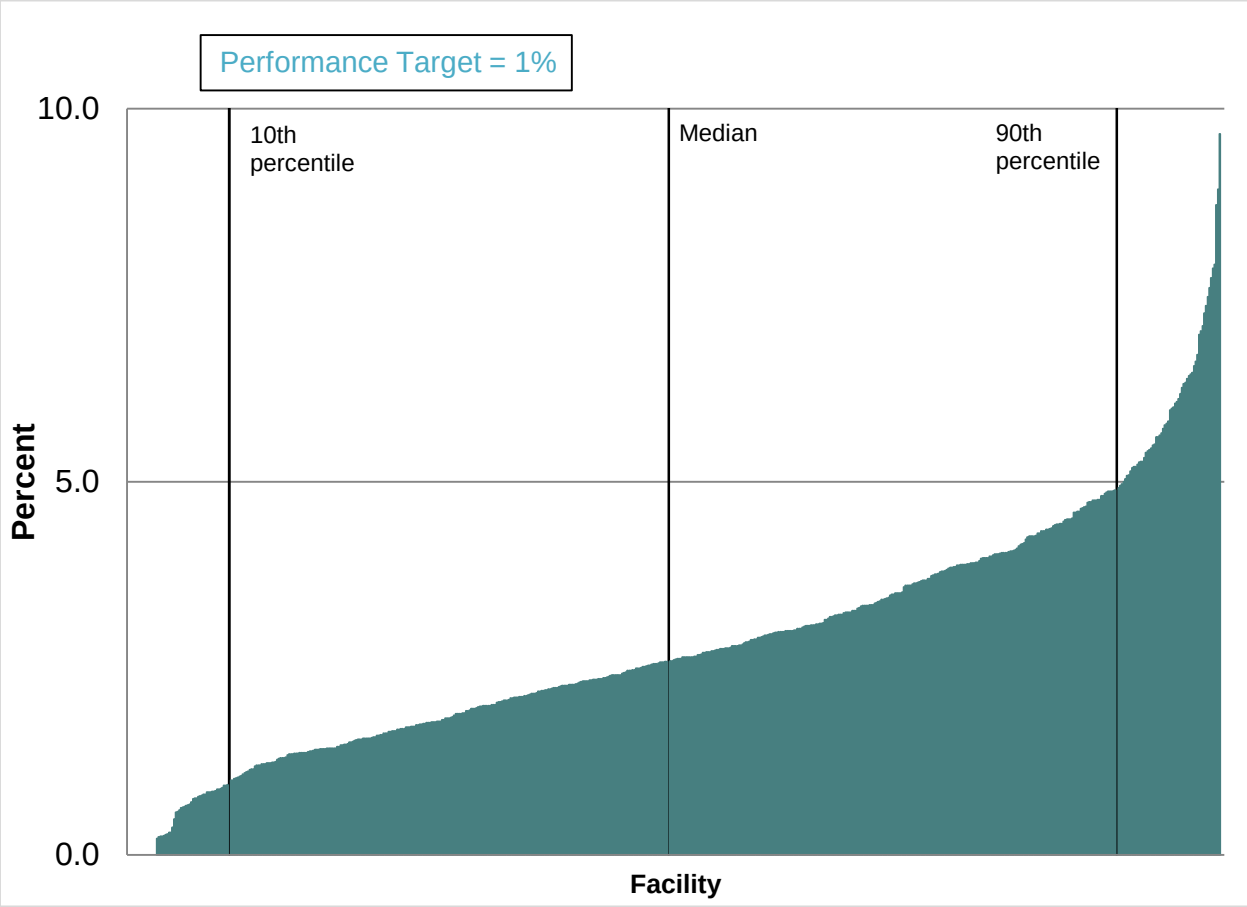


Table1: Facility-level distribution of the percent of LTC residents who had a newly occurring stage 2 to 4 pressure ulcer in fiscal year 2011/12

Min	5th Percentile	10th Percentile	25th Percentile	Median	75th Percentile	90th Percentile	95th Percentile	Max
0.0	0.6	1.0	1.7	2.6	3.8	4.9	5.8	9.7

Statement of results

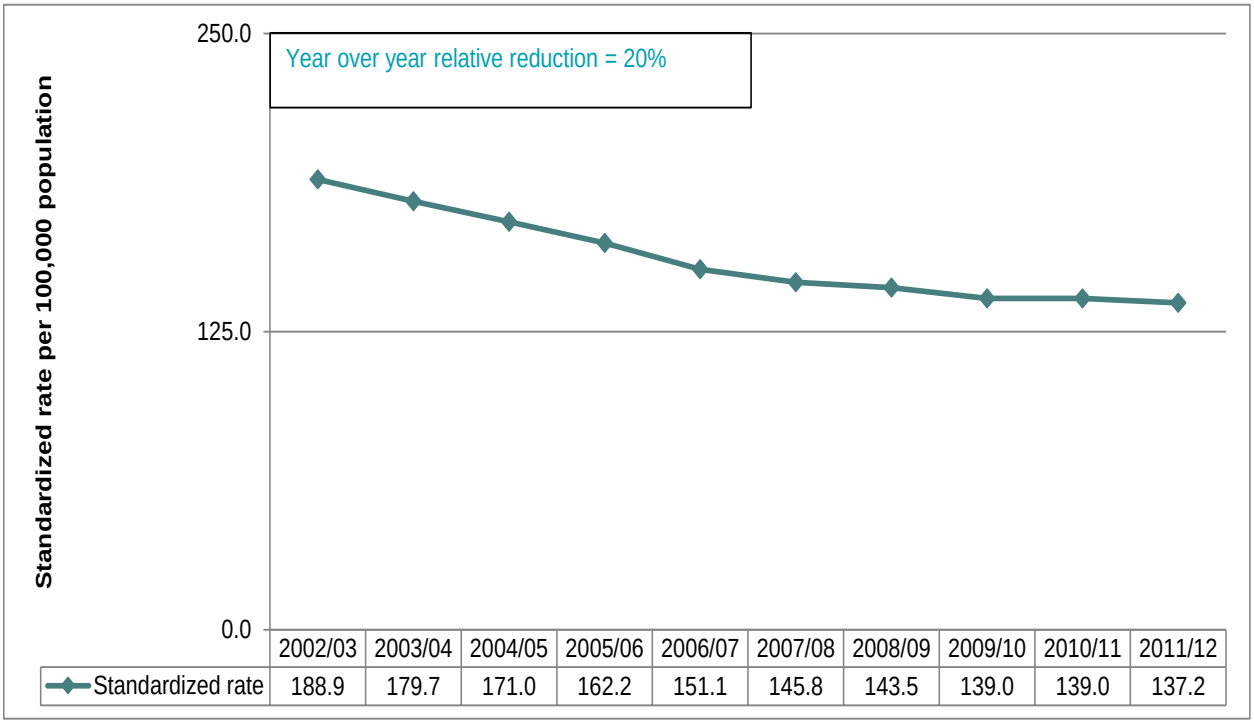
- Between 2009/10 (2.7%) and 2011/12 (2.6%), there was a 5% relative decrease in the percent of residents who were newly diagnosed with stage 2 to 4 pressure ulcers.
- Although there was a small improvement provincially, there were still homes with a high percent of residents who developed stage 2 to 4 pressure ulcers. The 10% of Ontario LTC homes with the worst indicator results had percentages that more than doubled the provincial median (5.8% vs 2.6%).

Admission rate for conditions that are sensitive to outpatient (ambulatory) care delivery: CHF	
Indicator description	This indicator measures the hospitalization rate for CHF in Ontario
Relevance/ Rationale	ACSCs are conditions where appropriate ambulatory care may prevent or reduce the need for hospitalization. It is an important indicator because monitoring potentially avoidable admissions for ACSCs can help tracking the performance of the primary care system.
Reporting tool/product	Quality Monitor
Attribute	Efficient / Integrated
Type	Outcome and core indicator
External Alignment	HQO Primary Care Performance Measurement (PCPM); M-SAA indicator; May also align with Health Links; Ministry Quarterly Report: Ontario Action Plan for Health Care
Accountability	**Hospital, Primary care, Long-term care, Home care**
Calculation	***Numerator*** Number of inpatient records from acute care hospitals during each fiscal year from 2002/03-2011/12 with a CHF as the most responsible diagnosis. Exclude: 1. Death before discharge 2. Patients sign themselves out 3. Transfers from another acute care facility
	Denominator Ontario LHIN population files: • 2002-2010 population counts • 2011projected population counts
Data source / data elements	• DAD • Stats Can LHIN Population Files
Timing and frequency of data release	• Data updated by ICES at each fiscal year
Levels of comparability	• Across time at provincial level (FY2002/03+) ; • By LHIN for the most recent FY, i.e. FY2011/12; The following stratifications for the most recent FY, i.e. FY2011/12: • By age group (<20, 20-44,45-64,65-79,80+); • By sex; • By income quintile; • By rural/urban status.
Targets and/or Benchmarks	Twenty percent relative year over year reduction
Target Source	Expert consultation
Limitations	n/a
Adjustment (risk, age/sex standardization)	Age-sex standardized rate.

Guidelines, SOPs, Evidence for best practice	n/a
Comment	n/a

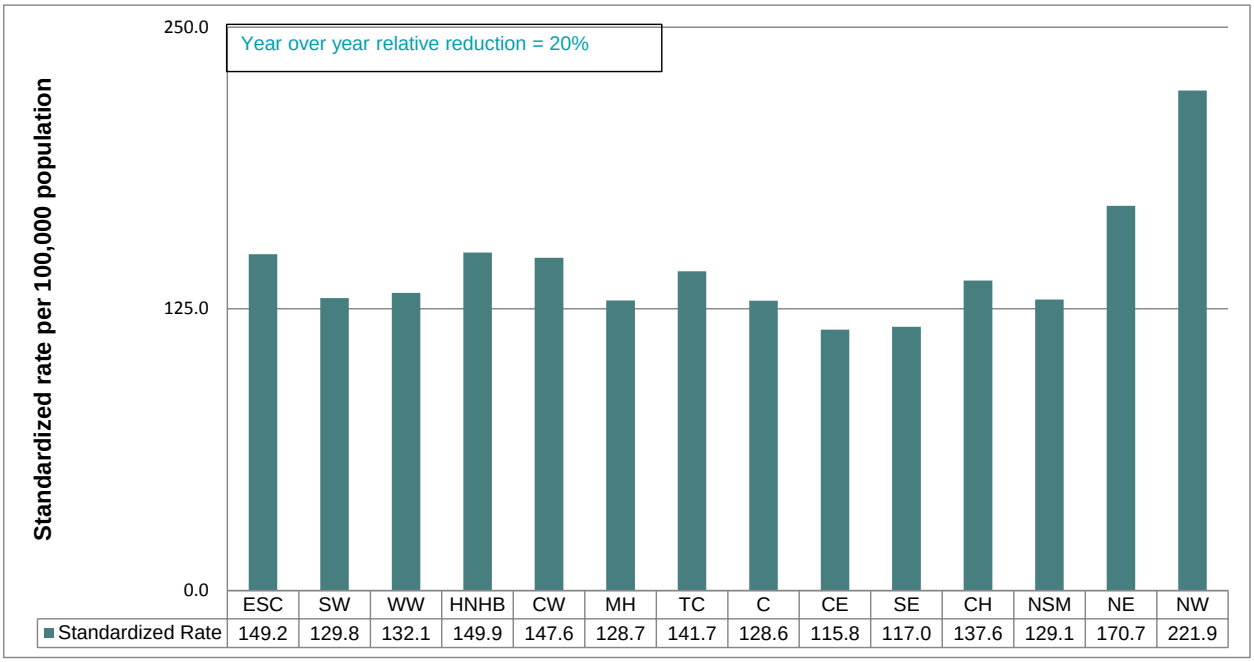
Current performance

Figure1. Age and Sex Standardized Hospitalization Rate for CHF, Ontario, FY2002/03-2011/12



	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Standardized rate	188.9	179.7	171.0	162.2	151.1	145.8	143.5	139.0	139.0	137.2

Figure2. Age and Sex Standardized Hospitalization Rate for CHF, Ontario, by LHIN, FY2011/12



Note: The standardized rates in Figure 1 and 2 are adjusted by age and sex.

Table1. Standardized hospitalization rate for CHF, by age, by sex, by rural/urban status and by income quintiles, FY2011/12.

Variable	Stratification	Standardized Rate (per 100,000 population)	95%LCL	95%UCL
Age	<20	1.6	1.2	2.1
	20-44	5.9	5.2	6.7
	45-64	64.7	62.2	67.3
	65-79	469.6	458.0	481.3
	80+	1774.2	1737.2	1811.8
Sex	Female	116.5	114.1	118.9
	Male	162.6	159.2	165.9
Income quintile	Q1 (Lowest)	170.7	165.6	175.8
	Q2	146.2	141.7	150.8
	Q3	136.7	132.3	141.3
	Q4	127.0	122.7	131.3
	Q5 (Highest)	107.6	103.7	111.5
Rural/ Urban	Urban	137.9	135.8	140.1
	Rural	132.0	126.7	137.5

Statement of results

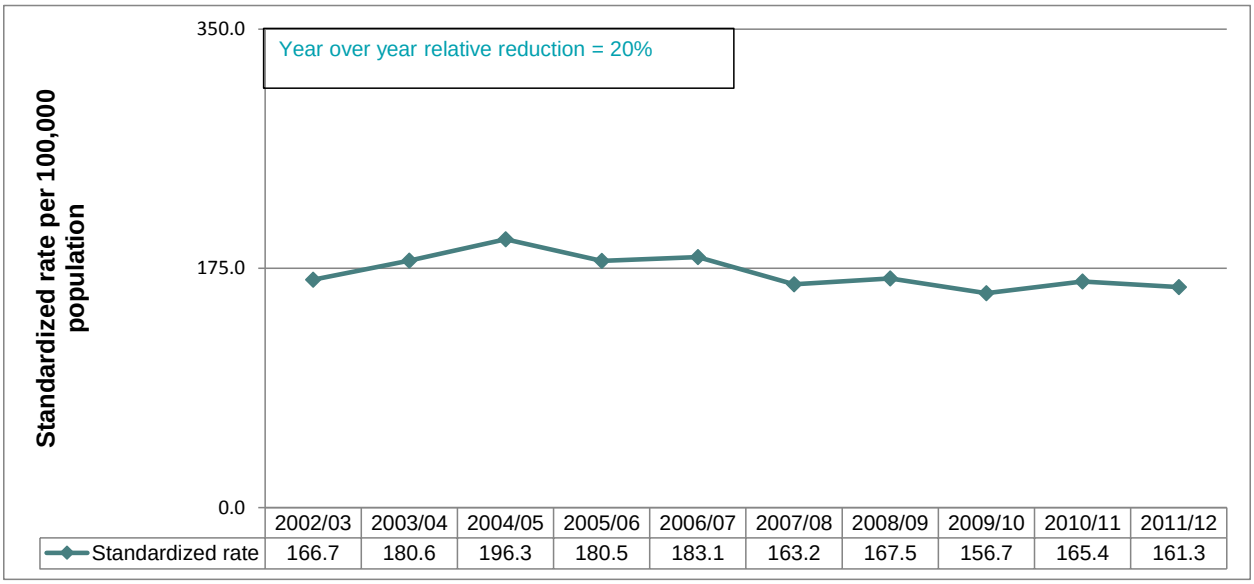
- Over the past ten years, the CHF hospitalization rates have decreased by 27.4%, from 188.9 per 100,000 population in 2002/03 to 137.2 per 100,000 population in 2011/12.
- CHF hospitalization rates varied across the LHINs, ranging from 115.8 per 100,000 population in the Central East LHIN to 221.9 per 100,000 population in the North West LHIN in 2011/12.
- The rates of hospitalizations varied significantly by sex, age group and neighbourhood income quintile but not by rural/urban status. Men and older adults had higher CHF hospitalization rates than their counterparts. CHF hospitalization rates decreased consistently with increasing neighbourhood income quintile.

Admission rate for conditions that are sensitive to outpatient (ambulatory) care delivery: COPD	
Indicator description	This indicator measures the hospitalization rate for COPD in Ontario
Relevance/ Rationale	ACSCs are conditions where appropriate ambulatory care may prevent or reduce the need for hospitalization. It is an important indicator because monitoring potentially avoidable admissions for ACSCs can help tracking the performance of primary care system.
Reporting tool/product	Quality Monitor
Attribute	Efficient / Integrated
Type	Outcome and core indicator
External Alignment	HQO Primary Care Performance Measurement (PCPM); M-SAA indicator; May also align with Health Links; Ministry Quarterly Report: Ontario Action Plan for Health Care
Accountability	**Hospital, Primary care, Long-term care, Home care**
Calculation	***Numerator*** Number of inpatient records from acute care hospitals during each fiscal year from 2002/03-2011/12 with COPD as the most responsible diagnosis. Exclude: 4. Death before discharge 5. Patients sign themselves out 6. Transfers from another acute care facility
	Denominator Ontario LHIN population files: • 2002-2010 population counts • 2011 projected population counts
Data source / data elements	• DAD • Stats Can LHIN Population Files
Timing and frequency of data release	• Data updated by ICES at each fiscal year
Levels of comparability	• Across time at provincial level (FY2002/03+) ; • By LHIN for the most recent FY, i.e. FY2011/12; The following stratifications for the most recent FY, i.e. FY2011/12: • By age group (<20, 20-44,45-64,65-79,80+); • By sex; • By income quintile; • By rural/urban status.
Targets and/or Benchmarks	Twenty percent relative year over year reduction
Target Source	Expert consultation
Limitations	n/a
Adjustment (risk, age/sex standardization)	Age-sex standardized rate.

Guidelines, SOPs, Evidence for best practice	n/a
Comments	n/a

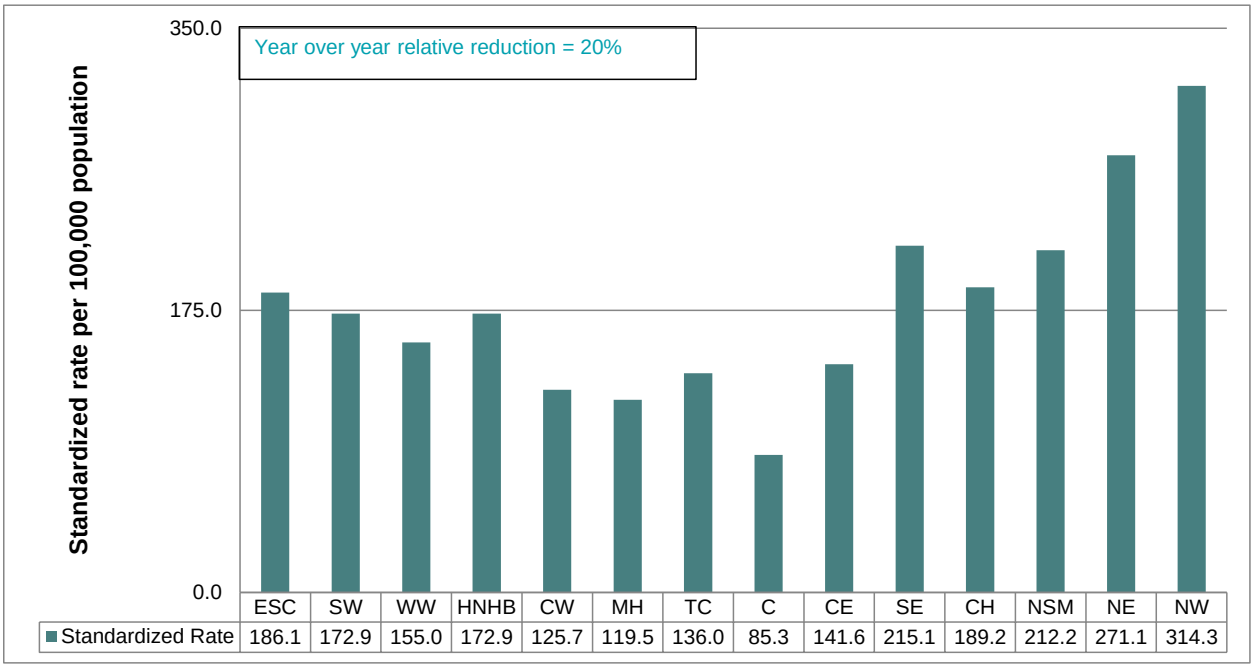
Current performance

Figure1. Age and Sex Standardized Hospitalization Rate for COPD, Ontario, FY2002/03-2011/12



	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Standardized rate	166.7	180.6	196.3	180.5	183.1	163.2	167.5	156.7	165.4	161.3

Figure2. Age and Sex Standardized Hospitalization Rate for COPD, Ontario, by LHIN, FY2011/12



Note: The standardized rates in Figure 1 and 2 are adjusted by age and sex.

Table1. Standardized Hospitalization Rate for COPD, by age, by sex, by rural/urban status and by income quintiles, FY2011/12

Variable	Stratification	Standardized Rate(per 100,000 population)	95%LCL	95%UCL
Age	<20	1.0	0.7	1.4
	20-44	4.8	4.2	5.5
	45-64	123.7	120.1	127.3
	65-79	691.6	677.6	705.7
	80+	1459.1	1424.9	1493.9
Sex	Female	145.8	143.0	148.6
	Male	185.3	181.8	188.9
Income quintile	Q1 (Lowest)	249.8	243.6	256.1
	Q2	173.9	169.0	179.0
	Q3	151.4	146.7	156.2
	Q4	136.3	131.9	140.8
	Q5 (Highest)	103.8	100.0	107.6
Rural/Urban	Urban	153.9	151.6	156.2
	Rural	208.4	201.8	215.2

Statement of results

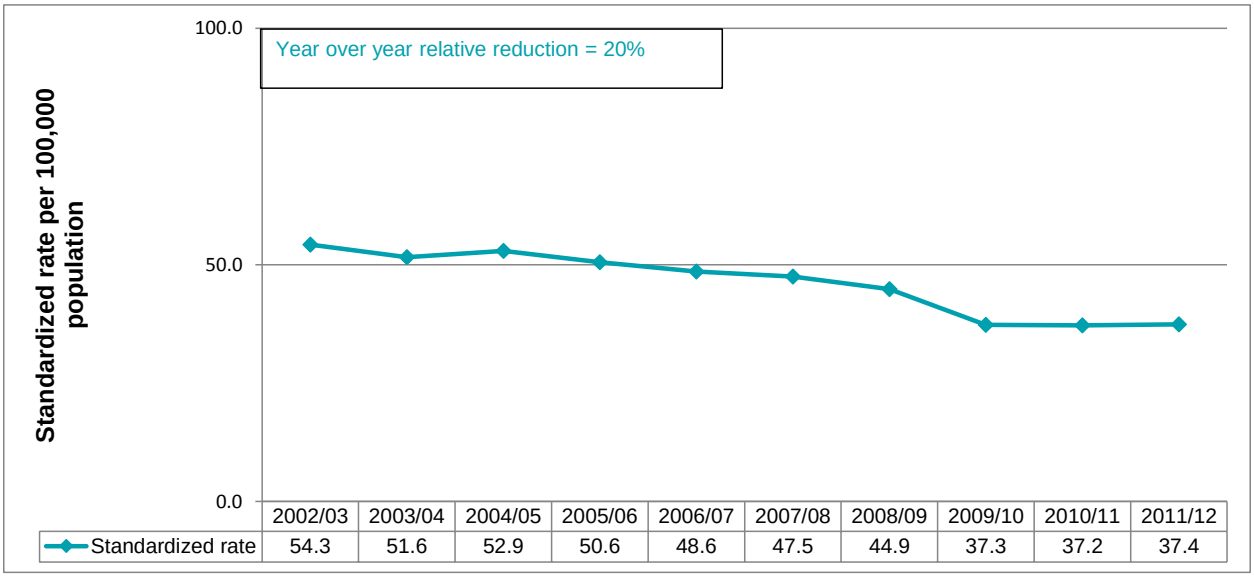
- Over the past ten years, the COPD hospitalization rate has decreased from 166.7 per 100,000 population in 2002/03 to 161.3 per 100,000 population in 2011/12.
- COPD hospitalization rates varied across the LHINs, ranging from 85.3 per 100,000 population in the Central LHIN to 314.3 per 100,000 population in the North West LHIN.
- The rate of COPD hospitalizations increased with age and was higher among men than among women. Rates also varied by neighbourhood income quintile and rural/urban status. The COPD hospitalization rates decreased with increasing neighbourhood income quintile and populations from rural areas had higher COPD hospitalization rates than their counterparts. Those living in the lowest income neighbourhoods an almost 2.5 times higher hospitalization rate than those living in the highest income neighbourhoods (249.8 vs 103.8 per 100,000 population).

Admission rate for conditions that are sensitive to outpatient (ambulatory) care delivery: Diabetes	
Indicator description	This indicator measures the hospitalization rate for diabetes in Ontario
Relevance/ Rationale	ACSCs are conditions where appropriate ambulatory care may prevent or reduce the need for hospitalization. It is an important indicator because monitoring potentially avoidable admissions for ACSCs can help tracking the performance of primary care system.
Reporting tool/product	Quality Monitor
Attribute	Efficient / Integrated
Type	Outcome and core indicator
External Alignment	HQO Primary Care Performance Measurement (PCPM); M-SAA indicator; May also align with Health Links; Ministry Quarterly Report: Ontario Action Plan for Health Care
Accountability	**Hospital, Primary care, Long-term care, Home care**
Calculation	***Numerator*** Number of inpatient records from acute care hospitals during each fiscal year from 2002/03-2011/12 with diabetes as the most responsible diagnosis. Exclude: 7. Death before discharge 8. Patients sign themselves out 9. Transfers from another acute care facility
	Denominator Ontario LHIN population files: • 2002-2010 population counts • 2011 projected population counts
Data source / data elements	• DAD • Stats Can LHIN Population Files
Timing and frequency of data release	• Data updated by ICES at each fiscal year
Levels of comparability	• Across time at provincial level (FY2002/03+) ; • By LHIN for the most recent FY, i.e. FY2011/12; The following stratifications for the most recent FY, i.e. FY2011/12: • By age group (<20, 20-44,45-64,65-79,80+); • By sex; • By income quintile; • By rural/urban status.
Targets and/or Benchmarks	Twenty percent relative year over year reduction
Target Source	Expert consultation
Limitations	n/a
Adjustment (risk, age/sex standardization)	Age-sex standardized rate.

Guidelines, SOPs, Evidence for best practice	n/a
Comments	n/a

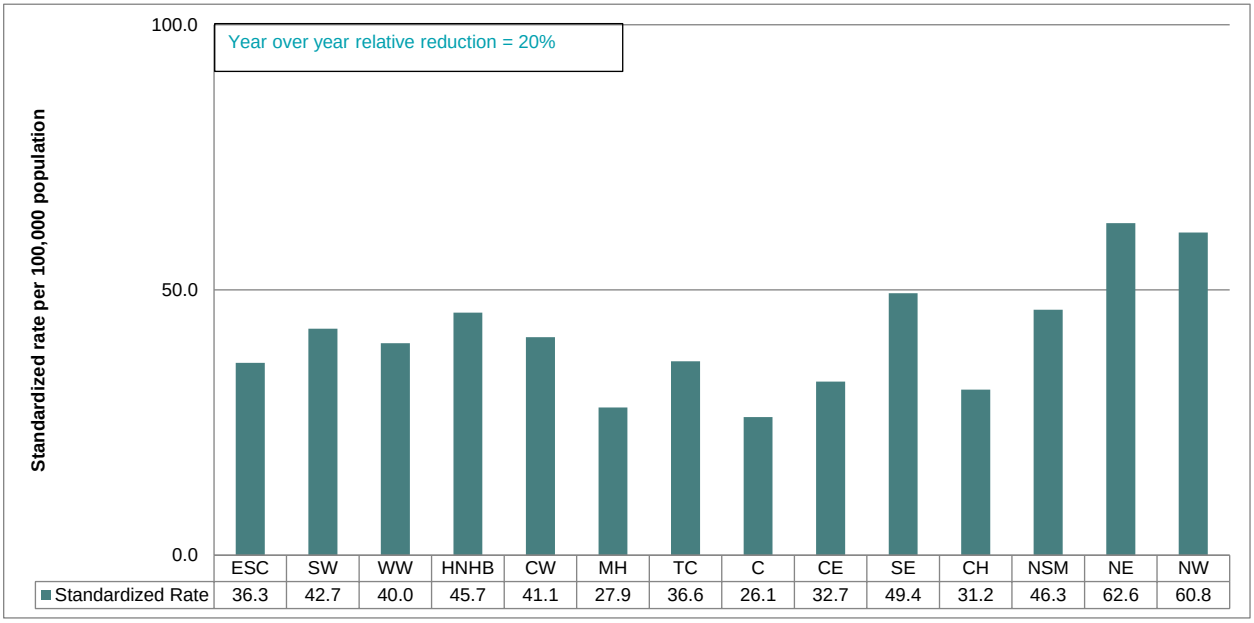
Current performance

Figure1. Age and Sex Standardized Hospitalization Rate for Diabetes, Ontario, FY2002/03-2011/12



	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Standardized rate	54.3	51.6	52.9	50.6	48.6	47.5	44.9	37.3	37.2	37.4

Figure2. Age and Sex Standardized Hospitalization Rate for Diabetes, Ontario, by LHIN, FY2011/12



	ESC	SW	WW	HNHB	CW	MH	TC	C	CE	SE	CH	NSM	NE	NW
Standardized Rate	36.3	42.7	40.0	45.7	41.1	27.9	36.6	26.1	32.7	49.4	31.2	46.3	62.6	60.8

Note: The standardized rates in Figure 1 and 2 are adjusted by age and sex

Table1. Standardized Hospitalization Rate for Diabetes, by age, by sex, by rural/urban status and by income quintiles, FY2011/12

Variable	Stratification	Standardized Rate (per 100,000 population)	95%LCL	95%UCL
Age	<20	31.3	29.4	33.4
	20-44	33.1	31.5	34.8
	45-64	31.8	30.0	33.6
	65-79	54.0	50.1	58.1
	80+	112.2	103.0	122.0
Sex	Female	34.7	33.4	36.2
	Male	40.5	39.0	42.1
Income quintile	Q1 (Lowest)	54.4	51.6	57.3
	Q2	41.5	39.1	44.1
	Q3	34.8	32.6	37.2
	Q4	30.8	28.7	32.9
	Q5 (Highest)	25.9	24.0	27.9
Rural/Urban	Urban	36.7	35.6	37.8
	Rural	43.4	40.1	46.9

Statement of results

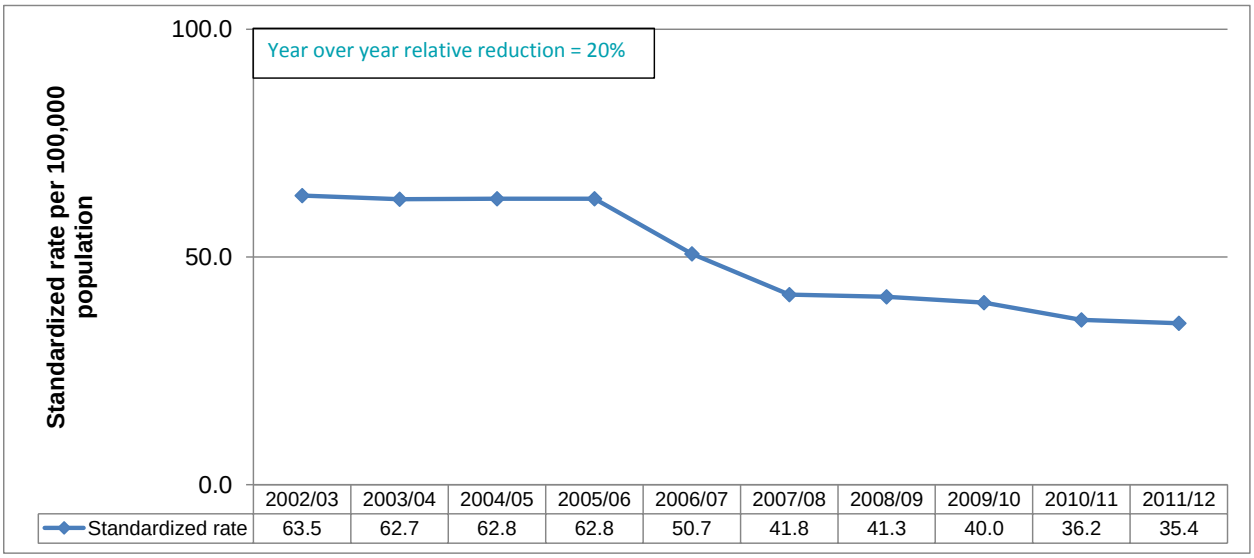
- Over the past ten years, the diabetes hospitalization rate has decreased by 31%, from 54.3 per 100,000 population in 2002/03 to 37.4 per 100,000 population in 2011/12.
- Diabetes hospitalization rates varied across the LHINs, ranging from 26.1 per 100,000 population in the Central LHIN to 62.6 per 100,000 population in the North East LHIN in 2011/12.
- The rate of hospitalizations for diabetes varied by patient age group, sex, neighbourhood income quintile and urban/rural status. Men, older adults, those from rural areas of the province and those living in lower-income neighbourhoods had higher rates of hospitalizations for diabetes than their counterparts. Diabetes hospitalization rates decreased as neighbourhood income quintile increased; those living in the lowest income neighbourhoods had more than twice the hospitalization rate as those living in the highest income neighbourhoods (54.4 vs 25.9 per 100,000 population).

Admission rate for conditions that are sensitive to outpatient (ambulatory) care delivery: Asthma	
Indicator description	This indicator measures the hospitalization rate for asthma in Ontario
Relevance/ Rationale	ACSCs are conditions where appropriate ambulatory care may prevent or reduce the need for hospitalization. It is an important indicator because monitoring potentially avoidable admissions for ACSCs can help tracking the performance of primary care system.
Reporting tool/product	Quality Monitor
Attribute	Efficient / Integrated
Type	Outcome and core indicator
External Alignment	HQO Primary Care Performance Measurement (PCPM); M-SAA indicator; May also align with Health Links; Ministry Quarterly Report: Ontario Action Plan for Health Care
Accountability	**Hospital, Primary Care, Long-term care, Home care**
Calculation	***Numerator*** Number of inpatient records from acute care hospitals during each fiscal year from 2002/03-2011/12 with asthma as the most responsible diagnosis. Exclude: 10. Death before discharge 11. Patients sign themselves out 12. Transfers from another acute care facility
	Denominator Ontario LHIN population files: • 2002-2010 population counts • 2011 projected population counts
Data source / data elements	• DAD • Stats Can LHIN Population Files
Timing and frequency of data release	• Data updated by ICES at each fiscal year
Levels of comparability	• Across time at provincial level (FY2002/03+) ; • By LHIN for the most recent FY, i.e. FY2011/12; The following stratifications for the most recent FY, i.e. FY2011/12: • By age group (<20, 20-44,45-64,65-79,80+); • By sex; • By income quintile; • By rural/urban status.
Targets and/or Benchmarks	Twenty percent relative year over year reduction
Target Source	Expert consultation
Limitations	n/a
Adjustment (risk, age/sex standardization)	Age-sex standardized rate

Guidelines, SOPs, Evidence for best practice	n/a
Comments	n/a

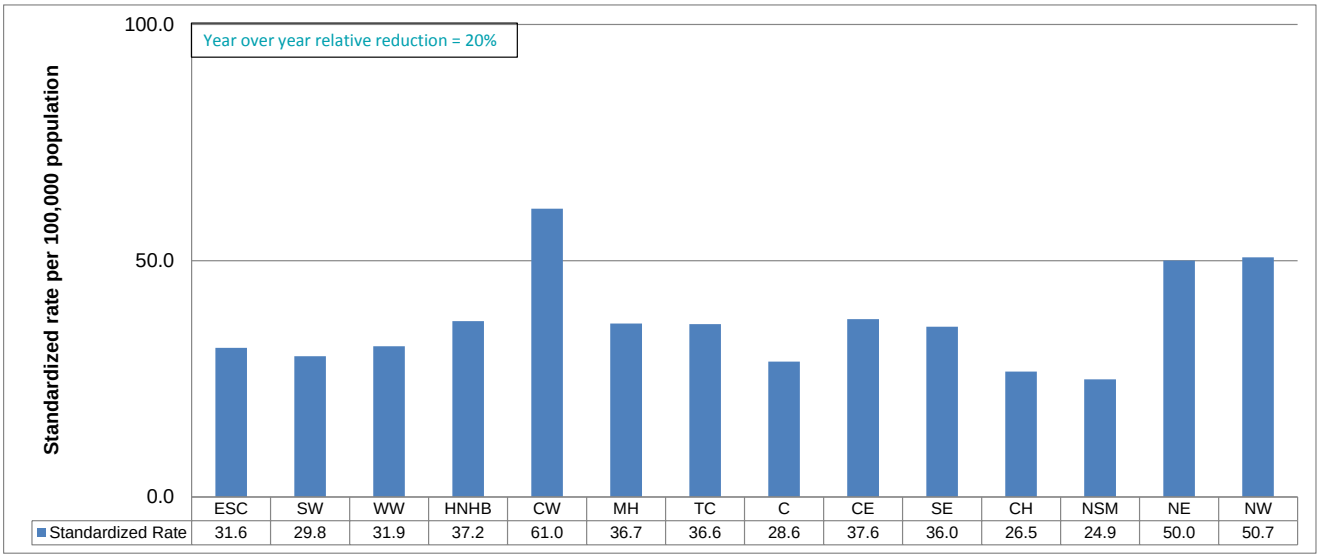
Current performance

Figure1. Age and Sex Standardized Hospitalization Rate for Asthma, Ontario, FY2002/03-2011/12



	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Standardized rate	63.5	62.7	62.8	62.8	50.7	41.8	41.3	40.0	36.2	35.4

Figure2. Age and Sex Standardized Hospitalization Rate for Asthma, Ontario, by LHIN, FY2011/12



	ESC	SW	WW	HNHB	CW	MH	TC	C	CE	SE	CH	NSM	NE	NW
Standardized Rate	31.6	29.8	31.9	37.2	61.0	36.7	36.6	28.6	37.6	36.0	26.5	24.9	50.0	50.7

Note: The standardized rates in Figure 1 and 2 are adjusted by age and sex.

Table1. Standardized Hospitalization Rate for Asthma, by age, by sex, by rural/urban status and by income quintiles, FY2011/12

Variable	Stratification	Standardized Rate (per 100,000 population)	95%LCL	95%UCL
Age	<20	89.2	85.9	92.6
	20-44	15.0	13.9	16.1
	45-64	18.7	17.4	20.1
	65-79	25.1	22.5	27.9
	80+	37.6	32.7	42.9
Sex	Female	35.4	34.0	36.9
	Male	34.6	33.3	36.1
Income quintile	Q1 (Lowest)	46.6	44.1	49.3
	Q2	40.1	37.7	42.6
	Q3	35.2	33.0	37.5
	Q4	30.1	28.1	32.2
	Q5 (Highest)	24.9	23.0	26.9
Rural/ Urban	Urban	36.1	35.0	37.2
	Rural	31.3	28.4	34.3

Statement of results

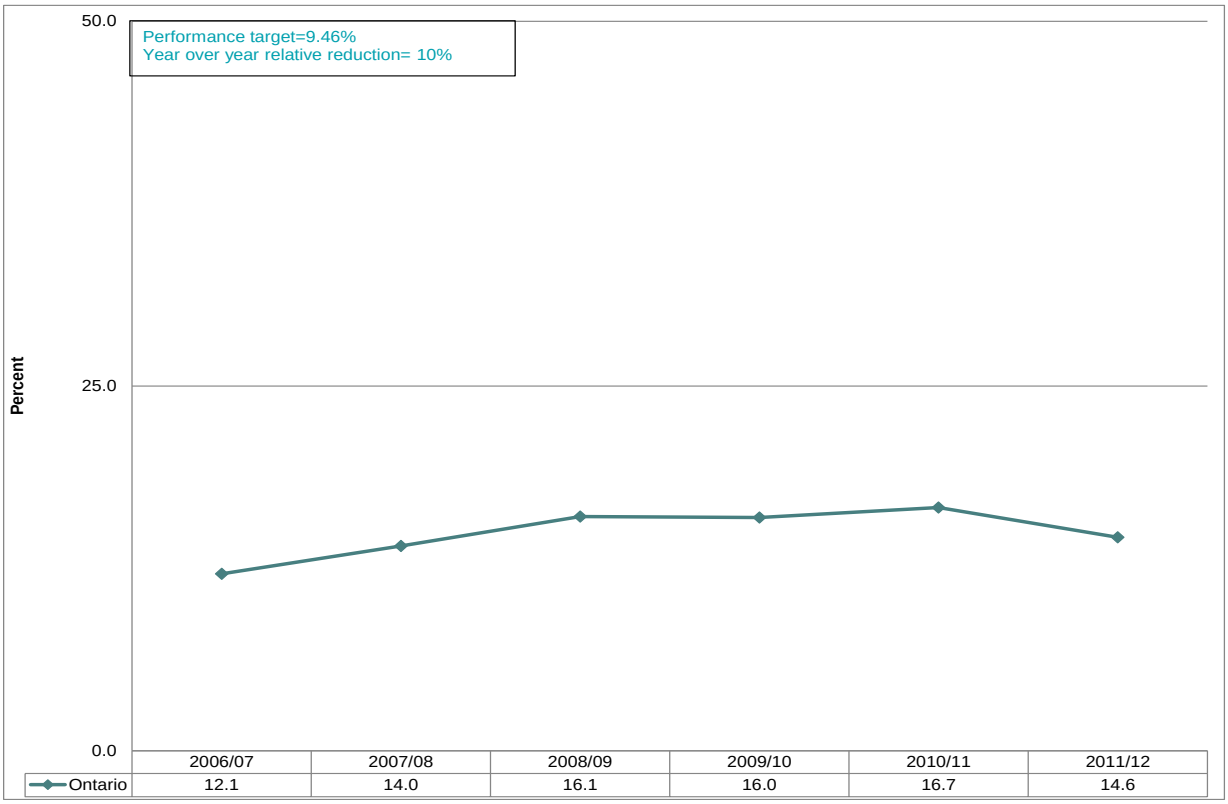
- Over the past ten years, the asthma hospitalization rates have decreased by 45%, down from 63.5 per 100,000 population in 2002/03 to 35.4 per 100,000 population in 2011/12.
- Asthma hospitalization rates varied across the LHINs, ranging from 24.9 per 100,000 population in the North Simcoe Muskoka LHIN to 61.0 per 100,000 population in the Central West LHIN in 2011/12.
- The rate of hospitalizations for asthma varied by patient age, neighbourhood income quintile and rural/urban status, but not by sex. The youngest (i.e. <20 years old group) were more likely to be admitted to hospitals due to asthma than older patients and asthma admission rates were higher in rural areas than in urban areas. Asthma hospitalization rates also decreased consistently with increasing neighbourhood income quintile.

Percent of alternate level of care (ALC) days (as a proportion of total inpatient days) in acute care hospitals	
Indicator description	This indicator measures the number of bed days that are designated as being ALC in acute hospitals in Ontario.
Relevance/Rationale	The indicator measures the unnecessary use of high cost hospital services. There is a clear and pressing need to improve efficiencies and implement sustainable solutions that maximize our ability to provide the right service, in the right place, at the right time. ALC refers to those cases where a physician (or designated other) has indicated that a patient occupying an acute care hospital bed has finished the acute care phase of his/her treatment. Better quality of care is associated with a lower score of the indicator.
Reporting tool/product	QMonitor
Attribute	Efficient
Type	Process and core indicator
External Alignment	Ontario's Action Plan for Health Care; Sinha Report; QIP- Acute care sector; HSAA indicator; May also align with Health Links; Ministry Quarterly Report; Walker Report
Accountability	**Hospital, Primary care, Long-term care, Home care**
Calculation	***Numerator*** Total number of inpatient days designated as ALC in a given time period (i.e. monthly, quarterly, and yearly)
	Denominator Total number of inpatient days in a given time period Inclusion: Data are retrieved for acute care hospitals (hospital type = AP, AT) Exclusion: Newborns, stillborns, and records with missing or invalid “Discharge Date” are not included in this indicator.
Data source / data elements	• Discharge Abstract Database (DAD), MOHLTC • FY2011-12 (final data sets), extracted October 2012 • Monthly, fiscal quarterly, fiscal yearly
Timing and frequency of data release	Yearly data reported in QMonitor.
Levels of comparability	By hospital site, by LHIN, over time trending
Targets and/or Benchmarks	Performance target: 9.46% (Note: the indicator reported here is different from what is used for the target – We report % of inpatient days that are designated as ALC days; target set for % of patients who are ALC) 10% relative year over year reduction
Target Source	Provincially established + expert consultation
Limitations	• Only includes acute care hospital beds • Not reported in a timely manner • Only includes closed cases (those patients designated ALC who have been discharged)- and so may miss cases that carry over to the next fiscal year.

	• This indicator is based on discharge. Successes resulting in a higher rate of discharges in ALC clients will result in an initial spike in the results. Discharges of long-stay ALC clients will attribute all days to the time period of discharge, also potentially skewing the results. Point-in-time results must be analyzed with caution, and trending of this indicator is preferred.
Adjustment (risk, age/sex standardization):	Crude rate
Guidelines, SOPs, Evidence for best practice	n/a
Comments	All numbers used for calculations are as reported by the hospitals. The information is from each acute site of the hospital and the assignment to a LHIN is based on the postal code of the hospital site. All data are suppressed where ALC separations are <5.

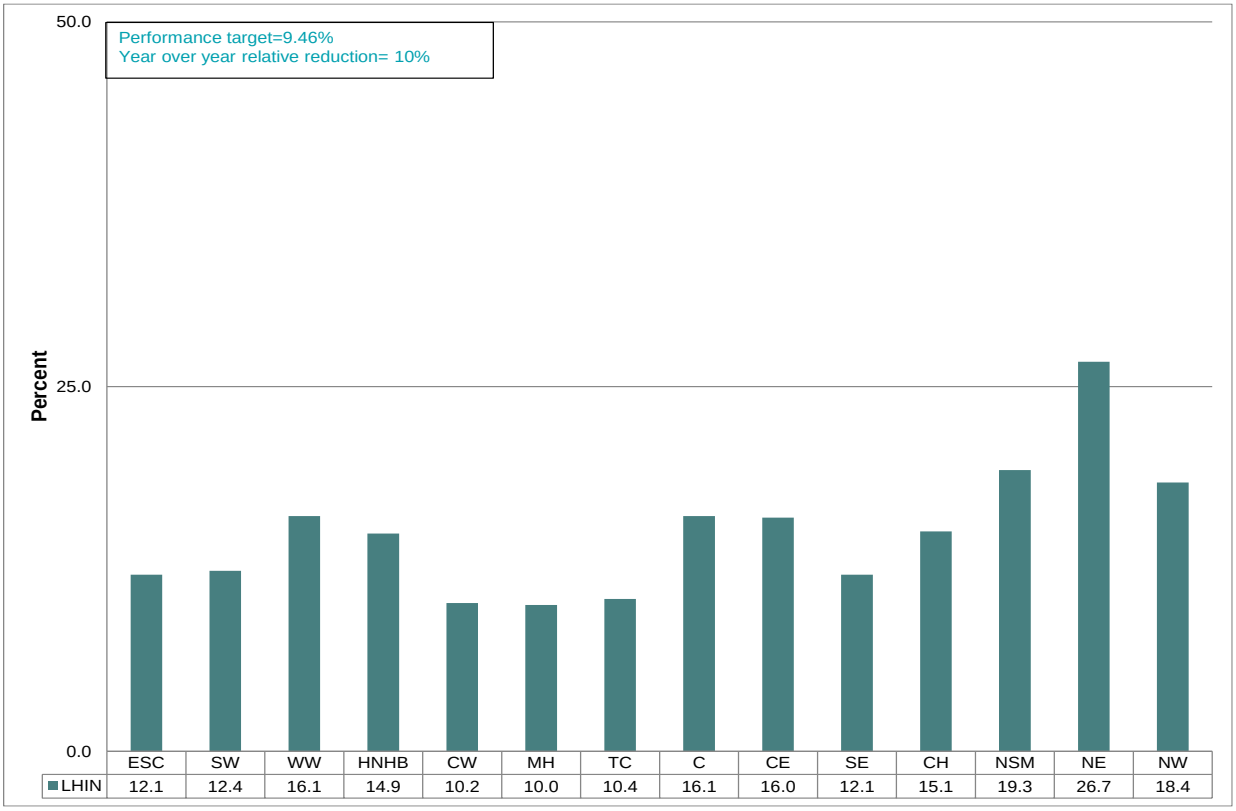
Current Performance

Figure1. Percent of inpatient days designated as alternate level of care (ALC) days in acute care hospitals, FY2006/07-2011/12



Note: *the indicator reported here is different from what is used for the target – We report % of inpatient days that are designated as ALC days; target set for % of patients who are ALC.

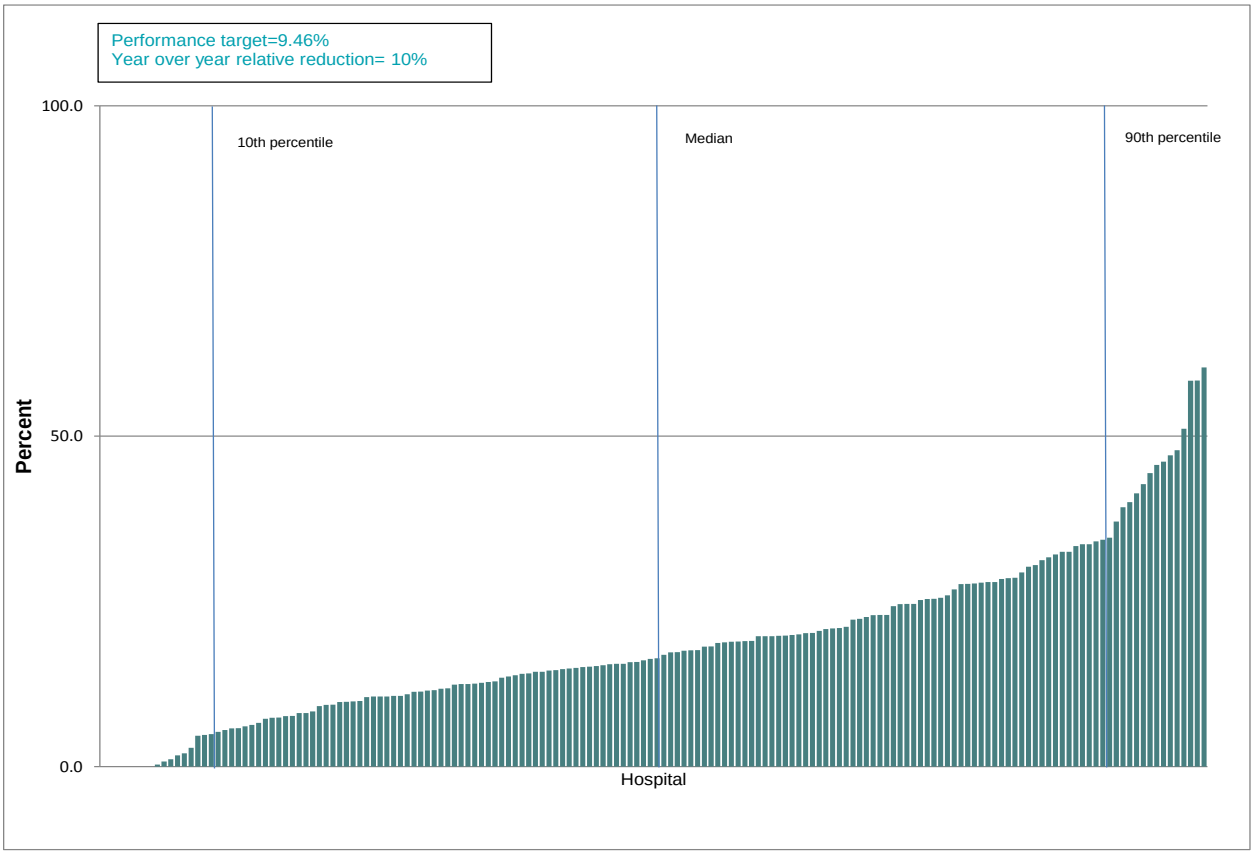
Figure2. Percent of inpatient days designated as alternate level of care (ALC) days in acute care hospital, by LHIN, FY2011/12



	ESC	SW	WW	HNHB	CW	MH	TC	C	CE	SE	CH	NSM	NE	NW
LHIN	12.1	12.4	16.1	14.9	10.2	10.0	10.4	16.1	16.0	12.1	15.1	19.3	26.7	18.4

Note: *the indicator reported here is different from what is used for the target – We report % of inpatient days that are designated as ALC days; target set for % of patients who are ALC

Figure3. Percent of inpatient days designated as ALC days in acute care hospitals, by hospital, FY2011/12



Note: *the indicator reported here is different from what is used for the target – We report % of inpatient days that are designated as ALC days; target set for % of patients who are ALC

Table1. Hospital-level distribution of percent of ALC days in acute care hospitals, FY2011/12

Min	5th Percentile	10th Percentile	25th Percentile	Median	75th Percentile	90th Percentile	95th Percentile	Max
0.0	0.38	5.0	10.6	16.4	25.4	34.0	44.2	60.4

Statement of results

- After several years of increases in the percentage of ALC days, the provinical score has now decreased from 16.7% in 2010/11 to 14.6% in 2011/12, however even in this most recent year, approximately one in seven acute care hospital bed days was categorized as ALC (see figure 1).
- There is wide LHIN-level variation in the percentage of ALC days, from 10.0 % to 26.7% in 2011/12 (see Figure 2).
- Across 164 acute care hospitals in Ontario, ALC rates ranged from 0% to 60.4% in 2011/12; 60% of hospitals had rates that were higher than the provinical mean rate (see Figure 3).

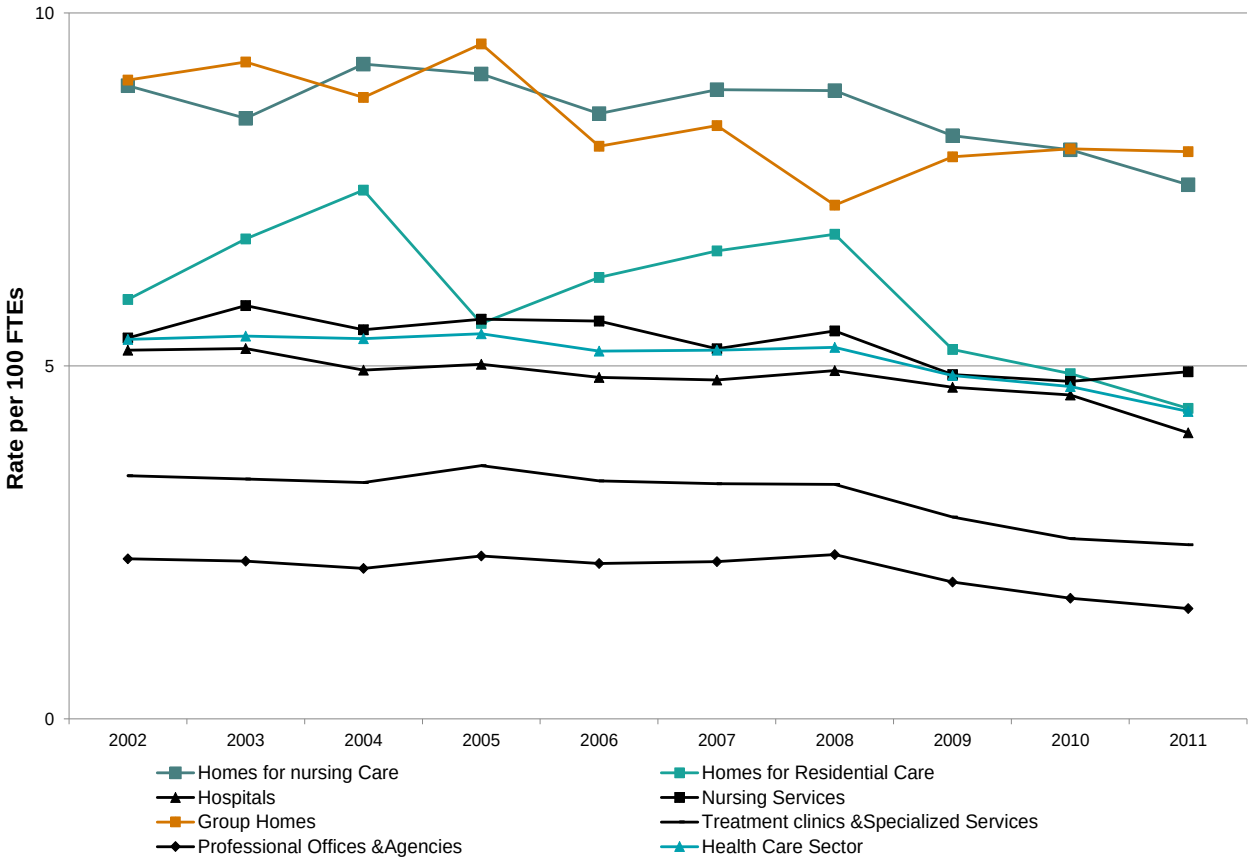
Injury rate in health care providers	
Indicator description	Lost-time and non-lost time injury rates per 100 full-time equivalent workers in: • Health Care Sectors (combined) • LTC homes • Hospitals • Nursing services • Treatment clinics • Professional offices and labs
Relevance/ Rationale	There are 775,800 registered workers in Ontario's health care sector that work at more than 6,000 hospitals, long-term care homes, retirement homes, community care and other workplaces across Ontario. The health care sector faces some challenges which may have significant impact on worker health and on lost-time injury (LTI) rates. These include increased care requirements resulting from the aging of Ontario's population, increased patient and resident needs, increased obesity rates and increased demand on health and community care services. In addition, employers face recruitment and retention challenges, an aging workforce, a shortage of skilled professional staff, and an increase in casual and part-time workforce.[2] Implementing healthy work environments and building a culture of safety for health care workers are key to ensuring quality patient care. Enhancing morale and reducing absenteeism can reduce adverse events, improve patient safety and support improved patient outcomes.[3]
Reporting tool/product	Quality Monitor
Attribute	Appropriately resourced
Type	Context
External Alignment	Quality Monitor
Accountability	**Hospital, Primary care, Long-term care, Home care**
Calculation	***Numerator*** Total number of LTIs and NLTIs that occurred in the injury year in each health care setting. *Notes: Lost-Time Injuries (LTIs) - allowed injury/illness claims by workers who have lost wages as a result of temporary or permanent impairment. Excludes fatalities.* *No lost-time injuries (NLTIs) - allowed injury/illness claims by workers who have not lost wages, but who have incurred health care expenses*
	Denominator Total Full Time Equivalent (FTE) Workers

[2] Ontario Ministry of labour. Health care Sector Plan 2013-14. Accessed August2, 2013 at http://www.labour.gov.on.ca/english/hs/sawo/sectorplans/2013/health/index.php
[3] HealthForceOntario. Healthy Work Environment. Accessed on August 2, 2013 at http://www.healthforceontario.ca/en/Home/Employers/Healthy_Work_Environments

	Note: FTE Workers is an estimate based on the average hourly wage for the rate group and the insurable earnings for the calendar year, assuming a person works an average of 2,000 hours per year.
Data source / data elements	WSIB Enterprise Information Warehouse as of March 31st, of the following year for each injury year.
Timing and frequency of data release	Provided by WSIB annually
Levels of comparability	Across time and health care settings such as: • Long-term care homes, • Residential care homes, • Hospitals, • Nursing services, • Supported group living residences and other facilities, • Treatment clinics and specialized services, • Professional offices and agencies For the detailed descriptions of these settings visit http://www.labour.gov.on.ca/english/hs/sawo/sectorplans/2013/health/healthcare_1.php
Targets and/or Benchmarks	NA
Target Source	NA
Limitations	
Adjustment (risk, age/sex standardization)	None
Guidelines, SOPs, Evidence for best practice	
Comments	

Current performance

Figure 1. Lost-time and Non-lost-time injury rates by different health care sectors, 2002-2011



Source: WSIB

Table1. Rate per 100 FTE Injury Years

RATE GROUP & DESCRIPTION	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Homes for nursing Care	9.0	8.5	9.3	9.1	8.6	8.9	8.9	8.3	8.1	7.6
Homes for Residential Care	5.9	6.8	7.5	5.6	6.3	6.6	6.9	5.2	4.9	4.4
Hospitals	5.2	5.2	4.9	5.0	4.8	4.8	4.9	4.7	4.6	4.1
Nursing Services	5.4	5.9	5.5	5.7	5.6	5.2	5.5	4.9	4.8	4.9
Group Homes	9.0	9.3	8.8	9.6	8.1	8.4	7.3	8.0	8.1	8.0
Treatment clinics &Specialized Services	3.4	3.4	3.4	3.6	3.4	3.3	3.3	2.9	2.6	2.5
Professional Offices &Agencies	2.3	2.2	2.1	2.3	2.2	2.2	2.3	1.9	1.7	1.6
Health Care Sector	5.4	5.4	5.4	5.5	5.2	5.2	5.3	4.9	4.7	4.4

Statement of results

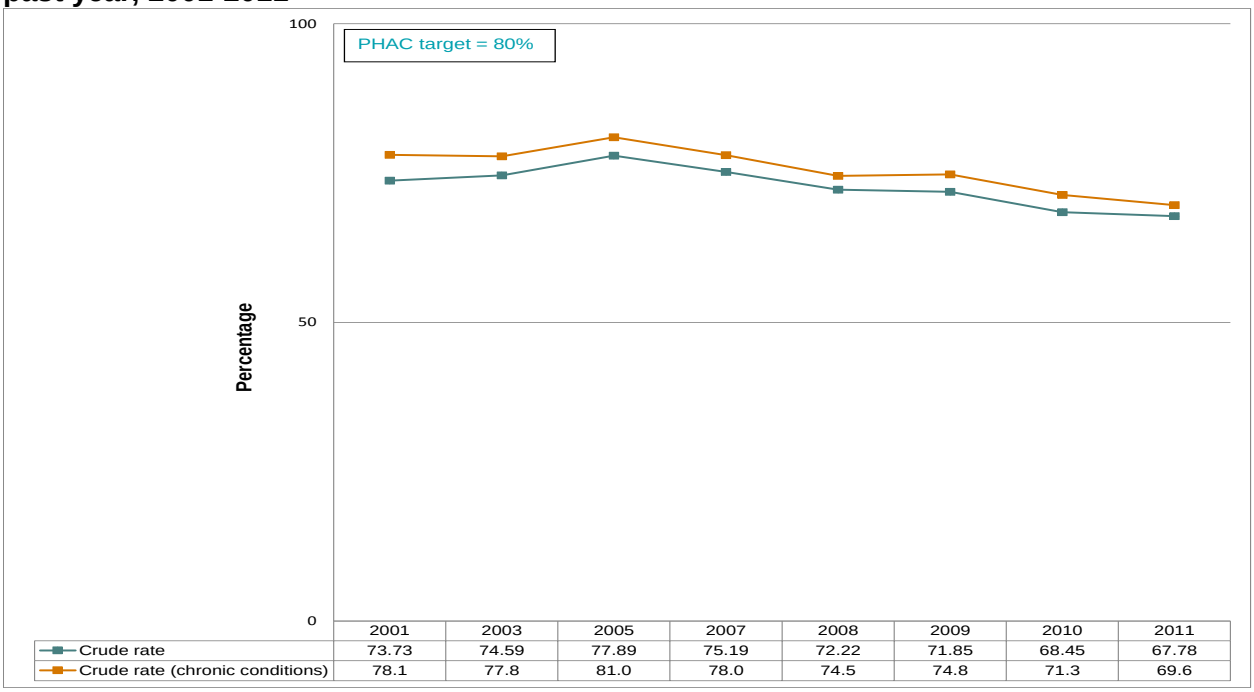
- The lost-time and non-lost-time injury rates in all health care sectors have dropped significantly from 2008 to 2011. From 2010 to 2011, there where around 940 less injuries reported in hospitals, the largest sector in health care, which constitutes to a 12% decrease in injury rates.

Influenza immunization coverage among adults 65 years of age and older	
Indicator description	Proportion of people 65 years of age and older who have had an influenza vaccine for the current influenza season. The APHEO Influenza Vaccination Core Indicator includes the following specific indicators related to seniors: • Influenza vaccination coverage for those 65 years and older with no chronic condition • Influenza vaccination coverage for those 65 years and older with a chronic condition **Direction of improvement:** increase **Frequency of reporting:** intermittently reported by Statistics Canada (see "reporting tool/product" section below).
Relevance/ Rationale	Adults and children with certain chronic diseases, persons 65 years of age and older, children 6 to 59 months of age, pregnant women and Aboriginal peoples are at high risk for influenza-related complications
Reporting tool/product	Statistics Canada reporting of influenza immunization: • Influenza immunization 2008 • The effect of universal influenza immunization on vaccination rates in Ontario, 2006
Attribute	Focused on population health
Type	Context and process indicator
External Alignment	Quality Monitor; Potential PCPM alignment; Quality Improvement Plans (Primary Care); M-SAA
Accountability	**Primary Care, Long-term Care and Home Care**
Calculation	***Numerator[1]*** • Weighted number of people aged 65 years and older with no chronic condition who had a flu shot in past year • Weighted number of people aged 65 years and older with a chronic condition who had a flu shot in past year
	Denominator[1] Weighted total number aged 65 years and older
Data source / data elements	**Canadian Community Health Survey (CCHS)** • Data elements used: ○ Have you ever had a flu shot? ○ When did you have your last flu shot? ○ Do you have asthma? ○ Do you have chronic bronchitis? ○ Do you have emphysema? ○ Do you have chronic obstructive pulmonary disease (COPD)? ○ Do you have diabetes? ○ Do you have heart disease? ○ Do you have cancer? ○ Do you suffer from the effects of a stroke? **Data collection method:** national, telephone-based, population-level health survey **Data availability:** Years available:

	○ CCHS Core Content (i.e., available for all health regions in Canada): 2000/2001; 2003; 2005; 2007/2008; 2009/2010;2011/2012; Geography: ○ public health unit **Alternative data source: Rapid Risk Factor Surveillance System (RRFSS)** • Approximately half of Ontario health units participate in RRFSS, a telephone-based, population-level health survey conducted in Ontario by the Institute for Social Research. No provincial sample is available. • RRFSS data have traditionally been used by health units to produce flu immunization results, as data are traditionally more timely than CCHS data.
Timing and frequency of data release	**CCHS** • "Flu shot" module is core content (i.e., collected by all health regions in Canada) • ongoing telephone survey • data released annually
Levels of comparability	Public health units are encouraged to use the APHEO Core Indicators for population health reporting.
Targets and/or Benchmarks	Public Health Agency of Canada: 80% for seniors ≥65 and adults <65 years of age with high risk conditions
Target Source	Public Health Agency of Canada
Limitations	• Self-reported survey data • Surveys only those seniors that are community-dwelling, limiting representativeness • Data is not from a population registry
Adjustment (risk, age/sex standardization):	Age and sex standardized for 2011 overall population only for the following stratifications (i.e. not chronic condition cohort): 1. LHIN 2. Age (12-17, 18-64, 65+) (sex-adjusted only) 3. Sex (age-adjusted only) 4. Income 5. Rural/urban 6. Immigrant status (3 definitions) 7. Education (restrict to 25+ years of age)
Guidelines, SOPs, Evidence for best practice	
Comments	

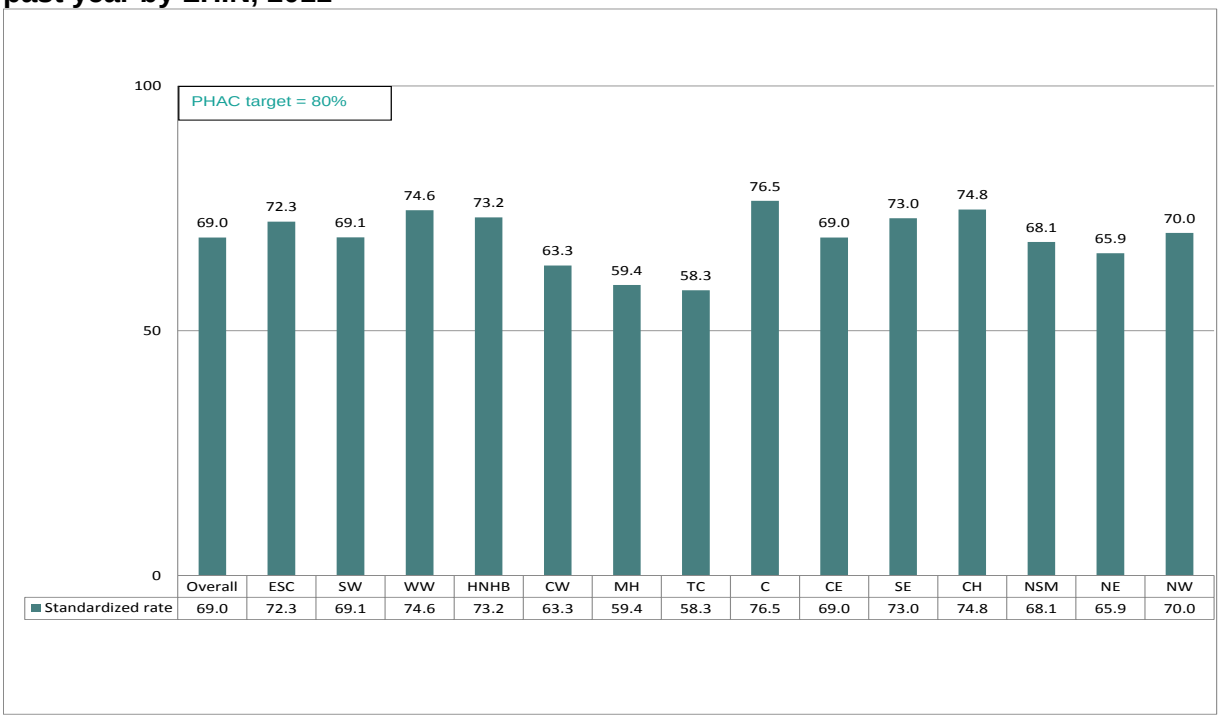
Current performance

Figure1. Percent of the population aged 65+ reporting having received a flu shot in the past year, 2001-2011



	2001	2003	2005	2007	2008	2009	2010	2011
Crude rate	73.73	74.59	77.89	75.19	72.22	71.85	68.45	67.78
Crude rate (chronic conditions)	78.1	77.8	81.0	78.0	74.5	74.8	71.3	69.6

Figure2. Percent of the population aged 65+ reporting having received a flu shot in the past year by LHIN, 2011



	Overall	ESC	SW	WW	HNHB	CW	MH	TC	C	CE	SE	CH	NSM	NE	NW
Standardized rate	69.0	72.3	69.1	74.6	73.2	63.3	59.4	58.3	76.5	69.0	73.0	74.8	68.1	65.9	70.0

Table1. Percent of the population aged 65+ reporting having received a flu shot in the past year by population characteristics, 2011

Variable	Stratification	Adjusted rate per 100	95% LCL	95% UCL
Sex	Female	68.5	65.15	71.97
	Male	69.94	66.79	73.19
Age	65-74	61.34	58.13	64.69
	75-84	78.35	75.05	81.76
	85+	74.89	66.33	84.26
Income quintile	Q1	66.76	62.23	71.53
	Q2	70.73	66.87	74.75
	Q3	62.46	56.08	69.37
	Q4	72.45	67.42	77.76
	Q5	76.78	71.19	82.69
Rural/urban	rural	67.6	63.65	71.73
	urban/non-rural	69.17	66.53	71.89
Immigration	1 Born in Canada	72.89	70.54	75.3
	2 Over 10 years	63.27	58.37	68.47
	3. 0-9 years	43.18	23.78	72.05
Education	1 Less than high school	65.21	60.5	70.19
	2 High school graduation	70.51	65.2	76.13
	3 Post-secondary graduation	71.77	69.01	74.61

**for calculating the p values the overall rates of the subgroups were used as a reference population.*

Statement of results

- In 2011 one third of the population aged 65 and older did not receive the annual influenza vaccination. Over time, since 2001 the rate has varied from 67.8% to 77.9% and was the highest in 2005 and the lowest in 2011. Consistently, the immunization rates were slightly higher in people aged 65 and older with chronic conditions.
- The influenza vaccination rates in the population aged 65 and older for 2011 varied significantly by the age of the population and immigration status. Those aged 75 and older were more likely to be immunized than younger adults and people who were born in Canada had higher immunization rates than those who had been in Canada for 10 or more years. There was no variation in flu vaccination rates by gender, place of residence and education. Population residing in the highest income neighbourhoods had significantly higher vaccination rates compared to the provincial rates.
- The rates varied across the LHINs as well, ranging from 58% in the Toronto Central LHIN to 77% in the Central LHIN.