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Improving quality in Long Term Care: Regulation, Public Reporting or Quality Improvement Collaboratives

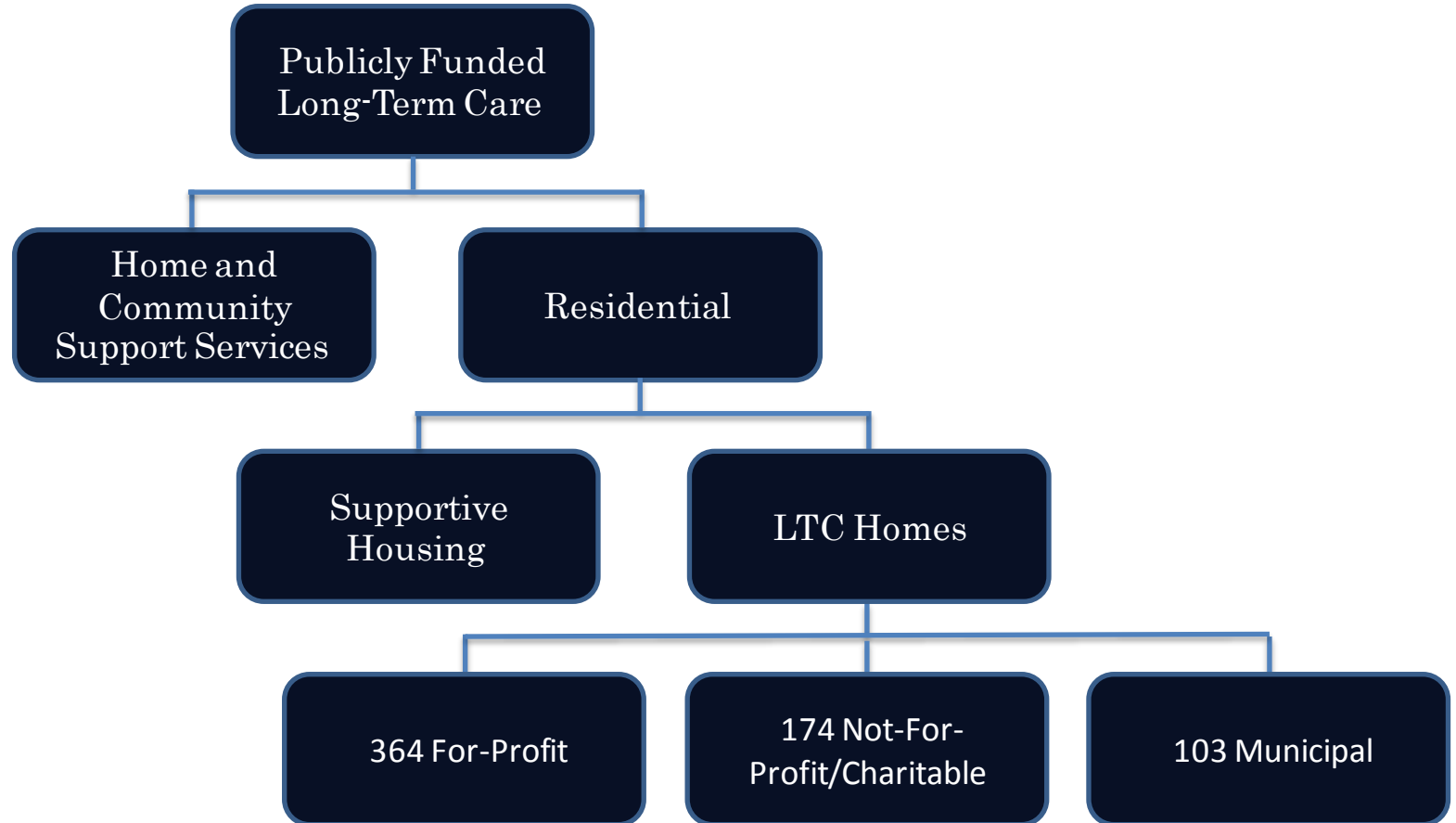
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Ontario Long-Term Care



Concerns About the Quality of Care

- Shocking neglect of elderly: Exclusive study reveals inadequate care is widespread Toronto Star, 2003
- Crucial records about complaints, injuries and substandard care are kept secret from the public Toronto Star, 2003
- Natalie's story: One senior's heartbreaking experience in a nursing home. Natalie Babineau died because an untreated bedsore became gangrenous Toronto Star, 2003



Improving Quality: Regulation

- Received Royal Assent June 4, 2007, but came into force July 1, 2010, along with the regulations
- Governs the requirements relating to:
 - Resident care, services, admissions
 - Home operations, funding and licensing
 - Compliance and inspections
- Each LTC home must have clinical care programs for:
 - Falls prevention and management
 - Skin and wound care
 - Continence care and bowel management
 - Pain management



Improving Quality: Public Reporting

- In June 2008, the provincial government tasked Health Quality Ontario with “measuring and reporting to the public on the quality of long-term care”
- Voluntary participation from 2010-2012. Public reporting will be mandatory for all of Ontario’s LTC homes in 2013
- Individual home results are accessible on HQO’s website. Topics include:
 - Falls
 - Incontinence
 - Pressure ulcers
 - Restraint use



Improving Quality: QI Collaborative

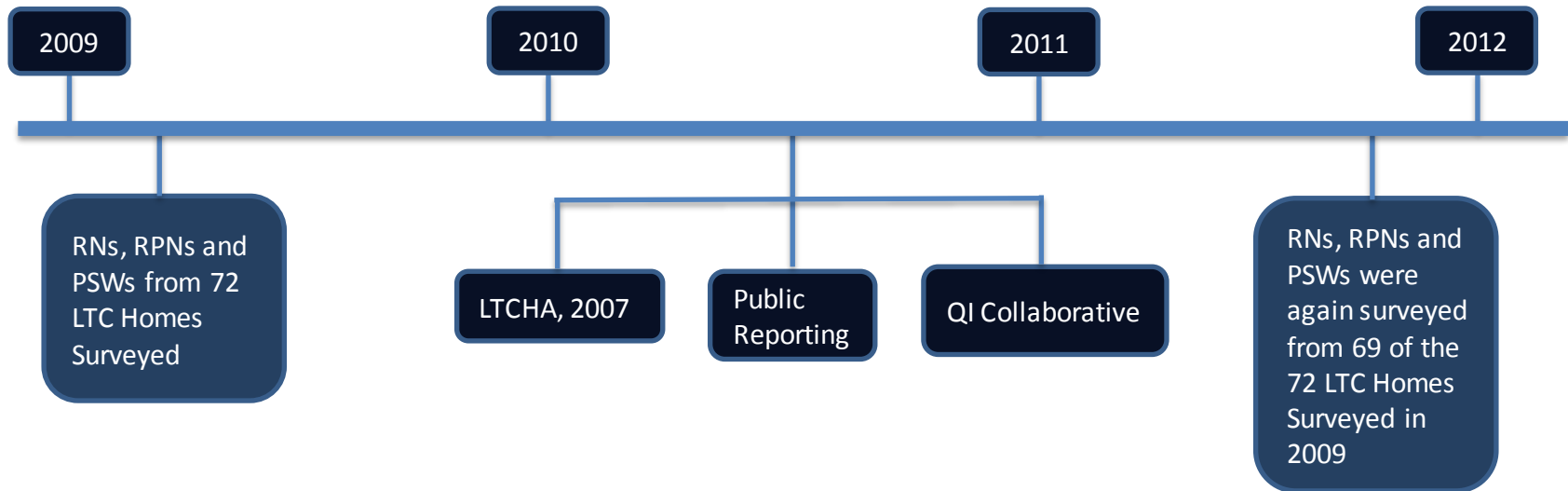
- Also in June 2008, HQO's role and mandate was expanded to include “supporting continuous quality improvement” leading to the implementation of Residents First
- Residents First is a voluntary quality improvement initiative that started in 2010
- Participants in Residents First may participate in:
 - Leading Quality
 - Facilitating Improvement
 - Learning Collaboratively

Research Questions

1. Were there baseline differences in quality between Homes that did and did not voluntarily participate in HQO's a) public reporting and b) QI collaborative programs?
2. Were there changes in quality attributable to participation in HQO's a) public reporting and b) QI collaborative programs?



Sampling Timeline



Measures of Quality

Based on the Malcolm Baldrige National Quality Award Criteria

- Leadership (e.g. “Challenges people to try out new and innovative approaches to their work”, “Makes sure people we work with stick to the principles and standards that we have agreed on”, “Praises people for a job well done”)
- Performance Improvement System (e.g. “Our Home continuously evaluates our care and services to change future care and services”, “Staff are encouraged to develop new ways to deliver resident care and services”)
- Customer Focus (e.g. “This Home does a good job of assessing resident needs and wishes”)
- Work Environment (Summary of 19 items in 7 domains)
- Workforce Engagement (e.g. “I am involved in decisions that affect me on the job”)



LTC Home Sample

Characteristic	Sample	Province
Ownership		
For Profit	28 (45.16 %)	364 (56.79 %)
Not-For-Profit	21 (33.87 %)	174 (27.15 %)
Municipal	13 (20.97 %)	103 (16.07 %)
Size		
128 or fewer beds	31 (50 %)	403 (62.87 %)
More than 128 beds	31 (50 %)	238 (37.13 %)
Location		
Urban	50 (80.65 %)	523 (81.59 %)
Rural	12 (19.35 %)	118 (18.41 %)
Participation in a QI Collaborative		
Yes	24 (38.71 %)	133 (20.75 %)
No	38 (61.29 %)	508 (79.25 %)
Participation in Public Reporting		
Yes	26 (41.94 %)	130 (20.28 %)
No	36 (58.06 %)	511 (79.72 %)



LTC Staff Sample

Characteristic	2009	2011
Gender		
Female	1305 (95.05 %)	1598 (94.11 %)
Male	68 (4.95 %)	100 (5.89 %)
Position		
Registered Nurse	199 (14.28 %)	211 (12.28 %)
Registered Practical Nurse	281 (20.16 %)	345 (20.08 %)
Personal Support Worker	914 (65.57 %)	1162 (67.64 %)
Hours		
Part-Time	627 (46.9 %)	667 (39.3 %)
Full-Time	710 (53.1 %)	1030 (60.7 %)
# of Years Working in this LTC Home		
< 1 Year	126 (9.12 %)	134 (7.99 %)
1-2 Years	160 (11.58 %)	202 (12.04 %)
3-4 Years	234 (16.93 %)	243 (14.48 %)
> 5 Years	862 (62.37 %)	1099 (65.49 %)



Results – Public Reporting

1. a) Were there baseline differences in quality between Homes that did and did not voluntarily participate in HQO's public reporting program?
 - Aggregated 2009 staff responses to the Home-level
 - Bivariate analysis of participation on each of the 5 measures of quality
 - Fit logistic regression models of participation on each of the 5 measures of quality while controlling for Home characteristics

Results – Public Reporting

1. a) Were there baseline differences in quality between Homes that did and did not voluntarily participate in HQO's public reporting program?

Characteristic	Participant (Mean (SD))	Non-Participant (Mean (SD))	test value	p-value
Leadership	3.47 (0.43)	3.35 (0.39)	t = -1.17	Pr = 0.25
Performance Improvement System	3.14 (0.54)	3.08 (0.49)	t = -0.44	Pr = 0.66
Customer Focus	3.7 (0.38)	3.67 (0.37)	t = -0.33	Pr = 0.74
Work Environment	7.12 (0.65)	7.1 (0.66)	t = -0.12	Pr = 0.9
Workforce Engagement	2.89 (0.42)	2.93 (0.39)	t = 0.42	Pr = 0.68



Results – Public Reporting

1. a) Were there baseline differences in quality between Homes that did and did not voluntarily participate in HQO's public reporting program?

Characteristic	Leadership	Performance Improvement System	Customer Focus	Work Environment	Workforce Engagement
Quality Measure	0.75	1.33	0.8	0.91	0.43
Ownership					
For-Profit	0.44	0.46	0.46	0.46	0.44
Municipal	0.56	0.68	0.59	0.59	0.44
Size					
More than 128 beds	1.41	1.19	1.38	1.33	1.46
Location					
Rural	0.2*	0.23*	0.21*	0.22*	0.2*
n	62	62	62	62	62
χ^2 (Prob > χ^2)	6.46 (0.26)	6.37 (0.27)	6.3 (0.28)	6.26 (0.28)	7.41 (0.19)
c statistic	0.68	0.68	0.68	0.68	0.68

* p < 0.1; ** p<0.05; *** p<0.01



Results – Public Reporting

2. a) Were there changes in quality attributable to participation in HQO's public reporting programs?
- Calculated change scores from the home-level results
 - Bivariate analysis of participation on the change score for each of the 5 measures of quality
 - Fit linear regression models of the change score on participation in HQO's programs

Results – Public Reporting

2. a) Were there changes in quality attributable to participation in HQO's public reporting program?

Characteristic	Participant (Mean (SD))	Non-Participant (Mean (SD))	test value	p-value
Leadership	0.03 (0.48)	-0.01 (0.48)	t = -0.4	t = 0.69
Performance Improvement System	0.02 (0.3)	0.03 (0.34)	t = 0.09	t = 0.93
Customer Focus	0.04 (0.23)	-0.06 (0.3)	t = -1.44	t = 0.16
Work Environment	-0.08 (0.49)	-0.11 (0.51)	t = -0.23	t = 0.82
Workforce Engagement	0.12 (0.3)	-0.08 (0.37)	t = -2.24	t = 0.03

* p < 0.1; ** p < 0.05; *** p < 0.01



Results – Public Reporting

2. a) Were there changes in quality attributable to participation in HQO's public reporting program?

Characteristic	Leadership	Performance Improvement System	Customer Focus	Work Environment	Workforce Engagement
Participant in Public Reporting	0.08	-0.01	0.08	0	0.21**
Ownership					
For-Profit	0.14	0.09	-0.04	0.06	0.1
Municipal	0.1	0.05	0.03	0.17	0.1
Size					
More than 128 beds	-0.02	0.03	-0.04	0.13	0.05
Location					
Rural	0.05	-0.04	-0.11	-0.1	0
Constant	-0.11	-0.03	0	-0.2	-0.18
n	62	62	62	62	62
F (Prob > F)	0.24 (0.94)	0.22 (0.95)	0.69 (0.63)	0.53 (0.76)	1.25 (0.3)
R²	0.02	0.02	0.06	0.04	0.1

* p < 0.1; ** p<0.05; *** p<0.01



Results – Public Reporting

Conclusions:

- There were no significant differences in baseline quality between participants and non-participants in HQO's public reporting program
- Rural Homes were less likely to voluntarily join HQO's public reporting program. It is possible that there is less competition among rural homes and they are thus less compelled to publicly report
- Change in workforce engagement was positively related with participation in HQO's public reporting program.



Results – QI Collaborative

1. b) Were there baseline differences in quality between Homes that did and did not voluntarily participate in HQO's QI collaborative program?

Characteristic	Participant (Mean (SD))	Non-Participant (Mean (SD))	test value	p-value
Leadership	3.19 (0.5)	3.05 (0.51)	t = -1.06	Pr = 0.3
Performance Improvement System	3.5 (0.43)	3.34 (0.39)	t = -1.57	Pr = 0.12
Customer Focus	3.73 (0.33)	3.66 (0.4)	t = -0.74	Pr = 0.46
Work Environment	7.09 (0.66)	7.13 (0.61)	t = 0.21	Pr = 0.83
Workforce Engagement	2.97 (0.41)	2.88 (0.4)	t = -0.85	Pr = 0.4



Results – QI Collaborative

1. b) Were there baseline differences in quality between Homes that did and did not voluntarily participate in HQO's QI collaborative program?

Characteristic	Leadership	Performance Improvement System	Customer Focus	Work Environment	Workforce Engagement
Quality Measure	1.27	2.64	1.58	0.72	1.61
Ownership					
For-Profit	0.22**	0.21**	0.21**	0.2**	0.22**
Municipal	0.58	0.7	0.6	0.44	0.64
Size					
More than 128 beds	0.85	0.69	0.82	0.98	0.86
Location					
Rural	0.21*	0.22*	0.2*	0.2*	0.2*
n	62	62	62	62	62
χ^2 (Prob > χ^2)	9.62 (0.09)	10.9 (0.05)	9.76 (0.08)	9.93 (0.08)	9.83 (0.08)
c statistic	0.70	0.74	0.71	0.72	0.72

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Results - QI Collaborative

2. b) Were there changes in quality attributable to participation in HQO's QI Collaborative program?

Characteristic	Participant (Mean (SD))	Non-Participant (Mean (SD))	test value	p-value
Leadership	-0.01 (0.48)	0.02 (0.48)	t = 0.21	t = 0.83
Performance Improvement System	0 (0.25)	0.04 (0.36)	t = 0.51	t = 0.61
Customer Focus	0.01 (0.21)	-0.04 (0.31)	t = -0.77	t = 0.44
Work Environment	-0.06 (0.46)	-0.12 (0.52)	t = -0.49	t = 0.62
Workforce Engagement	0.02 (0.29)	0 (0.4)	t = -0.29	t = 0.77

* p < 0.1; ** p < 0.05; *** p < 0.01



Results – QI Collaborative

2. b) Were there changes in quality attributable to participation in HQO's QI Collaborative program?

Characteristic	Leadership	Performance Improvement System	Customer Focus	Work Environment	Workforce Engagement
Participant in QI Collaborative	0.01	-0.03	0.02	0.06	0.03
Ownership					
For-Profit	0.13	0.08	-0.05	0.08	0.08
Municipal	0.1	0.04	0.02	0.18	0.09
Size					
More than 128 beds	-0.01	0.03	-0.03	0.13	0.06
Location					
Rural	0.03	-0.04	-0.12	-0.09	-0.05
Constant	-0.08	-0.01	0.03	-0.24	-0.08
n	62	62	62	62	62
F (Prob > F)	0.16 (0.97)	0.24 (0.94)	0.47 (0.8)	0.56 (0.73)	0.3 (0.91)
R ²	0.01	0.02	0.04	0.05	0.03

* p < 0.1; ** p<0.05; *** p<0.01

Results – QI Collaborative

Conclusions:

- There were no significant differences in baseline quality between participants and non-participants in HQO's QI collaborative program
- Rural and for-profit Homes were less likely to volunteer for HQO's QI collaborative
- There were no significant changes in quality attributable to HQO's QI collaborative

* p < 0.1; ** p < 0.05; *** p < 0.01



Next Steps

- Administrator/Director of Care survey collecting:
 - Staffing
 - Turnover
 - QI activities
- Linking data with resident outcomes:
 - Health related quality of life
 - Stage 2+ ulcer
 - Incidence of worsening continence
 - Incidence of new falls in past 30 days

* p < 0.1; ** p < 0.05; *** p < 0.01



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