

**Online Appendix Table 1**

Estimated model:  $QM_{i,t} = \alpha + \beta t + \gamma P_i + \delta P_i t + \sum_i \phi_i D_i$

		<b>Physical Restraints</b>	<b>Short- term Pain</b>	<b>Pressure Ulcers</b>	<b>ADLs</b>	<b>Infections</b>
<b>Coefficients (P-value)</b>						
$\beta$	<i>Time</i>	-0.33 (0.000)	-0.05 (0.796)	-0.07 (0.282)	-0.11 (0.369)	-0.17 (0.086)
$\gamma$	<i>Post-publication (yes = 1)</i>	-1.19 (0.033)	-3.14 (0.007)	0.33 (0.412)	0.26 (0.738)	-0.68 (0.279)
$\delta$	<i>Time *Post- publication</i>	0.09 (0.410)	0.12 (0.604)	0.05 (0.557)	0.07 (0.634)	0.18 (0.136)
$\alpha$	<i>Constant</i>	9.95 (0.000)	26.41 (0.000)	8.55 (0.000)	16.54 (0.000)	15.92 (0.000)
<b>Number of observations</b>						
		5104	3824	5104	4936	5004
<b>Number of nursing homes (fixed effects)</b>						
		647	554	647	639	641
<b>R-squared</b>						
		0.79	0.71	0.63	0.49	0.58
<b>Adjusted R-squared</b>						
		0.75	0.66	0.58	0.42	0.52

**Online Appendix Table 2**

Estimated model:  $QM_{it} = \alpha + \beta t + \gamma P_i + \delta_1 P_i N_i + \delta_2 P_i N_i^2 + \sum_i \phi_i D_i$

		<b>Physical Restrains</b>	<b>Short- term Pain</b>	<b>Pressure Ulcers</b>	<b>ADLs</b>	<b>Infections</b>
<b>Coefficients (P-value)</b>						
$\beta$	<i>Time</i>	-0.27 (0.000)	0.03 (0.802)	-0.04 (0.328)	-0.06 (0.404)	-0.06 (0.372)
$\gamma$	<i>Post-publication (yes = 1)</i>	-0.29 (0.426)	-2.28 (0.003)	0.52 (0.046)	0.95 (0.057)	0.28 (0.491)
$\delta_1$	<i>Number of actions * Post-publication</i>	-0.37 (0.000)	-0.11 (0.632)	-0.00 (0.972)	-0.35 (0.013)	-0.14 (0.232)
$\delta_2$	<i>Number of actions squared *Post- publication</i>	0.03 (0.000)	0.00 (0.934)	0.00 (0.910)	0.04 (0.003)	0.01 (0.181)
$\alpha$	<i>Constant</i>	9.82 (0.000)	26.23 (0.000)	8.48 (0.000)	16.43 (0.000)	15.65 (0.000)
<b>Number of observations</b>		5104	3824	5104	4936	5004
<b>Number of nursing homes (fixed effects)</b>		647	554	647	639	641
<b>R-squared</b>		0.79	0.71	0.63	0.50	0.58
<b>Adjusted R-squared</b>		0.76	0.66	0.58	0.42	0.52

**Online Appendix Table 3**

$$\text{Estimated model: } QM_{it} = \alpha + \beta t + \gamma P_i + \sum_{k=1}^{20} \delta_k P_i A_{ik} + \sum_i \phi_i D_i$$

		<b>Physical Restraints</b>	<b>Short- term Pain</b>	<b>Pressure Ulcers</b>	<b>ADLs</b>	<b>Infections</b>
<b>Coefficients (P-value)</b>						
$\beta$	<i>Time</i>	-0.27 (0.000)	0.03 (0.815)	-0.04 (0.330)	-0.06 (0.400)	-0.05 (0.380)
$\gamma$	<i>Post-publication (yes = 1)</i>	-0.46 (0.196)	-2.57 (0.001)	0.67 (0.011)	1.17 (0.020)	0.49 (0.224)
$\delta_1$	<i>Investigated reasons for scores * Post- publication</i>	-0.29 (0.387)	1.40 (0.048)	-0.23 (0.340)	-1.43 (0.002)	-0.65 (0.084)
$\delta_2$	<i>Developed new care protocols * Post-publication</i>	-1.14 (0.003)	2.52 (0.004)	-0.50 (0.078)	0.84 (0.125)	0.35 (0.431)
$\delta_3$	<i>Changed existing care protocols * Post-publication</i>	0.05 (0.898)	-2.13 (0.011)	0.47 (0.079)	0.26 (0.618)	0.17 (0.682)
$\delta_4$	<i>Re-allocated staff from other activities to care related to this QM * Post- publication</i>	0.96 (0.137)	5.40 (0.004)	-0.16 (0.706)	1.25 (0.195)	1.06 (0.160)
$\delta_5$	<i>Trained staff specifically for targeted QM * Post-publication</i>	1.06 (0.003)	-2.00 (0.009)	0.12 (0.657)	-0.46 (0.363)	-0.21 (0.605)
$\delta_6$	<i>Changed medical director * Post- publication</i>	-7.12 (0.002)	-0.24 (0.955)	-3.58 (0.035)	-5.10 (0.114)	-1.51 (0.564)
$\delta_7$	<i>Changed nursing director * Post- publication</i>	0.25 (0.712)	-1.67 (0.318)	1.36 (0.005)	1.82 (0.065)	0.21 (0.782)
$\delta_8$	<i>Changed work organization to empower workers * Post- publication</i>	-0.30 (0.465)	-0.26 (0.772)	0.546 (0.073)	-0.083 (0.886)	0.48 (0.312)
$\delta_9$	<i>Revised job descriptions * Post-publication</i>	1.12 (0.023)	0.22 (0.847)	-0.02 (0.951)	-0.35 (0.618)	-0.98 (0.079)

$\delta_{10}$	<i>Hired more staff * Post-publication</i>	1.68 (0.003)	2.18 (0.112)	0.32 (0.439)	1.95 (0.018)	0.51 (0.437)
$\delta_{11}$	<i>Contracted for more staff * Post-publication</i>	1.34 (0.218)	-0.54 (0.843)	-1.50 (0.057)	1.20 (0.437)	-2.27 (0.065)
$\delta_{12}$	<i>Increased wages/benefits * Post-publication</i>	-1.57 (0.006)	-3.46 (0.013)	0.75 (0.073)	-0.29 (0.730)	1.16 (0.077)
$\delta_{13}$	<i>Other initiatives to hire/retain staff * Post-publication</i>	-0.36 (0.500)	0.26 (0.816)	0.21 (0.600)	0.49 (0.525)	1.48 (0.018)
$\delta_{14}$	<i>Increased private pay prices * Post-publication</i>	-3.25 (0.000)	-0.45 (0.793)	0.41 (0.448)	-1.88 (0.075)	-0.73 (0.386)
$\delta_{15}$	<i>Started an organized quality improvement program * Post-publication</i>	0.93 (0.019)	-1.76 (0.054)	0.15 (0.597)	-0.14 (0.810)	0.46 (0.316)
$\delta_{16}$	<i>Changed priorities of existing quality assurance or quality improvement program to focus on QMs * Post-publication</i>	-0.39 (0.221)	-0.15 (0.830)	-0.03 (0.911)	-0.20 (0.655)	-0.41 (0.256)
$\delta_{17}$	<i>Changed the type of patient admitted * Post-publication</i>	0.91 (0.222)	8.49 (0.000)	0.29 (0.592)	0.59 (0.565)	1.40 (0.095)
$\delta_{18}$	<i>Changed ownership * Post-publication</i>	8.50 (0.000)	-2.02 (0.593)	-0.82 (0.582)	1.20 (0.731)	-2.69 (0.275)
$\delta_{19}$	<i>Requested help from the QIO * Post-publication</i>	-1.07 (0.002)	-0.73 (0.356)	-1.23 (0.000)	0.04 (0.935)	-0.64 (0.108)
$\delta_{20}$	<i>Purchased new technology/equipment * Post-publication</i>	-0.43 (0.346)	0.02 (0.985)	0.48 (0.142)	0.03 (0.964)	-0.57 (0.266)
$\alpha$	<i>Constant</i>	9.82 (0.000)	26.25 (0.000)	8.48 (0.000)	16.44 (0.000)	15.65 (0.000)

	<b>Number of observations</b>	5104	3824	5104	4936	5004
	<b>Number of nursing homes (fixed effects)</b>	647	554	647	639	641
	<b>R-squared</b>	0.79	0.72	0.64	0.50	0.58
	<b>Adjusted R-squared</b>	0.76	0.67	0.58	0.42	0.52