Appendix 4 (as supplied by the authors)

Supplemental Table 1. Results of negative binomial regression model analyzing routine chest X-ray (CXR) use over time in Ontario (n = 2,847,508).

Factor*		Adjusted RR[a] (95% CI)	*P* value
Time (fiscal quarter)		0.98 (0.97-0.98)	< .001
April-June vs January-March		0.92 (0.88-0.96)	< .001
July-September vs January-March		0.91 (0.88-0.95)	< .001
October-November vs January-March		0.90 (0.86-0.93)	< .001
LHIN			
	2 vs 1	0.45 (0.42-0.49)	< .001
	3 vs 1	0.49 (0.45-0.53)	< .001
	4 vs 1	0.54 (0.50-0.58)	< .001
	5 vs 1	0.69 (0.64-0.74)	< .001
	6 vs 1	0.70 (0.65-0.75)	< .001
	7 vs 1	0.93 (0.86-0.99)	.032
	8 vs 1	1.21 (1.13-1.29)	< .001
	9 vs 1	1.37 (1.29-1.46)	< .001
	10 vs 1	0.40 (0.36-0.44)	< .001
	11 vs 1	0.41 (0.38-0.44)	< .001
	12 vs 1	0.51 (0.47-0.55)	< .001
	13 vs 1	0.66 (0.60-0.71)	< .001
	14 vs 1	1.04 (0.95-1.15)	< .001

Notes: *all factors significant at $P<0.05$; RR = relative risk; CI = confidence interval.

[a] adjusted for all other factors present in the table.

Appendix to: Bouck Z, Mecredy G, Ivers NM, et al. Routine use of chest x-ray for low-risk patients undergoing a periodic health examination: a retrospective cohort study. *CMAJ Open* 2018. doi: 10.9778/cmajo.20170138.

Supplemental Table 2. Patient- and provider-level indicators for a routine chest X-ray (CXR) being ordered on the same day as a periodic health examination based on a multilevel logistic regression with a random intercept for practice-level effects, *N* = 1,709,206.

Fixed Effects, OR[a] (95% CI)	
Time-based variables	
Time (fiscal quarter)	0.98 (0.97-0.98)***
April-June vs January-March	0.91 (0.87-0.96)***
July-September vs January-March	0.91 (0.88-0.95)***
October-November vs January-March	0.89 (0.85-0.94)***
Patient characteristics	
Age, years (y)	
45-64 vs 18-44	1.69 (1.65-1.74)***
65+ vs 18-44	2.06 (1.96-2.17)***
Male	2.46 (2.39-2.53)***
Rural	0.94 (0.88-1.01)
Income quintile	
2 vs 1 (lowest)	0.98 (0.94-1.02)
3 vs 1 (lowest)	0.88 (0.84-0.92)***
4 vs 1 (lowest)	0.88 (0.84-0.91)***
5 vs 1 (lowest)	0.76 (0.73-0.79)***
Hospitalization - past 5 y	0.87 (0.83-0.92)***
Mental health diagnosis - past 5 y	0.87 (0.83-0.91)***
Dementia diagnosis – past 5 y	1.25 (1.02-1.53)*
Rheumatologic disease diagnosis – past 5 y	0.97 (0.91-1.04)
Physician characteristics	
Male	1.57 (1.51-1.62)***
IMG	0.95 (0.92-0.98)**
Years since graduation	
21-30 vs ≤20	1.29 (1.25-1.34)***
> 30 vs ≤20	1.81 (1.74-1.87)***
Primary care practice model[b]	
Family health group vs FFS	0.97 (0.93-1.02)
Family health network vs FFS	0.56 (0.34-0.92)*
Family health organization vs FFS	0.83 (0.77-0.90)***
Family health team vs FFS	0.93 (0.86-1.02)
Other vs FFS	1.60 (1.40-1.83)***
Random Effects[c]	
Variance (SE)	0.65 (0.04)
MOR (95% CI)	2.16 (2.08-2.24)
ICC[c], %	16.5

Notes: Significant at *P*<0.05*, *P*<0.01 **, *P*<0.001 ***; OR = odds ratio; CI = confidence interval; IMG = international medical graduate; FFS = fee-for-service SE = standard error; MOR = median odds ratio; ICC = intraclass correlation coefficient;

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All reported values based on SAS PROC GLIMMIX output; model estimation method = RSPL; denominator degrees of freedom estimation method = between and within (bw); covariance structure = standard variance (vc).

[a] Adjusted for all other factors present in the table.

[b] Represents the primary care patient enrollment model which informs practice organization and remuneration.

[c] Estimated based on the distribution of random, practice-specific intercepts.

[d] Calculated using the linear threshold method.

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