

**Supplementary Material****Supplementary Table 1** - List of SSDs used to identify potential diagnostic opportunities.

Category	Symptomatically Similar Diagnosis (SSD)	ICD-9-CM	ICD-10-CM
Alternative-Cardio-Sino-Pulmonary-Based Diagnoses	Tonsillitis	474.12, 474.2, 474.8, 474.9	J35.1
	Respiratory Failure	517.3, 518.81, 518.82, 518.83, 518.84, 799.1	J80, J96.00, J96.01, J96.02, J96.10, J96.12, J96.20, J96.21, J96.22, J96.90, J96.92
	Respiratory Cancer	163.0, 163.1, 163.8, 163.9, 165.0, 165.8, 165.9, 231.1, 231.8, 231.9	C33, C38.4, C39.0, C39.9, C45.0, D02.1, D02.3, D02.4
	Pleurisy Pneumothorax	511.0, 511.1, 511.8, 511.89, 512.0, 512.8, 512.81, 512.82, 512.83, 512.84, 512.89, 518.1, 518.2	J86.9, J92.0, J92.9, J93.0, J93.12, J93.81, J93.82, J93.83, J94.0, J94.1, J94.2, J94.8, J94.9, J98.19, J98.2, J98.3, R09.1
	Other Upper Respiratory Disease	472.0, 477.0, 477.2, 477.8, 477.9, 478.1, 478.19, 478.20, 478.29, 478.30, 478.31, 478.32, 478.33, 478.34, 478.4, 478.5, 478.70, 478.74, 478.75, 478.79, 478.8, 519.1, 519.11, 519.19, 519.3, 784.40, 784.49, 784.7, 784.8	J30.0, J30.1, J30.2, J30.81, J30.89, J30.9, J31.0, J34.2, J34.89, J37.0, J37.1, J38.00, J38.01, J38.02, J38.1, J38.2, J38.3, J38.4, J38.5, J38.6, J38.7, J39.2, J39.3, J39.8, J39.9, J98.01, J98.51, R04.0, R04.1, R09.81
	Other Lower Respiratory Disease	514, 515, 516.0, 516.1, 516.2, 516.3, 516.30, 516.31, 516.32, 516.33, 516.34,	J81.0, J81.1, J82, J84.01, J84.02, J84.03, J84.09, J84.10, J84.111, J84.112, J84.113, J84.114, J84.115, J84.116,

		516.35, 516.36, 516.37, 516.4, 516.5, 516.8, 516.9, 517.2, 517.8, 518.3, 518.4, 518.89, 519.4, 519.8, 519.9, 786.00, 786.09, 786.39, 786.9, 793.11, 794.2	J84.117, J84.17, J84.2, J84.81, J84.82, J84.89, J84.9, J98.4, J98.6, J98.8, J99, R04.89, R04.9
	Lung Disease Due to External Agents	495.0, 495.1, 495.2, 495.3, 495.4, 495.5, 495.6, 495.7, 495.8, 495.9, 500, 501, 502, 503, 504, 505, 506.0, 506.1, 506.2, 506.3, 506.4, 506.9, 507.1, 507.8, 508.0, 508.1, 508.2, 508.8, 508.9	J60, J61, J62.0, J62.8, J63.0, J63.1, J63.2, J63.3, J63.4, J63.5, J63.6, J64, J66.0, J66.1, J66.2, J66.8, J67.0, J67.1, J67.2, J67.3, J67.4, J67.5, J67.6, J67.7, J67.8, J67.9, J68.0, J68.1, J68.2, J68.3, J68.4, J68.8, J68.9, J69.1, J69.8, J70.0, J70.1, J70.2, J70.3, J70.4, J70.5, J70.8, J70.9
	Lung Cancer	162.2, 162.3, 162.4, 162.5, 162.8, 162.9, 209.21	C34.00, C34.01, C34.02, C34.10, C34.11, C34.12, C34.2, C34.30, C34.31, C34.32, C34.80, C34.81, C34.82, C34.90, C34.91, C34.92, C7A.090, D02.20, D02.21, D02.22
	Hemoptysis	786.39	R04.8, R04.89, R04.9
	COPD	491.2, 491.20, 491.21, 491.22, 492.0, 492.8, 494, 494.0, 494.1, 496	J41.8, J43.0, J43.1, J43.2, J43.8, J43.9, J44.1, J44.9, J47.1, J47.9
	Asthma	493.00, 493.01, 493.02, 493.10, 493.11, 493.12, 493.20, 493.21, 493.22, 493.81, 493.82, 493.90, 493.92	J45.20, J45.21, J45.22, J45.30, J45.31, J45.32, J45.40, J45.41, J45.42, J45.50, J45.51, J45.52, J45.901, J45.902, J45.909, J45.990, J45.991, J45.998
	Aspiration Pneumonitis	507.0	J69.0

	Additional Codes	135, 197.0, 212.3, 235.7, 239.1, 289.1, 416.8, 423.9, 428.0, 446.4	I50.9, J85.0, N39.0
Alternative-Infectious- Disease-Based Diagnoses	Tonsillitis	463, 474.0, 474.00, 474.01, 474.02, 474.10, 474.11, 475	J03.80, J03.81, J03.90, J03.91, J35.01, J35.02, J35.03, J35.2, J35.3, J35.8, J35.9, J36
	Pneumonia	112.4, 114.0, 114.4, 115.05, 115.15, 115.95, 130.4, 136.3, 480.0, 480.1, 480.2, 480.8, 480.9, 481, 482.0, 482.1, 482.2, 482.3, 482.30, 482.31, 482.32, 482.39, 482.4, 482.40, 482.41, 482.42, 482.49, 482.8, 482.81, 482.83, 482.84, 482.89, 482.9, 483, 483.0, 483.1, 483.8, 484.1, 484.3, 484.6, 484.7, 484.8, 485, 486, 513.0	A31.0, A37.01, A37.11, A43.0, A48.1, B25.0, B37.1, B38.0, B38.1, B38.2, B39.0, B39.1, B39.2, B58.3, B59, B77.81, J12.0, J12.1, J12.2, J12.3, J12.89, J12.9, J13, J14, J15.0, J15.1, J15.20, J15.211, J15.212, J15.29, J15.3, J15.4, J15.5, J15.6, J15.7, J15.8, J15.9, J16.0, J16.8, J17, J18.0, J18.1, J18.8, J18.9, J85.1
	Pleurisy Pneumothorax	510.0	J86.0, J93.11
	Other Upper- Respiratory Infection	460, 461.0, 461.1, 461.2, 461.3, 461.9, 462, 464.0, 464.00, 464.01, 464.11, 464.20, 464.21, 464.30, 464.31, 464.4, 464.50, 464.51, 465.0, 465.8, 465.9, 473.0, 473.1, 473.2, 473.3, 473.8, 473.9	J00, J01.00, J01.01, J01.10, J01.11, J01.20, J01.21, J01.30, J01.31, J01.40, J01.41, J01.80, J01.81, J01.90, J01.91, J02.0, J02.8, J02.9, J03.00, J03.01, J04.0, J04.10, J04.11, J04.2, J04.30, J04.31, J05.0, J05.10, J05.11, J06.0, J06.9, J32.0, J32.1, J32.2, J32.3, J32.4, J32.8, J32.9, R09.82

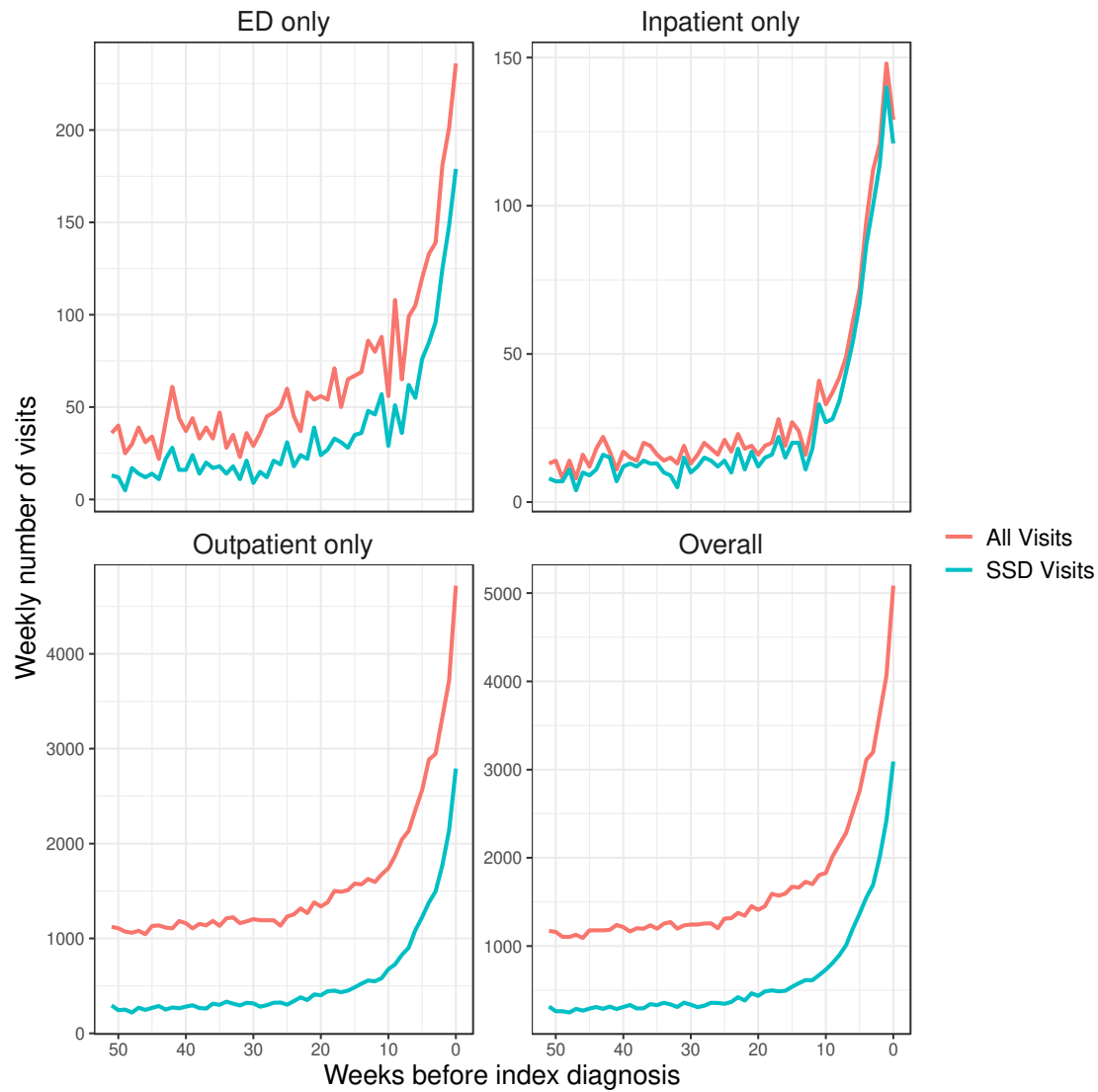
	Other Upper Respiratory Disease	472.2, 476.0, 476.1, 478.21, 478.22, 478.24, 478.71, 478.9, 519.2	J31.1, J31.2, J39.0, J39.1, J98.09, J98.5, J98.59, R07.0
	Other Lower Respiratory Disease	513.1	J18.2, J22, J85.2, J85.3, J98.9, R06.6, R06.82
	Influenza	487.0, 487.1, 487.8, 488, 488.1, 488.11, 488.12, 488.19, 488.81, 488.82, 488.89	J09.X1, J09.X2, J09.X3, J09.X9, J10.00, J10.01, J10.08, J10.1, J10.2, J10.89, J11.00, J11.08, J11.1, J11.2, J11.81, J11.82, J11.83, J11.89
	COPD	490, 491.0, 491.1, 491.8, 491.9	J40, J41.0, J41.1, J42, J44.0, J47.0
	Bronchitis	466.0, 466.1, 466.11, 466.19	J20.0, J20.1, J20.2, J20.3, J20.4, J20.5, J20.6, J20.7, J20.8, J20.9, J21.0, J21.1, J21.8, J21.9
	Additional Codes	038.9, 079.99, 310, 340, 391, 599.0, 830, 995.91	A41.9, B34.9, D14.30, D38.1, D49.1, D86.0, D86.9
Symptom-Based Diagnoses	Other Upper Respiratory Disease	784.1, 784.41, 784.42, 784.9, 784.99	R49.0, R49.8, R49.9
	Other Lower Respiratory Disease	786.02, 786.05, 786.07, 786.2, 786.3, 786.30, 786.4, 786.52	R04.2, R05, R06.00, R06.01, R06.02, R06.03, R06.09, R06.2, R06.89, R06.9, R07.1, R07.81, R09.3
	Hemoptysis	786.3, 786.30	R04.2
	Fever	780.6, 780.60, 780.61	R50, R50.81, R50.9
	Cough	786.2	R05
	Additional Codes	780.79, 780.8, 783.21, 786.50, 786.51, 786.59	R07.2, R07.82, R07.89, R07.9, R53.1, R53.81, R53.83, R61, R63.4
Testing-Imaging-or Physical-Exam-Based Diagnoses	Pleurisy Pneumothorax	511.9, 518.0	J90, J91.8, J93.9, J98.11
	Other Lower Respiratory Disease	786.6, 786.7, 793.1, 793.19	R09.02, R91.1, R91.8
	Additional Codes	263.9, 276.1, 285.29, 285.9, 288.60, 289.3,	D64.9, D72.829, E871, I51.7, R00.0, R22.0,

		429.3, 782.2, 784.2, 785.0, 785.6, 799.02, 799.4	R22.1, R22.2, R59, R59.0, R59.1, R59.9
<b>Procedure Codes</b>		<b>CPT Code</b>	
CT – Chest		71260, 71250, 71270	
X-ray - Chest		71010, 71015, 71020, 71021, 71022, 71023, 71030, 71034, 71035, 71101, 71111, 71120, 71045, 71046, 71047, 71048	

**Supplementary Table 2** – ILI Indicators for the optimal ILI cutoff. We used AIC to select the optimal cutoff for defining peak ILI activity; this was determined to be an ILI level >3.8%.

Period	ILI >= 3.8%
2001/01/01 - 2001/01/14	0
2001/01/15 - 2001/02/04	1
2001/02/05 - 2003/11/23	0
2003/11/24 - 2003/12/28	1
2003/12/29 - 2005/01/23	0
2005/01/24 - 2005/02/20	1
2005/02/21 - 2008/01/20	0
2008/01/21 - 2008/03/09	1
2008/03/10 - 2009/08/30	0
2009/08/31 - 2009/11/15	1
2009/11/16 - 2011/01/16	0
2011/01/17 - 2011/02/20	1
2011/02/21 - 2012/12/09	0
2012/12/10 - 2013/01/27	1
2013/01/28 - 2013/12/22	0
2013/12/23 - 2014/01/05	1
2014/01/06 - 2014/12/14	0
2014/12/15 - 2015/01/25	1
2015/01/26 - 2017/01/15	0
2017/01/16 - 2017/02/19	1
2017/02/20 - 2017/12/10	0
2017/12/11 - 2017/12/24	1

**Supplementary Figure 1** – Trend in SSD visits and all visits prior to the index tuberculosis diagnoses broken down by type of healthcare setting. The red lines depict all visits, and the blue line depicts visits with SSD-related conditions.



**Supplementary Figure 2** – Trend in SSD visits prior to diagnosis for the four SSD categories.

