

ONLINE SUPPLEMENTARY DATA

Supplementary Table 1. All-cause healthcare utilization and costs (2014 US \$) over 5 year of follow-up for incident RA-ILD patients

	Year 1-5	Year 1	Year 2	Year 3	Year 4	Year 5
Inpatient admissions	537 (71.6%)	271 (36.1%)	194 (25.9%)	187 (24.9%)	217 (28.9%)	207 (27.6%)
Mean (SD) Costs, all patients	\$41,066 (\$83,796)	\$10,437 (\$32,784)	\$6,379 (\$22,794)	\$6,179 (\$23,752)	\$9,332 (\$35,203)	\$8,739 (\$33,222)
Median (IQR), all patients	\$14,797 (\$0, \$43,368)	\$0 (\$0, \$9,116)	\$0 (\$0, \$1,988)	\$0 (\$0, \$0)	\$0 (\$0, \$5,190)	\$0 (\$0, \$4,264)
Mean (SD) Costs, patients with an admission	\$57,355 (\$94,213)	\$28,884 (\$49,464)	\$24,662 (\$39,535)	\$24,782 (\$42,525)	\$32,253 (\$59,620)	\$31,663 (\$57,303)
Median (IQR), patients with an admission	\$29,637 (\$11,246, \$60,088)	\$15,048 (\$7,378, \$30,748)	\$13,082 (\$6,200, \$26,697)	\$12,916 (\$6,198, \$24,765)	\$11,973 (\$6,844, \$29,058)	\$14,454 (\$8,194, \$31,062)

Emergency room visits	570 (76.0%)	272 (36.3%)	242 (32.3%)	239 (31.9%)	259 (34.5%)	254 (33.9%)
Mean (SD) Costs, all patients	\$1,813 (\$4,407)	\$307 (\$921)	\$306 (\$1,019)	\$345 (\$1,281)	\$395 (\$1,353)	\$460 (\$1,748)
Median (IQR), all patients	\$598 (\$0, \$1,728)	\$0 (\$0, \$285)	\$0 (\$0, \$201)	\$0 (\$0, \$193)	\$0 (\$0, \$208)	\$0 (\$0, \$215)
Outpatient office visits	746 (99.5%)	744 (99.2%)	736 (98.1%)	732 (97.6%)	727 (96.9%)	722 (96.3%)
Mean (SD) Costs, all patients	\$8,409 (\$6,210)	\$1,987 (\$1,439)	\$1,670 (\$1,471)	\$1,597 (\$1,530)	\$1,578 (\$1,538)	\$1,579 (\$1,401)
Median (IQR), all patients	\$7,389 (\$5,177, \$10,114)	\$1,728 (\$1,158, \$2,530)	\$1,370 (\$852, \$2,164)	\$1,273 (\$774, \$2,055)	\$1,316 (\$802, \$2,038)	\$1,348 (\$789, \$2,002)
Other outpatient services	750 (100.0%)	750 (100.0%)	745 (99.3%)	742 (98.9%)	744 (99.2%)	738 (98.4%)

Mean (SD) Costs, all patients	\$66,342 (\$88,213)	\$13,188 (\$16,322)	\$12,801 (\$20,225)	\$12,302 (\$22,364)	\$13,404 (\$25,174)	\$14,646 (\$32,652)
Median (IQR), all patients	\$40,026 (\$20,968, \$77,466)	\$7,124 (\$3,524, \$15,795)	\$5,966 (\$2,558, \$14,400)	\$5,484 (\$2,406, \$13,391)	\$5,657 (\$2,327, \$15,785)	\$6,165 (\$2,079, \$15,647)
Outpatient pharmacy	745 (99.3%)	742 (98.9%)	736 (98.1%)	735 (98.0%)	734 (97.9%)	731 (97.5%)
Mean (SD) Costs, all patients	\$55,775 (\$63,061)	\$11,072 (\$12,479)	\$11,084 (\$12,980)	\$11,182 (\$16,013)	\$11,116 (\$14,517)	\$11,321 (\$16,202)
Median (IQR), all patients	\$32,166 (\$15,578, \$80,953)	\$6,684 (\$3,038, \$15,862)	\$6,332 (\$2,562, \$15,065)	\$5,685 (\$2,208, \$15,043)	\$5,126 (\$2,274, \$15,638)	\$5,031 (\$1,887, \$15,285)

Mean (SD) total healthcare costs, all patients	\$173,405 (\$158,837)	\$36,991 (\$42,337)	\$32,240 (\$36,918)	\$31,604 (\$39,248)	\$35,825 (\$52,259)	\$36,744 (\$55,013)
Median (IQR), all patients	\$132,929 (\$76,555, \$211,141)	\$26,589 (\$14,124, \$44,021)	\$23,179 (\$9,853, \$40,635)	\$22,328 (\$10,007, \$38,120)	\$22,936 (\$10,018, \$39,412)	\$23,994 (\$9,196, \$41,509)

Supplementary Table 2. Respiratory-related healthcare utilization and costs (2014 US \$) over 5 year of follow-up for incident RA-ILD patients

	Year 1-5	Year 1	Year 2	Year 3	Year 4	Year 5
Inpatient admissions	244 (32.6%)	128 (17.1%)	56 (7.5%)	50 (6.7%)	49 (6.5%)	65 (8.7%)
Mean (SD) Costs, all patients	\$10,253 (\$34,203)	\$3,993 (\$14,622)	\$1,312 (\$8,985)	\$1,692 (\$16,878)	\$1,444 (\$9,492)	\$1,813 (\$14,335)
Median (IQR), all patients	\$0 (\$0, \$7,288)	\$0 (\$0, \$0)	\$0 (\$0, \$0)	\$0 (\$0, \$0)	\$0 (\$0, \$0)	\$0 (\$0, \$0)
Mean (SD) Costs, patients with an admission	\$31,475 (\$54,133)	\$23,366 (\$28,338)	\$17,544 (\$28,423)	\$25,352 (\$61,129)	\$22,067 (\$30,648)	\$20,886 (\$44,688)
Median (IQR), patients with an admission	\$13,791 (\$8,173, \$28,639)	\$13,778 (\$8,966, \$25,494)	\$9,889 (\$5,945, \$15,052)	\$8,614 (\$5,599, \$16,098)	\$10,770 (\$6,606, \$23,591)	\$9,267 (\$6,772, \$14,482)
Emergency room visits	233 (31.1%)	73 (9.7%)	61 (8.1%)	63 (8.4%)	69 (9.2%)	82 (10.9%)

Mean (SD) Costs, all patients	\$338 (\$1,632)	\$49 (\$262)	\$65 (\$539)	\$55 (\$338)	\$60 (\$405)	\$109 (\$785)
Median (IQR), all patients	\$0 (\$0, \$190)	\$0 (\$0, \$0)	\$0 (\$0, \$0)	\$0 (\$0, \$0)	\$0 (\$0, \$0)	\$0 (\$0, \$0)
Outpatient office visits	730 (97.5%)	677 (90.4%)	562 (75.0%)	531 (70.9%)	524 (70.0%)	519 (69.3%)
Mean (SD) Costs, all patients	\$1,393 (\$1,132)	\$439 (\$378)	\$259 (\$298)	\$225 (\$276)	\$219 (\$270)	\$250 (\$345)
Median (IQR), all patients	\$1,111 (\$570, \$1,937)	\$345 (\$164, \$603)	\$172 (\$0, \$381)	\$139 (\$0, \$321)	\$136 (\$0, \$323)	\$146 (\$0, \$324)
Other outpatient services	741 (98.9%)	702 (93.7%)	548 (73.2%)	529 (70.6%)	525 (70.1%)	535 (71.4%)
Mean (SD) Costs, all patients	\$8,371 (\$12,248)	\$2,393 (\$3,849)	\$1,490 (\$3,409)	\$1,432 (\$3,982)	\$1,333 (\$3,343)	\$1,724 (\$4,901)
Median (IQR), all patients	\$3,416 (\$1,277, \$10,126)	\$1,054 (\$354, \$2,647)	\$286 (\$0, \$1,359)	\$171 (\$0, \$964)	\$169 (\$0, \$1,140)	\$236 (\$0, \$1,141)

Antibiotic claims						
Mean (SD) Costs, all patients	\$164 (\$580)	\$49 (\$332)	\$33 (\$239)	\$30 (\$263)	\$24 (\$121)	\$28 (\$176)
Median (IQR), all patients	\$0 (\$0, \$116)	\$0 (\$0, \$0)	\$0 (\$0, \$0)	\$0 (\$0, \$0)	\$0 (\$0, \$0)	\$0 (\$0, \$0)
Respiratory-related pharmacy claims	674 (90.0%)	523 (69.8%)	480 (64.1%)	450 (60.1%)	445 (59.4%)	431 (57.5%)
Mean (SD) Costs, all patients	\$3,613 (\$6,028)	\$773 (\$1,304)	\$715 (\$1,290)	\$713 (\$1,317)	\$730 (\$1,562)	\$682 (\$1,374)
Median (IQR), all patients	\$816 (\$122, \$4,813)	\$170 (\$0, \$988)	\$89 (\$0, \$885)	\$48 (\$0, \$867)	\$45 (\$0, \$724)	\$27 (\$0, \$637)
Mean (SD) total healthcare costs, all patients	\$24,133 (\$42,942)	\$7,696 (\$16,345)	\$3,875 (\$10,579)	\$4,147 (\$18,663)	\$3,808 (\$11,152)	\$4,606 (\$16,010)

Median (IQR), all patients	\$11,613 (\$3,680, \$26,539)	\$2,484 (\$1,121, \$6,645)	\$1,156 (\$304, \$3,564)	\$955 (\$191, \$3,166)	\$913 (\$167, \$3,329)	\$957 (\$163, \$3,706)
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