

## Supplementary Appendix

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to: Haberman R, Axelrad J, Chen A, et al. Covid-19 in immune-mediated inflammatory diseases — case series from New York. *N Engl J Med*. DOI: [10.1056/NEJMc2009567](https://doi.org/10.1056/NEJMc2009567)

**COVID-19 in Immune-Mediated Inflammatory Diseases: Case Series From New York**  
**Supplementary Appendix**

**TABLE OF CONTENTS**

Table S1. Additional Baseline Characteristics of Patients with Confirmed COVID-19.	Page 2
Table S2. Medication Use in All Patients with Confirmed or Suspected COVID-19.	Page 3
Table S3. Medication Use in Patients with Confirmed COVID-19.	Page 4
Table S4. Detailed Clinical Course of Patients Hospitalized with COVID-19.	Page 5
Table S5. Hospitalization Rate of Immune-Mediated Inflammatory Disease Patients with Confirmed or Highly Suspected COVID-19 by Age Group.	Page 7
Table S6. Medication Use in All Patients with a Primary Immune-Mediated Inflammatory Disease of Psoriasis and Psoriatic Arthritis with Confirmed or Suspected COVID-19.	Page 8
Table S7. Medication Use in All Patients with a Primary Immune-Mediated Inflammatory Disease of Rheumatoid Arthritis with Confirmed or Suspected COVID-19.	Page 9
Table S8. Medication Use in All Patients with a Primary Immune-Mediated Inflammatory Disease of Inflammatory Bowel Disease (Crohn’s Disease and Ulcerative Colitis) with Confirmed or Suspected COVID-19 Infection.	Page 10

**Table S1.** Additional Baseline Characteristics of Patients with Confirmed COVID-19.♦

<b>Characteristic</b>	<b>Total (n = 59)</b>	<b>Ambulatory (n = 45)</b>	<b>Hospitalized (n = 14)</b>
Age—mean(range)	47.7 (22-74)	47.0 (22-74)	50.0 (25-73)
Female- n (%)	32 (54)	25 (55.6)	7 (50.0)
<b>Primary IMID Diagnosis—n (%)</b>			
Psoriasis	7 (11.9)	6 (13.3)	1 (7.1)
Psoriatic Arthritis	14 (23.7)	11 (24.4)	3 (21.4)
Rheumatoid Arthritis	17 (28.8)	11 (24.4)	6 (42.9)
Ulcerative colitis	10 (16.9)	7 (15.6)	3 (21.4)
Crohn’s disease	12 (20.3)	11 (24.4)	1 (7.1)
Ankylosing Spondylitis	6 (10.2)	6 (13.3)	0 (0.0)
<b>Body Mass Index—mean (SD)</b>	28.2 (6.5)	27.4 (5.7)	30.8 (8.5)
<b>Comorbidities—n (%)</b>			
History of organ transplantation	1 (1.7)	1 (2.2)	0 (0.0)
Current malignancy	0 (0.0)	0 (0.0)	0 (0.0)
Congestive heart failure	1 (1.7)	1 (2.2)	0 (0.0)
Hypertension	9 (15.3)	4 (8.9)	5 (35.7)
Diabetes	4 (6.8)	2 (4.4)	2 (14.3)
Chronic obstructive pulmonary disease	2 (3.4)	1 (2.2)	1 (7.1)
Asthma	9 (15.3)	9 (20.0)	0 (0.0)
Currently pregnant	2 (3.4)	1 (2.2)	1 (7.1)
<b>Chronic Medications—n(%)</b>			
ACE inhibitor/ARB	10 (16.9)	5 (11.1)	5 (35.7)
Any medication for primary IMID diagnosis	53 (89.8)	40 (88.9)	13 (92.9)
Methotrexate	14 (23.7)	8 (17.8)	6 (42.9)
Hydroxychloroquine	7 (11.9)	4 (8.9)	3 (21.4)
Oral glucocorticoids	7 (11.9)	3 (6.7)	4 (28.6)
Any biologic or JAK inhibitor	41 (69.5)	34 (75.6)	7 (50.0)
TNF inhibitor	27 (45.8)	24 (53.3)	3 (21.4)
IL-17 blocker	5 (8.5)	4 (8.9)	1 (7.1)
IL-12/23 blocker	2 (3.4)	2 (4.4)	0 (0.0)
IL-23 blocker	1 (1.7)	1 (2.2)	0 (0.0)
JAK inhibitor	4 (6.8)	3 (6.7)	1 (7.1)
<b>COVID-19 Symptoms—n (%)</b>			
Fever	53 (89.8)	41 (91.1)	12 (85.7)
Cough	27 (45.8)	15 (33.3)	12 (85.7)
Shortness of breath	27 (45.8)	14 (31.1)	13 (92.9)
Rhinorrhea	4 (6.8)	3 (6.7)	1 (7.1)
Sore throat	7 (11.9)	7 (15.6)	
Diarrhea	10 (16.9)	6 (13.3)	4 (28.6)
Anosmia	8 (13.6)	4 (8.9)	4 (28.6)
Ageusia	8 (13.6)	4 (8.9)	4 (28.6)

♦IMID denotes immune mediated inflammatory disease, ACE angiotensin-converting enzyme, ARB angiotensin II receptor blocker, JAK janus kinase, TNF tumor necrosis factor, and IL interleukin.

**Table S2. Medication Use in All Patients with Confirmed or Suspected COVID-19.♦**

<b>Medication – n(%)</b>	<b>Total (n = 86)</b>	<b>Ambulatory (n = 72)</b>	<b>Hospitalized (n = 14)</b>	<b>Odds ratio (adjusted*)</b>	<b>95% Confidence Interval (adjusted*)</b>
<b>ACE inhibitor/ARB</b>	13 (15.1)	8 (11.1)	5 (35.7)	1.01	[0.75, 1.34]
<b>Any medication for primary IMID diagnosis</b>	75 (87.2)	62 (86.1)	13 (92.9)	1.13	[0.90, 1.41]
<b>Any biologic or JAKi</b>	62 (72.1)	55 (76.4)	7 (50.0)	0.85	[0.71, 1.02]
<b>TNF inhibitor</b>	38 (44.2)	35 (48.6)	3 (21.4)	0.90	[0.76, 1.06]
<b>IL-17 blocker</b>	6 (7.0)	5 (6.9)	1 (7.1)	0.97	[0.72, 1.31]
<b>IL-23 blocker</b>	3 (3.5)	3 (4.2)	0 (0.0)	0.75	[0.50, 1.13]
<b>IL-12/23 blocker</b>	6 (7.0)	6 (8.3)	0 (0.0)	0.86	[0.65, 1.15]
<b>JAKi</b>	6 (7.0)	5 (6.9)	1 (7.1)	1.05	[0.78, 1.41]
<b>Small molecules</b>					
Apremilast	1 (1.2)	1 (1.4)	0 (0.0)	0.79	[0.39, 1.59]
Azathioprine	1 (1.2)	1 (1.4)	0 (0.0)	0.86	[0.43, 1.69]
Hydroxychloroquine	8 (9.3)	5 (6.9)	3 (21.4)	1.36	[1.06, 1.74]
Leflunomide	1 (1.2)	1 (1.4)	0 (0.0)	0.57	[0.28, 1.15]
Mesalamine	7 (8.1)	5 (6.9)	2 (14.3)	1.33	[0.98, 1.79]
Methotrexate	17 (19.8)	11 (15.3)	6 (42.9)	1.29	[1.04, 1.58]
NSAIDs	3 (3.5)	3 (4.2)	0 (0.0)	0.97	[0.65, 1.45]
Prednisone	8 (9.3)	4 (5.6)	4 (28.6)	1.38	[1.07, 1.77]
Sulfasalazine	1 (1.2)	1 (1.4)	0 (0.0)	0.95	[0.47, 1.93]
<b>Biologics</b>					
Adalimumab	17 (19.8)	16 (22.2)	1 (7.1)	0.92	[0.76, 1.12]
Certolizumab	3 (3.5)	3 (4.2)	0 (0.0)	0.89	[0.60, 1.32]
Etanercept	6 (7.0)	5 (6.9)	1 (7.1)	1.00	[0.74, 1.34]
Guselkumab	3 (3.5)	3 (4.2)	0 (0.0)	0.75	[0.50, 1.13]
Infliximab	12 (14.0)	11 (15.3)	1 (7.1)	0.96	[0.76, 1.22]
Ixekizumab	1 (1.2)	1 (1.4)	0 (0.0)	0.93	[0.47, 1.84]
Rituximab	1 (1.2)	0 (0.0)	1 (7.1)	1.73	[0.79, 3.83]
Secukinumab	5 (5.8)	4 (5.6)	1 (7.1)	0.98	[0.71, 1.36]
Tocilizumab	1 (1.2)	0 (0.0)	1 (7.1)	2.32	[1.20, 4.48]
Tofacitinib	6 (7.0)	5 (6.9)	1 (7.1)	1.05	[0.78, 1.41]
Ustekinumab	6 (7.0)	6 (8.3)	0 (0.0)	0.86	[0.65, 1.15]
Vedolixumab	1 (1.2)	1 (1.4)	0 (0.0)	0.94	[0.42, 2.11]

♦IMID denotes immune mediated inflammatory disease, ACE angiotensin-converting enzyme, ARB angiotensin II receptor blocker, JAKi janus kinase inhibitor, TNF tumor necrosis factor, and IL interleukin.

\*OR and 95% CI for hospitalization based on chronic medication use, adjusted for age, sex, BMI, and selected comorbidities (history of organ transplantation, congestive heart failure, hypertension, diabetes mellitus, COPD, and pregnancy)

**Table S3.** Medication Use in Patients with Confirmed COVID-19.♦

Medication—n(%)	Total (n = 59)	Ambulatory (n = 45)	Hospitalized (n = 14)	Odds ratio (adjusted*)	95% Confidence Interval (adjusted*)
<b>ACE inhibitor/ARB</b>	10 (16.9)	5 (11.1)	5 (35.7)	0.88	[0.56, 1.41]
<b>Any medication for primary IMID diagnosis</b>	53 (89.8)	40 (88.9)	13 (92.9)	1.22	[0.85, 1.77]
<b>Any biologic or JAKi</b>	41 (69.5)	34 (75.6)	7 (50.0)	0.79	[0.59, 1.05]
<b>TNF inhibitor</b>	27 (45.8)	24 (53.3)	3 (21.4)	0.84	[0.64, 1.09]
<b>IL-17 blocker</b>	5 (8.5)	4 (8.9)	1 (7.1)	0.89	[0.61, 1.31]
<b>IL-23 blocker</b>	1 (1.7)	1 (2.2)	0 (0.0)	0.79	[0.36, 1.76]
<b>IL-12/23 blocker</b>	2 (3.4)	2 (4.4)	0 (0.0)	0.69	[0.38, 1.24]
<b>JAKi</b>	4 (6.8)	3 (6.7)	1 (7.1)	1.06	[0.68, 1.65]
<b>Small molecules</b>					
Apremilast	1 (1.7)	1 (2.2)	0 (0.0)	0.85	[0.36, 1.99]
Azathioprine	1 (1.7)	1 (2.2)	0 (0.0)	0.81	[0.36, 1.82]
Hydroxychloroquine	7 (11.9)	4 (8.9)	3 (21.4)	1.43	[1.04, 1.97]
Leflunomide	1 (1.7)	1 (2.2)	0 (0.0)	0.50	[0.22, 1.16]
Mesalamine	5 (8.5)	3 (6.7)	2 (14.3)	1.47	[0.93, 2.31]
Methotrexate	14 (23.7)	8 (17.8)	6 (42.9)	1.37	[1.06, 1.78]
NSAIDs	2 (3.4)	2 (4.4)	0 (0.0)	0.96	[0.53, 1.71]
Prednisone	7 (11.9)	3 (6.7)	4 (28.6)	1.40	[1.01, 1.93]
Sulfasalazine	1 (1.7)	1 (2.2)	0 (0.0)	0.86	[0.37, 2.01]
<b>Biologics</b>					
Adalimumab	11 (18.6)	10 (22.2)	1 (7.1)	0.93	[0.70, 1.22]
Certolizumab	2 (3.4)	2 (4.4)	0 (0.0)	0.86	[0.48, 1.54]
Etanercept	4 (6.8)	3 (6.7)	1 (7.1)	1.01	[0.66, 1.57]
Guselkumab	1 (1.7)	1 (2.2)	0 (0.0)	0.79	[0.36, 1.76]
Infliximab	10 (16.9)	9 (20.0)	1 (7.1)	0.88	[0.62, 1.23]
Ixekizumab	1 (1.7)	1 (2.2)	0 (0.0)	0.92	[0.41, 2.07]
Rituximab	1 (1.7)	0 (0.0)	1 (7.1)	1.41	[0.52, 3.86]
Secukinumab	4 (6.8)	3 (6.7)	1 (7.1)	0.88	[0.56, 1.38]
Tocilizumab	1 (1.7)	0 (0.0)	1 (7.1)	2.23	[1.03, 4.86]
Tofacitinib	4 (6.8)	3 (6.7)	1 (7.1)	1.06	[0.68, 1.65]
Ustekinumab	2 (3.4)	2 (4.4)	0 (0.0)	0.69	[0.38, 1.24]
Vedolixumab	0 (0.0)	0 (0.0)	0 (0.0)	--	--

♦IMID denotes immune mediated inflammatory disease, ACE angiotensin-converting enzyme, ARB angiotensin II receptor blocker, JAKi janus kinase inhibitor, TNF tumor necrosis factor, and IL interleukin.

\*OR and 95% CI for hospitalization based on chronic medication use, adjusted for age, sex, BMI, and selected comorbidities (history of organ transplantation, congestive heart failure, hypertension, diabetes mellitus, COPD, and pregnancy)

**Table S4.** Detailed Clinical Course of Patients Hospitalized with COVID-19.♦

	Age	Sex	Disease/ Severity	Medications	Comorbidities	Symptoms	Imaging Findings	Hospital Outcomes
<b>A</b>	73	Male	PsA Moderate	Tofacitinib	Diabetes BMI> 40	Fever >100.4 Cough Shortness of breath	CXR: Diffuse patchy opacities	Regular room Needed supplemental O2 with nasal cannula Given hydroxychloroquine/ azithromycin Discharged at day 14
<b>B</b>	51	Male	PsA Mild	Secukinumab	Hypertension BMI> 35	Fever > 102 Cough Shortness of breath	CXR: Prominence of bronchovascular markings	Regular room Needed supplemental O2 with nasal cannula Given hydroxychloroquine/ azithromycin Discharged at day 3
<b>C</b>	67	Male	RA Mild	Methotrexate 20 mg Hydroxychloroquine Prednisone 5 mg		Fever> 103 Cough Shortness of breath	CXR: Diffuse patchy opacities Prominent interstitial markings	Regular room Needed supplemental O2 with nasal cannula Continued home hydroxychloroquine/given azithromycin Discharged at day 2
<b>D</b>	54	Female	RA Remission	Rituximab Methotrexate 10 mg Prednisone 5mg	Hypertension Diabetes BMI> 40	Fever >102 Cough Shortness of breath Diarrhea Loss of smell Loss of taste	CXR: Bilateral lower lung opacities	Regular room Needed supplemental O2 with non- rebreather mask Given hydroxychloroquine/azithromycin/ lopinavir-ritonavir /tocilizumab Discharged at day 10
<b>E</b>	47	Female	RA Remission	Tocilizumab Methotrexate 15 mg Hydroxychloroquine	BMI > 30	Fever >102 Cough Shortness of breath Loss of smell Loss of taste	CXR: Bilateral lower lung opacities.	Regular room Needed supplemental O2 with nasal cannula Continued home hydroxychloroquine/given azithromycin Discharged at day 6
<b>F</b>	62	Male	PsA Mild	Methotrexate 20 mg	Hypertension BMI >30	Fever >103 Shortness of breath	CXR: Diffuse patchy opacities	ICU level care ARDS requiring ventilator assistance Elevated IL-6 (9 pg/ml), CRP (315.7 mg/L), D-dimer (2,828 ng/ml), ferritin (3,583 ng/ml) levels Given hydroxychloroquine /azithromycin/ lopinavir-ritonavir Currently on hospital day 24
<b>G</b>	57	Female	RA Moderate	Prednisone 15 mg Methotrexate 20 mg		Fever> 102 Cough Shortness of breath Diarrhea	CXR: Bilateral lower lung opacities	Regular room No supplemental oxygen needed Given hydroxychloroquine/ azithromycin Discharged at day 10
<b>H</b>	59	Male	Psoriasis Severe	UV light therapy	Hypertension BMI >40 History of heart disease (stent x2)	Cough Shortness of breath		Died on arrival to the ED
<b>I</b>	60	Female	RA Moderate	Etanercept	Hypertension COPD	Fever > 100.4 Cough Shortness of breath Diarrhea	CXR: Diffuse patchy opacities Coarsened pulmonary markings	Regular room Needed supplemental O2 with nasal cannula Given hydroxychloroquine/ azithromycin Discharged at day 7
<b>J</b>	52	Female	RA Moderate	Hydroxychloroquine Methotrexate 20 mg Prednisone 10mg	Hypertension BMI >=30	Fever >101 Cough Shortness of breath Diarrhea	CXR: Bilateral lower lung patchy opacities Coarsened pulmonary markings	Regular room Needed supplemental O2 with nasal cannula Continued home hydroxychloroquine/given azithromycin/lopinavir-ritonavir Discharged at day 7
<b>K</b>	34	Male	UC Remission	Infliximab	None	Fever > 101 Cough Runny Nose	CXR: Coarsened pulmonary markings No definite consolidation	Regular room No supplemental O2 need Not treated medically Discharged within 24 hours
<b>L</b>	26	Female	UC Remission	Mesalamine	None	Fever > 99 Cough	Not available	Regular room No supplemental O2 needed Not treated medically

						Shortness of breath		Discharged within 24 hours
<b>M</b>	25	Male	CD Moderate	Adalimumab	None	Fever > 102 Cough Shortness of breath	Not available	Regular room No supplemental O2 needed Not treated medically Discharged at day 2
<b>N</b>	26	Female	UC Severe	Prednisone 20 mg	7 weeks pregnant	Shortness of breath	CXR: No definite consolidation	Admitted for UC flare Regular room No supplementary O2 needed Given hydroxychloroquine/ azithromycin UC treated with Cyclosporine and tapering prednisone Currently on hospital day 11

♦PsA denotes psoriatic arthritis, RA rheumatoid arthritis, UC ulcerative colitis, CD Crohn's disease, CXR chest X-ray, BMI body mass index, COPD chronic obstructive pulmonary disease, O2 oxygen, ICU intensive care unit, ARDS acute respiratory distress syndrome, IL-6 interleukin-6, and CRP c-reactive protein.

**Table S5.** Hospitalization Rate of Immune-Mediated Inflammatory Disease Patients with Confirmed or Highly Suspected COVID-19 by Age Group.♦

<b>Age group</b>	<b>IMID total cases—n</b>	<b>IMID hospitalized cases – n (%)</b>	<b>NYC Total Cases<sup>1</sup>—n</b>	<b>NYC Total Hospitalized Cases<sup>1</sup>—n (%)</b>
<b>18 to 44</b>	42	4 (10)	49,887	5,105 (10)
<b>45 to 65</b>	34	8 (24)	49,383	12,675 (26)
<b>65 to 74</b>	10	2 (20)	17,072	8,127 (48)

<sup>1</sup>NYC Health. Coronavirus Disease 2019 Daily Data Summary: NYC COVID-19 Hospitalizations Among Confirmed Cases.

<https://www1.nyc.gov/assets/doh/downloads/pdf/imm/covid-19-daily-data-summary-hospitalizations-04212020-1.pdf> (Accessed April 21, 2020)

♦IMID denotes immune mediated inflammatory disease, and NYC New York City.



**Table S6.** Medication Use in All Patients with a Primary Immune-Mediated Inflammatory Disease of Psoriasis and Psoriatic Arthritis with Confirmed or Suspected COVID-19.♦

<b>Medication – n(%)</b>	<b>Total (n = 25)</b>	<b>Ambulatory (n = 21)</b>	<b>Hospitalized (n = 4)</b>
<b>ACE inhibitor/ARB</b>	6 (24.0)	4 (19.0)	2 (50.0)
<b>Any medication for primary IMID diagnosis</b>	22 (88.0)	19 (90.5)	3 (75.0)
<b>Any biologic or JAK inhibitors</b>	20 (80.0)	17 (80.0)	2 (50.0)
<b>TNF inhibitor</b>	7 (28.0)	7 (33.3)	0 (0.0)
<b>IL-17 blocker</b>	6 (24.0)	5 (23.8)	1 (25.0)
<b>IL-23 blocker</b>	3 (12.0)	3 (14.3)	0 (0.0)
<b>IL-12/23 blocker</b>	2 (8.0)	2 (9.5)	0 (0.0)
<b>JAK inhibitor</b>	2 (8.0)	1 (4.8)	1 (25.0)
<b>Small molecules</b>			
Apremilast	1 (4.0)	1 (4.8)	0 (0.0)
Hydroxychloroquine	1 (4.0)	1 (4.8)	0 (0.0)
Methotrexate	4 (16.0)	3 (14.3)	1 (25.0)
NSAIDs	2 (8.0)	2 (9.5)	0 (0.0)
Prednisone	2 (8.0)	2 (9.5)	0 (0.0)
<b>Biologics</b>			
Adalimumab	4 (16.0)	4 (19.0)	0 (0.0)
Certolizumab	2 (8.0)	2 (9.5)	0 (0.0)
Etanercept	1 (4.0)	1 (4.8)	0 (0.0)
Guselkumab	3 (12.0)	3 (14.3)	0 (0.0)
Ixekizumab	1 (4.0)	1 (4.8)	0 (0.0)
Secukinumab	5 (20.0)	4 (19.0)	1 (25.0)
Tofacitinib	2 (8.0)	1 (4.8)	1 (25.0)
Ustekinumab	2 (8.0)	2 (9.5)	0 (0.0)

♦IMID denotes immune mediated inflammatory disease, ACE angiotensin-converting enzyme, ARB angiotensin II receptor blocker, JAK janus kinase, TNF tumor necrosis factor, and IL interleukin.

**Table S7.** Medication Use in All Patients with a Primary Immune-Mediated Inflammatory Disease of Rheumatoid Arthritis with Confirmed or Suspected COVID-19.♦

<b>Medication – n(%)</b>	<b>Total (n =20)</b>	<b>Ambulatory (n =14)</b>	<b>Hospitalized (n =6)</b>
<b>ACE inhibitor/ARB</b>	5 (25.0)	2 (14.3)	3 (50.0)
<b>Any medication for primary IMID diagnosis</b>	20 (100.0)	14 (100.0)	6 (100.0)
<b>Any biologic or JAK inhibitor</b>	16 (80.0)	13 (90.3)	3 (50.0)
<b>TNF inhibitor</b>	9 (45.0)	8 (57.1)	1 (16.7)
<b>IL-17 blocker</b>	1 (5.0)	1 (7.1)	0 (0.0)
<b>JAK inhibitor</b>	3 (15.0)	3 (21.4)	0 (0.0)
<b>Small molecules</b>			
Azathioprine	1 (5.0)	1 (7.1)	0 (0.0)
Hydroxychloroquine	5 (25.0)	2 (14.3)	3 (50.0)
Leflunomide	1 (5.0)	1 (7.1)	0 (0.0)
Methotrexate	12 (60.0)	7 (50.0)	5 (83.3)
NSAIDs	1 (5.0)	1 (7.1)	0 (0.0)
Prednisone	5 (25.0)	1 (7.1)	4 (66.7)
Sulfasalazine	1 (5.0)	1 (7.1)	0 (0.0)
<b>Biologics</b>			
Adalimumab	2 (10.0)	2 (14.3)	0 (0.0)
Certolizumab	1 (5.0)	1 (7.1)	0 (0.0)
Etanercept	5 (25.0)	4 (28.6)	1 (16.7)
Infliximab	1 (5.0)	1 (7.1)	0 (0.0)
Rituximab	1 (5.0)	0 (0.0)	1 (16.7)
Secukinumab	1 (5.0)	1 (7.1)	0 (0.0)
Tocilizumab	1 (5.0)	0 (0.0)	1 (16.7)
Tofacitinib	3 (15.0)	3 (21.4)	0 (0.0)

♦IMID denotes immune mediated inflammatory disease, ACE angiotensin-converting enzyme, ARB angiotensin II receptor blocker, JAK janus kinase, TNF tumor necrosis factor, and IL interleukin.

**Table S8.** Medication Use in All Patients with a Primary Immune-Mediated Inflammatory Disease of Inflammatory Bowel Disease (Crohn’s Disease and Ulcerative Colitis) with Confirmed or Suspected COVID-19 Infection.♦

<b>Medication – n(%)</b>	<b>Total (n = 37)</b>	<b>Ambulatory (n = 33)</b>	<b>Hospitalized (n = 4)</b>
<b>ACE inhibitor/ARB</b>	2 (5.4)	2 (6.1)	0 (0.0)
<b>Any medication for primary IMID diagnosis</b>	30 (81.1)	26 (78.8)	4 (100.0)
<b>Any biologic or JAK inhibitor</b>	26 (70.2)	23 (69.7)	2 (50.0)
<b>TNF inhibitor</b>	19 (51.4)	17 (51.5)	2 (50.0)
<b>IL-12/23 blocker</b>	4 (10.8)	4 (12.1)	0 (0.0)
<b>Small molecules</b>			
Hydroxychloroquine	1 (2.7)	1 (3.0)	0 (0.0)
Mesalamine	7 (18.9)	5 (15.2)	2 (50.0)
Methotrexate	1 (2.7)	1 (3.0)	0 (0.0)
Prednisone	1 (2.7)	1 (3.0)	0 (0.0)
<b>Biologics</b>			
Adalimumab	8 (21.6)	7 (21.2)	1 (25.0)
Infliximab	11 (29.7)	10 (30.3)	1 (25.0)
Ustekinumab	4 (10.8)	4 (12.1)	0 (0.0)
Vedolixumab	1 (2.7)	1 (3.0)	0 (0.0)

♦IMID denotes immune mediated inflammatory disease, ACE angiotensin-converting enzyme, ARB angiotensin II receptor blocker, JAK janus kinase, TNF tumor necrosis factor, and IL interleukin.