

# Co<sup>3</sup>: COVID, Cocci and Coinfection

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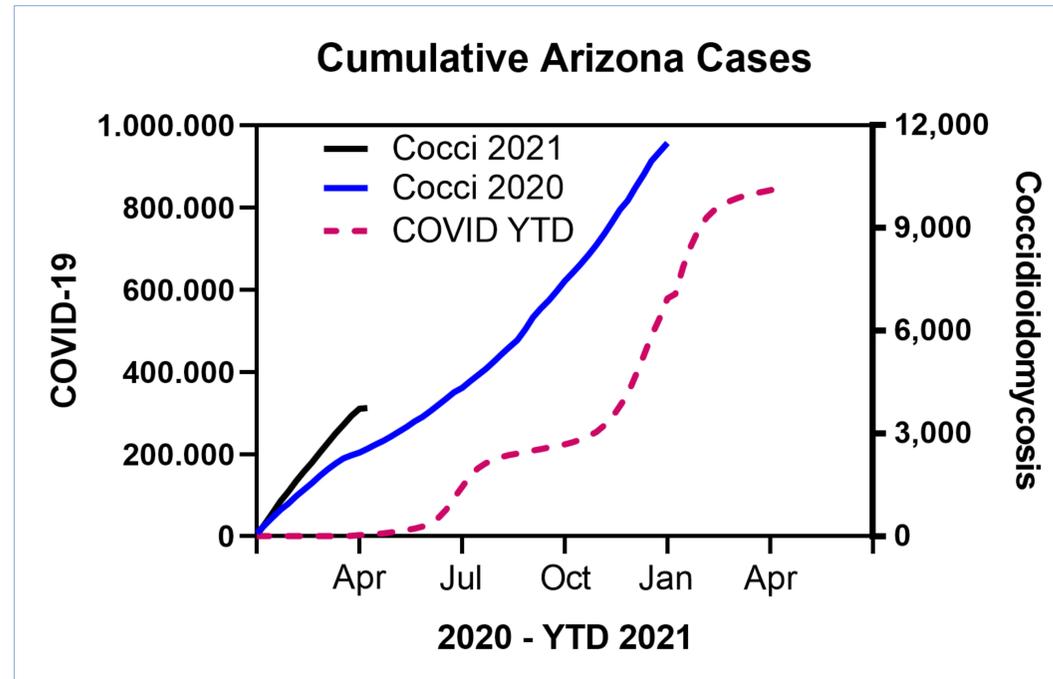
## Background

Both COVID-19 and coccidioidomycosis present with fever and respiratory symptoms; as such, simultaneous testing for COVID and coccidioidomycosis was commonly performed in Arizona within Banner Health. Many of the patients found to be positive for COVID by PCR were also positive for Coccidioidomycosis by EIA.

## Methods

Arizona Department of Health Services provided reported Arizona cases of COVID-19 and Coccidioidomycosis from week 1, 2020 through week 14, 2021. From Banner Health Data Warehouse, all first tests of patients for SARS-CoV-2 PCR and/or coccidioidal serology done from Jan 1, 2020 through March 31, 2021 were enumerated. Of these, results were compared where both were done within 10 days of each other. These data are shown in the adjacent figure and table. Chart review to confirm those with true co-infections is ongoing.

## Results



## Results (cont.)

Coccidioidal weekly case rates dropped in the early part of the COVID-19 pandemic but accelerated in mid-year through March, 2021. As noted previously (Pu et al., Clin Infect Dis, 2020), most coccidioidal infections in Banner Health are identified at hospitalization. Most co-testing for SARS-CoV-2 and cocci was performed during hospitalization. In preliminary chart reviews, younger patients were more likely to have a positive cocci test.

## Conclusions

Within our Coccidioides-endemic region, testing for coccidioidal antibodies in patients suspected of, and tested for, COVID-19 identified significant numbers of Cocci cases (n=1,735). It is likely that the diagnosis of valley fever streamlined care and limited broad antibacterial use in many patients. The increased pneumonia-related hospitalizations during the pandemic likely contributed to the increased incidence of reported cocci during the past year. Further studies on the subset of patients with co-infection are ongoing.

Units	Banner-wide testing for COVID-19 PCR and Coccidioidal antibodies							
	Total (% pos)		COVID & Cocci Tested together (± 10 days)					
	COVID	Cocci	Total Tested	COVID +		COVID -		CV <sup>+</sup> /Cx <sup>-</sup> : Cx <sup>+</sup> /CV <sup>-</sup>
			Cocci+	Cocci-	Cocci+	Cocci-		
All units	444,184 (19.3%)	38,573 (9.9%)	20,427	462	6,222	1,735	12,008	10 : 2.8
Hospitals	439,444 (19.3%)	28,675 (9.7%)	18,920	441	5,986	1,465	11,028	10 : 2.4
Urgent Care	1,029 (28.6%)	1,520 (15.5%)	651	16	151	98	350	10 : 6.5
Clinics	3,286 (13.0%)	7,635 (8.8%)	583	1	42	115	425	10 : 27
EM Dept	425 (18.4%)	744 (19.2%)	309	4	43	57	205	10 : 13