

Changes in Patient Demographics During a Transition to Telehealth

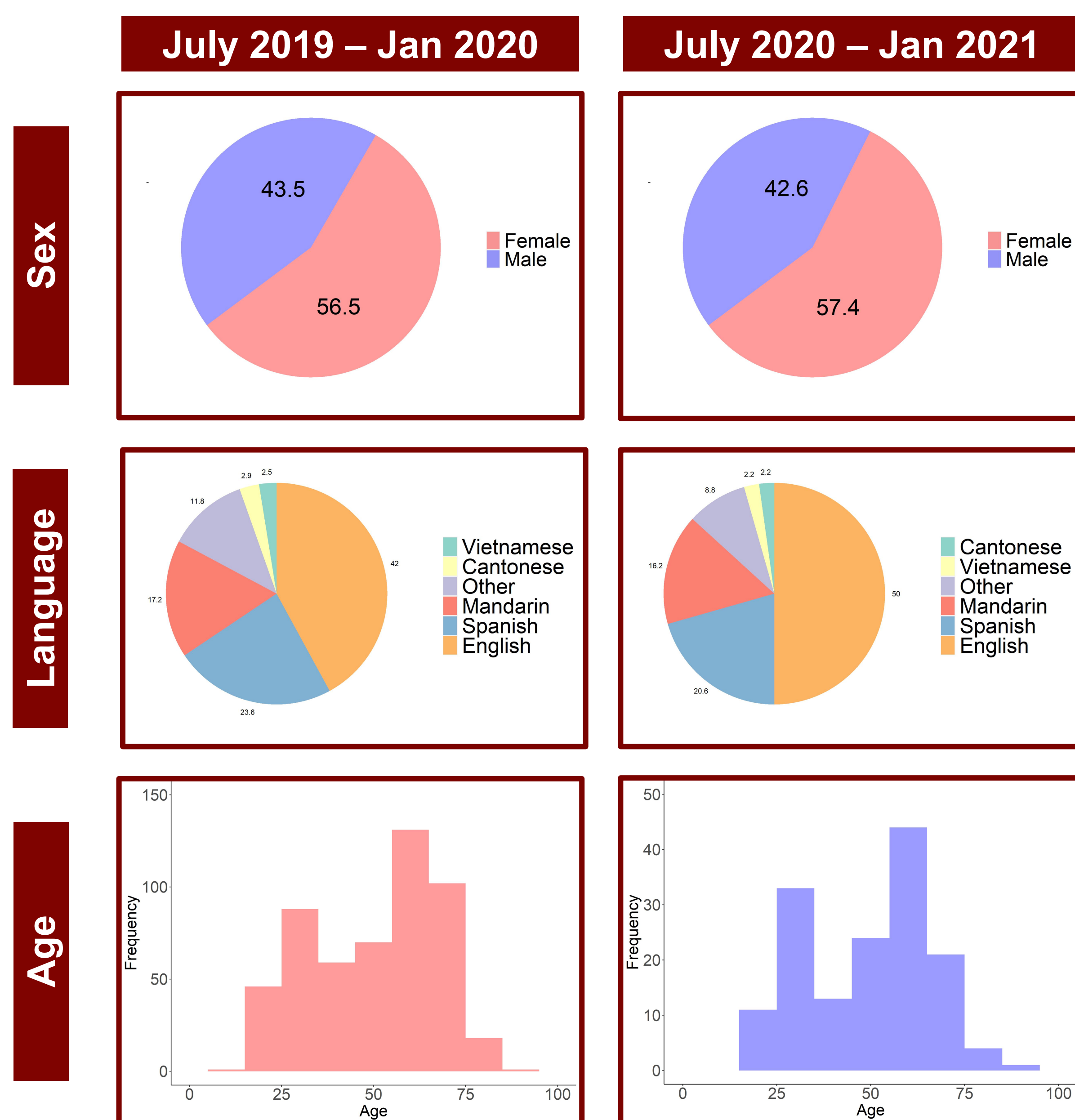
Background

- The Cardinal Free Clinics (CFCs) are two student-run free clinics affiliated with the Stanford School of Medicine that serve a diverse patient population in the California Bay Area
- In-person visits were suspended in March 2020 due to the global COVID-19 pandemic, and the CFCs reopened in July 2020 after transitioning to telehealth
- Certain patient populations might be excluded from the transition to telehealth due to lack of access to technology, low literacy or language barriers, and other socioeconomic factors
- We performed a retrospective analysis to identify changes in patient demographics before and after the shift to telehealth

Methods

- Demographic data, diagnosis codes, and prescribed medications for telehealth patients seen at the CFCs July 2020-January 2021 (post-COVID, N=152) were compared with in-person patients seen at the CFCs July 2019-January 2020 (pre-COVID, N=516) as well as telehealth patients seen at Stanford Health Care (SHC) July 2020-January 2021. Pearson's chi square test with Yates' continuity correction was used for all statistical comparisons

Figure 1. Patient demographics before vs. after telehealth



Compared to our pre-COVID cohort of patients, we observed the following changes, none of which were significant at the 5% level:

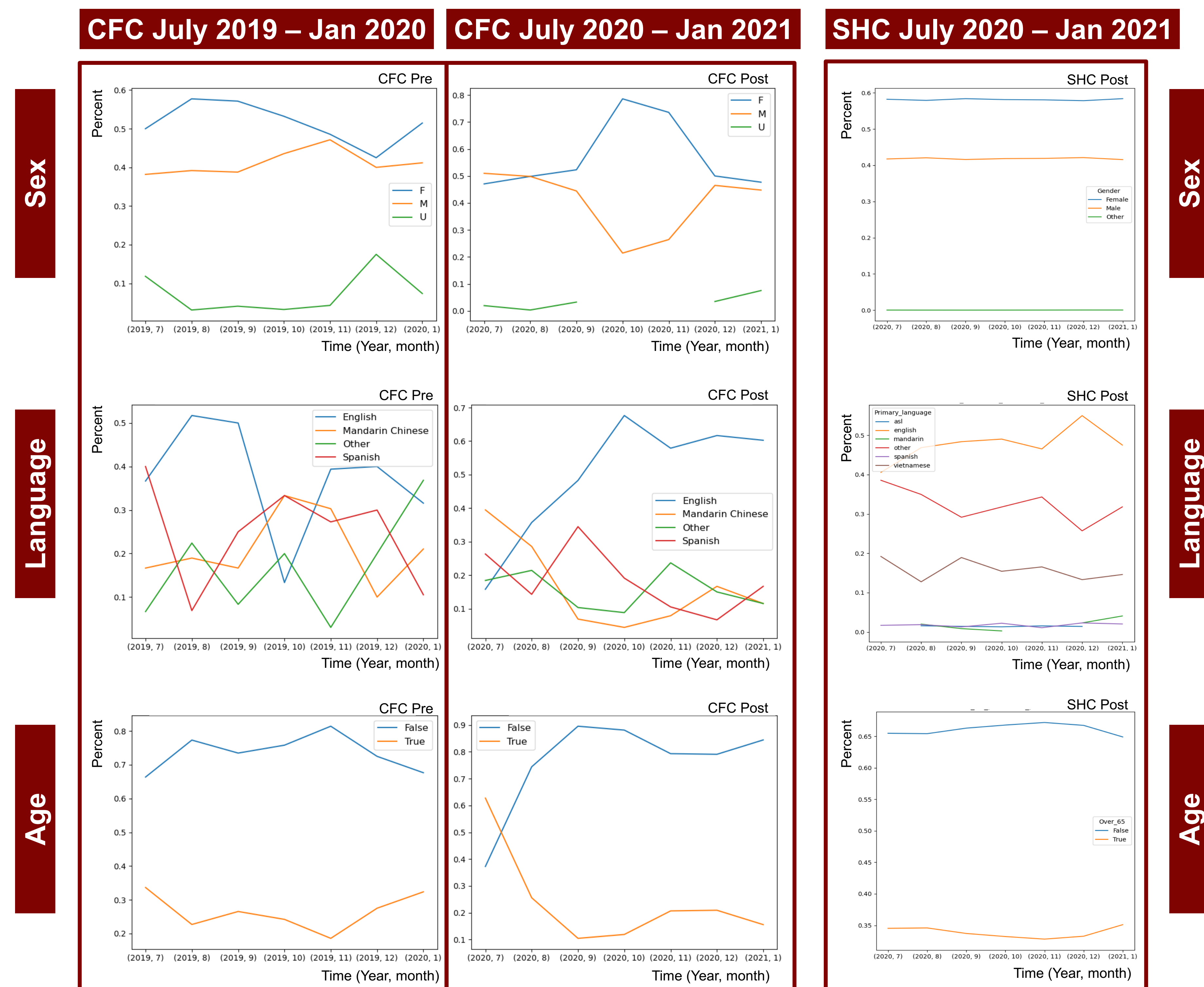
- Sex** - 57% (pre-COVID) to 57% female patients (p=0.91)
- Language** - 42% (pre-COVID) to 50% primarily English-speaking patients (p=0.15)
- Age** - 27% (pre-COVID) to 19% of patients over 65 (p=0.08)

Figure 2. Top diagnosis codes and prescriptions comparing CFCs in-person vs. telehealth and CFCs telehealth vs. SHC telehealth

Diagnoses	Rank	CFC (in-person)	No (%) of patients	CFC (telehealth)	No (%) of patients	SHC (telehealth)	No (%) of patients
		July 2019 – Jan 2020		July 2020 – Jan 2021		July 2020 – Jan 2021	
Diagnoses	#1	Hypertension	61 (5.4)	Hypertension	34 (10.0)	Hypertension	11709 (10.7)
	#2	Influenza vaccine	58 (5.1)	Preventive health care	22 (6.5)	Obstructive sleep apnea	7838 (7.2)
	#3	Preventive health care	50 (4.4)	Type 2 Diabetes	19 (5.6)	Hyperlipidemia	7619 (7.0)
	#4	Type 2 Diabetes	43 (3.8)	Dyslipidemia	11 (3.2)	Chronic pain	4221 (3.9)
	#5	Tdap vaccine	36 (3.2)	Anxiety	10 (3.0)	Anxiety disorder	3670 (3.4)
Prescriptions	Rank	CFC (in-person)	No (%) of patients	CFC (telehealth)	No (%) of patients	SHC (telehealth)	No (%) of patients
		July 2019 – Jan 2020		July 2020 – Jan 2021		July 2020 – Jan 2021	
	#1	Metformin	34 (8.9)	Atorvastatin	24 (11.4)	Gabapentin	978 (2.5)
	#2	Atorvastatin	30 (7.8)	Amlodipine	13 (6.2)	Albuterol	773 (1.9)
	#3	Losartan	25 (6.5)	Gabapentin	10 (4.7)	Triamcinolone acetonide	677 (1.7)
#4	Amlodipine	17 (4.4)	Metformin	9 (4.3)	Diclofenac	658 (1.7)	
#5	Omeprazole	15 (3.9)	Omeprazole	9 (4.3)	Nitrofurantoin	616 (1.5)	

Hypertension was the most common diagnosis in the telehealth period (n=34), followed by **type 2 diabetes mellitus** (n=19). Previously, **hypertension** (n=61) and **influenza vaccine** (n=58) were most common in-person. Atorvastatin, amlodipine, metformin, and omeprazole remain top medications. **Anxiety** was a top diagnosis in both the CFC and SHC populations post-COVID.

Figure 3. Demographic trends by month comparing CFCs in-person vs. telehealth and CFCs telehealth vs. SHC telehealth



While CFC pre-COVID in-person and SHC post-COVID telehealth trends were roughly constant, the CFCs' proportions of patients **under age 65** and **primarily English-speaking** patients seen via telehealth have **increased** over time during the pandemic.

Conclusions

- Our post-COVID telehealth patient population is **largely comparable** to our pre-COVID in-person population
- There is a downward trend in the **age** of patients over time during the pandemic, as well as an increase in **English-speaking** patients, which may coincide with a shift from existing patient follow-ups to new patient visits. Stanford Health Care (SHC) did not experience similar changes in age or primary language
- Hypertension** was the most common diagnosis during both time periods, suggesting that telehealth is an effective platform for diagnosing and treating our patient population
- Gabapentin** emerged as a top five prescription and **anxiety** was a top five diagnosis during the pandemic period in both the CFC and SHC populations
- A notable limitation of telehealth is inability to provide **vaccines** such as influenza and Tdap, which previously were commonly administered
- Close monitoring** will be required to assess whether demographic differences widen over time as the CFCs see new patients. The clinics may consider proactive outreach strategies to address emerging demographic trends

Acknowledgements

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