

EXPLORING THE IMPACT OF COVID-19 ON LIVER TRANSPLANT EVALUATION



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Background

- COVID-19 pandemic disrupted healthcare delivery, including services for liver transplant evaluation (LTE)
- Disruption abruptly shifted LTE services to telehealth
- COVID-19 pandemic was associated with increased alcohol consumption, with an unknown impact on the LTE process

Objectives

- 1. To explore the effect of telehealth services on LTE with a focus on sociodemographic factors
- 2. To examine the changes in burden of alcohol associated liver disease (ALD) resulting in LTE during initial COVID-19 era

Methods

- Retrospective analysis of patients who began LTE during initiation of shelter-in-place (3/16/2020 10/1/2020) and during an identical time the year prior (3/16/2019 10/1/2019)
- Collected sociodemographic data (insurance, language, race), clinical data, LTE encounter type (office, telehealth inpatient), and evaluation duration

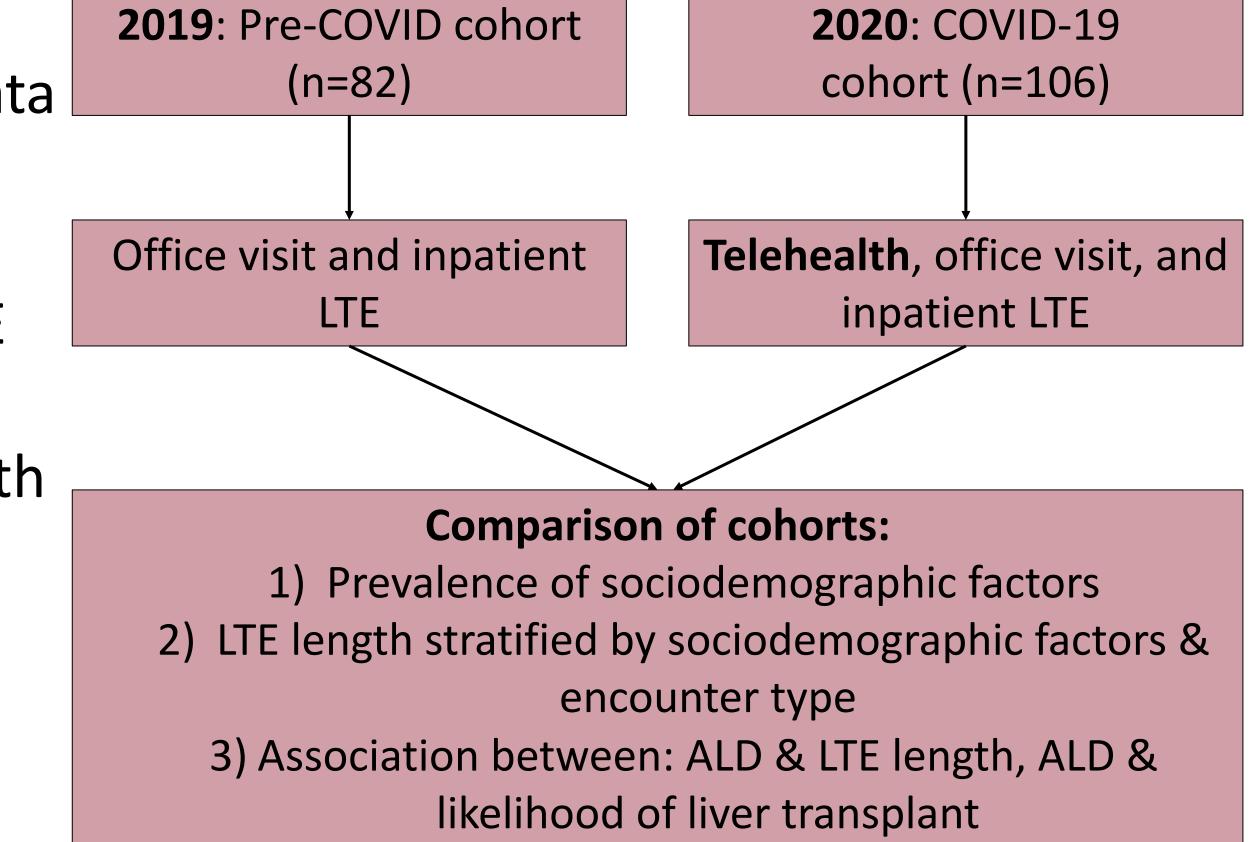


Figure 1: Methods

Results

Table 1. Liver Transplant Evaluation Data: COVID-19 vs pre-COVID-19, univariate analysis

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Cohort Details		2019	2020	Significance		
Median time to committee review all patients (IQR), days						
		33 (11-66)	12 (5-42)	p=0.0026		
Median time to committee review outpatient only (IQR), days						
		41 (14-88)	32 (11-69)	NS		
Median MELD-Na at evaluation (IQR)						
		15 (8-23)	21 (11-29)	p=0.0025		
Encounter Type	Office Visit	62 (75.6%)	24 (22.6%)			
	Telehealth	0 (0.0%)	37 (34.9%)			
	Inpatient	20 (24.4%)	45 (42.5%)	p=0.0131*		
Race	Asian	11 (13.4%)	13 (12.3%)			
	Hispanic	29 (35.3%)	48 (45.3%)			
	White	39 (47.6%)	45 (42.5%)			
	Other	3 (3.7%)	0 (0.0%)	NS		
Insurance	Medi-cal	24 (29.3%)	35 (33.0%)			
	Medicare	31 (37.8%)	34 (32.1%)			
	Other/					
	Government	2 (2.4%)	1 (0.9%)			
	Private	25 (30.5%)	36 (34.0%)	NS		
Language	English	61 (74.4%)	78 (73.6%)			
	Other	21 (25.6%)	28 (26.4%)	NS		
AID	No ALD	36 (43.9%)	54 (50.9%)			
ALD	ALD	46 (56.1%)	52 (49.1%)	NS		

^{*} Pooled outpatient encounters vs inpatient encounters

Table 2: Median LTE length, disaggregated by ALD (days)

Year	ALD	No ALD	Significance
2019	30.5	34.0	NS
2020	11.5	12.0	NS

Conclusions

- COVID-19 era was associated with higher MELD-Na scores and shorter time to committee review, which is explained by increased inpatient evaluations during COVID-19 period
- Median time to committee review in the outpatient setting did not change with the introduction of telehealth, suggestive that telehealth does not prolong length of LTE
- A quasi-Poisson multivariable linear regression analysis showed Asian race (compared to white race) and Medicare (compared to private insurance) were associated with longer time to committee review during COVID-19 (p< 0.05) but not pre-COVID-19
- The prevalence of ALD remained stable during early COVID-19; ALD did not impact LTE length or likelihood of liver transplant

Limitations

- We collected data from a single center
- We obtained data from only the first six months of COVID-19
- Limited sample size

Future Directions

 Expand time period of data collected during COVID-19 to increase statistical power