Changing Demographics of HIV+ Liver Transplant Candidates

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Introduction

- End stage liver disease (ESLD) is a growing cause of morbidity and mortality among HIV-infected (HIV+) individuals.
- Several studies have demonstrated that liver transplantation (LT) is a reasonable therapeutic option for carefully selected HIV+ patients wit ESLD.
- Epidemiologic data on HIV+ candidates awaiting LT are lacking as the Organ Procurement Transplant Network (OPTN) does not collect HIV status at the time of waitlisting.
- We hypothesized that there have been major changes in the characteristics of HIV+ individuals awaiting LT over time.

Methods

- We identified 465 HIV+ listings on the LT waiting list by linking IMS Health pharmacy data with SRTR data, 1/1/2001 – 10/1/2012. IMS captures about 75% of medication fills in the US.
- HIV+ status was determined by ≥1 fill of an antiretroviral medication specific for HIV treatment. Individuals only on a singe hepatitis-B active ARV were not considered to be HIV+.
- 93% of candidates had >1 fill.
- Simultaneous listings were collapsed.

Results

- As of 2012, 76.7% of prevalent HIV+ candidates were aged 50 years or older, versus 31.0% in 2001 and 38.0% in 2005.
- 62.8% were white, 23.3% African-American, and 14% Hispanic.
- Proportions of African-Americans and Hispanics increased, while the proportion of women (<10%) was unchanged.
- Reasons for liver failure included hepatitis C virus infection (HCV) (46.5%) and hepatitis B virus (HBV) (11.6%); malignancy, alcoholic liver disease, cholestasis, and other (including non-alcoholic fatty liver disease) accounted for 41.9% of cases.
- Type 2 diabetes became more prevalent.
- First-time LT versus repeat LT became more prevalent.
- Both Medicare and Medicaid coverage increased.
- The number of new listings in the cohort varied substantially by region, with regions 5, 2, and 9 listing the most candidates.
- Prior to 2001, only 5/11 regions listed a candidate; as of 2012, 10/11 had listed a candidate.

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Figure 1. Candidate character-istics by prevalent waitlist years

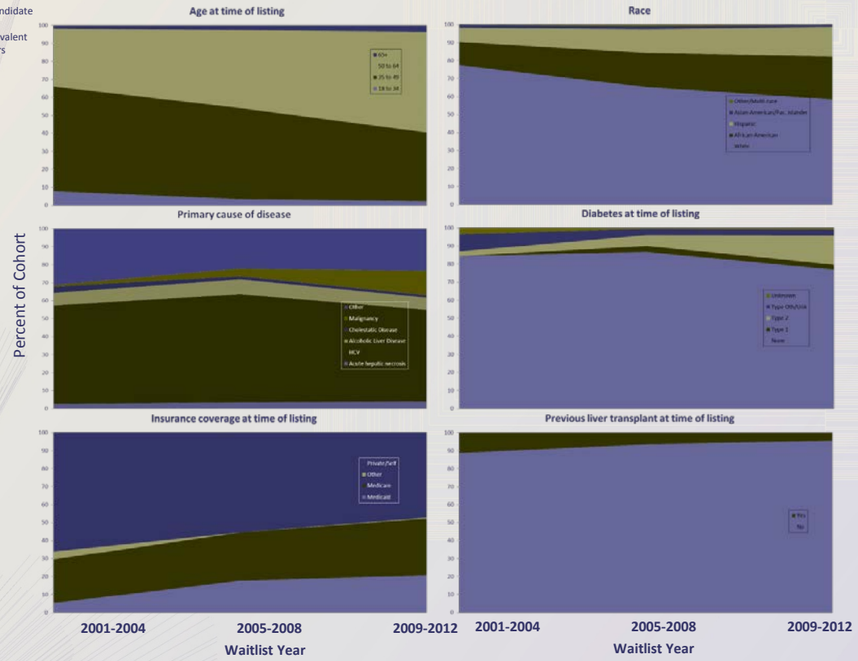
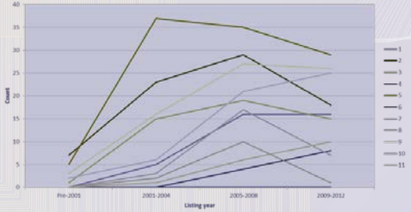


Figure 2 and Table: New HIV+ liver waitlistings by region



Region	Pre-2001	2001-2004	2005-2008	2009-2012	Total Listings
1	0	5	16	16	37
2	7	23	29	18	77
3	1	15	19	15	50
4	0	0	4	8	12
5	5	37	35	29	106
6	0	0	0	0	0
7	2	6	21	25	54
8	0	2	10	1	13
9	3	16	27	26	72
10	0	3	17	7	27
11	0	1	6	10	17

Conclusions

- Demographic characteristics of HIV+ candidates on the LT waiting listing changed substantially over time.
- An increasing proportion were older.
- Racial diversity increased, but HIV+ women are rarely listed.
- Since 2001, there has been a significant increase in the proportion of UNOS regions which now list HIV+ LIT candidates.
- Compared to HCV- or HBV-related cirrhosis, hepatocellular carcinoma and other diseases increasingly accounted for higher proportions of diagnoses. This likely reflects an aging HIV+ population with more comorbid conditions such as diabetes and hypertension.

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