

Is Percentage Exception at Transplant a Driver of MELD Inflation?

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Introduction

- Before 2016, the percentage of deceased donor liver recipients with an exception status at transplant correlated strongly with median MELD at transplant (MMaT), leading to the belief that the increase in the percentage of exceptions is a major driver of MELD inflation.
- The recent decrease in patients with exceptions at transplant, after implementation of the hepatocellular carcinoma (HCC) cap and delay liver transplant exception policy in October 2015, provides a unique opportunity to study the hypothetical link between these two metrics.

Methods

- We selected adult (age ≥ 18 years) deceased donor liver recipients from SRTR standard analysis files January 1, 2006-December 31, 2017.
- Percentages of exceptions and MMaT were calculated by year.
- Status 1, 1A, and 1B recipients were excluded from the calculation of MMaT

Figure 1
National Percentage Exception at Transplant

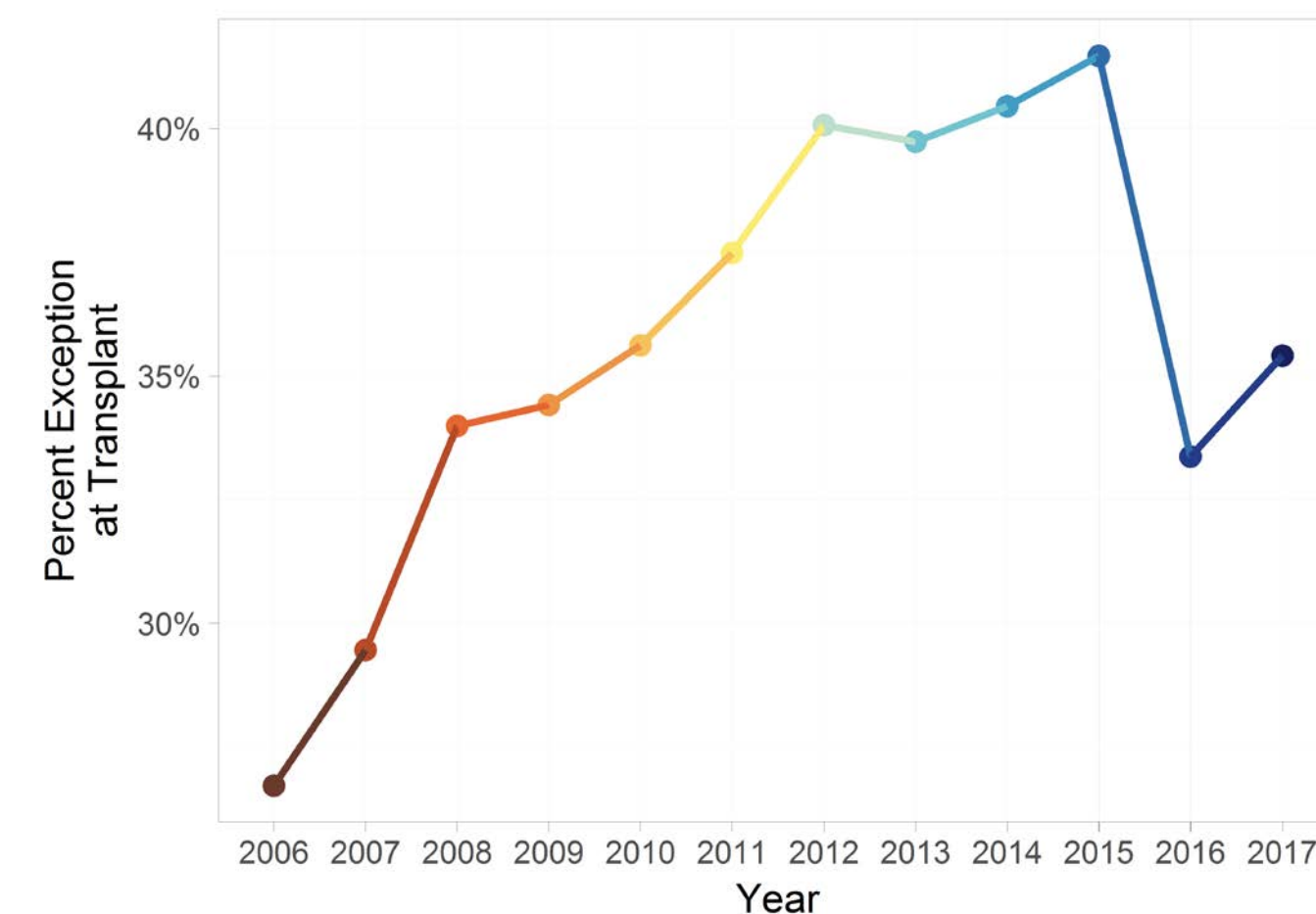


Figure 3
National Median MELD at Transplant

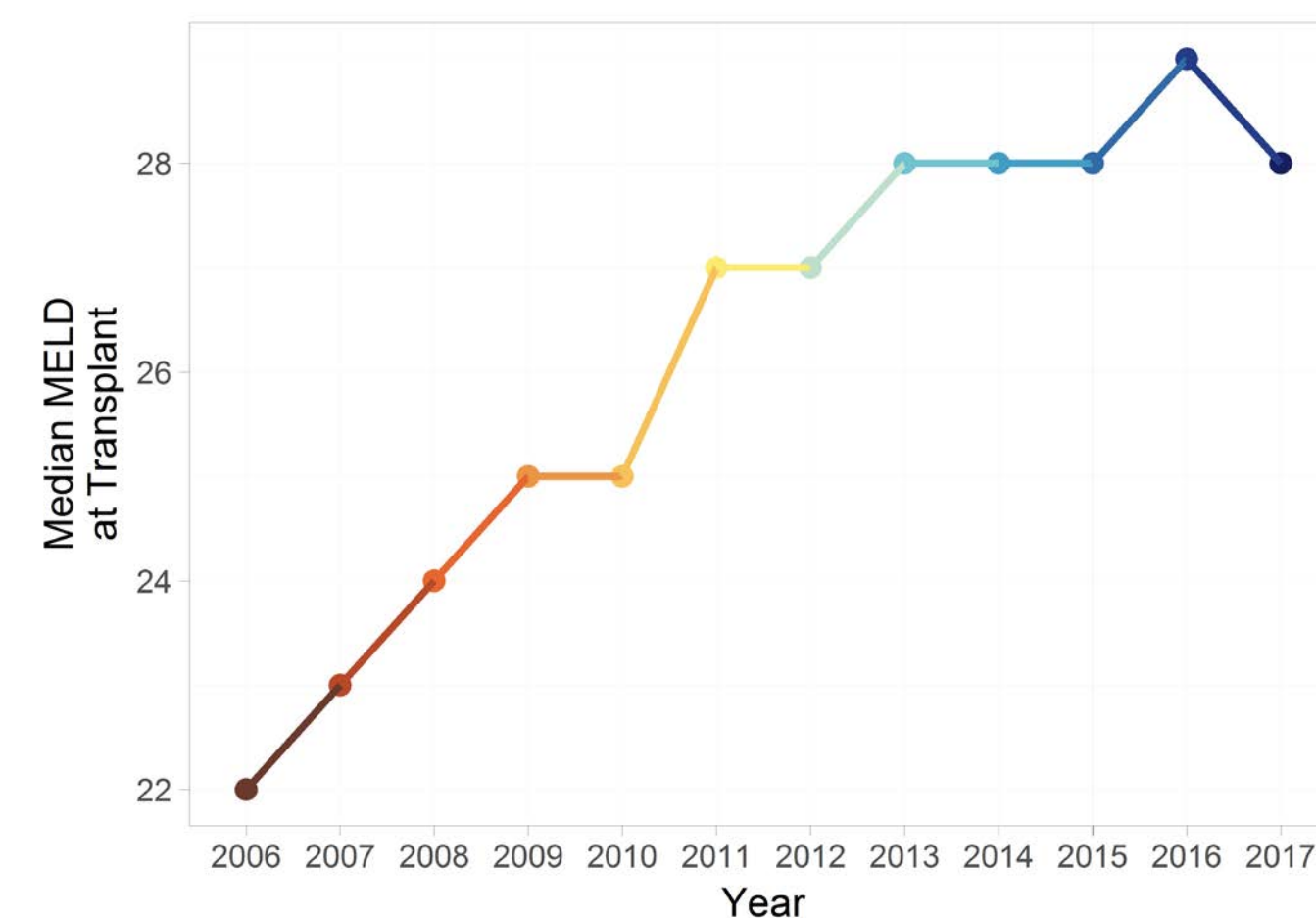


Figure 2
Regional Percentage Exception at Transplant

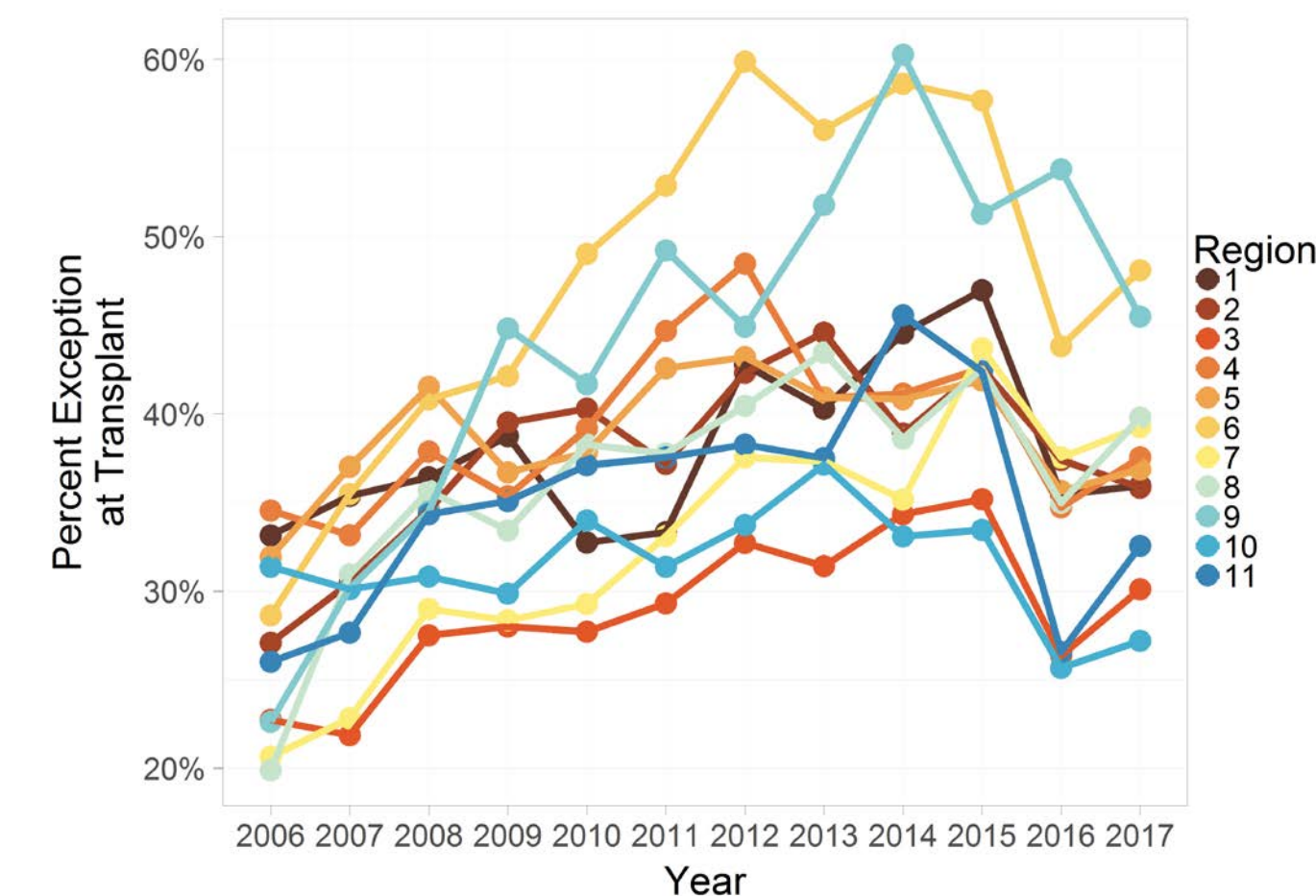
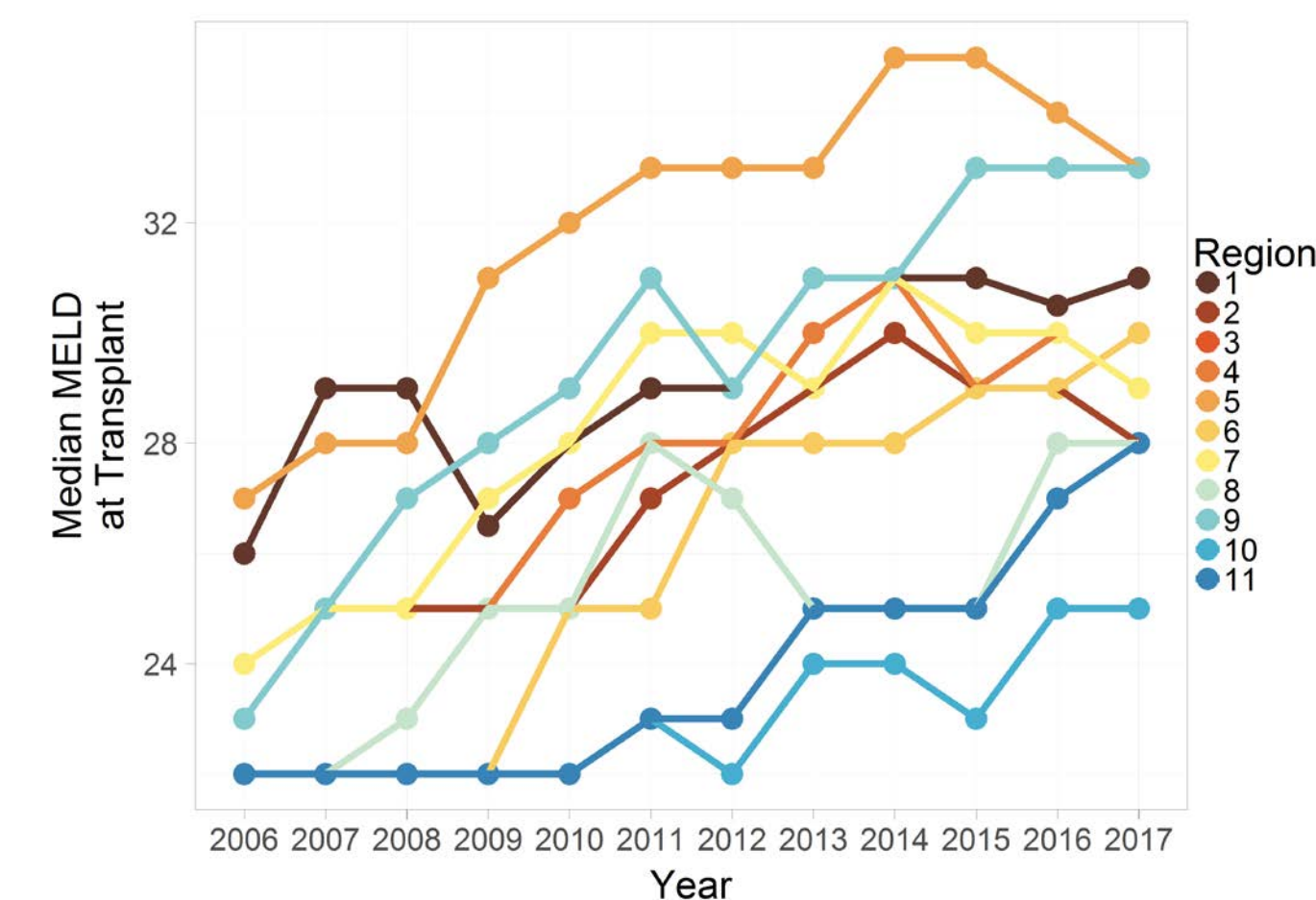


Figure 4
Regional Median MELD at Transplant



Results

- Percentages of recipients with exceptions at transplant rose steadily 2006-2015, but dropped dramatically in 2016 after implementation of HCC cap and delay (Figure 1).
- “HCC2” exceptions made up 14.74% of transplants in 2015, 9.42% in 2016, and 8.82% in 2017.
- “HCC other” exceptions made up 12.38% of transplants in 2015, 11.45% in 2016, and 13.81% in the first half of 2017.
- In each region, the percentage of exceptions at transplant was lower in 2017 than in 2015 (Figure 2).
- National MMaT was the same in 2013 and 2017 (Figure 3).
- In the same period, MMaT increased in 6 regions, remained unchanged in 3, and decreased in 2 (Figure 4).
- From 2006 to 2015, national percentages of recipients with exceptions at transplant and MMaT were highly correlated ($r^2 = 0.95$, $P < 0.001$), but showed no association in the last 2 years.

Conclusions

- MELD inflation does not appear to be driven by percentages of recipients with exception scores at transplant, despite the historical association.
- MELD inflation may be due to improved pretransplant care.
- According to the SRTR Annual Data Report, the waitlist mortality rate for active adult candidates in all MELD groups was approximately half of what it was a decade ago, with the starkest change in MELD 35+ candidates (643.5 deaths per 100 waitlist years, 2006; 339.8, 2016)

The authors have no conflicts to disclose.