



Impact of Safety Net Provision on Indications for Simultaneous Liver-Kidney Transplant and Kidney-After-Liver Transplant

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Introduction

- Managing the number of simultaneous liver-kidney (SLK) transplants in the US has been a challenge.
- A major step forward occurred in 2017, when minimum eligibility criteria for listing patients for SLK transplant were put in place.
- These criteria included a safety net provision whereby patients who did not recover kidney function after 2 months could be prioritized on the kidney transplant waiting list.
- AIM: We sought to better understand the use of and indications for SLK and kidney-after-liver (KAL) transplants after institution of the safety net provision.

Methods

- We used the Scientific Registry of Transplant Recipients database to study SLK and KAL transplants in the US from 2010 through 2022
- We compared the numbers of SLK and KAL transplants before and after 2017 and also compared indications for kidney transplant.

Results

- Since 2010, the number of liver transplants in the US has risen from 6,291 to 9,527.
- The number of SLK transplants increased from 396 in 2010 to 738 in 2016 but has been flat since 2020, such that the percentage of SLK transplants decreased from 9.4% in 2016 to 8.4% in 2022 (Figure 1).
- Most dramatically, the number of SLK transplants meeting the chronic kidney disease (CKD) criteria was 714 in 2022, such that 89% of SLK transplants are currently performed for CKD (Figure 2).
- Since 2017, the percentage of patients listed for a KAL transplant from day 60 to 365 post liver transplant increased from 12% to 42% (Figure 3).
- The indication of acute kidney injury (AKI) for KAL transplant increased from 61 patients in 2016 to 201 in 2022, and the percentage of KAL transplant for AKI increased from 14% to 28% (Figure 4).
- Of note, calcineurin inhibitor toxicity as an indication for KAL transplant decreased from 32% in 2011 to 18% in 2022.
- The number of patients who had transplant under the safety net protocol increased from 29 in 2017 to 180 in 2022.

Figure 1: Percent SLK

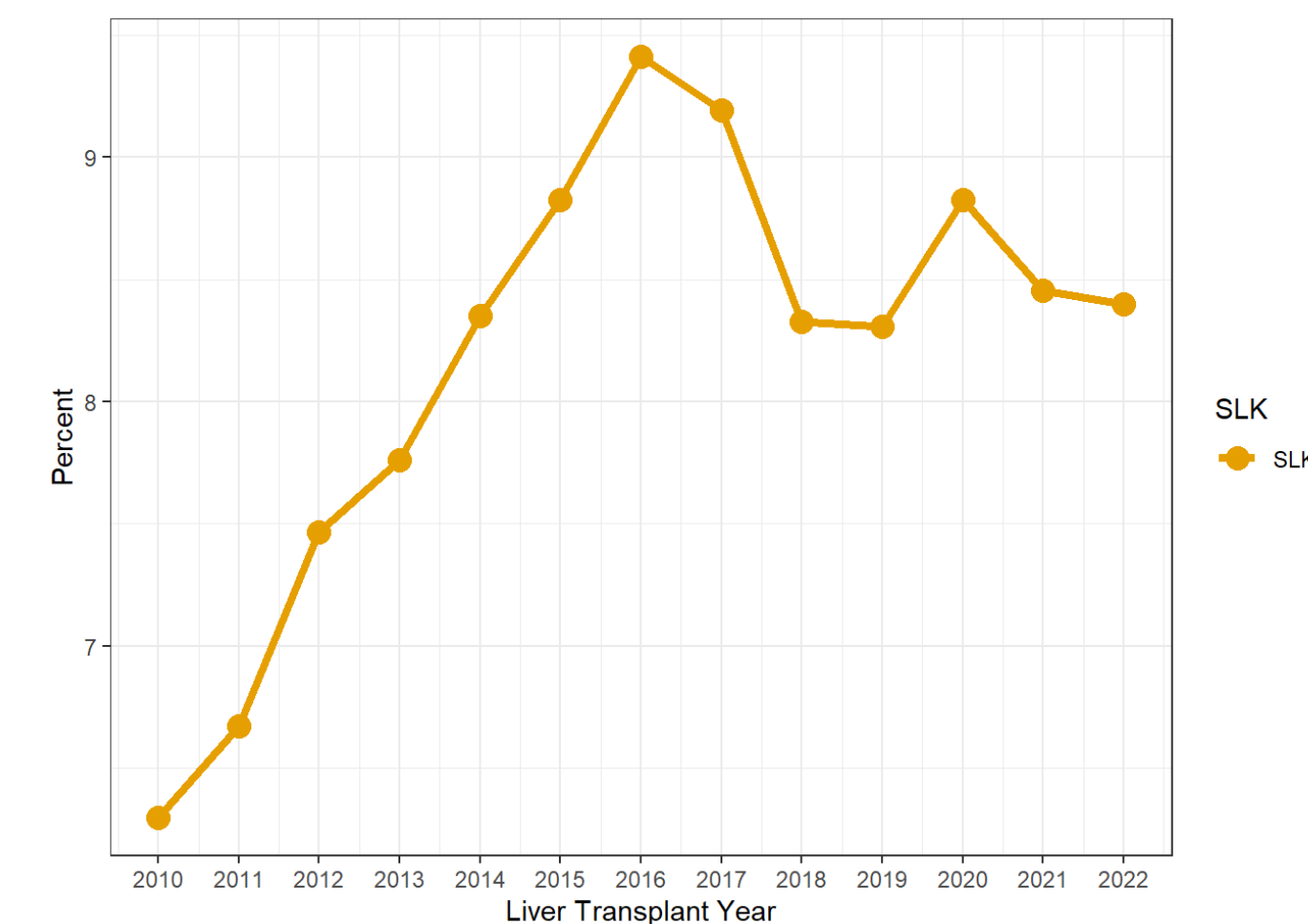


Figure 2: Percent SLK Diagnosis

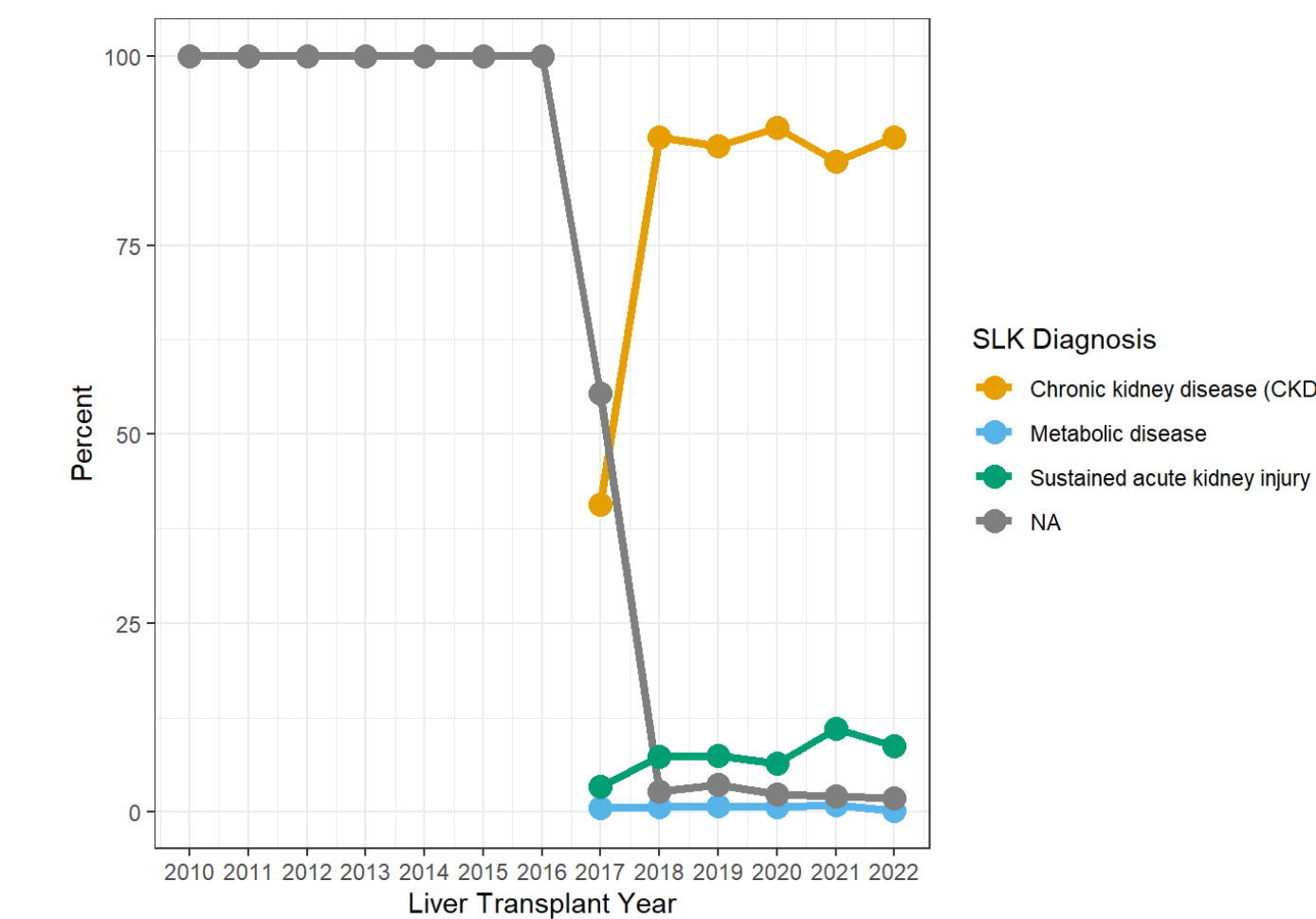


Figure 3: Percent Time from Liver Transplant to Kidney Listing

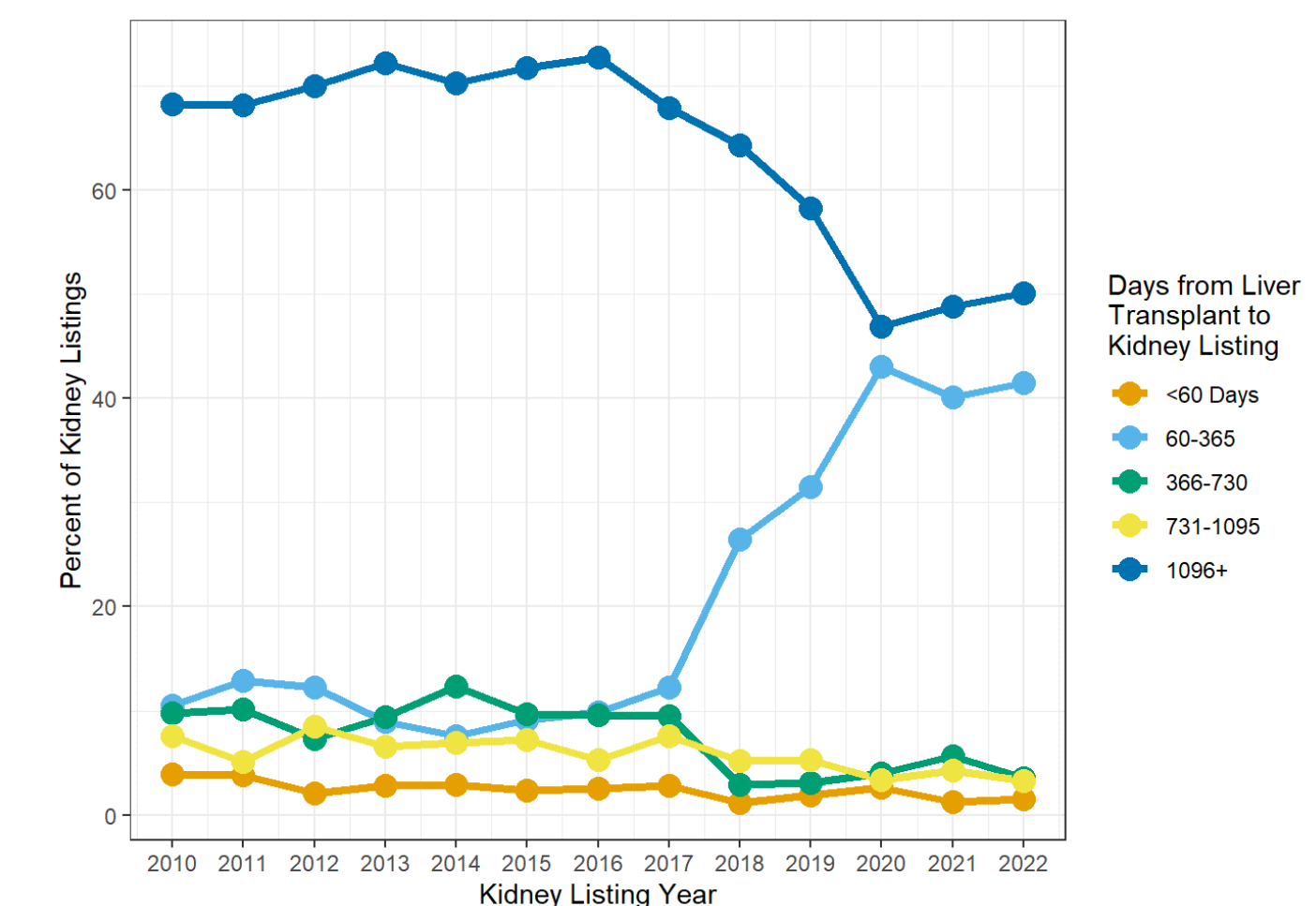
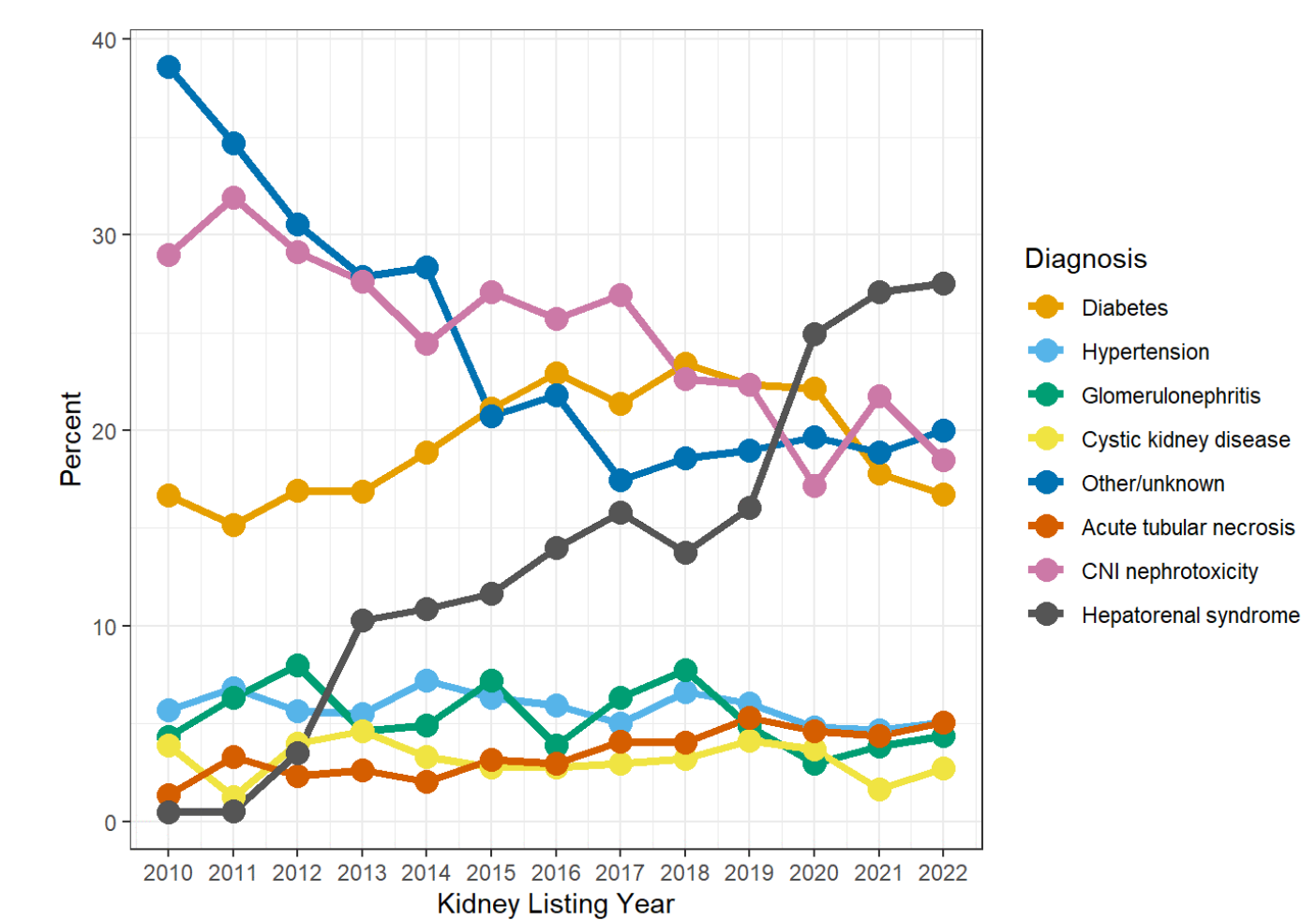


Figure 4: Percent KAL Diagnosis



Conclusions

- The safety net provision has decreased the proportion of SLK transplants in the US from 9.4% to 8.4%.
- Currently in 90% of patients undergoing SLK transplant, the indication for kidney transplant is CKD.
- By contrast, AKI as the indication for KAL transplant has increased 330% and almost half the patients listed for KAL transplant are listed between 2 months and 1 year post liver transplant.

This work was supported wholly or in part by HRSA contract 75R60220C00011. The content is the responsibility of the authors alone and does not necessarily reflect the views or policies of the Department of Health and Human Services, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

The authors have no conflicts of interest to report.