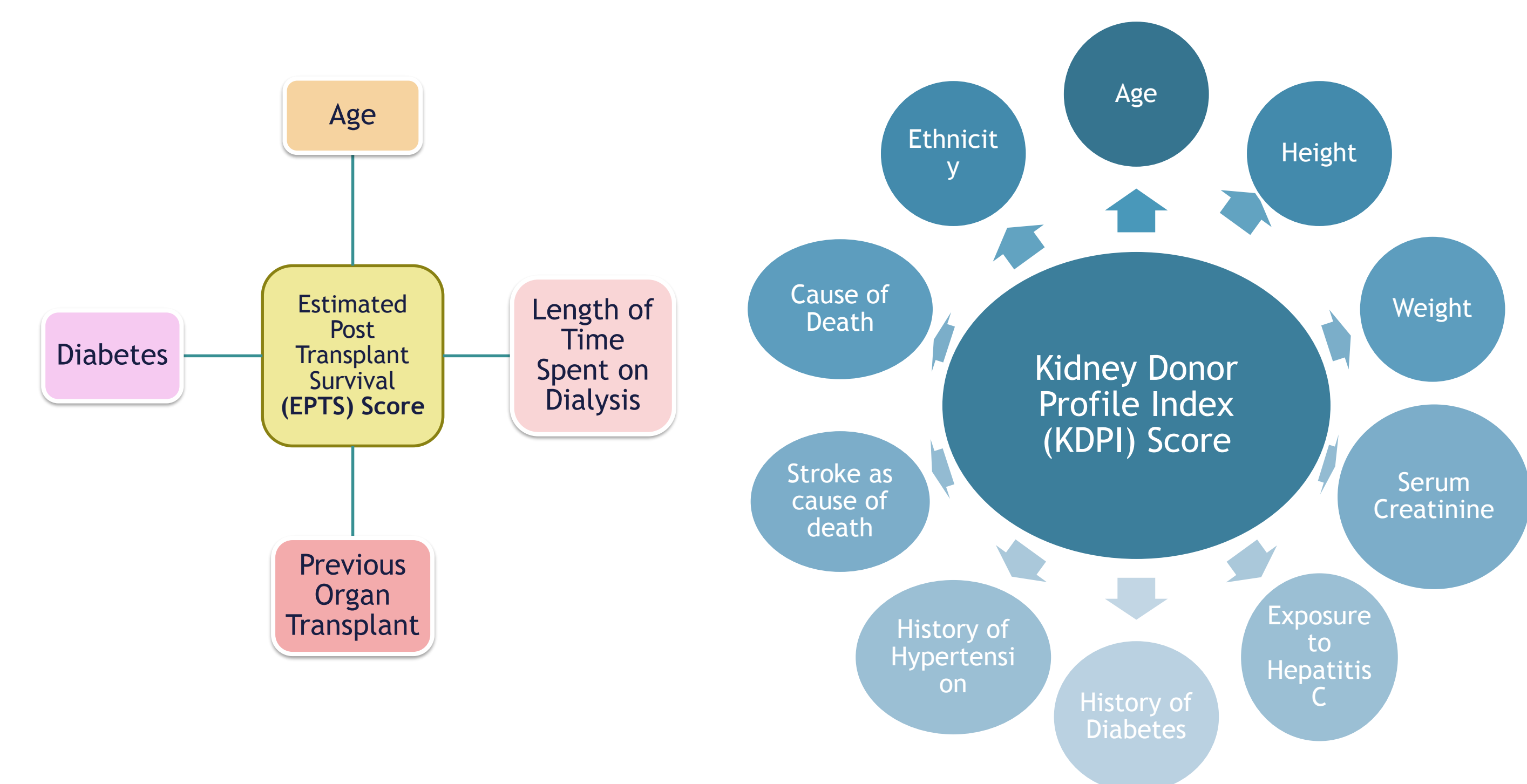


Background

- **660,00** people are suffering from End Stage Renal Disease (ESRD)³.
- **96,307** people are on the wait list for a kidney transplant⁸.
- In 2015, approximately 17,821 individuals received kidney transplants and simultaneously 4,295 individuals died while waiting for a transplant¹⁰.
- Increasing rate of individuals being placed on the waitlist, and no corresponding increase in donors in the United States¹⁰.
- Annual Medicare spending for the treatment of ESRD is approximately \$31 billion³.
- United Network for Organ Sharing, UNOS, is a private non-profit organization, contracted under the government, responsible for managing the nation's organ transplant system and developing policies, maintaining the organ waitlist, matching donors to recipients, and monitoring all organs to ensure the allocation policies are followed⁹.
- The organ transplant process is collaborative, involving UNOS, Organ Procurement and Transplantation Network (OPTN), Organ Procurement Organization (OPO), local community members, transplant centers, and the Scientific Registry of Transplant Recipients (SRTR)⁹.
- OPTN has divided the United States into 11 regions to regionalize organ transplant allocation⁸.
- Transplant candidates are classified by an Estimated Post-Transplant Survival (EPTS) score. This score is associated with how long the patient will need a functioning kidney³.
- All potential kidneys offered for transplant are assigned a Kidney Donor Profile Index (KDPI) percentage score, that indicates the viability of the organ and its function compared to a healthy kidney³.
- Introduction of the EPTS and KDPI has resulted in an increase in organ discard due to perceived low one-year transplant survival rates⁷.

Figure 1: KDPI and EPTS Factors³



Objective

To propose policy recommendations to decrease the discarding of viable kidneys and to increase transplantation.

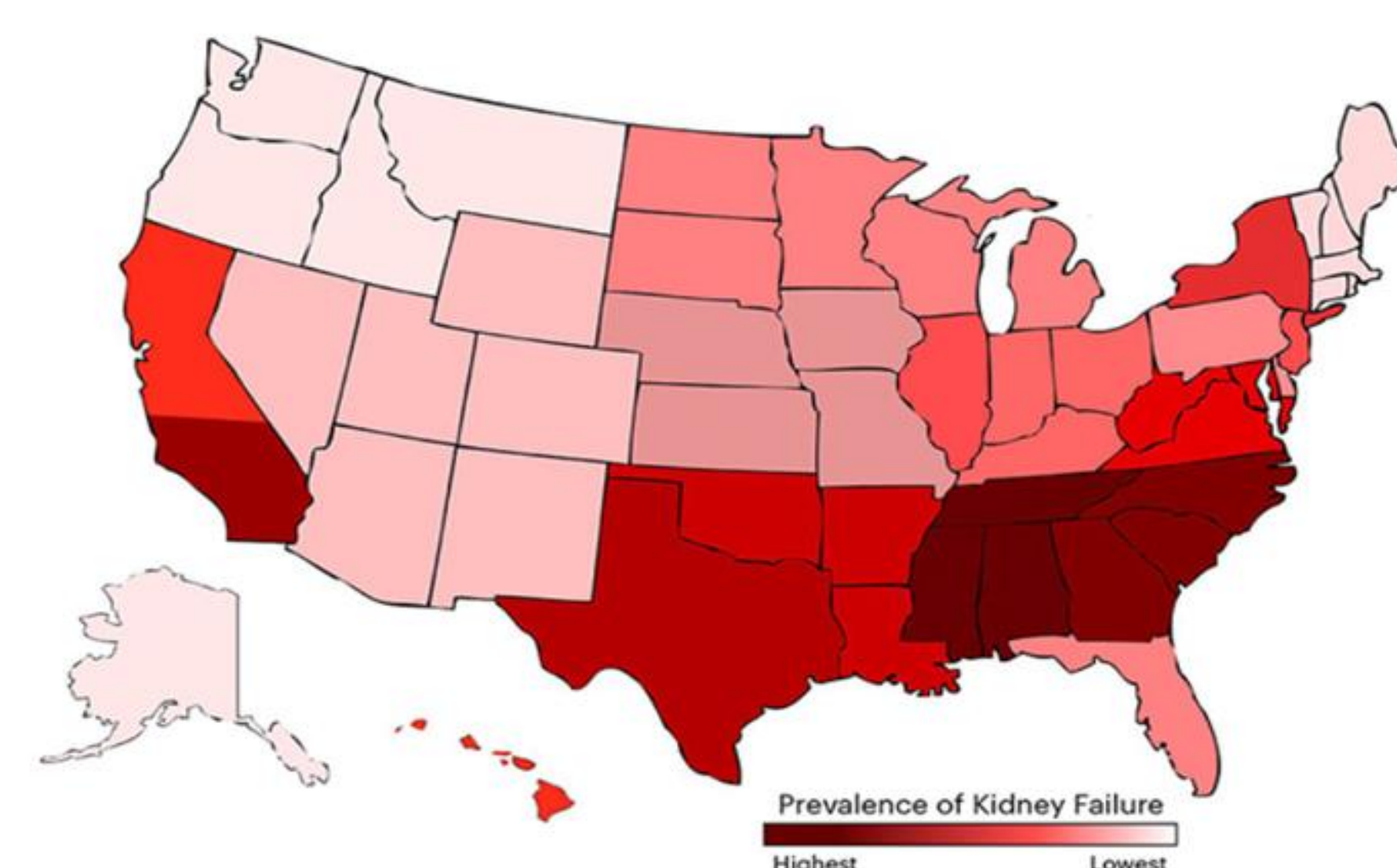
Aims

- Aim 1**
 - Conduct a comprehensive review of the scientific literature, current kidney allocation policies and guidelines to understand the current process, barriers to access to kidneys and transplantation, current best practices, and policies addressing these issues
- Aim 2**
 - Conduct comprehensive interview with a key opinion leader in an OPO about the current kidney allocation process including SWOT, and recommendations for policy change.
- Aim 3**
 - Propose policy recommendations to increase access to available donor kidneys based upon the findings of peer reviewed literature and key informant interview.

Results

- Prevalence of ESRD varies in the donor service regions, creating allocation disparities in areas where there is a higher prevalence of the disease⁴.
- Organ discard can be a result of sharing organs in regions where the relationship has not been established¹.
- 20% of kidneys approved for transplantation are discarded⁷.
- Transplant centers are less likely to perform riskier surgeries, with concerns to not meeting the recommended one-year post transplant survival rate⁷.
- A poor evaluation from the SRTR can result in Medicare/Medicaid refusing patients to have transplants at these centers⁷.
- A recent study identified there is no relationship between transplanting a high volume of high KDPI kidneys and a low rating from the program specific reports by the SRTR⁷.
- Kidney transplantation is associated with a longer survival compared to keeping patients on dialysis⁶.

Figure 2: Kidney Failure Prevalence⁴



Discussion

In 2013, 117,000 newly reported cases of kidney failure were observed. The number of patients suffering from kidney failure is increasing by over 100,000 individuals per year⁷. In 2015, while 100,000 patients waited for a kidney transplant, 3,159 kidneys were discarded in the process⁷. It is clear that there is a need for better access to kidneys. Kidney allocation policies need to be amended and provisions need to be drafted to expand the availability of kidneys. Since transplantation is linked to a longer survival period than dialysis, adopting policy provisions to prohibit donor kidney discard will give more patients opportunities to a longer life. These findings confirm there is a need for procedural changes to increase access to kidneys and potentially delay mortality. Further research is needed to identify other factors contributing to kidney discard in order to optimize utilization of all kidneys².

Policy Recommendations (UNOS/OPTN)

- Amend the refusal criteria to prohibit rejection of kidneys based on the possibility that the patient is likely to live long enough to receive another offer of a higher-quality kidney.
- Draft a provision to penalize hospitals that discard kidneys without offering them back to their local OPO.
- Revise provision regarding one-year post-transplant survival rates to encourage more transplants for in patients with ESRD and to increase access in donor service areas to reduce access disparities

Conclusion

Kidney allocation procedures and policies need to be modified. Without changes, an even steeper increase in discarding of viable organs can be predicted. Implementing these proposed policy and procedural changes can be an effective mechanism for increasing available kidneys for transplantation

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