

From Public Health to Organ Utilization: How Population Health Shapes Donor Risk, Resource Burden, and OPO Performance



Jeffery B. Nave, Ronald A. Squires MD, Jeffrey P. Orlowski
LifeShare Network, Inc., Oklahoma City, OK, United States

Introduction

Success in organ donation is dependent on multiple factors, systems, and strictly regulated processes that involve multiple entities and individual stakeholders. A state’s inequities in access to healthcare, socioeconomic imbalances, and burden of chronic illness have a well-documented impact on health and thus, the impact on the health of a donor pool. Conditions such as hypertension (HTN), diabetes and obesity create a downstream impact on organ donation and utilization that is less clearly defined.

Methods

Evaluating data from 01/01/2018-03/24/2026 from a single OPO, we conducted a retrospective analysis of a donor-level dataset integrating UNOS data with internal institutional data. Donors were stratified by race and ethnicity. Comorbidities, including HTN, diabetes, and elevated BMI/obesity, were categorized using standard clinical groupings.

Organ disposition outcomes were evaluated, including transplantation, discard, and non-utilization codes such as poor organ function and diseased organ. Associations between comorbidity burden and utilization outcomes were examined to assess how donor health profiles influence downstream outcomes relevant to organ utilization and OPO performance.

Conclusion

The donor pool within this OPO is a direct reflection of the population it serves, with a high burden of chronic disease translating into increased donor complexity and measurable downstream effects on organ utilization. These findings highlight that population health influences not only donor risk profiles, but also the operational, logistical, and financial demands required to successfully recover and transplant organs.

Without accounting for these factors, assessments of OPO performance may fail to capture the true complexity of the environment in which donation and transplantation occur. These findings suggest more insight and study is needed to fully understand how population health impacts individual OPOs navigating the complexities associated with their state’s health.

Results

