Change in Deceased Donor Demographics with Drug Intoxication Deaths: 2010 – 2019

Donnie Musgrove, PhD1, David Zaun, MS1, Ajay Israni, MD1,2,3, Jon Snyder, PhD1
1Scientific Registry of Transplant Recipients, 2Dept of Medicine, University of MN, 3Hennepin Healthcare; Minneapolis, MN

Introduction
• The number of deceased donors with Drug Intoxication as the Mechanism of Death reported to the OPTN has grown dramatically from less than 400 in 2010 to greater than 1600 in 2019, an increase of over 350%.
• The demographic changes in deceased donors with drug intoxication have not been studied extensively.
• Of particular concern is the change in demographics related to vulnerable populations.
  • Young and old individuals
  • Race/ethnicity minority individuals
  • Low-income and lower socioeconomic status individuals
  • Individuals in rural areas

Methods
• Donor-level demographic information as well as information related to each donor’s home ZIP code was gathered and analyzed to find trends over time
• Donor information includes:
  • Donor age
  • Donor race/ethnicity
  • Donor sex
  • Unemployment rate (percent; ZIP code)
  • Population density (Metro/micro/rural area)
• The OPTN donor-level data were compiled by the SRTR, current as of October 3rd, 2020.
• Donor home ZIP code
• Donor status (organ recovered/not recovered)
• Donor age
• Donor race/ethnicity
• Donor home ZIP code
• ZIP code level data were collected from the US Census and USDA data; donors missing a valid ZIP code were excluded.

Results
• The increase in drug intoxication deaths among donors is largely occurring in:
  • Metro areas
  • Areas with low unemployment rates
  • All poverty rate levels
  • All median incomes levels
• Within non-metro areas, increases are seen largely in areas with low unemployment, at all poverty rate levels, and median incomes up to $75k
• Despite a large relative change in donors with drug intoxication at the OPO level was 20; as of 2019, the count ranged up to 185 donors
• Donors who have died from drug intoxication over the previous decade increased, many of them from vulnerable populations

Percent Change in Drug Intoxication Deaths Change in donor counts since 2010

Donors who have died from drug intoxication over the previous decade increased, many of them from vulnerable populations.

References
• Donors with drug intoxication increased across all age groups, race/ethnicity, median ZIP code income, ZIP code poverty level, and ZIP code population density.
  o Donors counts from ZIP codes with high unemployment decreased from 2010 to 2019, a trend seen with all deceased donors.
  o Despite a large relative change in donors from ZIP codes with low poverty of 90%, the absolute increase was 100 donors.
  o In 2010, the largest count of donors with drug intoxication at the OPO level was 20; as of 2019, the count ranged up to 185 donors.
  o Donors who have died from drug intoxication over the previous decade increased, many of them from vulnerable populations.

Number of Drug Intoxication Deaths by DSA - 2019

Conclusions
• Marginally, the number of donors increased across all age groups, race/ethnicity, median ZIP code income, ZIP code poverty level, and ZIP code population density.
• Donors counts from ZIP codes with high unemployment decreased from 2010 to 2019, a trend seen with all deceased donors.
• Despite a large relative change in donors from ZIP codes with low poverty of 90%, the absolute increase was 100 donors.
• In 2010, the largest count of donors with drug intoxication at the OPO level was 20; as of 2019, the count ranged up to 185 donors.
• Donors who have died from drug intoxication over the previous decade increased, many of them from vulnerable populations.

Percent Change in Donor Demographic Among Drug Intoxication Deaths Change in donor demographics since 2010

Donors counts from ZIP codes with high unemployment decreased from 2010 to 2019, a trend seen with all deceased donors.

Discussion
• Despite a large relative change in donors from ZIP codes with low poverty of 90%, the absolute increase was 100 donors.
• In 2010, the largest count of donors with drug intoxication at the OPO level was 20; as of 2019, the count ranged up to 185 donors.
• Donors who have died from drug intoxication over the previous decade increased, many of them from vulnerable populations.

This was supported wholly or in part by HRSA contract 75N02020C00011. The content is the responsibility of the authors alone and does not necessarily reflect the views or policies of the Department of HHS, nor does mention of trade names, commercial products, or organizations singly endorsed by the U.S. Government.

The authors have no financial relationships to disclose within the past 12 months relevant to this presentation.