The primary objective of this modeling study was to estimate total US dialysis transportation costs for Medicare beneficiaries in 2009. The costs were estimated at $9.64 billion, comprising $930M for ambulance services and $7.2B for outpatient dialysis and injectable drugs. Total ESRD costs were estimated at $25.1B. These costs include the frequency of travel and the high-cost means of transport used to meet the travel assistance and transportation needs of ESRD patients. A large portion of these costs are due to ambulance travel to and from routine dialysis. In 2009, Medicare spent $930M on ambulance transports for end-stage renal disease (ESRD) patients. This figure was calculated from Medicare’s 2012 Ambulance Fee Schedule. Other cost and sensitivity analyses were conducted to estimate total transportation costs for ESRD beneficiaries in 2009. Costs and use of transport services were estimated in an actuarial model. Currently, quality data and estimates of total transportation costs are lacking. There are unreported costs, such as data on the number of patient-driven miles. In estimating travel distances exact patient location was not known. Assumptions and modeling techniques were required to estimate patient residence and dialysis facility preferences.

**METHODS**

**Countries of Major Transportation Costs**

- **Ambulance Costs:** 45% of total ESRD costs
- **Outpatient Dialysis and Injectable Drugs:** 48% of total ESRD costs
- **Total ESRD Costs:** 100% of total ESRD costs

**Table 1: Summary of Data Sources Used For Estimating Transportation Costs**

- Costs by Transport Type and payer
  - Medicare
  - Medicaid
  - Private Ins
  - Indemnity
  - Other

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- **Ambulance Costs:**
  - Medicare: $930M
  - Medicaid: $7.2B
  - Total ESRD: $25.1B

**Table 2: Estimated National Costs of Dialysis Transportation 2012–2014, by Transport Type ($ Millions)**

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**Table 3: 2012 Costs ($ Millions) and Percent of Costs by Transport Type and payer**

- Medicare
- Medicaid
- Private
- Indemnity
- Other

**Figure 1: Cumulative Growth Rate in Medicare ESRD Costs 2005–2009 by Service Category**

**Figure 2: 2012 Dialysis Transportation Costs, Per Patient / Per Year (PPPY) and Percent of Trips by Ambulance, by State**

**Figure 3: Percent of Dialysis Transportation Costs by payer, by ESRD Network**

**Figure 4: Cost Savings Scenarios**

- **Scenario 1:** Shifting non-ambulance trips to lower cost transport types could save $1B over three years. (80% savings)
- **Scenario 2:** Ambulance service provision decreased from 1% to 0.5% of trips, saving an additional $0.25B over three years. (50% savings)
- **Scenario 3:** Combine Scenarios 1 and 2. (97% savings)

**Table 4: 2012 Dialysis Transportation Costs, Per Patient / Per Year (PPPY) and Percent of Trips by Ambulance, by State**

- **Table 4: 2012 Dialysis Transportation Costs, Per Patient / Per Year (PPPY) and Percent of Trips by Ambulance, by State**

**Table 5: Sensitivity Analysis**

- **Scenario 2:** Shifting non-ambulance trips to lower cost transport types could save $1B over three years. (80% savings)
- **Scenario 3:** Combine Scenarios 1 and 2. (97% savings)

**Table 6: Sensitivity Analysis**

- **Scenario 1:** Shifting non-ambulance trips to lower cost transport types could save $1B over three years. (80% savings)
- **Scenario 3:** Combine Scenarios 1 and 2. (97% savings)

**REFERENCES**