Recent Trends and Outcomes from the USRDS

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Disclosures

• Federal Funding Sources
  – National Institutes of Health – NIDDK
  – Centers for Medicare & Medicaid Services
  – Centers for Disease Control and Prevention
  – Veterans Health Administration

• Non-Federal Funding Sources
  – Joint Institute (University of Michigan and Beijing University)
  – Arbor Research Collaborative for Health
  – Renal Research Institute
  – Forest Research Institute
Chronic Kidney Disease (CKD) in the United States
Prevalence (95% CIs) of CKD by Stage NHANES (1988-2012)
Awareness of CKD in the United States among NHANES Participants

![Graph showing the awareness of CKD stages over survey years.](chart)
ICD-9 Coded CKD Diagnoses in the Medicare Population

Data Source: 5% random sample of Medicare Data
Albuminuria Common in High Risk Groups for CKD (NHANES)
Urine Testing: Room for Improvement

No CKD

With CKD

Overall  No DM, No HTN  HTN, No DM  DM, No HTN  DM & HTN

Cumulative probability of testing


USRDS
2014 ADR Vol 1
Chapter 2 Figures 3a & 3b
End-Stage Renal Disease (ESRD) in the United States
Adjusted ESRD Incidence Rate per Million/Year & Annual % Change, 1980-2012

Adjusted for age, sex and race. The standard population was the U.S. population in 2011.
Trends in Prevalence of ESRD per Million/Year and Annual % Change

Note: Includes both dialysis and transplant patients.
Trends in Home Dialysis: (Among Incident Dialysis Patients)
Vascular Access Use among HD Patients at ESRD Incidence, 2005-2012
Light blue color indicates time period ("at initiation"), including both maturing fistula and fistula in-use; fistula for the subsequent time periods is restricted to fistula in-use only.
Adjusted All-Cause Mortality Rates, Overall and by Modality

Note: Adjusted for age, sex, race and primary diagnosis. Reference: 2011 patients.
Transplantation Rate vs. Growth in Wait-listed Patients

Figure 1a
Waiting List Getting Bigger, Wait Times Getting Longer

[Graph showing kidney wait list counts and median wait time over years, with trends indicating an increase in both counts and wait times.]
Total Medicare Dollars Spent on ESRD, by Type of Service
Annual Percentage Change in Medicare ESRD Spending
International Incidence Rates of ESRD
Good News – 1

In incidence rate of ESRD decreasing for three consecutive years

– Greater recognition of CKD (by providers)
  • eGFR reporting?
  • More appropriate referrals?
– Better detection & care of upstream CKD risk factors
– Better care of CKD; slower progression
  • DM, HT, CVD, etc.
– Stabilization of obesity rates in the US
– Fewer patients being committed to renal replacement?
Good News – 2

**Falling mortality rates in ESRD patients**

- Improving infection control practices
  - Greater vaccination uptake
- Improvement in vascular access practices
- Greater use of cardio-protective medications/procedures
- Greater attention to quality metrics
- Falling background population mortality rates
Major Challenges Remain

• Low rates of urine testing in the community
• No Pre-ESRD care documented in 40% of patients at incidence
• Low rates of AV fistula in patients new to dialysis
• High mortality rates in patients new to dialysis and over the first year of ESRD onset
  – More attention to the critical transition period; better preparation/education of patients approaching ESRD
  – Gentler dialytic approaches at start
• Waiting list and wait times are getting longer
Acknowledgements

• The USRDS Coordinating Center Team at the University of Michigan Kidney Epidemiology and Cost Center (UM-KECC)
  – In partnership with Arbor Research Collaborative for Health (subcontract with UM)
  – Deputy Directors (Bruce Robinson and Yi Li)
  – Project Manager (Melissa Fava) and ADR Editors (Janet Kavanaugh and Ruth Shamraj)
  – Team of Programmers and Analysts (Valarie Ashby and Tempie Shearon)
  – Co-investigators – A multi-talented, experienced, multidisciplinary group
  – Institute for Health Policy and Innovation, UM

• Project Officials at NIH – NIDDK
  – Paul Eggers, Lawrence Agodoa and Kevin Abbott

• Centers for Medicare & Medicaid
  – Teresa Titus-Howard and others

• Special Study Center Investigators
  – Kam Kalantar-Zadeh, Csaba Kovesdy and Steve Jacobsen
  – Ann O’Hare, Manjula Kurella and Danielle Lavalle

• External Expert Panel to NIDDK
Administrative Oversight
NIH, CMS, External Expert Committee

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Project Management, Administration and Editorial Support
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Jennifer McCready-Maynes, BA*
Sudipta Dasmunshi
Caitlin Hanna
Janet Kavanagh
Ruth Shamraj

* Subcontractor
** Consultant
Acknowledgements

• Previous USRDS contractors
  – Minnesota Medical Research Foundation, Minneapolis, MN
    • Alan Collins and his team at MMRF
  – University of Michigan – Kidney Epidemiology and Cost Center, Ann Arbor, MI
    • Philip Held, Friedrich Port, Robert Wolfe, Randall Webb
  – The Urban Institute
    • Philip Held
Thank You!
Risk Factors for CKD: The Dominance of Age
Recognized CKD in Medicare Data by Race
Trends in ESRD Incident Rate, per Million/Year, by Age Group, 1980-2012
Trends in Counts of Incident ESRD Cases, by Race, in the U.S. Population, 1980-2012
Prevalent ESRD Cases, by Primary Cause of ESRD, 1980-2012
Adjusted All-Cause & Cause-Specific Hospitalization Rates: All ESRD
Adjusted All-Cause & Cause-Specific Hospitalization Rates: Hemodialysis
Adjusted All-Cause & Cause-Specific Hospitalization Rates: Peritoneal Dialysis
Adjusted All-Cause & Cause-Specific Hospitalization Rates: Transplant

![Graph showing percent change from 1993 for all-cause, cardiovascular, and infection rates. The graph indicates a decrease in all categories over time, with cardiovascular showing the most significant decline.]

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UNITED STATES RENAL DATA SYSTEM
Mortality by Facility Fistula Use, 2012

![Bar chart showing SMR by facility fistula use percentage.](chart)
Mortality by Facility Catheter Use, 2012

![Graph showing SMR for different facility catheter use percentages.](chart.png)
Urine Albumin/Creatinine Ratio among NHANES Participants, 1988-2012
Mortality by Facility Fistula Use Adjusted for Catheter Use, 2012

![Bar chart showing SMR by Facility Fistula Use percentage categories]
Mortality by Facility Catheter Use Adjusted for Fistula Use, 2012
Catheter Alone at HD Initiation, 2012
All-Cause Mortality Rates for Medicare Patients Aged 66+, by CKD Status, 1995-2012

a) Unadjusted

b) Adjusted
Adjusted All-Cause Mortality in 1st Year of HD, by Year of Dialysis Initiation