March Madness: The Healthy Way

National Kidney Month 2016

Kayla Garcia, BS
Center for Health Equity
Tarrant County Public Health
Learning Objectives

- To understand chronic kidney disease and kidney functions
- To discuss high risk population groups and relation to health disparities
- To identify prevention and treatment options
Your Kidneys and You
Chronic Kidney Disease

- Condition where a person has reduced kidney function or kidney damage for more than 3 months

- Can develop at any age
  - Chances increase as you get older

- There are few signs or symptoms

- End-Stage Renal Disease
  - The final stage of Chronic Kidney Disease

Source: Center for Disease Control, 2015
Who is at risk?

- Family history
- Individuals with high blood pressure or diabetes
- Senior citizens (65 and over)
- African Americans
- Hispanics
- American Indians and Alaska Natives
- Asian and Pacific Islanders
Family History

- Higher risk of kidney disease
- Health history of family members
  - Parents, grandparents, aunts, uncles, and cousins
- Genetics play a role in family history
Individuals with...

**HIGH BLOOD PRESSURE**

- The blood in the body has to be pushed through at a higher pressure than what is normally required.
- No symptoms
  - Known as the “Silent Killer”
- Can also lead to heart attacks and strokes.
- **1 in 5** people with high blood pressure has kidney disease.

**DIABETES**

- The body is unable to produce enough insulin or is unable to properly use insulin.
- Can cause damage to other organs throughout the body.
- **1 in 3** people with diabetes has kidney disease.

**High Blood Pressure and Diabetes are the most common causes of kidney failure.**

Senior Citizens

- Increased risk of chronic kidney disease.
- Kidney function can decrease with age.
- Estimated 50% are believed to have kidney disease.

Source: National Kidney Foundation, 2015
African Americans

- High rates of diabetes and high blood pressure
  - Most common: **Type 2 diabetes**

- **3 times more likely** to have kidney failure when compared to White Americans
  - 32% of those with kidney failure in 2014

Hispanics

- High rates of diabetes and high blood pressure
- **1.5 times more likely** to have kidney failure when compared to White Americans
  - More than 14.7% of new kidney failure patients in 2013

Source: National Kidney Foundation, 2016
American Indians and Alaska Natives

- 2 times more likely to have diabetes than White Americans
- Rates of diabetes caused by kidney failure has risen 30%
- Less access to health care
  - Cultural differences and communication barriers

Source: National Kidney Foundation, 2015
Asian and Pacific Islanders

- Risk of diabetes is *18% higher* than White Americans
- Western diet may be part of the issue
  - High in calories and fat
- Less access to health care
  - Cultural differences and communication barriers

Source: National Kidney Foundation, 2015
Kidney Disease Indicator, Tarrant County, 2012

18.9 percent

Measurement Period: 2012

Source: Dallas Fort Worth Hospital Council, 2012
# Chronic Kidney Disease Indicator, 2012

## Chronic Kidney Disease: Medicare Population

### County View

<table>
<thead>
<tr>
<th>Location</th>
<th>Status</th>
<th>Percent</th>
<th>Source</th>
<th>Measurement Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>County: Collin</td>
<td></td>
<td>15.0</td>
<td>Centers for Medicare &amp; Medicaid Services</td>
<td>2012</td>
</tr>
<tr>
<td>County: Dallas</td>
<td></td>
<td>17.9</td>
<td>Centers for Medicare &amp; Medicaid Services</td>
<td>2012</td>
</tr>
<tr>
<td>County: Denton</td>
<td></td>
<td>16.2</td>
<td>Centers for Medicare &amp; Medicaid Services</td>
<td>2012</td>
</tr>
<tr>
<td>County: Ellis</td>
<td></td>
<td>16.2</td>
<td>Centers for Medicare &amp; Medicaid Services</td>
<td>2012</td>
</tr>
<tr>
<td>County: Erath</td>
<td></td>
<td>11.5</td>
<td>Centers for Medicare &amp; Medicaid Services</td>
<td>2012</td>
</tr>
<tr>
<td>County: Hunt</td>
<td></td>
<td>15.1</td>
<td>Centers for Medicare &amp; Medicaid Services</td>
<td>2012</td>
</tr>
<tr>
<td>County: Johnson</td>
<td></td>
<td>17.0</td>
<td>Centers for Medicare &amp; Medicaid Services</td>
<td>2012</td>
</tr>
<tr>
<td>County: Kaufman</td>
<td></td>
<td>15.0</td>
<td>Centers for Medicare &amp; Medicaid Services</td>
<td>2012</td>
</tr>
<tr>
<td>County: Parker</td>
<td></td>
<td>18.6</td>
<td>Centers for Medicare &amp; Medicaid Services</td>
<td>2012</td>
</tr>
<tr>
<td>County: Rockwall</td>
<td></td>
<td>13.8</td>
<td>Centers for Medicare &amp; Medicaid Services</td>
<td>2012</td>
</tr>
<tr>
<td>County: Tarrant</td>
<td></td>
<td>18.9</td>
<td>Centers for Medicare &amp; Medicaid Services</td>
<td>2012</td>
</tr>
<tr>
<td>County: Wise</td>
<td></td>
<td>14.4</td>
<td>Centers for Medicare &amp; Medicaid Services</td>
<td>2012</td>
</tr>
</tbody>
</table>

Source: Dallas Fort Worth Hospital Council, 2012
# Health Indicators among adults 18 years and older by ZIP code, Tarrant County, 2009-2010

[Image of a heatmap graph showing health indicators among adults 18 years and older by ZIP code, with cities like Grand Prairie, Arlington, Burleson, and Fort Worth highlighted.]
Treatment

- Kidney transplant
- Medication
- Dialysis
  - Hemodialysis
  - Peritoneal Dialysis
    - Continuous Ambulatory Peritoneal Dialysis
    - Automated Peritoneal Dialysis

Source: National Kidney Foundation, 2015
Prevention

- Keep diseases like high blood pressure and diabetes under control through regulation
- Annual testing through Albumin-to-Creatinine Ratio (ACR) urine test and Glomerular Filtration Rate (GFR) blood test
- Exercise and make healthy lifestyle choices
- Limit salt intake and drink plenty of water
- Take prescribed medication as directed

Source: National Kidney Foundation, 2015
# Glomerular Filtration Rate (GFR) Table

<table>
<thead>
<tr>
<th>GFR Stages</th>
<th>Albuminuria categories</th>
<th>A1</th>
<th>A2</th>
<th>A3</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1 Normal or high</td>
<td>Normal to mildly increased</td>
<td>≥90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G2 Mildly decreased</td>
<td>Moderately increased</td>
<td>60-90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G3a Mildly to moderately decreased</td>
<td>Severe increase</td>
<td>45-59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G3b Moderately to severely decreased</td>
<td>Severe increase</td>
<td>30-44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G4 Severely decreased</td>
<td>Severe increase</td>
<td>15-29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G5 Kidney failure</td>
<td>Severe increase</td>
<td>&lt;15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Key to Figure:**
- **Colors:** Represents the risk for progression, morbidity and mortality by color from best to worst.
  - Green: Low Risk (if no other markers of kidney disease, no CKD)
  - Yellow: Moderately Increased Risk
  - Orange: High Risk
  - Red: Very High Risk
  - Deep Red: Highest Risk

Source: National Kidney Foundation, 2015
Testimonial

Veronica Sutton
National Kidney Foundation
5426 Lyndon B Johnson Freeway #250
Dallas, Texas 75240
(214) 315-2393
www.kidney.org

Thank you!

Brought to you by:
Center for Health Equity

Tarrant County Public Health
References

- Dallas Fort Worth Hospital Council Foundation. (2012). *Community Dashboard: Kidney Disease Indicator, Tarrant County*.