Welcome

Office for State, Tribal, Local and Territorial Support

presents . . .

CDC Vital Signs

Good Healthcare Decreases Kidney Failure in Native Americans with Diabetes

January 17, 2017

2:00–3:00 pm (ET)
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker/Notes</th>
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</table>
| 2:00 pm | Welcome & Introduction | CAPT Carmen Clelland, PharmD, MPA  
Associate Director, Tribal Support Unit, Office for State, Tribal, Local and Territorial Support, CDC |
| 2:05 pm | Vital Signs Overview | Nilka Ríos Burrows, MPH  
Lead, Chronic Kidney Disease Initiative, Division of Diabetes Translation CDC |
| 2:10 pm | Presentations | Ann Bullock, MD  
Director  
Division of Diabetes Treatment and Prevention  
Indian Health Service |
|        |                       | Andrew Narva, MD  
Director, National Kidney Disease Education Program, NIDDK, National Institutes of Health |
| 2:30 pm | Q&A and Discussion | CAPT Carmen Clelland, PharmD, MPA |
| 2:55 pm | Wrap-up               |                                                                               |
| 3:00 pm | End of Call           |                                                                               |
to support STLT efforts and build momentum around the monthly release of CDC Vital Signs

Nilka Ríos Burrows, MPH
Lead, Chronic Kidney Disease Initiative
Division of Diabetes Translation
Centers for Disease Control and Prevention

The findings and conclusions in this presentation are those of the author and do not necessarily represent the views of the Centers for Disease Control and Prevention.
Diabetes

The leading cause of new cases of end stage renal disease

The leading cause of nontraumatic lower extremity amputations

The leading cause of nontraumatic blindness in working-age adults

A 2-fold increase in cardiovascular mortality
American Indian and Alaska Native adults have the highest prevalence of diagnosed diabetes compared with other racial/ethnic groups in the U.S.

<table>
<thead>
<tr>
<th>Race/Group</th>
<th>Prevalence</th>
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</thead>
<tbody>
<tr>
<td>Non-Hispanic whites</td>
<td>7.6%</td>
</tr>
<tr>
<td>Asian Americans</td>
<td>9.0%</td>
</tr>
<tr>
<td>Hispanics</td>
<td>12.8%</td>
</tr>
<tr>
<td>Non-Hispanic blacks</td>
<td>13.2%</td>
</tr>
<tr>
<td>American Indians/Alaska Natives</td>
<td>15.9%</td>
</tr>
</tbody>
</table>

*Based on the 2000 U.S. standard population.
Kidney failure from diabetes in American Indians/Alaska Natives was the highest of any race group in the U.S. but now has declined the FASTEST!

*Rate per 1,000,000 population and adjusted for gender and age based on the 2010 ESRD cohort as reference. AI/AN=American Indians and Alaska Natives. Racial groups include persons of Hispanic and non-Hispanic origin. Source: US Renal Data System, 2013 Annual Data Report.
What Did We Do in the Vital Signs Report?

- Looked at trends in kidney failure from diabetes in AI/AN and compared with other racial/ethnic groups.
- Obtained number of US adults aged ≥18 years who began treatment for diabetes-related kidney failure.
- Calculated rate using two population estimates:
  - 1) total population (with and without diagnosed diabetes) between 1996 and 2013, and
  - 2) population with diagnosed diabetes between 2006 and 2013.
- Discussed probable factors that influenced these remarkable improvements in the AI/AN population.
Kidney failure from diabetes among American Indian/Alaska Native adults decreased by MORE THAN HALF!

*Rate per 100,000 population and age-adjusted based on the 2000 US standard population.
AI/AN=American Indians and Alaska Natives. Racial groups include persons of Hispanic and non-Hispanic origin; Hispanics may be of any race. Source: Data from the US Renal Data System and the US Census.
In the diabetic population, kidney failure from diabetes among American Indian/Alaska Native adults is now *the SAME* as Whites.

*Rate per 100,000 diabetic population and age-adjusted based on the 2000 US standard population.

AI/AN=American Indians and Alaska Natives. Racial groups include persons of Hispanic and non-Hispanic origin; Hispanics may be of any race. Sources: US Renal Data System, US Diabetes Surveillance System, and data from the Indian Health Service applied to the Census population.
Prescription of ACE inhibitors/ARBs in American Indian/Alaska Native patients with diabetes, 1996–2015

ACE=angiotensin-converting enzyme; ARB=angiotensin II receptor blocker; CKD=chronic kidney disease.

Source: Indian Health Service (IHS) Diabetes Care and Outcomes Audit
American Indians/Alaska Natives (AI/AN) are more likely to have diagnosed diabetes than other groups.

During 1996–2013, ESRD-D incidence among AI/AN decreased 54%.

By 2013, in adults with diabetes, ESRD-D incidence was the same in AI/AN as in whites.

Prescription of kidney-protective medicines for AI/AN with diabetes increased greatly from 1997 to 2002.

IHS developed a comprehensive diabetes prevention and treatment system that might be useful to other health care systems serving populations at high risk.
Nilka Ríos Burrows, MPH

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www.cdc.gov/diabetes/data

www.cdc.gov/ckd/surveillance

For more information please contact Centers for Disease Control and Prevention

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Diabetes Care in the Indian Health System

Ann Bullock, MD
Director
Division of Diabetes Treatment and Prevention
Indian Health Service
Indian Health Service (IHS)

- IHS is a federal agency which serves members of 567 federally-recognized Tribes in 36 states
  - 2.2 million American Indians and Alaska Natives (AI/AN)
- IHS/Tribal/Urban (I/T/U) Health System
  - IHS provides direct health care services at many sites
  - Tribes have the option to assume control and management of programs.
  - 34 Urban Indian health care services and resource centers

<table>
<thead>
<tr>
<th></th>
<th>Hospitals</th>
<th>Health Centers</th>
<th>Alaska Village Clinics</th>
<th>Health Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>IHS</td>
<td>26</td>
<td>59</td>
<td>n/a</td>
<td>32</td>
</tr>
<tr>
<td>Tribal</td>
<td>19</td>
<td>284</td>
<td>163</td>
<td>79</td>
</tr>
</tbody>
</table>
Diabetes in AI/AN People

• Prevalence of type 2 diabetes was rising in AI/ANs
• In response, IHS:
  • Established the National Diabetes Program: 1979
  • IHS Diabetes Standards of Care: 1986
  • Started the Diabetes Care and Outcomes Audit: 1986
  • Promoted comprehensive approaches to diabetes care
• Special Diabetes Program for Indians (SDPI)
  • Established by Congress in 1997
  • Today provides funds to 301 I/T/U grant programs for diabetes prevention and treatment
    • IHS Division of Diabetes provides national support
# Percent of SDPI Programs Reporting Diabetes Services

<table>
<thead>
<tr>
<th>Intervention</th>
<th>1997</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes clinical teams</td>
<td>30%</td>
<td>96%</td>
</tr>
<tr>
<td>Diabetes patient registries</td>
<td>34%</td>
<td>98%</td>
</tr>
<tr>
<td>Nutrition services for adults</td>
<td>39%</td>
<td>93%</td>
</tr>
<tr>
<td>Access to registered dietitians</td>
<td>37%</td>
<td>79%</td>
</tr>
<tr>
<td>Access to physical activity specialists</td>
<td>8%</td>
<td>74%</td>
</tr>
<tr>
<td>Access to culturally tailored diabetes education materials</td>
<td>36%</td>
<td>97%</td>
</tr>
<tr>
<td>Adult weight management programs</td>
<td>19%</td>
<td>78%</td>
</tr>
<tr>
<td>Nutrition services for children and youth</td>
<td>65%</td>
<td>84%</td>
</tr>
<tr>
<td>Community-based physical activity programs for children and youth</td>
<td>13%</td>
<td>80%</td>
</tr>
<tr>
<td>Physical activity programs for school-age youth</td>
<td>9%</td>
<td>80%</td>
</tr>
</tbody>
</table>

Source: Evaluation of the SDPI Community-Directed Diabetes Programs
Incident Rates of ESRD due to Diabetes Rose Dramatically 1980-1999

*per million population, by age, gender, race, & ethnicity*
IHS Kidney Initiative

- Established nephrology position in 1989 to:
  - Promote prevention of CKD
  - Optimize care for people with CKD
  - Facilitate access to excellent ESRD care
  - Provide “in house” nephrologic expertise to IHS and to tribes
- Intent to **enhance existing diabetes care** to provide better CKD care
Challenges to Improving CKD Care

- CKD remains under diagnosed
- Implementation of recommended care is poor
- Many clinicians feel inadequately educated
  - Uncertain about how to interpret diagnostic tests
  - Unclear about clinical recommendations
  - Low confidence in their ability to successfully manage CKD
  - Indications for, and process of, referral poorly defined
Patient Awareness of CKD is Low General U.S. Population

“Have you ever been told by a doctor or other health care professional that you had weak or failing kidneys?”

NHANES 1999-2000:
4101 participants

< 20% of patients with moderate to severe CKD said yes

Most had seen a physician within the past year

Adapted from: Coresh, et al. JASN 2005
**Healthy People 2010:** Increase the proportion of treated chronic kidney failure patients who have received counseling on nutrition, treatment choices, and cardiovascular care 12 months before the start of renal replacement therapy.

Pre-ESRD counseling and care for greater than 12 months (2008)

Reference: USRDS Annual Data Report (NIDDK, 2010)
Goals for Population Management

Delay the need for renal replacement therapy (dialysis or transplant)

- Identify patients with kidney disease and monitor progression: eGFR (kidney function) and UACR (kidney damage)
- Implement appropriate therapy to slow progression
- Screen for complications: anemia, malnutrition, metabolic bone disease
- Treat cardiovascular risk, especially with smokers and hypercholesterolemia
- Refer to dietitian for nutritional guidance
- Avoid acute injury to the kidney (NSAIDs)
- Educate patients about kidney disease and treatment
**IHS Kidney Initiative:**


2. Broaden Diabetes Standards of Care for Kidney
   - Manage and monitor patients with DM and CKD
   - Identify and treat complications of CKD
   - Provide appropriate nutritional counseling for CKD
   - Provide patient education on CKD
   - Provide appropriate preparation for renal replacement therapy

3. Implementation promoted through continuing education for *all* healthcare professionals
Ace Inhibitor/ARB Use
1997-2013

% Patients Using Ace Inhibitor/ARB

Audit Year


- All Patients
- Patients with Known HTN
- Patients with Elevated Urine Albumin

Source: IHS Diabetes Care and Outcomes Audit
Lessons Learned

- Diabetic kidney disease is best addressed through population management
- Improvement in care results from changes implemented by in the community and in the clinic by all health professionals (Chronic Care Model)
- Implemented through diabetes care delivery system; not specialty clinic based
- Surveillance and prevention are part of multisystem chronic disease control
- Emphasis on ensuring that patient received care from competent and interested individual, not referral
Implications Beyond AI/AN Communities

- American Indians: a “sentinel” population
  - Epidemic of diabetes
    - Onset 1960’s
  - Epidemic of diabetic kidney disease and kidney failure
    - Onset 1980’s
- Indian Health: response of IHS may provide a model for other health care organizations serving high risk populations
The National Kidney Disease Education Program

NKDEP aims to reduce the morbidity and mortality caused by kidney disease and its complications by:

- Improving early detection of CKD
- Facilitating identification of patients at greatest risk for progression to kidney failure
- Promoting evidence-based interventions to slow progression of kidney disease
- Supporting the coordination of Federal responses to CKD

Bringing the Chronic Care Model to CKD
NKDEP Resources
Contact

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NIDDK, National Institutes of Health
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Bethesda, MD 20892-5458
Office: 301-594-8864  Fax: 301-480-3510
Twitter: @NarvaNKDEP
Improving Diabetes Care

Goal: provide comprehensive, compassionate diabetes care which addresses the needs of both individuals and the communities served

• I/T/U sites have been working to do this since the mid-1980s
• Many other health care systems are working on this too
• American Diabetes Association, Standards of Medical Care in Diabetes—2017
  • Promoting Health and Reducing Disparities in Populations
    *Diabetes Care 2017 Jan; 40(Supplement 1): S6-S10*

Major Focus Areas:
• Public Health
• Population Management
• Team-based Care
Context of Diabetes: Public Health

• Many life factors can make it difficult for patients to control diabetes and access healthcare
  • Poverty, food insecurity
  • Lack of transportation, child care, elder care, sick leave, housing
  • Chronic stress directly affects diabetes

• Diabetes care is a marathon, not a sprint
  • Preventing/delaying complications, (e.g., kidney failure) requires control of risk factors over many years
  • To reduce kidney failure rates, health care systems need to:
    • Take the long view on costs, outcomes
    • Work with all patients, including those who have challenges with clinic attendance, affording medicines, achieving targets
    • Actively engage communities as partners, value cultures as strengths
    • Go beyond medical care
      • Assess the communities where their patients live, work with local governments and community organizations to make improvements
Approaches to Diabetes Care: Population Management

• Care Management
  • Care Manager follows all patients with diabetes (e.g., registry)
    • Tracks medication adherence, clinic attendance, achieving targets, flu shots, etc.
    • Coordinates in-house and outside referrals
  • Determine which patients to offer additional support
    • Home visits by nurses, community health workers
    • Connect patients with community resources

• Community Outreach
  • Work with schools, worksites, senior centers, etc.
  • Community events, meetings
  • Diabetes health messages via local media
Approaches to Diabetes Care:
Team-Based Care

• Multidisciplinary
  • Providers, nurses, dietitians, diabetes educators, pharmacists, community health workers, behavioral health clinicians

• Standards of Care
  • Focus of diabetes care by all team members

• Care processes
  • Designed to ensure patients receive all needed exams, lab tests, & education, and are achieving clinical targets

• Data
  • Measure process and outcomes data, feed it back to care teams, use to target improvement efforts
National Support for Diabetes Care

• IHS Division of Diabetes
  • Promotes diabetes science to I/T/U programs nationwide
    • IHS Diabetes Standards of Care
    • Training for clinicians, educators
    • Clinical tools
  • Culturally-appropriate patient education materials
  • Website: www.ihs.gov/diabetes

• Diabetes Care and Outcomes Audit
  • Annual assessment of diabetes care processes and outcomes at I/T/U sites across the country
    • Audit 2016: 332 I/T/U facilities; 122,051 charts audited
  • National data used to guide programming
    • Local data returned to sites to inform clinic improvements

• IHS Electronic Health Record
  • Reminders and templates to assist providers
  • Population management tools
Key Points

• Preventing/delaying kidney failure from diabetes requires
  • Control of blood pressure, blood sugar, and use of kidney-protective medications over many years

• What does it take to make that happen?
  • Comprehensive, systematic approaches
    • Public health: assess and address social determinants of health issues in the communities where patients live
    • Population health: take care of the group of patients with diabetes
    • Multidisciplinary teams: partner with and support patients on their life journeys with diabetes
  • People with diabetes who overcome many challenges to take care of themselves so they can take of their families and communities
Key Points

• But beyond the “what” to do is the “how” and, even more, the “why”
  • How: respectful, non-judgmental, compassionate
  • Why: connection to communities through being part of them, seeing through their eyes, experiencing their strengths as well as their challenges
    • When health care systems and clinicians do this, the work flows from it

I am honored to represent the work of so many patients and clinicians, across so many years, at I/T/U sites
Thank you
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Please mark your calendars for the next
Vital Signs Town Hall Teleconference
February 14, 2017
2:00–3:00 pm (ET)

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