



House Testimony
Monday, April 8, 2019

Representative Whiteford and Subcommittee Members: I am Linda Smith-Wheelock, President and CEO, with the National Kidney Foundation of Michigan (NKFM). We thank you for your ongoing support of kidney disease prevention in Michigan.

I am here to update you on diabetes and kidney disease in Michigan.

- 11 % of adults in Michigan have diabetes, 15% (1 in 7 adults) have chronic kidney disease AND 37% have prediabetes that will result in a diagnosis of type 2 diabetes – This will continue to grow unless steps are taken.
- Obesity, prediabetes, diabetes and hypertension continue to be the leading causes of kidney failure.
- 75-80% of all health care costs are associated with chronic conditions. For each additional condition health care costs increase 1.5x-2x.
- 60% of Michigan adults have at least one chronic condition and 95% report at least one behavior that increases their risk of chronic conditions.
- Dialysis costs ~\$80,000 - \$100,000 a year per patient. **70% of kidney failure can be prevented.**
- Medicaid costs for kidney disease was 1 Billion in CY 2017
- Diabetes and Prediabetes cost Michigan \$9.7 Billion annually in Michigan.

The good news is that we have programs that:

- Address childhood obesity by teaching children and families to make healthy lifestyle changes.
- Teach adults to prevent type 2 diabetes and, ultimately, chronic kidney disease
- Teach people with diabetes to better manage their health avoiding the complications of blindness, amputation, heart attack, stroke, kidney disease and failure.
- Provide adults with proven physical activity programs that increase balance, strength and reduce depression.
- Have effectively reduced the incidence of kidney failure due to diabetes in Michigan.

Your support that has allowed us to improve health in MI. I will highlight a few of our programs referenced in the attached handout.

- For children:
 - We provide a number of early childhood programs to address prevention– 33% of children are either overweight or obese –The NKFM provides these evidence-based programs with state funding in conjunction with funding from other sources as part of our robust **private public partnership.**
 - Regie’s Rainbow Adventure, which educates kids 3-5 years old (and parents) about fruits/vegetables and physical activity, serves over **350 preschools (17,000 children and families).** This program has received many accolades and is one of the tools day care centers can use to improve their star rating within Michigan’s Quality Rating and Improvement System.
- For adults:
 - We have many evidence-based programs highlighted in your packet. I would like to highlight the Diabetes Prevention Program or DPP (data provided in the handout). The DPP is a year-long lifestyle change program recognized by the CDC to prevent or delay type 2 diabetes. Over 3,000 people in MI have taken this NKFM program with an average of **5.9% weight loss.** Over **32,000 pounds have been lost.** Our data on 1,580 people demonstrates, per the research, that **237 people prevented diabetes** by taking this class. Medicare now pays for this program but many other insurers do not yet pay for it. Your investment helps prevent disease and will save cost to the Medicaid and other population groups.
- Another note of interest: **NKFM is in the top 1% of all charities per Charity Navigator.** This has been the case for 11 years in a row. Your state dollars are an excellent investment.

We support the governor’s budget which maintains the diabetes and kidney funding. (These dollars were in the Diabetes and Kidney Programs/Health and Wellness line and are now in the Chronic Disease Prevention and Control line.) Questions? Contact: lsmith-wheelock@nkfm.org.

Preventing kidney disease and improving the quality of life for those living with it.





ENHANCE FITNESS®

Do you want to become fit and have fun at the same time? Start with Enhance Fitness, the exercise class with **you** in mind!



25+ classes offered across Michigan through the National Kidney Foundation of Michigan

What is Enhance Fitness?

Enhance Fitness is an evidence-based, **physical activity** program that has been tested and studied to show its effectiveness for older adults to improve functional fitness and **well-being**.

The U.S. Department of Health and Human Services recommends **2.5 hours** of moderate-intensity exercise **weekly** for adults.

Regular exercise has been found to **decrease the risk** of developing chronic diseases, such as **type 2 diabetes, high blood pressure, and heart disease**.

Over **7,000 people** have participated in NKFM Enhance Fitness classes between **2008 and 2016**.

Seniors can **improve their health** and maintain their independence.



Of participants:

64%

have maintained or improved in measures of upper body strength and endurance

72%

have maintained or improved in measures of lower body strength and endurance

94%

report a positive change in physical ability after participating in EF classes,

65%

have maintained or improved in measures of balance

38%

with of that group reporting "great improvement"



Participant Testimonials

"When you get older, you need someone to help motivate you. Having people there to coach us and assist us to get started made it fun and easy to exercise."

- Dorothy, Ecorse Senior Center Participant

"I am thankful for the trainer of the class and the NKFM's Enhance Fitness for helping me stay mobile." - Mollie, Turner Senior Resource Center Participant, who recently turned 100 years old!

What you can expect

Enhance Fitness classes are held 2-3 times a week.

They are taught by certified fitness instructors who are trained in the Enhance Fitness procedures and exercise program.

Participants are a diverse group of women and men, usually between 50-95 years old. Anyone is welcome!

Classes range from 10-60+ people in a class.

Classes focus on balance, strength, endurance, and flexibility exercises and are adjustable to all levels of fitness.



National Kidney Foundation*

of Michigan

nkfm.org/enhance-fitness

* EF is partially funded through the generosity of the following funders: AAA 1-B, TSA, AAA Region 7, HAP, & MDHHS.

Sources: The National Kidney Foundation of Michigan, Project Enhance, & Sound Generations. Updated: January 2017

National Kidney Foundation of Michigan's Evidence Based Programs

National Diabetes Prevention Program (NDPP)	Personal Action Toward Health (PATH) and Diabetes PATH (for individuals with diabetes)
<p>The NDPP, is a proven lifestyle change program for people with prediabetes and others at high risk, including those with obesity. Trained lifestyle coaches lead year-long groups to encourage proven lifestyle changes – losing 5-7% of weight and increasing physical activity to 150 minutes per week. Participants will reduce their risk for type 2 diabetes by 58%. For individuals aged 60 or older the risk reduction is 71%.</p> <p>Treating 4,000 high risk adults:</p> <ul style="list-style-type: none"> • Prevents 600 cases of type 2 diabetes.¹ • Prevents 6,480 missed work days.² • Avoids the need for medication for high blood pressure and high cholesterol in 440 people.³ • Avoids \$3,656,000 in health care costs. ⁴ • Adds the equivalent of 20 years of health for every 100 served.⁵ • Saves \$2,650 per person (CMS,2016) 	<p>The PATH program is the Stanford Chronic Disease Self Management Program which has undergone rigorous evaluation. Results of a randomized study involving more than 1,000 people with chronic disease demonstrated that participants “who took the program, compared to those who did not, had significant improvements in exercise, cognitive symptom management, communication with physicians, self-reported general health, health distress, fatigue, disability, and social/role activities limitations. They also spent fewer days in the hospital, and there was also a trend toward fewer outpatient visits and hospitalizations. These data yield a cost to savings ratio of approximately 1:4.”</p> <p>http://patienteducation.stanford.edu/programs/cdsmp.html)</p> <p>Using 2007 MI hospitalization cost⁶ and 2010 health care dollars for emergency room visits⁷, cost savings per participant⁸ are between \$2,010 and 2,141 per person over a 2-year period after subtracting for the cost to run the program⁹.</p>
Enhance Fitness	
<p>Enhance Fitness implemented in vulnerable communities provides a safe, low cost, and effective exercise program 3x a week.</p> <ul style="list-style-type: none"> • 14% improvement in physical functional performance on the CS-PFP10 (The Continuous Scale Physical Functional Performance) ; • 26% improvement in balance and coordination; • 18% improvement in endurance, • 33% improvement in general health on the SF-36 (Short Form, Health Survey); • 40% improvement in mental health (reduction in symptoms of depression); and • 89% improvement in social functioning <p>Using physical inactivity calculator¹⁰ and supplying county level data^{11 12}, estimated cost savings for Michigan residents who go from being inactive to physically active was \$755 per person.</p>	

¹ DPP Research Group. N Engl J Med. 2002 Feb 7 346 (6): 393-403

²DPP Research Group. Diabetes Care. 2003 Sep; 26 (9): 2693-4

³ Ratner, et al. 2005 Diabetes Care 28 (), pp. 888-894

⁴ Ackermann, et al.2008 Am J Prev Med 35 (4), pp.357-363

⁵ Herman, et al. 2005 Ann Intern Med 142 (5), pp. 323-32

⁶ Corteville, Lori. Data Analyst at Michigan Department of Community Health. Personal Communication. Mean hospital cost per day of hospitalization of chronic disease based on 2007 Michigan Inpatient Database.

⁷ 2010 American College of Emergency Physicians. <http://www.acep.org/practres.aspx?id=45887>. Final Rules for 2010 Medicare Physician Fee Schedule.

⁸ April 2002 AHRQ Publication No. 02-0018. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.ahrq.gov/research/elderdis.htm>. Preventing Disability in the Elderly with Chronic Disease

⁹ CDSMP (PATH, Diabetes-PATH and TCDSS) cost between \$70 and \$200/person to administer.

¹⁰ Quantifying the cost of physical inactivity calculator. East Carolina University. <https://www.ecu.edu/picostcalc>.

¹¹ <http://www.census.gov/acs/www>. American Community Survey 2008 for Wayne County.

¹² Fussman, Chris. Michigan Behavioral Risk Factor Surveillance System Coordinator/Epidemiologist. Personal Communication. Percent of People Physically Inactive in Wayne County based on BRFSS 2009 Estimated data.

State programs to prevent diabetes and kidney disease serve almost 80,000 Michiganders annually.

NKFM Adult Programs

Empowering people with kidney disease through programs and services.

Peer Mentors can help empower kidney patients to move forward with their lives after being diagnosed with kidney disease.

The Luann Schepplmann-Eib Emergency Fund provides a one-time help of up to \$100 for the urgent needs of people with kidney disease.

CKD Intern Program provides an internship within an NKFM office (2-8 hours a week) for people living with chronic kidney disease.



Kidney PATH provides an accountable and supportive environment to learn new techniques to manage a variety of problems associated with kidney disease.

Worksite Wellness Initiatives create a healthy environment at work, encouraging employees to apply healthy habits at work and at home.

Community Coalitions are formed with NKFM support by representatives from key community stakeholders to improve the community's health and well-being.

Managing chronic conditions saves money and improves quality of life.

Personal Action Toward Health (PATH) helps adults to navigate the health care system and manage chronic conditions. Specific programs include:

- **Powerful Tools for Caregivers**
- **Chronic Pain PATH**
- **Diabetes PATH**

Enhance Fitness is a physical activity class for those with chronic conditions.

Healthy Hair Starts with a Healthy Body* and **Dodge the Punch: Live Right*** provide health information to African American adults through their salon stylist or barber.

Diabetes Self Management Education Support (DSMES) teaches people with diabetes the skills to manage their condition and prevent complications.

Diabetes Prevention Program is a year-long lifestyle change program that brings the proven success of the diabetes prevention clinical trial to people in communities around the country.

Walk with Ease provides information on physical activity and is proven to reduce the pain of arthritis and improve overall health.

A Matter of Balance is designed to reduce the fear of falling and increase activity levels and balance in older adults.



National Kidney Foundation®
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Only 1% of charities receive 4 stars from Charity Navigator 11 years in a row.

State programs to prevent diabetes and kidney disease serve almost 80,000 Michiganders annually.

NKFM Kids Programs

Children learn how to eat healthy and adopt positive physical activity habits.

Regie's Rainbow Adventure[®] teaches preschool-aged children healthy living through a storybook hero named Regie.

Healthy Families Start with You educates parents of preschool children on how to make healthy lifestyle changes.

PE-Nut (Physical Education and Nutrition) motivates youth and parents to be physically active and eat healthier by presenting simple, consistent nutrition and physical activity messages to elementary age youth.



Kids Camp is designed to provide an opportunity for children with kidney disease to experience a week away at camp. Medication compliance, diet and a positive attitude all result from this experience.

Nutrition And Physical activity Self-Assessment for Child Care (NAP SACC) is an intervention for early childhood educational settings that is aimed at improving nutrition and physical activity environments, policies and practices through self-assessment and targeted technical assistance.



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Only 1% of charities receive 4 stars from Charity Navigator 11 years in a row.

All references for 2018-2019 Legislative Handout Booklet:

Main Document - Front

Diabetes in Michigan prevalence:

- American Diabetes Association. The Burden of Diabetes in Michigan. <http://main.diabetes.org/dorg/assets/pdfs/advocacy/state-fact-sheets/Michigan2018.pdf>

Childhood Overweight/Obesity rate for ages 10-17:

- The Kaiser Family Foundation's State Health Facts. Child and Adolescent Health Measurement Initiative. Data Resource Center for Child and Adolescent Health. 2016 National Survey of Children's Health (NSCH) data query. Retrieved March 2, 2018 from [//www.childhealthdata.org](http://www.childhealthdata.org). <https://www.kff.org>. Retrieved November 28, 2018.

Prediabetes in Michigan prevalence:

- American Diabetes Association. The Burden of Diabetes in Michigan. <http://main.diabetes.org/dorg/assets/pdfs/advocacy/state-fact-sheets/Michigan2018.pdf>

Projected Cases of Diabetes 2030:

- Institute for Alternative Futures. Diabetes 2030 Forecasts, 2015. Michigan Diabetes Data & Forecasts. <http://www.altfutures.org/pubs/diabetes2030/MICHIGANDataSheet.pdf>

Main Document - Middle

Diabetes in Michigan vs. U.S. chart:

- Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. BRFSS Prevalence & Trends Data [online]. 2015 [accessed Nov 28, 2018]. URL: <https://www.cdc.gov/brfss/brfssprevalence/>
- Murad A and Barth O. 2018. Health Risk Behaviors within the State of Michigan: 2016 Behavioral Risk Factor Survey. 30th Annual Report. Lansing, MI: Michigan Department of Health and Human Services, Lifecourse Epidemiology and Genomics Division. https://www.michigan.gov/documents/mdhhs/2016_MiBRFS_Annual_Report_7.25.18_635618_7.pdf

Forecasted Prediabetes Prevalence in Michigan vs. U.S.:

- Institute for Alternative Futures. Diabetes 2030 Forecasts, 2015. Michigan Diabetes Data & Forecasts. <http://www.altfutures.org/pubs/diabetes2030/MICHIGANDataSheet.pdf>
- Institute for Alternative Futures. Diabetes 2030 Forecasts, 2015. United States Diabetes Data & Forecasts. <http://www.altfutures.org/pubs/diabetes2030/UNITEDSTATESDataSheet.pdf>

Prediabetes and diabetes quotes:

- American Diabetes Association. The Burden of Diabetes in Michigan. <http://main.diabetes.org/dorg/assets/pdfs/advocacy/state-fact-sheets/Michigan2018.pdf>

Prevalence and Spending by Number of Chronic Conditions (2014):

- Buttorff, Christine, Teague Ruder, and Melissa Bauman, Multiple Chronic Conditions in the United States. Santa Monica, CA: RAND Corporation, 2017. <https://www.rand.org/pubs/tools/TL221.html>

Kidney Disease and Michigan Medicaid

- Payformance Solutions, 2019

Chronic conditions quotes:

- Michigan Department of Health and Human Services. Overview of the Chronic Disease Epidemiology Section. Accessed Jan 31, 2019. https://www.michigan.gov/mdhhs/0,5885,7-339-71550_5104_5279-185986--,00.html

Kidney Failure Incidence in Michigan from Diabetes:

- 2018 USRDS Annual Data Report Table A.9(2). <https://www.usrds.org/reference.aspx> United States Renal Data System. 2018 USRDS annual data report: Epidemiology of kidney disease in the United States. National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2018. The data reported here have been supplied by the United States Renal Data System (USRDS). The interpretation and reporting of these data are the responsibility of the author(s) and in no way should be seen as an official policy or interpretation of the U.S. government.

Diabetes Prevention Program Insert

Total Economic Cost of Diabetes to the United States:

- American Diabetes Association. Economic Costs of Diabetes in the U.S. in 2017. Diabetes Care May 2018, 41 (5) 917-928; DOI: 10.2337/dci18-0007. <http://care.diabetesjournals.org/content/diacare/41/5/917.full.pdf>

The Cost of Diagnosed Diabetes to Michigan:

- American Diabetes Association. The Burden of Diabetes in Michigan. <http://main.diabetes.org/dorg/assets/pdfs/advocacy/state-fact-sheets/Michigan2018.pdf>

Diabetes in Michigan Prevalence:

- American Diabetes Association. The Burden of Diabetes in Michigan. <http://main.diabetes.org/dorg/assets/pdfs/advocacy/state-fact-sheets/Michigan2018.pdf>

Prediabetes in Michigan Prevalence:

- American Diabetes Association. The Burden of Diabetes in Michigan. <http://main.diabetes.org/dorg/assets/pdfs/advocacy/state-fact-sheets/Michigan2018.pdf>

Diabetes and Michigan Medicaid

- Payformance Solutions, 2019

National Outcomes Data:

- Ely EK, Gruss SM, Luman ET, Gregg EW, Ali MK, Nhim K, Rolka DB, Albright AL. A National Effort to Prevent Type 2 Diabetes: Participant-Level Evaluation of CDC's National Diabetes Prevention Program. Diabetes Care. 2017 Oct;40(10):1331-1341. doi: 10.2337/dc16-2099. <https://www.ncbi.nlm.nih.gov/pubmed/?term=28500215>.
- Or <https://www.endocrineweb.com/professional/type-2-diabetes/national-diabetes-prevention-program-effective-evolving>.

New Cases of Type 2 Diabetes Prevented

- DPP Research Group. N Engl J Med. 2002 Feb 7;346(6):393-403

Fewer patients using blood pressure or lipid lowering medication

- Ratner, et al. 2005 Diabetes Care 28 (4), pp. 888-894



What is the evidence base for the prevention of diabetes through lifestyle change interventions?

Over the last 15 years, a number of scientific studies have evaluated the design and effectiveness of lifestyle change interventions for delaying or preventing the onset of type 2 diabetes among overweight or obese adults who have blood glucose levels in the prediabetes range. A few representative studies are summarized below.

The original NIH-funded Diabetes Prevention Program study

Funded by the National Institutes of Health (NIH), a multi-center randomized controlled clinical trial of 3,234 overweight adults with prediabetes proved that a structured intensive behavioral counseling intervention that lowered body weight by 7 percent through a low-fat diet and increased physical activity reduced the risk of progression to diabetes by 58 percent over three years compared with placebo. Among adults 60 years and older, the risk reduction was even greater at 71 percent. This translates to one case of diabetes prevented for every seven adults receiving the lifestyle change intervention.

Knowler WC, Barrett-Connor E, Fowler SE, et al. Diabetes Prevention Program Research Group. Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. *N Engl J Med.* 2002;346(6):393-403.

The intervention delivered in the community

The Diabetes Education and Prevention with a Lifestyle Intervention Offered at the YMCA (DEPLOY) study—a matched-pair, group-randomized pilot intervention—compared group-based diabetes prevention program behavioral counseling delivered by trained YMCA staff to brief counseling alone and found that a scaled-down, low-cost version of the program delivered in a community setting could achieve weight loss comparable to the original NIH-funded study.

Ackermann RT, Finch EA, Brizendine E, Zhou H, Marrero DG. Translating the Diabetes Prevention Program into the community. The DEPLOY Pilot Study. *Am J Prev Med.* 2008;35(4):357-363.

The intervention delivered in a real-world primary care setting

In a randomized controlled trial conducted in a primary care clinic, two adapted diabetes prevention program lifestyle interventions—a coach-led group intervention and self-directed DVD intervention—were compared with usual care and found that both interventions achieved weight loss similar to the original NIH-funded study. The adapted curriculum was delivered jointly by certified dietitians and fitness instructors to the coach-led group at clinic sites, whereas both groups received secure email reminders about self-monitoring via the clinic's electronic health record.

Ma J, Yank V, Xiao L, et al. Translating the Diabetes Prevention Program lifestyle intervention for weight loss into primary care: a randomized trial. *JAMA Intern Med.* 2013;173(2):113-121.

The intervention delivered via an online social network

In a before-after comparison of subjects recruited online to participate in a diabetes prevention program-based group lifestyle intervention that integrated online social networking, online health coaching and a wireless scale and pedometer, participants achieved outcomes that met the Centers for Disease Control and Prevention (CDC) Diabetes Prevention Recognition Program standards and compared favorably to other program translations.

Sepah SC, Jiang L, Peters AL. Translating the Diabetes Prevention Program into an online social network: validation against CDC standards. *Diabetes Educ.* 2014;40(4):435-443.

Ten-year outcomes of the original NIH-funded Diabetes Prevention Program study

A 10-year follow-up of 2,766 participants from the original NIH-funded research study revealed that diabetes incidence in the 10 years since study randomization was reduced by 34 percent in the lifestyle group compared with placebo. Participants older than 45 years at randomization had more sustained weight loss over the 10 years of follow-up. The estimated delay to onset of diabetes was four years in the lifestyle group compared with placebo.

Knowler WC, Fowler SE, Hamman RF, et al. Diabetes Prevention Program Research Group. 10-year follow-up of diabetes incidence and weight loss in the Diabetes Prevention Program Outcomes Study. *Lancet*. 2009;374(9702):1677-1686.

Systematic review of translational studies based on the original NIH-funded study

A systematic review of 17 translational studies based on the original NIH-funded research study found that group-based interventions yielded significant weight loss—with the expectation of concomitant reductions in the risk of type 2 diabetes—with the resulting benefits increasing proportionately with sustained weight loss over time. A review of behavioral strategies used in these studies revealed that interventions comprising modified versions of most of the core modules of the original NIH-funded research study were most effective in producing the desired behavioral changes.

Johnson M, Jones R, Freeman C, et al. Can diabetes prevention programmes be translated effectively into real-world settings and still deliver improved outcomes? A synthesis of evidence. *Diabet Med*. 2013;30(1):3-15.

Primary predictor of reduced diabetes incidence

An investigation into the relative contributions of changes in weight, diet and physical activity on the risk of developing type 2 diabetes among participants in the lifestyle intervention group from the original NIH-funded Diabetes Prevention Program study found that weight loss was the primary predictor of reduced diabetes incidence.

Hamman RF, Wing RR, Edelstein SL, et al. Effect of weight loss with lifestyle intervention on risk of diabetes. *Diabetes Care*. 2006;29(9):2102-2107.

Impact of the diabetes prevention program lifestyle intervention on hypertension and hyperlipidemia

An assessment of the impact of the lifestyle intervention on hypertension and hyperlipidemia revealed that hypertension control improved significantly, triglycerides decreased significantly and HDL cholesterol increased significantly in the lifestyle intervention group compared with placebo, resulting in a greater than 25 percent reduction in medication use for hypertension and hyperlipidemia.

Ratner R, Goldberg R, Haffner S, et al. Impact of intensive lifestyle and metformin therapy on cardiovascular disease risk factors in the diabetes prevention program. *Diabetes Care*. 2005;28(4):888-894.

Cost-effectiveness of the diabetes prevention program intervention

Estimation of the lifetime cost-utility of the intervention using a Markov simulation model based on data from the original NIH-funded research study showed that the lifestyle intervention was cost-effective across all age groups. The lifestyle intervention cost approximately \$1,100 per quality adjusted life year and cost-effectiveness improved when the intervention was implemented as it might be in routine clinical practice. (Cost-effectiveness analyses in the United States commonly use a figure of [\\$40,000 per life-year](#) or quality-adjusted life-year gained as a threshold for assessing the cost-effectiveness of an intervention, meaning anything below \$40,000 is cost-effective.)

Herman WH, Hoerger TJ, Brandle M, et al. The cost-effectiveness of lifestyle modification or metformin in preventing type 2 diabetes in adults with impaired glucose tolerance. *Ann Intern Med*. 2005;142(5):323-332.



PATH

Personal Action Toward Health

What is PATH?

PATH is a six week 2.5 hour evidence-based workshop that has been studied to help participants **better self-manage** their chronic condition through a variety of skills and tools.

The program was designed by Stanford University and is lead by **two certified leaders** who one or both have a **chronic disease themselves**.

Over **4,900 people** have participated in over **400 PATH classes** between **2008 and 2016** through the National Kidney Foundation of Michigan. **74%** of those who enroll complete PATH.

How do participants feel afterwards?

Participants feel more **confident** about taking care of their health



92% Would **recommend** PATH to others

Do you want to take charge of your daily health and better understand your chronic condition? Then you are ready to take **Personal Action Towards your Health**.

What skills & tools have participants continued to use?



83% said **Healthy Eating**



47% said **Using your mind**



81% said **Physical Activity**



46% said **Proper Use of Medication**



64% said **Action Planning**



46% said **Problem Solving**



63% said **Weight Management**



43% said **Communication**

What types of conditions do participants have?

High Blood Pressure (**63%**)

Diabetes (**53%**)

Disability (**48%**)

High Cholesterol (**43%**)

Arthritis (**42%**)

Obesity (**35%**)

Depression/Anxiety (**24%**)

Cancer (**14%**)

Chronic Kidney Disease (**10%**)

Anyone with **any chronic conditions** and their **caregivers** may attend.



MICHIGAN
Partners on the
PATH



National Kidney Foundation®
of Michigan

PATH is partially funded through the generosity of the following funders: The Michigan Department of Health and Human Services, Area Agency of Aging 1b, The Senior Alliance, Valley Area Agency on Aging, Region 7 Area Agency on Aging, The University of Michigan Transplant Center, Beaumont Health & The Gift of Life

For additional information contact The National Kidney Foundation of Michigan call 1-800-482-1455 or email PATHPrograms@NKFM.org

What are the different types of PATH programs?

Personal Action Toward Health (PATH)

The general PATH is for participants who have chronic conditions such as hypertension or arthritis. Their caregiver or support system are welcome to attend.

What will you gain from PATH?

- The confidence to manage everyday activities by making an action plan
- New ways to manage your symptoms and decrease stress

Kidney PATH

Kidney PATH is an **8-week workshop** for participants who are in various stages of Chronic Kidney Disease. The first six weeks are exactly like general PATH with two additional sessions added that cover Kidney specific content.

What will you gain from Kidney PATH?

- A better understanding about dialysis and fluid restrictions
- How to advocate for yourself within the hospital system

Diabetes PATH

Diabetes PATH is for participants who have diabetes. Their caregiver or support system are welcome to attend.

What will you gain from Diabetes PATH?

- New ways to balance your blood sugar and a better understanding of the importance of monitoring
- A better understanding of how you can avoid complications

Cancer: Thriving & Surviving

Cancer: Thriving & Surviving is for participants who are cancer survivors or living with cancer. Their caregiver or support system are welcome to attend.

What will you gain from Cancer PATH

- New skills to help you face uncertainty about the future
- A better understanding about how cancer effects your body and how you can work to regain fitness

Building Better Caregivers

Building Better Caregivers is **ONLY** for caregivers of people who have a chronic health condition.

What will you as a caregiver gain from Building Better Caregivers?

- New skills in managing the difficult behaviors of the person your providing care for
- New techniques in taking better care of your health
- Better ways to ask for help from others

Chronic Pain PATH

Chronic Pain PATH is for participants who have struggle with chronic pain. Their caregiver or support system are welcome to attend.

What will you gain from Chronic Pain?

- Knowing the difference between myths and facts when dealing with your pain
- New techniques to help you deal with frustration, fatigue, isolation, and poor sleep
- The appropriate use of your medication



NATIONAL KIDNEY FOUNDATION OF MICHIGAN 2015 EVALUATION FINDINGS
REGIE'S RAINBOW ADVENTURE[®]



93% of children in the U.S. **DO NOT** eat the recommended daily serving of vegetables.



48% of Detroit children are overweight or obese.



60% of children in the U.S. **DO NOT** eat the recommended daily serving of fruit.

NKFM IS WORKING TO DECREASE THE NUMBER OF KIDS WHO DON'T MEET BASIC NUTRITION OR HEALTH GUIDELINES

2,181 children from **27** head start centers participate in a seven-week nutrition and physical activity education program.



Each session includes reading a book and trying a new fruit or vegetable.

HIGH ENGAGEMENT IN THE CLASSROOM

A teacher talked about a student who would draw Regie with Spiderman every day. When asked why he drew Regie with Spiderman, the student said,

"Because Regie is going to make sure Spiderman eats right because Spiderman needs his energy to fight the bad guys!"

*"When broccoli is served at lunch, the children say, 'Broccoli, like Regie's Rainbow! I love broccoli!' They are much better about eating many vegetables now."
 - Preschool Teacher*

PROFESSIONAL DEVELOPMENT FOR TEACHERS

(RRA) staff provided materials and trained 131 teachers who implemented the program in their classrooms during the 2014-2015 school year.

WHAT ARE THE OUTCOMES FOR CHILDREN AFTER COMPLETING RRA?



82% of parents reported an **increase** in their children's fruit consumption.



Parents reported a **significant increase** in the number of hours their children were physically active.



Parents reported a **significant decrease** in children's TV time and time playing video games.



75% of parents reported an **increase** in their children's veggie consumption.





Nutrition and Physical activity Self-Assessment for Childcare Centers

What is NAP SACC?

NAPSACC is a research-tested environmental intervention that aims to improve the childcare environment by encouraging best practices in: children's nutrition; infant and breastfeeding; 0-5 year old physical activity and screen time.

By the end of the program, participants will have:

Identified strengths and improvement areas.

Created goals and taken concrete action to achieve these goals

Completed a follow up assessment to assess progress

The majority of past participants have reported making important changes to help the children at

With NAP SACC, NKFM Improves the Childcare Environment and reduces the risk for childhood obesity:

The National Kidney Foundation of Michigan has seen **statistically significant improvements** in the percentage of childcare centers meeting best practices after the program. After the program, **39%** of centers had **improved the frequency of fruit** served to children, and **30%** of centers had **improved the frequency of vegetables** served to children.

A Research Tested and Nationally Recognized Program

NAP SACC has been **recognized and recommended** by Michelle Obama's 'Let's Move' campaign and the **USDA as an innovative program that can be used to combat childhood obesity.**^{1,2} Several published research studies have also shown the **marked improvements** to the childcare environment resulting from the program. One study found that after the program, centers had significant increases in nutrition and physical activity best practices.³ Children in centers that received the program, too, were also found to be **significantly more physically active.**⁴

Cost Savings

Investing in our youngest generation will result in significant cost savings. Similar childhood obesity programs have been found to be cost effective and result in a societal net benefit of up to \$68,000.⁵

¹ Executive Office of the President of the United States. (2010). *Solving the Problem of Childhood Obesity within a Generation: White House Task Force on Childhood Obesity Report to the President*. Retrieved from http://www.letsmove.gov/sites/default/files/TaskForce_on_Childhood_Obesity_May2010_FinalReport.pdf.

² United States Department of Agriculture. (2014). *SNAP-Ed Strategies & Interventions: An Obesity Prevention Toolkit for States, May 2014 Update*. Retrieved from <http://snap.nal.usda.gov/snap/SNAP-EdInterventionsToolkit.pdf>.

³ Drummond, R.L., Staten, L.K., Sanford, M.R., Davidson, C.L., Cloazan, M.M., Khor, K., Kaplan, F. (2009). A Pebble in the Pond: The Ripple Effect of an Obesity Prevention Intervention Targeting the Child Care Environment. *Health Promotion Practice*, 10(2), 156S-167S.

⁴ Bonis, M., Loflin, M., Ward D., Tseng, S., Clesi, A., Southern, M. (2014). Improving Physical Activity in Daycare Interventions. *Childhood Obesity*, 10(4): 334-341.

⁵ Brown, H.S., Pérez, A., Li, Y.P., Hoelscher, D.M., Kelder, S.H., Rivera, R. (2007). The cost-effectiveness of a school based overweight program. *International Journal of Behavioral Nutrition and Physical Activity*, 4(47): 1-12.



National Kidney Foundation[®]
of Michigan

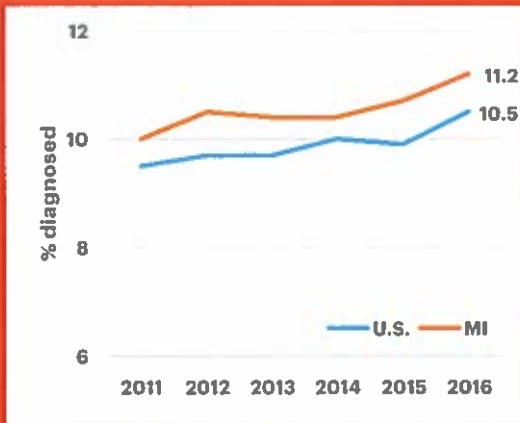
1169 Oak Valley Dr.
Ann Arbor, MI 48108
734-222-9800
www.nkfm.org



Only 3% of charities receive 4 stars from Charity Navigator 6 years in a row.

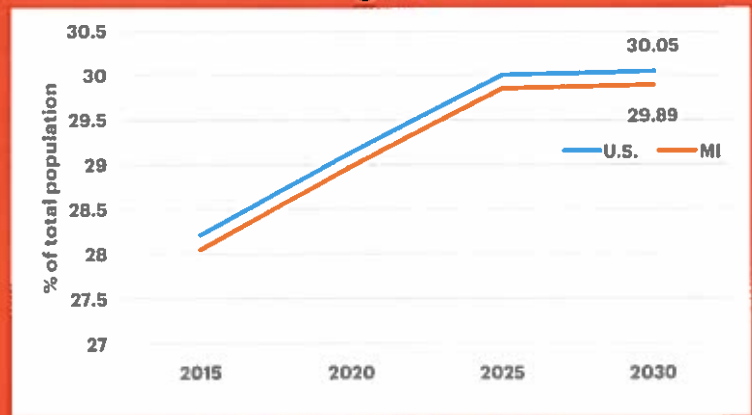
The NKFM is leading the charge against diabetes...

Diabetes in Michigan vs. U.S.



Source: CDC BRFSS and MIBRFSS

Forecasted Prediabetes Prevalence in Michigan vs. U.S.



Source: Institute for Alternative Futures

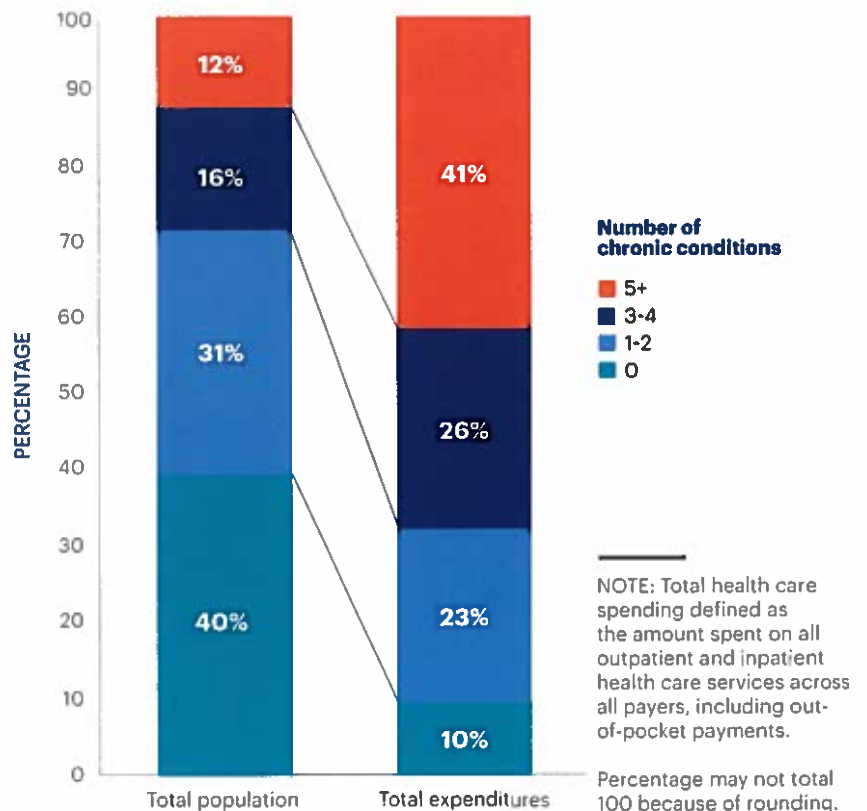
49.9% of the adult population in Michigan has either **prediabetes** or **diabetes**.



Every year, an estimated **46,000** people in Michigan are diagnosed with diabetes.

Source: American Diabetes Association

Prevalence and Spending by Number of Chronic Conditions (2014)



Buttorff, Christine, Teague Ruder, and Melissa Bauman, Multiple Chronic Conditions in the United States. Santa Monica, CA: RAND Corporation, 2017. <https://www.rand.org/pubs/tools/TL221.html>.

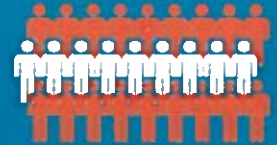


National
Kidney
Foundation* of
Michigan

2018-2019 Michigan Guide for Policy Makers and Stakeholders

In the state of Michigan...

1.09 million have type 2 diabetes¹



32% of children are obese or overweight²

Over 2.7 million have prediabetes¹



Sources: 1. American Diabetes Association
2. The Kaiser Family Foundation's State Health Facts

Nearly **2 million** projected cases
of **diabetes** in **2030** at the current pace

Source: Institute for Alternative Futures

Take action, support solutions:



National Kidney Foundation*
of Michigan

www.nkfm.org
800.482.1455



Only 1% of charities
receive 4 stars from
Charity Navigator
11 years in a row.

The NKFM is committed to excellence in organizational performance.

The National Kidney Foundation of Michigan is happy to provide hope and help across Michigan and we're proud to be recognized for our success.



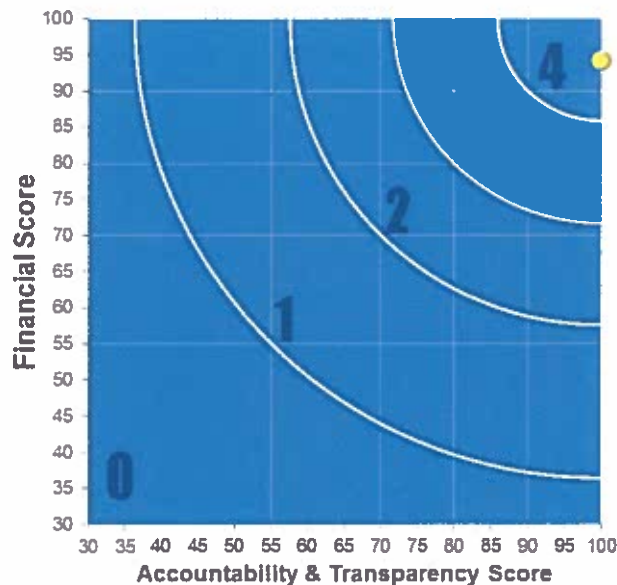
CHARITY NAVIGATOR



For the **11th** consecutive year, the National Kidney Foundation of Michigan (NKFM) has been recognized for its sound fiscal management and performance by receiving the coveted 4-star rating from Charity Navigator.

Charity Navigator is the leading charity evaluator in America and only gives the 4 out of 4-star ratings to **25% of the charities** it evaluates.

Only 1% of these charities have received the prestigious 4-star rating for eleven consecutive years.



At a **95.85** rating, the NKFM is in the **top 1%** of all nonprofits in America.



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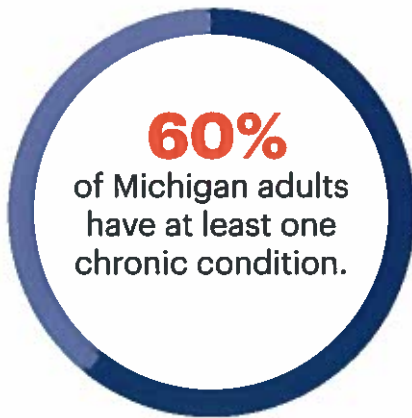
...and kidney disease

Kidney Disease and Michigan Medicaid

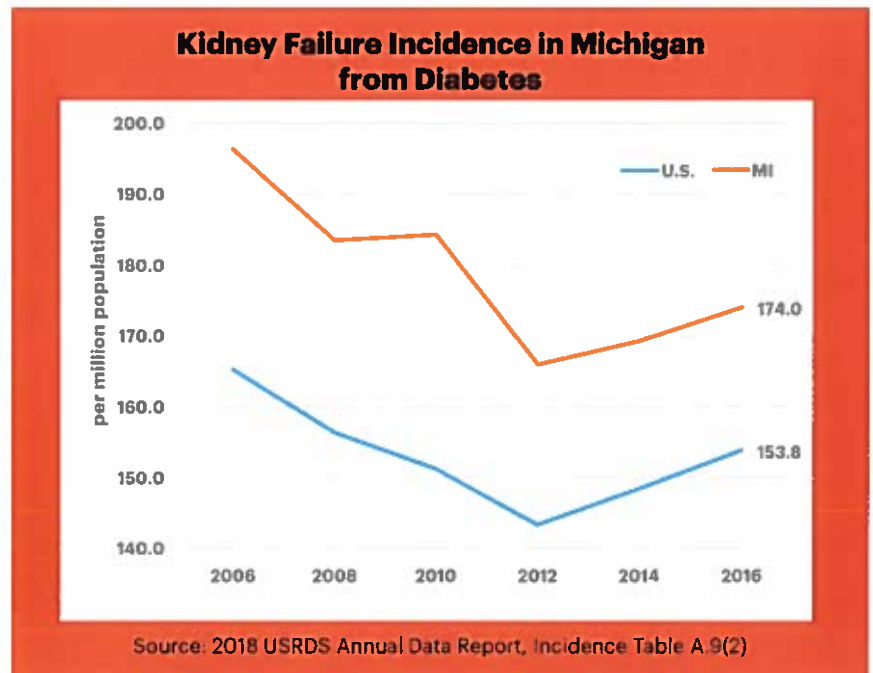
Description	Member Count with Diagnosis	2017 Spend*
End Stage Renal Disease	4,113	\$218,500,000
Chronic Kidney Disease (CKD)	34,214	\$549,700,000
Acute Kidney Failure (Injury)	36,031	\$809,700,000
All Kidney Conditions	50,174	\$1,057,900,000

*Spend is for all care for the member during CY 2017 for principal diagnosis and members are in more than one category. Payformance Solutions, 2019.

It is estimated that more than:



Source: Michigan Department of Health and Human Services



*Data after 2013 includes incidence of ESRD for diabetes patients, U.S., with unknown age dropped.

NKFM annual program cost savings:

\$6,450,000
cost savings in Michigan

Preventing Diabetes and Kidney Disease Through the Diabetes Prevention Program (DPP) Saves Money, Saves Lives

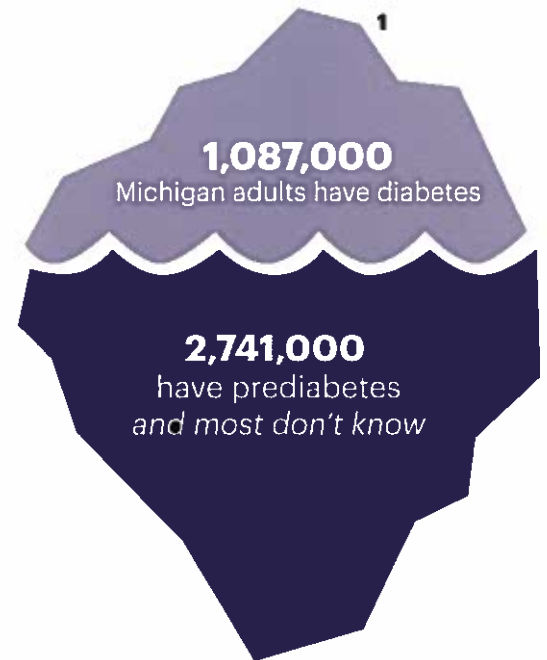
Total Economic Cost of Diabetes to the United States (Billions of 2017 Year Dollars)¹



The Cost of Diagnosed Diabetes to Michigan¹

~\$9.7 billion

Source: 1. American Diabetes Association



In Michigan, **1 out of every 6** Medicaid dollars is spent by the **1 in 23** Medicaid members with diabetes.

*Data for 30 months, October 1, 2015 – March 31, 2018. Payformance Solutions, 2019.



National Kidney Foundation^{*}
of Michigan

www.readyssetprevent.org
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www.nkfm.org



Only 1% of charities receive 4 stars from Charity Navigator 11 years in a row.

Preventing Diabetes and Kidney Disease Through the Diabetes Prevention Program (DPP) Saves Money, Saves Lives

The Diabetes Prevention Center at the NKFM
 has served **3,086** adults with prediabetes
 who collectively have lost **32,119** pounds.

Average Participant Weight Loss



National Average¹
4.2%

NKFM Average*
5.96%

Average Physical Activity Minutes



National Average¹
152

NKFM Average*
201

~237 new cases of
type 2 diabetes
prevented^{2*}

~174 fewer patients using blood
pressure or lipid lowering
medication^{3*}

Sources: 1. American Diabetes Association. Diabetes Care 2017 Oct; 40(10): 1331-1341
 2. DPP Research Group. N Engl J Med. 2002 Feb 7;346(6):393-403
 3. Ratner, et al. 2005 Diabetes Care 28 (4), pp. 888-894

*Outcome data is based upon 1580 NKFM DPP participants.

\$4,187,000 »   
Total Net Savings in healthcare costs*

*Outcome data based upon 1580 NKFM DPP participants. Cost data is over 15 months. Centers for Medicare and Medicaid Services (CMS).
 All other references available upon request.



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Chronic Kidney Disease in the United States, 2019

With **chronic kidney disease (CKD)**, kidneys become damaged over time or cannot clean the blood as well as healthy kidneys. When the kidneys don't work well, wastes and extra water build up in the body and may cause other health problems, including heart disease and high blood pressure. However, people with CKD and people at risk for CKD can take steps to protect their kidneys.

CKD Is Common Among US Adults

Fast Stats

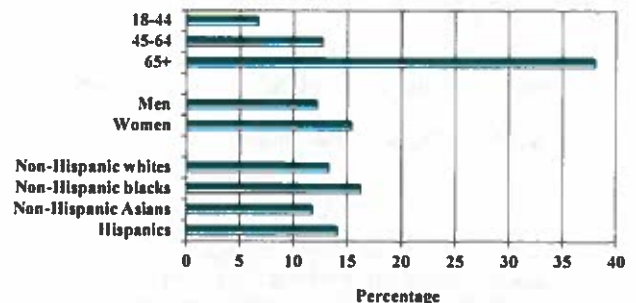
- 15% of US adults—37 million people—are estimated to have CKD.*
- Most (9 in 10) adults with CKD do not know they have it.
- 1 in 2 people with very low kidney function who are not on dialysis do not know they have CKD.



According to current estimates:*

- CKD is more common in people aged 65 years or older (38%) than in people aged 45–64 years (13%) or 18–44 years (7%).
- CKD is more common in women (15%) than men (12%).
- CKD is more common in non-Hispanic blacks (16%) than in non-Hispanic whites (13%) or non-Hispanic Asians (12%).
- About 14% of Hispanics have CKD.

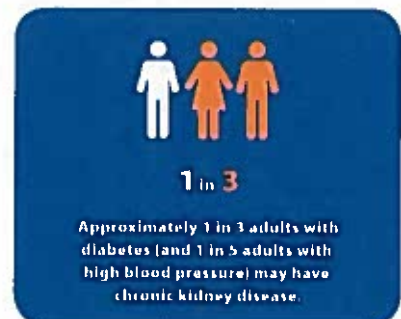
Percentage* of CKD Among US Adults 18 Years or Older, By Age, Sex, and Race/Ethnicity



CKD Risk Factors

Diabetes and high blood pressure are the major causes of CKD in adults. Other risk factors include heart disease, obesity, a family history of CKD, past damage to the kidneys, and older age.

Keep kidneys healthy by managing blood sugar and blood pressure.



*Percentage of CKD stages 1–4 among US adults aged 18 years or older using data from the 2013–2016 National Health and Nutrition Examination Survey and the CKD Epidemiology Collaboration (CKD-EPI) equation. These estimates were based on a single measure of albuminuria or serum creatinine; they do not account for persistence of albuminuria or creatinemia as indicated by the Kidney Disease Improving Global Outcomes recommendations. Thus, CKD in this report might be overestimated. Estimates by sex and race/ethnicity were age-standardized using the 2000 US census population; the overall percentage is unadjusted. The number of adults with CKD stages 1–4 was estimated by applying the overall percentage to the 2016 US Census population.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Ways to Prevent CKD or Detect It Early

- **Control risk factors for CKD:**
 - High blood pressure.
 - High blood sugar levels.

Keeping a healthy body weight through a balanced diet and physical activity may help.

- **Test for CKD regularly** in people who have diabetes, high blood pressure, or other risk factors for CKD.

Testing and Treatment

- People may not feel ill or notice any symptoms until CKD is advanced.
- The only way to find out if people have CKD is through simple blood and urine tests. The blood test checks for creatinine (a waste product produced by muscles) in the blood to see how well the kidneys work. The urine test checks for protein in the urine (a sign of kidney damage).
- Following a healthy diet and taking medicine for diabetes and high blood pressure may keep CKD from getting worse and may prevent other health problems such as heart disease.

CKD-Related Health Problems

Early Death

Adults with CKD are at a higher risk of early death compared to adults without CKD of the same age.

Heart Disease and Stroke

- Having CKD increases the chances of also having heart disease and stroke.
- Managing high blood pressure, blood sugar, and cholesterol levels—all factors that increase the risk for heart disease and stroke—is very important for people with CKD.

Other Health Problems

As CKD worsens over time related health problems become more likely, including:

- Anemia or low red blood cell count (can cause fatigue and weakness).
- Low calcium levels and high phosphorus levels in the blood (can cause bone problems).
- High potassium levels in the blood (can cause an irregular or abnormal heartbeat).
- Loss of appetite or nausea.
- Extra fluid in the body (can cause high blood pressure, swelling in the legs, or shortness of breath).
- Infections or a weakened immune system.
- Depression.

Kidney Failure

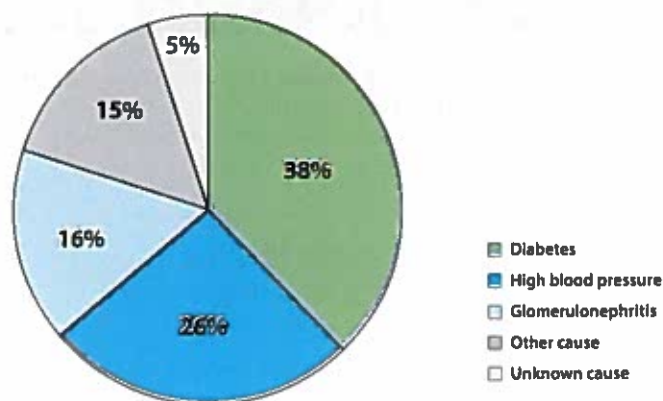
If kidney damage is severe and kidney function is very low, dialysis or a kidney transplant is needed for survival. Kidney failure treated with dialysis or a kidney transplant is called **end-stage kidney disease (ESKD)**.

Treatment may slow the decline in kidney function and delay kidney failure. However, not everyone with CKD develops ESKD, and in some cases ESKD develops even with treatment.

Facts About ESKD

- In 2016, nearly 125,000 people in the United States started treatment for ESKD, and more than 726,000 (2 in every 1,000 people) were on dialysis or were living with a kidney transplant.
- Every day, more than 240 people on dialysis die.
- For every 2 women who develop ESKD, 3 men develop ESKD.
- African Americans are about 3 times more likely than whites to develop ESKD.
- For every 3 non-Hispanics who develop ESKD, 4 Hispanics develop ESKD.
- In US adults aged 18 years or older, diabetes and high blood pressure are the main reported causes of ESKD.
- In US children and adolescents younger than 18 years, polycystic kidney disease and glomerulonephritis (inflammation of the kidneys) are the main causes of ESKD.

Reported Causes of End-stage Kidney Disease in the United States



N=726,331 (all ages, 2016)

Source: US Renal Data System

*Includes polycystic kidney disease, among other causes.



National Kidney Foundation®

of Michigan

*You are cordially invited to attend the 22nd Annual
Champion of Hope Tribute Dinner.*

Wednesday, April 24, 2019
Kellogg Hotel and Conference Center
East Lansing, Michigan (Free Parking)

Cocktail Reception 5:30 p.m.
Dinner 6:30 p.m.
Program and Awards Presentation 7:00 p.m.

Keynote

Robert Gordon
Director, Michigan Department of Health and Human Services

M. David Campbell Leadership Award Winner

Mr. Jack N. E. Pitts, Sr., Founder, Jack Pitts Health Foundation

Legislative Honorees

Representative Abdullah Hammoud, 15th House District
Representative Mary Whiteford, 80th House District

Presentation of
The 2019 Innovations in Health Care Awards

*Proceeds to benefit the National Kidney Foundation of Michigan whose mission is to
prevent kidney disease and improve the quality of life for those living with it.*

To purchase tickets to the event or for more information, please visit
www.nkfm.org/events, or contact Ryder Comstock at
734.222.9800 or rcomstock@nkfm.org



National Kidney Foundation®

of Michigan

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President & CEO

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