

# Working Together to Manage Diabetes: A Toolkit for Pharmacy, Podiatry, Optometry, and Dentistry

The findings and conclusions in this webinar are those of the presenters and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



**National Diabetes Education Program NDEP** 

A program of the National Institutes of Health and the Centers for Disease Control and Prevention



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# Welcome!

Meet Today's Presenters



## Moderator



### **Dennis Frisch, DPM**

Dr. Frisch will moderate each of the Pharmacy, Podiatry, Optometry, and Dentistry (PPOD) webinars. Dr. Frisch assisted in writing the *Working Together to Manage Diabetes* Toolkit and has lectured widely on the subject of team care among PPOD professionals.

Dr. Frisch is active in many professional societies including the American Podiatric Medical Association and has a private practice in Boca Raton, Florida.



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## **CDC PPOD Project Director**



### **Pam Allweiss, MD, MPH**

Dr. Allweiss is a medical officer with the CDC Division of Diabetes Translation (DDT). She completed her fellowship in Endocrinology at Cedars Sinai Medical Center in Los Angeles and was the chief clinical fellow at the Joslin Clinic in Boston.

She has been in private practice and on the faculty of the University of Kentucky Medical School. She has been working with the DDT since 1999, working on several projects with the National Diabetes Education Program



# Pharmacy



## **Sandra Leal, PharmD, MPH, FAPhA, CDE**

Dr. Leal is the Medical Director Clinical Pharmacists/Broadway Clinic, which serves special populations at El Rio Health Center in Tucson, Arizona. Dr. Leal's current clinical practice includes provision of clinical services in the areas of diabetes, hypertension, and dyslipidemia in a largely Hispanic and American Indian population. She has presented extensively about the value and implementation of team care.

Dr. Leal will present in all three of the PPOD webinars.



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# Podiatry



## **Javier La Fontaine, DPM, MS**

Associate Professor at University of Texas  
Southwestern Medical Center, Dallas, TX

Associate Professor at Texas A & M College of  
Medicine, Temple, TX

Former, Chief, Podiatry Section, Central Veterans  
Medical Center, Temple, TX

Born in Bayamón, Puerto Rico

Dr. LaFontaine has been active with the National Diabetes Education Program for many years. His input helped shape the NDEP PPOD materials and resources.



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# Optometry



**Paul Chous, MA, OD, FAAO**

American Optometric Association  
Chous Eye Care Associates, Tacoma, WA

Dr. Chous assisted in the development of the PPOD Toolkit and has both lectured and written extensively about diabetic eye disease and team care.



## Dental



### **Winnie Furnari, RDH, MS, FAADH**

Associate Professor and Assistant Clinical Director at  
New York University College of Dentistry

Ms. Furnari was appointed to the NDEP – PPOD group in 2010 by the American Dental Hygienists' Association. She has contributed to the creation of the documents in the PPOD Tool Kit and has brought the team approach message in presentations to both her colleagues and the public involving her dental hygiene students in community outreaches on the topic of Diabetes and Oral Health.



# Today's Agenda

- Welcome and Announcements
- Introductions
- Exploring Team Care
- Implementing PPOD
  - Pharmacy
  - Podiatry
  - Optometry
  - Dentistry
- Q&A
- Wrap Up



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# Exploring Team Care



## What Is NDEP?

- Established in 1997 as an initiative of the U.S. Department of Health and Human Services to:
  - Promote early diagnosis.
  - Improve diabetes management and outcomes.
  - Prevent/delay the onset of type 2 diabetes in the United States and its territories.
- Jointly sponsored by Centers for Disease Control and Prevention (CDC) and National Institutes of Health (NIH).
- Involves 200+ federal, state, and private sector agency partners.



## What Is PPOD?

- PPOD is a collaborative team approach that:
  - Engages many health care providers who treat patients with diabetes.
  - Reinforces consistent diabetes messages across four disciplines:
    - Pharmacy
    - Podiatry
    - Optometry
    - Dentistry



# What Can PPOD Providers Do?

- PPOD providers can:
  - Embrace a team approach to diabetes care.
  - Recognize signs of diabetes and systemic concerns across all PPOD areas.
  - Reinforce the importance of annual screenings and healthy habits.
  - Educate patients about diabetes.
  - Encourage self-management.
  - Provide treatment.





## Why Do We Need PPOD?

- PPOD makes a difference for patients with diabetes.
- A team approach to diabetes care:
  - Reduces risk factors.
  - Improves diabetes management.
  - Lowers the risk for chronic disease complications.



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# A PPOD Provider May Be the First to See a Person Having a New Problem

- Patients may consult a PPOD provider about new symptoms that may be diabetes-related before consulting with a primary care provider.
- Regular communication provides an opportunity to keep diabetes on the patient's radar screen.





# **A PPOD Provider May Be the First to See a Person Having a Problem**

- PPOD providers are well positioned to advise and educate their patients about diabetes control and prevention.
- All providers need to give consistent messages, recognize early danger signs, and promote the team approach.



## Benefits to Patients

- Access to integrated diabetes care across specialty and primary care areas.
- Regular communication among your team of health care providers.
- Strong focus on preventive care.





## Role of Pharmacists

Pharmacists are unique members of the health care team because:

- Patients often see their pharmacist ***seven times more often*** than their doctor.
- Pharmacists are often available all day and into evenings and weekends—with no appointment needed.



## Role of Pharmacists (cont.)

- Monitor drug regimens.
- Work with patients to develop a plan to reduce risk of side effects and drug interactions.
- Advise patients on how to take medications properly.
- Provide other information to help control diabetes.
- Communicate with health care team.



# Key Questions to Ask Your Patients About Medication Therapy Management

**Patients should be referred to a pharmacist if the answers to these questions are “no” or “unsure”:**

- Do you have a list of all your medicines, vitamins, and supplements?
- Do you know the reason why you take each medicine?
- Have you reported any side effects from your medicines to your pharmacist?
- Do you have difficulty affording your medication and testing supplies?
- Do you understand the importance of timing your medication in relation to your meals?



## Example: PPOD in Action

- 40-year-old woman notices blurry vision and asks her pharmacist about reading glasses.
- Pharmacist discovers that patient was diagnosed with diabetes last year but did not return for follow-up appointment.
- Pharmacist advises that changes in vision may be a sign of diabetes, not a need for reading glasses.
- Pharmacist arranges primary care visit and eye care visit for follow-up.
- Pharmacist also refers her to the NDEP website at [www.cdc.gov/diabetes/ndep](http://www.cdc.gov/diabetes/ndep) for more materials.



# Foot Health and Diabetes

- More than 60% of nontraumatic lower-limb amputations occur in people with diabetes.
- Patients with diabetes are 15–26 times more likely to have an amputation than patients without diabetes.
- Up to 20% of diabetes patients who participate in routine foot care will have a treatable foot care problem.



# Diabetic Foot Ulceration

- Incidence foot wounds is 2-7%
- 9 -20% of ulcers end in amputation
- 28-83% re-ulcerate within 12 months
- More days spent treating a pedal wound than any other DM complications
- 20-25% of all DM-related admissions
- >80% of ulcers potentially preventable



# Diabetic Foot Ulcers



Ulcers occur most often on the ball of the foot or on the bottom of the big toe. Ulcers on the sides of the foot may be due to poorly fitting shoes. Some ulcers do not hurt – remind patients to check their feet regularly. Tell patients that every ulcer should be seen by a health care provider right away. Neglecting ulcers can result in infections, which in turn can lead to loss of a limb.



# Causal Pathways for Foot Ulceration



Critical triad: neuropathy, deformity, and trauma present in 63% of foot ulceration cases

- Neuropathy most important component cause in 78% of cases
- Poor circulation is a component cause in 35% of cases

>80% of ulcers potentially preventable



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# Identifying patients with...



**Neuropathy**

**Vascular Disease**

**Foot Deformity**



# Neuropathy

- Nerve damage from diabetes is called diabetic neuropathy. About half of all people with diabetes have some form of nerve damage. It is more common in those who have had the disease for a number of years and can lead to many kinds of problems.
- Patients may mention ...
  - Tingling or pins and needles feeling in the feet
  - Foot Pain (burning, stabbing or shooting pains)
  - Increased Sensitivity to touch, heat, cold
  - Numbness or Weakness

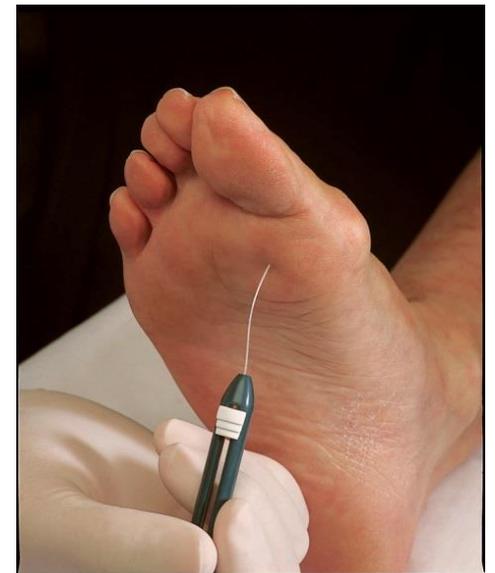


# Diagnosing Neuropathy



**Tuning Fork-spring two limbs with thumb and forefinger**

**Semmes Weinstein monofilament  
1, 3, 10 sites in each foot**





# Peripheral Vascular Disease

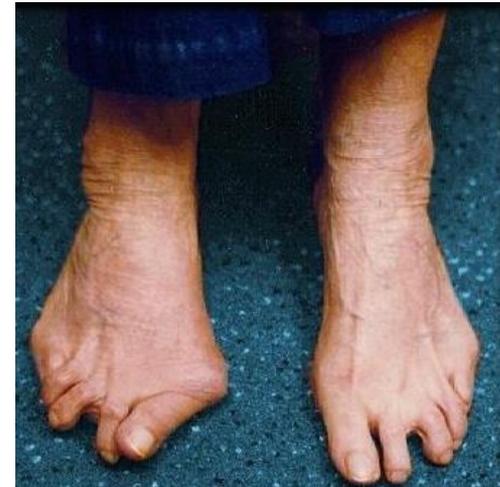
- Peripheral vascular disease occurs when blood vessels in the legs are narrowed or blocked by [fatty deposits](#) and blood flow to the feet and legs decreases.
  - Dorsalis pedis and posterior tibial
  - Generally one pulse per foot adequate for perfusion
  - Calcification





# Recognizing Deformities

- Calluses
- Mycotic Nails
- Bony Prominences
- Digital Deformities
- Hallux Valgus/Bunion
- Prior Amputation





# Key Questions to Ask Your Patients About Foot Health



- **Patients should be referred to a podiatrist if the answers to these questions are “no” or “unsure”:**
  - Do you get a full foot exam by a podiatrist at least once a year?
  - Do you know how diabetes can affect your feet?
  - Do you know how to check your feet every day?



## Additional Questions to Patients



- Are your feet numb?
- Do you have burning pain?
- Are your feet sensitive to touch?
- Do you experience muscle cramps?
- Can you tell hot from cold water?
- Do you fatigue easy?
- Are symptoms worse at night
- Do legs hurt when you walk?
- Do you experience prickling feelings in your feet?
- Are you able to sense your feet when walking?
- Have you had a foot ulcer?
- Has your doctor diagnosed neuropathy?
- Have you had an amputation?



## Questions from Patients

- “Why are my feet are numb, or burn or tingle at night?”
- “My legs hurt when I walk, what could cause that?”
- “My legs get tired very easily – what could cause that?”
- “I have a callus on my foot, what should I do?”
- “I have an ingrown nail, should I see a podiatrist?”
- “Why are my legs swollen?”



## Eye Health

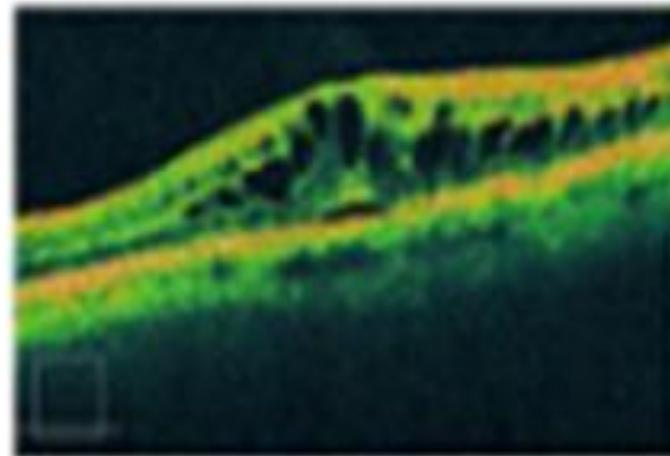
- 11% of U.S. adults with diabetes have a form of visual impairment.
- Adults with visual function loss are at least 90% more likely to have depression than those without visual function loss.
- The majority of severe vision loss from diabetes is preventable with timely diagnosis and therapy.



# Eye Exams



- **People with diabetes should have an annual comprehensive dilated eye exam at least once a year.**
  - Help determine risk of developing eye complications.
  - Educate high-risk patients on how to care for and monitor their eye health.
  - Prevent low-risk patients from becoming high-risk.





# Key Questions to Ask Your Patients About Eye Health

- **Patients should be referred to an optometrist if the answers to these questions are “no” or “unsure”:**
  - Do you get a full eye exam with dilated pupils at least once a year?
  - Do you know how diabetes can affect your eyes?
  - Do you know what to do if you have vision changes?



## Example: PPOD in Action

- A 45-year-old African American woman brings her mother for her annual comprehensive diabetes eye exam.
- The eye care provider asks if she has ever considered that she, too, is at risk for developing type 2 diabetes.
- The provider gives the woman *NDEP's Am I At Risk?* brochure and points out the NDEP website and toll-free number for more information and resources.
- The provider suggests the woman make a follow-up appointment with her own primary care provider.
- The provider recommends the woman schedule a dilated eye examination to check for signs of diabetic retinopathy, which occurs in 20% of patients at diagnosis, as well as glaucoma, which is 4X more common in African Americans and a leading cause of blindness.



## Oral Health and Diabetes

- 85% of patients with type 2 diabetes report that they have received no information on the association between diabetes and oral health.
- Periodontal disease has been associated with poor glycemic control.
- Tobacco use and poor nutrition are risk factors for compromised oral health.



## Oral Health Exams

- Encourage regular (annual or more frequent) oral examinations.
- Educate patients about:
  - The link between diabetes and oral health.
  - Self-management skills to properly care for teeth.
- Prevent low-risk patients from becoming high-risk.



# Key Questions to Ask Your Patients About Oral Health

- **Patients should be referred to a dental professional if the answers to these questions are “no” or “unsure”:**
  - Do you visit your dental provider at least once a year for mouth exam?
  - Do you know how diabetes can affect your teeth and gums?
  - Do you know the early signs of tooth, mouth, and gum problems?



## Example: PPOD in Action



- A dental patient is scheduled for a procedure, but she doesn't understand how to manage the timing of her insulin injections.
- The dental professional arranges a pharmacy consultation for the patient.
- The patient and pharmacist develop an individualized medication schedule together.





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## Q&A

Questions not responded today will be answered by e-mail within a couple of weeks.



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## Wrap Up



## PPOD: How to Get Started

- **Review and download** the PPOD Guide and other Toolkit materials including these slides at <http://www.cdc.gov/diabetes/ndep/ppod.htm>
- **Review and identify best strategies** to implement PPOD in your practice.
- **Share a consistent message** with your patients about controlling their ABCs.
- **Pay attention** to signs of problems in other PPOD areas and **make referrals.**



# Practice True Multidisciplinary Team Care!

- **Collaborate** with other health care providers, including podiatrists, pharmacists, optometrists, and dentists, primary care physicians, nurse practitioners, diabetes educators, physician assistants, and community health workers.
- **Network** with local associations and local chapters of national associations.
- Consider creating a **local PPOD coalition** in your state or community.
- **Tailor and use PPOD materials** for patients in your practice and providers in your coalition.



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For more information, call 1-800-CDC-INFO (800-232-4636)

TTY 1-888-232-6348 or visit [www.cdc.gov/info](http://www.cdc.gov/info).

To order resources, visit [www.cdc.gov/diabetes/ndep](http://www.cdc.gov/diabetes/ndep).

## Or contact:

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## Thank you!

Please remember to fill out the survey you will receive immediately after this call and also the surveys you will be receiving to see how you might be practicing team care.



Visit [www.cdc.gov/diabetes/ndep](http://www.cdc.gov/diabetes/ndep) for more resources for health care professionals *and* patients.