ADAPT
The Adoption of the Diabetic Amputation Prevention Team

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Presenter Disclosures

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1. The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

“No relationships to disclose”
Percentage of residents living in poverty in 2015: 27.3%
Summary

- The Facts of Leg Loss
- Signs of Troubled Soles
- The Amputation Stairway
- Traits of Team Success
- Keys to Winning
Worldwide 2015: 415 million people with diabetes
2040: 642 million people with diabetes

- North America and Caribbean
  2015: 44.5 million
  2040: 60.5 million

- Europe
  2015: 59.8 million
  2040: 71.1 million

- Middle East and North Africa
  2015: 33.4 million
  2040: 72.1 million

- South and Central America
  2015: 29.6 million
  2040: 48.8 million

- South East Asia
  2015: 78.3 million
  2040: 140.2 million

- Western Pacific
  2015: 183.2 million
  2040: 214.8 million

IDF 2015
Among all people with diabetes,

UP TO 4% ANNUALLY
will develop a DFU &

25%
will develop a DFU in their lifetime\textsuperscript{19, 20}


Healing of Neuropathic Ulcers


A meta-analysis of 10 control groups in clinical trials evaluating treatments for diabetic neuropathic foot ulcers revealed that approximately 70% of DFUs are slow to heal (only 24% and 31% of ulcers heal after 12 and 20 weeks of good wound care, respectively).
5-YEAR MORTALITY RATES

Leg Amputations per 1000 Black Medicare Enrollees, 2007-2011
Psychological Impact

• Loss of ability to engage in previous activities
  Vocational
  Social
  Leisure
  Body Image & Self Esteem
  Sexual
    (50% dissatisfied)
  Mood
    (20–30% depression rate)

Pasquina 2015
“Walking is man's best medicine.”
- Hippocrates
Cost of a Major Leg Amputation

$91,000 in Direct Health Expenditures

Mackenzie JBJS 2007
Signs of Trouble Soles

- Peripheral Arterial Disease (20–30% of DM pts)
- Neuropathy (50% of DM pts)
- Foot Deformities
- Weak or absent pulses
- Lack of hair on feet
- Sluggish capillary refill
- Rubor with dependency
- Pallor with elevation
- Thin, shiny skin
Neuropathy
Foot Deformity
Rogers 2009

Summary

The Facts of Leg Loss

Signs of Troubled Soles

The Amputation Stairway

Traits of Team Success

Keys to Winning
• Achieve quick infection control
• Timely revascularization
• High quality wound care
• Offloading devices
• Improve the A1C and nutrition status
The impact and outcomes of establishing an integrated interdisciplinary surgical team to care for the diabetic foot.

Armstrong, Bharara 2012  Arizona

Implemented team and over 4 years performed 800 procedures

Vascular Procedures up 44%

Below Knee Amputations down 46%

- Major Amputation Rate Reduced from 32% to 19%
  - 41% fewer legs lost
- In-hospital Mortality Reduced from 9% to 4%
  - 56% fewer lives lost

Initial workup by Foot and Ankle Ortho ➔ Vascular Surgery ➔ Plastic Surgery + Endocrinology and Infectious Disease as needed
Reduction in diabetic amputations over 15 years in a defined Spanish population. Benefits of a critical pathway approach and multidisciplinary team work.

Martinez Gomez 2014, Spain

Established Diabetic Foot Clinic in Hospital
- General Surgeon
- Rehab Physician Assistant
- Orthotist + Shoemaker
- Endocrine
- Orthopedics
- Vascular
- Interventional Radiology

After implementing the team clinic major amputations fell by 47%
The impact of a podiatric lead limb preservation team on disease outcomes and risk prediction in the diabetic lower extremity: a retrospective cohort study. Driver 2010, USA.

Follow cohort of patients over 5 year period

311 patients followed by team

174 patients by non-team providers

- Survival significantly improved by the team (19.5% vs 7.7%)

- Much more minor amputations than leg amputations
The Facts of Leg Loss

Signs of Troubled Soles

The Amputation Stairway

Traits of Team Success

Keys to Winning
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Traits of Team Success

Keys to Winning

Total amps down 40%
48% fewer AKA
39% fewer BKA
10% fewer toe amps

Total vascular procedures up 65%
Endovascular procedures up 423%
Open procedures down 61%

Goodney 2015
Keys to Winning

▪ Early Referral to Multidisciplinary Team

▪ Aggressive infection management

▪ Rapid PAD recognition and revascularization

▪ Initiation of advanced wound care
Alone we can do so little; together we can do so much.

-Helen Keller
THANKS!

Any questions?

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