



**Selling Diabetes
and the
Treatment of the Diabetic Foot**

Learning Objectives

- Scope of problem of diabetic foot disease
- Marketing Risk and Risk Communication
- Comprehensive Diabetic Foot Exam
- Principles of treatment of DFU's



What Do Diabetics Think About When They Hear “DIABETES”



Diabetes Management

- Treatment based on lifestyle modification/pt education
- Emphasis on medications
- Visits to Family doctor, specialists, DEC's, pharmacists, dieticians
- Monitoring with labs
- *Clinicians financially rewarded if they document this activity*



Outcomes

- Diabetes rates in Ontario have gone from 5% 1995 to 11% in 2006 and predicted to rise to 25% in 2020-Why?
 - **OBESITY**
- In February of 2010, obesity overtook smoking as the number 1 preventable cause of cardiovascular disease.
 - 1 in 2 Americans are obese
 - 1 in 4 Canadians are obese
 - *1 in 3 children are obese!*
- Less than 50% of all diabetics in Canada have A1c at target
 - after 10+ years this falls to less than 35%



Conclusions

- With these statistics we must accept the fact that current approach to **pt education has failed**
- We need a **drastic change** in the approach to addressing diabetes and its complications
- Maybe we should be judged/rewarded on **outcomes** as opposed to simply performing the task



“You are what your record says you are.”

Bill Parcells



Marketing Risk

- We have not been successful in convincing pts to change their behaviours
- The case exists for using the term “Malignant Diabetes”
 - Malignant HTN
 - Malignant Hyperthermia
 - Malignant OM

Definitions

- Malignant is a medical term used to describe a severe and progressively worsening disease
- Metastatic disease is the spread of a disease from one organ or part to another non-adjacent organ or part

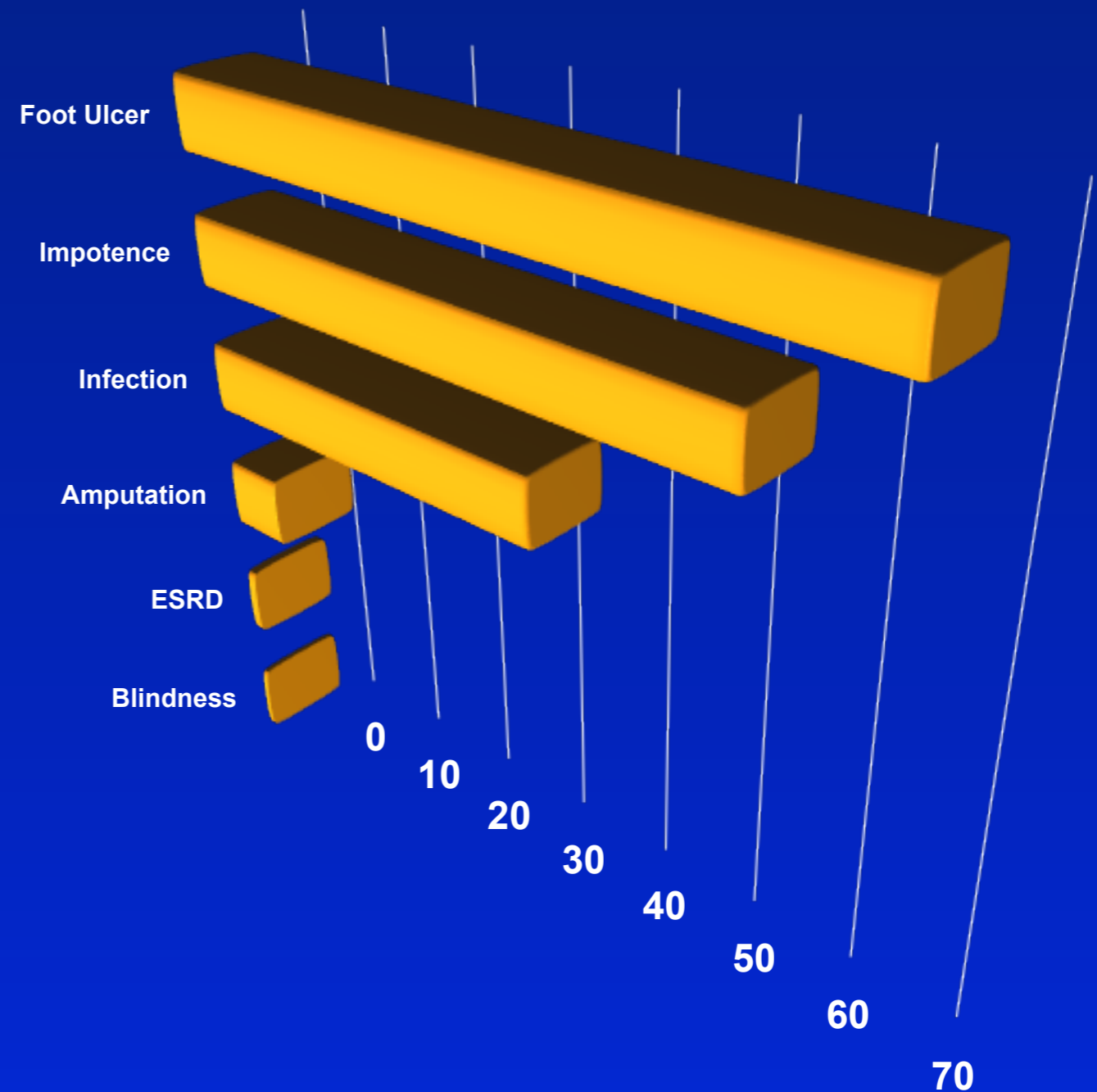


Mortality and DFU

- Moulik et al 2003 137 DFU pts who healed or went on to amputation
 - amputation group 47% 5yr mortality
 - healed DFU group 43% 5yr mortality
- Armstrong, Robbins and Boulton 2007 2432 DFU pts
 - 48% in amputation group
 - 47% in healed group

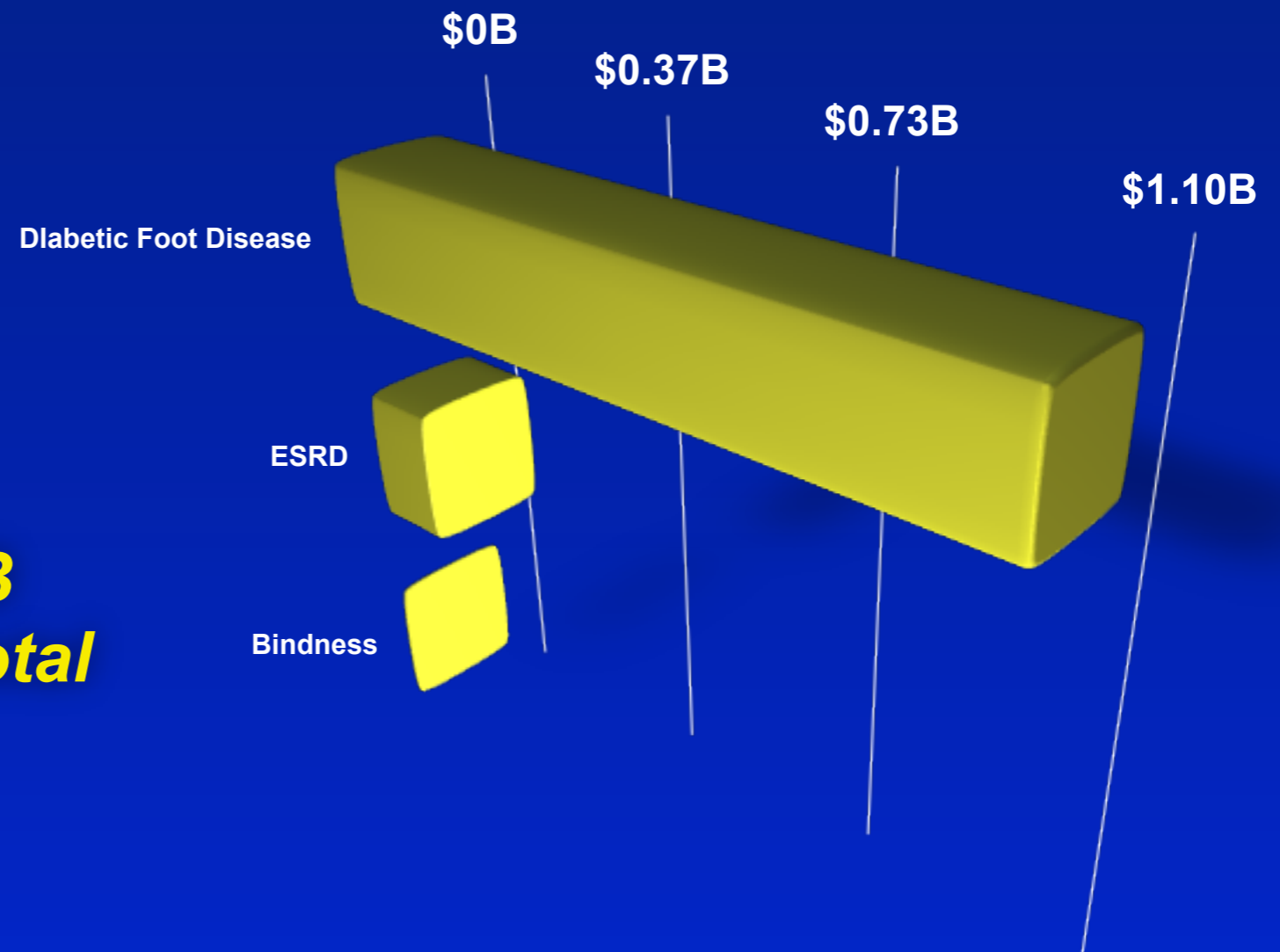
How does diabetic foot disease compare with other diabetes complications?

- Infected wounds: most common reason for hospital admission
- 1 in 5 leads to lower extremity amputation
- 85% preceded by ulcer



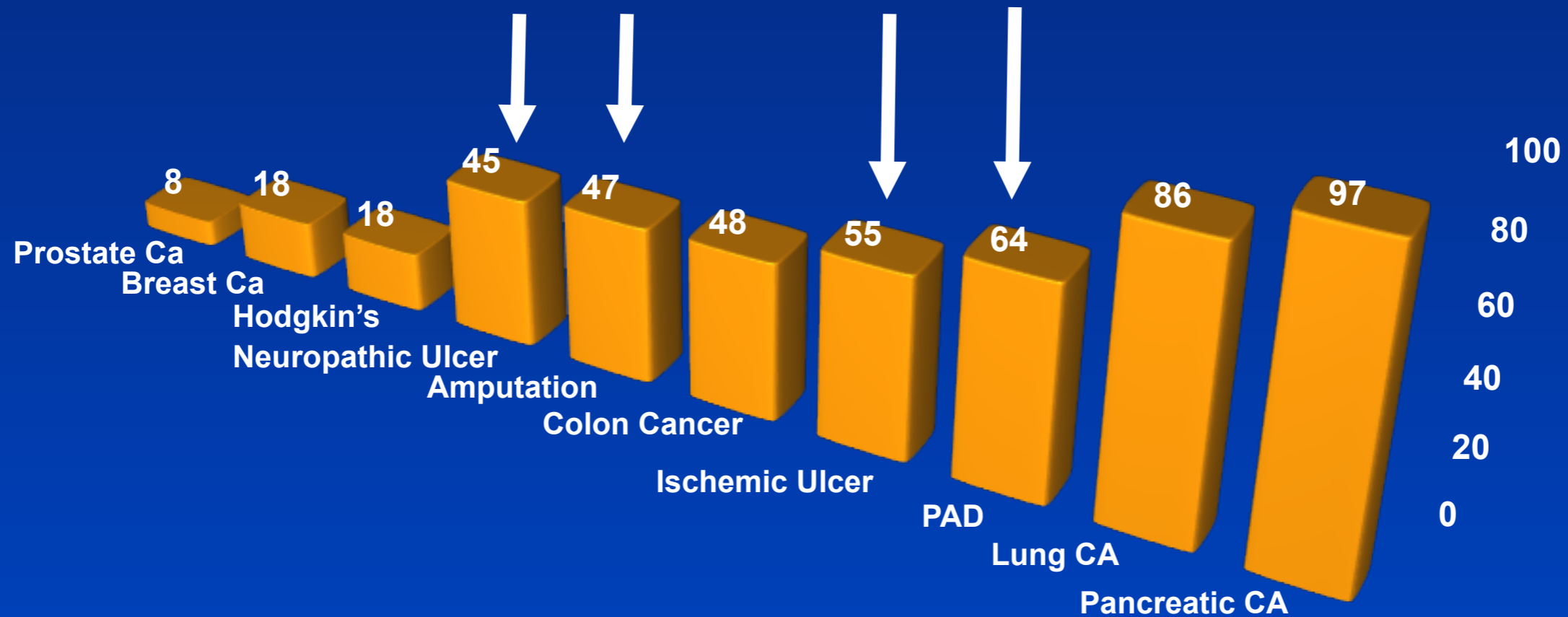
How much does diabetic foot disease cost ?

- 7% DM's will develop DFU every year
- Cost to system is **over \$1B**
- Represents over **33% of total DM treatment costs**



O'Brien, Patrick, Caro, BMC Health Services Research 2003
Rogers, Lavery, Armstrong, JAPMA, 2008
Sendry, Camerota Martens Clinical Therapeutics 1998
Stockl, Vanderplas, tafesse, Chang Diabetes Care 2004
Prompers et al Diabetologia 2008
Driver, Fabbi, Lavery, Gibbons JAPMA 2010

Relative 5-Year Mortality Rates



Armstrong, et al, Int Wound J, 2007
American Cancer Society. *Cancer Facts and Figures*, 2000
National Cancer Institute (<http://seer.cancer.gov>), 2007
Moulik, et al, Diabetes Care 2003
Golomb, et al, Circulation, 2006
Faglia, et al, Eur J Vasc Surg, 2006
Office for National Statistics, UK, 2006
Singh, Armstrong, Lipsky, JAMA, 2005



Risk Communication

- Diabetes is a malignant and metastatic disease
- Motivate patients into the same type of resolve to treat their diabetes that they would have for a diagnosis of cancer
- When was the last time you heard a pt say.....
“I’m a 4 year diabetic foot ulcer survivor!”



Quiz

What do all these people have in common based on what I have just told you?



Treating Diabetic Foot Ulcers

The mainstay of treatment for DFU's:

- 1. Offloading**

2. Frequent Surgical Debridement

3. Advanced Wound Dressings



Diabetic Foot Exam

- Look
- Touch
- Assess

INLOW'S
60-second Diabetic Foot Screen
SCREENING TOOL

Canadian Association of Wound Care  Association canadienne du soin des plaies
www.cawc.net

Patient Name:

Clinician Signature:

Date:

Look – 20 seconds	Score		Care Recommendations
	Left Foot	Right Foot	
1. Skin 0 = intact and healthy 1 = dry with fungus or light callus 2 = heavy callus build up 3 = open ulceration or history of previous ulcer			
2. Nails 0 = well-kept 1 = unkempt and ragged 2 = thick, damaged, or infected			
3. Deformity 0 = no deformity 1 = mild deformity 2 = major deformity			
4. Footwear 0 = appropriate 1 = inappropriate 2 = causing trauma			
Touch – 10 seconds	Left Foot	Right Foot	Care Recommendations
5. Temperature – Cold 0 = foot warm 1 = foot is cold			
6. Temperature – Hot 0 = foot is warm 1 = foot is hot			
7. Range of Motion 0 = full range to hallux 1 = hallux limitus 2 = hallux rigidus 3 = hallux amputation			
Assess – 30 seconds	Left Foot	Right Foot	Care Recommendations
8. Sensation – Monofilament Testing 0 = 10 sites detected 2 = 7 to 9 sites detected 4 = 0 to 6 sites detected			
9. Sensation – Ask Four Questions: i. Are your feet ever numb? ii. Do they ever tingle? iii. Do they ever burn? iv. Do they ever feel like insects are crawling on them? 0 = no to all questions 2 = yes to any of the questions			
10. Pedal Pulses 0 = present 1 = absent			
11. Dependent Rubor 0 = no 1 = yes			
12. Erythema 0 = no 1 = yes			
Score Totals =			

Screening intervals for foot ulcers and/or limb-threatening complications. Use the highest score from left or right foot. Screening intervals may vary based on clinical judgement and individual patient factors.
 Score = 0 to 5 → recommend screening yearly
 Score = 6 to 11 → recommend screening every 6 months
 Score = 12 to 17 → recommend screening every 3 months
 Score = 18 to 23 → recommend screening every 1 to 3 months

Inlow's 60-second diabetic foot screen has been shown to have content validity.

Offloading

- 2010 Consensus Guidelines for the Treatment of the Diabetic Foot
 - Total contact casting (TCC) was the “gold standard”
 - 80% healed within 6-8 weeks



Total Contact Casting



26 months Hx

TCC



6 weeks



2 weeks

Removable Cast Walkers

- Work almost as well as TCC
 - only if the pt wears it
 - Armstrong et al found that pts only wore the RCW 25% of the time
- logical approach is to make it irremovable



Removable Cast Walker

Add Coban



iTCC

Offloading Scooters



RAMM Turning Leg Caddy



Forward Mobility Voyager Seated Scooter

Debridement



Simple



Complex



Gadgets

The Blister



Limb Threatening Wound



Limb Salvage



Dry Skin



Neglect



The Ingrown Toenail



Prevention

- Never going barefoot either in the house or out
- Looking at the feet every day
- Moisturizing the feet every day
- Proper footwear
- Orthotics

These simple steps reduce ulceration/amputation rate
by 85%



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 - **selling** the notion that diabetes is a **malignant disease**
- Principles of treatment of DFU's



TMI Team





