

This product was developed by the St. Peter Family Medicine Residency Program in Olympia, WA. Support for this product was provided by a grant from the Robert Wood Johnson Foundation® in Princeton, New Jersey.

Diabetes and IGT (impaired glucose tolerance):
Patient Self-Management Workshop
Goals and Objectives

Goals:

To increase the residents understanding and knowledge of Diabetes Mellitus II with an emphasis on patient self-management.

Objectives: At the conclusion of this workshop the resident will be able to:

1. Describe the prevalence of diabetes in the US and worldwide, and its overall financial impact on society.
2. Discuss the chronic care model of disease management.
3. List the clinical criteria for diagnosis of diabetes and IGT.
4. Describe the latest published literature on chronic disease and patient self-management/self-efficacy, and apply it to practice.
5. Demonstrate a practical approach to seeing a diabetic or IGT patient in the confines of a routine 15-minute encounter to include:
 - Background
 - Barriers to lifestyle modification
 - Exploring a patients successes with lifestyle modification
 - Asses a patients willingness to change
 - Develop an action plan
 - Reinforcement and how your office and staff can help
6. Engage and support a patient in reaching a self-management goal as part of the diabetes care routine by demonstrating with role-playing.



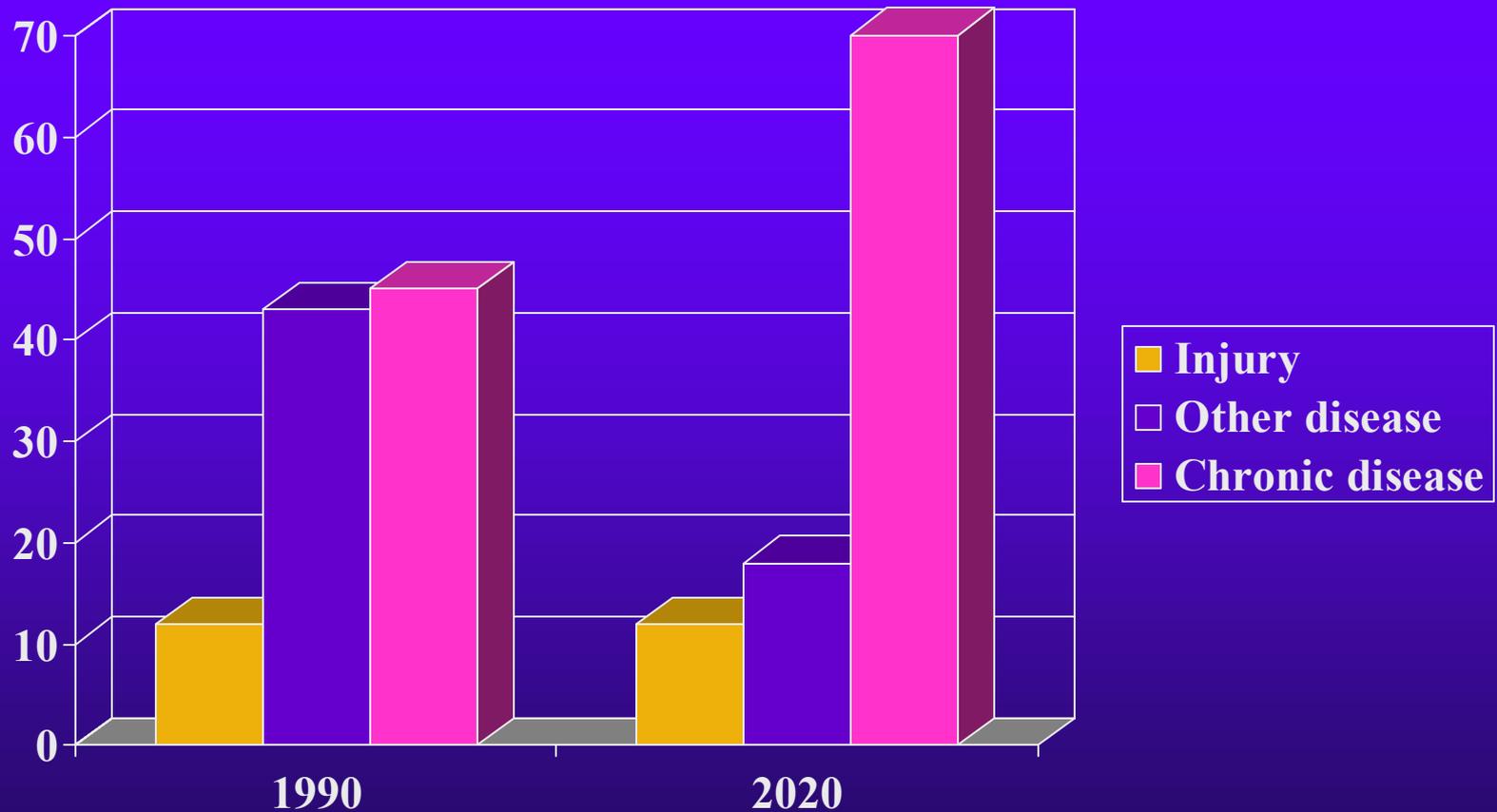
Diabetes & IGT/IFG (a.k.a. “Pre-Diabetes”): Patient Self-Management



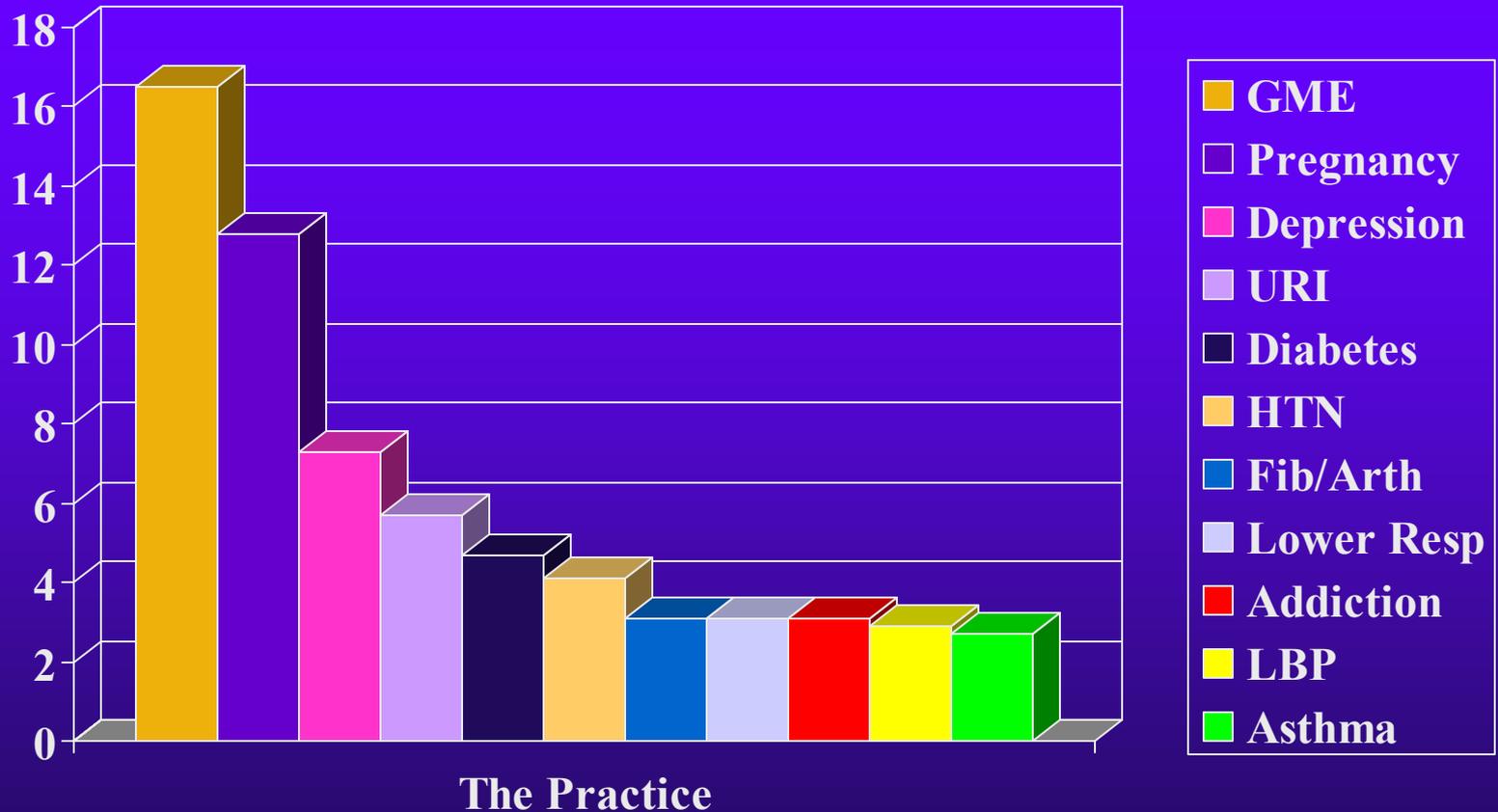
June 4, 2003

Devin Sawyer, MD

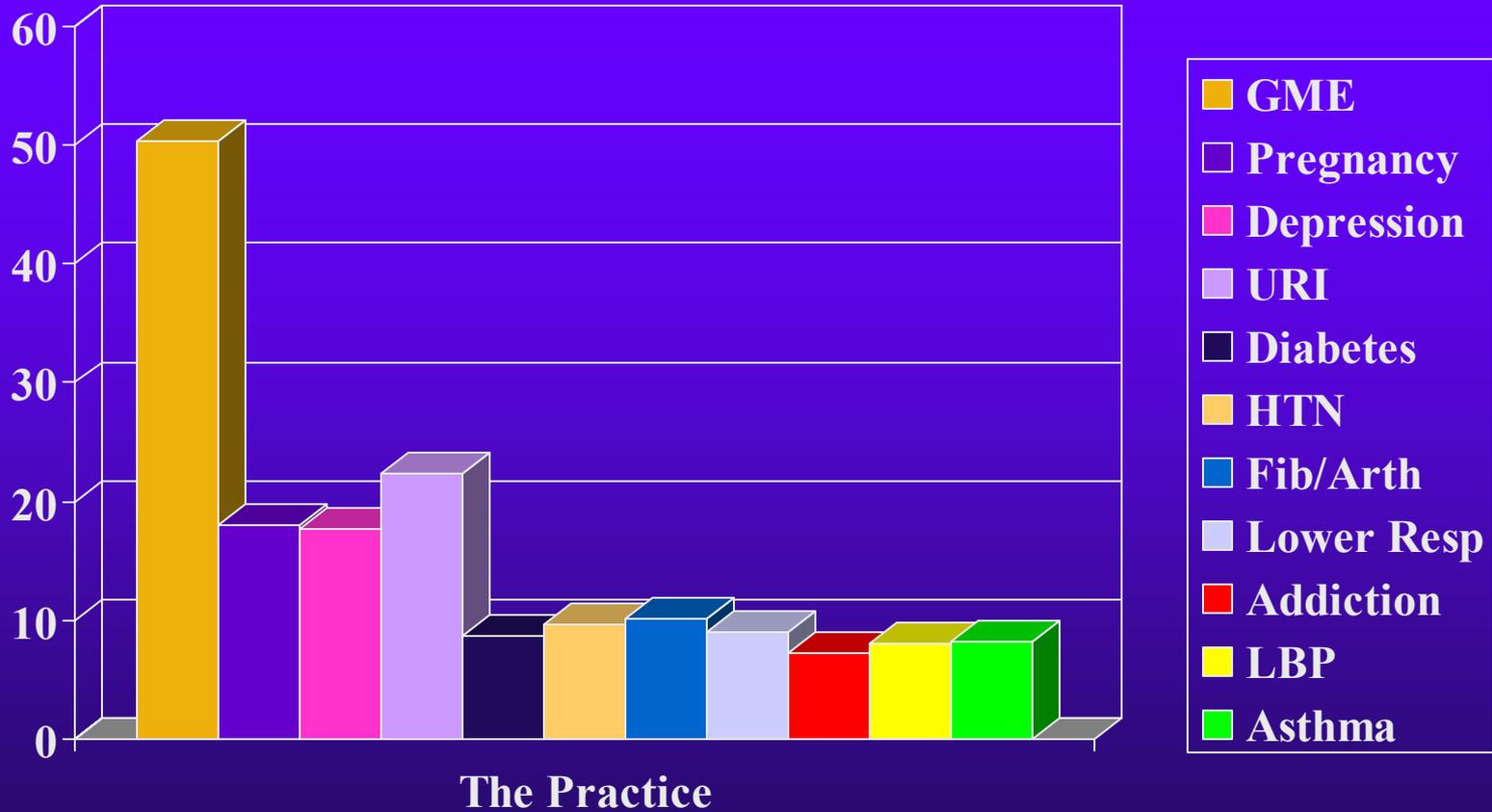
Chronic disease in your practice:



St Peter Family Practice- % visits



St Peter Family Practice- % with diagnosis





SPFP grads; what are they seeing?

- ◆ Goodman (VA in Las Vegas)- “Every patient has diabetes”
- ◆ Cates (SeaMar)- “Frustrating and difficult, I need help (from DE). I feel under-prepared to educate my patients. Group visits were great. Satisfying when it works.”
- ◆ Sargent (Indian Health Services)- “Open Access and max-pack the visit is how I survived. Diabetes educators on site.”



SPFP grads; what are they seeing?

- ◆ Taylor (local private practice)- “Lifestyle modification? A dismal failure”
- ◆ Michaels & Glass (Shiprock ,NM)- Diabetes educators on site in the waiting room
- ◆ Kershisnik (local private practice)- “It is so satisfying to hang in with a patient (diabetic) for 5 or more years and they finally make a breakthrough (with lifestyle changes)”



Prevalence of Diabetes & IGT:

- ◆ An estimated 16 million people have diabetes in the US & 6 million of those don't know it yet
- ◆ Some estimate a 11-20% prevalence of impaired glucose tolerance (IGT) in the US (between 20 and 39 million people)



Prevalence of Diabetes & IGT:

- ◆ WHO estimates that those with DM worldwide will double from 140 million to 300 million in the next 25 years
- ◆ WHO estimates that 40-45% of persons age 65 years of age or older have either type 2 diabetes or IGT



Cost of diabetes care:

- ◆ Medical cost of diabetes in 2002 was an estimated **\$92 Billion** (\$44 Billion in 1997)
- ◆ Adding medical cost and lost productivity, diabetes cost an estimated **\$132 Billion** in 2002 (\$98 Billion in 1997)



Diagnosis of diabetes & IGT:

- ◆ IGT is a 2 hr PP (75gm) BS from 140 to 200 (or the IHOP test)
- ◆ IFG is a fasting BS from 110-125
- ◆ Diabetes is a 2 hr PP (75gm) BS over 200 and/or a fasting BS over 125
- ◆ A repeat test should be done on a separate day to confirm diagnosis of diabetes



What is Self-Management?

- ◆ Checking blood sugars
- ◆ Taking meds (pills and shots)
- ◆ Eating right (CDE, doctor, other diabetics)
- ◆ Exercising (30 mins/day, 150 mins/week)
- ◆ Checking feet
- ◆ Making appointments (PCP, eye doc, CDE)
- ◆ “Compliance”???



What is Self-Management?

- ◆ “The patients right and responsibility to make decisions that make sense within the context of their lives”
- ◆ “Education and support refocused on helping patients achieve goals and outcomes that they themselves have selected”
- ◆ “Must acknowledge and support the patients role as the key decision maker in self-management”
- ◆ Patient role? Provider role? Staff role? Others?



A “new drug” on the horizon: (lifestyle change is disease management)

- ◆ Ann Intern Med. 2001;134:96-105
(diabetic nurses)
- ◆ N Engl J Med, 2001; 344,18:1343-1350
(Finnish diabetes prevention study)
- ◆ Diabetes Care, 1997; 20,4:537-544
(China prevention study)
- ◆ N Engl J Med, 2003; 348,5:383-459
(Copenhagen CV event study)
- ◆ N Engl J Med, 2002; 346: 393
(Diabetes Prevention Program)



Ann Intern Med. 2001;134:96-105

Physical activity and risk for
cardiovascular events in diabetic women,
Harvard, Boston

- ◆ 5125 female nurses with DM were assessed on their level of physical activity (number of hours per week and level of intensity, number of flights of stairs, walking pace) and asked to keep activity diaries

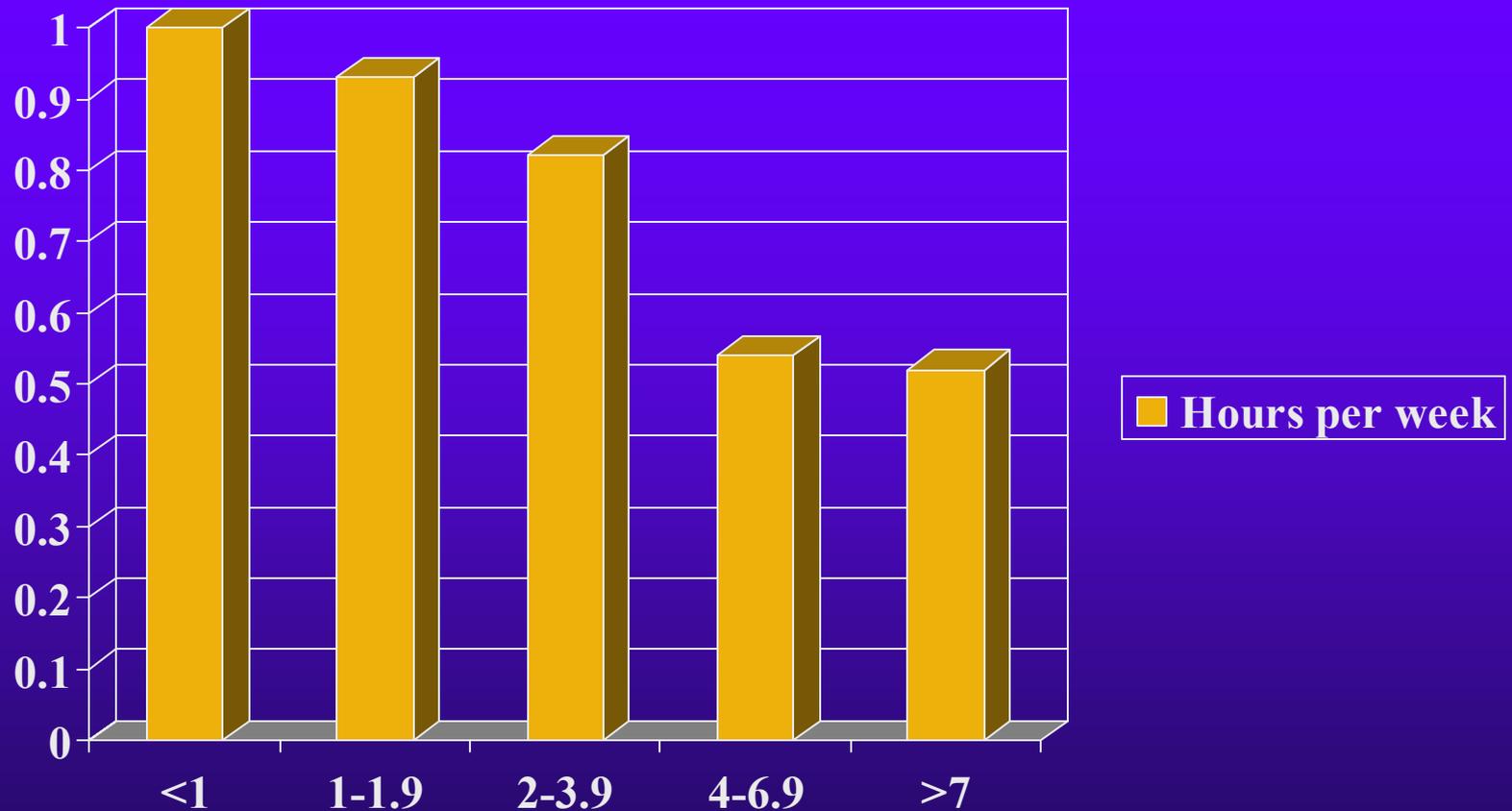


Ann Intern Med. 2001;134:96-105

- ◆ 323 new cases of vascular disease (stroke, AMI- fatal and non fatal)
- ◆ 104 cases/7918 person yrs <1hr/wk (RR=1)
- ◆ 76/6385 with 1-1.9hr/wk (.93)
- ◆ 83/8091 with 2-3.9hr/wk (.82)
- ◆ 52/7650 with 4-6.9hr/wk (.54)
- ◆ 8/1389 with >7hr/wk (.52)
- ◆ No change in RR when controlled for BMI and smoking

Ann Intern Med. 2001;134:96-105

Relative Risk Reduction





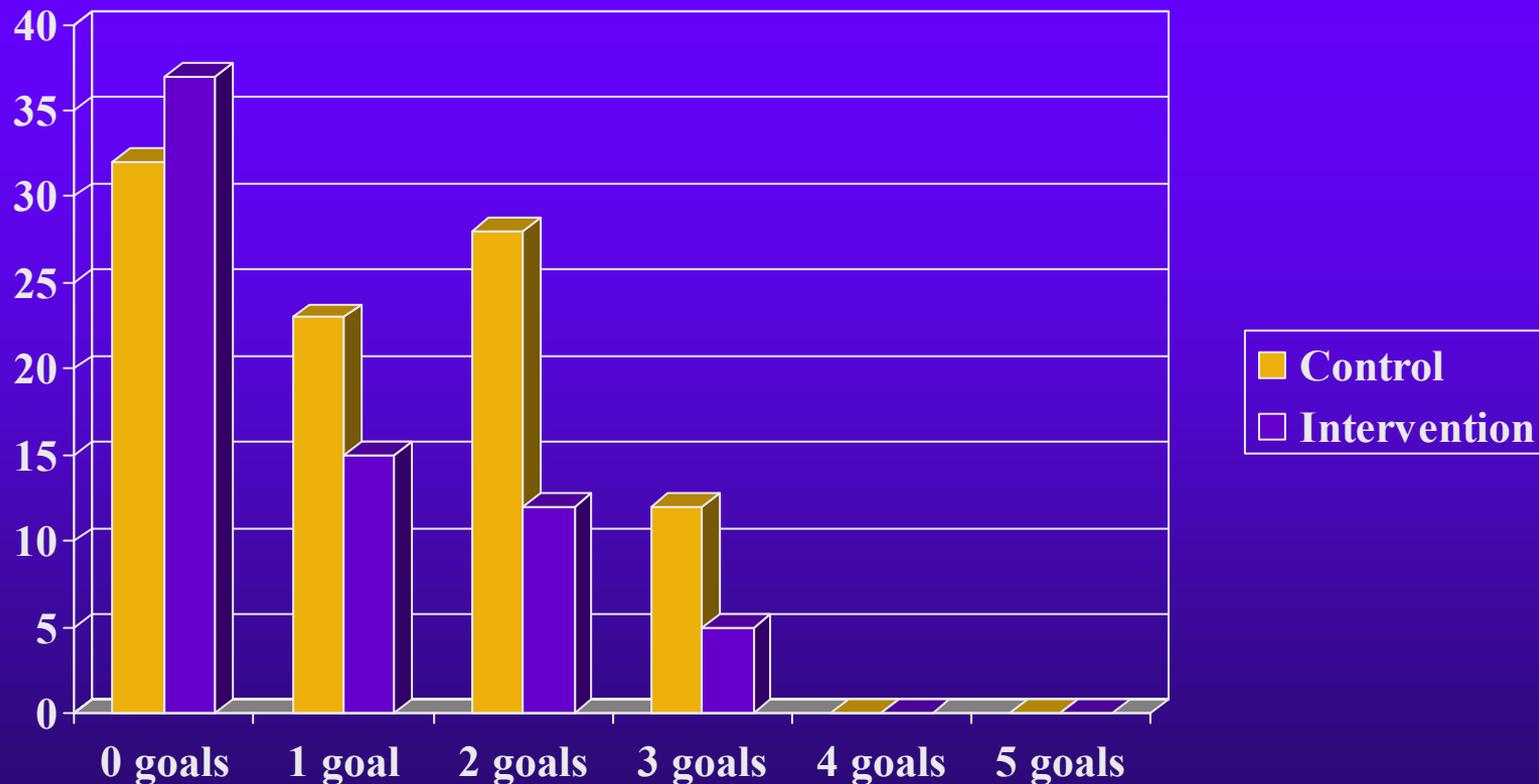
NEnglJMed, 2001;344,18:1343-1350

Finnish Diabetes Prevention Study

- ◆ 522 overweight patients with IGT
- ◆ Mean age 55, BMI 31, followed up to 6 years
- ◆ Randomized into intervention and control
 - Interv.- met with nutritionist 7x during 1st year and every 3 months thereafter, with these 5 goals:
 - 1) to loose 5% wt,
 - 2) fat intake <30%,
 - 3) sat. fat <10%,
 - 4) fiber >15gms/1000kcal
 - 5) exercise >30 minutes per day

NEnglJMed, 2001;344,18:1343-1350

Percent of patients going on to DMII





NEnglJMed, 2001;344,18:1343-1350

- ◆ Diabetes did not develop in any patient who reached 4 or 5 of the goals
- ◆ Those who did not meet the weight goal but met the exercise goal had an 80% reduction in risk of developing DMII
- ◆ Number needed to treat to prevent one case of DM was 5 patients for 5 years
- ◆ 91% of patients completed the study



Diabetes Care, 1997; 20,4:537-544

Diabetes prevention with IGT

- ◆ 110,660 patients in 33 clinics in China were screened for IGT and DMII
- ◆ 577 classified as IGT and randomized into
 - Control
 - Diet only
 - Exercise only
 - Diet and exercise
- ◆ Followed at 2 year intervals for 6 years



Diabetes Care, 1997; 20,4:537-544

Results: Those who developed DM in 6 years

- ◆ Control - 67.7%
- ◆ Diet - 43.8%
- ◆ Exercise - 41.1%
- ◆ Both - 46.0%





N Engl J Med, 2003; 348,5:383-459

- ◆ Steno-2 study in Copenhagen looked at 8 year cardiovascular event occurrences in DMII with microalbuminuria
- ◆ 160 pts randomized to 1) intensive treatment, and 2) usual care
- ◆ Intensive tx= aggressive and strict treatment guidelines and protocols, and support for behavior modification



N Engl J Med, 2003; 348,5:383-459

- ◆ 44 events in 35 patients in the conventional group
 - ◆ 33 events in 19 patients in the intensive treatment group
 - ◆ Nephropathy (macroprot.)= 31 and 16 patients
 - ◆ Retinopathy= 51 and 38 patients....
-
- ◆ Number needed to treat= 5 patients to prevent one event



N Engl J Med, 2003; 348,5:383-459

The NPR news report:

- ✓ Experienced TEAM
- ✓ Motivated
- ✓ Enthusiastic
- ✓ Gung Ho



N Engl J Med, 2002; 346: 393

Diabetes Prevention Program

- ◆ 3234 with IFG and IGT followed for an average of 2.8 years
- ◆ Randomized to placebo, metformin 850mg BID, or lifestyle modification
- ◆ Primary outcome: DMII
- ◆ Study was terminated 1 year early



N Engl J Med, 2002; 346: 393

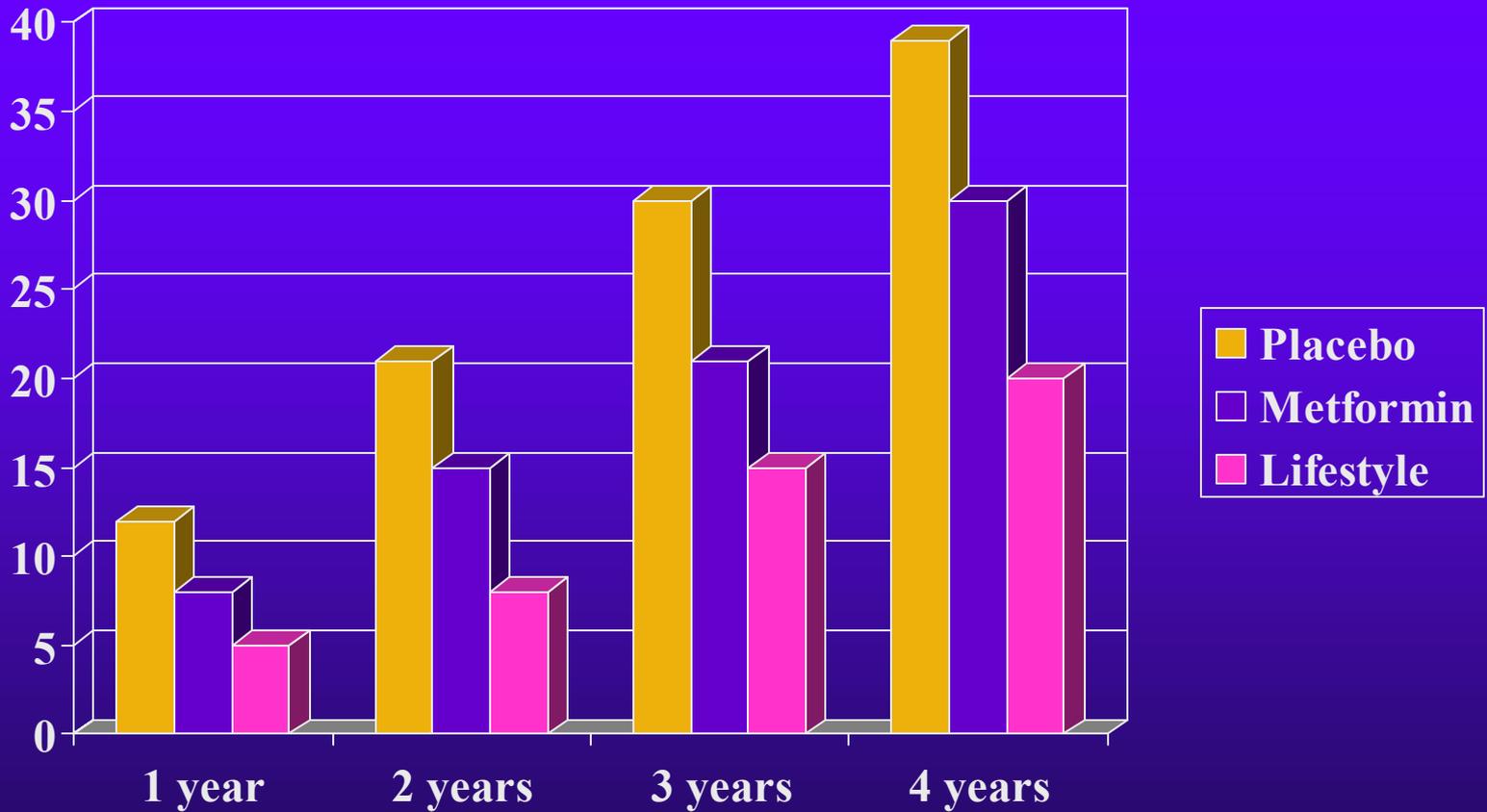
◆ Lifestyle Modification:

- Goals: 7% weight reduction and 150 minutes of moderate physical activity a week
- 16 lesson curriculum on lifestyle modification (looking at food choices and physical activity) followed by monthly meetings

◆ 50% met weight loss goal

◆ 74% met exercise goal

N Engl J Med, 2002; 346: 393





N Engl J Med, 2002; 346: 393

- ◆ 58% reduction in progression to DMII with Lifestyle modification whether they mets goals or not!
- ◆ 31% reduction in metformin group
- ◆ Effects found across gender, ethnicity, ages, BMI, and baseline glucose levels
- ◆ **Conclusion: Lifestyle modification could prevent up to 1 million cases of DMII/year in the US**

An open padlock is shown on a textured, light-colored surface. The padlock is dark and appears to be made of metal. The shackle is open and curved upwards. The body of the padlock has some markings, including the number '4014' and a keyhole.

N Engl J Med, 2002; 346: 393

“The DPP is a landmark trial (and is) one of the most important studies in the recent history of diabetes”

Christopher D. Saudek, MD

President

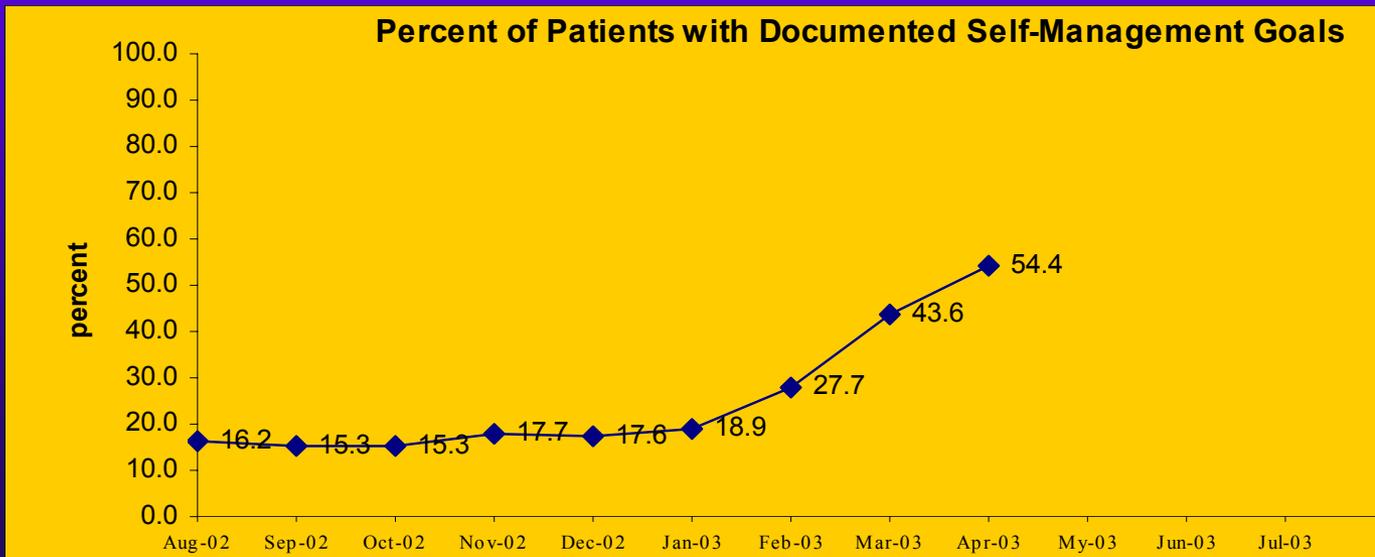
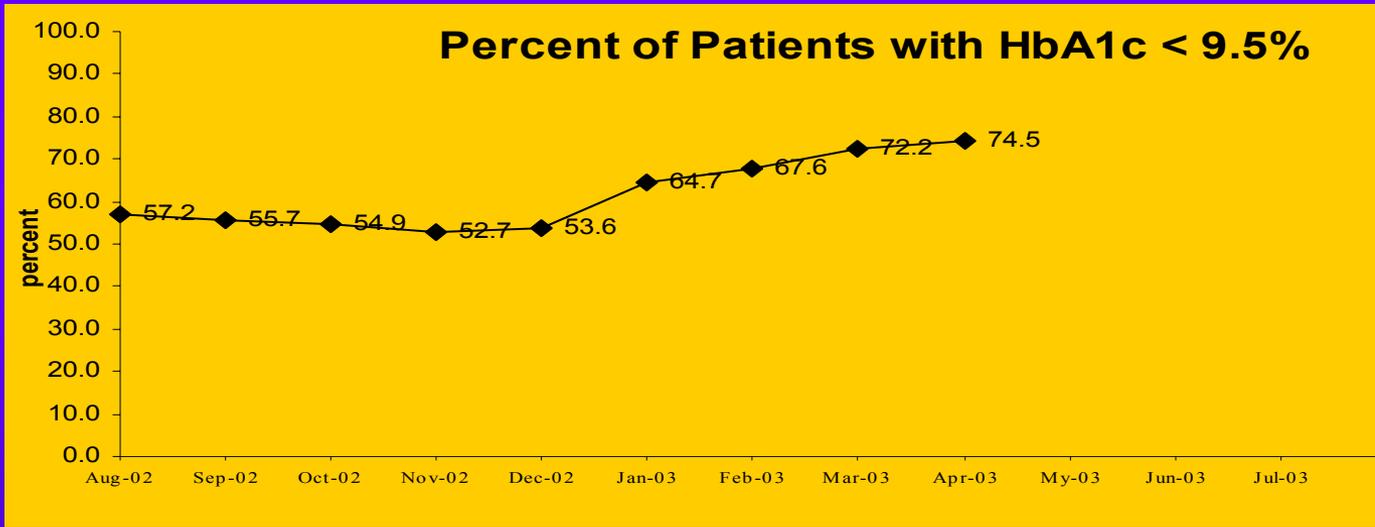
American Diabetes Association



What study is needed now?

A study showing that a group of providers working in a cost-effective system of care designed to provide patient centered care and effective self-management support has patients with better controlled disease and improved outcomes.

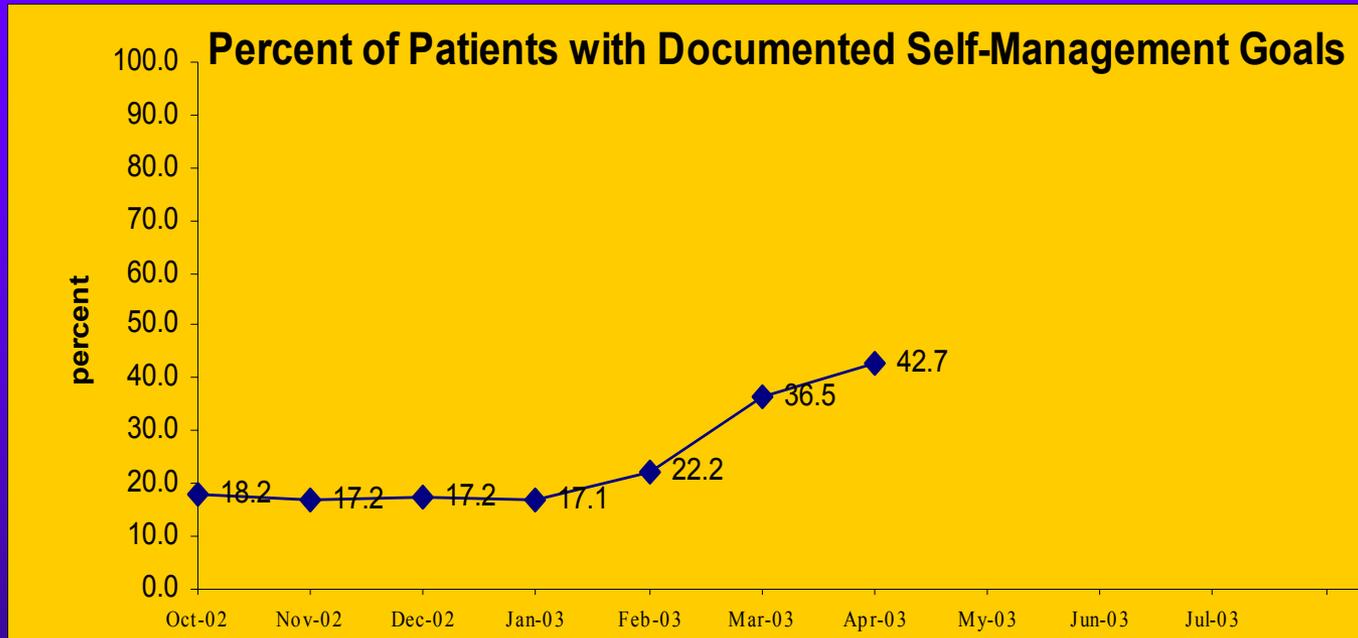
Practice At Large



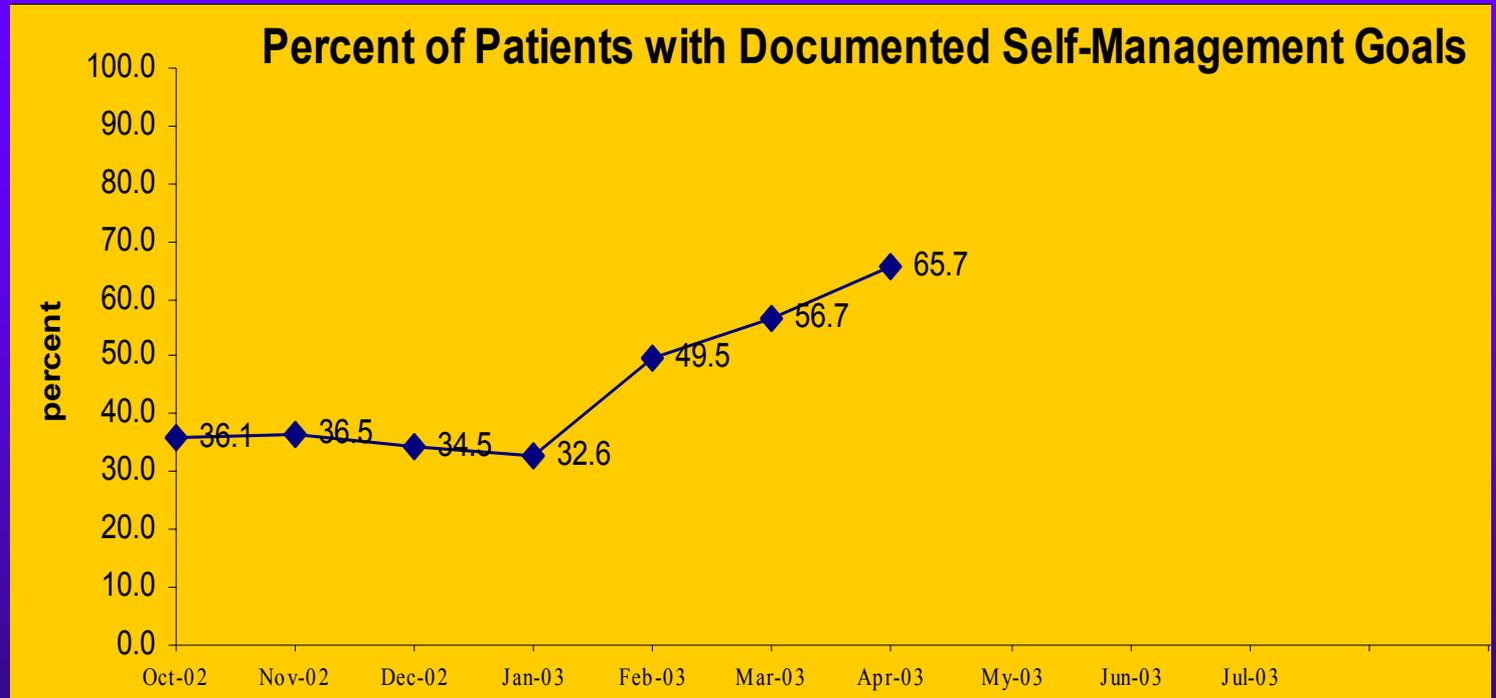
TEAMWORK WORKS



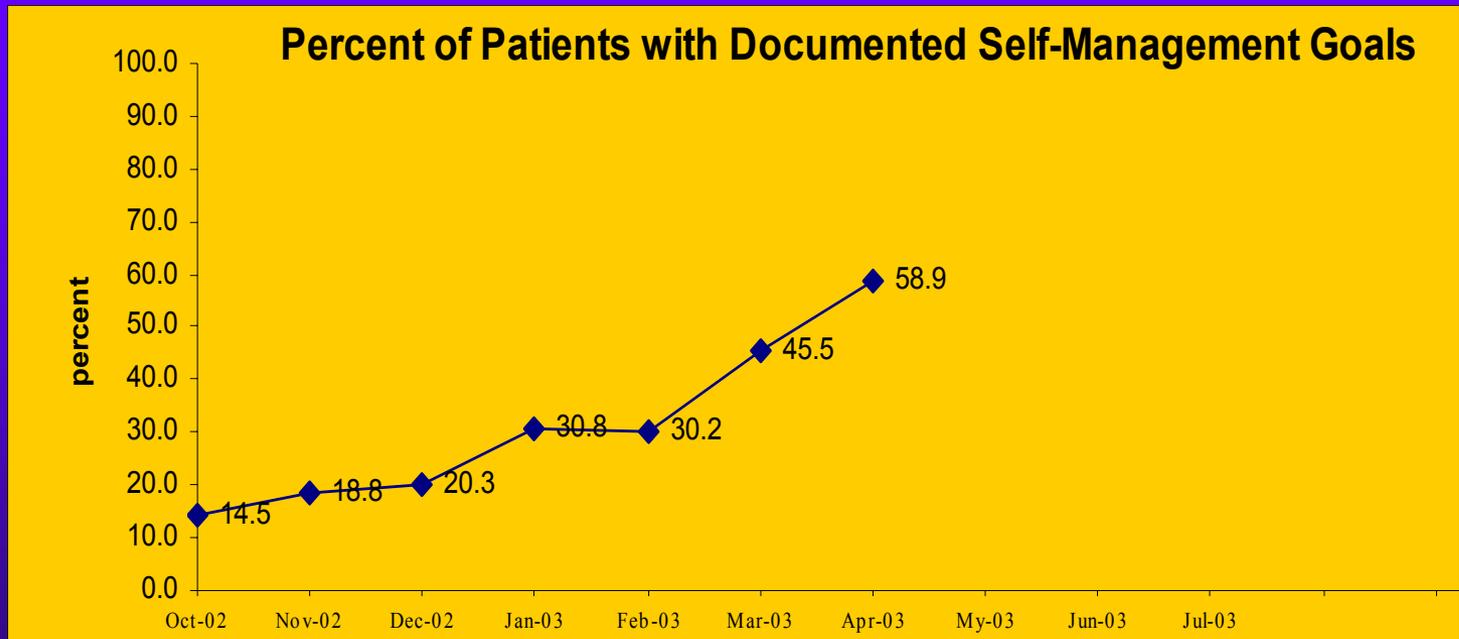
Team A



Team B



Team C





How do we do and teach this?

Big Bad

Sugar

WAR





The 15 minute encounter: A tool Big Bad Sugar W.A.R.

- ◆ Background
- ◆ Barriers
- ◆ Successes
- ◆ Willingness to change
- ◆ Action plan
- ◆ Reinforcement

The 15 minute visit:

How do you spend your time?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|
| | | | | | | | | | | | | | | |

Chart review, labs, referrals, meds, last note(s) etc...

Discussion with patient (history)

Physical exam

Make an assessment

**Plan (med changes and additions,
referrals, labs, immuniz., etc...)**

Self-management

Background

Who are they, where are they with their disease, are there other diseases, who is their support, where and with who do they live- get to know the patient well.



Barriers

What hasn't worked well in past, what makes it difficult to make lifestyle changes around food choices and physical activity.



Successes



Focus on what a patient has done well and highlight it (even if, deep down, you don't feel they were very successful)

Willingness to change (WTC)

Characterize a patient's readiness or willingness to change (i.e., pre-contemplation, contemplation, preparation, action, maintenance)



A tool to assess WTC (JABFP, 2002)

Precontemplation- (*neg. response to 4 statements*)

Contemplation-

I am intending to make changes in my diabetes care in the next 6 months

Preparation-

I am intending to make changes in my care in the next month

Action-

I have made changes in in the last 6 months

Maintenance-

My diabetes is in good control for 6 months





JABFP, 2002; 15,4:266-271

- ◆ University of Minnesota
- ◆ Looked at using a tool to assess readiness to change asking patients to pick one (or none) of the statements listed that fit them
- ◆ Used it with 50 consecutive patients with HBA1C>9.0 and followed “usual care” for 24 months



JABFP, 2002; 15,4:266-271

In 12 months:

- ◆ *Precontemplation* and *Contemplation* changed HBA1C from 10.5 to 10.3
- ◆ *Preparation* changed HBA1C from 10.3 to 8.3
- ◆ *Action* changed from 10.7 to 8.2



The 15 minute encounter: A tool Big Bad Sugar WAR

- ◆ Background
- ◆ Barriers
- ◆ Successes
- ◆ Willingness to change
- ◆ Action plan
- ◆ Reinforcement

Action Plan



Patient oriented, patient driven, and highly specific
Write it down and give it to the patient.



An Action Plan:

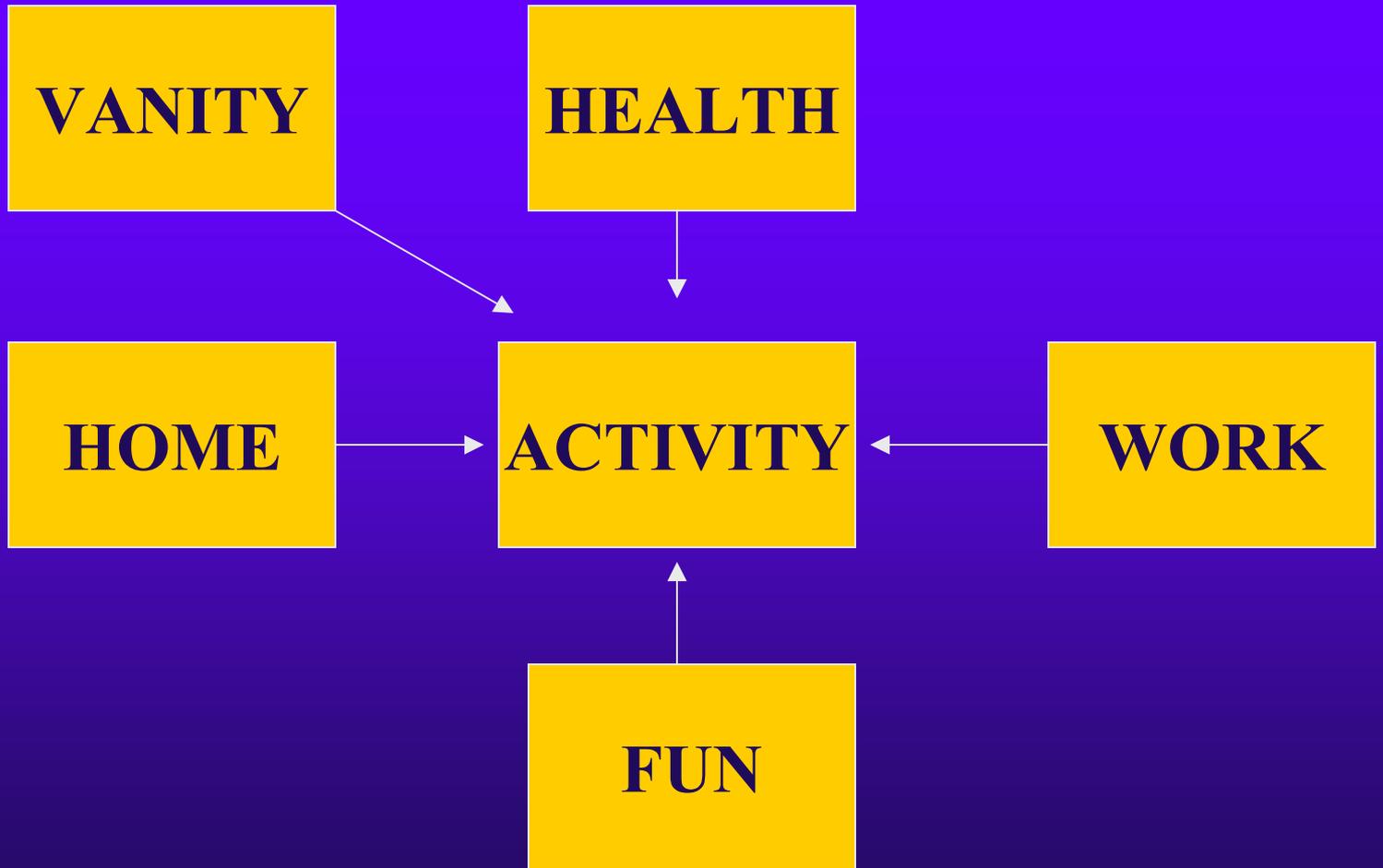
- ◆ Something the patient WANTS to do
- ◆ Should be REASONABLE
- ◆ Behavior specific
- ◆ Should answer the questions:
 - What?
 - How much?
 - When?
 - How often?
- ◆ Confidence level (likelihood-of-success) 1-10

(adapted from work by Kate Lorig, Stanford, California)



An Action Plan:

- ◆ Refrain from telling the patient what you think they should do
- ◆ Incorporate an activity into their everyday life....





Reinforcement

Follow-up with encouragement and motivation (MA or PCP phone call, next planned visit, group visit, other patients, family, friends- be creative) and *refine, redefine, or stretch the goal.*





SMG Cycle

- ◆ Introduce concept to patient (initial phone call, provider visit, group visit)
- ◆ Planned visit
- ◆ Provider visit
- ◆ (Group visit)
- ◆ F/U phone call
- ◆ ...and so on...