An aerial photograph of a vast, snow-covered mountain range. The peaks are rugged and partially covered in snow, with deep valleys and ridges visible. The overall color palette is dominated by various shades of blue and white, giving it a serene and majestic appearance. The text is overlaid on this background.

INTEGRATING SELF-MANAGEMENT FOR CHRONIC ILLNESSES AND PREVENTIVE BEHAVIORS INTO HEALTH CARE

Russell E. Glasgow, Ph.D.
Kaiser Permanente Colorado
Denver, Colorado

Overview of Presentation

- **The Health Care Crisis—and a couple models to help address it**
- **Improving Chronic Illness Care using the Chronic Care Model: Lessons Learned**
- **Self-Management Research and Its Impact**
- **Needed Changes and Future Directions**

IOM Quality Chasm Report (2001)

Current Chronic Care System

Recommended “New Rules”

Care based on visits

Care is continuous,
multimodal

Professional autonomy drives
variability

Care customized on patient
needs and values

Professionals control care

Patient is source of control

Information is a record

Knowledge and decisions are
shared

IOM Quality Chasm Report (2001)

(cont.)

Current Chronic Care System

Recommended “New Rules”

Decision making based on training and experience

Decision making is evidence-based

Secrecy is necessary

Transparency is necessary

The system reacts to needs

Needs are anticipated

Preference is given to professional roles over the system

Cooperation is a priority

***“In theory, there is no difference
between theory and practice. In
practice, there is.”***

Yogi Berra

Organization of Health Care

**Community
Linkages**

**Clinical
Information
Systems**

**Self-
Management
Support**

**Delivery
System
Design**

**Decision
Support**

**Informed,
Activated
Patient**

**Productive
Interaction**

**Prepared,
Proactive
Practice Team**

Functional and Clinical Outcomes

Chronic Care Model Principles

Care should be:

- **Patient-centered**
- **Planned**
- **Proactive**
- **Population-based (all patients)**
- **PDSA improvement cycles are critical**

Why Self-management Focus?

- Is aspect of CCM model—and of guidelines recommendations is done least often
- Is the most foreign to clinician training
- Patients are responsible for 99% of their care
- Patients and staff like it—and today's methods work

Integrating Dsme Into Systems Change: The Improving Chronic Illness Care (ICIC) Breakthrough Series

- ❖ 4 group learning sessions over 12 – 14 month “collaborative” to assist health care systems to improve care
- ❖ Combine GHC Chronic Care Model interventions with IHI change technologies (e.g., PDSA cycles)
- ❖ Work to date with over 500 health care systems, including large number of community health centers

Characteristics of Health Care Systems in Diabetes Breakthrough Series I

Type of Organization (n=23)

Safety net (community health center, etc.)	30%
Managed care	22%
Academic medical center	17%
Hospital-based	13%
Other	17%
<hr/>	
Average size diabetes target population	615

Population-based Results From Registry Data

<u>Measure</u>	<u>Baseline Median</u>	<u>End of Collaborative Median</u>
% Patients ≥ 2 A _{1C} assays per year	30%	63%
% Patients most recent A _{1C} < 8 %	37%	58%
% patients with documented SM goal	NA	70%

ICIC Breakthrough Series Results to Date

- ❖ **Consistent improvements across:
registry reviews of both process and outcome
measures, quality of care surveys, and faculty
ratings**
 - **Different types of health care systems**
 - **Different chronic illnesses (diabetes,
CHF, asthma, depression)**

“Every system is perfectly designed to produce exactly the results it gets.”

Don Berwick

ICIC Breakthrough Series Results to Date

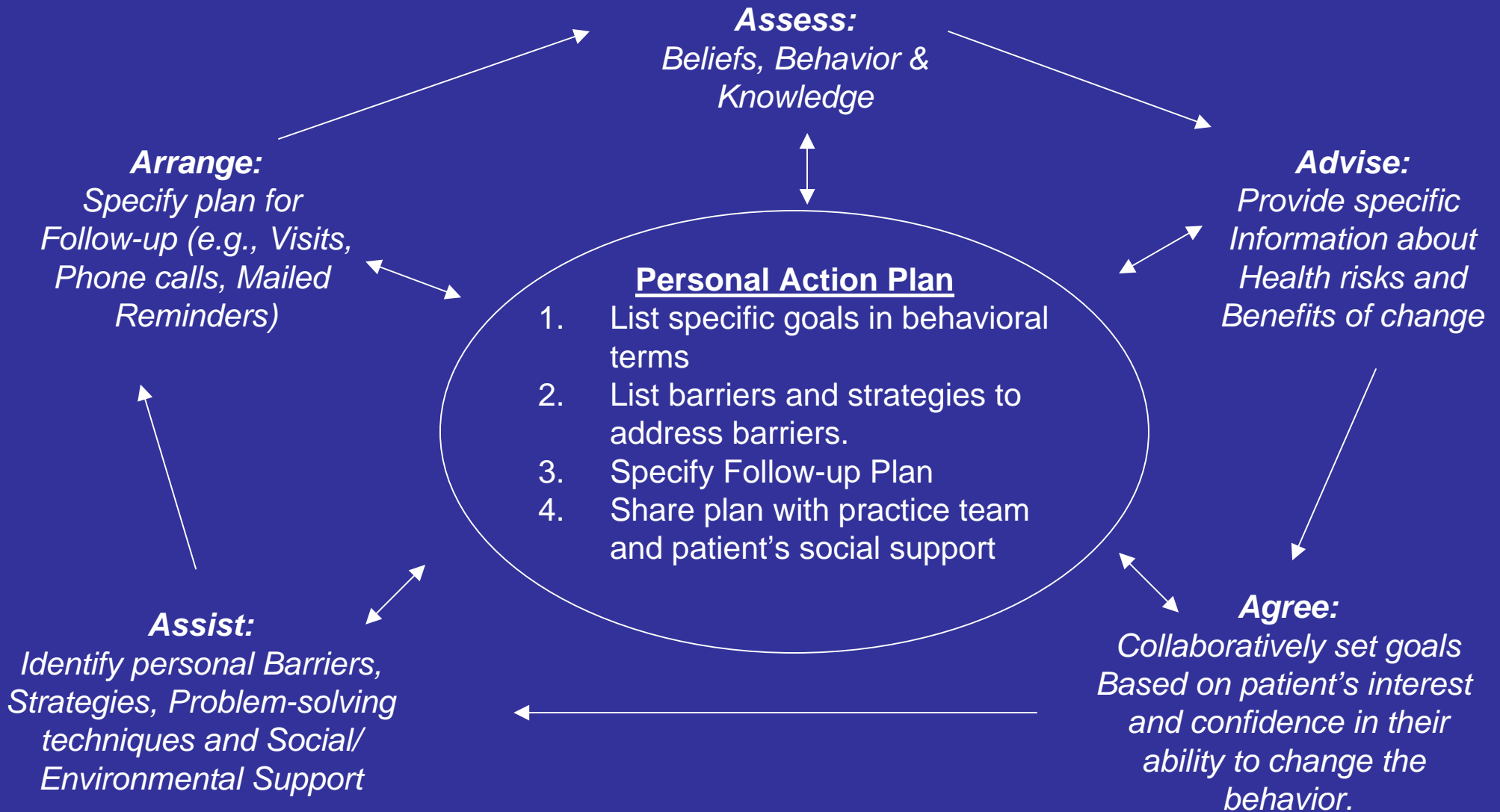
- **To date encouraging but uncontrolled quality improvement data**
- **Integrates self-management with other key components of care**
- **Future research needs: Controlled research, evaluate sustainability, and generalization**

ICIC Breakthrough Series: Self-management Lessons Learned

- **Self-management and Community Resources most challenging components of model to implement and sustain**
- **Multi-level Change Processes: Same principles apply to helping patients and practices**
- **Importance of tailoring and customizing at both patient and practice level**

Self-Management Model with 5 A's

(Glasgow, et al, 2002; Whitlock, et al, 2002)



Assess:

Beliefs, Behavior & Knowledge

Advise:

Provide specific Information about Health risks and Benefits of change

Agree:

Collaboratively set goals Based on patient's interest and confidence in their ability to change the behavior.

Arrange:

Specify plan for Follow-up (e.g., Visits, Phone calls, Mailed Reminders)

Assist:

Identify personal Barriers, Strategies, Problem-solving techniques and Social/ Environmental Support

Personal Action Plan

1. List specific goals in behavioral terms
2. List barriers and strategies to address barriers.
3. Specify Follow-up Plan
4. Share plan with practice team and patient's social support

Self-Management Planning Coordination Matrix

Self-Management Activity Component	Person Responsible	How Done	Where Done	Resources Needed	Date/ Comments
Assess Level of Self-Management					
Collaborative Goal Setting					
ID Barriers & Support					
ID Problem-Solving Strategies					
Follow-up Support					
Coordinate/Check on All of Above					

Ultimate Impact of Magic Diet Pill

50% of Clinics Use	Adoption	50%
50% of Clinicians Prescribe	Adoption	25%
50% of Patients Accept Medication	Reach	12.5%
50% Follow Regimen Correctly	Implementation	6.2%
50% of Those Taking Correctly Benefit	Effectiveness	3.2%
50% Continue to Benefit After 6 Months	Maintenance	1.6%

Purposes of RE-AIM

- **To broaden the criteria used to evaluate health promotion programs to include external validity**
- **To evaluate issues relevant to program adoption and implementation**
- **To help close the gap between research studies and practice by**
 - **Informing design of interventions**
 - **Providing guides for adoptees**

RE-AIM Dimensions and Definitions

	DIMENSION	DEFINITION
Individual Level	REACH	<ol style="list-style-type: none">1. Participation rate among eligible individuals2. Representativeness of participants
	EFFICACY / EFFECTIVENESS	<ol style="list-style-type: none">1. Effects on primary outcome of interest2. Impact on quality of life and negative outcomes

RE-AIM Dimensions and Definitions (cont.)

	DIMENSION	DEFINITION
Setting Level	ADOPTION	<ol style="list-style-type: none"> 1. Participation rate among possible settings 2. Representativeness of settings participating
	IMPLEMENTATION	<ol style="list-style-type: none"> 1. Extent to which intervention delivered as intended 2. Time and costs of intervention
Both	MAINTENANCE	<ol style="list-style-type: none"> 1. (Individual) Long-term effects of intervention (≥ 6 months) 2. (Individual) Impact of attrition on outcomes 3. (Setting) Extent of continuation or modification of treatment

Recommended Purpose of Future Research

To determine the characteristics of interventions that can:

- Reach large numbers of people, especially those who can most benefit
- Be widely adopted by different settings
- Be consistently implemented by staff members with moderate levels of training and expertise
- Produce replicable and long-lasting effects (and minimal negative impacts) at reasonable cost

“60 – Something”

Enhancing REACH

Russ Glasgow, Pete Lewinsohn, Matthew Riddle

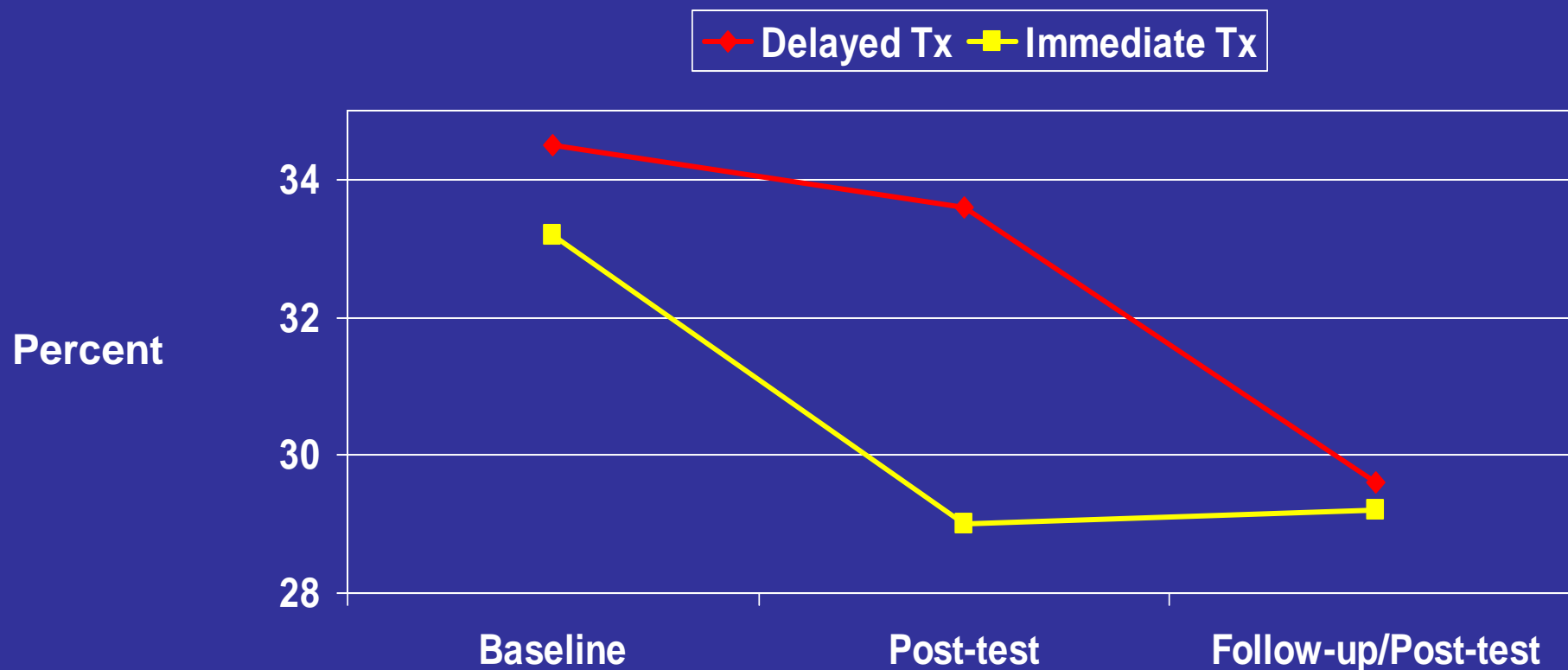
SCOPE

- **Older adults with diabetes were ignored;**
- **Assumed could not learn new tricks.**
- **Applied self-management to older adults in small RCT;
8 group sessions**

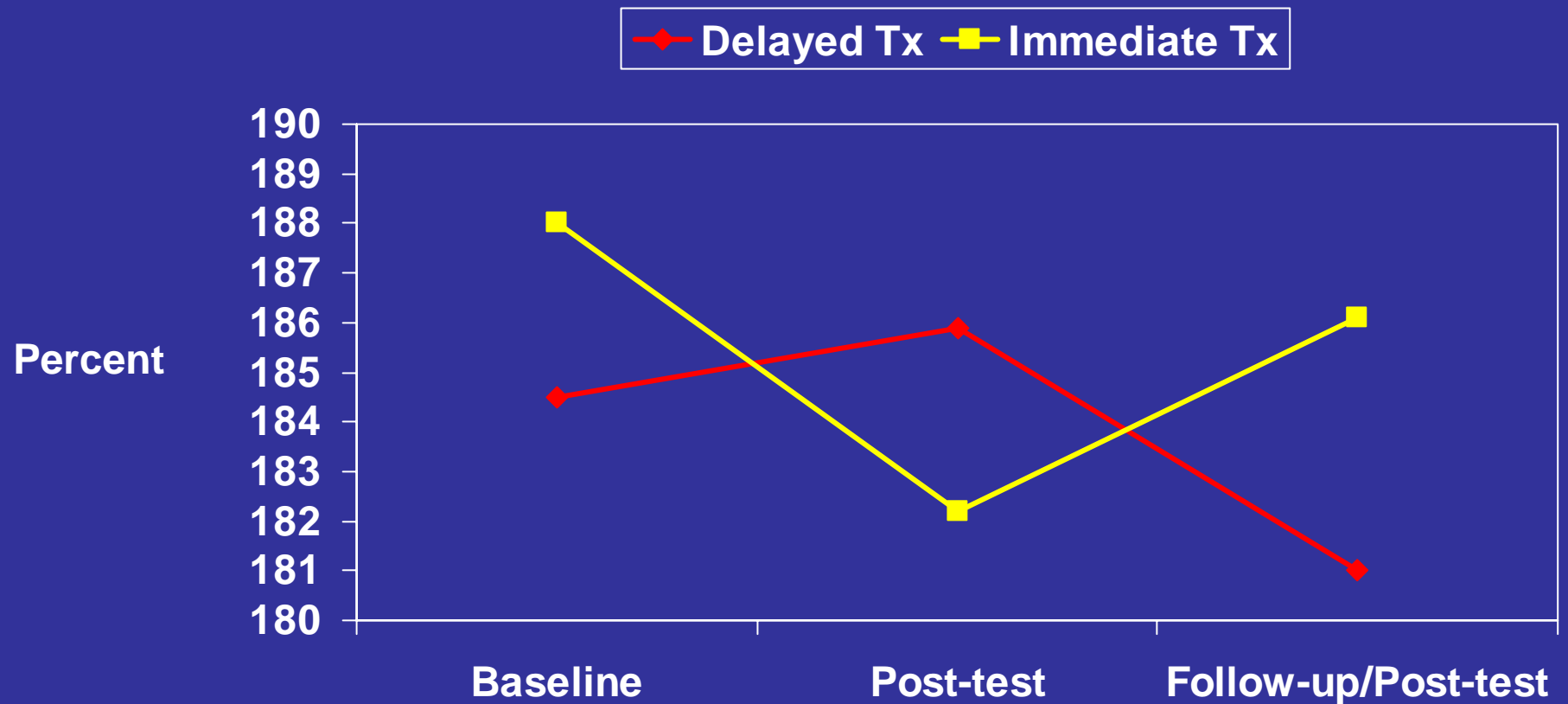
60-Something

Percent Calories from Fat

(n=48 and 49/condition)



60-Something Weight (n=48 and 49/condition)



Contributions and Lessons Learned

- **Barriers-based, tailored problem solving worked for older adults also!**
- **Group support and problem solving were important processes**

“If you build it, they will not necessarily come.”

***“Do not do unto others as you would
have them do unto you.”***

G.B. Shaw

Brief Medical Office-based Intervention

Russ Glasgow, Sarah Hampson, John Noell

SCOPE

Trying to reach those who would not
otherwise attend during primary care visit
and condense multiple-session
program into 20 minutes

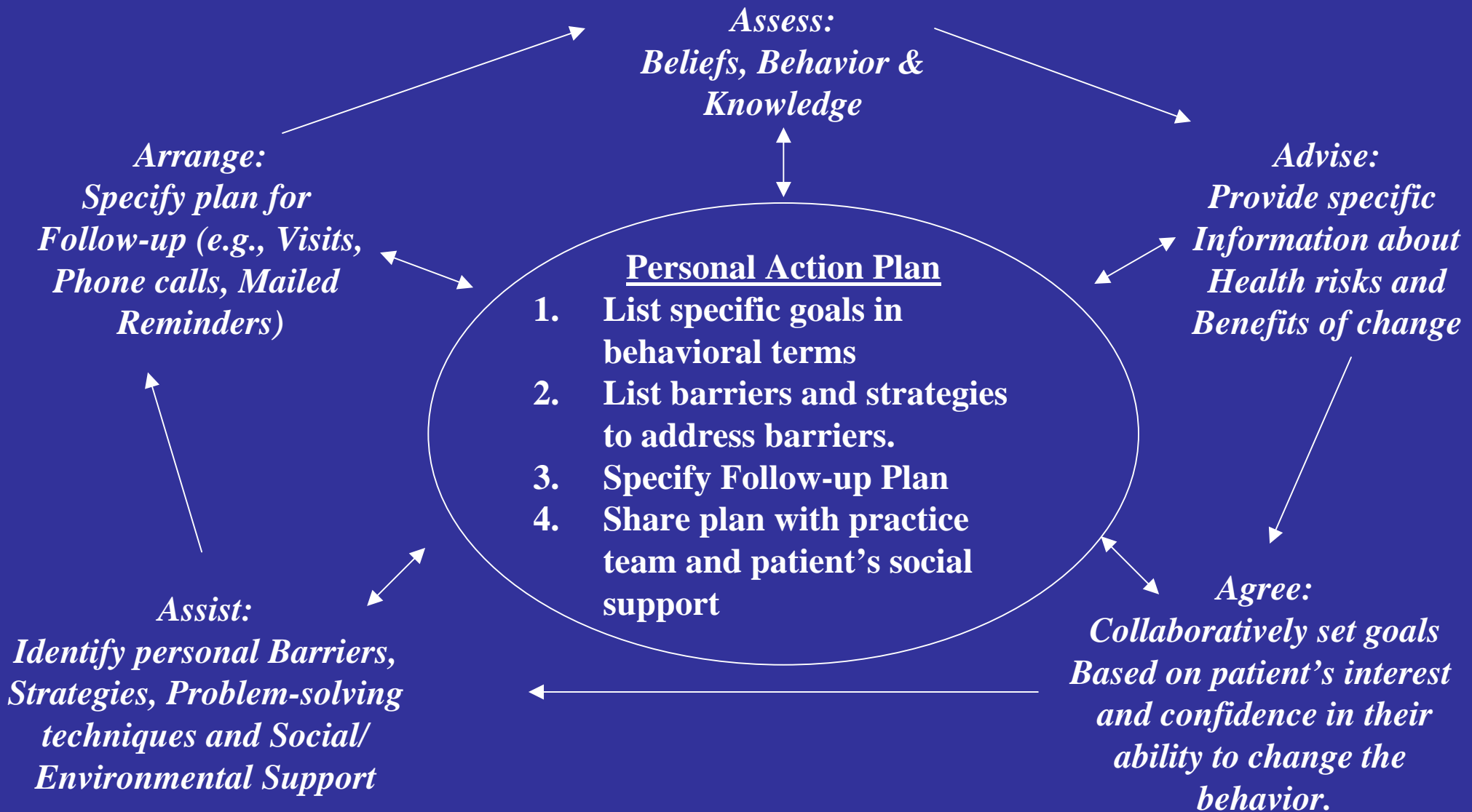
Funded by NIDDK Grant #35524

Purpose and Intervention

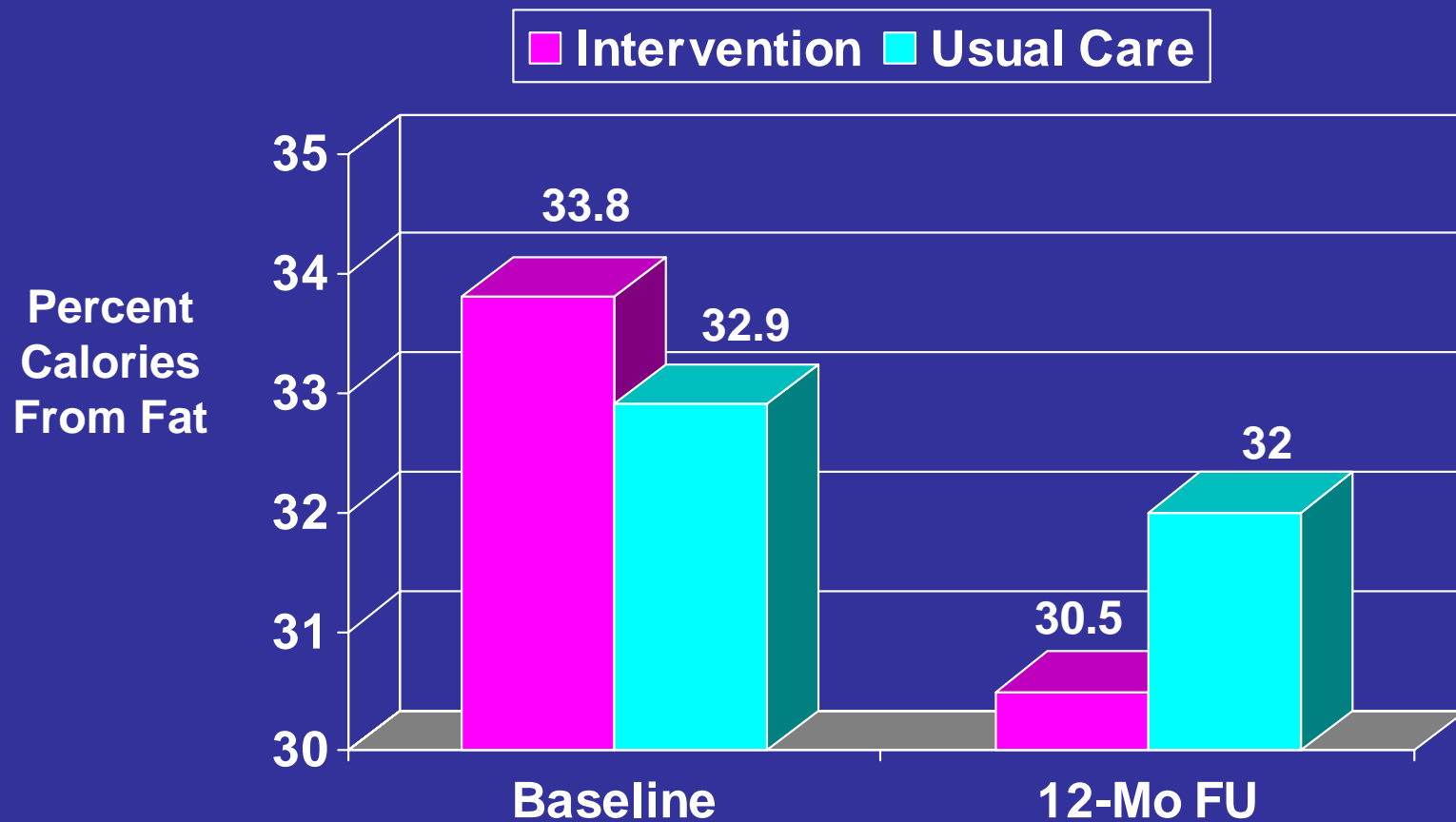
- Evaluation in an RCT, the **REACH** and **EFFECTIVENESS** of a brief intervention guided by a patient-computer intervention
- Intervention began with 15-minute interaction with multi-media touchscreen computer program
- Focus on goal setting, identification of barriers, tailored problem-solving (with educator) and follow-up support

Self-Management Model with 5 A's

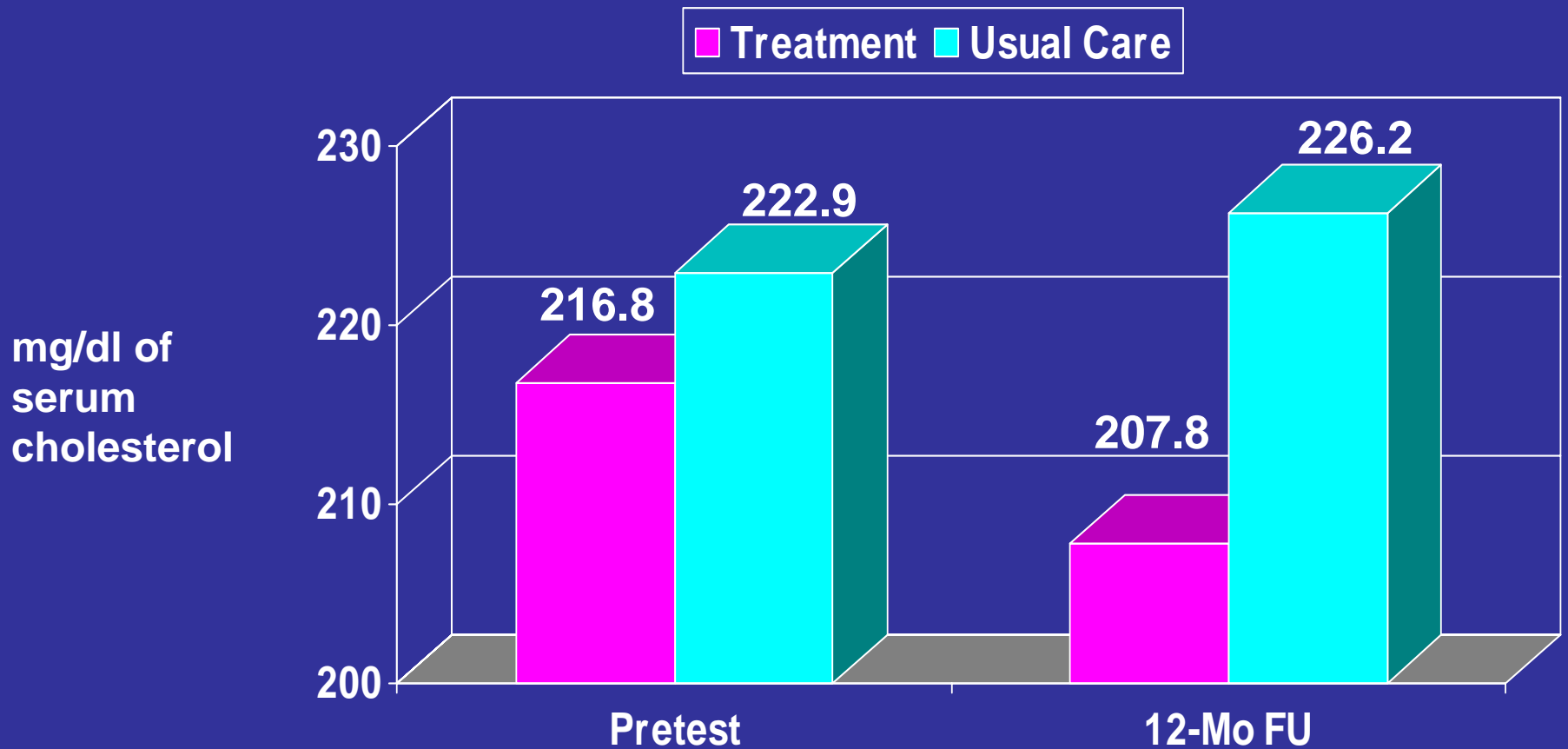
(Glasgow, et al, 2002; Whitlock, et al, 2002)



Baseline and 12-month Follow-up Levels of Percent of Calories From Fat by Condition



Pretest to Follow-up Changes in Serum Cholesterol



***“It’s not the patient’s fault;
it’s not the doctor’s fault;
it may be the system.”***

Diabetes Priority Program

(Russ Glasgow, Paul Nutting, et al, 2000-2004)

OBJECTIVE: Work with both primary care offices and patients to enhance accomplishment of ADA Provider Recognition Program criteria

ADOPTION: Invite family physicians across the state of Colorado to conduct the study in their offices

Diabetes Priority Program

KEY OUTCOMES: Accomplishment of ADA PRP criteria on:

- a) medical / lab checks and activities
- b) patient self-management / behavioral activities

DESIGN: Nested design with practices matched and randomized to Intervention or Touchscreen Computer Assessment Control

Diabetes Guidelines Implementation: A Colorado Effectiveness Study

- **Ongoing RCT in practices of 49 primary care physicians**
- **Physician practice is unit of randomization (900+ type 2 diabetes patients)**
- **Two-arm design: Computer-assisted usual care vs. computer-assisted ADA PRP performance enhancement**
- **CD-ROM based intervention in waiting room with print-outs for patient, physician, care manager**

Guidelines Printout for Physician

DIABETES PRIORITY PROGRAM

Plan For: JIFFY JEN

5/8/01

RECOMMENDED SUPPORTIVE MESSAGES

- Reinforce the patient's participation in the Diabetes Priority Program.
- Offer to discuss the meaning of test/exam results, and to answer any questions.
- Let patient know you're here to support and help them reach the goals they have selected.
- Review the following areas and discuss those items checked by the patient (see check list below).

MEDICAL CARE PROCEDURES

(Please schedule, if appropriate)

- | | |
|------------------------------|------------------|
| 1) Hemoglobin A1c test | 5) Lipid Profile |
| 2) Dilated Eye Exam | 6) Flu Shot |
| 3) Foot Exam/Risk Assessment | |
| 4) Blood Pressure Check | |

SELF CARE GOAL:

I will reduce my intake of saturated fats

SELF MANAGEMENT STATUS	PATIENT WANTS TO DISCUSS	Patient self-report	Target Action Area
Smoking		does NOT smoke	
Diet: Fat Intake		very poor (40-50% of calories)	X
Diet: Fruits and Vegetables		excellent (5+ servings/day)	
Physical Activity		less than recommended	
Blood Glucose Self-Monitoring		does this	
Blood Glucose self monitoring: Recommended? <input type="checkbox"/> Yes <input type="checkbox"/> No # times per day _____ Target Ranges: _____ Meter Checked? <input type="checkbox"/> Yes <input type="checkbox"/> No			

MEDICAL CARE STATUS	PATIENT WANTS TO DISCUSS	Last completed (patient report)	Recommended
Hemoglobin A1c test		Between 1 and 2 years ago	this visit
Dilated Eye Exam		More than 2 years	this visit
Foot Exam/Risk Assessment		Between 1 and 2 years ago	this visit
Blood Pressure Check		Between 6 and 12 months ago	w/in next 6 - 12 months
Lipid Profile		Never had this test	this visit
Albumin, Micro-albumin		Less than 6 months ago	w/in next 6 - 12 months
Flu Shot		more than 12 months ago	Oct-Nov

Diabetes Guidelines - Results

REACH: 83 % of contacted eligible type 2 DM patients have participated thus far

EFFECTIVENESS: To be determined

ADOPTION: Poor: Approximately 3% of 1500 PCPs from non-managed care programs throughout Colorado participated

Diabetes Guidelines - Results (cont.)

IMPLEMENTATION: Generally good but
variable

MAINTENANCE: To be determined
Most practices continuing in some form

Diabetes Guidelines - Results (cont.)

- Practice reported use of components of the Chronic Care Model at baseline was significantly associated with level of care (ADA PRP measures; rho = .41 - .48) and HgA_{1c} (rho = .52)

Diabetes Guidelines Lessons Learned

Thank God we are now in HMO with a good registry!

Reach: Good -- need organizational support

Adoption: Poor -- Small rural practices feel overwhelmed

Roger's Theory of Innovations apropos: Flexibility

Implementation of Chronic Care Model associated with
better care and better glycemic control

What About Prevention?

- **Will the Chronic Care Model work there?**
- **Will self-management and the “5 A’s” work to change addictive behaviors?**

Brief Smoking Cessation in Planned Parenthood Clinics: A Randomized Trial

**R.E. Glasgow, E.P. Whitlock,
E.G. Eakin & E. Lichtenstein**

Setting and Context

Four Planned Parenthood Clinics in the Pacific Northwest

- **Serve predominantly female, low-income population (57% < 125% of poverty level)**
- **Clients seen while at general health and contraceptive visits**
- **Providers are nurse practitioners and physician assistants**
- **Participant average age = 24; smoked for 6 years; < 30% intended to quit in next month**

Adoption

- **Approached 4 PP clinics in Portland, Oregon, that had most diverse, low SES populations**
- **All 4 clinics and all of providers in each clinic participated**

Recruitment and Reach

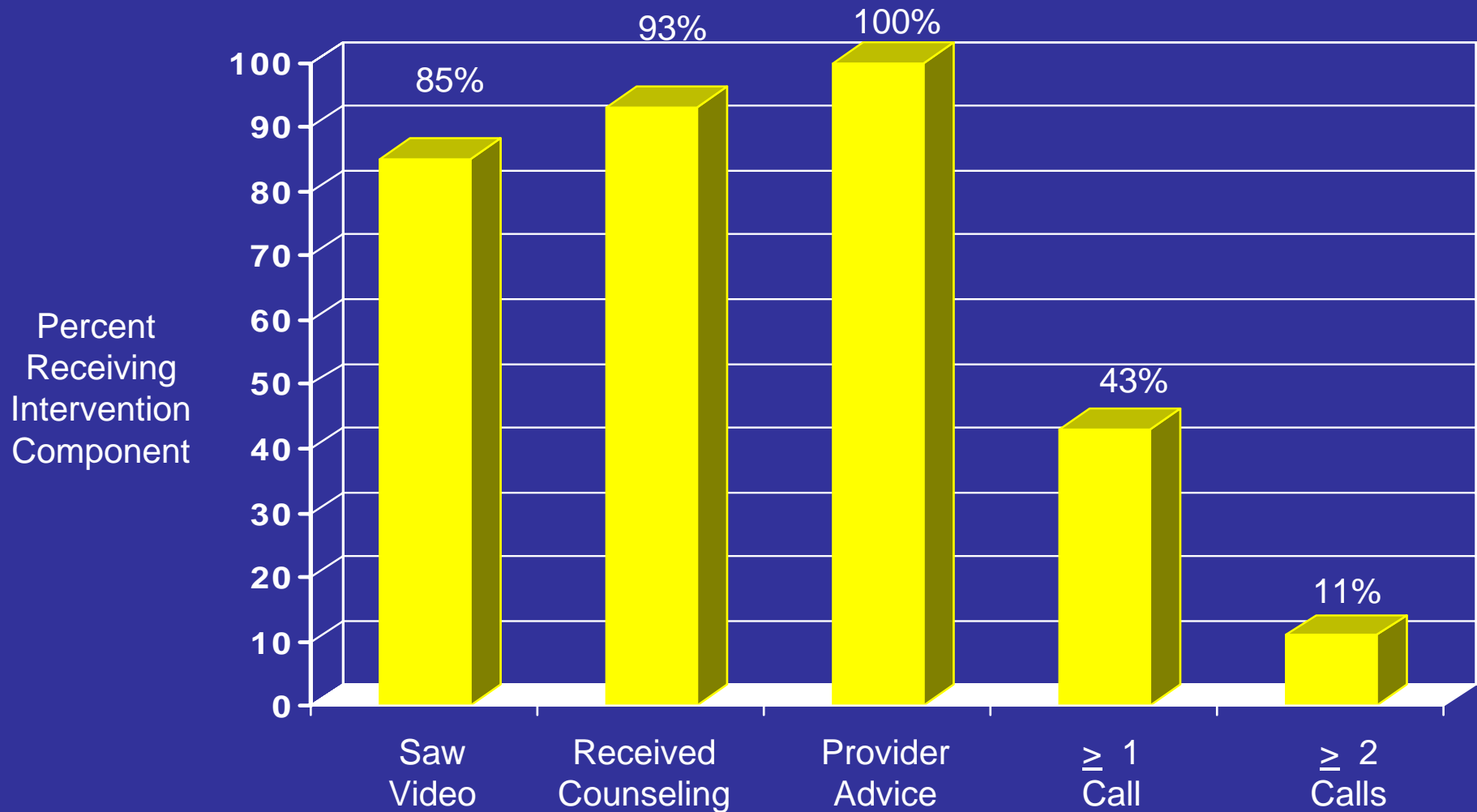
**Approach all female smokers (age 15-35)
when in waiting room for usual visit**

- **99% had smoking status identified**
- **76% of these approached
participated, n=1154**
- **No differences, participants vs. non-
participants**

Intervention

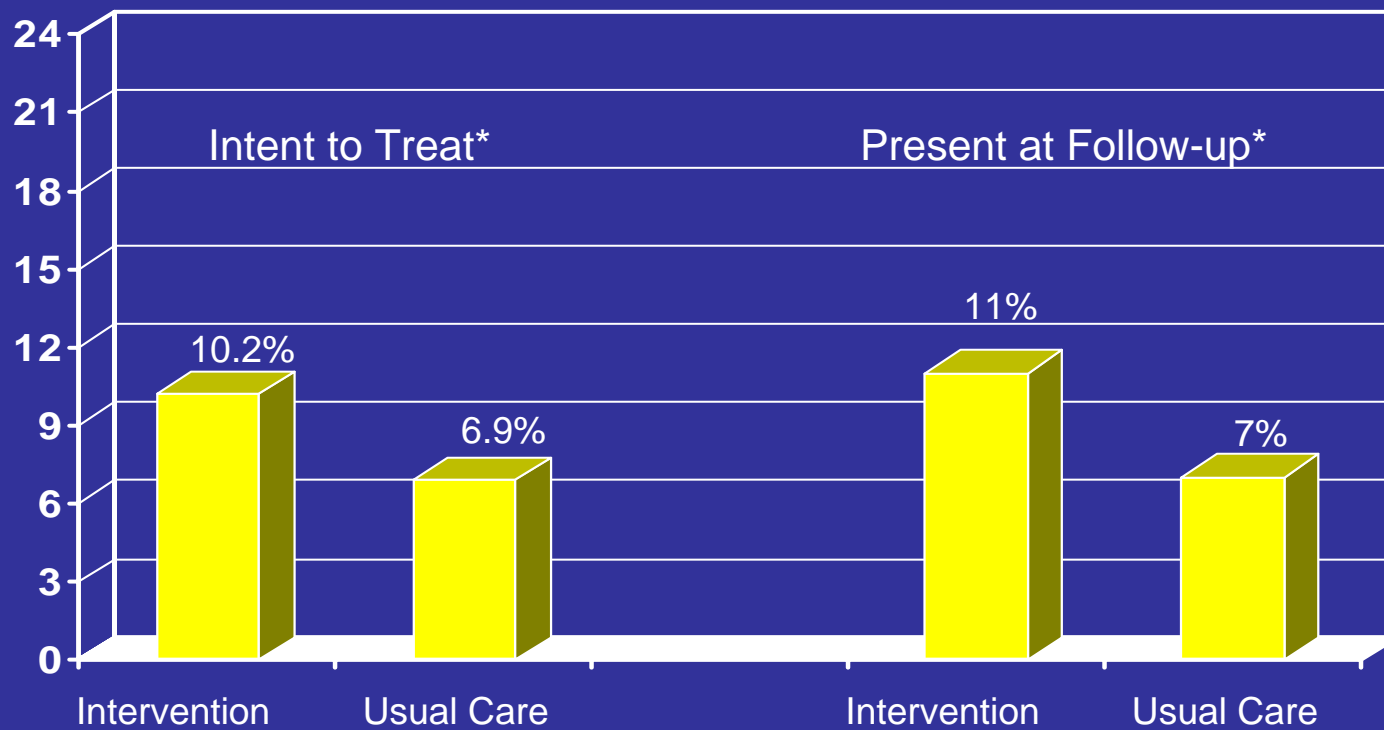
- **Brief written assessment (barriers, readiness to change)**
- **9 min. video developed for this project**
- **Clinician advice to quit**
- **Brief motivational interviewing, barriers-based cessation counseling (12-15 min.)**
- **2 follow-up phone calls**

Implementation



Effectiveness

6-week Cessation Rates
(1-week abstinence criterion)



*Both significant, $p < .05$

Maintenance: At 6 Months

- **Intent to treat, 30-day self-report:
11.6% vs. 8.5%, NS**
- **Biochemically confirmed abstinence:
6.4% vs. 3.8%, NS**
- **Small, but statistically significantly greater
reductions among continuing smokers in
intervention, $p < .05$**

Conclusions from PP Study

- **Feasible to reach a high percentage of young female smokers in these settings**
- **Regular PP staff able to deliver intervention consistently (but high turnover rates)**
 - **Except phone calls**

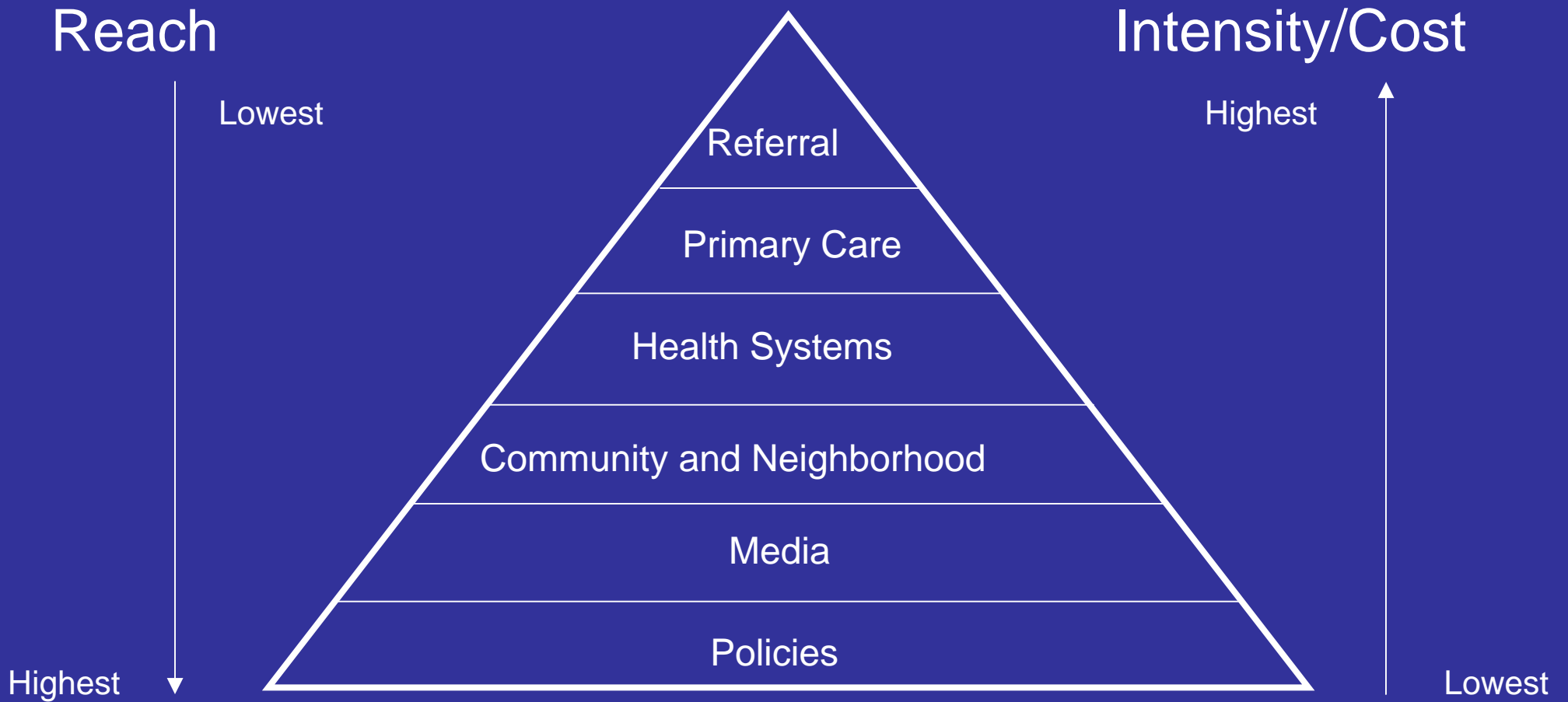
Conclusions from PP Study (cont.)

- **Possible to involve non-research settings as long as demands are reasonable and are of benefit to clients**
- **Short-term success, but maintenance is challenging and need different support components**

Overall Summary

- **RE-AIM: “Focus on the Denominator, Stupid!”**
- **Self-management Needs to be Integrated into Primary Care**
- **Ongoing Assessment, Feedback, Revising Action Plans and Follow-up Needed**
- **More Intensive Behavioral Intervention probably needs referred out, but linked back to Primary Care**

Stepped Care Model



Abrams D, et al. (1996) *Annals Int Med* 18:290-304

Walden T, Brownell K, Foster G. (2002) *J Consult Clinic Psychol* 70:510-525

***“The significant problems we
face cannot be solved by the
same level of thinking that
created them.”***

A. Einstein

Implications and Recommendations for Translating Research to Practice

Substantial change is needed by:

- **Researchers**
- **Funding Organizations**
- **Reviewers**

“Dissemination is Everyone’s Business”

Recommended Purpose of Future Research

To determine the characteristics of interventions that can:

- Reach large numbers of people, especially those who can most benefit
- Be widely adopted by different settings
- Be consistently implemented by staff members with moderate levels of training and expertise
- Produce replicable and long-lasting effects (and minimal negative impacts) at reasonable cost

Recommendations for Funding Organizations

- Encourage proposals that study interventions in multiple, representative settings
- Create mechanisms for study of replication and implementation by different types of staff
- Fund studies of long-term maintenance, change in multiple behaviors, and sustainability of programs

Recommendations for Reviewers

- Use editorial guidelines (ala CONSORT criteria) that include external validity
- Relax usual criteria for reports on long-term maintenance at individual and especially setting levels
- Include potential for translation as a standard review criteria (like innovativeness)

Future Directions for Chronic Illness Self-management Research

- What are characteristics of Interactive Technology that enhance vs. interfere with primary care?
- Evaluations of the **REACH, ADOPTION, IMPLEMENTATION, and SUSTAINABILITY** of Practical Interventions
- Identification of approaches and models of behavior change that are robust across:
 - Multiple levels
 - Multiple illnesses
 - Multiple behaviors
- Economic evaluations, “business case,” and packaging of self-management interventions that are broadly applicable

***“To every complex question,
there is a simple answer.....
and it is wrong”***

H. L. Mencken