

**Organización  
Panamericana  
de la Salud**

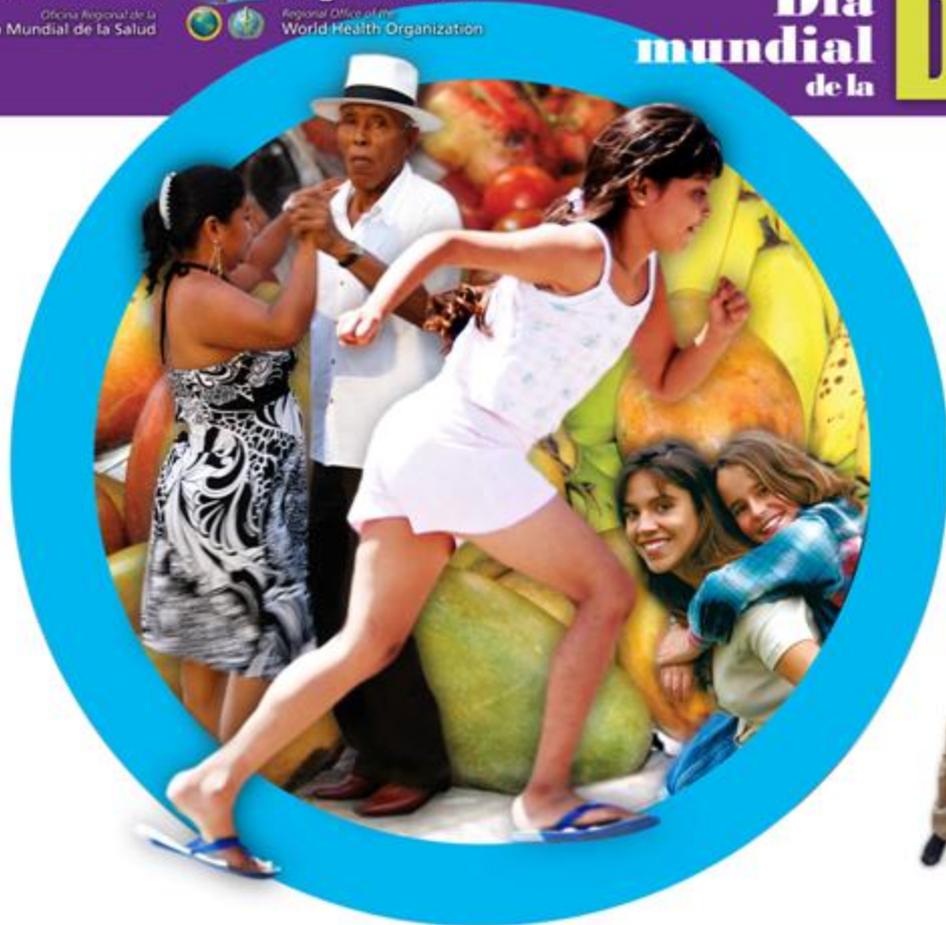
Oficina Regional de la  
Organización Mundial de la Salud



**Pan American  
Health  
Organization**

Regional Office of the  
World Health Organization

**World  
Día  
mundial  
de la** **Diabetes** 14 de noviembre  
**Day** November 14



Diabetes  
affects children  
& adults

Prevent  
type 2 diabetes

Control  
your diabetes better,  
visit your Doctor

Be active,  
eat  
healthy



  
world diabetes day

La diabetes  
afecta a niños  
y adultos

evite  
la diabetes tipo 2

controle mejor  
su diabetes,  
visite a su médico

Se activo,  
come alimentos  
saludables

  
día mundial de la diabetes

# The Burden of Diabetes



# Cost-Effectiveness of Interventions for Preventing & Treating Diabetes

## Priority Level 1

- ✓ Glycemic control in people with A1c>9
- ✓ Blood pressure control in people with BP>160/95
- ✓ Foot care in people at risk

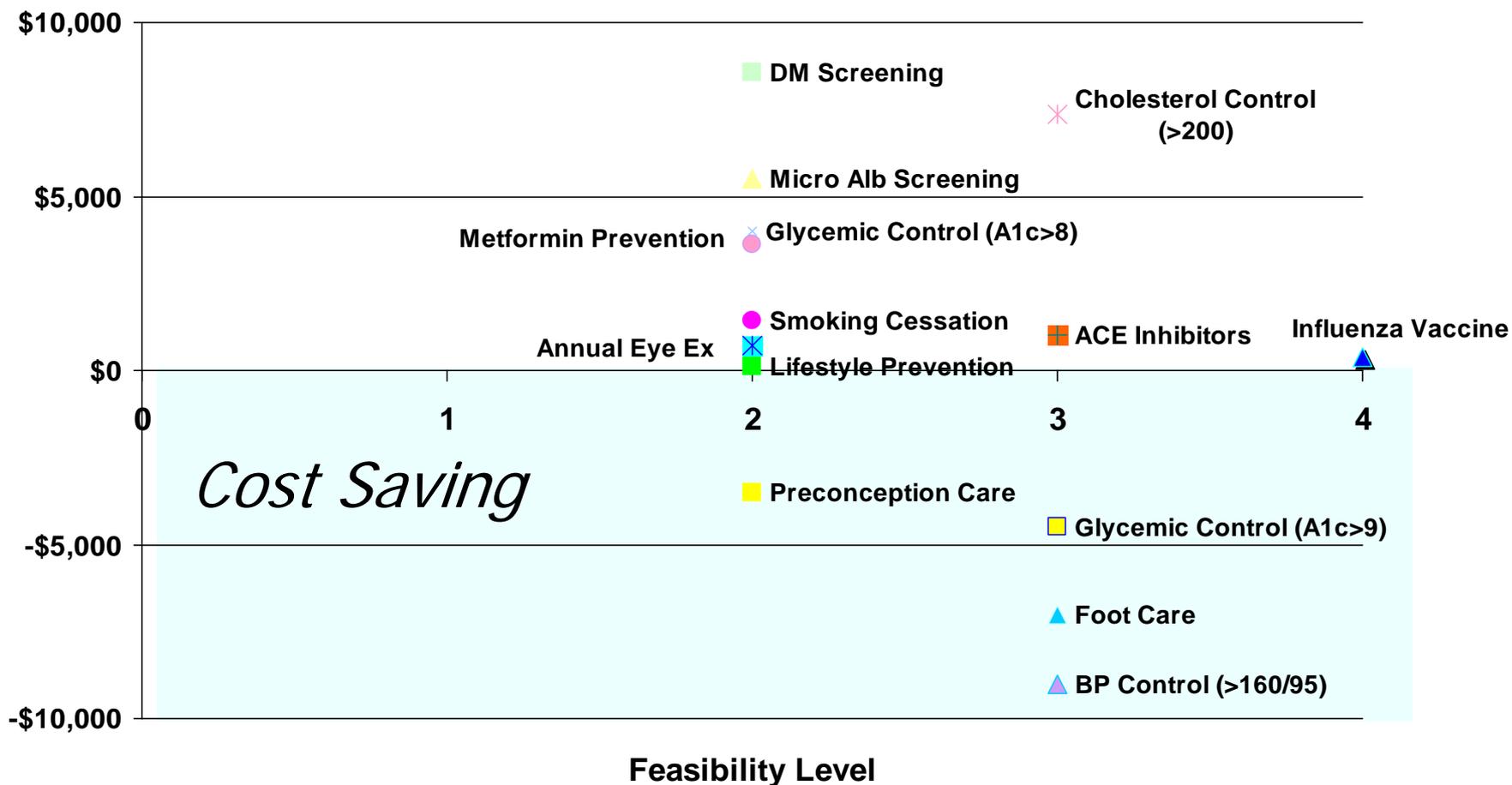
## Priority Level 2

- ✓ Preconception care
- ✓ Lifestyle DM prevention
- ✓ Influenza vaccine
- ✓ Annual eye exam
- ✓ Smoking cessation
- ✓ ACE inhibitors

## Priority Level 3

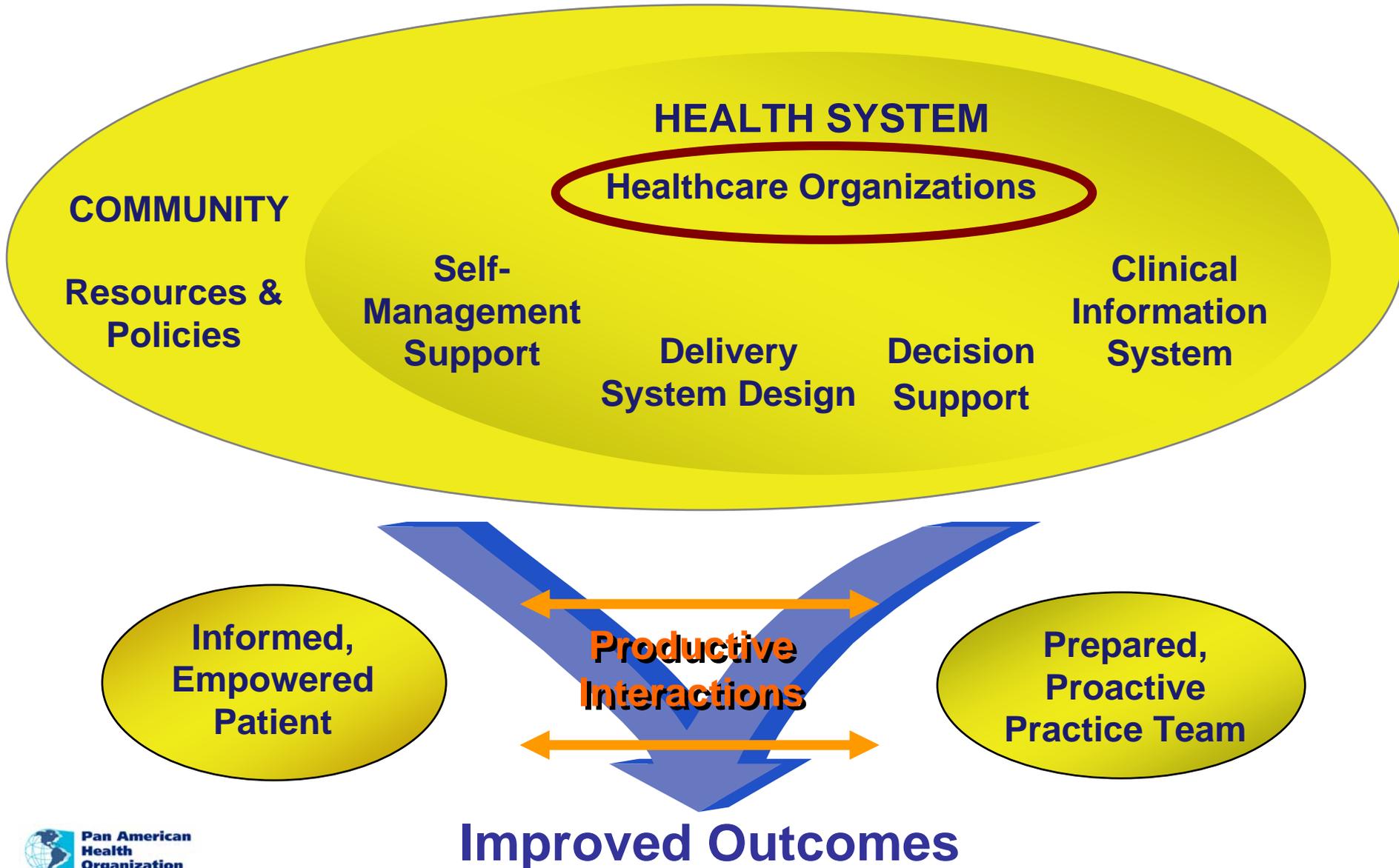
- ✓ Metformin prevention
- ✓ Cholesterol control (>200)
- ✓ Intensive glycemic control in people with A1c>8
- ✓ Screening for undiagnosed diabetes
- ✓ Annual microalbuminuria screening

## Cost-Effectiveness (QALY US\$) of Diabetes Mellitus (DM) Interventions in Latin America & the Caribbean



Source: Disease Control Priorities in Developing Countries. Feasibility based on difficulty reaching target population, capacity, medical knowledge needed, capital required and social acceptability

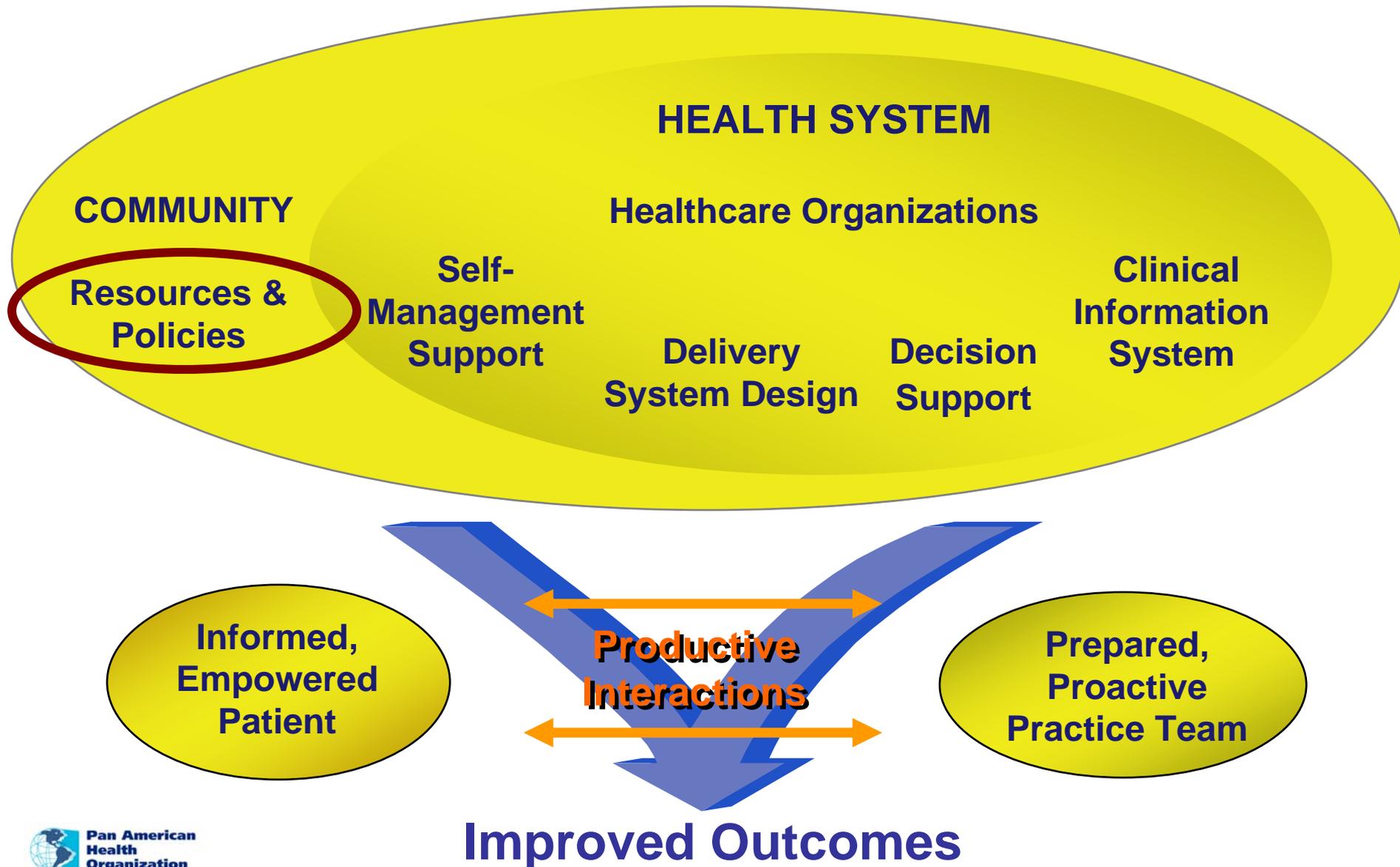
# Chronic Care Model



# Six Focal Areas

- ◆ Healthcare Organizations
  - ◆ Visibly support improvement in chronic illness care at all levels of the organization
  - ◆ Provide incentives to encourage better chronic illness care
  - ◆ Facilitate care coordination throughout the organization

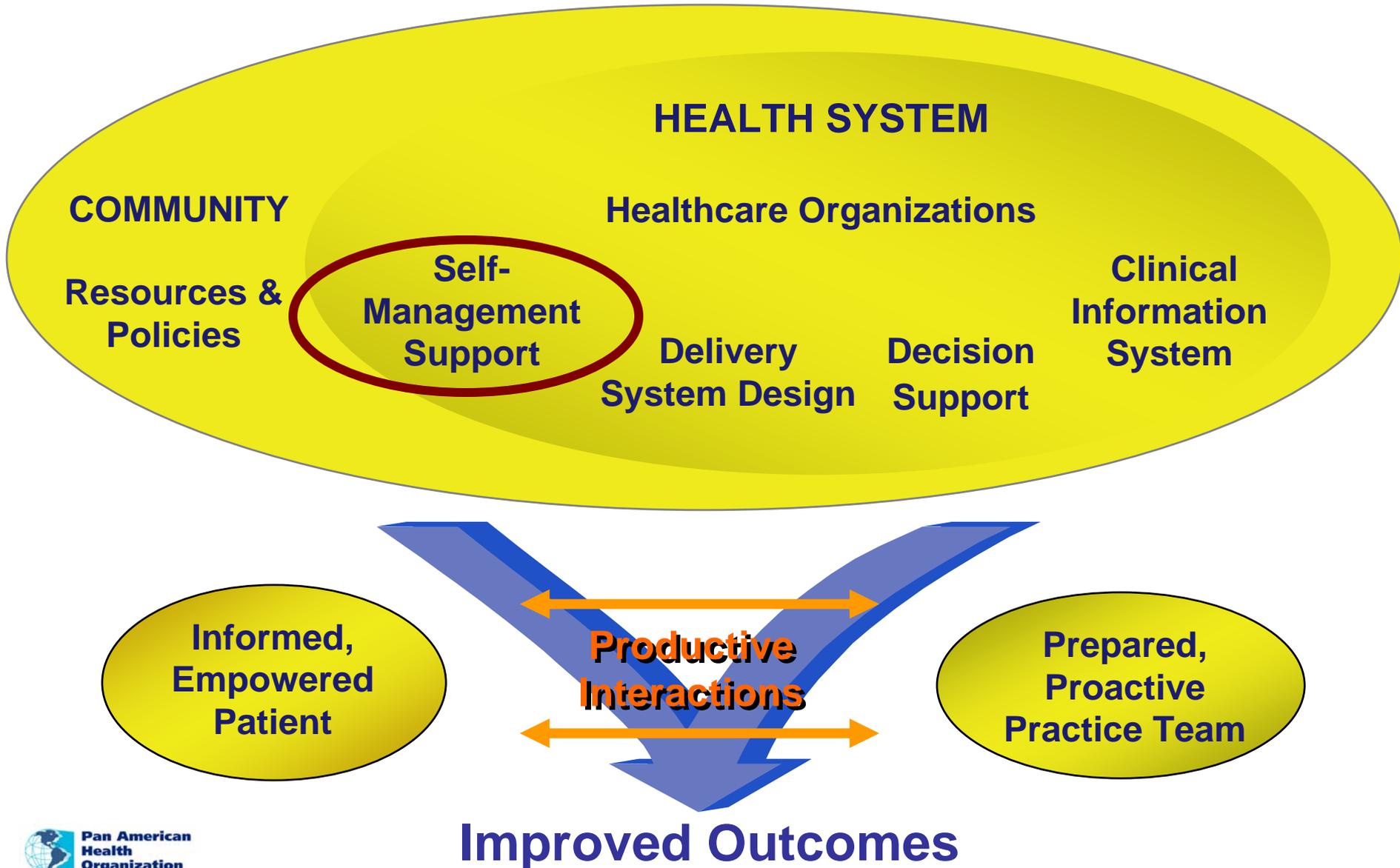
# Chronic Care Model



# Six Focal Areas

- ◆ **Community Resources & Policies**
  - ◆ Form partnerships with community organizations to support and develop interventions that fill gaps in needed services
  - ◆ Encourage patients to participate in effective community programs
  - ◆ Advocate for policies to promote health, prevent disease and improve patient care

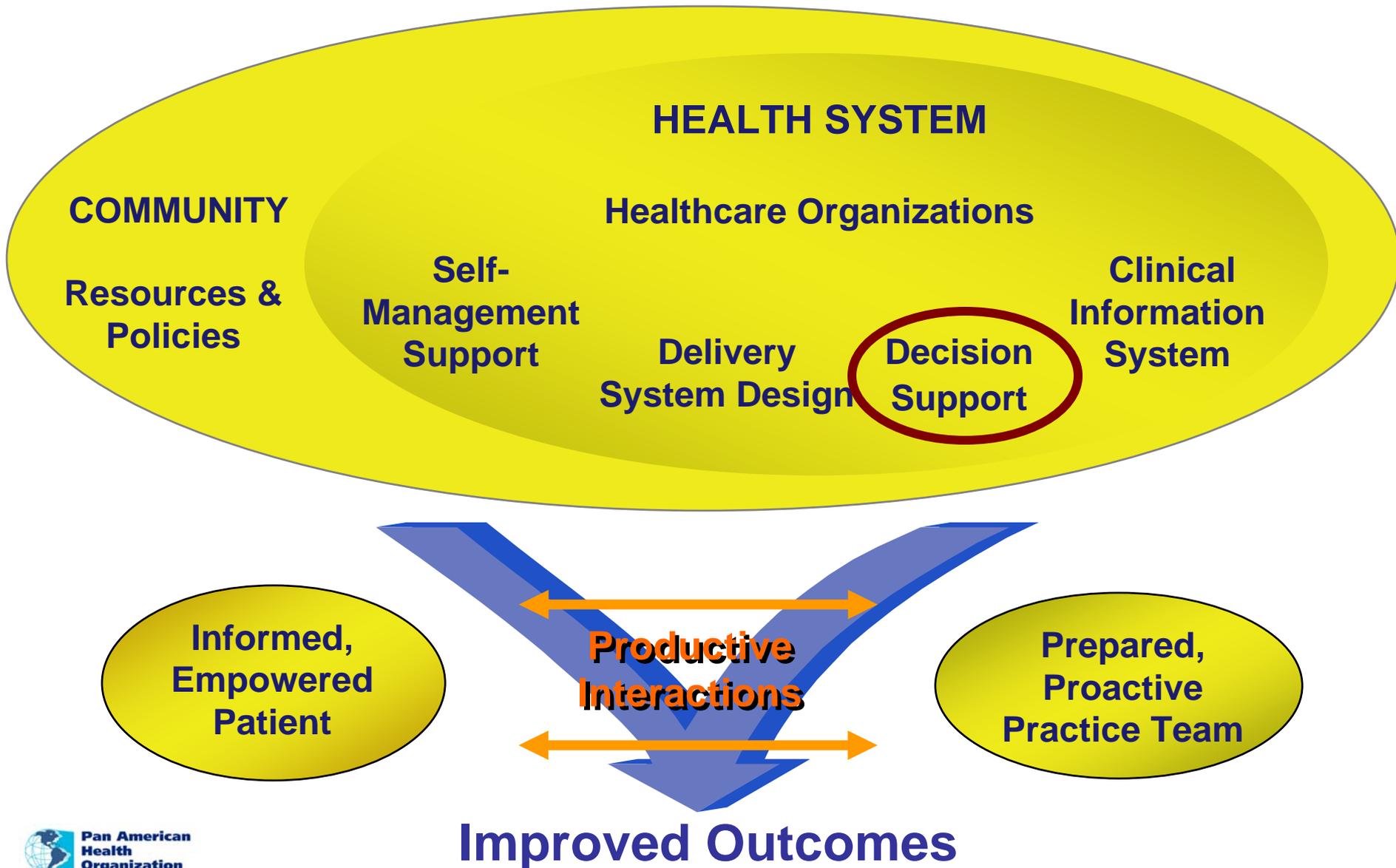
# Chronic Care Model



# Six Focal Areas

- ◆ **Self-Management Support**
  - ◆ Emphasize the patient's central role in managing his/her health
  - ◆ Use effective self-management support strategies that include goal setting, action planning and problem-solving
  - ◆ Organize internal and community resources to provide ongoing self-management support to patients

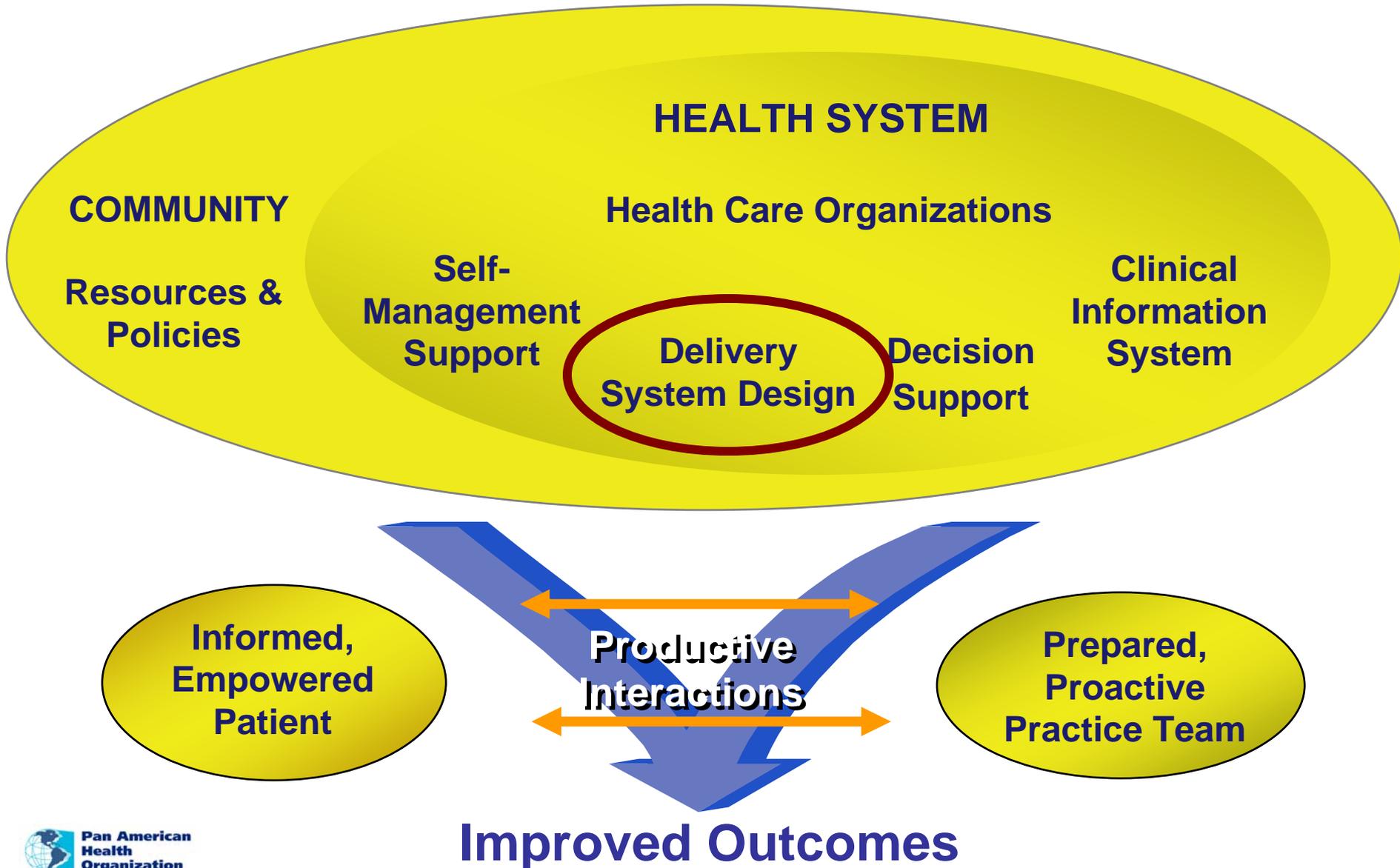
# Chronic Care Model



# Six Focal Areas

- ◆ Decision Support
  - ◆ Embed evidence-based guidelines into daily clinical practice
  - ◆ Share evidence-based guidelines and information with patients to encourage their participation
  - ◆ Integrate specialist expertise and primary care

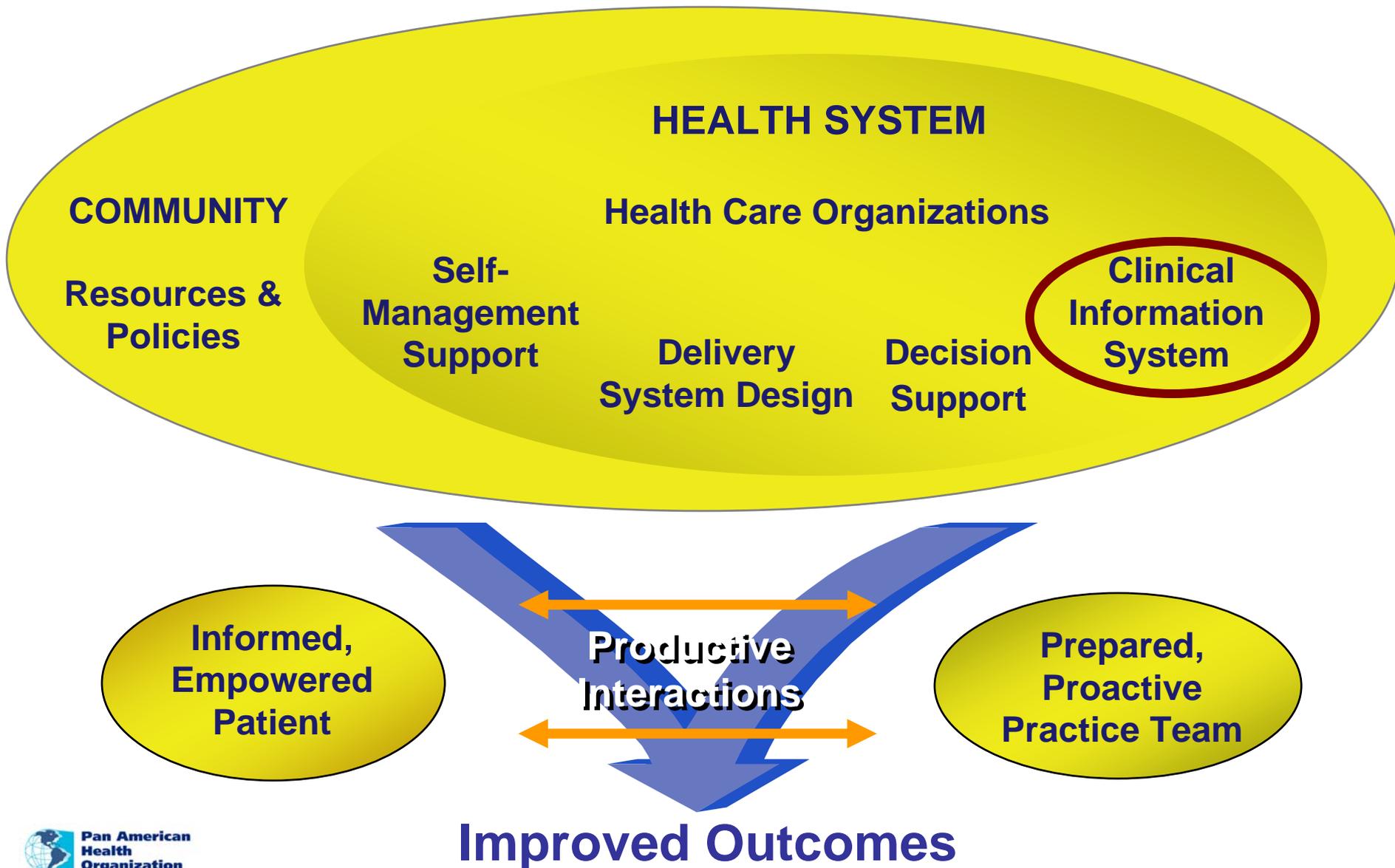
# Chronic Care Model



# Six Focal Areas

- ◆ Delivery System Design
  - ◆ Define roles and distribute tasks among team members
  - ◆ Use planned interactions to support evidence-based care
  - ◆ Ensure regular follow-up by the care team
  - ◆ Give care that patients understand and that fits with their cultural background

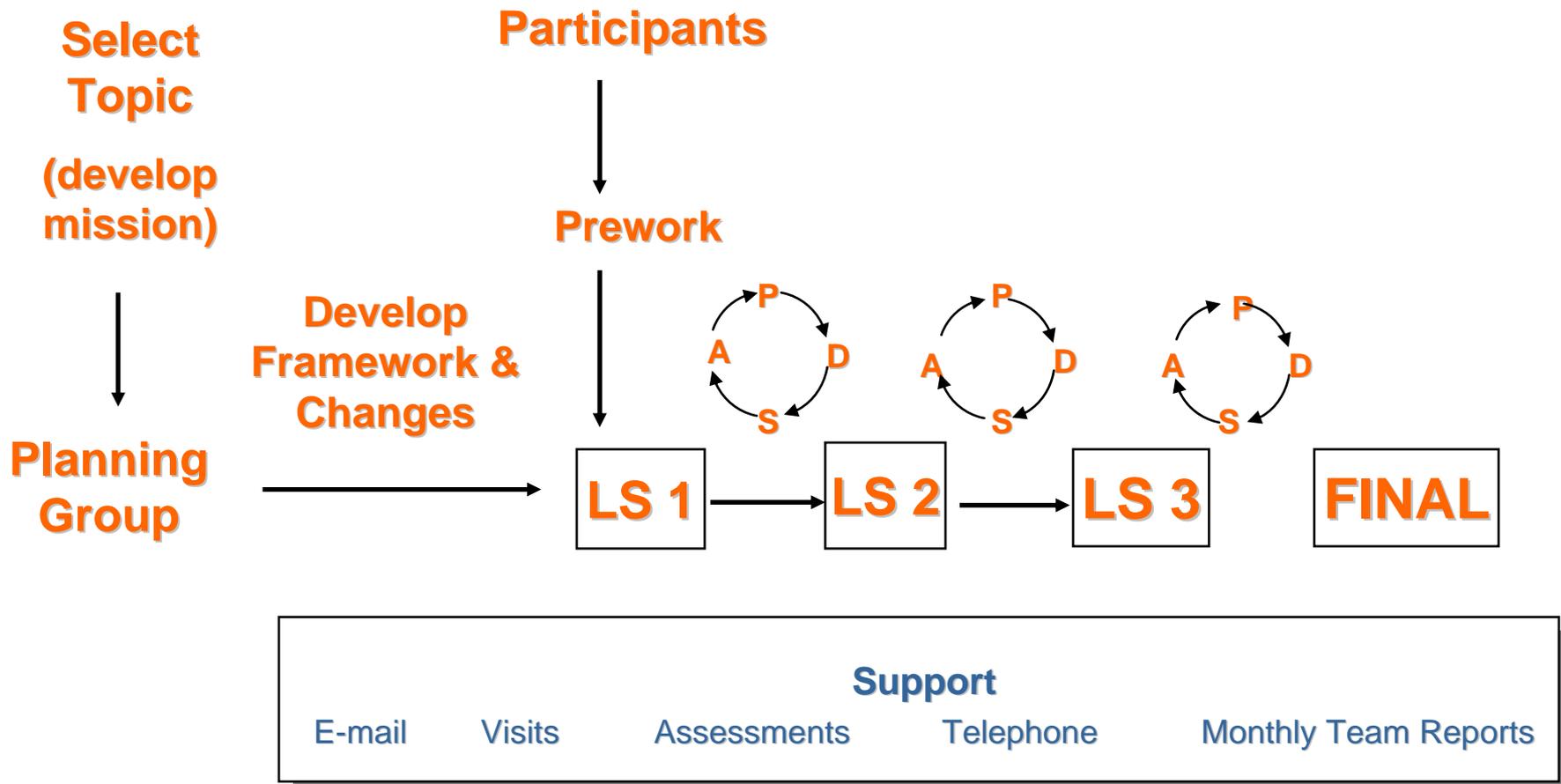
# Chronic Care Model



# Six Focal Areas

- ◆ Clinical Information Systems
  - ◆ Provide timely reminders for providers and patients
  - ◆ Identify subpopulations for proactive care
  - ◆ Facilitate individual care planning
  - ◆ Share information with patients and providers to coordinate care
  - ◆ Monitor performance of practice team and care system

# Breakthrough Series for the Improvement of Chronic Care (6–13 months timeframe)

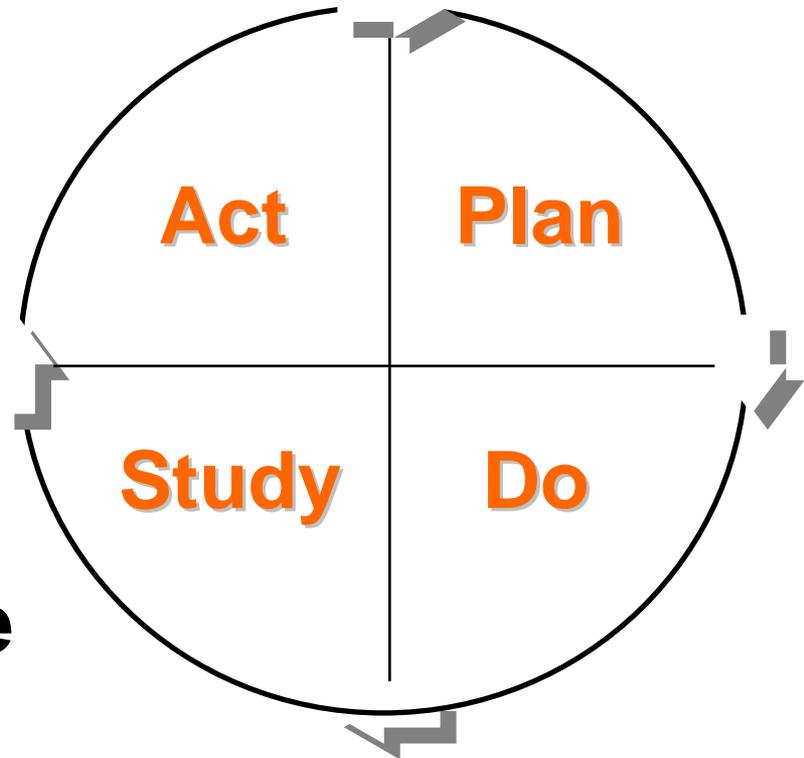


# The PDOSA Cycle

Four Steps: Plan, Do, Study, Act

Also known as:

- ✓ Shewhart Cycle
- ✓ Deming Cycle
- ✓ Learning and Improvement Cycle

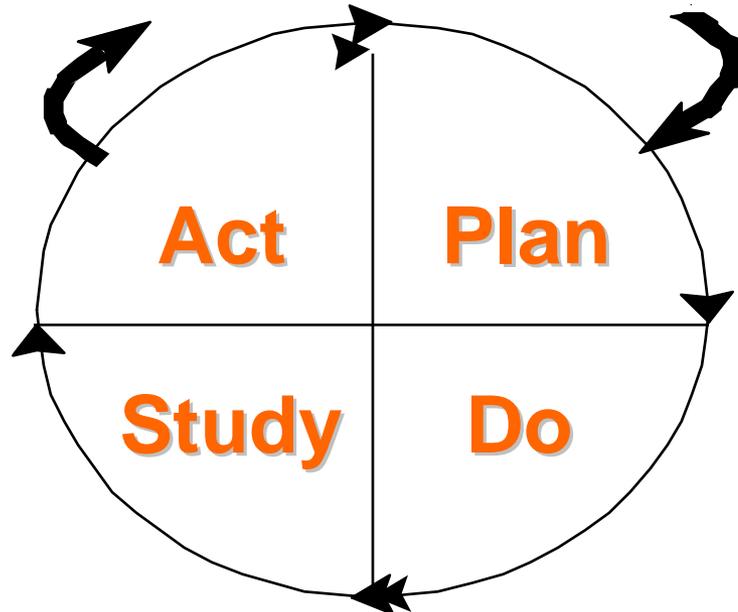


# Model for Improvement

What are we trying to accomplish?

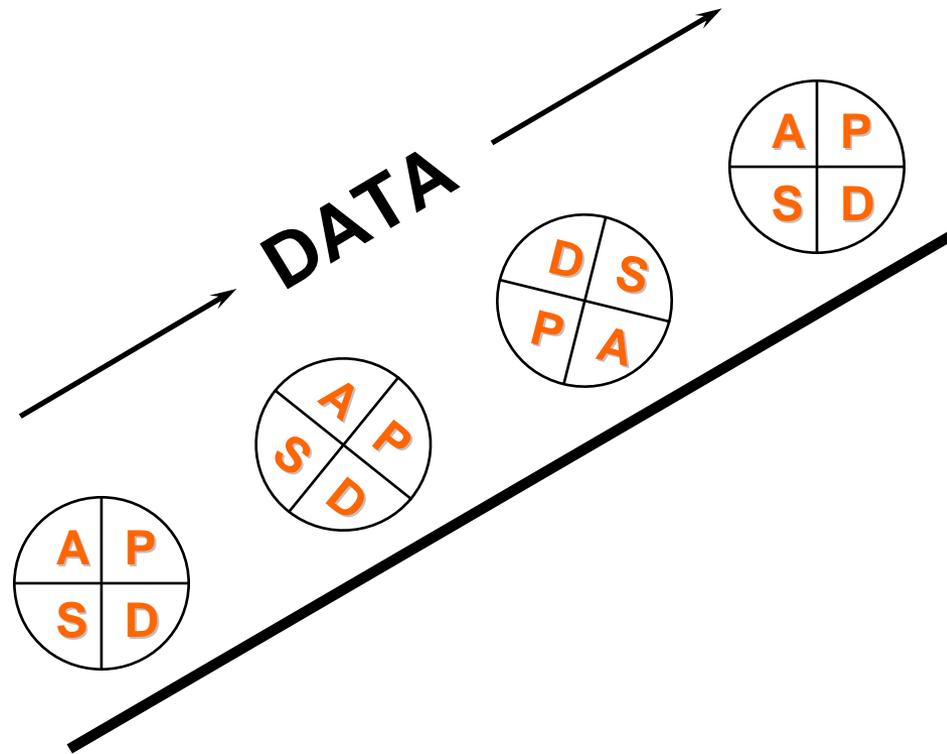
How will we know that a change is an improvement?

What change can we make that will result in improvement?



# Repeated Use of the Cycle

Changes That  
Result in  
Improvement



Hunches  
Theories  
Ideas

# VIDA Project

**VIDA was a one-year intervention project focused on quality of diabetes care improvement in the state of Veracruz, Mexico. The intervention used the Chronic Care Model\* and the Breakthrough Methodology\* to promote collaboration between primary care teams to identify gaps in the provided care and find solutions.**

**VIDA Project**  
**Veracruz Initiative for Diabetes Awareness**





# Priority-setting: *Diabetes Care Model*



**Better health for people with diabetes**

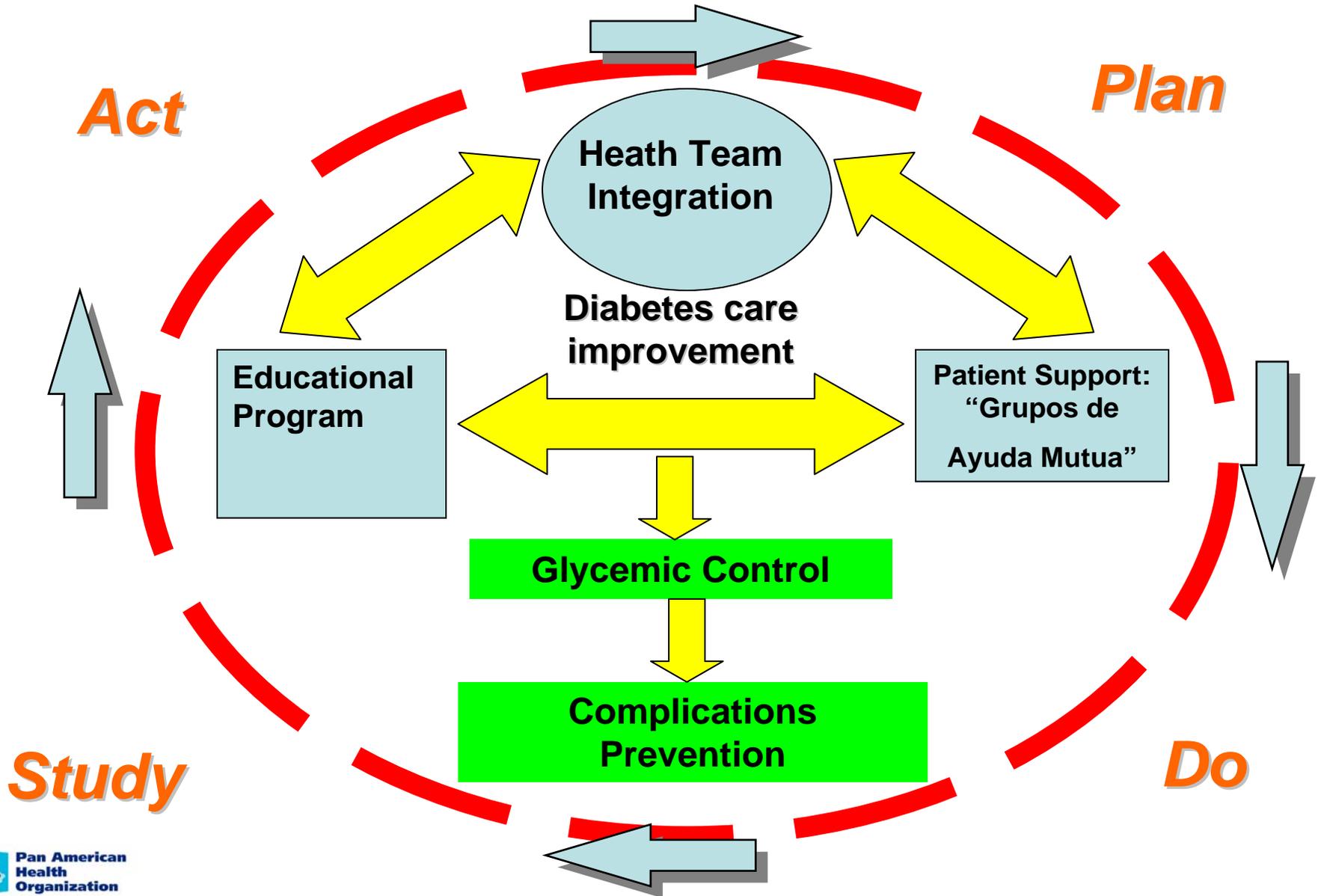


# The intervention plan included:

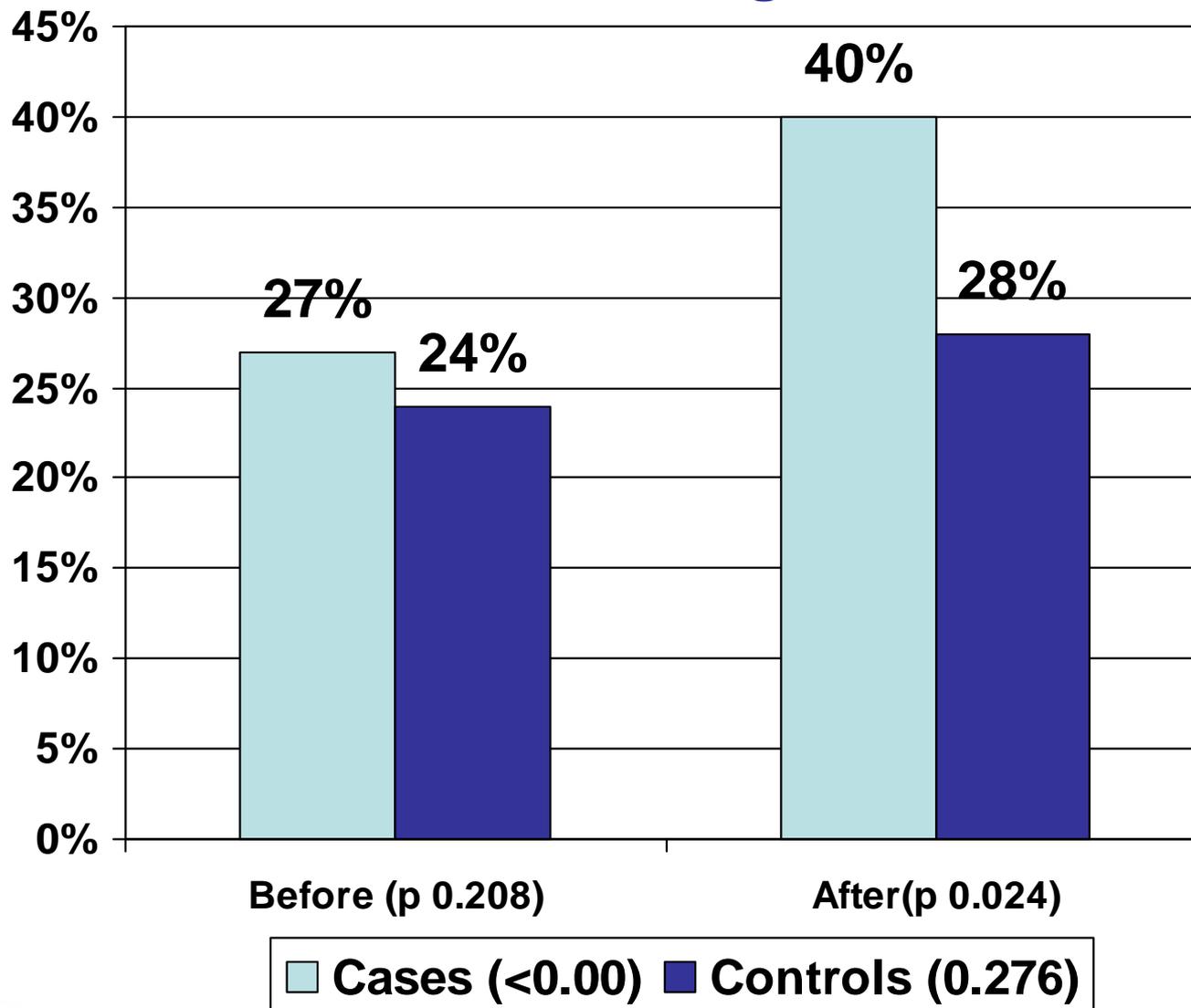
- A structured diabetes education program
- In-service training on diabetes management and foot care
- Innovative reference system with specialist visit
- Monitoring system (QUALIDIAB)
- Strengthen the *Grupos de Ayuda Mutua* (diabetic clubs) and the *promotoras* work

**In addition, primary-care centers were able to implement other strategies to respond to specific needs**

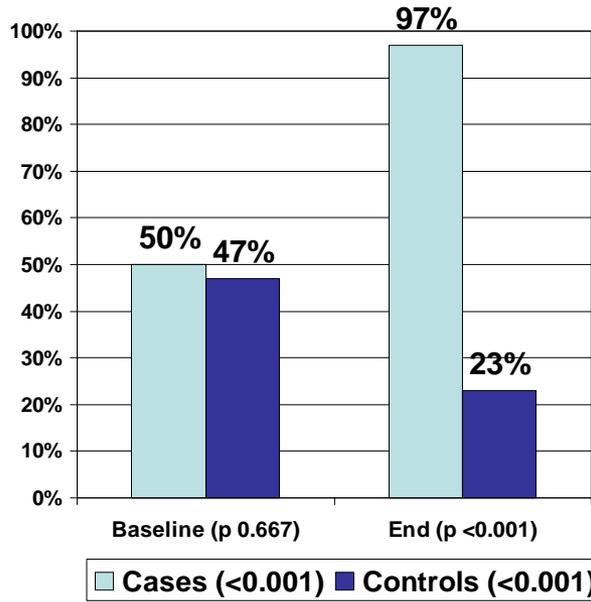
# Change Package



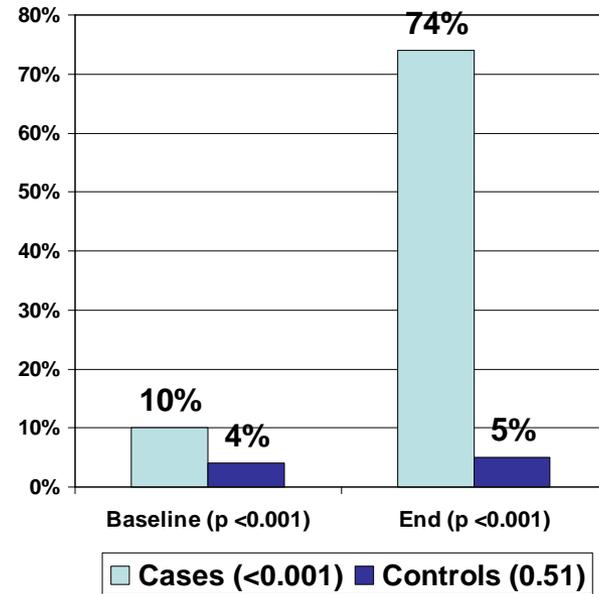
# Patient with good control (A1c< 7%) before and after the intervention among cases and controls



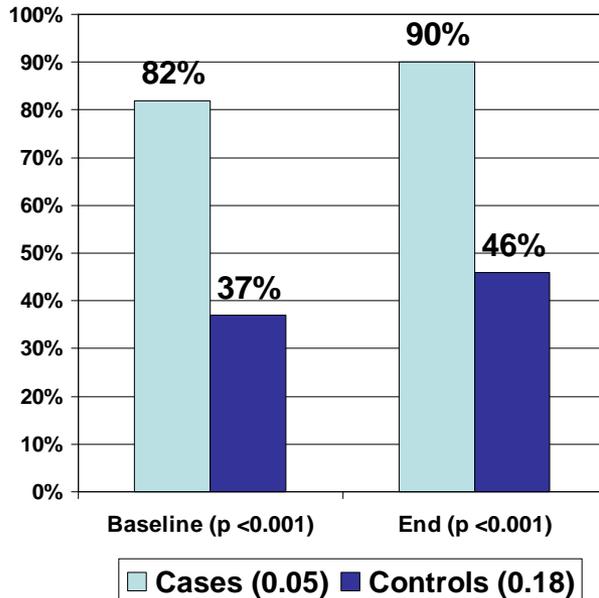
### Foot Exam Reported



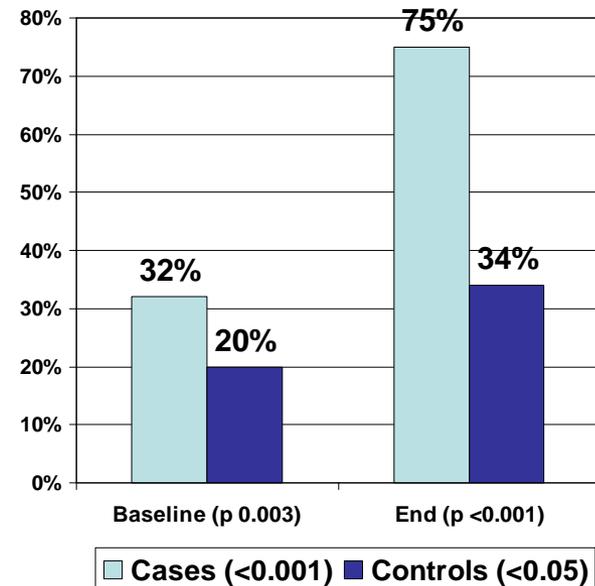
### Eye Exam Reported



### Nutritional Counseling

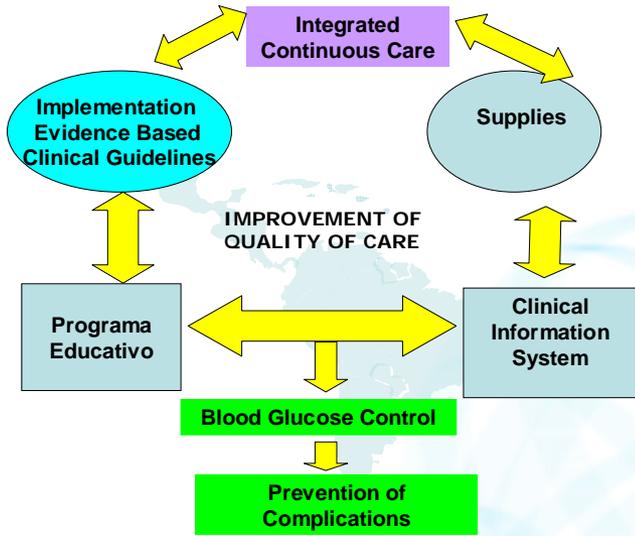


### Documented Foot Care Education

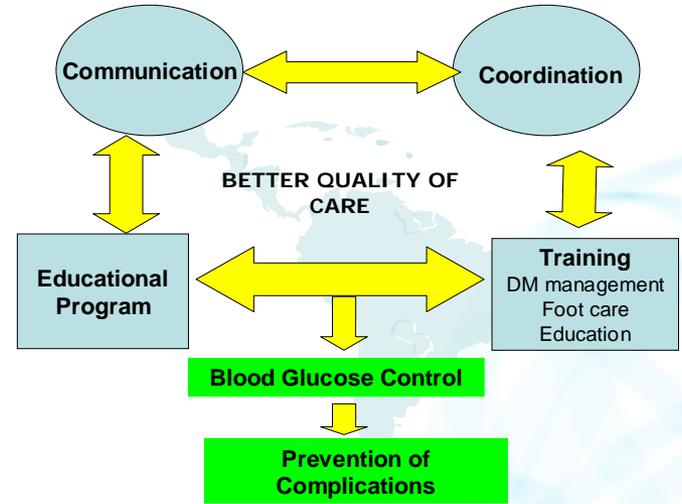








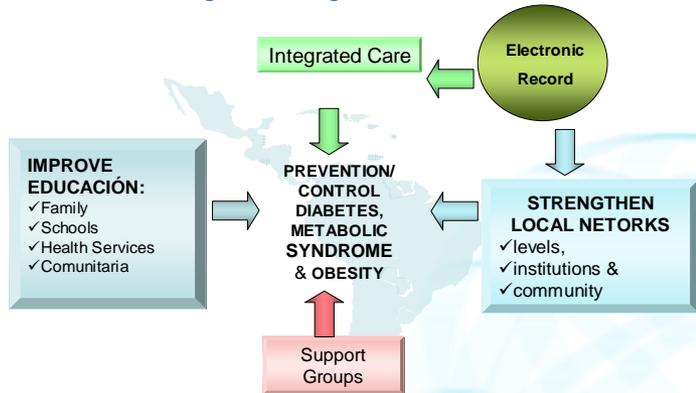
### Change Package: Nicaragua



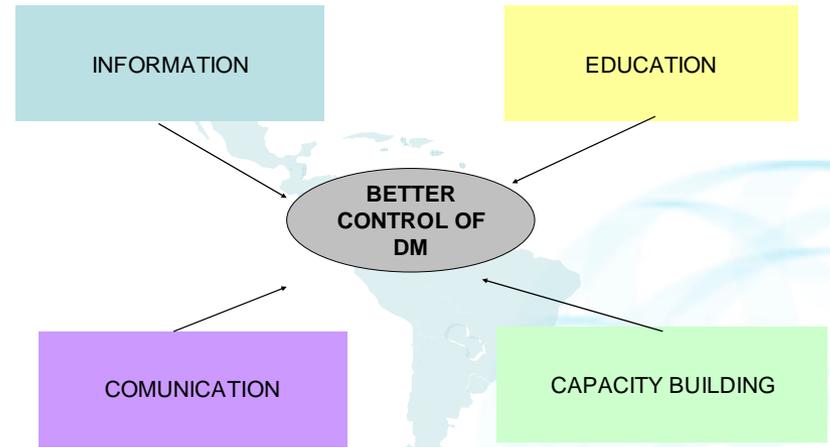
### Change Package: El Salvador



### Change Package: Costa Rica



### Change Package: Guatemala



# Collaboration

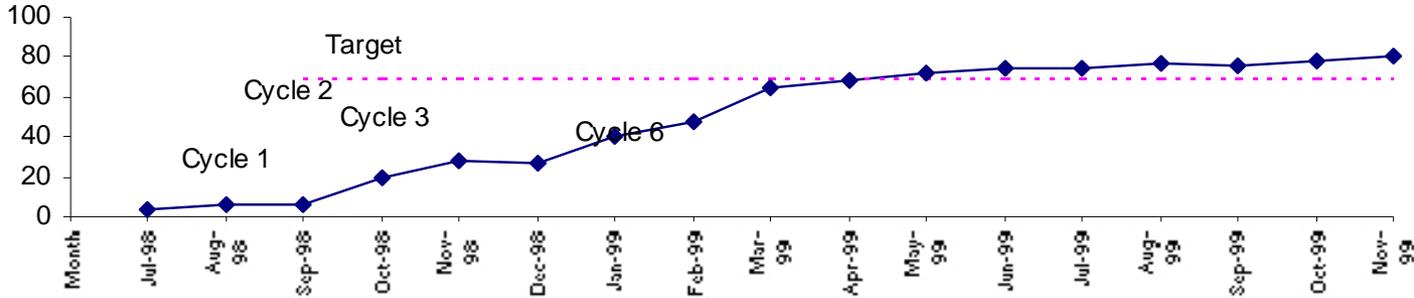
# Measure

# Implement

# Measure

### Self-Management Support

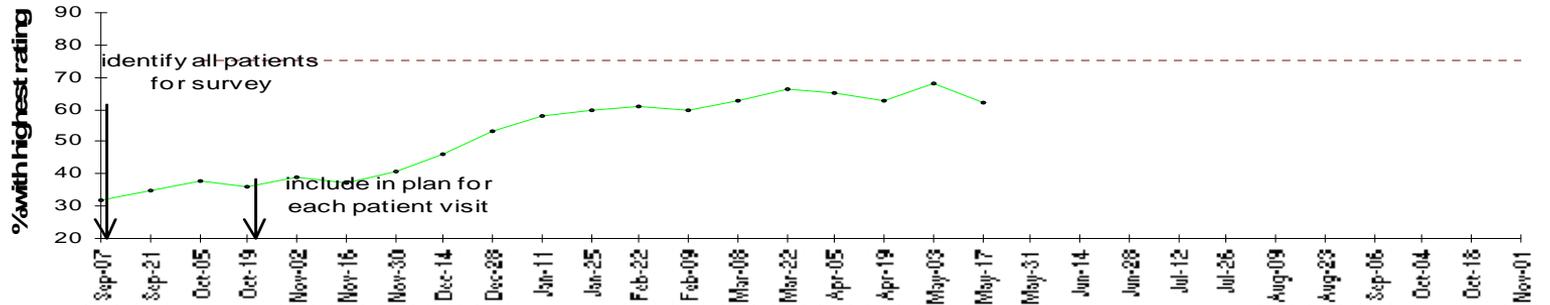
% of population with documented goals



### Patient Satisfaction

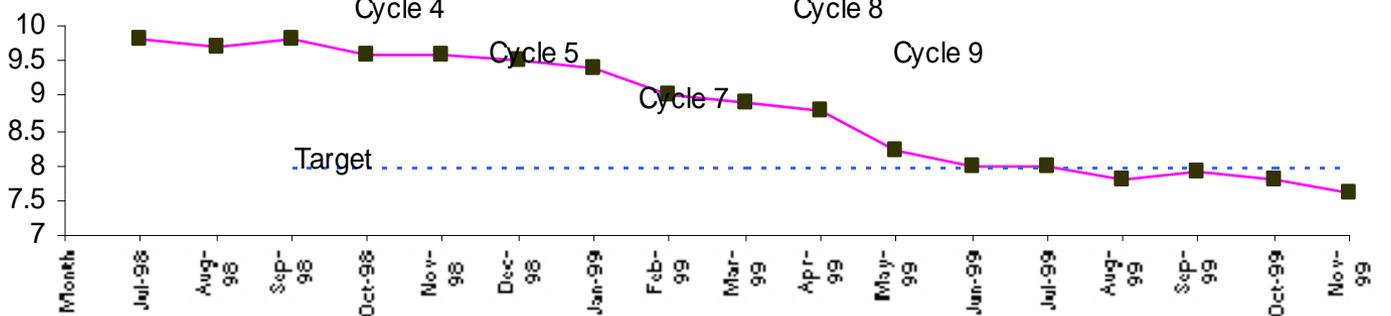
(average for 2-week period - all diabetic patients returning surveys)

target = 75%

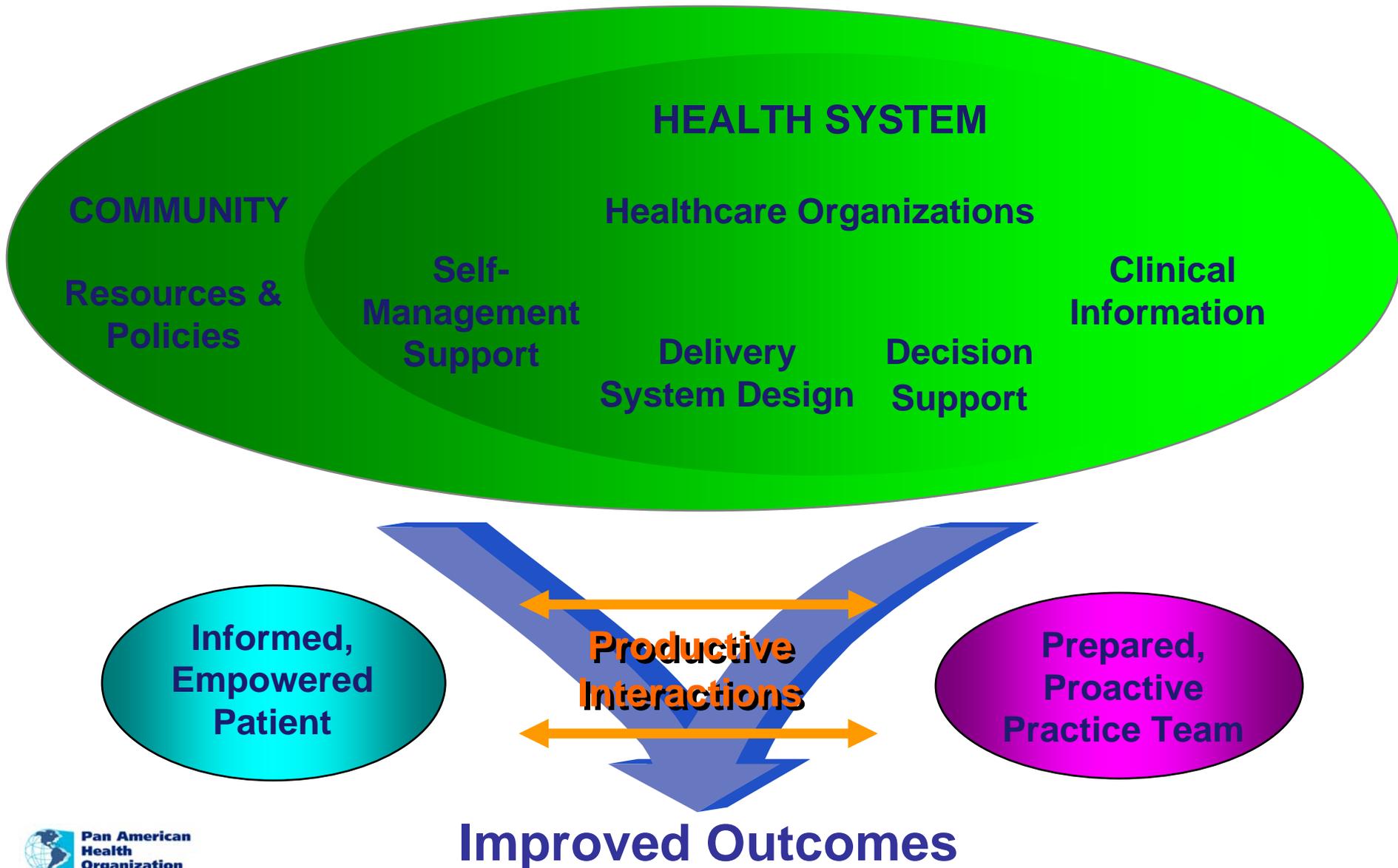


### Glycemic Control

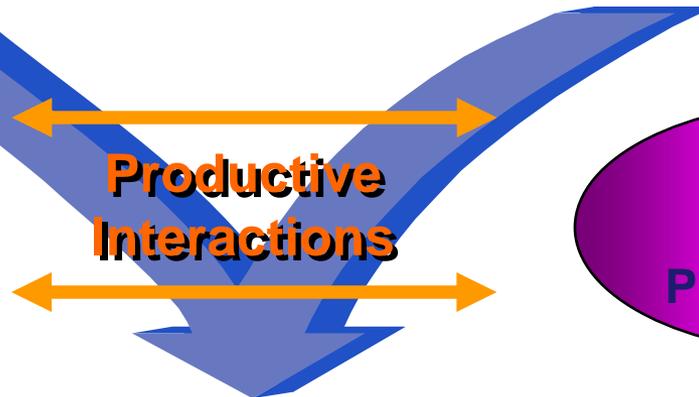
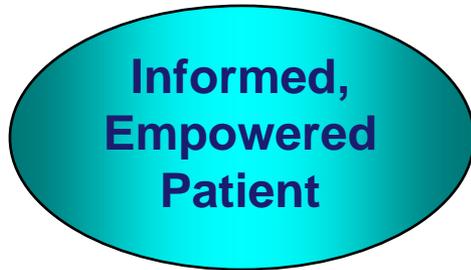
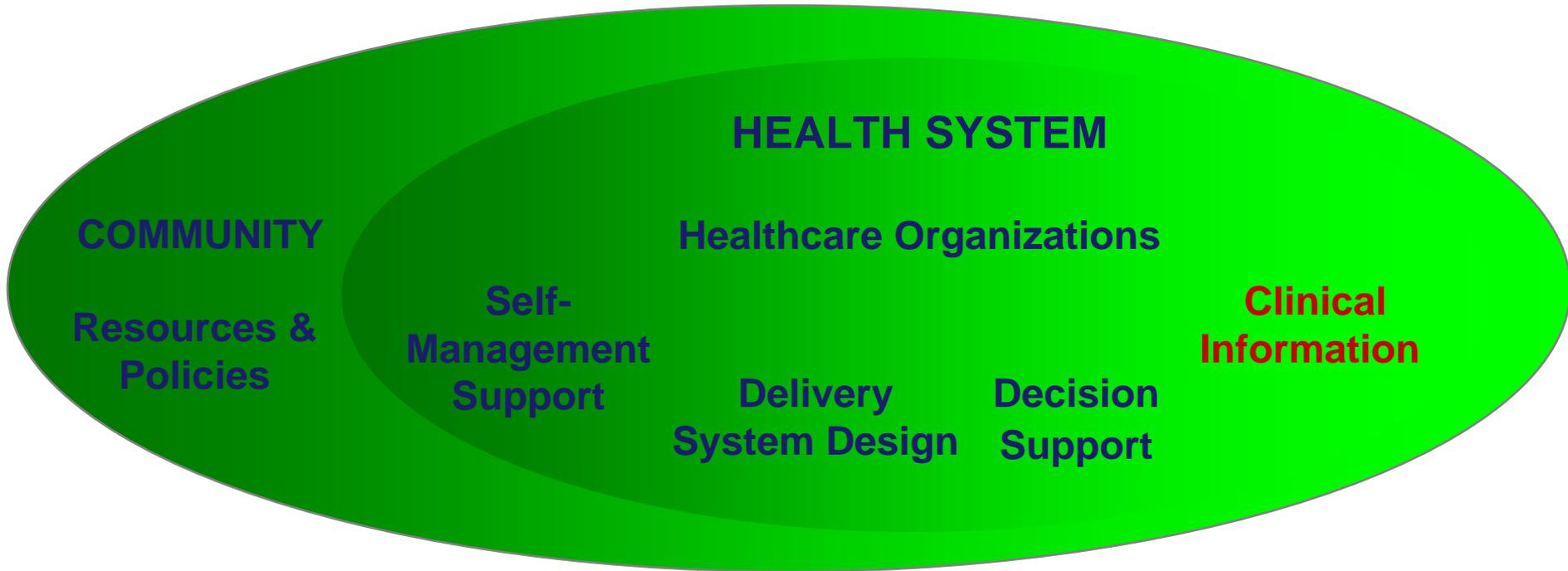
Average % HbA1c



# Chronic Care Model

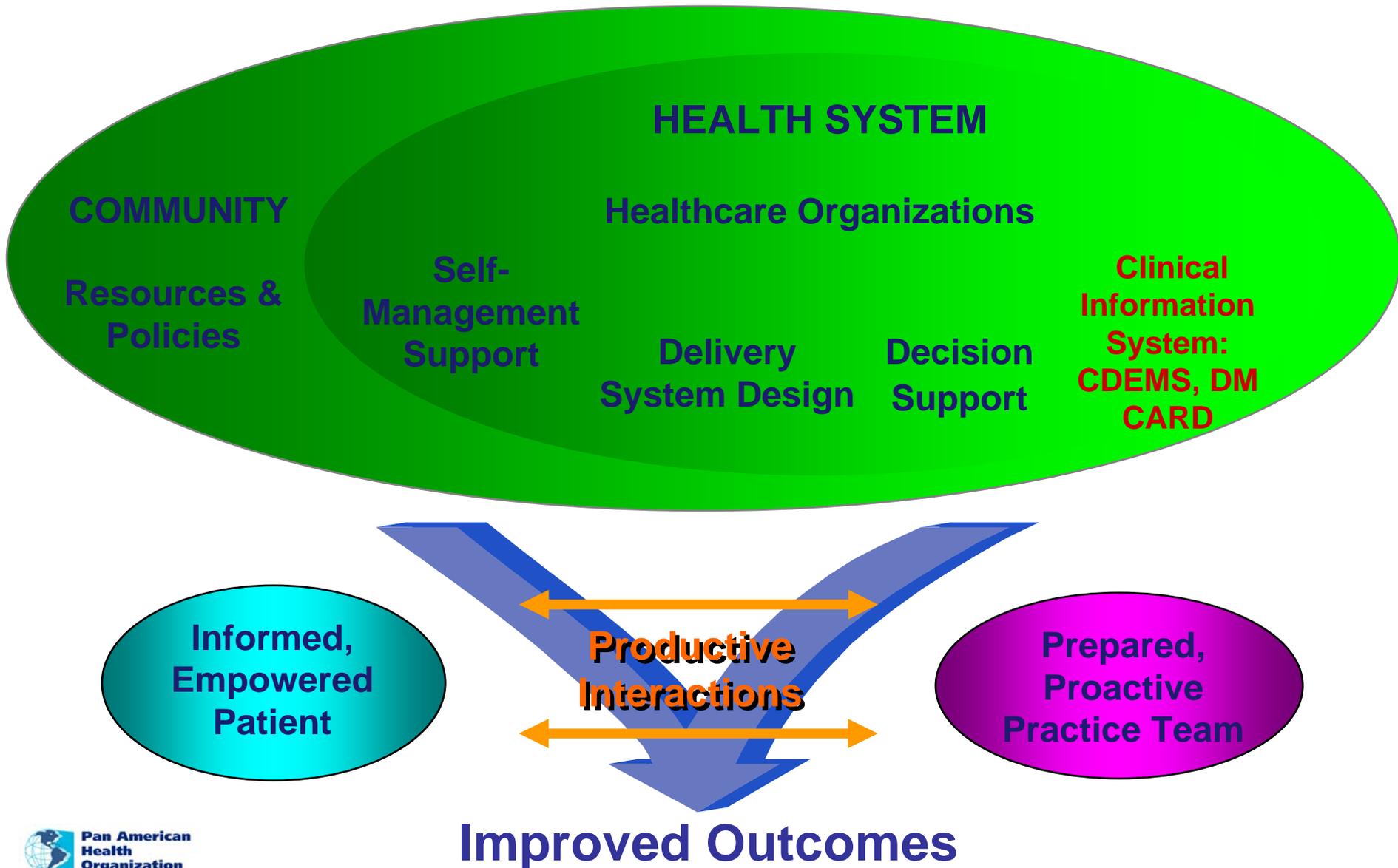


# Chronic Care Model



**Improved Outcomes**

# Chronic Care Model





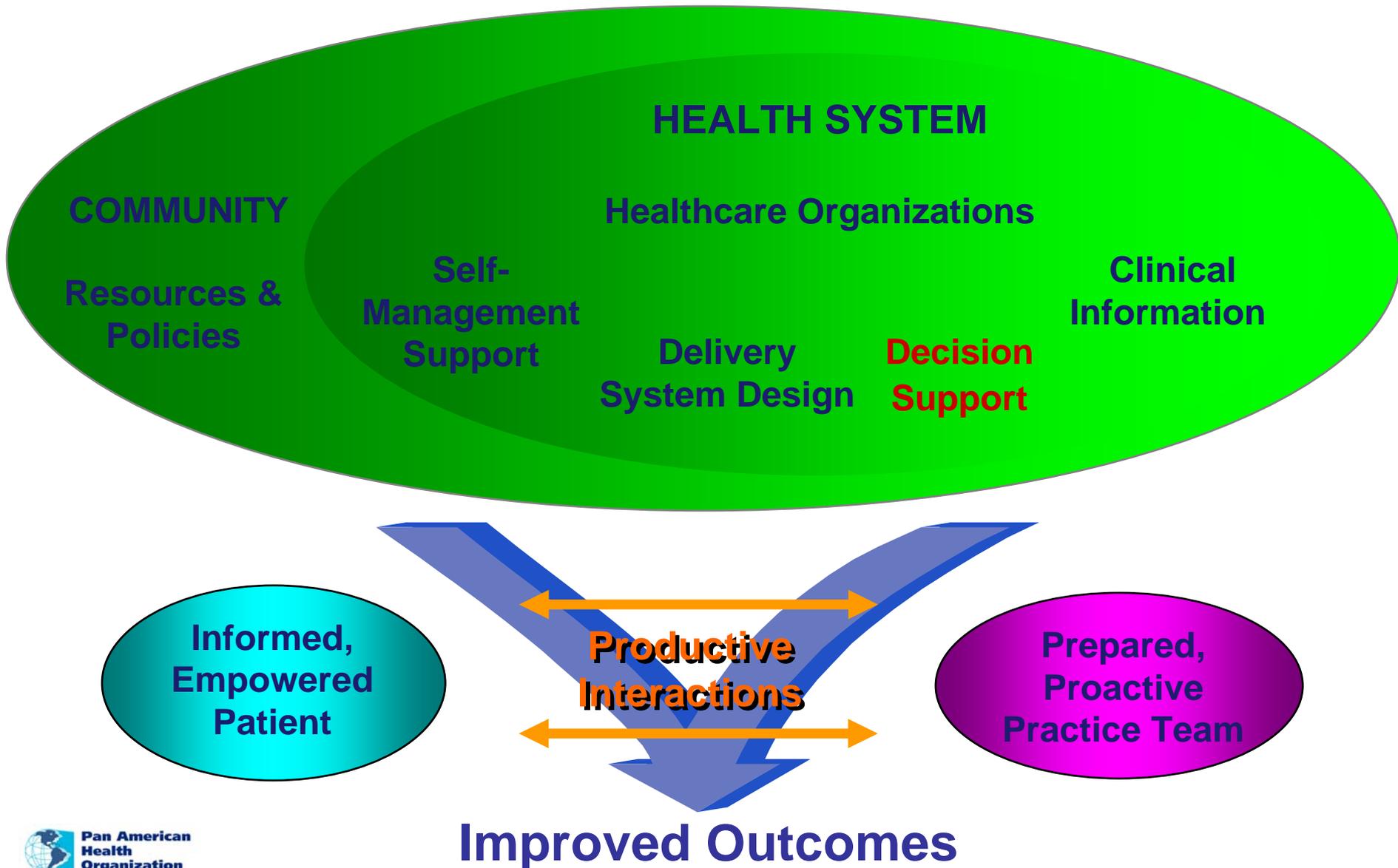
### INSTRUCTIONS:

1. Write the unit or clinic as well as the physician's and nurse's names.
2. Write the patient's name, gender, date of birth and home address.
3. Make a check mark (✓) if the patient has these complications, if not listed write the complication the patient has.
4. Write the date of the visit or encounter.
5. Inquire on tobacco and alcohol use; if positive answer write T+ or A+ in the corresponding box
6. Measure patient's blood pressure, height and the weight and ascertain the BMI.
7. Ask the patient to remove shoes and socks and examine patient's feet.
8. Examine retina after dilating pupils or refer the patient to the ophthalmologist once per year.
9. Review and write the results/ (or request new) fasting blood glucose test, A1c and lipid profile.
10. Explain to patient his/her educational goals as per the protocol for the non pharmacological treatment of diabetes mellitus. Make a check mark (✓) in the corresponding box if diet and exercise education are provided. Using codes in parenthesis, write what other educational subjects are discussed with the patient i.e. (1) General knowledge of diabetes; (2) Administration of medications and related risks; (3) Relation between diet, exercise, and blood glucose and other metabolic indicators; (4) Foot care; (5) Use of medical and community services; (7) Negative consequences of risk behaviors such as smoking and alcohol use, and ways of eliminating these behaviors.
11. Ask and write the name of all medicines and doses that the patient is taking.
12. Write the date of Influenza or Pneumococcal vaccination.

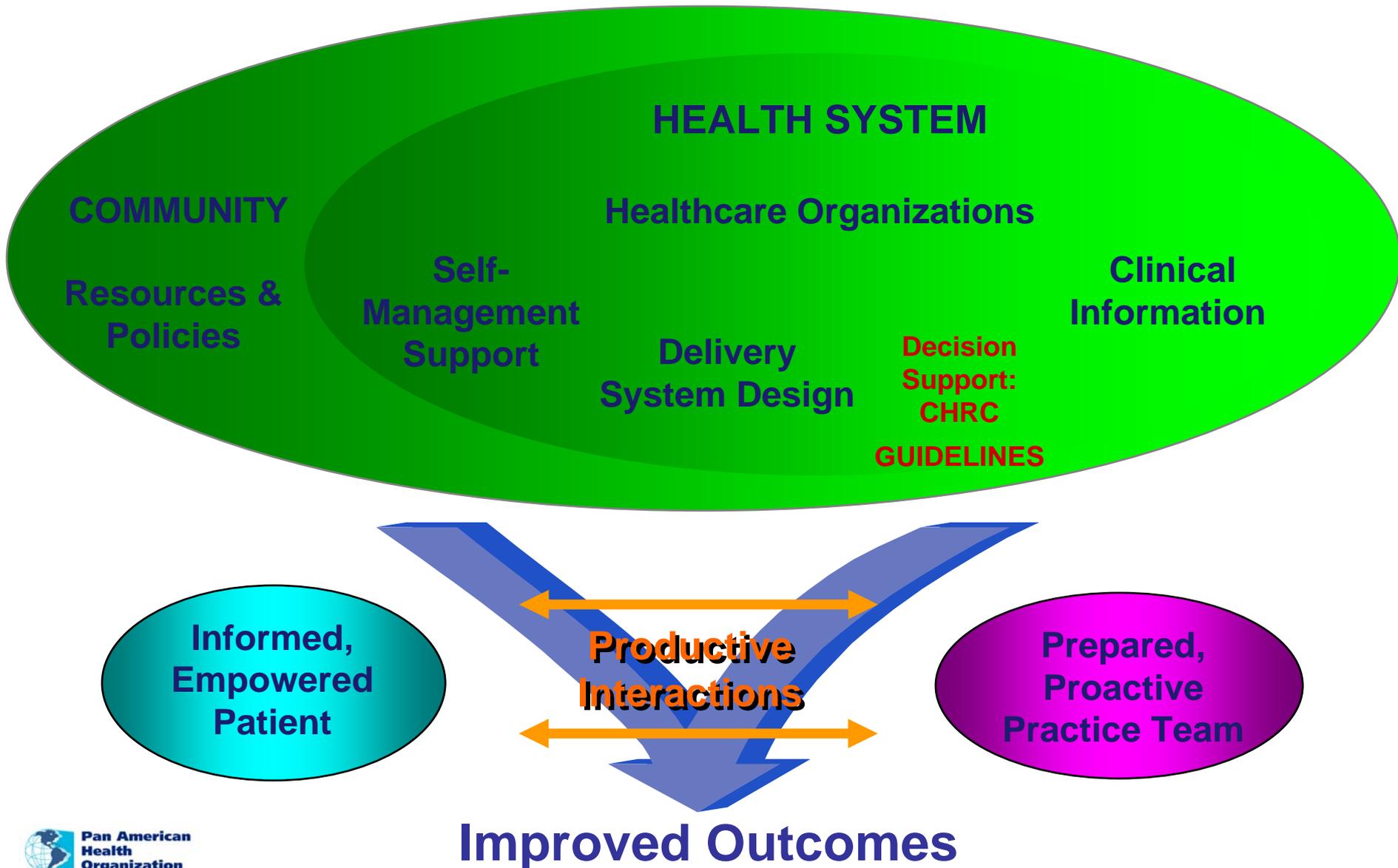
#### Standards of Diabetes Care

	Component	Frequency	Description
MEDICAL VISITS	Blood Pressure	Each visit	<130/80
	Eye Exam	Annual	Ophthalmologist/ Optometrist
	Dental Exam	Every 6 months	Teeth and gum exam
	Brief Foot Exam	Each visit	Remove shoes and socks
	Complete Foot Exam	Annual	Visit the podiatrist if high risk
	Flu vaccine	Annual	If available
LABORATORY	Hemoglobin A1c	Every 3-6 months	<7%
	Triglycerides	Annual	<150 mg/ dl
	Cholesterol total	Annual	<200 mg / dl
	LDL Cholesterol	Annual	< 100 mg/ dl
	HDL Cholesterol	Annual	>40 (men) >50 (women)
	Proteinuria/ albuminuria	Annual	<30
EDUCATION	Treatment Goals	Each visit	Discuss with patient
	Blood Glucose	Monitor	Recommend if needed
	Healthy Eating	Each visit	Recommend always
	Physical Activity	30", 5 times/ week	Recommend if indicated

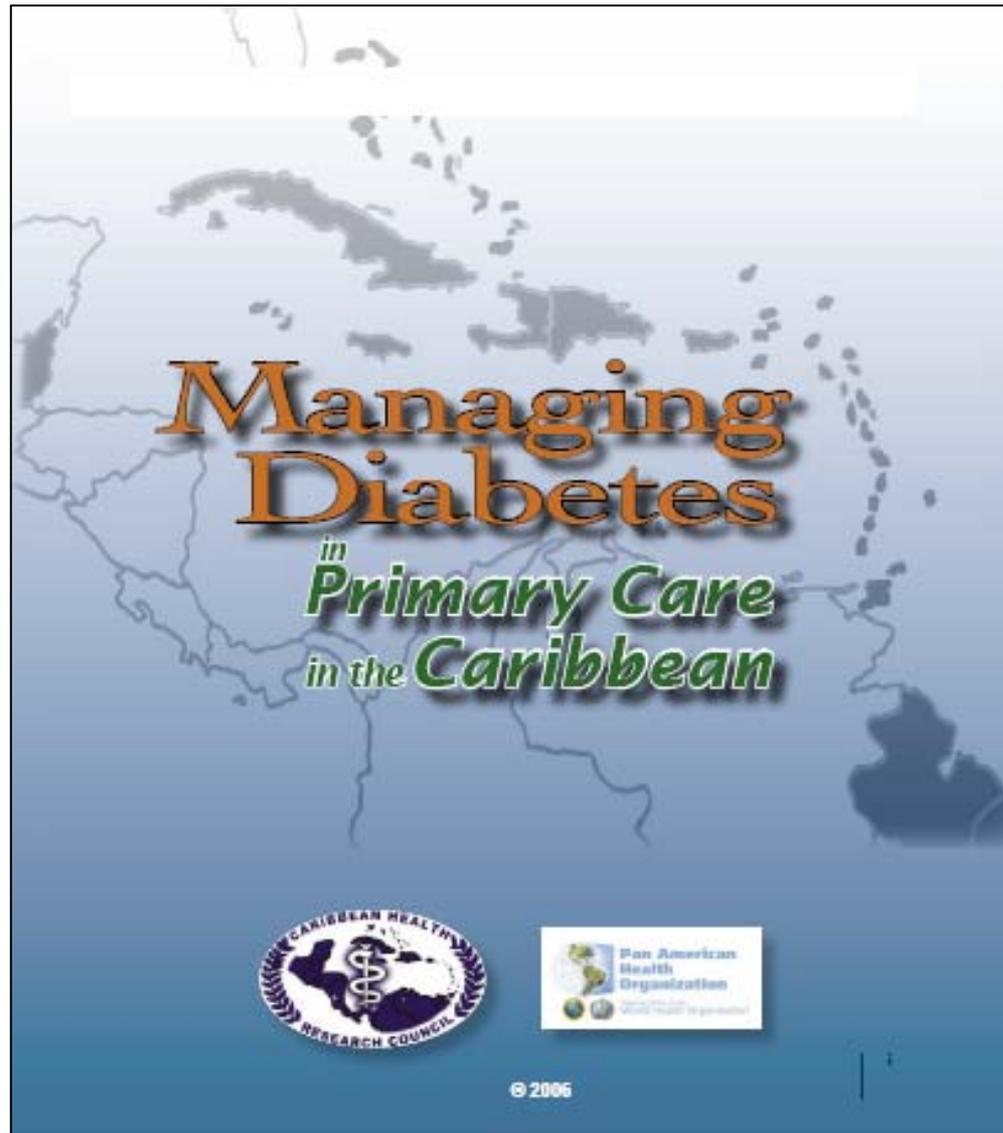
# Chronic Care Model



# Chronic Care Model



Build up on existing strategies such as the CHRC guidelines, the Caribbean Protocol for Nutritional Management of Diabetes and Hypertension, CCH3



# Collaboration



# To Do List

- ✓ Share information with the PAHO local office
- ✓ Define national and local teams
- ✓ Organize initial meeting
- ✓ Define scope (public, private, national, demonstration sites?) and select clinics
- ✓ Measure baseline
- ✓ Organize LS1: Implementation of the CHRC Guidelines. Pocket guide... at least 30 health providers.
- ✓ Report by the end of January 2009
- ✓ Implement changes, measure again and report
- ✓ Bring results to ILS-2 (March 2009)