

Delivery System Design

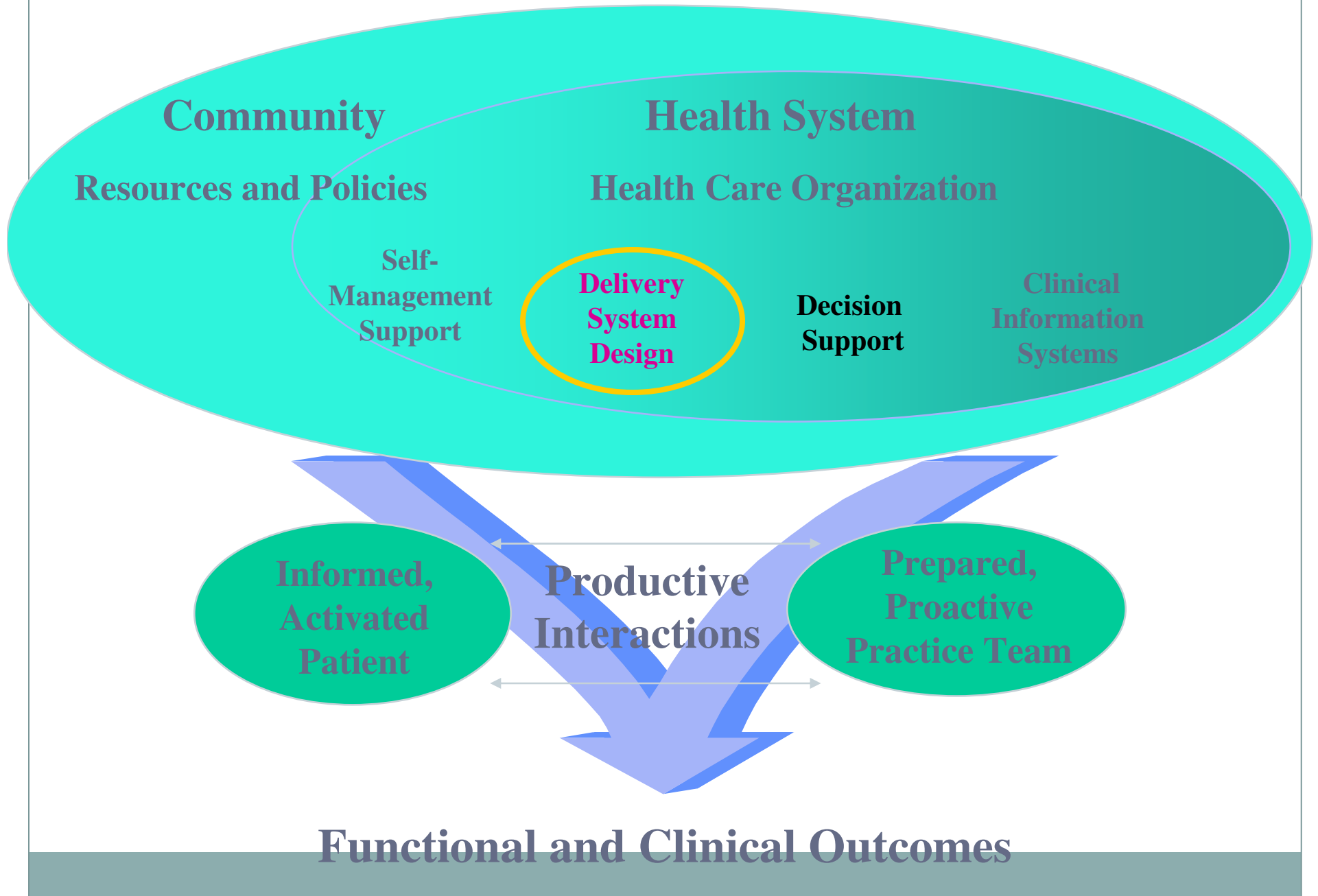


**SEED: SPREADING EFFECTIVE AND EFFICIENT DIABETES
CARE IN CALIFORNIA'S PUBLIC HOSPITALS**

J. Michael Allevato, MD

April 2, 2008

Chronic Care Model



Delivery System Design



- **Healthcare Team:** broaden and define roles and distribute tasks amongst team members.
- **Planned Visits:** use planned interactions to support evidence-based care.
- **Stepped Care:** provide more intensive clinical services based on need.
- **Follow-Up:** ensure regular follow-up.

To improve outcomes in chronic illness:



- **Patients must be prescribed and taking proven therapies**
- **Patients must be managing their illness well**
- **Patient course must be followed for changes in status and reinforcement**

What do we know about primary care?



- **Clinics and providers have too many issues to deal with in the average 18 minute visit**
- **Patients are frustrated by waits and discontinuities, often don't receive proven services and often feel they are not heard.**
- **Acute problems crowd out time for routine management of chronic illness**

What do we know about primary care?



50-70% are largely informational or informative (including check-backs for chronic illness care) yet they are organized like acute visits



*"Forget the wheel... why don't you
invent some SHOES?"*

What do we know about primary care?



- **Non-physician staff are generally more likely to adhere to protocols**
- **The physician part of the visit is shorter when non-physician staff are used to their capacity.**

Old Interaction vs. New Interaction



Between provider and patient	Between patient and care team
Face-to-face	Multiple methods
Problem-initiated and focused	Based on care plan: “planned visit”
Topics are clinician’s concerns and treatment	Collaborative problem list, goals and plan
Ends with a prescription	Ends with a shared plan of care

Roybal Comprehensive Health Center

Attacking the tyranny of the urgent

The Problem

- Appointments with our Primary Care providers were booked for the next 3 months.
- Patients would frequently miss these appointments
- At these visits, the patients were often more focused on their aches and pains than their chronic disease
- When treatment plan adjustments were made, it would take another 3 months to find out if they were successful



Roybal Comprehensive Health Center

Attacking the tyranny of the urgent



Brainstorming the important questions

- How can we deliver quality care as outlined in nationally accepted guidelines while still addressing the day to day concerns of our patients?
- How can we change our system so that we don't simply increase the burden on our Primary Care Providers?
- Once our system is changed, will we still have time for lunch?



Roybal Comprehensive Health Center

Attacking the tyranny of the urgent



Solution: Multidisciplinary Team Work

- Expanded Team Member Roles
- Model of Planned Visits adopted
- Group Visits held monthly
- Nurses and pharmacists run protocol clinics which provide stepped care to our patients
- “Open Access” system in which patients call for next day appointments



Healthcare Teams



EXPANDING INDIVIDUAL ROLES TO ACHIEVE TEAM GOALS

Healthcare Teams



© Cartoonbank.com



"Let's do the good cholesterol, bad cholesterol bit."

Healthcare Teams



- **Team development**
 - Members from different disciplines and with different strengths
 - Regular meeting times
- **Review process for care**
 - Use Registry or chart reviews to gather data
 - Review current clinic design
- **Dividing tasks by skills or motivation.**
- **Cross train staff**
- **Use protocols and standing orders**

Working as a Team- old model



Members

- Nursing Attendant →
- Physician/Nurse Practitioner →
- Licensed Nurse →

Tasks

- Checks Vital Signs
- Review lab results/vital signs and adjusts the patients medications
- Gives patient their discharge instructions

Working as a Team-New Model



Members

- Nursing Attendant
- Physician/Nurse Practitioner
- Licensed Nurse

Tasks

- Adds data to and gets data from the registry
- Review lab results/vital signs and adjusts the patients medications
- Works with patient to set Self Management Goals
- Runs a Group Visit
- Fills out disease scorecard
- Prepares the patient for a Planned Visit
- Closes the loop

Working as a Team-New Model



Members

- Nursing Attendant
- Physician/Nurse Practitioner
- Pharmacist
- Licensed Nurse
- Health Educator

Tasks

- Adds data to and gets data from the registry
- Review lab results/vital signs and adjusts the patients medications
- Works with patient to set Self Management Goals
- Runs a Group Visit
- Fills out disease scorecard
- Prepares the patient for a Planned Visit
- Closes the loop

Working as a Team-New Model

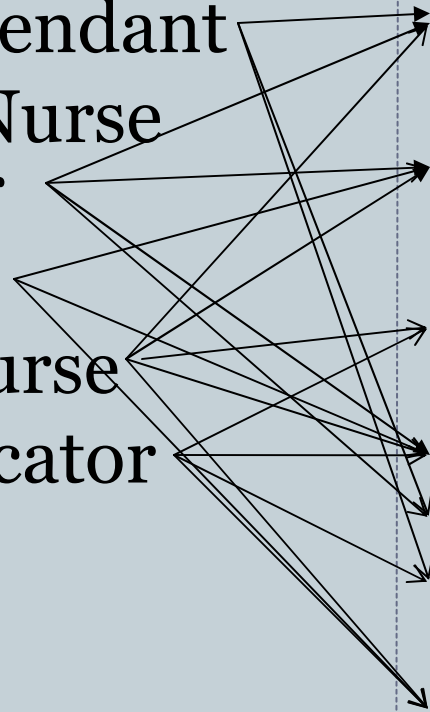


Members

- Nursing Attendant
- Physician/Nurse Practitioner
- Pharmacist
- Licensed Nurse
- Health Educator

Tasks

- Adds data to and gets data from the registry
- Review lab results/vital signs and adjusts the patients medications
- Works with patient to set Self Management Goals
- Runs a Group Visit
- Fills out disease scorecard
- Prepares the patient for a Planned Visit
- Closes the loop



Expanding Roles



Nursing Attendant/Medical Assistant

- Enter data into and extract data from the registry
- Prepare the patient's chart for a Planned Visit
- Prepare the patient for a Planned Visit
- Aid patient to set Self-Management Goals

Expanding Roles



Licensed Nurse

- Enter data into and extract data from the registry
- Review patients' blood pressures/lab results and start/adjust medications according to protocol
- Aid patient to set Self Management goals
- Close the loop
- Prepare the patient for a Planned Visit

Expanding Roles



Pharmacist

- Enter data into and extract data from the registry
- Review patients' blood pressures/lab results and start/adjust medications according to protocol
- Aid patient to set Self Management goals
- Close the loop

Expanding Roles



Health Educator

- Enter data into and extract data from the registry
- Aid patient to set Self Management goals
- Close the loop

Expanding Roles



Everyone on your team can provide patient care:

- Face to face
- Via telephone follow up calls
- In a group visit



Planned Visits

What is a planned visit?



- An encounter with the patient initiated by the practice to focus on aspects of care that typically are not delivered during an acute care visit.

Goals of the Planned Visit



- To deliver evidence-based clinical care
- To offer the patient self-management support
- To provide care without the demands of the acute care visit at regularly scheduled intervals

What does a Planned Visit look like?



- **The healthcare team proactively calls in patients**
- **Visits occur at regular intervals**
- **Team members have clear roles and tasks.**
- **Clinical management and patient self-management support are the key aspects of care.**

Patient Outreach



- **Preparing patients for a planned visit**
 - Inform them of the nature of the visit planned
 - Begin to focus patients on their chronic disease
- **Ideally, patients can pick the day and time of their appointments**

The Planned Visit Process



- **Pre-Visit**

- Assigned team members

- ✦ review patient summaries from registry and/or chart
- ✦ Make sure any diagnostic study results are available
- ✦ Make note of any tests/referrals/treatments that may need to be ordered at the visit

The Planned Visit Process



- **The Visit**

- A Team Member reviews/adjusts patient's medication regimen
- Update immunizations and order needed labs
- Foot exam/referrals as indicated
- Activate the patient by having them set a Self Management goal
- Refer for annual dilated retinal examination
- Identify patients who would benefit from stepped care
- Create an action plan and close the loop
- Schedule follow-up

The Planned Visit Process



- **Post-Visit**

- Check adherence to action plan
- Problem solve as needed
- Schedule additional follow-up as needed



Group Visits

Group Visits



- Patients brought in by clinically relevant groups
- Patients can receive:
 - One-on-one with medical provider
 - Patient education
 - Self-management support
 - Peer support
- Multiple Models for Group Visits

Group Visits



- Allows time for more in-depth discussions of topics
- Can include larger numbers of patients than a typical session because redundancy is eliminated

Group Visits



- **Multidisciplinary Approach:** Can involve speakers such as podiatrists, nutritionists, pharmacists, yoga instructors, etc.
- **Can be shaped for many purposes:**
 - From simply establishing self management goals to a complete planned visit

Group Visits



- **Pitfalls**

- Patient selection critical- patients with very complicated co-morbidities are not good candidates for a group visit
- More planning needed than a typical session
- Prepare for an occasional urgent issue to arise

Stepped Care



**KNOWING WHO NEEDS MORE SUPPORT AND FINDING A WAY TO
DELIVER IT.**

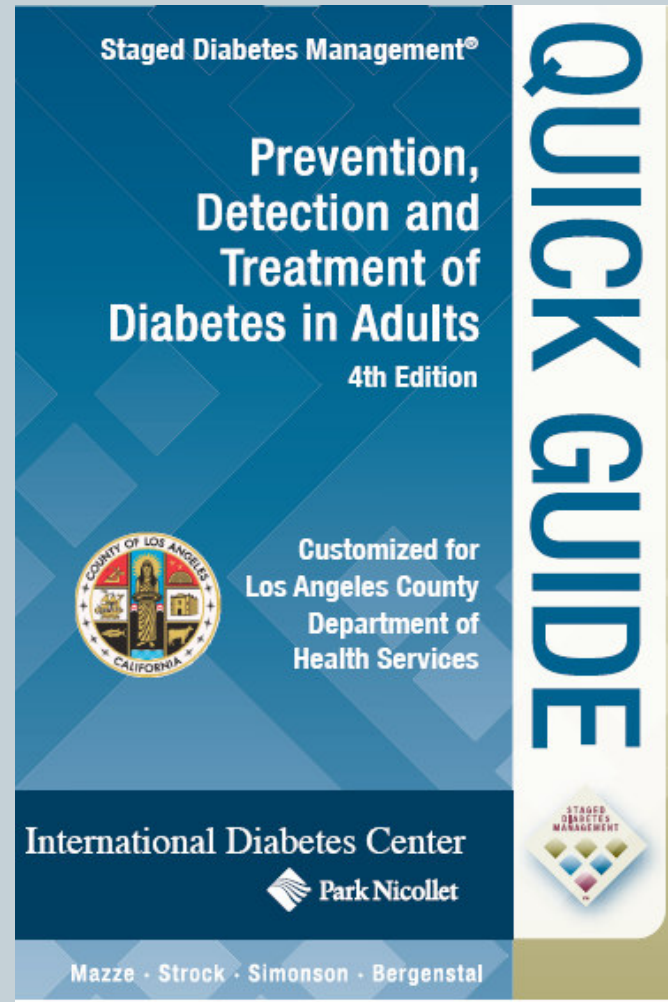
Stepped Care



Protocol Driven Clinics

- Nurses or pharmacists use well developed protocols to improve care for patients. Following standing orders, proven therapies are systematically implemented
- Patients followed closely via face to face visits, phone follow up, and even group visits
- Helps the patient focus on their chronic illness

Diabetes Management Protocol



At Presentation:

Mild or no symptoms; no acute illness; any A1C

Therapy:

Start Metformin + MNT

Metformin
FBG in 2 weeks; increase dose every 2 weeks until FBG 90–130 mg/dL; if FBG >130 mg/dL or on max tolerated dose, move to **Combination Therapy Stage**

Combination Therapy Stage + MNT

Metformin + Sulfonylurea
Check FBG every 2 weeks; titrate to FBG 90–130; if FBG >130 mg/dL or on maximum tolerated dose of Metformin + Sulfonylurea, choose one of the following:

Add TZD;
titrate dose

Add Basal Insulin
(BIDO) ^(Preferred)

If A1C >8%
after 3–6
months STOP
TZD and either

If A1C remains
>8% add
pre-meal insulin

Add Basal Insulin
(BIDO) ^(Preferred)

Add
exenatide*

Stop and add insulin if
A1C remains >8%

Note: Women who are pregnant or are of child-bearing age and not using birth control should not be treated following this Master DecisionPath; refer to PCP

*Exenatide not on formulary at time of printing and restricted to A1C 8–9.5% and BMI ≥29.

Comments

1. Consider self-monitored blood glucose (SMBG) for medication additions and modifications for all patients regardless of therapy (See Section 1-6 for details)
2. Routine SMBG use for patients not using insulin should be based on individual need.
3. Reaching targets is the goal; FBG 90–130 mg/dL and A1C <7%
4. Refer patients for diabetes and nutrition education at time of diagnosis and annually thereafter.
5. Pioglitazone is a 3rd line agent restricted to type 2 DM patients with A1C < 10.5% who have failed or are intolerant to maximal dose metformin and sulfonylurea AND are not on sitagliptin (Januvia) or exenatide (Byetta).
6. Consider sitagliptin (Januvia) with renal insufficiency (eGFR <50); sitagliptin not on formulary at time of printing

Patient treated with
Metformin and not
at target

Assess adherence to regimen and screen for GI side effects (anorexia, nausea bloating, diarrhea, constipation); if severe side effects, consider decreasing dose and follow-up in 1 week

Patient on maximum
dose of metformin for
2–4 weeks?

YES

Move to **Combination
Therapy Selection**

Metformin Dose Adjustments (in mg)

	START PM	NEXT AM/PM	NEXT AM/PM	MAX AM/PM
Metformin	500 with supper	500/500	500/1000	1000/1000

Increase every other week

Note - maximum clinically effective dose is 2000 mg/day

Follow-up

Phone: 1 week if confounding factors (illness, infection, adherence issues, stress, steroid use, problems with meter)

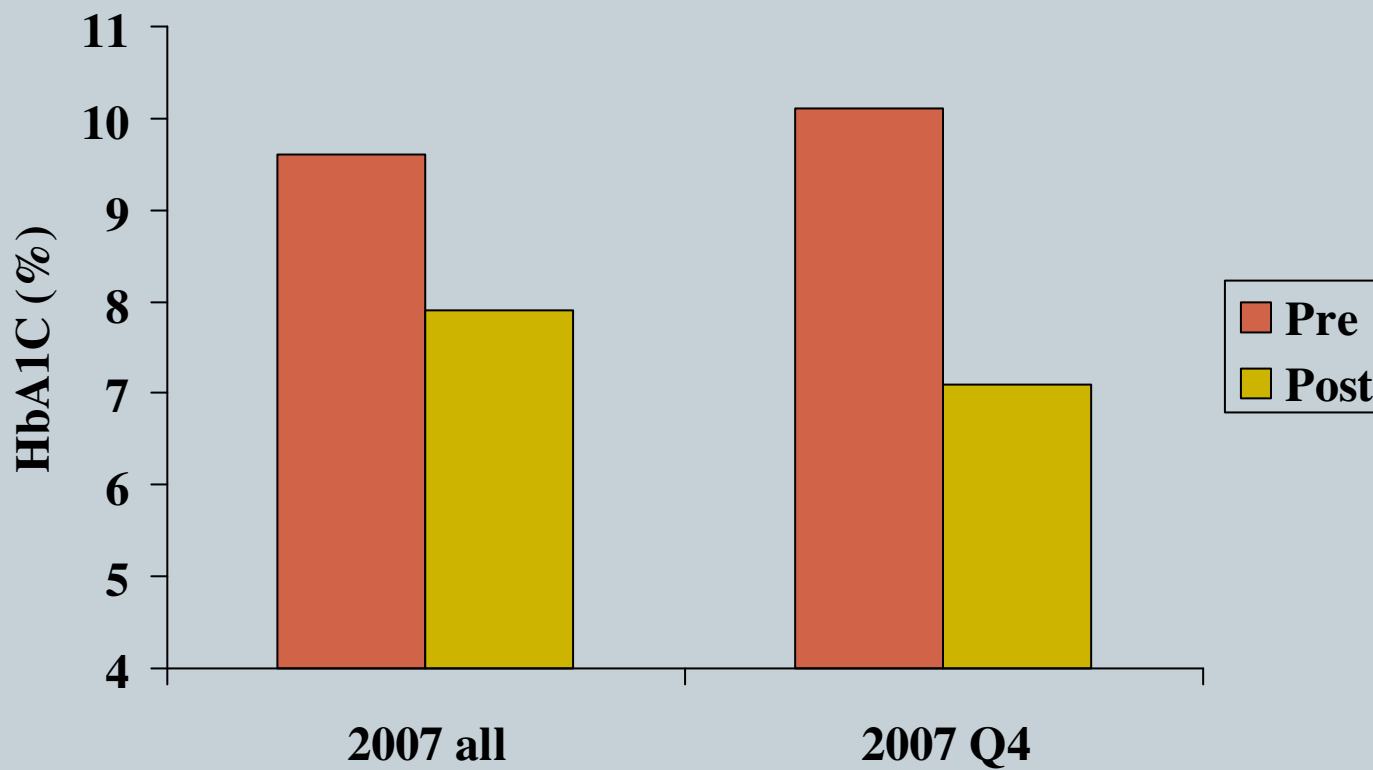
Increase dose every 2 weeks based on FBG; use phone or clinic visits to obtain FBG data. If FBG target of 90–130 mg/dL not achieved add sulfonylurea.

If persistent gastrointestinal discomfort, consider decreasing metformin dose by 50%; stop if GI side effects are intolerable; start sulfonylurea

Targets

- A1C <7.0%
- Pre-meal BG 90–130 mg/dL

Diabetes Management Nurses

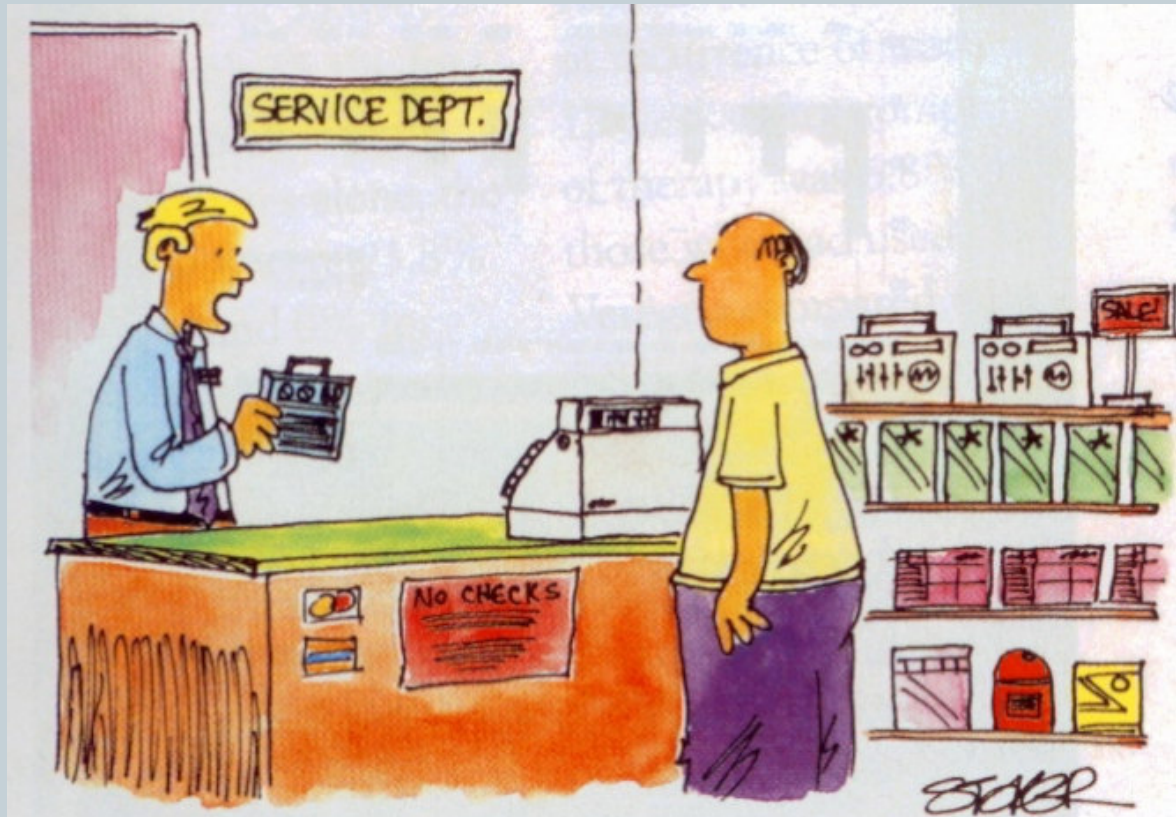


Features of effective stepped care



- Regularly assesses the patient's clinical status
- Allows timely adjustment of medications or communicates need to provider immediately
- Provides close monitoring and self-management support

The End



"Well, yes, Mr. Anderson—it does have a lifetime warranty, it's just that we didn't think you'd live this long!"