



Diabetes Management Dashboard

Patient List



Last Update: 12/2/2019 7:06:57 AM
 User: Albahar, Anuit

of Diabetic Patients **9,833**
 % of Patients HbA1c >= 9 **27.0%**
 % of Patients HbA1c < 9 **70.7%**
 % of Patients HbA1c < 8 **57.9%**
 % of Patients HbA1c < 7 **37.5%**

Patients Last Seen 7/1/2018 to 12/31/2019

Center All

Primary Care Provider All

PCP Specialty All

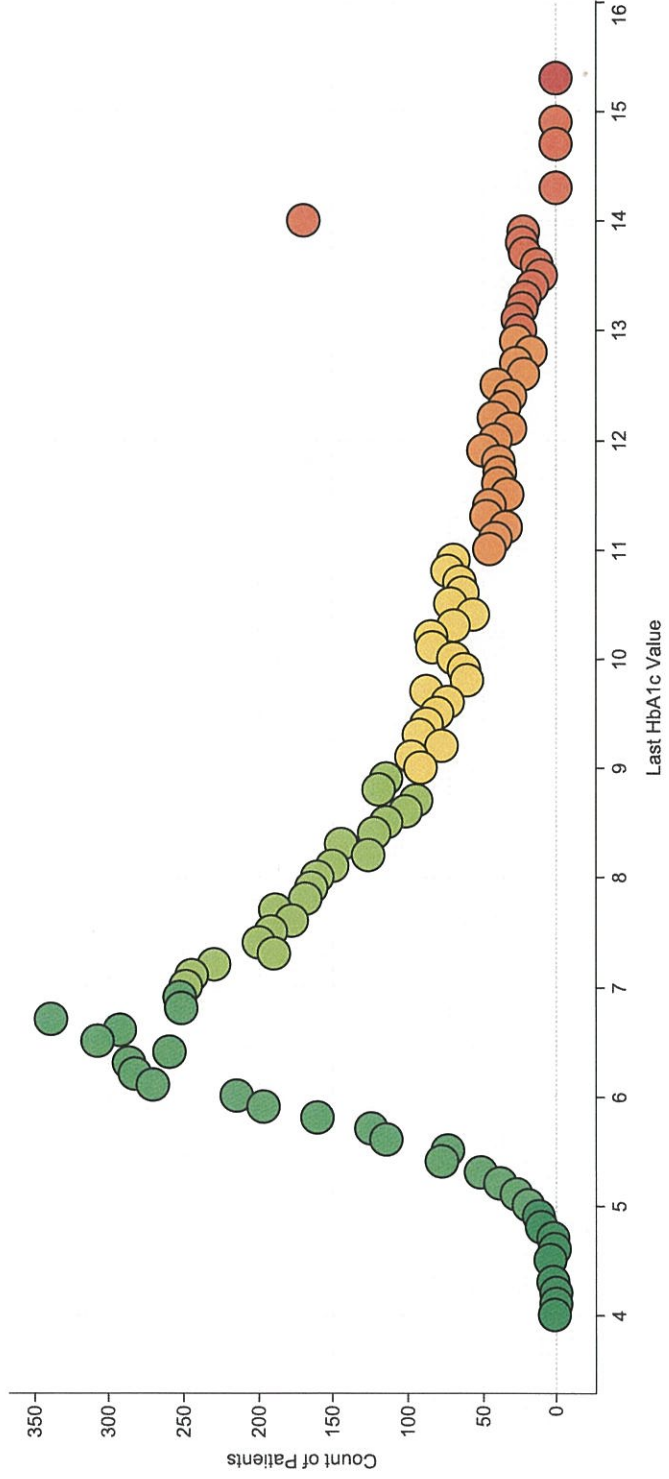
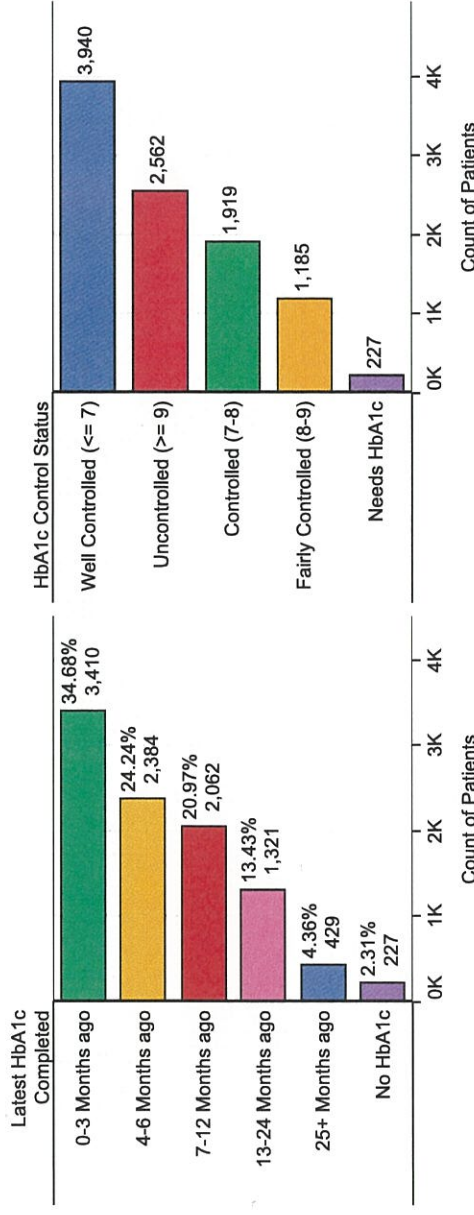
Rendering Provider All

Rendering Specialty All

Enc. Payer All

Payer Member All

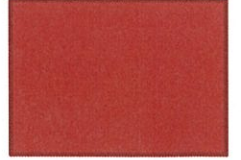
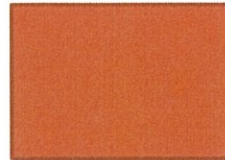
Last HbA1c Value 9.00 19.00



PDSA Bootcamp Packet


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PDSA

QI Training Module
 Alyssa Arimondi-Avareze, MPH, CPHQ
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 Community Medical Centers, Inc.



Change and Improvement

- ▶ To remain competitive in the medical field, it's important to consistently look for ways to improve
- ▶ Don't only make change in reaction to something that has happened
- ▶ We must always be looking for different and better ways to accomplish our goals, whether they are clinical goals; operational goals; or financial goals




Change and Improvement

- ▶ What is change?
- ▶ What is a change that will result in improvement?
- ▶ What is improvement?

Because the concepts of change and improvement are tied together so strongly, it is more useful to define them together. Fundamental changes that result in improvement:

- ▶ Alter how work or activity is done or the makeup of a product
- ▶ Produce visible, positive differences in results
- ▶ Have a lasting impact



CMC has adopted the Plan, Do, Study, Act (PDSA) model for performance improvement activities.



PDSA helps answer the following questions:

- ▶ What are we trying to accomplish?
- ▶ How will we know that a change is an improvement?
- ▶ What changes can we make that will result in improvement?



Case Study: Dental Sealant Rates

- ▶ XYZ Center (part of an FQHC)
- ▶ Experiencing low dental sealant rates for children (UDS measure) ***The data told them this***
- ▶ The site's Center Leadership Team decided to look into possible causes and to identify, test, and implement changes

Using the "5 Whys" to Define the Problem

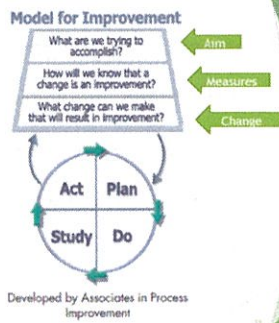
- 4. WHY is education inadequate during Well Child Checks?
 - ▶ Pediatric teams do not have adequate materials and training to educate parents/patients
- 5. WHY are there inadequate materials and lack of training for staff to educate parents/patients regarding sealants during Well Child Checks?
 - ▶ No team processes/workflows have been established to ensure information is shared about sealants

Asking WHY 5 times helped determine the root cause of the problem, which was lack of parent and patient education. They then created a problem statement.

Dental Sealant Problem Statement

- ▶ UDS outcomes for dental sealant rates in children ages 6-9 have performed below target at XYZ Center because:
 - ▶ Parents do not understand the importance of their children receiving dental sealants and do not know how to access a dentist
 - ▶ Educational materials to inform parents regarding the importance of sealants are not currently available or used

Tackling the problem: Using Evidence-Based Improvement Methodology



Smart Objectives

S	Specific • State exactly what you want to achieve. • Can you break a larger task down into smaller items?
M	Measurable • Establish clear definitions to help you measure if you're reaching your goal.
A	Ambitious • Be ambitious! Make sure your goal stretches you and your team.
R	Relevant • Objectives need to be in line with your organization's mission and goals.
T	Time-bound • Your objective should include a time limit; example: I will complete this step/process by day/month/year.

Case Study Dental Sealant Aim Statement

We will improve our dental sealant rate for children

► *Is this a SMART Aim statement?*

Case Study Dental Sealant SMART Aim Statement

XYZ Center will improve the UDS dental sealant rate for at-risk children ages 6-9 from 13.8% to 23.8% by December 31, 2019.

Once the Aim Statement has been created, then the rest of the PDSA process begins, starting with Plan

To make it easier, a PDSA Tracker Worksheet has been created to list all of the steps of the PDSA.

CMC Airplane Design Activity



Airplane
Design
Team Role
Assignment



TEAM WORK



Baseline data—
How important
is it really?

Design and
make a team
paper air plane.

D=DO

The improvement to the process

DO the improvement process

- Implement change strategies
- Start with small changes and develop a plan to scale up
- Collect the data

▶ PD



Modify current paper airplane or make a new one.

Let's go fly a plane!

...again!



But how do we know that a process needs/should be improved?

The data will tell you:

- Patient satisfaction
- Staff satisfaction
- Audit results
- Survey findings
- Clinical outcomes
- UDS

For questions contact the Quality Improvement department.



Resources

- ▶ Center for Care Innovations (CCI) Population Health Learning Collaborative
- ▶ Associates in Process Improvement www.aipweb.org
- ▶ The Improvement Guide 2nd Edition, A Practical Approach to Enhancing Organizational Performance, by Gerald J. Langley, et al.
- ▶ Q Solutions, Essential Resources for the Healthcare Quality Professional Second Edition, by Luc R. Pelletier and Christy L. Beaudin



Aim Statement Worksheet

Directions: Read the aim statement for each example and determine what is missing or wrong with the aim statement. Reminder: Aim statements should include a baseline data, goal measurement and end date.

1. By February 2011, 25% of licensed child care providers in Blue Earth County will be trained in the “I am Moving, I am Learning” curriculum.
-
-

2. By June 30, 2016, we will create sustainable strategies to improve asthma prevention across our community. Within our target of 10 public elementary schools in the local county, 30 percent will have staff trained in asthma prevention, 40 percent will have at least one professional who is trained to provide education to students with asthma and their families, and 40 percent will have programs to outreach to parents to increase awareness of the impact of second-hand smoke.
-
-

3. Improve medication reconciliation at transition points by 75 percent within 1 year.
-
-

4. Reduce complications of ICU stay by 40 percent:
 - Development of deep vein thrombosis
 - Gastrointestinal bleeding from stress ulcers
 - Line infections
-
-

SMART Objectives

Also in this Tool: [Meaningful Objectives](#)



What are SMART Objectives? What Does SMART Stand For?

Objectives concretely measure a program's successes or shortcomings, and to show how a program is translating an organization's mission, vision, and values into action. However, organizations often struggle in creating objectives that accurately measure progress toward a goal, or that are meaningful to other team members or to external partners.

Many programs are run on grant funding tied to achieving objectives, and it is important that a program can prove its success to continue funding. It is also important to know whether a program has failed, and by how much, in order to change the program to be more effective in the future.

To ensure you're effectively measuring a program's impact, draft objectives that are: **Specific, Measurable, Attainable, Relevant, and Timely.**



How to Write SMART Objectives

Learn more about the components of SMART objectives below by asking the questions provided.

Specific

Objectives should be well-defined, and clear to other team members and to partners with the same level of knowledge as you. Using action-oriented verbs, such as "increase" or "decrease," will make your objectives easier to measure in the end.

- **Resource:** Who is involved with executing this program?
- **Target Population:** Who is your target population?
- **Action:** What exactly will you do for them?
- What are the benefits of this goal?
- Where will this program be executed?

Measurable

Objectives should have a benchmark and a target, to help determine whether the objective is achieved, if it has been exceeded (and by how much), or if it hasn't been met (and by how much).

- **Change:** How much change is expected? In what direction?
- What data will prove this change has occurred? Where will this data come from?
- Is there a proxy measure to use If this objective cannot be directly measured, or is there another measure that would be more appropriate to use instead?

Meaningful Objectives

Also in this Tool: **SMART Objectives**



What Makes Objectives Meaningful?

Objectives provide measurable benchmarks or milestones against which your organization can measure successes or shortcomings on the way to achieving overall goals. Objectives should make your goals clear and concrete to program staff inside your organization, as well as to external stakeholders. Objectives also help keep your overall goals realistic, by breaking goals down into manageable, measurable bites.

Many organizations find it useful (and many granting organizations require) to break down objectives into three categories:

- Process Objectives**
- Impact Objectives**
- Outcome Objectives**

How to Write Meaningful Objectives

Process Objectives

Process objectives document and measure the integral steps your organization will take to achieve its goal: **what** your program will do, and **how** your program will do it.

These objectives may include activities, meetings, workshops, participants, interactions, and deadlines. With enough detail, a series of process objectives can also serve as a work plan. Process outcomes help your organization track whether it's on target to carry out activities on time, on budget, and within its planned scope.

Examples of Process Objectives

- Distribute 100 handwashing brochures per day at Minnesota State Fair
- Conduct one community meeting per quarter with North Metro Alliance
- Successfully fulfill 25 technical assistance requests per month

Impact Objectives

Impact objectives demonstrate how your program or organization has changed participants' attitudes, knowledge, or behavior in the short term. Along with outcome objectives, they show how your program benefits participants.

Impact objectives may seem harder to write, because they are not inherently quantifiable. Despite this, they are still important in speaking to your organization's vision and mission.

Examples of Impact Objectives

- Participants will leave the Introduction to Vaccination program with changed attitudes regarding vaccination
- Participants will leave the Positive Body Image program with higher levels of self-esteem regarding their own bodies and how they fit into a world of diverse body types

PDSA: Plan-Do-Study-Act

Also called: **Rapid Cycle Improvement, PDCA** (Plan-Do-Check-Act)



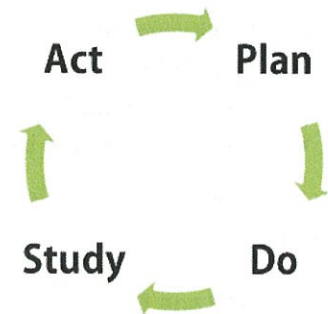
What is PDSA?

PDSA, or Plan-Do-Study-Act, is an iterative, four-stage problem-solving model used for improving a process or carrying out change.

When using the PDSA cycle, it's important to include internal and external customers; they can provide feedback about what works and what doesn't. The customer defines quality, so it would make sense to also involve them in the process when appropriate or feasible, to increase acceptance of the end result. (If you're unsure about, who your customers are, you may want to create a customer chain to assist in identification.)

In applying PDSA, ask yourself three questions:

1. What are we trying to accomplish?
2. How will we know that a change is an improvement?
3. What changes can we make that will result in an improvement?



Stage 1: Plan

A. Recruit Team

Assemble a team that has knowledge of the problem or opportunity for improvement. Consider the strengths each team member brings—look for engaged, forward-thinking staff.

After recruiting team members, identify roles and responsibilities, set timelines, and establish a meeting schedule.

B. Draft an Aim Statement

Describe what you want to accomplish in an Aim Statement ([QI Toolbox: Aim Statement](#)). Try to answer those three fundamental questions:

1. What are we trying to accomplish?
2. How will we know that a change is an improvement?
3. What change can we make that will result in improvement?



E. Identify Causes and Alternatives

Analyze Causes

For the problem in your problem statement, work to identify causes of the problem using tools such as control charts, fishbones, and work flow process maps (QI Toolbox: [Control Chart](#), [Fishbone Diagram](#)). The end of the cause analysis should summarize the cause analysis by describing and justifying the root causes.

Examine your swim lane map, and ask:

- Is this process efficient? What is the cost (including money, time, or other resources)?
- Are we doing the right steps in the right way?
- Does someone else do this same process in a different way?

Develop Alternatives

Try to mitigate your root causes by completing the statement, "If we do _____, then _____ will happen." Choose an alternative (or a few alternatives) that you believe will best help you reach your objective and maximize your resources.

Develop an action plan ([QI Toolbox: Action Plan](#)), including necessary staff/resources and a timeline. Try to account for risks you might face as you implement your action plan.

Stage 2: Do

Start to implement your action plan.

Be sure to collect data as you go, to help you evaluate your plan in **Stage 3: Study**. Your team might find it helpful to use a check sheet, flowchart, swim lane map, or run chart to capture data/occurrences as they happen or over time (QI Toolbox: [Check Sheet](#), [Flowchart](#), [Swim Lane Map](#), [Run Chart](#)).

Your team should also document problems, unexpected effects, and general observations.

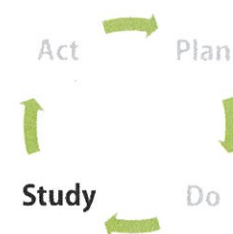


Stage 3: Study

Using the Aim Statement drafted in **Step 1: Plan**, and data gathered during **Stage 2: Do**, determine:

- Did your plan result in an improvement? By how much/little?
- Was the action worth the investment?
- Do you see trends?
- Were there unintended side effects?

You can use a number of different tools to visually review and evaluate an improvement, like a Pareto Chart ([QI Toolbox: Pareto Chart](#)), Control Chart ([QI Toolbox: Control Chart](#)), or Run Chart ([QI Toolbox: Run Chart](#)).





PDSA Bootcamp Project

Paper Airplane

Session Description:

The Airplane Exercise. A small group activity to demonstrate use of the PDSA cycle for making structured, measurable rapid cycle changes.

Learning Objectives:

1. Demonstrate the basic concept of rapid cycle change using the Plan-Do-Study-Act approach to process improvement.
2. Practice skills for using the PDSA approach to change.
3. Learn how to use the PDSA approach with a team in order to achieve a specific aim.



Team Assignment:

As a team, assign team members to specific roles: team leader, data coordinator, design team and test pilots 1, 2.

Team Task:

1. **PLAN:** Design a paper airplane using the materials provided. Set an aim and measure for your team-what do you want to accomplish?
2. **DO:** Each two pilots should take a turn to fly the plane. No modifications can be made to the plane between flights.
3. **STUDY:** After each test flight, the data coordinator should measure the distance the plane traveled down the runway and record this on the PDSA form.
4. **ACT:** Based on the measurements, review the design of your plan and look for improvements (what can we do that will result in an improvement). Make just ONE change to the design of the plane, and repeat steps 1-4 until you have collected data for 4 cycles (original design cycle (baseline data) + 3 change cycles). Be sure to specify the impact you want the change to have for each cycle (e.g. to increase distance flown by 15%).



Use the PDSA form to record all steps of the PDSA for each change cycle.

Change Cycle Rules:

1. Only one design change per PDSA cycle.
2. All planes must have wings and be able to glide.
3. Each design/change modification must be flown by two different test pilots.

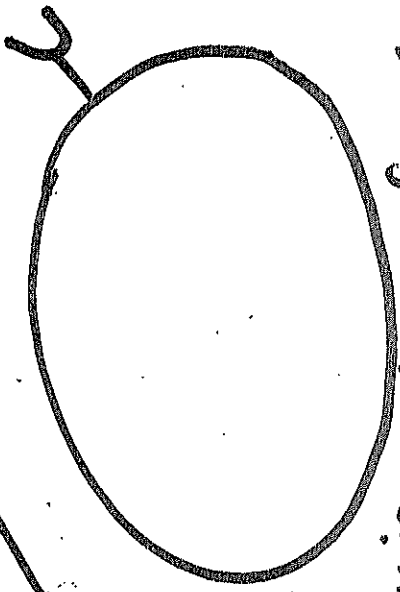
People need to know why
diabetes matters

Why they should take
prescribed medications

Is it worth giving up
the food they love or
their leisure time to
exercise.

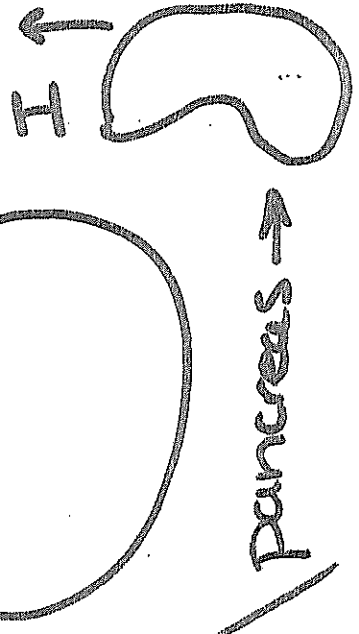
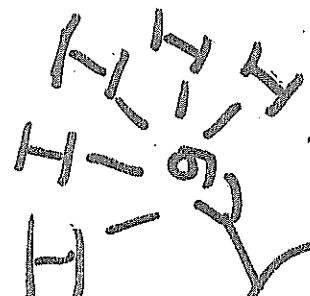
→ MOTIVATION BY EDUCATION

9999999999999999



Body is made up of cells
 Every cell has a job, that requires
 energy.
 glucose from food = primary energy
Need to get glucose inside cell

in Type 2 Diabetes 3
 the insulin requirement
 increases



Pancreas →

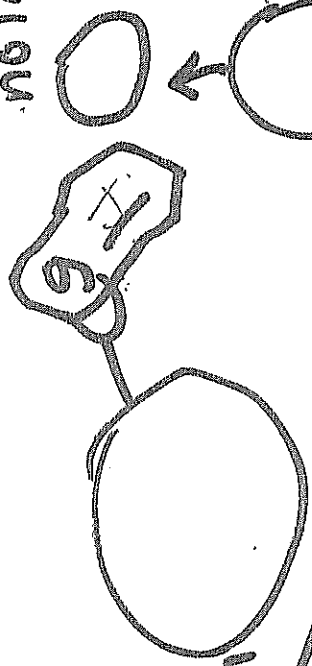
9999999999999999
 glucose
 enters
 cell

9999999999999999



insulin escorts glucose inside
 cells.
 Pancreas makes insulin.

in Type 1 Diabetes

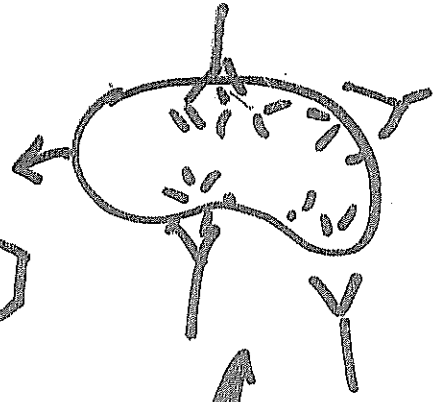


no insulin

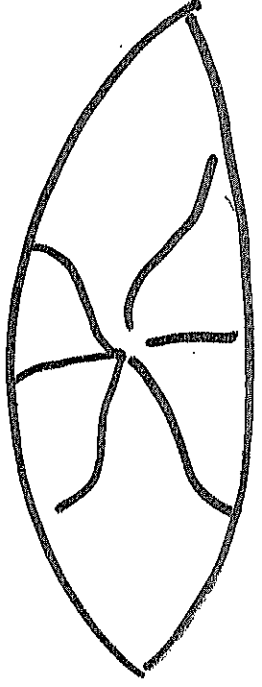
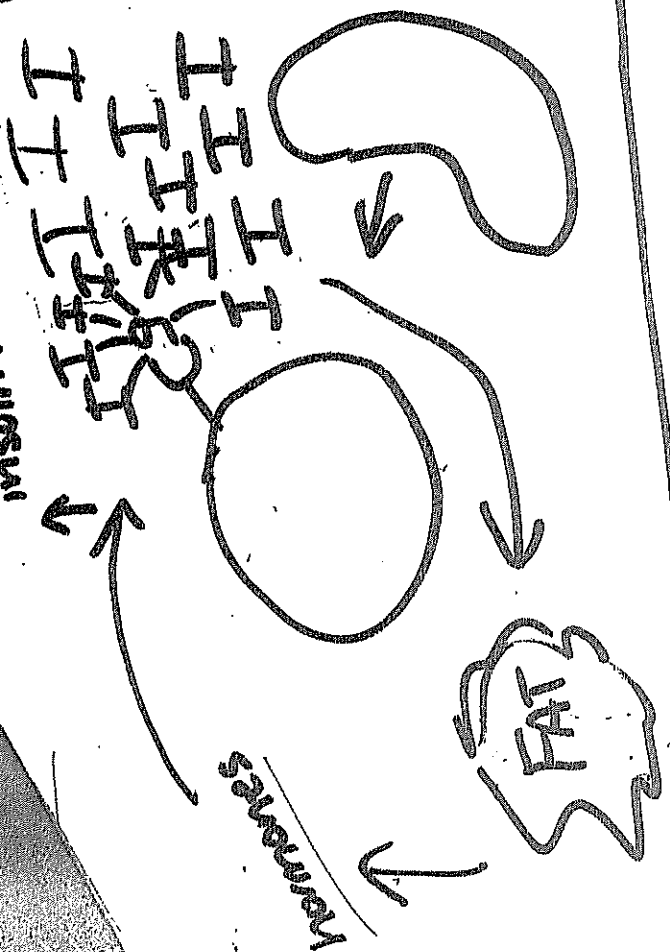
is made.

9999999999999999
 glucose
 enters
 cell

no insulin

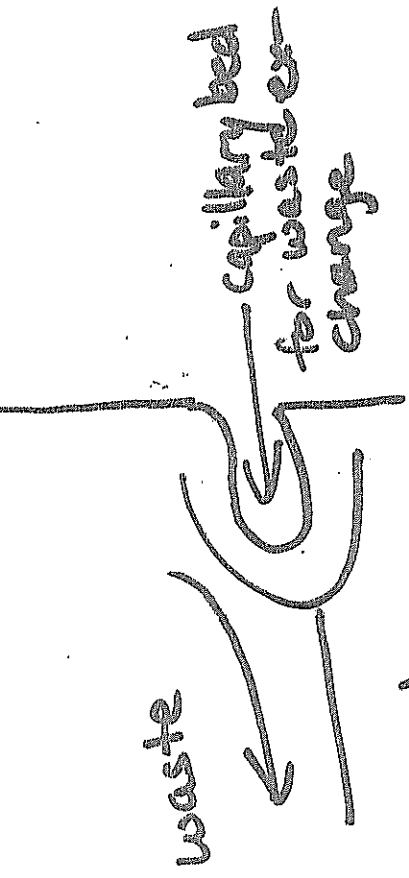


insulin

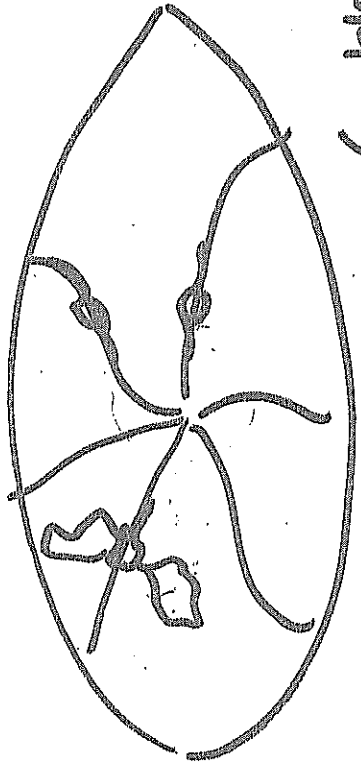


↑ glucose exerts pressure in blood vessel

8



delicate Filters in Kidney can become damaged.



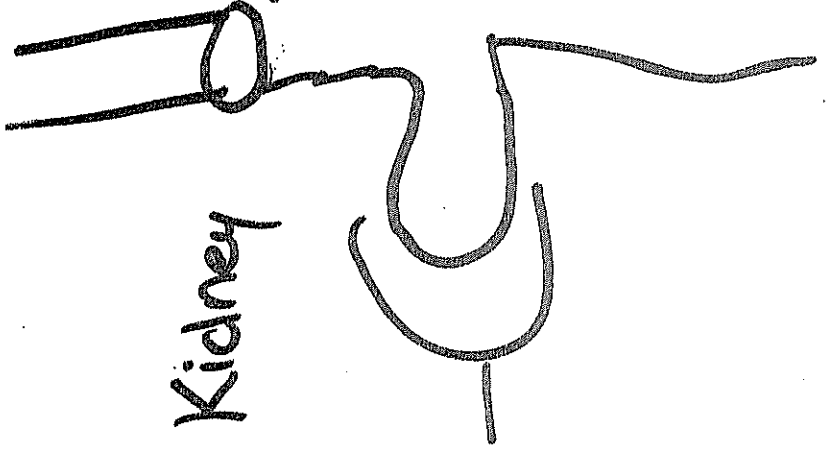
increased glucose pressure or blood pressure can cause thin walled vessels to form microaneurysms or bleed.

∴ Annual Dilated Eye Exams.

①

TP

ACE / ARB
dilates vessel
before kidney
thereby reducing
pressure.

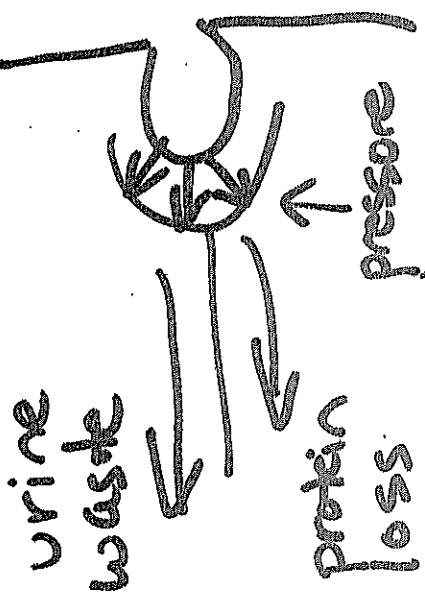


∴ treat with

ACE/ARB

ie Lisinopril losartan etc.

Kidney



first ident - damage
ified as microalbumin.

∴ Check

urine microalbumin:

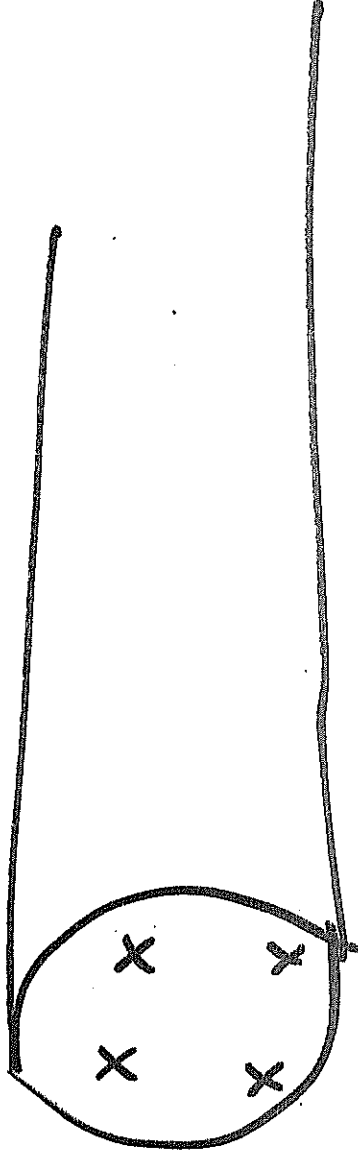
creatinine ratio

to assess injury

early

Blood vessels are pipes.

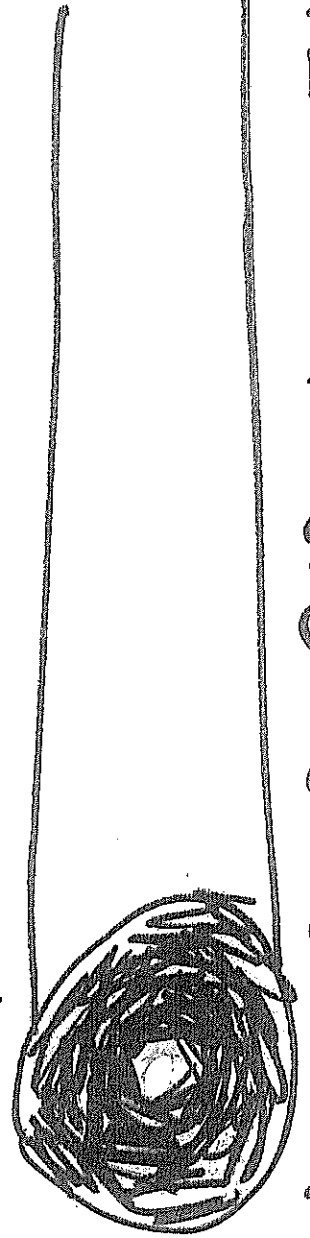
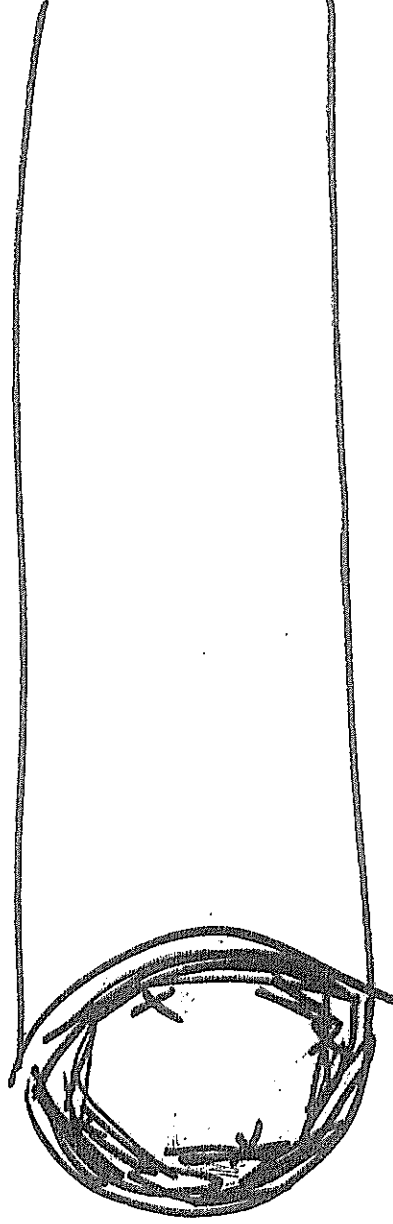
||



∴
Keep Glucose
Down

TAKE STATINS

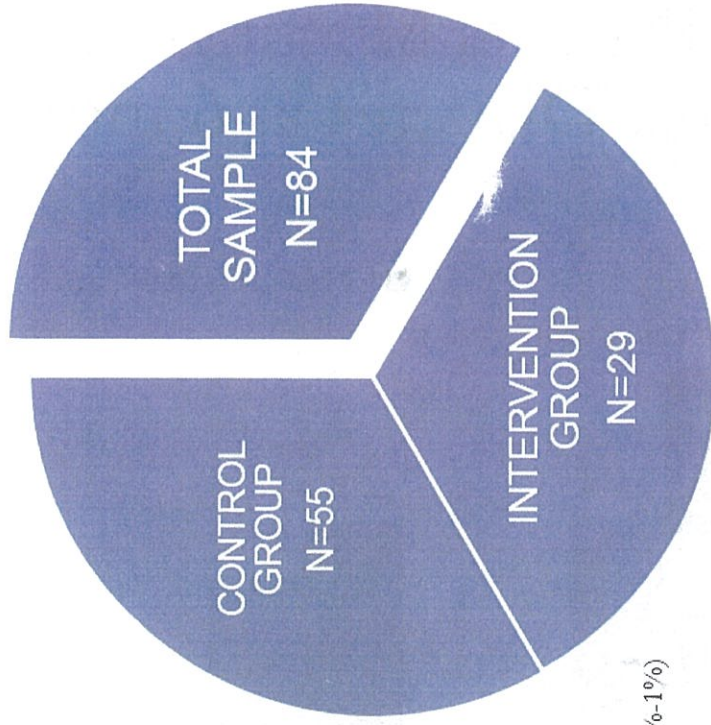
TAKE ASA



Risks: AMI CVA PVD LOSS OF LIMBS

Group Medical Visits

Sample for CMC Health Center



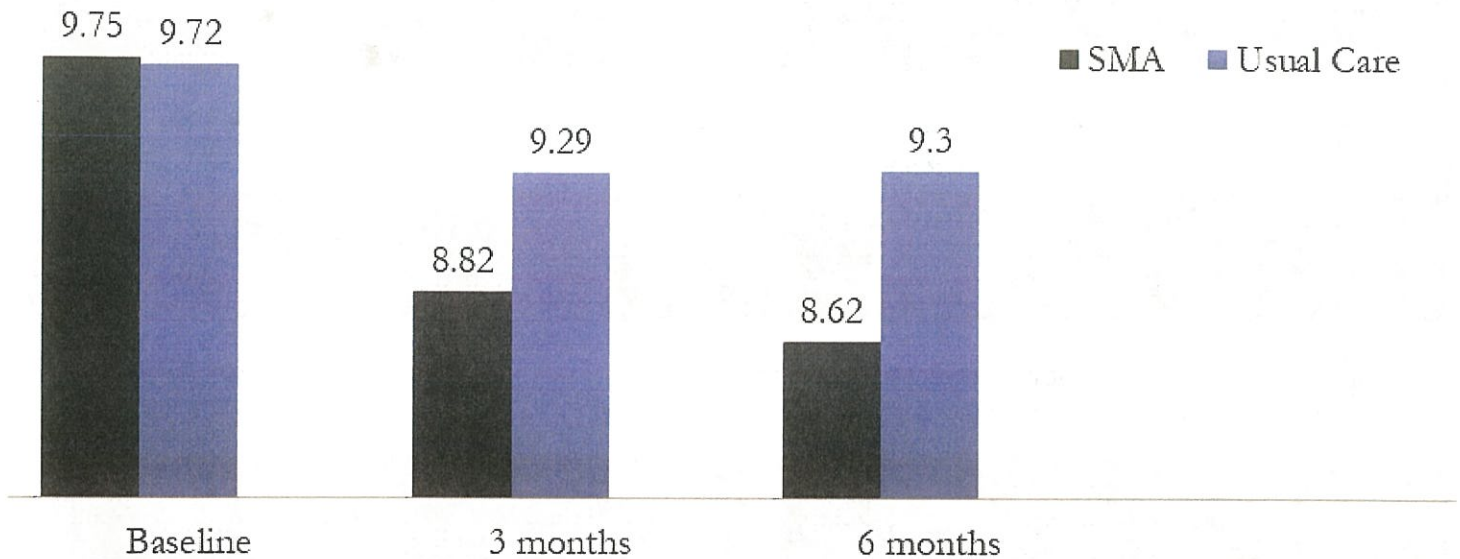
Matched
Baseline A1C (0.5%-1%)
Age (5-10 yrs)

- All adults, 18 years and older, Spanish-speaking Latinos living with type-2 diabetes, CMC patients
 - Patients were recruited via flyers, Diabetes registry and referrals from their PCP.
 - Inclusion criteria: sma: had a1c >9% (75mmol/mol) and/or lacked access to diabetes education and support outside of primary care visits, and attended a minimum of three sma sessions.
 - Exclusion- disability or non-Spanish speakers
- Intervention group had a total of 29 participants. The control group was a non-random, matched group of patients receiving upc at the fhc clinic. at baseline, intervention and control group participants were matched by age (within 5 years) and a1c levels (within 0.5-1%).
- Additionally, each cohort was matched with their control in time so that baseline and follow-up data mirrored each other time chronologically (a1c collected at during same quarter)

Baseline Data CMC

Characteristic	SMA Mean (SD)	Usual Care Mean (SD)	P value
Age	55 (12)	55 (12)	
Baseline A1C	9.87 (1.67)	9.81 (1.9)	

Mean A1C at Baseline, 3 and 6 Months CMC



Linear Regression- at 3 months (Beta – .67, R squared .03, $p < .21$)
 Linear Regression- at 6 months (Beta – 1.06, R squared .06, $p < 0.05$)

-Compared to the control group, results of the linear regression analysis revealed that there was a net reduction a1c difference of -.67 % from baseline to 3 months

and -1.06 % from baseline to 6 months in favor of SMA. In other words patients in the SMA group had an additional drop of .67% and 1.06% percent in their A1C at 3 and 6 months respectively. The 6 month change is statistically significant.

-Context for why these results are of clinical significance, according to the United Kingdom prospective diabetes study, a 1% decrease in a1c values, translated to a

- ⇒ 14% decreased risk in macro-vascular diseases,
- ⇒ a 37% decrease in micro-vascular complications and a
- ⇒ 21% decrease risk of deaths related to diabetes

SO in fact, a 1% drop in A1C has significant implications in long term health outcomes

Limitations: selection bias (lack of randomized control group), threat to internal validity (design contamination), limited generalizability

- ⇒ the lack of a randomized control group can lead to selection bias. self-selection in the sma program may have favorably influenced the results. patients who chose to participate in the sma group may have been already and motivated to improve their health. notwithstanding, evidence of this model provides the foundation for designing a more rigorous, prospective randomized
- ⇒ the treatment and control groups may have influenced each other in some way. for example, implementation of the sma program might have motivated medical providers to pay closer attention to the quality of diabetes management in their primary care practice. in addition, members of the sma program were highly motivated and enthusiastic about the program due to its novelty and being part of a dissertation.
- ⇒ this intervention was implemented at a single site with a relatively homogenous population of low-income, Spanish-speaking Latinos from central America and Mexico and it is unknown if this model could be implemented successfully in a different setting and with diverse populations.



GROUP MEDICAL VISITS

Bring this card to each session for completion of the program and a chance to win prizes!

 **Goals**
  **Self monitoring**
  **Medications**
  **Active Lifestyle**
  **Healthy Meals**



CITAS MEDICAS EN GRUPO

¡Traiga esta tarjeta a cada sesión para completar el programa y ganar premios!

 **Metas**
  **Autocontrol**
  **Medicamentos**
  **Vida Activa**
  **Comidas Sanas**

CONSEQUENCES

of High Blood Pressure

High blood pressure is often the first domino in a chain or “**domino effect**” leading to devastating consequences, like:



STROKE

HBP can cause blood vessels in the brain to burst or clog more easily.



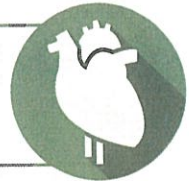
VISION LOSS

HBP can strain the vessels in the eyes.



HEART FAILURE

HBP can cause the heart to enlarge and fail to supply blood to the body.



HEART ATTACK

HBP damages arteries that can become blocked.



SEXUAL DYSFUNCTION

This can be erectile dysfunction in men or lower libido in women.



KIDNEY DISEASE/ FAILURE

HBP can damage the arteries around the kidneys and interfere with their ability to effectively filter blood.

A simple **blood pressure check** is the first step to preventing the “domino effect.”

Learn more at heart.org/hbp.

Blood Pressure QUESTIONS TO ASK YOUR DOCTOR

Q&A

This list of common questions about blood pressure will help you discuss test results, risk factors and lifestyle changes (including medication) with your doctor.

TAKE THIS SHEET TO YOUR NEXT APPOINTMENT AND USE THE SPACE PROVIDED TO WRITE DOWN YOUR DOCTOR'S COMMENTS.

QUESTIONS

COMMENTS

- What do my blood pressure numbers mean?
- What should my blood pressure numbers be?
- How can high blood pressure affect my health?
- Are there any lifestyle changes that will help me control my blood pressure?
- How often should my blood pressure be checked?
- Should I use a home blood pressure monitor?
- What type of home monitor should I purchase?
- Will I need to take blood pressure medication?
- What kind of medication is best for me?
- What are the side effects?
- What if I forget to take my medication?
- Should I avoid any foods or other medications?
- Can I drink alcohol?
- How long will I need to take my medication?

Learn more about blood pressure at: heart.org/hbp

FATS

THE GOOD THE BAD & THE UGLY



✓ GOOD

Monounsaturated & Polyunsaturated Fats

- Can lower bad cholesterol levels
- Can lower risk of heart disease & stroke
- Can provide essential fats that your body needs but can't produce itself

SOURCE

Plant-based liquid oils, nuts, seeds and fatty fish

EXAMPLES



✗ BAD

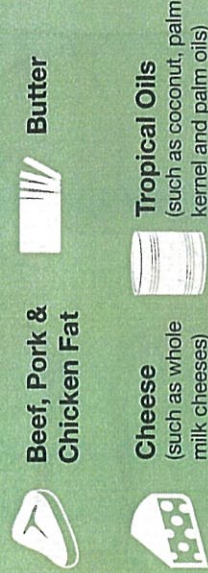
Saturated Fats

- Can raise bad cholesterol levels
- Can lower good cholesterol levels
- Can increase risk of heart disease & stroke

SOURCE

Most saturated fats come from animal sources, including meat and dairy, and from tropical oils

EXAMPLES



✗ UGLY

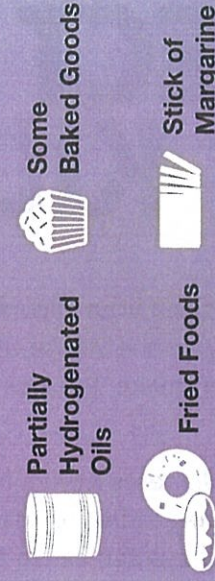
Hydrogenated Oils & Trans Fats

- Can raise bad cholesterol levels
- Can lower good cholesterol levels
- Can increase risk of heart disease & stroke
- Can increase risk of type 2 diabetes

SOURCE

Processed foods made with partially hydrogenated oils

EXAMPLES



American Heart Association
Recommendation

Eat a healthy dietary pattern that:

Includes good fats

Limits saturated fats

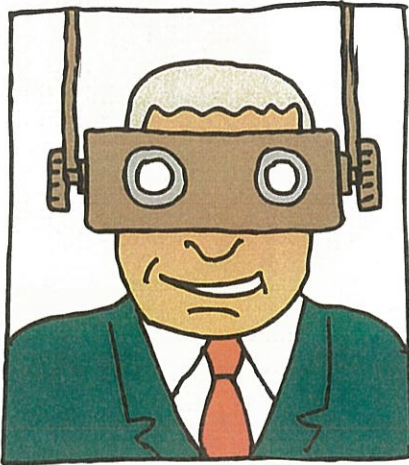
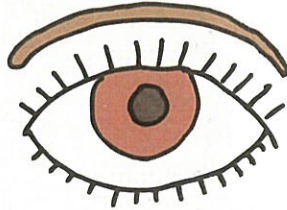
Keeps trans fats as LOW as possible

For more information, go to heart.org/fats

DIABETES AND YOUR EYES

High blood sugar levels from diabetes can cause a number of problems with your eyes, such as:

- Blurry vision
- Cloudy vision that feels like you are looking through a dirty window
- An increase in eye pressure
- Loss of vision



If you have a problem:

Call your doctor or health clinic right away if you have any sudden change in your vision.

Regular eye exams and taking good care of your diabetes are the best way to prevent eye problems.

What can you do?

You can help prevent eye problems and keep your eyes healthy if you:

- Get a “dilated” eye exam at least once a year*
- Control your blood pressure
- Keep your blood sugar under good control



* Dilated eye tests or exams are given only by an ophthalmologist (ahp tha MAHL uh jist). This is a medical doctor (MD or DO) with special eye care training.

Name/Nombre _____



Your thoughts...



Your feelings...



Progress towards
your goal

Name/Nombre _____

