

ABCS

GRHC Diabetes Care Program—A Team Based Approach for Empowering Patients to Manage Diabetes and Prevent Cardiovascular Disease

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Empowering Patients to Manage Diabetes and Prevent Cardiovascular Disease (CVD): ABCS & the Social Determinants of Health (SDH)

- Diabetes as a cardiovascular disease risk factor—what is **CVD** & what's the cause
- Contribution of diabetes, **SDH**, and the **ABCS** to cardiovascular risk
- Role of patients & healthcare providers—use of the GRHC Chronic Care Model & preventing diabetes associated cardiovascular risk
- **WIIFM**—Patient empowerment, information, and support

IDF

Global Symbol for Diabetes

United Nations

2006 Resolution 61/225

World Diabetes Day

14 November

Unite to fight against the

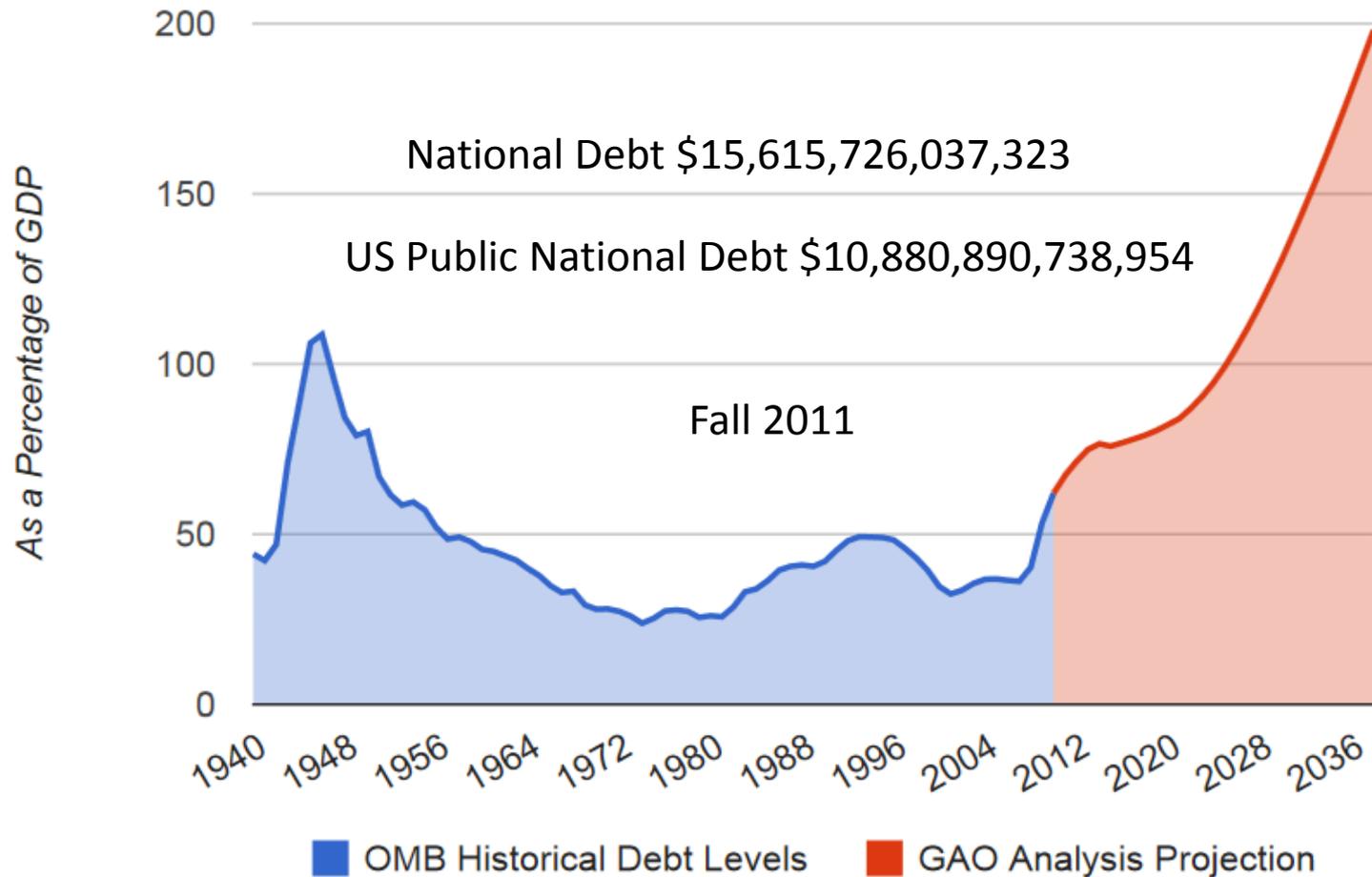
Diabetes Pandemic

ABCS

World Diabetes day 14 November

- At the United Nations in 2006 the International Diabetes Federation (IDF) and WHO
- 14 November to mark the birthday of Frederick Banting who, along with Charles Best, was instrumental in the discovery of insulin in 1922
- WHO estimates that more than 346 million people worldwide have diabetes. This number is likely to more than double by 2030 without intervention. Almost 80% of diabetes deaths occur in low- and middle-income countries. The problem—imbalance in the Social Determinants of Health!

U.S. Debt to Reach New Limit in One Decade

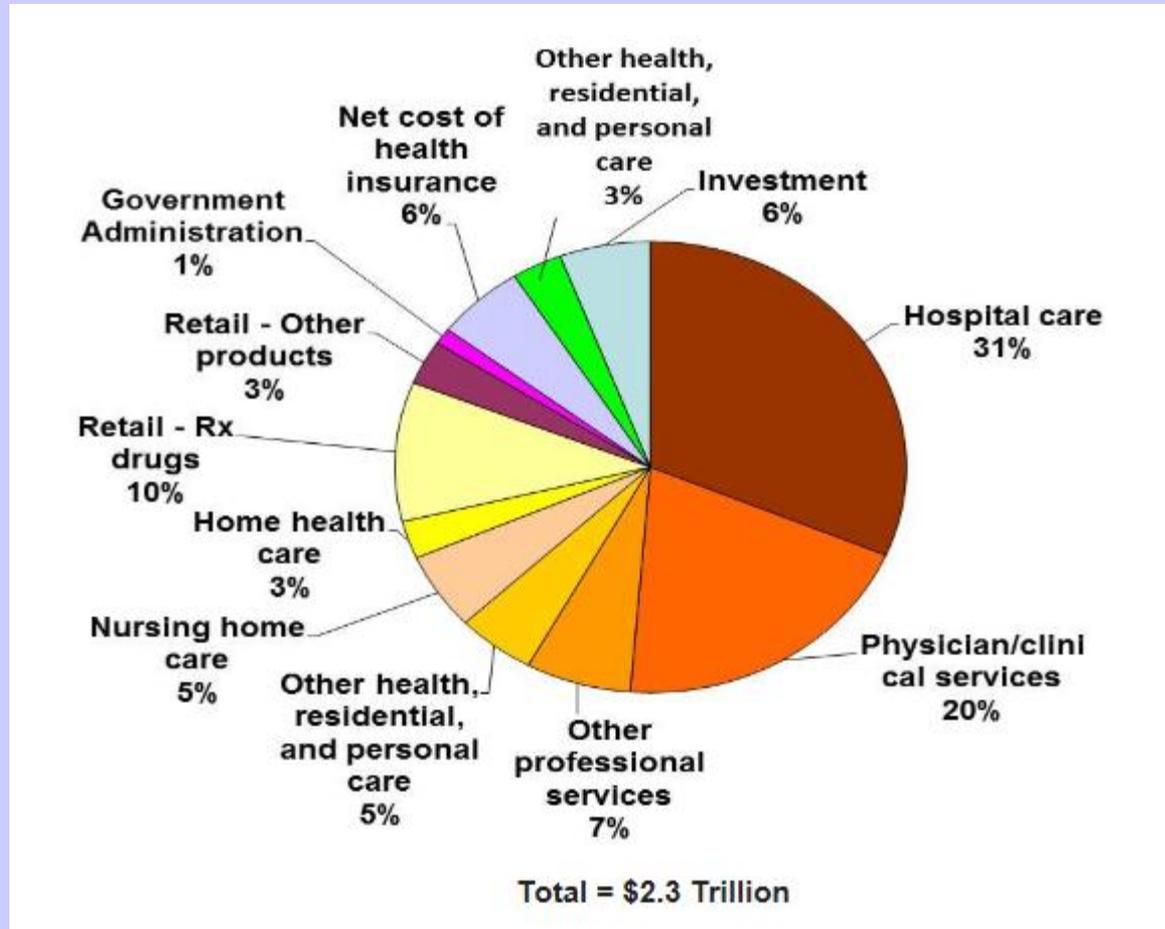


OMB Historical Tables 2011 and GAO Analysis Fall 2011

<http://www.concordcoalition.org/issues/indicators/projected-debt>

US National Health Expenditures, 2010

Hospital care and physician/clinical services combined account for half (51%) of the nation's health expenditures.



Source: Martin A.B. et al., "Growth In US Health Spending Remained Slow in 2010; Health Share of Gross Domestic Product Was Unchanged from 2009," Health Affairs, 2012

What is driving health care spending?

While there is broad agreement that the rise in costs must be controlled, there is disagreement over the driving factors. Some of the major factors that have been discussed in cost growth are:

- ✓ **Technology and prescription drugs**– For several years, spending on prescription drugs and new medical technologies has been cited as a primary contributor to the increase in overall health spending; however, in recent years, the rate of spending on prescription drugs has decelerated. Nonetheless, some analysts state that the availability of more expensive, state-of-the-art medical technologies and drugs fuels health care spending for development costs and because they generate demand for more intense, costly services even if they are not necessarily cost-effective.
- ✓ **Rise in chronic diseases** – Longer life spans and greater prevalence of chronic illnesses has placed tremendous demands on the health care system. **It is estimated that health care costs for chronic disease treatment account for over 75% of national health expenditures. In particular, there has been tremendous focus on the rise in rates of overweight and obesity and their contribution to chronic illnesses and health care spending.** The changing nature of illness has sparked a renewed interest in the possible role for prevention to help control costs.
- ✓ **Administrative costs** – At least 7% of health care expenditures are estimated to go toward for the administrative costs of government health care programs and the net cost of private insurance (e.g. administrative costs, reserves, taxes, profits/losses). Some argue that the mixed public-private system creates overhead costs and large profits that are fueling health care spending.

Source: Martin A.B. et al., “Growth In US Health Spending Remained Slow in 2010; Health Share of Gross Domestic Product Was Unchanged from 2009,” Health Affairs, 2012

Health Affairs 2010

Abstract

New research provides revised comprehensive estimates that suggest that **the U.S. national economic burden of pre-diabetes and diabetes reached \$218 billion in 2007**. This estimate includes \$153 billion in higher medical costs and \$65 billion in reduced productivity. The average annual cost per case is \$2,864 for undiagnosed diabetes, \$9,975 for diagnosed diabetes (\$9,677 for type 2 and \$14,856 for type 1), and \$443 for pre-diabetes (medical costs only). For each American, regardless of diabetes status, this burden represents a cost of approximately \$700 annually. These results underscore the urgency of better understanding how prevention and treatment strategies may or may not help reduce costs.

The Costs of Treating American Indian Adults With Diabetes Within the Indian Health Service

Joan M. O'Connell, PhD, Charlton Wilson, MD, Spero M. Manson, PhD, and Kelly J. Acton, MD, MPH

- IHS electronic medical reporting system for **32052** American Indian adults in central Arizona in 2004 and 2005.
- IHS treatment costs for the **10.9%** of American Indian adults with diabetes accounted for **37.0% (3.4X)** of all adult treatment costs.
- Diabetes accounted for nearly half of all hospital days (excluding days for obstetrical care).
- Hospital inpatient service costs for those with diabetes accounted for 32.2% of all costs.
- Costs for American Indians with diabetes were found to consume a significant proportion of IHS resources.

**According to the U.S. Bureau of the Census, the
resident population of the United States, projected to
Sunday 04/15/2012**

313,364,713

(7,007,086,335)

COMPONENT SETTINGS FOR March 2012

One birth every.....	8 seconds
One death every.....	13 seconds
One international migrant (net) every.....	44 seconds
Net gain of one person every.....	14 seconds

3.3 Million Native Americans

564 Federally Recognized Native American Tribes

Yearly CDC US Diabetes Statistics—2010

ADA

“Every 17 seconds someone in the US is diagnosed with diabetes—that is 5200 of your friends, family, coworkers, and neighbors each day!”



One-third (**1/3**) of everyone born after the year 2000 will develop diabetes & by 2050 **1/3** of all adults will be diabetic.

Number of Deaths for Leading Causes of Death United States—2009

1. **Heart disease: 599,413**
2. **Cancer: 567,628**
3. Chronic lower respiratory diseases: 137,353
4. **Stroke (cerebrovascular diseases): 128,842**
5. Accidents (unintentional injuries): 118,021
6. **Alzheimer's disease: 79,003**
7. **Diabetes: 68,705**
8. Influenza and Pneumonia: 53,692
9. **Nephritis, nephrotic syndrome, and nephrosis: 48,935**
10. **Intentional self-harm (suicide): 36,909**

US National Diabetes Statistics—2010-2012

- Diabetics—25.8 million (8.3%)
 - 95% Type 2
- Prediabetics—79 million (25.4%)
- Diabetes related deaths—200,000—3 min
- Diabetic related amputations—82,000—6 min
- Diabetic dialysis starts—42,000—12 min
- Diabetic related blindness—24,000—22 min
- Cost of diabetes care— >\$200 billion

Source: CDC's Division of Diabetes Translation. National Diabetes Surveillance System available at <http://www.cdc.gov/diabetes/statistics>

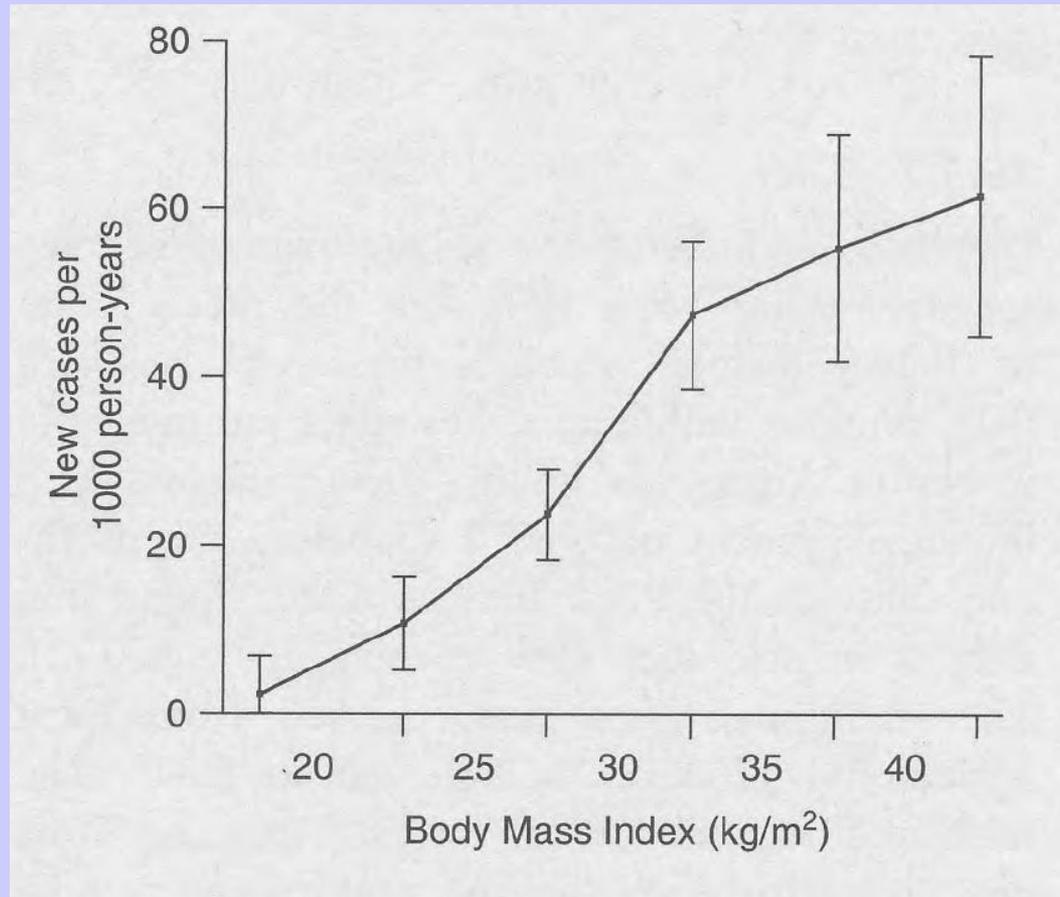
Genes load the gun. Lifestyle pulls the trigger.

“Genes load the gun, but environment pulls the trigger.”

“The idea that it’s all in your genes is nonsense. The human genome changes only one half of one percent every million years. The obesity epidemic is only about 30 years old, so changes in genes do not explain the recent dramatic rise in obesity, not only in this country but also worldwide.” **Dr. Elliot Joslin**

The Human Genome Project showed 46 Chromosomes with 23,000 protein-coding genes & 3 billion DNA base pairs.

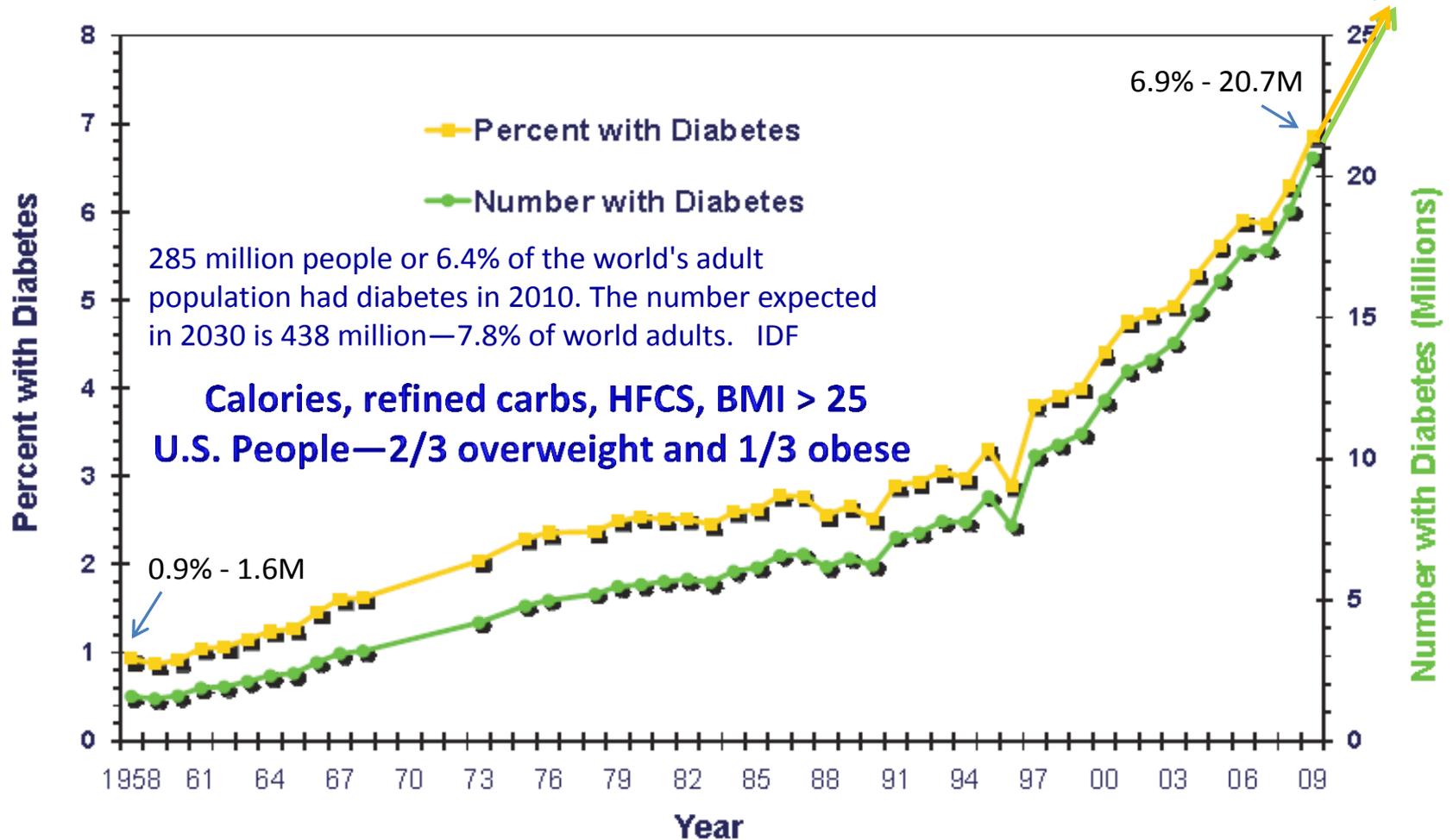
Relationship of BMI to Diabetes in Pima Indians



Age-sex adjusted incidence of Diabetes in adult Pima Indians by BMI with 95% Confidence Intervals. Knowler et AL Diabetes Mellitus in Pima Indians: Risk factors and pathogenesis. Diabetes/Metabolism Reviews 6:1-27, 1990

Number and Percentage of U.S. Population with Diagnosed Diabetes, 1958-2009

2010 Diabetics—25.8 million (8.3%)



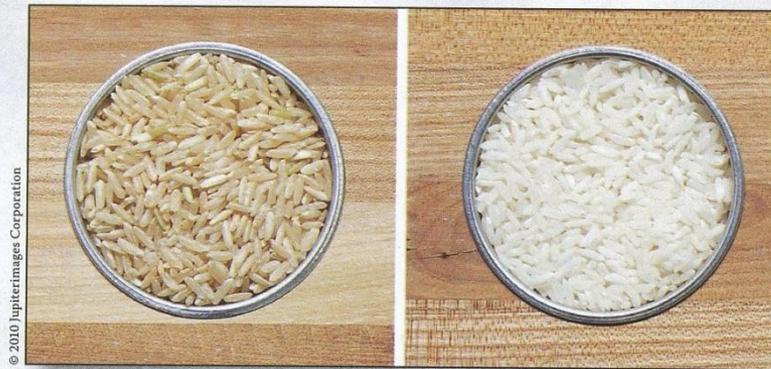
ARCHIVES

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INTERNAL MEDICINE

WWW.ARCHINTERNMED.COM

JUNE 14, 2010

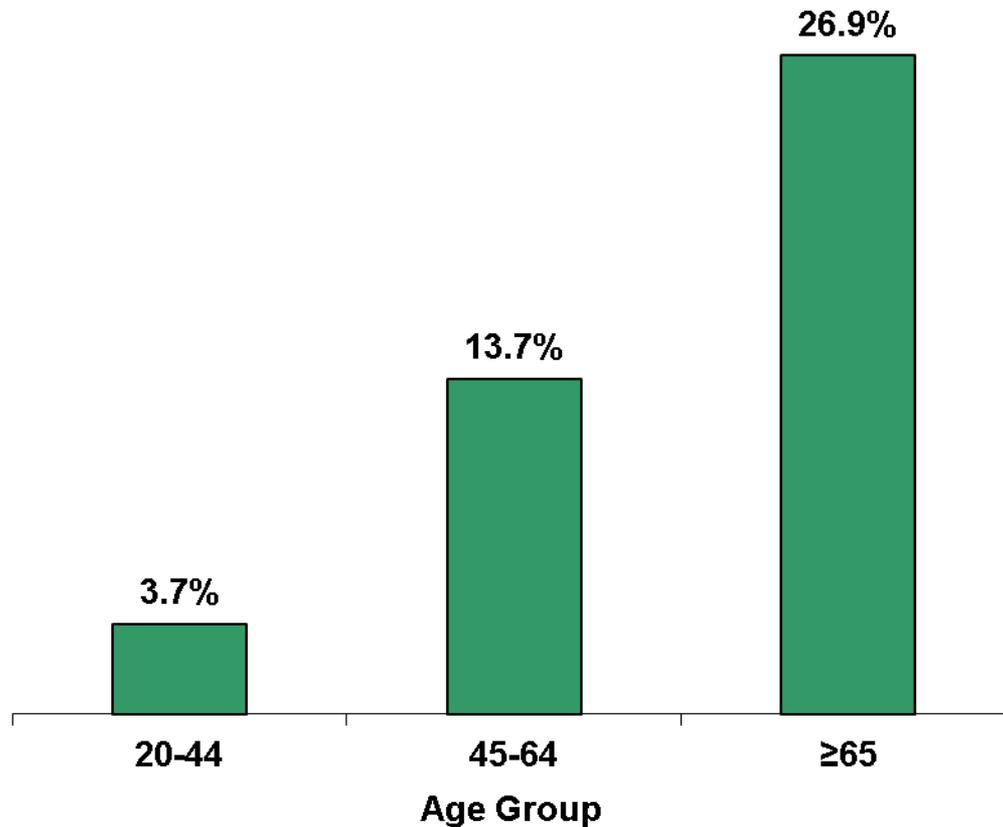


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White rice, brown rice, and risk of type 2 diabetes. See page 961.

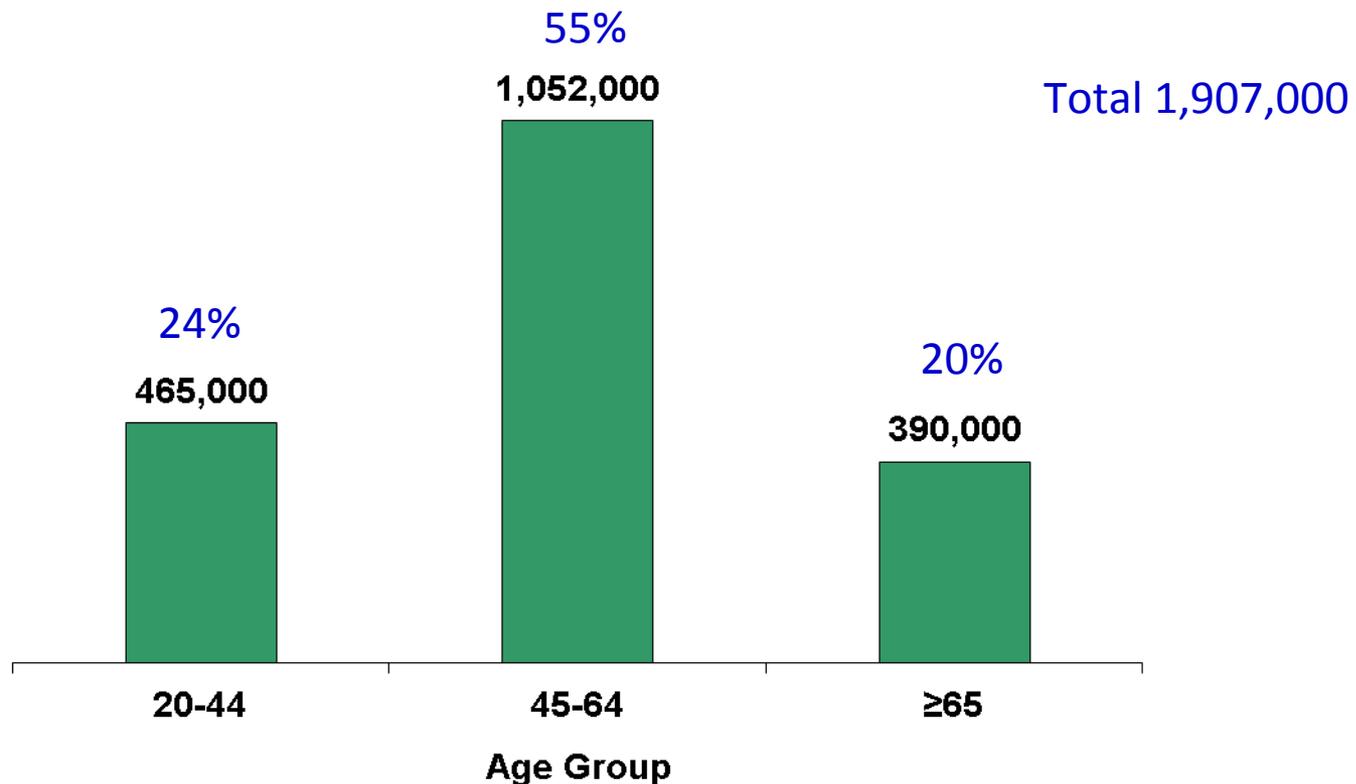
16-32% Decrease in incidence of Type 2 diabetes
By substituting Brown Rice and Whole Grains
For white rice.

Estimated percentage of people aged 20 years or older with diagnosed and undiagnosed diabetes, by age group, United States, 2005–2008



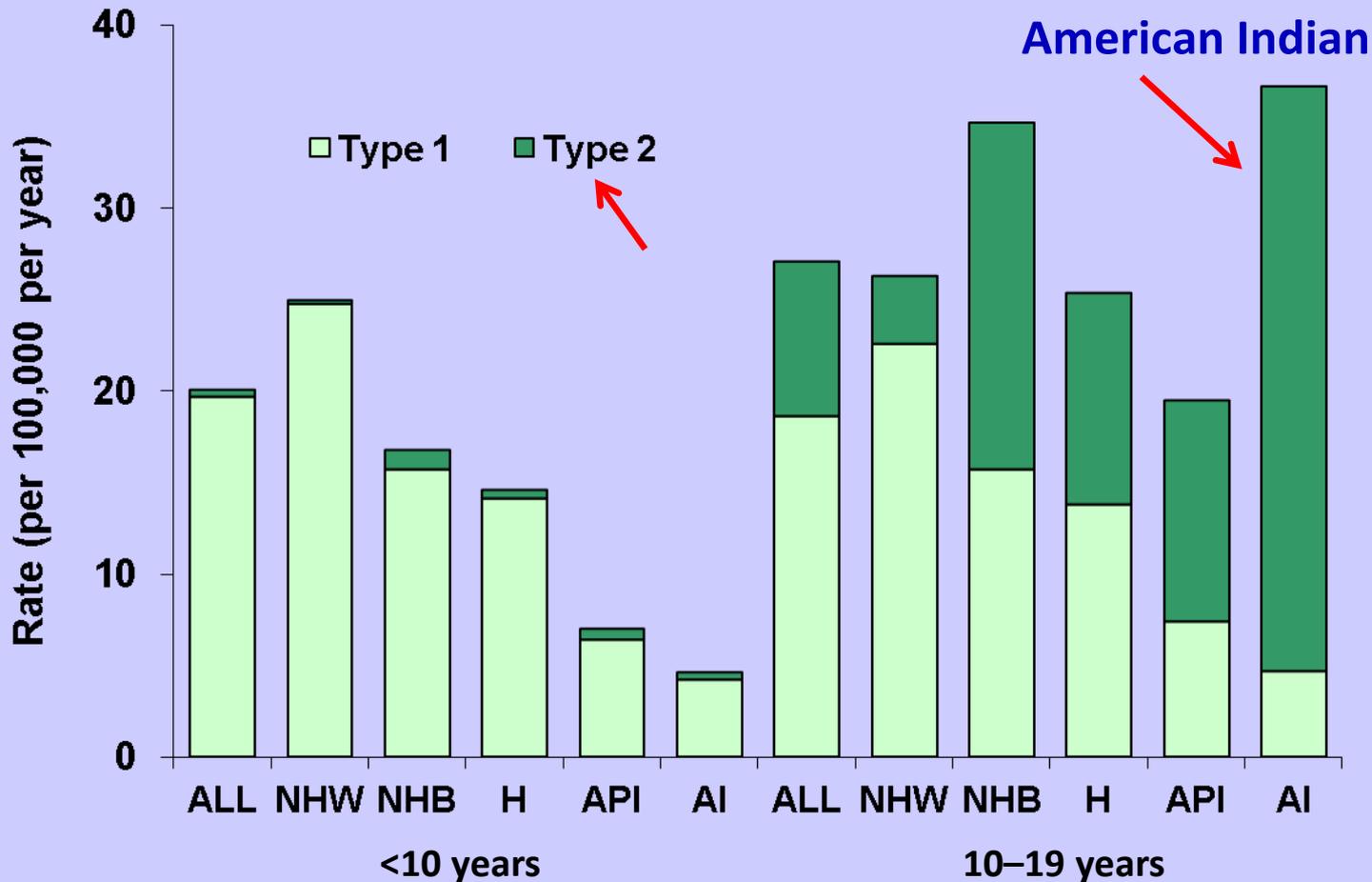
Source: 2005–2008 National Health and Nutrition Examination Survey.

Estimated number of new cases of diagnosed diabetes among people aged 20 years or older, by age group, United States, 2010



Source: 2007–2009 National Health Interview Survey estimates projected to the year 2010.

Rate of new cases of type 1 and type 2 diabetes among youth aged <20 years, by race/ethnicity, 2002–2005



Source: SEARCH for Diabetes in Youth Study

NHW=non-Hispanic whites; NHB=non-Hispanic blacks; H=Hispanics; API=Asians/Pacific Islanders; AI=American Indians

ABCS

Is Diabetes the leading cause of blindness, kidney disease, amputation, and a leading cause of heart disease?

YES

NO

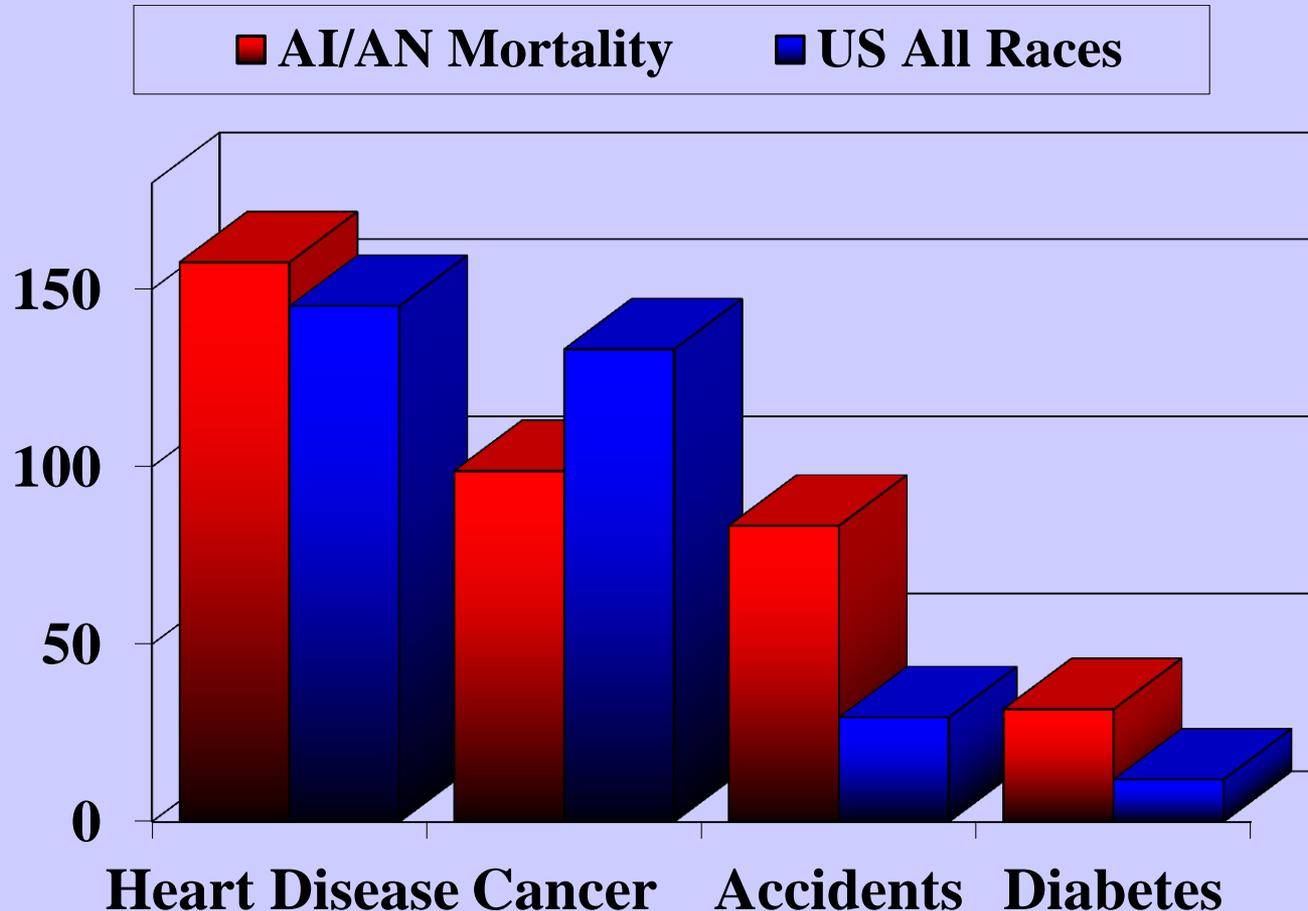
The Costs of Treating American Indian Adults With Diabetes Within the Indian Health Service

Joan M. O'Connell, PhD, Charlton Wilson, MD, Spero M. Manson, PhD, and Kelly J. Acton, MD, MPH

American Indians and Alaska Natives have the highest prevalence of diabetes among all US racial/ethnic groups

- 2.3 times more likely to be diagnosed with diabetes
- 2004 prevalence of diabetes 16.3% AI/AN \geq 20years
- Mortality attributable to diabetes is 3-4X higher
- Highest rate of premature deaths from heart disease
- 2.5 times heart disease mortality than for White Americans
- 36.0% of heart related deaths are in those < 65 years

Mortality Rates in American Indians Strong Heart Study



Rising Tide of Cardiovascular Disease in American Indians : The Strong Heart Study.
Circulation 1999, 99:2389-2395. <http://circ.ahajournals.org/content/99/18/2389>

Contribution of Diabetes to **CVD**—the Strong Heart Study in Native Americans

	Diabetic Women	& Men
Hazard Ratio	6.3	3.1
Prevalence	60%	50%
<i>DM Attributable risk</i>	76%	51%

Rising Tide of Cardiovascular Disease in American Indians : The Strong Heart Study.
Circulation 1999, 99:2389-2395. <http://circ.ahajournals.org/content/99/18/2389>

“50 Diabetes Myths That Can Ruin Your Life and the 50 Diabetes Truths That Can Save It” –*Riva Greenberg*

MYTH: Diabetes is the leading cause of blindness, kidney disease, amputation, and a leading cause of heart disease.

A B C S

TRUTH: *Poorly-controlled* diabetes is the cause of these outcomes. Well-controlled diabetes rarely is. Highly esteemed psychologist and certified diabetes educator, [Dr. William Polonsky](#), says well-controlled diabetes is the cause of nothing. I like to add, except for a healthier and happier life. **WIIFM**—happier, healthier, longer with out the CVD complications.



 **Cherry Potter-November 2011**
50 Years of diabetes & no complications

**The CDC View of the US Diabetes Epidemic:
Causes, Consequences and Interventions
12 Annual Rachmiel Levine February 2012
Diabetes & Obesity Symposium in Pasadena, CA**



**Ann Albright, PhD, RD
Director, Division of Diabetes Translation
Centers for Disease Control and Prevention**

Ann Albright, PhD, RD, has served as director of the Division of Diabetes Translation since January 2007. As director, Dr. Albright leads a team of professionals who strive to eliminate the preventable burden of diabetes. Dr. Albright received her doctoral degree in exercise physiology from Ohio State University. She completed an NIH postdoctoral fellowship in nutrition at the University of California, Davis and a clinical internship in nutrition at University of California, San Francisco (UCSF).

“Prevention & Treatment are two sides of a coin.”

Components of cardiovascular risk factors

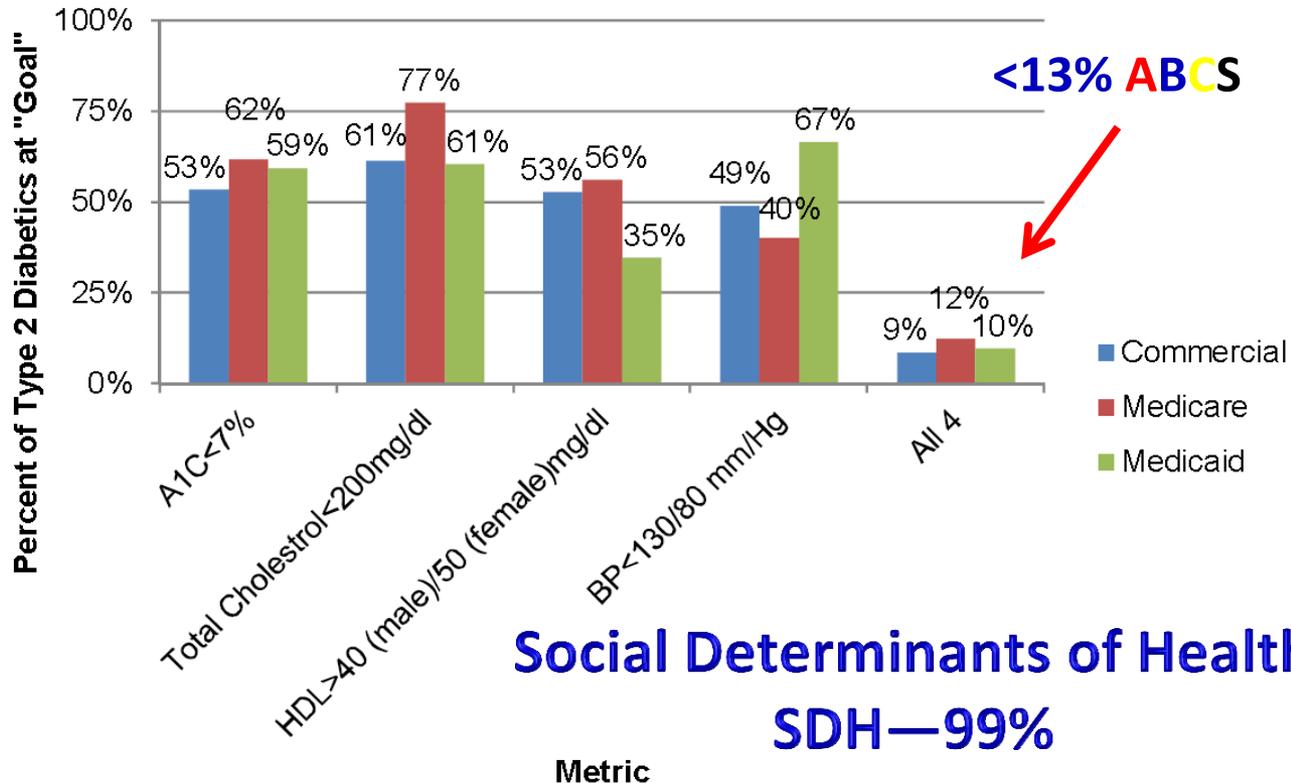
Major risk factors

- Hypertension
- Cigarette smoking
- Obesity (BMI ≥ 30 kg/m²)
- Physical inactivity
- Dyslipidemia
- **Diabetes mellitus**
- Microalbuminuria or estimated GFR < 60 mL/min
- Age > 55 years for men, > 65 years in women
- Family history of premature coronary disease
- Men - < 55 years
- Women - < 65 years

Data from The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood pressure. The JNC 7 report. JAMA 2003; 289:2560.

US Healthcare and Diabetes ABCS

Figure 4: Percent of Type 2 Diabetics at "Goal"



Source: Milliman analysis of NHANES 2005-2008, demographically adjusted to Milliman Commercial *Health Cost Guidelines* 2011, Milliman 65+ *Health Cost Guidelines*.

ABCS

A—<7%

Blood Pressure—< 130/80

Cholesterol—<70-100

Smoking—No Smoking

EASD / ADA AACE -- JNC-8 ATP-4 Obesity

Suggested Goals for Glycemic Treatment in Patients with Type 2 Diabetes

Glycated Hemoglobin Range



Most Intensive Level, Approximately 6.0%	Factors	Least Intensive Level, Approximately 8.0%
Highly motivated, adherent, knowledgeable, strong self-care capability	Psychosocial considerations	Less motivated, nonadherent, less knowledge, weak self-care capability
Adequate	Resources or support systems	Inadequate
Low	Risk of hypoglycemia	High
Short	Duration of type 2 diabetes	Long
Long	Life expectancy	Short
None	Microvascular disease	Advanced
None	Cardiovascular disease	Established
None	Coexisting conditions	Multiple, severe, or both

Ismail-Beigi F. N Engl J Med 2012;366:1319-1327

Diabetes Care April 2012—EASD & ADA

KEY POINTS

- 1) Glycemic targets and glucose-lowering therapies must be individualized.
- 2) Diet, exercise, and education remain the foundation of any type 2 diabetes treatment program.
- 3) Unless there are prevalent contraindications, metformin is the optimal first-line drug.
- 4) After metformin, there are limited data to guide us. Combination therapy with an additional 1–2 oral or injectable agents is reasonable, aiming to minimize side effects where possible.
- 5) Ultimately, many patients will require insulin therapy alone or in combination with other agents to maintain glucose control.
- 6) All treatment decisions, where possible, should be made in conjunction with the patient, focusing on his/her preferences, needs, and values.**
- 7) Comprehensive cardiovascular risk reduction must be a major focus of therapy.

Social Determinants of Health

“The social determinants of health are the daily conditions and activities we experience throughout our lives from conception to the grave and the socioeconomic factors that determine those conditions and activities.”

Leonard R Sanders MD—2011

GRHC Diabetes Care Program (DCP) is a holistic realistic approach to Diabetes Care that nurtures healthcare relationships for optimal patient health! 😊

- ✓ Intellectual
- ✓ Physical
- ✓ Mental
- ✓ Emotion
- ✓ Social
- ✓ Spiritual

Do the math. How many hours do you spend with your healthcare team?

HCP

$$365 \text{ days/year} \times 24 \text{ hr/day} = 8760 \text{ hr / year}$$

* Support from healthcare personnel—

SDH

$$0.5 \text{ hr (doctor)} + 1.0 \text{ (support) hr} = 1.5 \text{ hr}$$

$$6 \times \text{per year} = 9 \text{ hr / year} = < \mathbf{0.1\%}$$

**Empowerment &
Self-Determination**

$$8751 \text{ hours} = > \mathbf{99.9\%}$$

≈8750 – Self Management

The Magic of Attitude



Negative



Positive

SDH

What the brain hears over and over it believes and makes happen.

GRHC Diabetes Care Program—A Team based Approach for Empowering Patients to Improve Their **ABCS** and **Prevent** Cardiovascular Disease (**CVD**)

■ Macrovascular Disease

- IHD, MI, CHF, Cardiomyopathy
- Peripheral Vascular disease
 - carotid, aorta, femoral, lower extremity

■ Microvascular Disease

- Retinopathy
- Nephropathy
- Neuropathy

Diabetes = CVD

Only If Poorly Controlled

DPP
DPP-LTF
DA QING DPP
UKPDS
DCCT
EDIC
VADT
ACCORD
ADVANCE

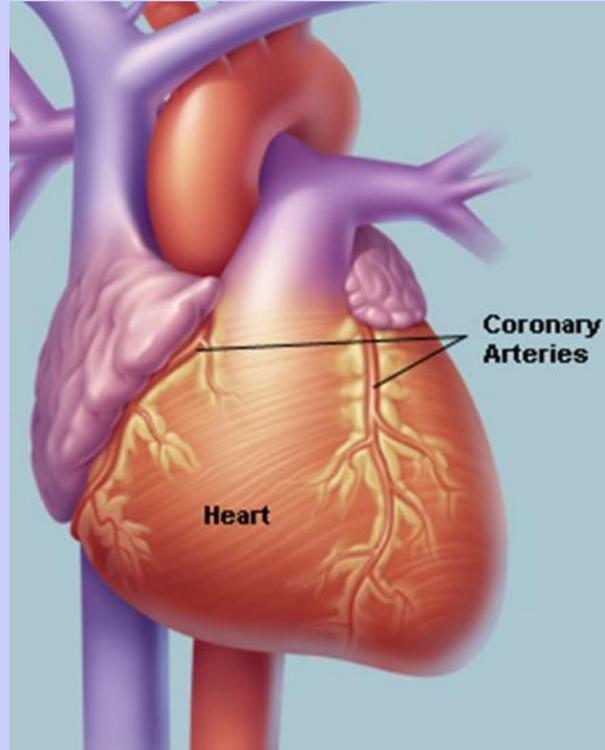
Social Determinants of Health
Motivational Interviewing

ABCS ← **VIP**

Cultural Sensitivity Promotes Acceptance & Empowerment

PT/HCP

CVD

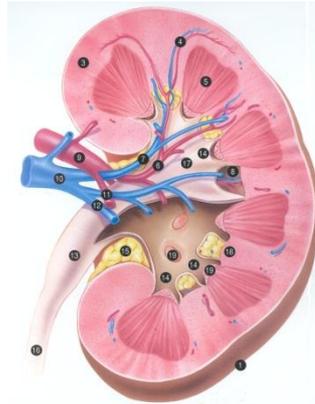
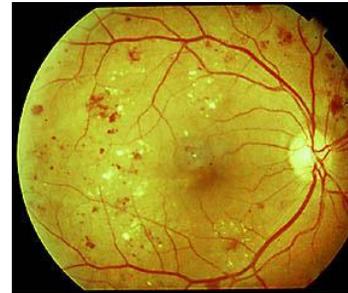
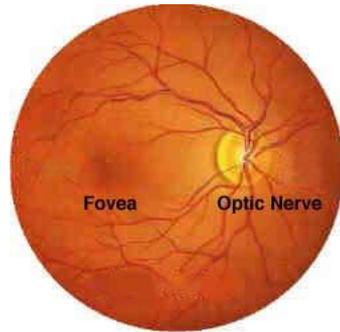
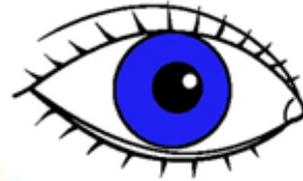


ABCS

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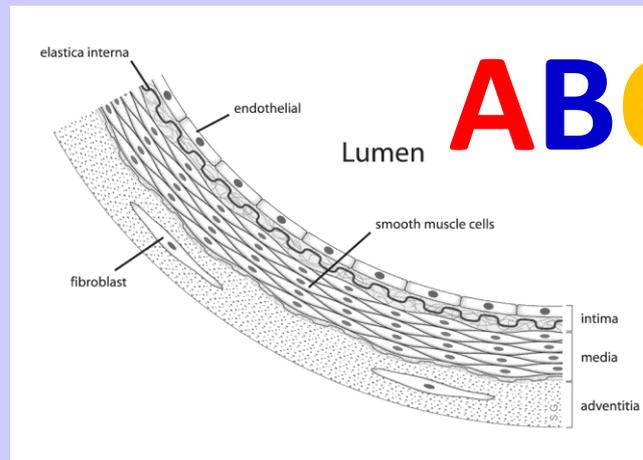
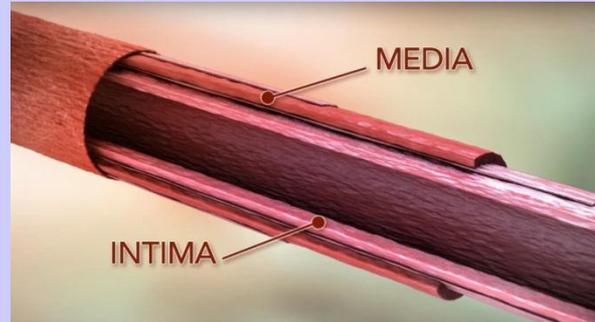


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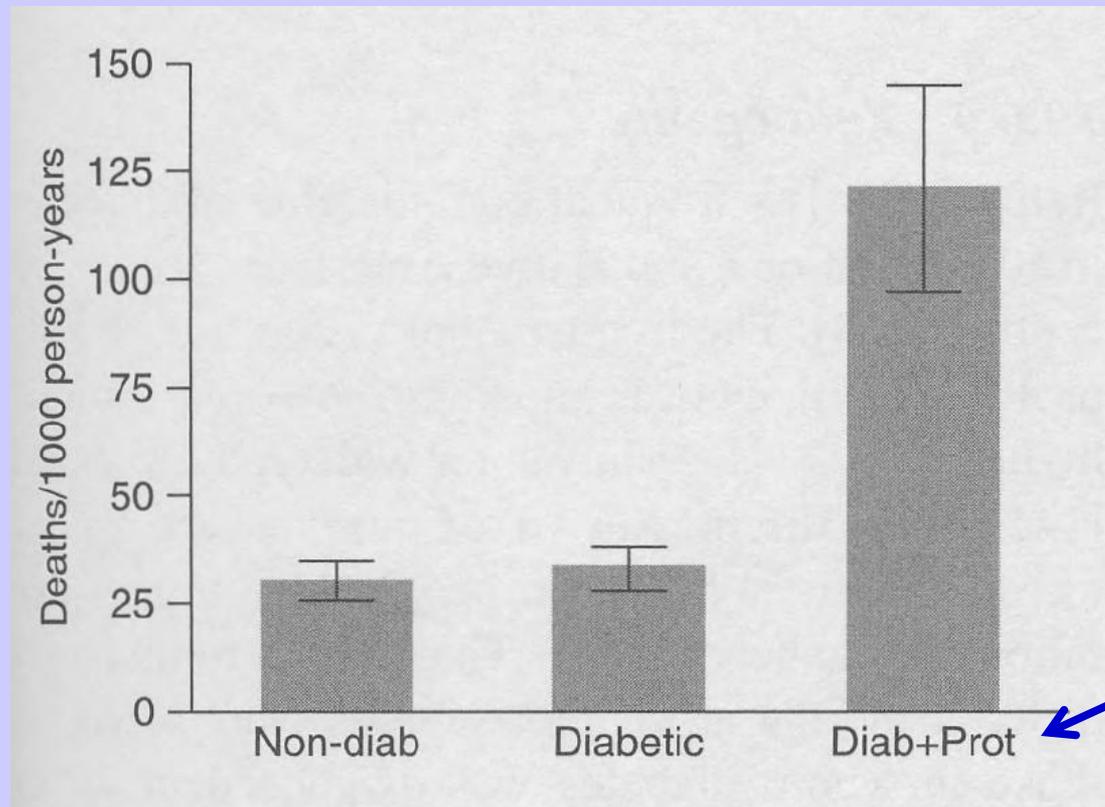


ABCS

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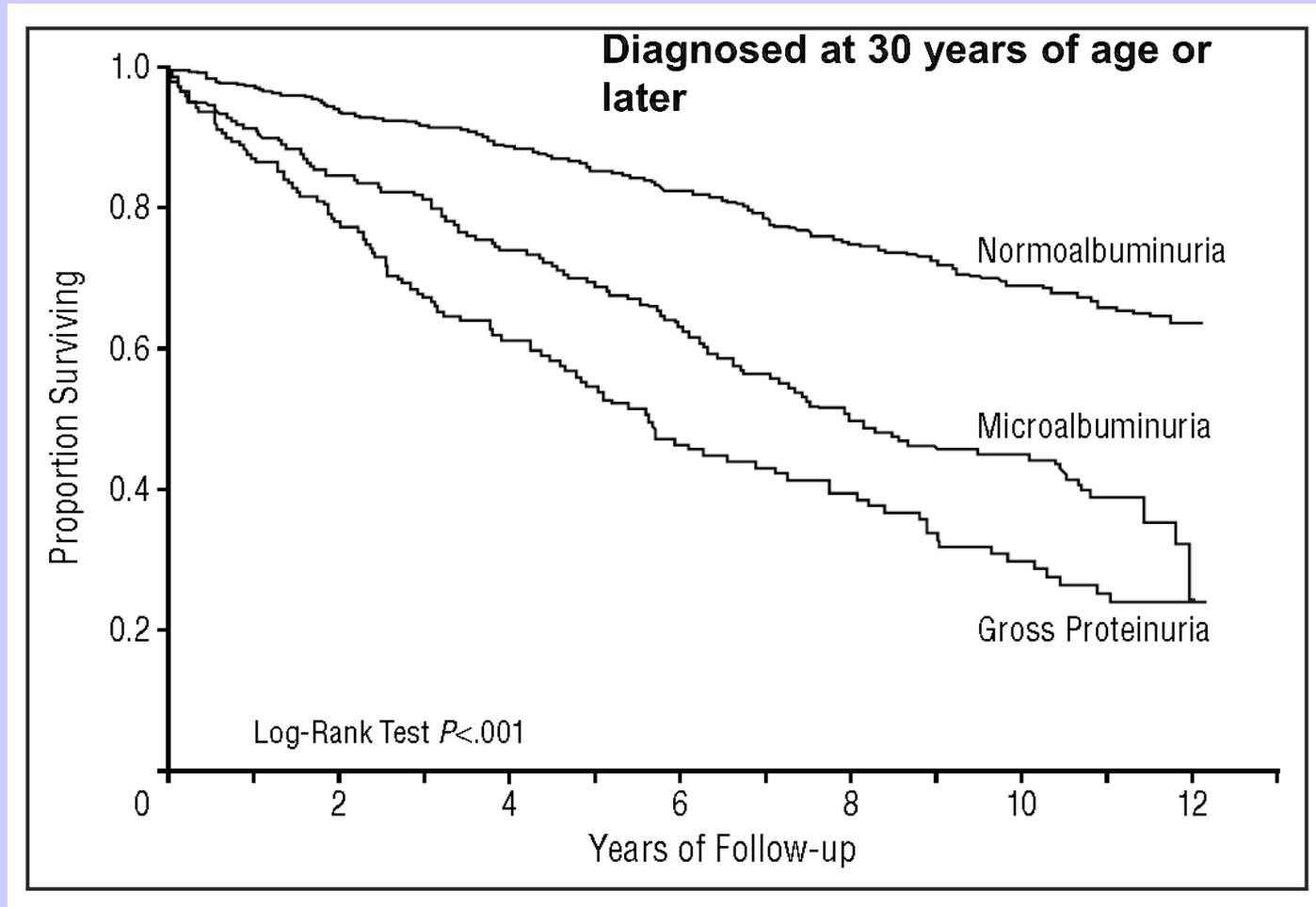
Cardiovascular Mortality in Pima Indians



PROTEIN

Age-sex adjusted death rates and 95% confidence intervals in 1426 Pima Indians 45 years of age. Non-diabetics, Diabetics without proteinuria, diabetics with Proteinuria >1.0 gm protein/gm creatinine. Nelson, RG et al. Effect of proteinuria On mortality in Type 2 Diabetes. Diabetes 37:, 1499-1504, 1988.

The Risk of Cardiovascular Disease Mortality Associated With Microalbuminuria and Gross Proteinuria in Persons With Older-Onset Diabetes Mellitus—2000

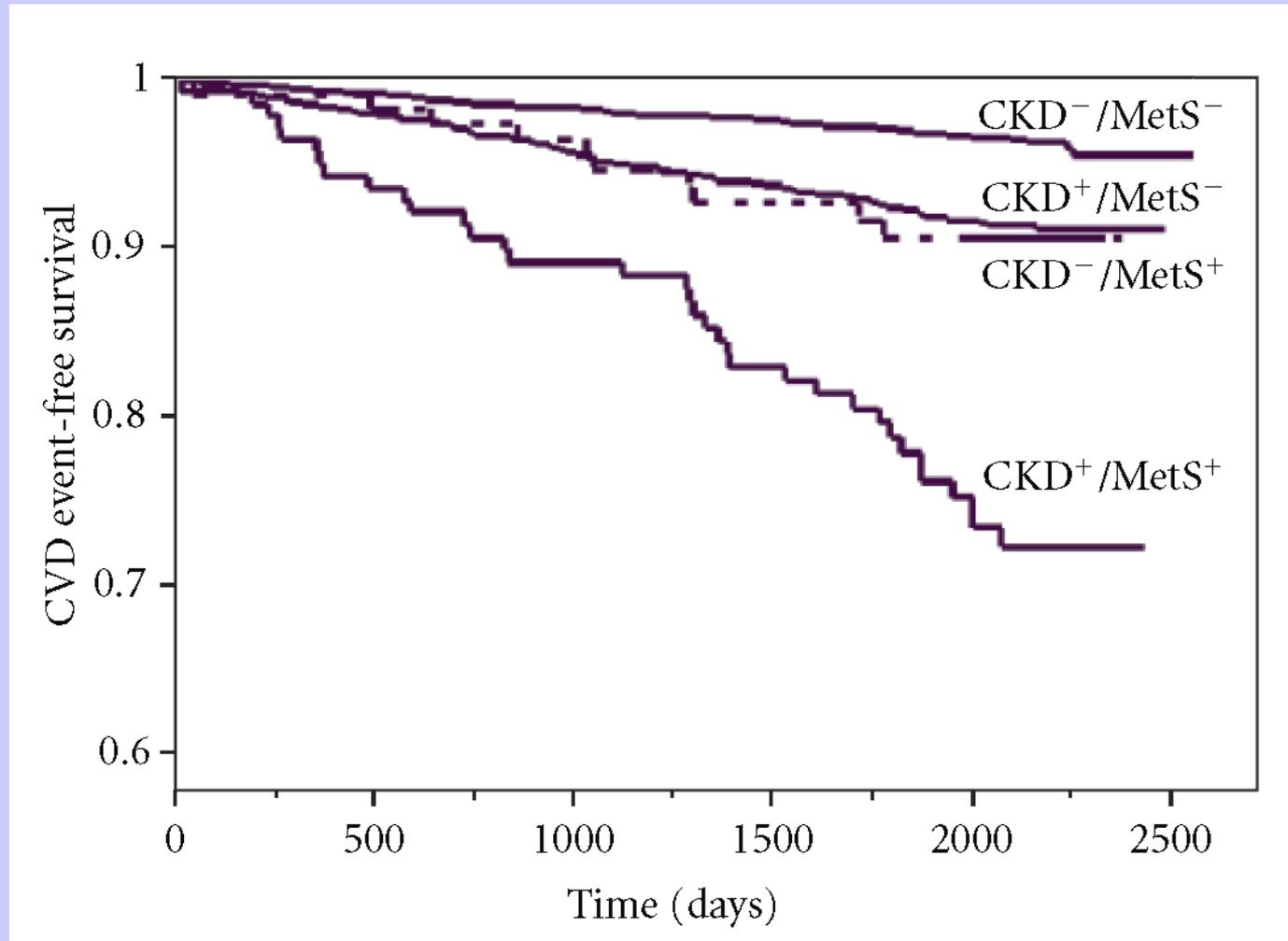


Charles T. Valmadrid, CT: Arch Intern Med. 2000;160:1093-1100

The Risk of Cardiovascular Disease Mortality Associated With Microalbuminuria and Gross Proteinuria in Persons With Older-Onset Diabetes Mellitus

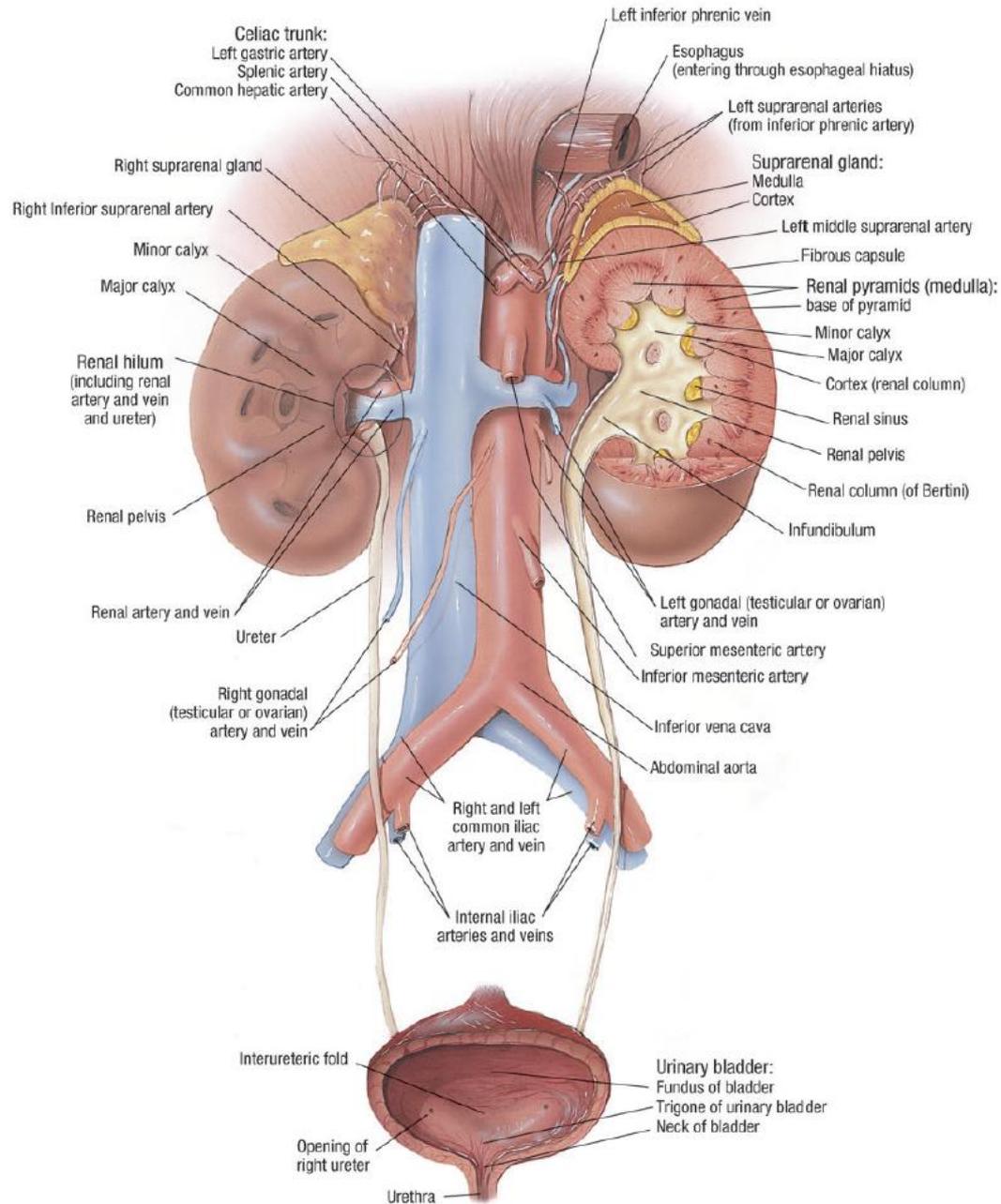
Conclusions: Results from our population-based study strongly suggest that *both microalbuminuria and gross proteinuria were significantly associated with subsequent mortality from all causes and from cardiovascular, cerebrovascular, and coronary heart diseases*. These associations were independent of known cardiovascular risk factors and diabetes-related variables.

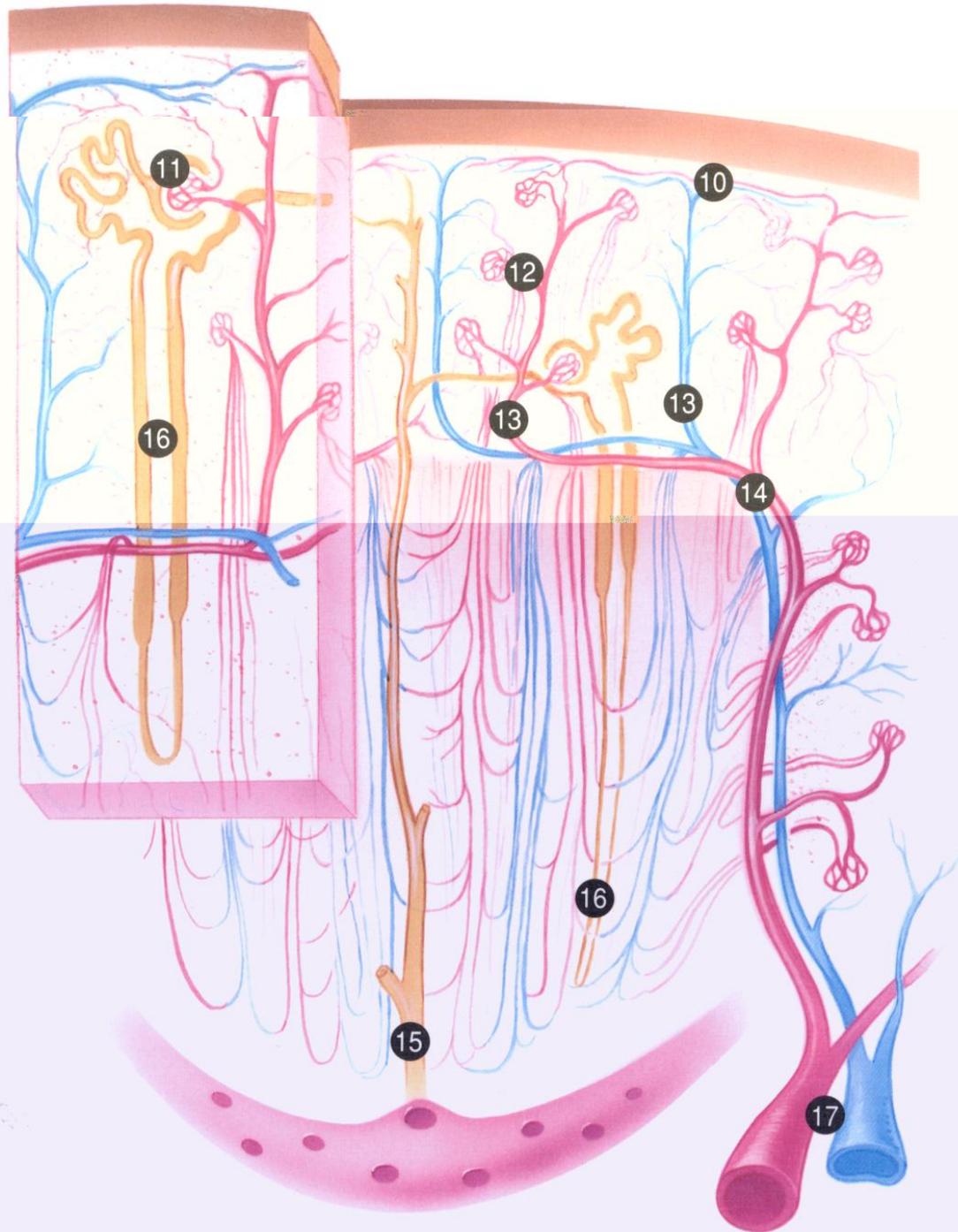
Association of CKD & Metabolic Syndrome with CVD

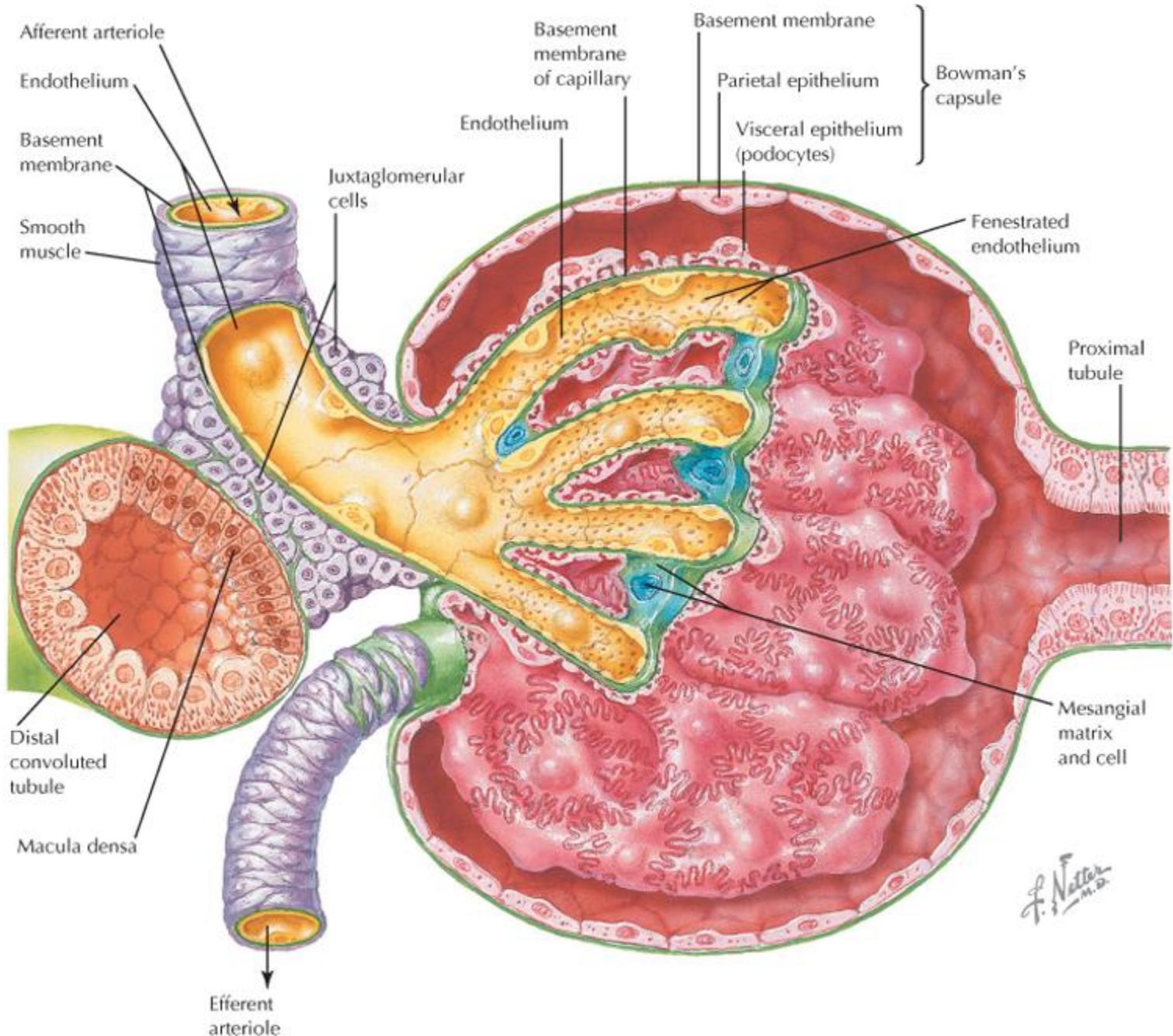


Association of CKD and Metabolic Syndrome with Cardiovascular Events. Agarwal S et. Al. Cardiol. Res. Prac. 10: 1155; 2012

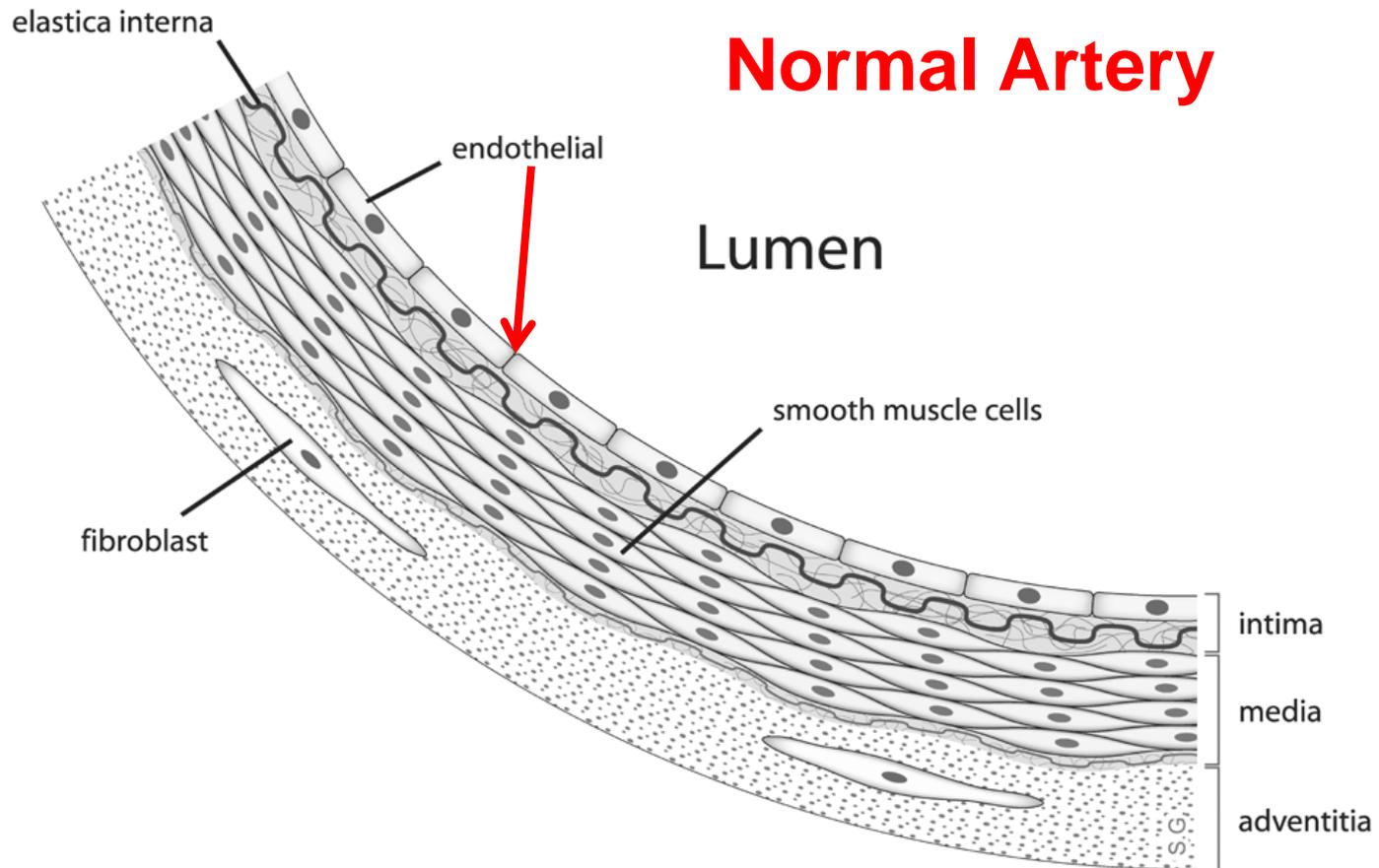
Urinary System (Anterior view)



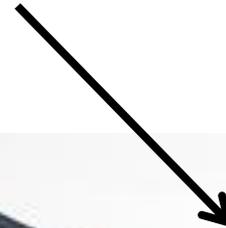
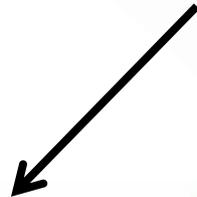
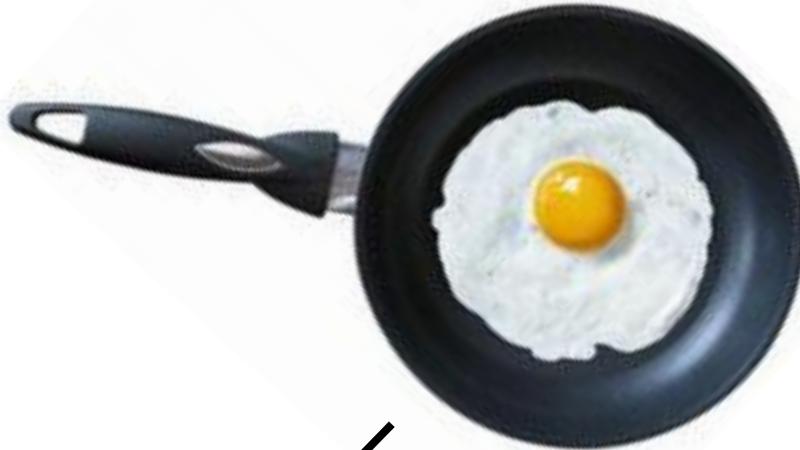




ABC'S OF DIABETES CARE



NONSTICK SURFACE



GRHC Diabetes Care Program—A Team based Approach for Empowering Patients to Improve Their **ABCS** and **Prevent** Cardiovascular Disease (**CVD**)

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■ Microvascular Disease

- Retinopathy
- Nephropathy
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Diabetes = CVD

Only If Poorly Controlled

HCP—SDH & MI

ABCS ← VIP

Cultural Sensitivity Promotes Acceptance & Empowerment

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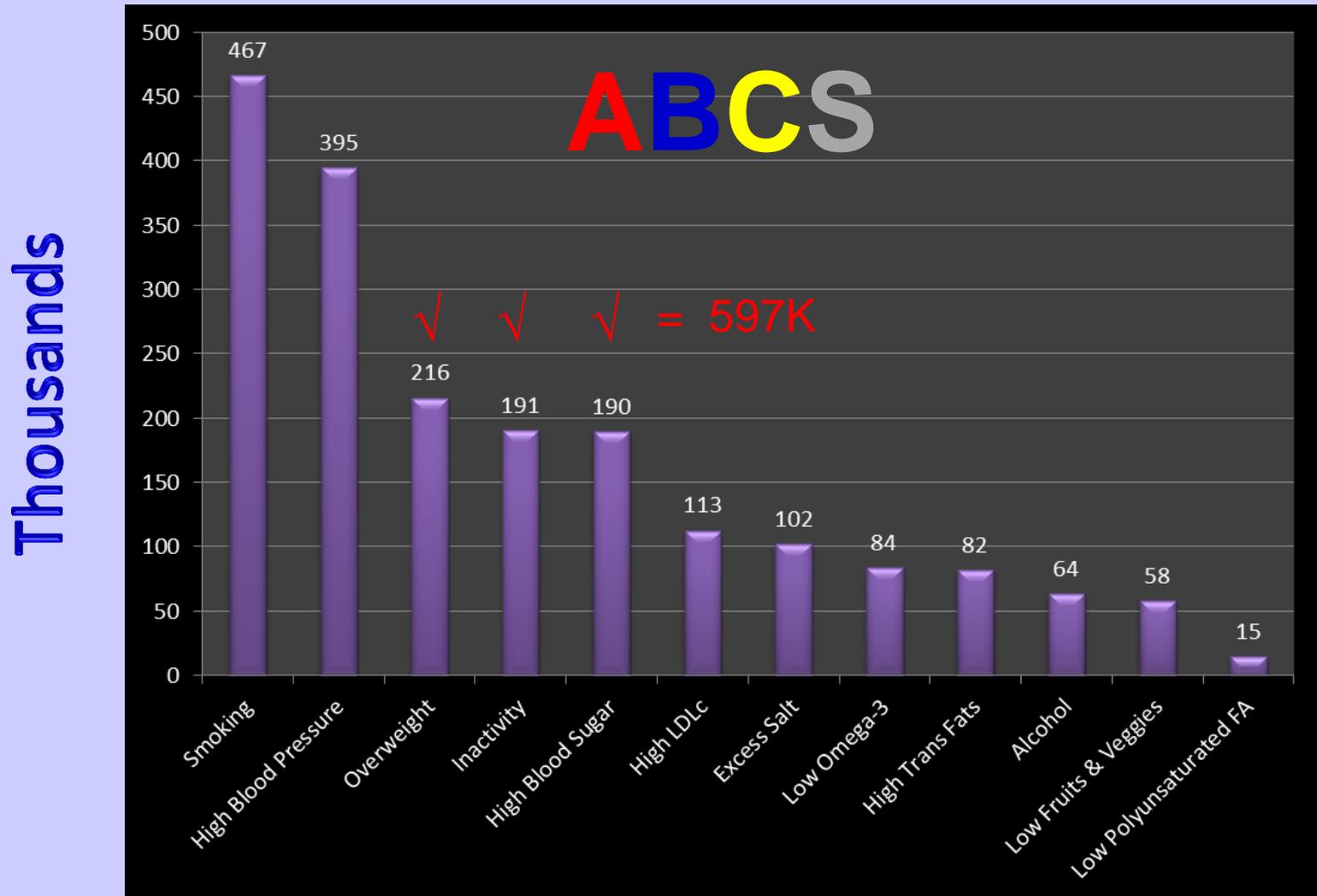
Do you know your

abcS

for Health?



Preventable Causes of Death in the United States—2008



Danaei G et al. The preventable causes of death in the United States. National Center for Health Statistics. PLoS Med. 2009 Apr28;6(4):e1000058.



Title: Gila River Health Care (GRHC) Diabetes Care Program (DCP)—A team based approach to improve diabetes care and prevent Cardiovascular Disease (CVD)

Leonard R Sanders MD CDE FACP
Gila River Health Care, USA

The purpose of the GRHC diabetes care program is to improve diabetes care by implementing a team-based and electronic health record (EHR) assisted approach to controlling the ABCS and addressing the 11 National Committee for Quality Assurance (NCQA) parameters for excellence in diabetes care. GRHC provides care to nearly 6000 diabetics with Type 2 diabetes. Based on numerous published studies showing improved or decreased CVD complications, NCQA recommends controlling A1C (A), blood pressure (B), LDL cholesterol (C), and smoking (S), and routinely examining the eyes, feet, and kidneys of diabetic patients. Despite the proven health benefits of the NCQA recommendations, they are achieved in less than 15% of US diabetics. By implementing a team-based approach using the EHR, algorithms, templates, and reminders GRHC has achieved the NCQA required **75 points** for certification of these goals within 3 months in **285 patients** and has maintained these certification requirements for an additional **20 months**. This compares to only a **45 point** total in diabetics not in the program. Our study shows that a team-based approach allows providers to achieve NCQA Certification requirements by 1) designing team care based on the Chronic Care Model, 2) using the EHR and automated systems as essential success tools, and 3) ***with this update, we outline reasons for therapeutic inertia and patient non-adherence as roadblocks to successful management.*** In addition we outline ways to improve Community interaction with the healthcare system to improve patient awareness and adherence.



2011 – NCQA Diabetes Recognition Program

ABCS

Clinical Measures	Criteria	Points
HbA1c Poor Control <9.0%	>=85% of patients in sample	12
HbA1c Control <8.0%	>=60% of patients in sample	8
HbA1c Control <7.0%	>=40% of patients in sample	5
Blood Pressure Control < 140/90 mm Hg	> 65% of patients in sample	15
Blood Pressure Control <130/80 mm Hg	>=25% of patients in sample	10
LDL Control <= 130 mg/dl	>=63% of patients in sample	10
LDL Control <100 mg/dl	>=36% of patients in sample	10
Smoking Status and Cessation Advice or Treatment	>=80% of patients in sample	10
Eye Examination	>=60% of patients in sample	10
Nephropathy Assessment	>=80% of patients in sample	5
Foot Examination	>=80% of patients in sample	5
Total Points		100
Points Needed to Achieve Recognition		75

SDH

<http://www.ncqa.org/tabid/1023/Default.aspx>

CVD

GRHC Diabetics Seen at least 3 times in the Past Year
 Comparison of 285 Diabetics in the DCP Vs the other 5861 Diabetics
 Data Current as of 14 April 2012

NCQA - Comparison Diabetes Disease Management Certification			Active DCP 285	All DCP 346	ADP less 5515 All DCP	ADP 5861				
<i>Total NCQA Points Achieved</i>			% Meeting Goal Active DCP	Active DCP NCQA Points Achieved	% Meeting Goal All DCP	All DCP NCQA Points Achieved	% Meeting Goal ADP	ADP - ALL DCP	% Meeting Goal ADP	ADP NCQA Points Achieved
HbA1C < 9.0% (poor control)	>= 85% of Sample	12	43.16	0	41.62	0	72.62	0	70.79	0
HbA1C < 8.0%	>= 60% of Sample	8	20.70	0	19.36	0	52.58	0	50.62	0
HbA1C < 7.0%	>= 40% of Sample	5	9.47	0	8.09	0	38.77	0	36.96	0
Blood Pressure <= 140/90 mm Hg	>= 65% of Sample	15	99.65	15	99.13	15	98.48	15	98.52	15
Blood Pressure < 130/80 mm Hg	>= 25% of Sample	10	54.39	10	52.89	10	43.55	10	44.11	10
Eye Examination	>= 60% of Sample	10	65.61	10	63.87	10	34.18	0	35.93	0
Smoking Status & Cessation Advice or Treatment	>= 80% of Sample	10	88.42	10	82.95	10	39.96	0	42.50	0
LDL-C <= 130 mg/DL	>= 63% of Sample	10	89.12	10	87.86	10	75.92	10	76.63	10
LDL-C < 100 mg/DL	>= 36% of Sample	10	67.02	10	65.90	10	52.09	10	52.91	10
Nephropathy Assessment	>= 80% of Sample	5	89.12	5	85.26	5	45.17	0	47.53	0
Foot Examination		5	88.42	5	84.39	5	34.72	0	37.66	0
Total NCQA Points Achieved				75		75		45		45

NCQA: National Committee for Quality Assurance
 NCQA certifications denote excellent diabetes care.
 Seventy Five Points are needed to be certified .

Evidence Based Guidelines
Integrated into Practice --
Algorithms of Diabetes Care

GRHC Diabetes Care

EHR – ABCS
Reminders
& Templates
Disease Registry,
PCP, PDCA DATA

Community

Health Care System

Resources and Policies

Health Care Organization

SDH =

Self-
Management
Support

Decision
Support

Delivery
System
Design

Clinical
Information
Systems

ABCS ≠ CVD

Teams – Patient & Family, MD, NP,
PA, RD, PhD, RN/LPN, MA, PharmD,
DMD/DDS, CDE, CM, OD, DPM, CHN,
DCC, PHN (RN/LPN), CHR, CAC, Clerks,
DCPC, Data Mgr, Admin, Grants

Support patient & family to be
Major managers of care

Informed,
Activated
Patient & Family

Productive
Interactions

Prepared,
Proactive
Practice Team

Empowered

Self-determined

PDCA

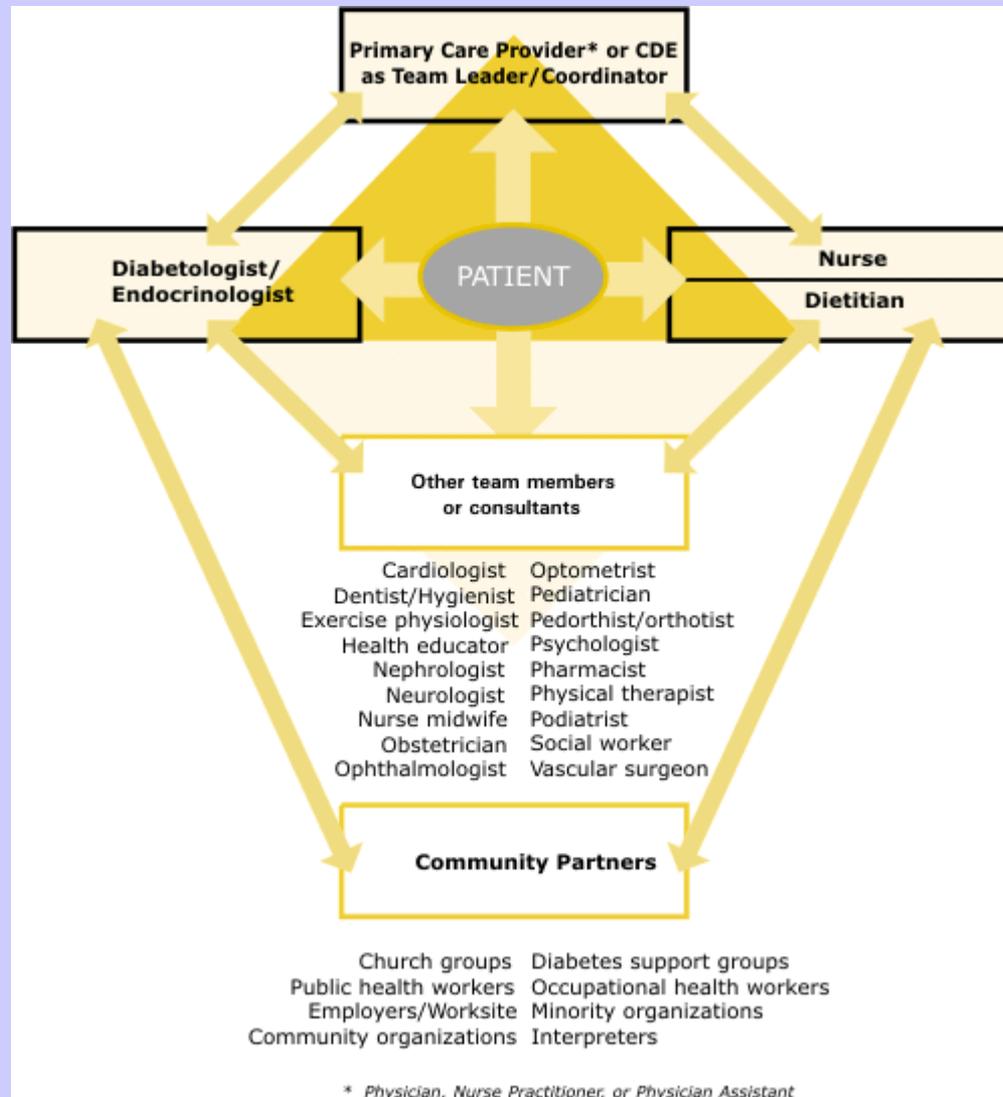
LRSMD

Cultural Sensitivity Promotes Acceptance & Self-determination

ABCS of Diabetes & CKD Care

Note:
Similarities
to the
Medical
Home

Note:
Similarities
to the
Chronic
Care Model



ABCS

Teamwork



GRHC Diabetes Care Program (DCP)—A Team-Based Approach to **Prevent** Cardiovascular Disease (**CVD**)

Empowerment—the act of conferring legality or sanction or formal warrant—to give official authority or legal power.

- **Remind you that you are empowered--encouragement**

Self-Determination—free choice of one's own acts or states without external compulsion.

- **Provide the tools and education to make choices for diabetes self-management.**

Diabetes self-management—effectively direct your own activities toward getting to your goal of preventing or controlling diabetes

- **Let you know the What's and Why's of effective self-management—ABCS**

Assurance—freedom from doubt, guaranteed or being certain in mind

- **Our job is to help provide you with complete assurance that you can manage your diabetes and prevent complications.**

Do the math. How many hours do you spend with your healthcare team?

HCP

$$365 \text{ days/year} \times 24 \text{ hr/day} = 8760 \text{ hr / year}$$

* Support from healthcare personnel—

SDH

$$0.5 \text{ hr (doctor)} + 1.0 \text{ (support) hr} = 1.5 \text{ hr}$$

$$6 \text{ x per year} = 9 \text{ hr / year} = < \mathbf{0.1\%}$$

**Empowerment &
Self-Determination**

$$8751 \text{ hours} = > \mathbf{99.9\%}$$

≈8750 – Self Management

Empowerment 99% Patient Motivation Interviewing

READS

- Roll with Resistance
- Express Empathy
- Avoid Argumentation
- Develop Discrepancies
- Support Self-efficacy

Stages of Change

- Precontemplation
- Contemplation
- Preparation
- Action
- Maintenance

ABCS

PDCA

Platinum Rule: Do unto others as they would have you do unto them.

Golden Rule: Do unto others as you would have them do unto you.

Cultural Sensitivity Promotes Acceptance & Self-determination

Empowerment 99% Patient Motivation Interviewing

READS

- Roll with Resistance
- Express Empathy
- Avoid Argumentation
- Develop Discrepancies
- Support Self-efficacy

PATIENT CENTERED

- Caring
- Collaboration
- Patient centered
- Relationship
- Maintenance

ABCS

PDCA

Platinum Rule: Do unto others as they would have you do unto them.

Golden Rule: Do unto others as you would have them do unto you.

Cultural Sensitivity Promotes Acceptance & Self-determination

AADE-7+1

Self-Care Behaviors

JAMA March 2012

Seven health behaviors and health factors currently define cardiovascular health: smoking status, body mass index, dietary content, participation in physical activity, and levels of blood pressure, blood glucose, and total cholesterol.

ABCS = CVD

ABCS ≠ CVD

Self-Care Behaviors

- Healthy **E**ating
- Being **A**ctive
- **M**onitoring
- Taking **M**edications
- **P**roblem Solving
- Reducing the **R**isks
- Healthy **C**oping
- **S**leeping Well

Diabetes = CVD

Only If Poorly Controlled

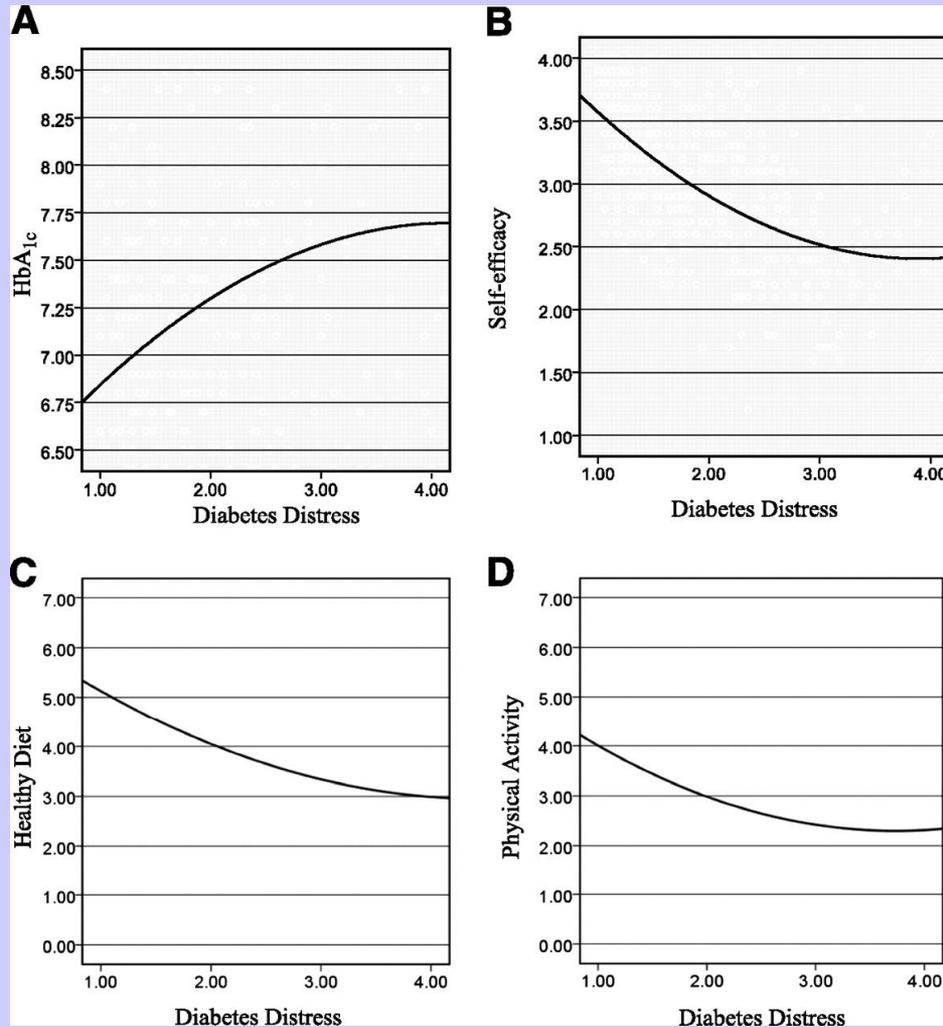
A**B****C****S**

Patients control their health (**A****B****C****S**)—not us.

SDH control the patient

“Life gets in the way”—SDH—MI

Associations between 3D Study DDS17 scores and the key diabetes variables of HbA1c (A), self-efficacy (B), healthy diet (C), and physical activity (D) using fitted quadratic lines.



Fisher L et al. Dia Care 2012;35:259-264



Why I DNKA, don't take meds, and don't do TLC (Therapeutic Lifestyle Changes)?

- Providing childcare
- Transportation
- Lack of family support
- Loss of Family Support
- Stress kids doing drugs
- Kids took my money for drugs
- No home or homeless
- Diabetes inevitable
- Complications inevitable
- Work
- I don't want to be criticized
- I don't want to think about it
- Family conflicts & crisis
- Low or no income
- Loss of loved one
- Work, stress or conflict
- Loss of employment
- Social gatherings = food
- I like junk food
- I don't have time
- I don't feel like exercising
- I'm scared of dialysis

Social Determinants of Health

“The social determinants of health are the daily conditions and activities we experience throughout our lives from conception to the grave and the socioeconomic factors that determine those conditions and activities.”

Leonard R Sanders MD—2011

SPECIAL ARTICLE

SHATTUCK LECTURE

We Can Do Better — Improving the Health of the American People

Steven A. Schroeder, M.D.

THE UNITED STATES SPENDS MORE ON HEALTH CARE THAN ANY OTHER nation in the world, yet it ranks poorly on nearly every measure of health status. How can this be? What explains this apparent paradox?

The two-part answer is deceptively simple — first, the pathways to better health do not generally depend on better health care, and second, even in those instances in which health care is important, too many Americans do not receive it, receive it too late, or receive poor-quality care. In this lecture, I first summarize where the United States stands in international rankings of health status. Next, using the concept of determinants of premature death as a key measure of health status, I dis-

From the Department of Medicine, University of California at San Francisco, San Francisco. Address reprint requests to Dr. Schroeder at the Department of Medicine, University of California at San Francisco, 3333 California St., Suite 430, San Francisco, CA 94143, or at schroeder@medicine.ucsf.edu.

N Engl J Med 2007;357:1221-8.

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N ENGL J MED 357;12 WWW.NEJM.ORG SEPTEMBER 20, 2007

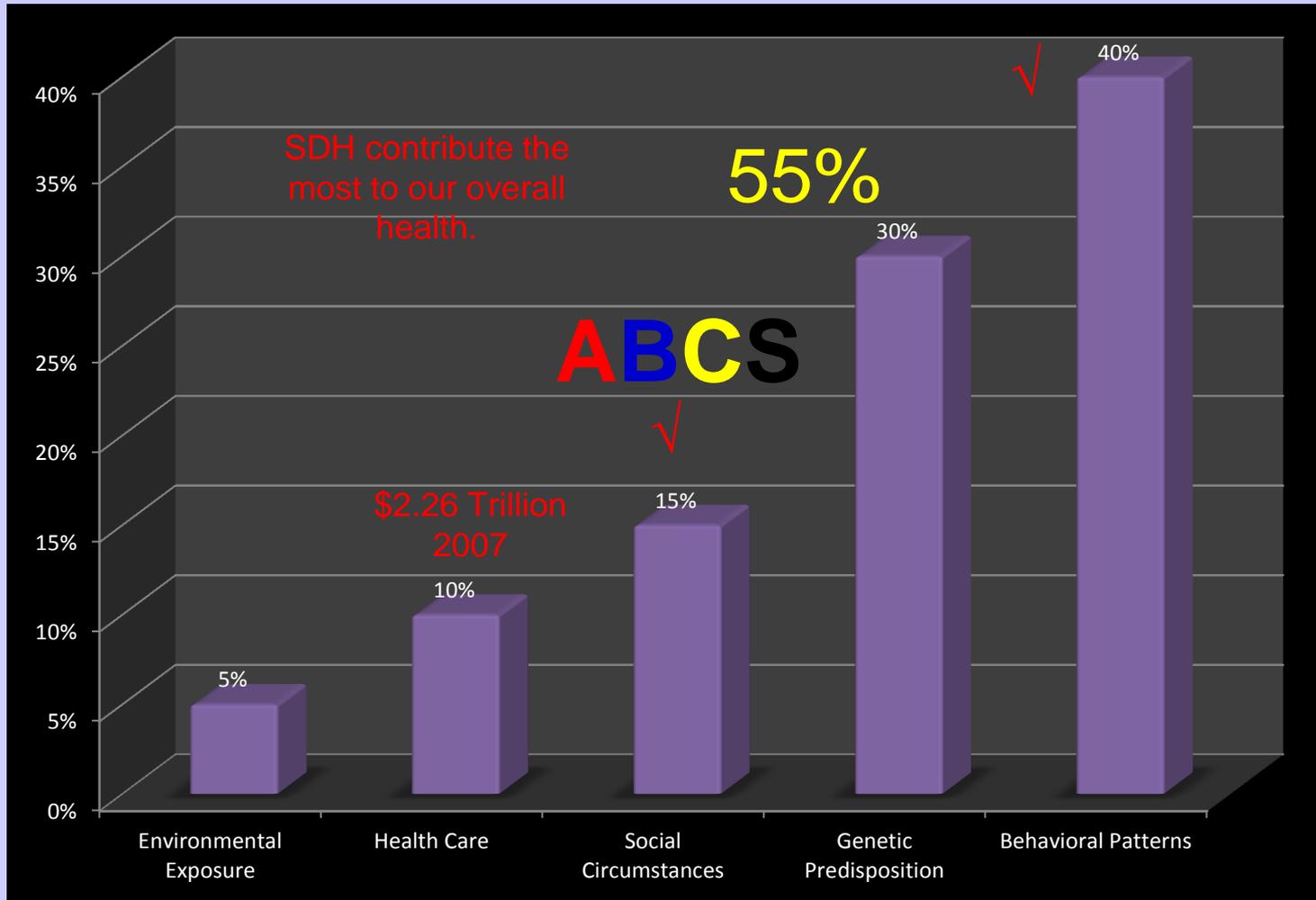
“—first, the pathways to better health do not generally depend on better health care, and second, even in those instances in which health care is important, too many Americans do not receive it, receive it too late or receive poor-quality care.”

VIP

Steven A Schroeder, MD

New England Journal of Medicine—2007

Determinants of Health and Their Contribution to Premature Death



McGinnis et al. adapted by Schroeder S. In N Engl J Med 2007;357:1221-1228

A health care system – even the best health care system in the world – will be only one of the ingredients that determine whether your life will be long or short, healthy or sick, full of fulfillment, or empty with despair.

– The Honorable Roy Romanow, 2004

Social Determinants of Health

“The primary factors that determine our overall health are the living conditions we experience, the health and social services we receive, and our ability to obtain quality education, food and housing, and other factors. Each of these social determinants of health has such strong effects on our overall health that they are felt to be actually much stronger than the ones associated with behaviors such as diet, physical activity, and even tobacco, (illicit drugs), and excessive alcohol use.”

Source: Raphael, D. (2009). Social Determinants of Health: Canadian Perspectives, 2nd edition. Toronto: Canadian Scholars' Press.

Social Determinants of Health

“The social determinants of health are the conditions in which people are born, grow, live, work and age, including the health system. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels, which are themselves influenced by policy choices. The social determinants of health are mostly responsible for health inequities—the unfair and avoidable differences in health status seen within and between countries.”

—WHO 2008

Social Determinants of Health

“The social determinants of health are the daily conditions and activities we experience throughout our lives from conception to the grave and the socioeconomic factors that determine those conditions and activities.”

Leonard R Sanders MD—2011

Social Determinants of Health

- Income and income distribution ←
- Education ←
- Unemployment and job security
- Employment and working conditions
- Early childhood development
- Food insecurity
- Housing
- Social exclusion
- Social safety net
- **Health services** ←
- Aboriginal status
- Gender
- Race
- Disability

~STRESS~

LIMIT

Life's most important things.

DNKA

Did not keep appointment.

Source: Raphael, D. (2009). Social Determinants of Health: Canadian Perspectives, 2nd edition. Toronto: Canadian Scholars' Press.

SDH

~STRESS~

Maslow's Hierarchy of Needs

Experience purpose and meaning, and realize all internal potentials.

“Be all you can be.”

Self-actualization

morality, creativity, spontaneity, problem solving, lack of prejudice, acceptance of facts

Esteem

self-esteem, confidence, achievement, respect of others, respect by others

Love/Belonging

friendship, family, sexual intimacy

Safety / Security

security of body, of employment, of resources, of morality, of the family, of health, of property

Physiological

breathing, food, water, sex, sleep, homeostasis, excretion

—conditions and activities we experience throughout our lives.

“Prolonged stress, or rather the responses it engenders, are known to have deleterious effects on a number of biological systems and to give rise to a number of illnesses.”

– Robert Evans, 1994

THE ANATOMY OF ANXIETY

TIME Diagram by Joe Lertola.
Text by Alice Park

WHAT TRIGGERS IT ...

When the senses pick up a threat—a loud noise, a scary sight, a creepy feeling—the information takes two different routes through the brain

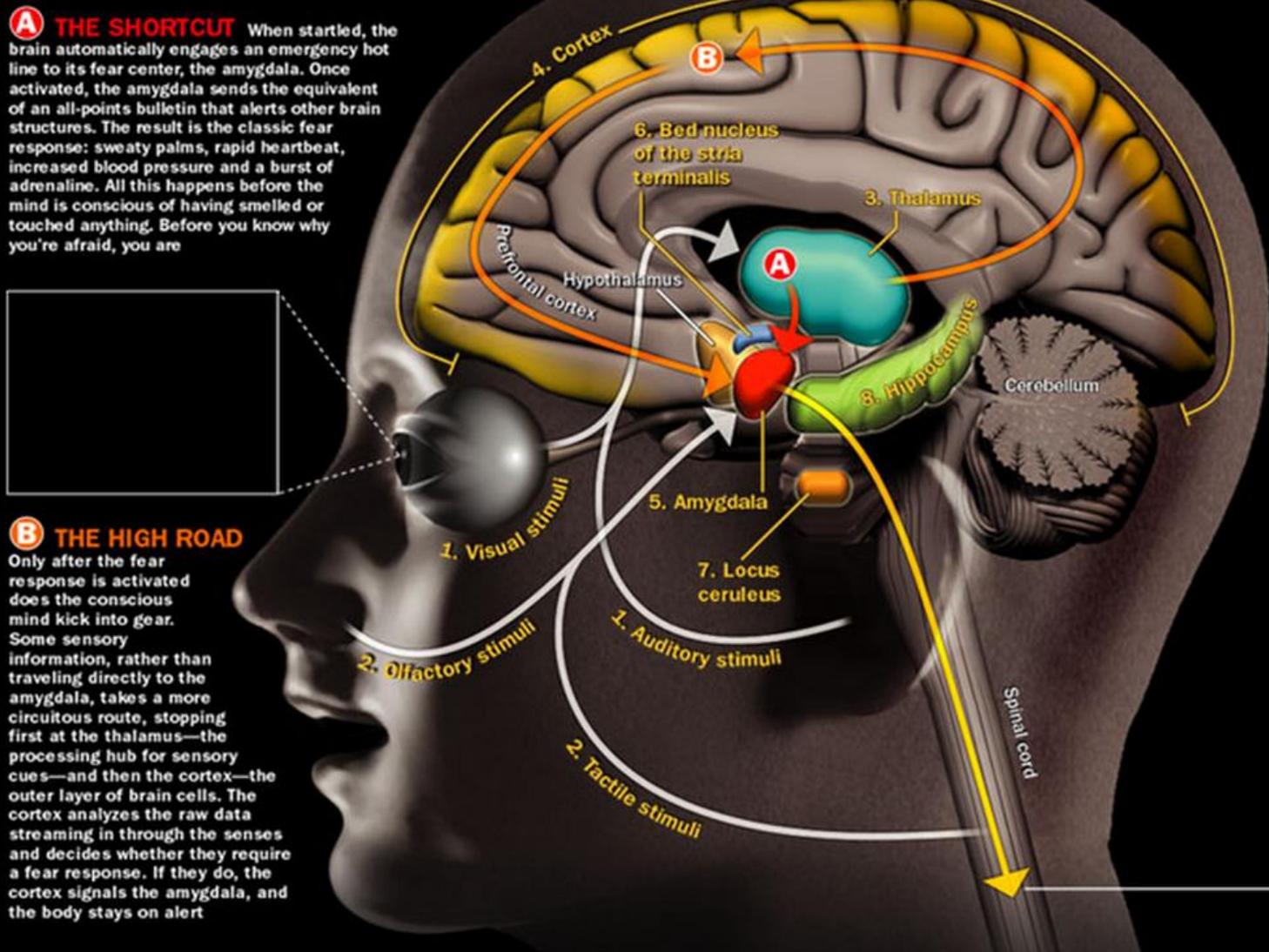
A THE SHORTCUT When startled, the brain automatically engages an emergency hot line to its fear center, the amygdala. Once activated, the amygdala sends the equivalent of an all-points bulletin that alerts other brain structures. The result is the classic fear response: sweaty palms, rapid heartbeat, increased blood pressure and a burst of adrenaline. All this happens before the mind is conscious of having smelled or touched anything. Before you know why you're afraid, you are

B THE HIGH ROAD

Only after the fear response is activated does the conscious mind kick into gear. Some sensory information, rather than traveling directly to the amygdala, takes a more circuitous route, stopping first at the thalamus—the processing hub for sensory cues—and then the cortex—the outer layer of brain cells. The cortex analyzes the raw data streaming in through the senses and decides whether they require a fear response. If they do, the cortex signals the amygdala, and the body stays on alert

... AND HOW THE BODY RESPONDS

By putting the brain on alert, the amygdala triggers a series of changes in brain chemicals and hormones that puts the entire body in anxiety mode



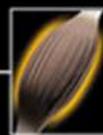
STRESS-HORMONE BOOST

Responding to signals from the hypothalamus and pituitary gland, the adrenal glands pump out high levels of the stress hormone cortisol. Too much cortisol short-circuits the cells in the hippocampus, making it difficult to organize the memory of a trauma or stressful experience. Memories lose their context and become fragmented



RACING HEARTBEAT

The body's sympathetic nervous system, responsible for heart rate and breathing, shifts into overdrive. The heart beats faster, blood pressure rises and the lungs hyperventilate. Sweat increases, and even the nerve endings on the skin tingle into action, creating goose bumps



FIGHT, FLIGHT OR FRIGHT

The senses become hyperalert, drinking in every detail of the surroundings and looking for potential new threats. Adrenaline shoots to the muscles, preparing the body to fight or flee



DIGESTION SHUTDOWN

The brain stops thinking about things that bring pleasure, shifting its focus instead to identifying potential dangers. To ensure that no energy is wasted on digestion, the body will sometimes respond by emptying the digestive tract through involuntary vomiting, urination or defecation

Social Determinants of Health and the Pathways to Health and Illness

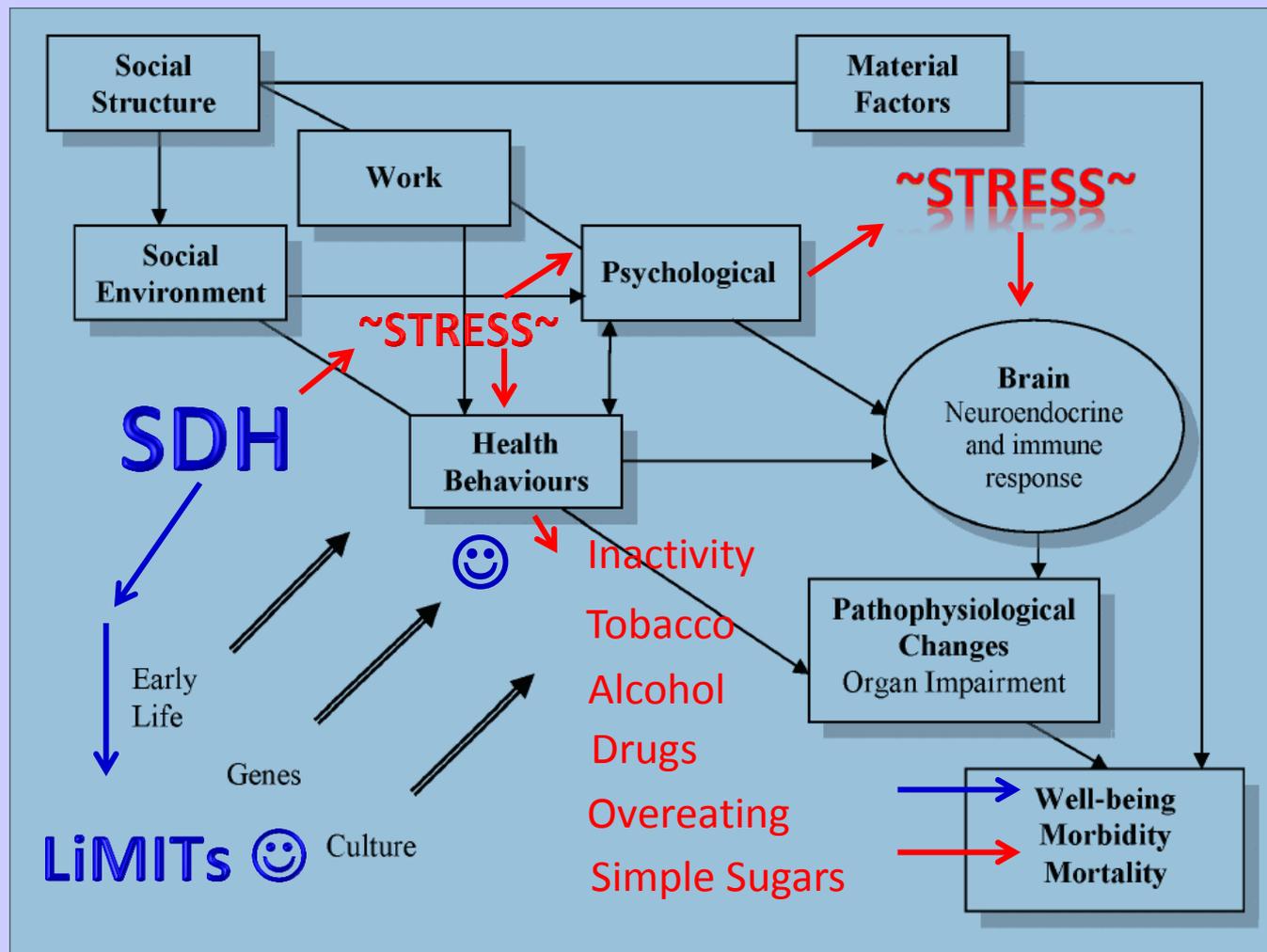
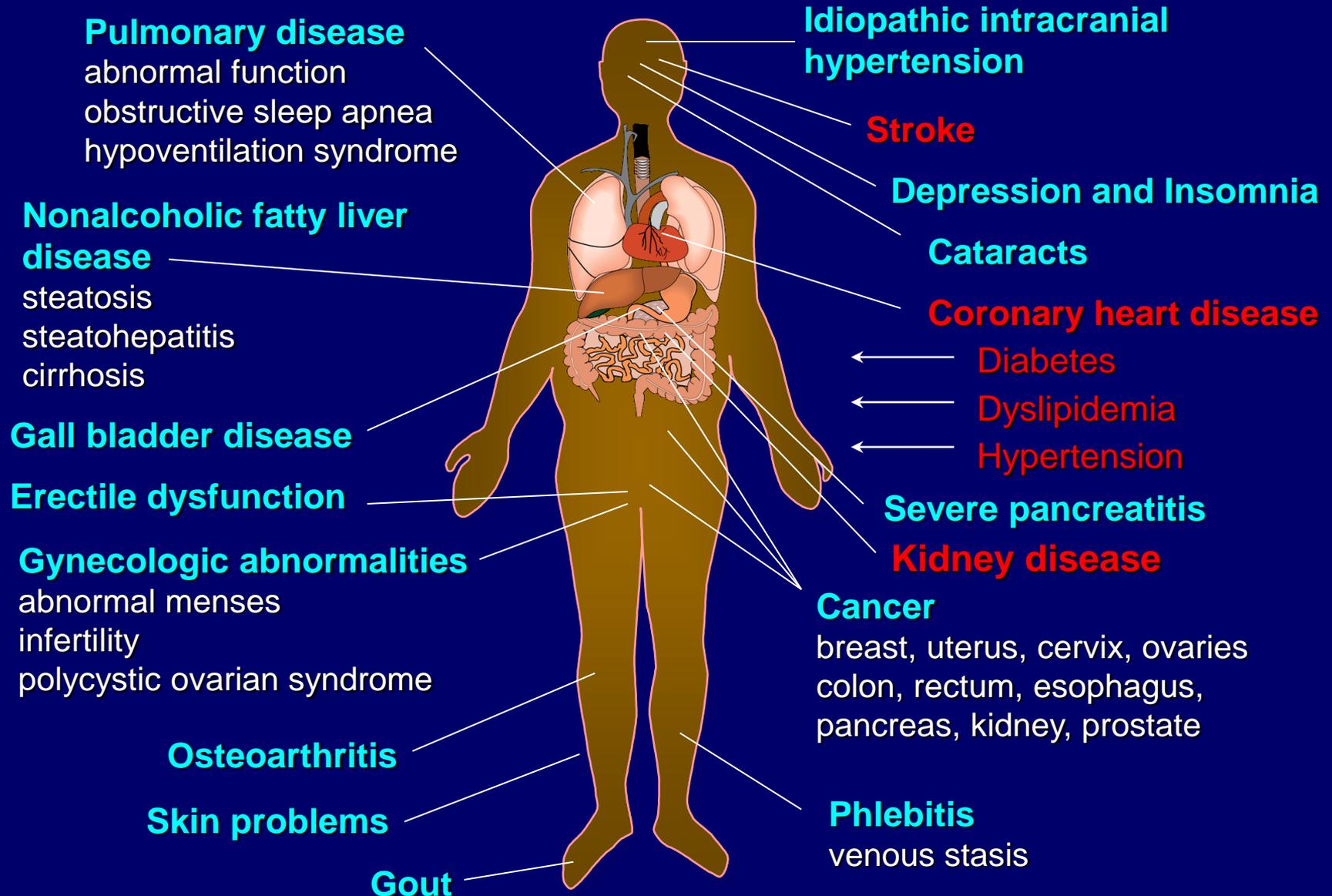


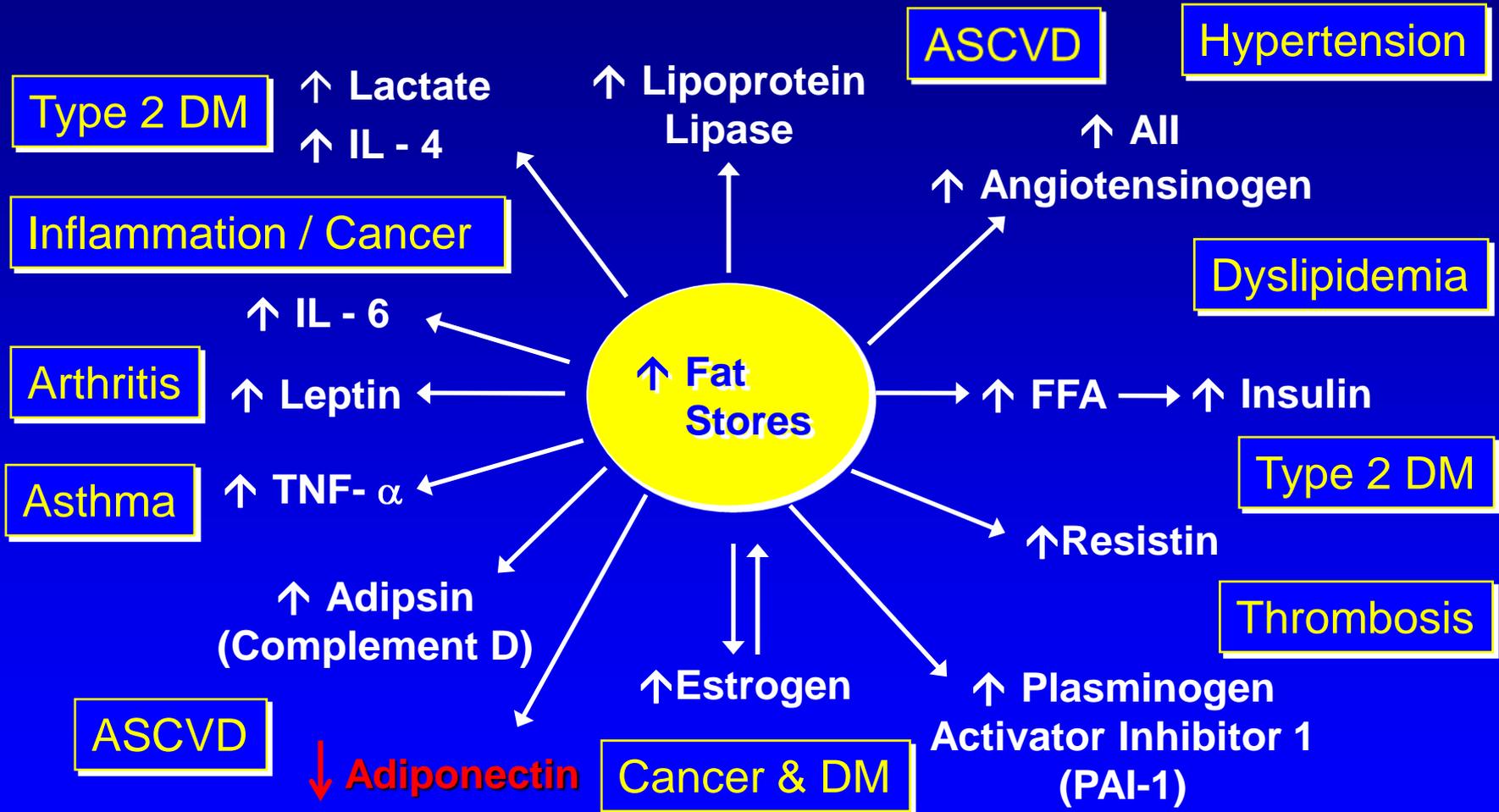
Figure shows how the organization of society influences the living and working conditions we experience that then go on to shape health. These processes operate through material, psychosocial, and behavioral pathways. At all stages of life, genetics, early life, and cultural factors are also strong influences upon health.

Medical Complications of Obesity



How Does Obesity Cause Disease?

Abnormal production of hormones and inflammation in fat



SDH

“The social determinants of health are the daily conditions and activities we experience throughout our lives from conception to the grave and the socioeconomic factors that determine those conditions and activities.”

Leonard R Sanders MD—2011



What good does it do to treat people's illnesses, to then send them back to the conditions that made them sick?

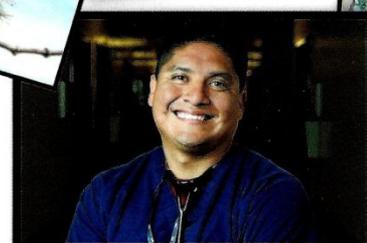
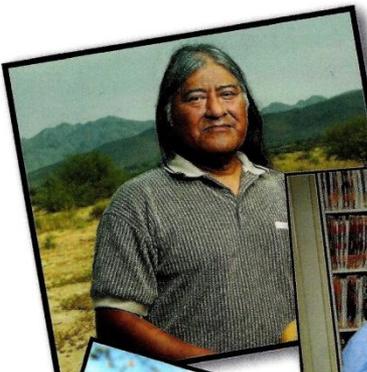
The Hon. Monique Bégin, PC, FRSC, OC

Member of WHO Commission on Social Determinants of Health

Do you know your

abcS

for Health?



There are many ways to stay active including walking, taking the stairs, housework, dancing, swimming, and others.

Start slow and gradually build up to at least 30 minutes daily 5-7 times per week. This time can be broken up throughout the day. For example, you can walk 10 minutes a day to start. Then increase to 10 minutes twice a day and finally three times during the day for total of 30 minutes. You can then gradually work up to 30 minutes at a time. Always ask your healthcare provider about an exercise program before you start. However, you can usually safely increase the activity you are already doing. The Life Center Wellness program can help you increase your activity and make an exercise program just for you.

Keep a positive attitude. Remember, even if your weight is not controlled, you can still control your ABCS.

Know your blood sugar as well as your ABCS. Your healthcare provider will usually ask you to measure your sugar at home. Always bring your glucose meter in to each visit with your healthcare provider. Ask your provider for a printout of your blood sugar readings. This will help you and your healthcare providers make adjustments in your diet, exercise program, and medications.

Remember to take your medications exactly as prescribed and try not to miss a dose. This is one of the best and easiest ways to control your ABCS. Most diabetics will eventually need insulin.

It is very important to stop or not start smoking. Smoking damages all blood vessels in the body and will undo most of the good effects of controlling A, B, and C. If you do smoke, there are many ways to help you quit. Ask your healthcare providers.

Last and most important is to remember that you are the main person who must understand and manage you diabetes. We encourage you to read this pamphlet several times and contact your healthcare providers if you have any questions.

Preventing cardio vascular disease.

A graphic representation of a river and a shegoi (creosote) plant constitute the new Gila River Health Care logo. Traditionally the shegoi plant has been used for centuries by the Akimel O'otham (Pima) and Pee Posh (Maricopa) tribes for a variety of medicinal purposes and the water of the river ensures that plants, animals and humans can live a healthy life in our harsh desert environment.

	GOAL
A for A1c	< 7%
B for Blood Pressure	< 130/80
C for (LDL) Cholesterol	< 70 -100
S for Smoking	No Smoking

KNOW YOUR ABCs

and how to control them.

We know that poorly controlled diabetes can cause many problems with our health. It does this by hurting the blood vessels throughout the body. This can cause stroke, heart attack, kidney disease (including the need for dialysis), decreased vision (including blindness), leg ulcers, foot infection, and nerve damage (numbness and tingling in the feet and hands and sometimes pain).

What we sometimes forget is that excellently controlled diabetics don't get the problems mentioned above. Furthermore, taking good care of our health can improve problems if present and keep our blood vessels healthy. Early healthy habits can even prevent diabetes from ever happening. The most important thing you can do to slow or prevent the complications of diabetes is to control your ABCs.

A = A1c (short for hemoglobin A1c) tells us the average glucose control over the past 8 to 12 weeks. The goal is less than 7%.

B = Blood pressure.
The goal is between 120/75 and 130/80 mmHg.

C = Cholesterol.
The main cholesterol we are concerned with is LDL cholesterol (LDLc). However, cholesterol is also in triglycerides and HDL. LDL is sometimes called "bad cholesterol", and HDL is sometimes called "good cholesterol." We would like the LDL cholesterol to be less than 70-100 mg/dl. The exact goal for your LDLc depends on your overall health status. If you have high risk for heart problems, your health-care provider will want your LDLc to be less than 70 mg/dl. The goal for HDL is above 50 mg/dl. Triglycerides should be less than 150 mg/dl.

S = Smoking.
Just say no to smoking.

Here are some tips on how to control your ABCs.

- 1) **DESIRE** - You must want to control your ABCs and learn your goals.
- 2) **BELIEF** - You must believe that you can control your ABCs. Know that you can do it.
- 3) **EFFORT** - You should work closely with all of your healthcare providers until you are completely in control and make every effort to obtain your goals.

Controlling your ABCs requires weight control, healthy food choices (eating right), regular exercise (being active), and taking your medications just as prescribed. You also need to check your blood sugar and sometimes your blood pressure at home.

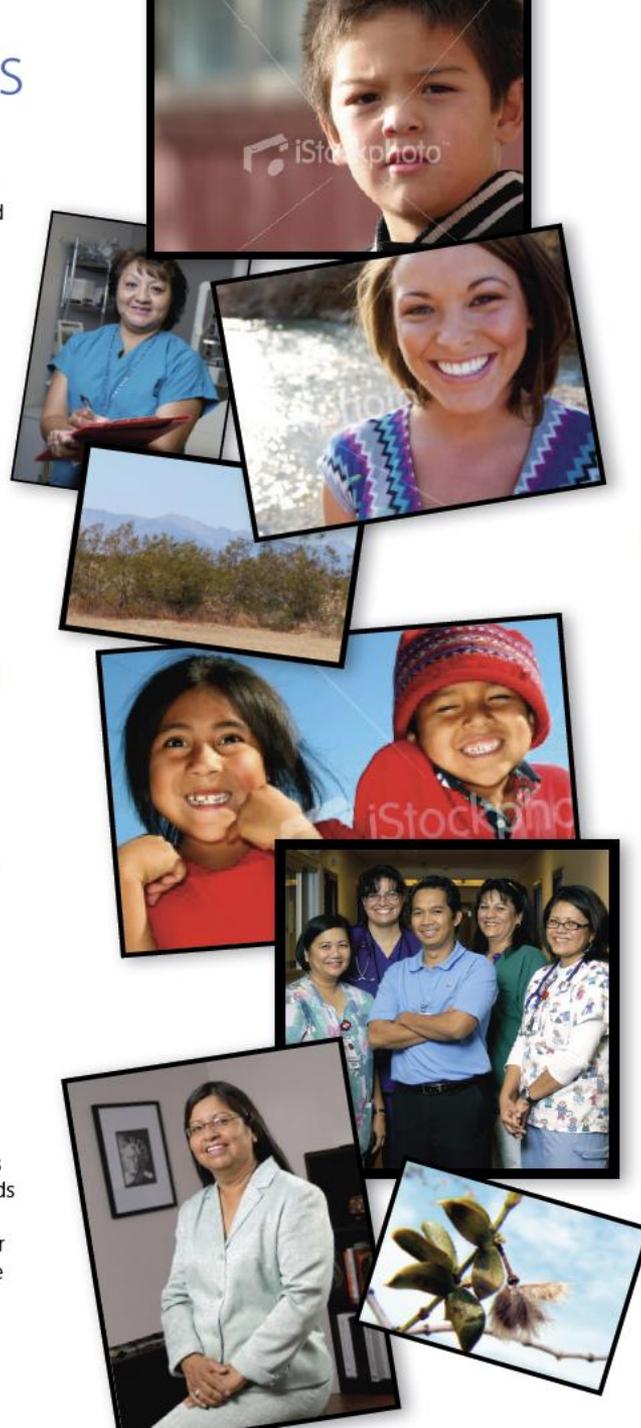
Try not to miss any of your medications. As a rule, you should not double up on your dose if you miss one, but just take the next dose at the usual time. There may be some exceptions to this rule that you may need to discuss with your healthcare provider or pharmacist. To control your ABCs you will also need to keep regular doctor and diabetes educator appointments and get regular and sufficient sleep. Most infants require 16 hours, most teenagers 9 hours, and most adults 7-8 hours of sleep per day for the best health.

Your healthcare providers include your doctor or dentist and his or her team in the clinic. Healthcare providers also include your diabetes educator, your dietitian, your case manager, and any specialist they may refer you to for care.

Working closely with your healthcare providers and getting regular follow-up is one of the best ways to control your ABCs.

The most important parts of weight control are eating right and staying active. This is easier said than done, but you can do it. Ask your dietitian or diabetes educator about The Healthy Plate and portion sizes. Portion size is most important with carbohydrates and proteins. Unless you have kidney problems, you can usually eat as many vegetables as you wish.

If you have kidney problems, always check with your healthcare provider first.



Living with Diabetes

An Everyday Guide for You and Your Family®



AMERICAN COLLEGE OF PHYSICIANS

FOUNDATION

Healthy Plate



ABC'S OF DIABETES CARE



Exercise helps to prevent or improve diabetes and its' problems

Here are a few suggestions to help you get started:

- Walk 5 minutes a day and increase your time every week.⁷
- Park your car farther away when you do your shopping.⁷
- Take the stairs instead of the elevator.⁸
- Get up to change the channel on your TV instead of using the remote.⁸



Treatment of Diabetes & Related Complications

Patient Management of—their

ABCS

Rx Diabetic CVD—same as Rx for Diabetes

Closely related to the Social Determinants of Health

“Life gets in the way”—SDH”

Evidence Based Guidelines
Integrated into Practice --
Algorithms of Diabetes Care

GRHC Diabetes Care

EHR – ABCS
Reminders
& Templates

Disease Registry,
PCP, PDCA DATA

Community

Health System

Resources and Policies

Health Care Organization

SDH =

Self-
Management
Support

Decision
Support

Delivery
System
Design

Clinical
Information
Systems

ABCS ≠ CVD

Teams – Patient & Family, MD, NP,
PA, RD, PhD, RN/LPN, MA, PharmD,
DMD/DDS, CDE, CM, OD, DPM, CHN,
DCC, PHN (RN/LPN), CHR, CAC, Clerks,
DCPC, Data Mgr, Admin, Grants

Support patient & family to be
Major managers of care

Informed,
Activated
Patient & Family

Productive
Interactions

Prepared,
Proactive
Practice Team

Empowered

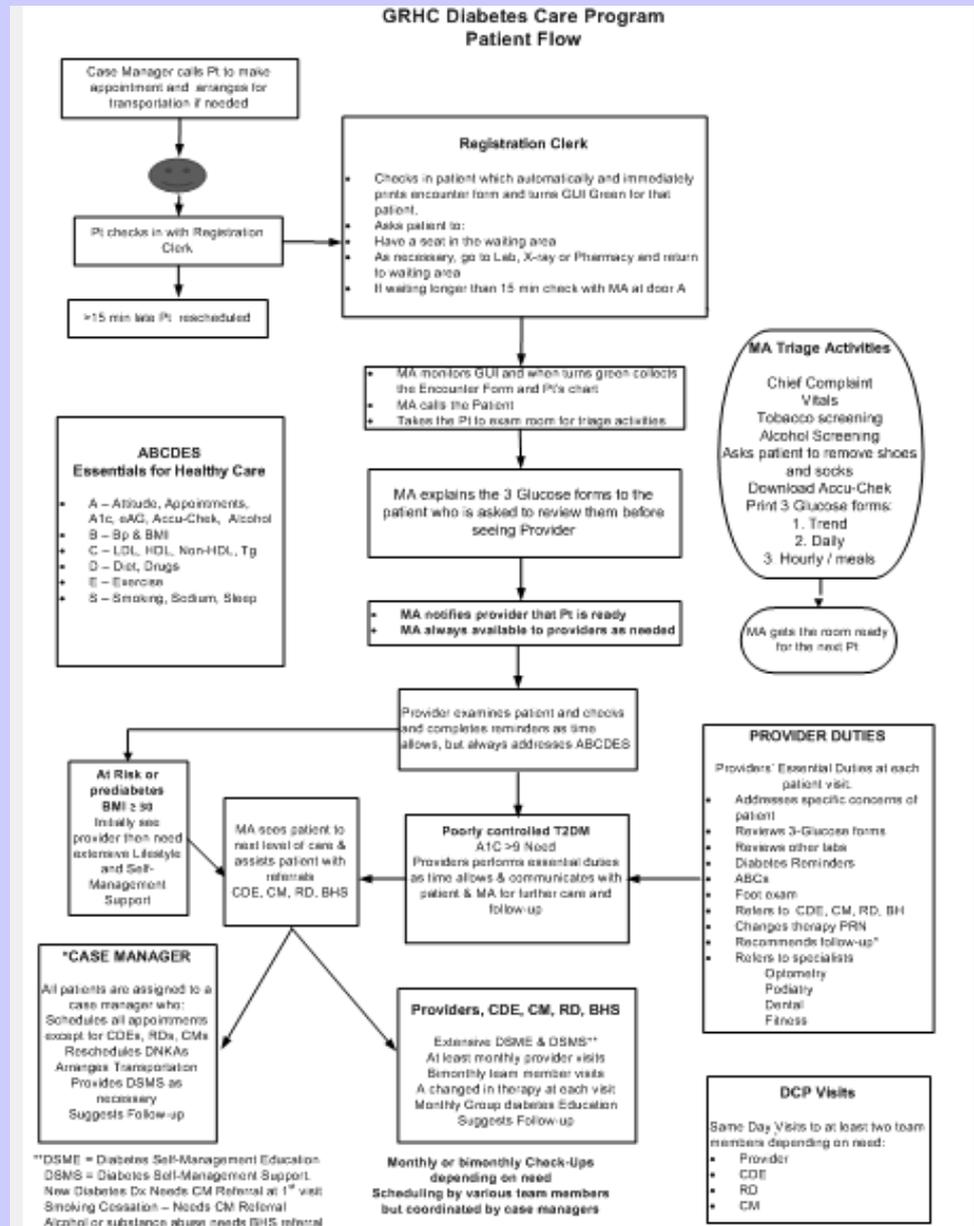
Self-determined

PDCA

LRSMD

Cultural Sensitivity Promotes Acceptance & Self-determination

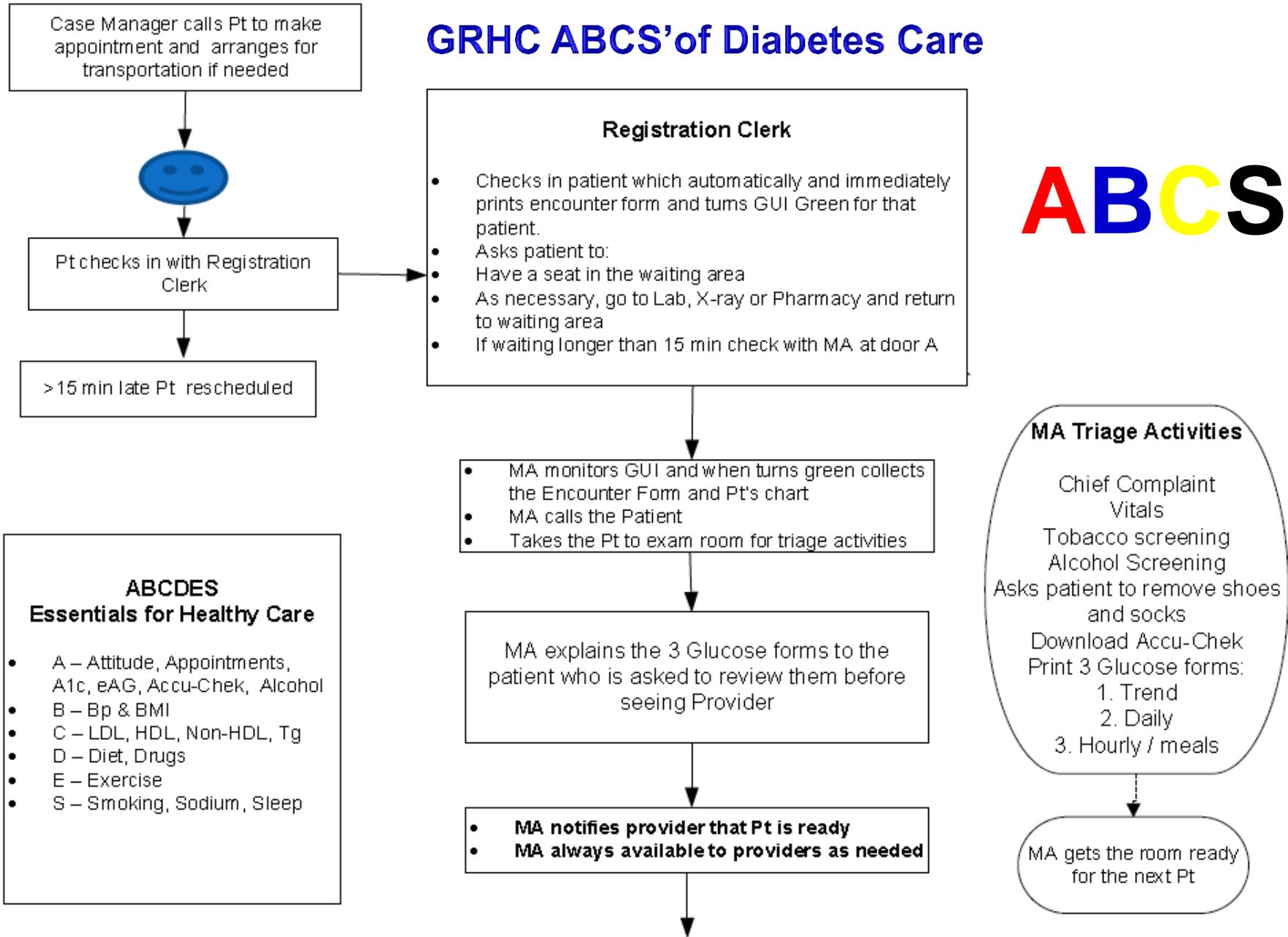
ABCS' of Diabetes Care



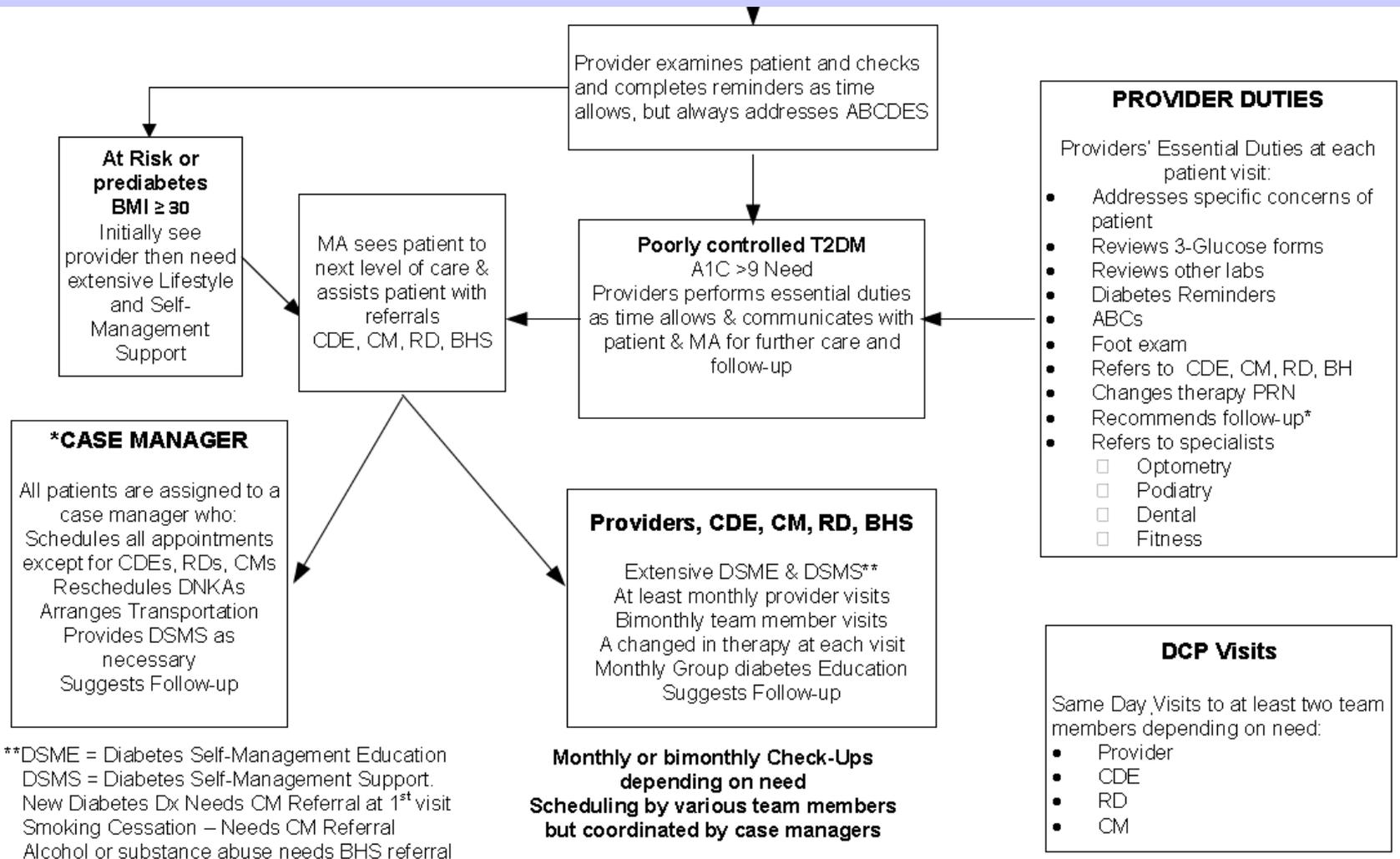
GRHC Diabetes Care Program Patient Flow

GRHC ABCS' of Diabetes Care

ABCS



ABCS'of Diabetes Care



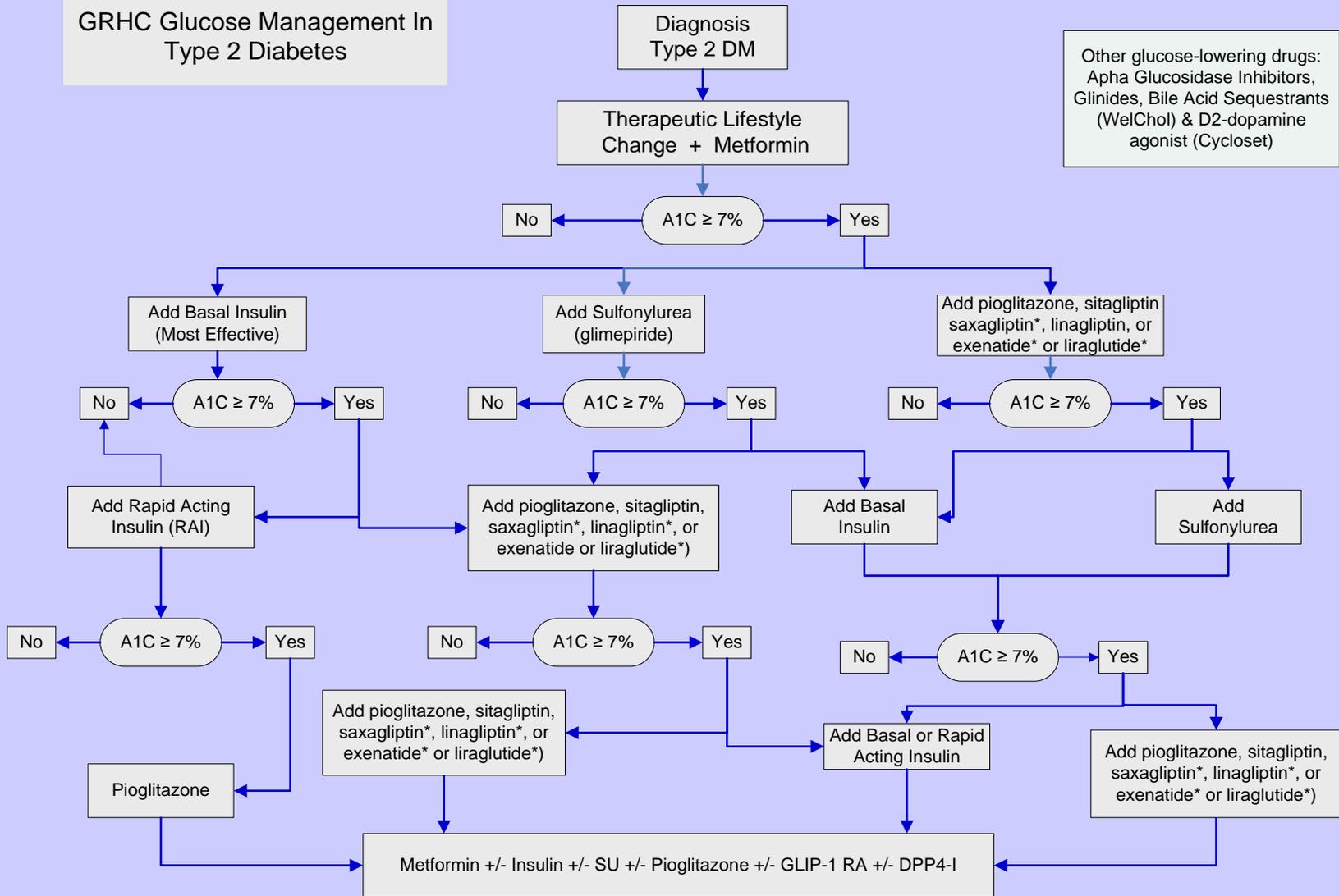
GRHC Diabetes Care

A**B****C**

Algorithms

2011

GRHC Glucose Management In Type 2 Diabetes

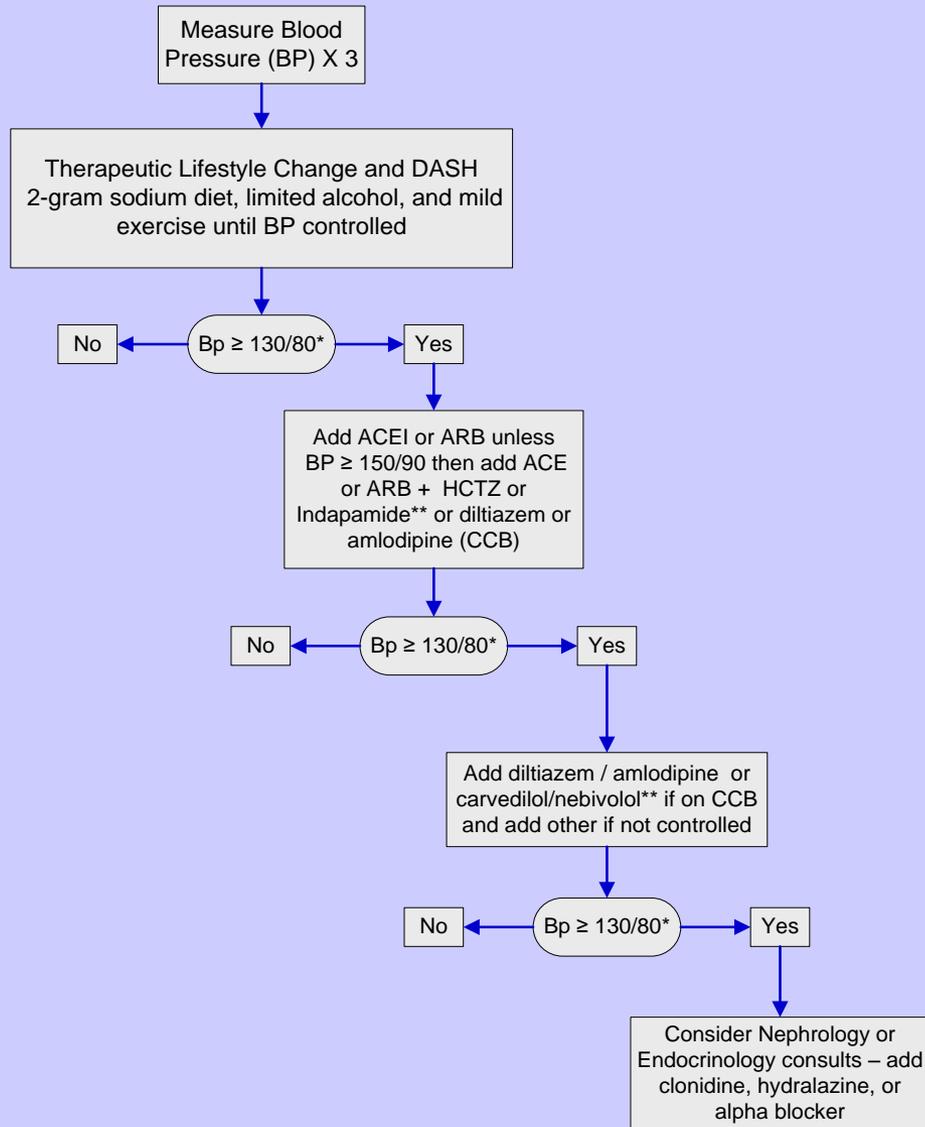


Other glucose-lowering drugs:
 Apha Glucosidase Inhibitors,
 Glinides, Bile Acid Sequestrants
 (WelChol) & D2-dopamine
 agonist (Cycloset)

NOTE: Basal Insulin = Lantus or Detemir / Rapid acting insulin = Humalog (don't use with Glip-1 RA)
 GLIP-1 RA [Byetta (exenatide) & Victoza (liraglutide)] / Glitazone = Pioglitazone 15, 30, or 45 mg / DPP4-Inhibitor = [Januvia (sitagliptin) or Onglyza (Saxagliptin) or Tradjenta (linagliptin)] ---- *Non-formulary item (Requires Prior authorization)

GRHC Hypertension Management in Type 2 Diabetes

1. Unless BP is significantly elevated, obtain 3 Bp readings before treatment to be sure of diagnosis.
2. *Goal BP is $\leq 130/80$ in all patients without orthostatic changes including those with CKD.
3. Goal BP may need to be increased in the elderly or those with orthostatic hypotension.
4. If patient has >500 mg protein in urine consider ACEI/ARB or diltiazem or carvedilol/nebivolol.
5. Maximize one dose if tolerated before adding additional drug if there are no side effects.
6. If GFR < 30 ml/min use furosemide, indapamide, and/or metolazone instead of a thiazide.
7. If BP $>130/80$ after 4 medications or has symptoms, consult with Nephrology or Endocrinology for workup of secondary hypertension.
8. Beta blockers are strongly encourage with history of MI. Carvedilol has better effects on lipids and glucose than other beta blockers. Consider Nebivolol.
9. Order of preference is ACEI / ARB, HCTZ/ indapamide, amlodipine/ diltiazem; carvedilol / nebivolol.
10. Edema indicates a volume component (common cause of resistance) to the BP reduced sodium to 1500-2000 mg daily and consider indapamide/ furosemide.
11. Consider diltiazem after thiazide if ACE or ARB not tolerated. Use with caution with beta blockers.
12. Pregnancy—methyldopa, hydralazine, and labetalol.
13. Sample dosing: lisinopril 20-40 mg daily, olmesartan 20-40 mg daily, HCTZ 12.5-25 mg daily, indapamide 1.25-2.5mg daily, diltiazem ER 120-360 mg daily, amlodipine 5-10 mg daily, carvedilol 6.25 to 25 mg BID, nebivolol 5-10 mg daily.
14. Check BP monthly until controlled and remind patient about excess Na (<2000 mg dialy).
15. Consider home BP monitoring. **non-formulary drug.



GRHC Lipid Management in Type 2 Diabetes Mellitus

Determine Fasting Lipid Profile
And start Therapeutic Lifestyle Change (TLC)

Isolated low HDLc < 40 mg/dl
(LDLc < 100 mg/dl & TG < 150 mg/dl)

Consider Fibrate*,
Niacin, Statin, fish oil

Elevated LDLc ≥ 100 mg/dl

Add Statin, titrate to
goal LDLc and
reinforce TLC

LDL-C > 100 mg/dL. Add
ezetimibe or bile acid
resin-binder (colesevelam),
then niacin

If LDL-C > 100mg/dL

Elevated TG ≥ 150 mg/dl

150-199 mg/dL

TLC then
consider fibrate*

<130 mg/dL

Add fibrate*
or Niacin

200-399 mg/dL

TLC & Calculate
Non-HDLc

≥130 mg/dL

LDLc < 100 mg/dL,
add fibrate or Niacin

LDLc ≥ 100 mg/dL,
treat elevated LDLc

≥400mg/dL

TLC & add fibrate*, titrate
to goal TG, decrease
carbs/calories

If TG > 200 mg/dL add
fish oil, Lovaza, Niacin,
Orlistat, or statin PRN

Refer to Endocrinologist

1. Screen for thyroid, liver and kidney disease with TSH and CMP.
2. Refer for dietary education: <7% saturated fat, < 200 mg cholesterol, and add >20 gams soluble fiber daily .
3. Reinforce TLC – diet, exercise, weight control. Avoidance of excess alcohol, carbs/fat, calories, and anabolic steroids.
4. Treat TG first if ≥ 400 mg/dL.
5. Maximize one drug dose as tolerated before adding additional drugs.
6. Fasting lipid goals:
LDLc < 100 mg/dL DM
LDLc < 70 mg/dL DM+CHD
HDLc > 40 mg/dL
TG < 150 mg/dL
Non-HDLc < 130 mg/dL
7. *Use fenofibrate and not gemfibrozil if statin is used.
8. Control HbA1c. Follow glucose control closely if add niacin.
9. Consider PCOS, corticosteroids, estrogens, and nephrotic syndrome.
10. Most diabetics need statin therapy.

Demo,One A

1 10-May-1952 (55) M

OPD SLOAN 27-Sep-2007 18:24
SANDERS,LEONARD R

File View Action Options

Last 100 Signed Notes

RENAL

Sep 27, 2007@18:25

- New Note in Progress
 - Sep 27,07 RENAL
- All signed notes
 - Sep 27,07 DIABI
 - Sep 21,07 NURS
 - Sep 21,07 PEDE
 - Sep 20,07 PEDE
 - Sep 11,07 DNKA
 - Sep 11,07 DNKA

Templates

Reminders

- Due
 - Alcohol Screen*
 - Depression Screen
 - Colon Cancer
 - Lipid Profile Male
 - High Risk Flu
- Applicable
 - Tobacco Screen
 - Blood Pressure
 - Height
 - High Risk Pneumova
 - Immunization Forecas
 - TD Immunization
 - Weight

Teams will complete the reminders and thereby the delivery of care –

MD, PA, NP, MA, RN/RD, CDE, CM, PhD, PharmD, DMD/DDS, OD, DPMs, CHN

CORE TEAM MEMBERS

1. MA / RN/RD (CDE)
2. DIABETIC EDUCATOR / CASE MANAGER
3. PROVIDER (MD/DO/NP/PA)

<No encounter information entered>

Demo One A
 1 10-May-1952 (55) M

OPD SANDERS 27-Sep-2007 18:28
 SANDERS,LEONARD R

- Last 100 Signed Notes
- New Note in Progress
 - Sep 27.07 REN
 - New Note in Progress
 - Sep 27.07 REN
 - All signed notes
 - Sep 27.07 DIABI
 - Sep 21.07 NURS
 - Sep 21.07 PEDE
 - Sep 20.07 PEDE
 - Sep 11.07 DNK/
 - Sep 11.07 DNK/
 - Sep 10.07 PEDE
 - Sep 10.07 PEDE
 - Sep 07.07 FAMI
- Templates
- Reminders

RENAL
 Vst: 09/27/07 OPD SANDERS

Sep 27,2007@18:38

BMI: 21.46 Last HT: 64 in [162.6 cm] Last WT: 125 lb [56.8 kg]

98.3 F [36.8 C] (Sep 13, 2007@10:34)67 (Sep 13, 2007@10:35:02)18 (Sep 13, 2007@10:35:04)132/63 (Sep 13, 2007@10:35:01)

Active Problems:

- Unspecified Psychosexual Disorder (Added on DEC 06, 2004)
- Acquired Deformity Of Nose (Last update on MAR 14, 2007)
- Hyperlipidemia (Added on FEB 04, 2005)
- AORTIC STENOSIS (Added on AUG 10, 2005)
- Rheumatoid Arthritis (Last update on NOV 22, 2006)
- Diabetes Mellitus (Added on DEC 19, 2006)
- uterine bleeding (Added on DEC 27, 2006)
- Latent TB, pos skin test 1989, treated (Added on MAR 06, 2007)
- Diabetes (Last update on JUN 07, 2007)
- Examination For Medicolegal Reasons (Added on JUN 15, 2007)
- CHART REVIEW (Added on SEP 27, 2007)
- Type 2 Diabetes Mellitus Uncontrolled (Added on SEP 27, 2007)

ALLERGIES: DOSS 300, LATEX, BACTRIM, KEFLEX, BEER, ERU
 OPTHALMIC OINTMENT
 DULOXETINE, MORPHINE SULFATE

ASSESSMENT AND PLAN

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

HEALTH FOLLOW-UP AND REFERRAL

1. Optometry Consult
2. Podiatry Consult
3. Life Center Consult
4. Dental consult
5. Pneumovax
6. Influenza
- 7.

FOLLOW-UP VISIT:

<No encounter information entered>

Reminder Resolution: Alcohol Screen*

Alcohol screen has two parts. If answer to first part is NO, record CAGE = 0. If answer to first part is yes, then proceed and ask the 4 CAGE questions and score accordingly.

Record CAGE Score:

Document Education Here:

Clear Clinical Maint Visit Info < Back Next > Finish Cancel

<No encounter information entered>

* Indicates a Required Field

Last 100 Signed Notes

- New Note in Progress
 - May 12,08 DIALYSIS
- All unsigned notes for SANDEF
 - May 12,08 DIALYSIS
- All signed notes
 - May 09,08 DIALYSIS
 - May 05,08 FAMILY PR
 - Apr 24,08 CASE MAN
 - Apr 22,08 FAMILY PR
 - Apr 18,08 OPTOMETF
 - Apr 17,08 OPTOMETF
 - Apr 08,08 PHARMACY
 - Mar 31,08 CASE MAN
 - Mar 28,08 PHARMAC
 - Mar 24,08 CASE MAN
 - Mar 19,08 CASE MAN
 - Mar 18,08 DIALYSIS, I
 - Mar 17,08 PHARMAC
 - Mar 13,08 CASE MAN

DIALYSIS
Vst: OPD SANDERS

Active Problems:

DIABETES MELLITUS TYPE II, ONSET 1984
 WITHOUT BDR (STAGE 0)
 ALLERGIC TO SULFA DRUGS RASH
 ALLERGIC TO DOXYCYCLINE
 S/P APPENDECTOMY 1986
 DIABETIC NEUROPATHY
 YEAST VAGINITIS
 HYPERGLYCEMIA
 MACROALBUMINURIA
 ADJUSTMENT DISORDER W/MIXED ANXIETY/DEPRESSED MOOD
 ANNUAL DIABETES MELLITUS FOOT EXAM
 DENTAL-OVERT DIABETIC PERIODONTITIS
 DENTAL-EXTRACTION
 VITREAL LENS IMPLANT
 MAJOR DEPRESSION RECURRENT
 MAJOR DEPRESSION
 MAJOR DEPRESSIVE DISORDER

Templates

Reminders

- Due
 - DM HgbA1c
 - DM Microalbumin
 - Diabetic Education
 - Alcohol Screen*
 - Tobacco Screen
 - Depression Screen
 - Colon Cancer
 - Lipid Profile Female
 - Pap Smear
 - Mammogram
- Applicable
 - DM ACE/ARB
 - DM Aspirin
 - DM Eye Exam
 - DM Foot Exam
 - Blood Pressure
 - Height
 - Weight
 - High Risk Flu
 - High Risk Pneumovax
 - Immunization Forecast
 - TD Immunization

ASSESSMENT AND PLAN

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

HEALTH FOLLOW-UP AND REFERRAL

1. Optometry Consult
2. Podiatry Consult
3. Life Center Consult
4. Dental consult
5. Pneumovax
6. Influenza
- 7.

FOLLOW-UP VISIT:

Diagnoses: TELEPHONE CALL (Primary)

Evidence Based Guidelines
Integrated into Practice --
Algorithms of Diabetes Care

GRHC Diabetes
Chronic Care Model

EHR – ABCS
Reminders
& Templates

Disease Registry,
PCP, PDCA DATA

Community

Healthcare System

Resources and Policies

Health Care Organization

SDH =

Self-
Management
Support

Decision
Support

Delivery
System
Design

Clinical
Information
Systems

ABCS ≠ CVD

Teams – Patient & Family, MD, NP,
PA, RD, PhD, RN/LPN, MA, PharmD,
DMD/DDS, CDE, CM, OD, DPM, CHN,
DCC, PHN (RN/LPN), CHR, CAC, Clerks,
DCPC, Data Mgr, Admin, Grants

Support patient & family to be
Major managers of care

Informed,
Activated
Patient & Family

Productive
Interactions

Prepared,
Proactive
Practice Team

Empowered

Self-determined

PDCA

LRSMD

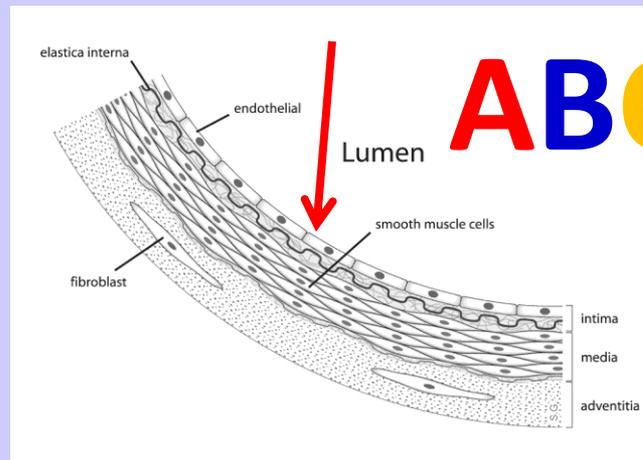
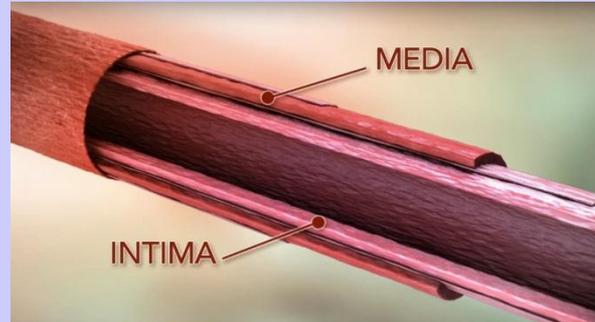
Cultural Sensitivity Promotes Acceptance & Self-determination

Key recommendations in the new ADA/EASD statement include the following—Diabetes Care April 2012

- ✓ Glycemic targets and treatments to lower glucose must be individualized according to specific patient characteristics.
- ✓ The mainstay of any type 2 diabetes treatment program is still diet, exercise, and education.
- ✓ Metformin is the preferred first-line drug, in the absence of contraindications.
- ✓ Data are limited regarding use of agents other than metformin. A reasonable approach is combination therapy with one to two additional oral or injectable agents, with the goal of minimizing side effects to the extent possible.
- ✓ To maintain glycemic control, many patients will ultimately need insulin monotherapy or in combination with other medications.
- ✓ Whenever possible, the patient should participate in all treatment decisions, focusing on their preferences, needs, and values.
- ✓ A major treatment goal must be comprehensive cardiovascular risk reduction.

IDF

CVD



ABCS

Diabetes = CVD

If Controlled, DM \neq CVD

ABCS

Patients control their health (ABCS)—not us.

SDH control the patient

It Requires (Medical Home) Teamwork! 😊