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

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Gila River Health Care
Sacaton, AZ
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
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!
National Debt $15,615,726,037,323
US Public National Debt $10,880,890,738,954

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

As a Percentage of GDP

Fall 2011


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.

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.

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 Economic Burden Of Diabetes. Dall, TM et al., Health Aff February 2010 vol. 29 (2) 297-303.
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 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 ($\frac{1}{3}$) of everyone born after the year 2000 will develop diabetes & by 2050 $\frac{1}{3}$ 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


- 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

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

285 million people or 6.4% of the world's adult population had diabetes in 2010. The number expected in 2030 is 438 million—7.8% of world adults. IDF

**Calories, refined carbs, HFCS, BMI > 25**

U.S. People—2/3 overweight and 1/3 obese

2010 Diabetics—25.8 million (8.3%)

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

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

- 20-44: 465,000 (24%)
- 45-64: 1,052,000 (55%)
- ≥65: 390,000 (20%)

Total 1,907,000

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
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 ≥ 20 years
- 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](http://circ.ahajournals.org/content/99/18/2389)
## Contribution of Diabetes to CVD—the Strong Heart Study in Native Americans

<table>
<thead>
<tr>
<th></th>
<th>Diabetic Women</th>
<th>Diabetic Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard Ratio</td>
<td>6.3</td>
<td>3.1</td>
</tr>
<tr>
<td>Prevalence</td>
<td>60%</td>
<td>50%</td>
</tr>
<tr>
<td><em>DM Attributable risk</em></td>
<td>76%</td>
<td>51%</td>
</tr>
</tbody>
</table>

**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](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.

**ABCS**

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 without the CVD complications.
Cherry Potter - November 2011
50 Years of diabetes & no complications
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

US Healthcare and Diabetes ABCS

Social Determinants of Health
SDH—99%

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

<table>
<thead>
<tr>
<th>Metric</th>
<th>Commercial</th>
<th>Medicare</th>
<th>Medicaid</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1C&lt;7%</td>
<td>62%</td>
<td>61%</td>
<td>53%</td>
</tr>
<tr>
<td>Total Cholesterol&lt;200 mg/dl</td>
<td>59%</td>
<td>61%</td>
<td>53%</td>
</tr>
<tr>
<td>HDL&gt;40 (male)/50 (female) mg/dl</td>
<td>77%</td>
<td>61%</td>
<td>56%</td>
</tr>
<tr>
<td>BP&lt;130/80 mm/Hg</td>
<td>49%</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td>All 4</td>
<td>12%</td>
<td>10%</td>
<td>10%</td>
</tr>
</tbody>
</table>

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

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

365 days/year \( \times \) 24 hr/day

\[ = 8760 \text{ hr / year} \]

Support from healthcare personnel—

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

\[ 6 \times \text{ per year} = 9 \text{ hr / year} = < 0.1\% \]

\[ 8751 \text{ hours} = > 99.9\% \]

\[ \approx 8750 – \text{ Self Management} \]
The Magic of Attitude

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

Social Determinants of Health Motivational Interviewing

Cultural Sensitivity Promotes Acceptance & Empowerment
Cardiovascular Mortality in Pima Indians

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

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

Normal Artery

- elastica interna
- endothelial
- smooth muscle cells
- fibroblast

Lumen

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)

- Macrovascular Disease
  - IHD, MI, CHF, Cardiomyopathy
  - Peripheral Vascular disease
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**Diabetes = CVD**

*Only If Poorly Controlled*

HCP—SDH & MI

ABCS ← VIP

Cultural Sensitivity Promotes Acceptance & Empowerment
Do you know your ABCS for Health?
Preventable Causes of Death in the United States—2008

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.
<table>
<thead>
<tr>
<th>Clinical Measures</th>
<th>Criteria</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>HbA1c Poor Control &lt;9.0%</td>
<td>&gt;=85% of patients in sample</td>
<td>12</td>
</tr>
<tr>
<td>HbA1c Control &lt;8.0%</td>
<td>&gt;=60% of patients in sample</td>
<td>8</td>
</tr>
<tr>
<td>HbA1c Control &lt;7.0%</td>
<td>&gt;=40% of patients in sample</td>
<td>5</td>
</tr>
<tr>
<td>Blood Pressure Control &lt; 140/90 mm Hg</td>
<td>&gt; 65% of patients in sample</td>
<td>15</td>
</tr>
<tr>
<td>Blood Pressure Control &lt;130/80 mm Hg</td>
<td>&gt;=25% of patients in sample</td>
<td>10</td>
</tr>
<tr>
<td>LDL Control &lt;= 130 mg/dl</td>
<td>&gt;=63% of patients in sample</td>
<td>10</td>
</tr>
<tr>
<td>LDL Control &lt;100 mg/dl</td>
<td>&gt;=36% of patients in sample</td>
<td>10</td>
</tr>
<tr>
<td>Smoking Status and Cessation Advice or Treatment</td>
<td>&gt;=80% of patients in sample</td>
<td>10</td>
</tr>
<tr>
<td>Eye Examination</td>
<td>&gt;=60% of patients in sample</td>
<td>10</td>
</tr>
<tr>
<td>Nephropathy Assessment</td>
<td>&gt;=80% of patients in sample</td>
<td>5</td>
</tr>
<tr>
<td>Foot Examination</td>
<td>&gt;=80% of patients in sample</td>
<td>5</td>
</tr>
</tbody>
</table>

**Total Points** 100

**Points Needed to Achieve Recognition** 75
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

<table>
<thead>
<tr>
<th>Total NCQA Points Achieved</th>
<th>Active DCP 285</th>
<th>All DCP 346</th>
<th>ADP less 5515</th>
<th>ADP ALL 5861</th>
</tr>
</thead>
<tbody>
<tr>
<td>HbA1C &lt; 9.0% (poor control)</td>
<td>&gt;= 85% of Sample 12</td>
<td>43.16</td>
<td>0</td>
<td>41.62</td>
</tr>
<tr>
<td>HbA1C &lt; 8.0%</td>
<td>&gt;= 60% of Sample 8</td>
<td>20.70</td>
<td>0</td>
<td>19.36</td>
</tr>
<tr>
<td>HbA1C &lt; 7.0%</td>
<td>&gt;= 40% of Sample 5</td>
<td>9.47</td>
<td>0</td>
<td>8.09</td>
</tr>
<tr>
<td>Blood Pressure &lt;= 140/90 mm Hg</td>
<td>&gt;= 65% of Sample 15</td>
<td>99.65</td>
<td>15</td>
<td>99.13</td>
</tr>
<tr>
<td>Blood Pressure &lt; 130/80 mm Hg</td>
<td>&gt;= 25% of Sample 10</td>
<td>54.39</td>
<td>10</td>
<td>52.89</td>
</tr>
<tr>
<td>Eye Examination</td>
<td>&gt;= 60% of Sample 10</td>
<td>65.61</td>
<td>10</td>
<td>63.87</td>
</tr>
<tr>
<td>Smoking Status &amp; Cessation Advice or Treatment</td>
<td>&gt;= 80% of Sample 10</td>
<td>88.42</td>
<td>10</td>
<td>82.95</td>
</tr>
<tr>
<td>LDL-C &lt;= 130 mg/DL</td>
<td>&gt;= 63% of Sample 10</td>
<td>89.12</td>
<td>10</td>
<td>87.86</td>
</tr>
<tr>
<td>LDL-C &lt; 100 mg/DL</td>
<td>&gt;= 36% of Sample 10</td>
<td>67.02</td>
<td>10</td>
<td>65.90</td>
</tr>
<tr>
<td>Nephropathy Assessment</td>
<td>&gt;= 80% of Sample 5</td>
<td>89.12</td>
<td>5</td>
<td>85.26</td>
</tr>
<tr>
<td>Foot Examination</td>
<td>&gt;= 80% of Sample 5</td>
<td>88.42</td>
<td>5</td>
<td>84.39</td>
</tr>
<tr>
<td>Total NCQA Points Achieved</td>
<td>75</td>
<td>75</td>
<td>45</td>
<td>45</td>
</tr>
</tbody>
</table>

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

Community

Resources and Policies

Health Care System

SDH = Self-Management Support

Health Care Organization

Decision Support

Delivery System Design

Clinical Information Systems

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

EHR – ABCS Reminders & Templates

Disease Registry, PCP, PDCA DATA

GRHC Diabetes Care

Informed, Activated Patient & Family

Prepared, Proactive Practice Team

Support patient & family to be Major managers of care

Productive Interactions

Empowered

Self-determined

PDCA

Cultural Sensitivity Promotes Acceptance & Self-determination
ABCs of Diabetes & CKD Care

Note: Similarities to the Medical Home

Note: Similarities to the Chronic Care Model

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 days/year X 24 hr/day
= 8760 hr / year

Support from healthcare personnel—

0.5 hr (doctor) + 1.0 (support) hr = 1.5 hr

6 x per year = 9 hr / year = < 0.1%

SDH

Empowerment & Self-Determination

8751 hours = > 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

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

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
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

Healthy Eating
Being Active
Monitoring
Taking Medications
Problem Solving
Reducing the Risks
Healthy Coping
Sleeping Well
Diabetes = CVD

Only If Poorly Controlled

ABCS

Patients control their health (ABCS)—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
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-
“—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.”

Steven A Schroeder, MD
Determinants of Health and Their Contribution to Premature Death

SDH contribute the most to our overall health. 55%

$2.26 Trillion 2007

ABCS

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.”

“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

Experience purpose and meaning, and realize all internal potentials.

“Be all you can be.”

—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

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 hotline 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 fight or flight 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, FIGHT OR FRIGHT
The senses become hyperalert, drinking in every detail of the surrounding 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

Pulmonary disease
- abnormal function
- obstructive sleep apnea
- hypoventilation syndrome

Nonalcoholic fatty liver disease
- steatosis
- steatohepatitis
- cirrhosis

Gall bladder disease

Erectile dysfunction

Gynecologic abnormalities
- abnormal menses
- infertility
- polycystic ovarian syndrome

Osteoarthritis

Skin problems

Gout

Idiopathic intracranial hypertension

Stroke

Depression and Insomnia

Cataracts

Coronary heart disease

Diabetes

Dyslipidemia

Hypertension

Severe pancreatitis

Kidney disease

Cancer
- breast, uterus, cervix, ovaries
- colon, rectum, esophagus, pancreas, kidney, prostate

Phlebitis
- venous stasis
How Does Obesity Cause Disease?
Abnormal production of hormones and inflammation in fat

**Type 2 DM**
- ↑ Lactate
- ↑ IL - 4

**Inflammation / Cancer**
- ↑ IL - 6
- ↑ Leptin
- ↑ TNF-α
- ↑ Adipsin (Complement D)

**Fat Stores**
- ↑ Lipoprotein Lipase
- ↑ All
- ↑ Angiotensinogen
- ↑ FFA
- ↑ Insulin
- ↑ Resistin
- ↑ Plasminogen Activator Inhibitor 1 (PAI-1)
- ↑ Estrogen

**ASCVD**
- ↑ Lipoprotein Lipase

**Hypertension**
- ↑ All

**Dyslipidemia**
- ↑ FFA
- ↑ Insulin

**Type 2 DM**
- ↑ Resistin
- ↑ Plasminogen Activator Inhibitor 1 (PAI-1)

**Thrombosis**
- ↑ Plasminogen Activator Inhibitor 1 (PAI-1)

**Asthma**
- ↑ Leptin

DM=diabetes mellitus; FFA=free fatty acid; PAI-1=plasminogen activator inhibitor-1; TNFα=tumor necrosis factor alpha; IL-6=interleukin 6. Slide: After Dr. G Bray
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
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 a 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 Cardiovascular Disease.

A graphic representation of a river and a shegoi (czeesote) plant constitute the new Gila River Health Care logo. Traditionally the shegoi plant has been used for centuries by the Akimel O’odham (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.
Healthy Plate
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”
Informed, Activated Patient & Family Prepared, Proactive Practice Team

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

GRHC Diabetes Care Community

Health System

Health Care Organization

Decision Support

Delivery System Design

Clinical Information Systems

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

SDH = Self-Management Support

ABCS ≠ CVD

Support patient & family to be Major managers of care

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

Productive Interactions

Empowered

Self-determined

PDCA

Cultural Sensitivity Promotes Acceptance & Self-determination
GRHC Diabetes Care Program
Patient Flow

GRHC ABCS’of Diabetes Care

Registration Clerk
- Checks in patient which automatically and immediately prints encounter form and turns GUI Green for that patient.
- Asks patient to:
  - Have a seat in the waiting area
  - As necessary, go to Lab, X-ray or Pharmacy and return to waiting area
  - If waiting longer than 15 min check with MA at door A

MA Triage Activities
- Chief Complaint
- Vitals
- Tobacco screening
- Alcohol Screening
- Asks patient to remove shoes and socks
- Download Accu-Chek
- Print 3 Glucose forms:
  1. Trend
  2. Daily
  3. Hourly / meals

MA gets the room ready for the next Pt

MA monitors GUI and when turns green collects the Encounter Form and Pt’s chart
- MA calls the Patient
- Takes the Pt to exam room for triage activities

MA explains the 3 Glucose forms to the patient who is asked to review them before seeing Provider

ABCDES
Essentials for Healthy Care
- A – Attitude, Appointments, A1c, eAG, Accu-Chek, Alcohol
- B – Bp & BMI
- C – LDL, HDL, Non-HDL, Tg
- D – Diet, Drugs
- E – Exercise
- S – Smoking, Sodium, Sleep

Case Manager calls Pt to make appointment and arranges for transportation if needed
Pt checks in with Registration Clerk
>15 min late Pt rescheduled
ABCS’of Diabetes Care

**CASE MANAGER**

All patients are assigned to a case manager who:
- Schedules all appointments except for CDEs, RDs, CMs
- Reschedules DNs
- Arranges Transportation
- Provides DSMS as necessary
- Suggests Follow-up

**PROVIDER DUTIES**

Providers’ Essential Duties at each patient visit:
- Addresses specific concerns of patient
- Reviews 3-Glucose forms
- Reviews other labs
- Diabetes Reminders
- ABCs
- Foot exam
- Refers to CDE, CM, RD, BH
- Changes therapy PRN
- Recommends follow-up*
- Refers to specialists
  - Optometry
  - Podiatry
  - Dental
  - Fitness

**DCP Visits**

Same Day Visits to at least two team members depending on need:
- Provider
- CDE
- RD
- CM

---

Provider examines patient and checks and completes reminders as time allows, but always addresses ABCDES

Poorly controlled T2DM
A1C >9 Need
Providers performs essential duties as time allows & communicates with patient & MA for further care and follow-up

Providers, CDE, CM, RD, BHS

Extensive DSME & DSMS*
- At least monthly provider visits
- Bi-monthly team member visits
- A changed in therapy at each visit
- Monthly Group diabetes Education
- Suggests Follow-up

Monthly or bimonthly Check-Ups depending on need
Scheduling by various team members but coordinated by case managers

At Risk or prediabetes
BMI ≥ 30
Initially see provider then need extensive Lifestyle and Self-Management Support

MA sees patient to next level of care & assists patient with referrals
CDE, CM, RD, BHS

*CASE MANAGER

*DSME = Diabetes Self-Management Education
DSMS = Diabetes Self-Management Support
New Diabetes Dx Needs CM Referral at 1st visit
Smoking Cessation – Needs CM Referral
Alcohol or substance abuse needs BHS referral
GRHC Diabetes Care
ABC
Algorithms
2011
GRHC Glucose Management In Type 2 Diabetes

Diagnosis
Type 2 DM

Therapeutic Lifestyle Change + Metformin

A1C ≥ 7%

Add Basal Insulin (Most Effective)

A1C ≥ 7%

Add Rapid Acting Insulin (RAI)

A1C ≥ 7%

Pioglitazone

Add pioglitazone, sitagliptin, saxagliptin*, linagliptin*, or exenatide* or liraglutide*)

Add Basal or Rapid Acting Insulin

Add Basal Insulin

Add Sulfonylurea (glimepiride)

Add pioglitazone, sitagliptin, saxagliptin*, linagliptin*, or exenatide* or liraglutide*)

Add Sulfonylurea

Add pioglitazone, sitagliptin, saxagliptin*, linagliptin*, or exenatide* or liraglutide*)

Add Basal Insulin

Add Rapid Acting Insulin (RAI)

A1C ≥ 7%

Pioglitazone

No

Yes

No

Yes

No

Yes

No

Yes

No

Yes

A1C ≥ 7%

A1C ≥ 7%

A1C ≥ 7%

A1C ≥ 7%

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)] / Giltazone = Pioglitazone 15, 30, or 45 mg / DPP4-Inhibitor = Januvia (sitagliptin) or Onglyza (Saxagliptin) or Tradjenta (linagliptin) ---- *Non-formulary item (Requires Prior authorization)
1. Unless BP is significantly elevated, obtain 3 Bp readings before treatment to be sure of diagnosis.
2. *Goal BP is ≤ 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 diiltiazem 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.
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.

**Goal BP is ≤ 130/80 in all patients without orthostatic changes including those with CKD.

**Add diltiazem / amlodipine or carvedilol/nebivolol** if on CCB and add other if not controlled

**Consider Nephrology or Endocrinology consults – add clonidine, hydralazine, or alpha blocker**

LR Sanders MD 2011
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
- <130 mg/dL
  - Add fbrate* or Niacin
- ≥130 mg/dL
  - LDLc <100 mg/dL, add fbrate or Niacin
  - LDLc ≥100 mg/dL, treat elevated LDLc

Elevated TG ≥ 150 mg/dl

- TLC & calculate Non-HDLc
- ≥400mg/dL
  - TLC & add fbrate*, titrate to goal TG, decrease carbs/calories
- If TG > 200 mg/dL add fish oil, Lovaza, Niacin, Orlistat, or statin PRN

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.
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.

Referral to Endocrinologist

GRHC Lipid Management in Type 2 Diabetes Mellitus
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)
RENAL
Vst: 09/27/07 OPD SANDERS

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 07:34:37) (Sep 13, 2007 07:35:02:18) (Sep 13, 2007 08:04:132/63) (Sep 13, 2007 08:05:01)

Active Problems:
Unspecified Psychosocial 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, 2005]
uterine bleeding [Added on DEC 27, 2005]
Latent TB, pos skin test 1989 treated [Added on MAR 06, 2007]
Diabetes [Last update on JUN 07, 2009]
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: BOSS SOO, LATEX, BACTIDIN, KEFLIX, BENED, BRI
OPHTHALMIC OINTMENT
DULOXETINE, MORPHINE SULFATE

Assessment and Plan
1.
2.
3.
4.
5.
6.
7.

Health Follow-up and Referral
1. Optometry Consult
2. Pediatrics Consult
3. Life Care Center Consult
4. Dental consult
5. Pneumovax
6. Influenza
7.

Follow-up Visit:

[No encounter information entered]

Indicates a Required Field
Active Problems:
- Diabetes Mellitus Type II, Onset 1984
- 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

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

Community

Healthcare System

Health Care Organization

Self-Management Support

Decision Support

Delivery System Design

Clinical Information Systems

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

EHR – ABCS Reminders & Templates

Disease Registry, PCP, PDCA DATA

Support patient & family to be Major managers of care

SDH = ABCS ≠ CVD

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

Support patient & family to be Major managers of care

Informed, Activated Patient & Family

Empowered

Productive Interactions

Self-determined

Prepared, Proactive Practice Team

PDCA

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.
Diabetes = CVD

If Controlled, DM ≠ CVD

ABCS

Patients control their health (ABCS)—not us.

SDH control the patient

It Requires (Medical Home) Teamwork! 😊