

The Severe Burden of Diabetes on America's Seniors

The Silver Book: Diabetes Briefing, Alliance for Aging Research, 5/12/10

The Severe Burden of Diabetes on Seniors

How can increased research address this challenge?

William Rowley, MD

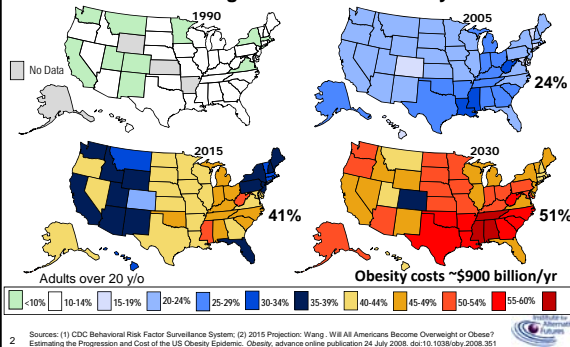
The Silver Book: Diabetes Briefing
May 12, 2010



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Biggest Challenge: Declining Health

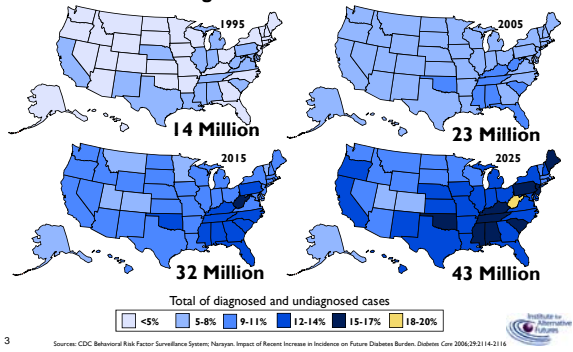
Increasing Prevalence of Obesity



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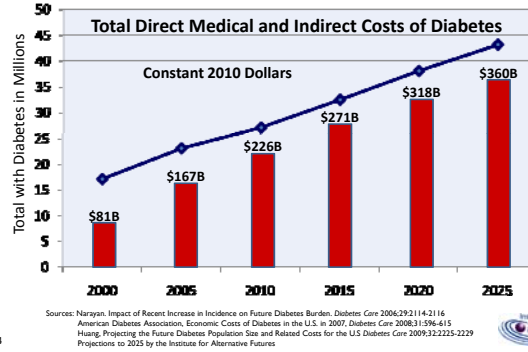
Biggest Challenge: Declining Health

Increasing Prevalence of Diabetes



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Burden of Diabetes in America



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Burden of Diabetes in America

- 32% of Medicare is spent on beneficiaries with diabetes
- By 2034 Medicare will spend \$171 billion on diabetes alone – 50% of all diabetes spending for the U.S.

Sources: American Diabetes Association, Economic Costs of Diabetes in the U.S. in 2007, Diabetes Care 2008;31:596-615
Huang, Projecting the Future Diabetes Population Size and Related Costs for the U.S. Diabetes Care 2009;32:2225-2229



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Diabetes and America's Seniors

65 and older	40,243,000
Known diabetes	6,801,000
Undiagnosed diabetes	5,795,000
Pre-diabetes	16,419,000
Diabetes/pre-diabetes	72%

Cowie, Full Accounting of Diabetes and Pre-Diabetes in the U.S. Population in 1988-1994 and 2005-2006, Diabetes Care, 2008;32:287-294



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Institute for Alternative Futures
100 N. Pitt St, Suite 235, Alexandria, VA 22314
703-684-5880 www.altfutures.com

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Diabetes and America's Seniors	
65 and older	40,243,000
Known diabetes	6,801,000
Undiagnosed diabetes	5,795,000
Pre-diabetes	16,419,000
Must find these:	22,214,000


Cowie, Full Accounting of Diabetes and Pre-Diabetes in the U.S. Population in 1988-1994 and 2005-2006. Diabetes Care, 2008;32:287-294

Diabetes and America's Seniors

- Over half our seniors have diabetes or pre-diabetes and don't know it
- For many it is already causing damage to the eyes, kidneys, and heart
- Early diagnosis and treatment
 - Reduce severe vision loss 50-60%
 - Reduce amputations 45-85%
 - Reduce kidney disease 30-70%

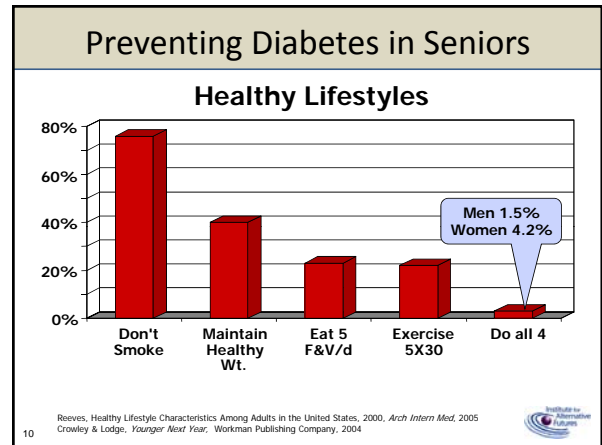
U.S. Department of Health and Human Services, National Diabetes Statistics, 2007

Impact of Diabetes on Seniors



- 9-11 year decline in quality adjusted life-years
- Die 5-7 years prematurely
- Death usually due to associated heart disease

Narayan, et al. Lifetime Risk for Diabetes Mellitus in the United States. JAMA 2003;290:1884-1890




Preventing Diabetes in Seniors

Healthy Lifestyles


- 70% of premature death is lifestyle-related
- Healthy lifestyle can reduce cancer risk 60%, diabetes risk 90%, heart disease by 80%
- 50% of all illness & injuries in the last third of life can be eliminated by changing lifestyle
- Seniors who exercise 30 minutes 5 days a week and lose 7-15 pounds can prevent pre-diabetes from becoming diabetes by 71%

Reeves, Healthy Lifestyle Characteristics Among Adults in the United States, 2000. Arch Intern Med, 2005

The Importance of Healthy Living



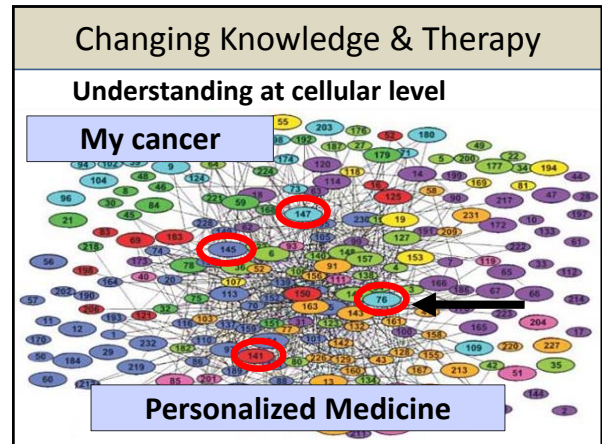
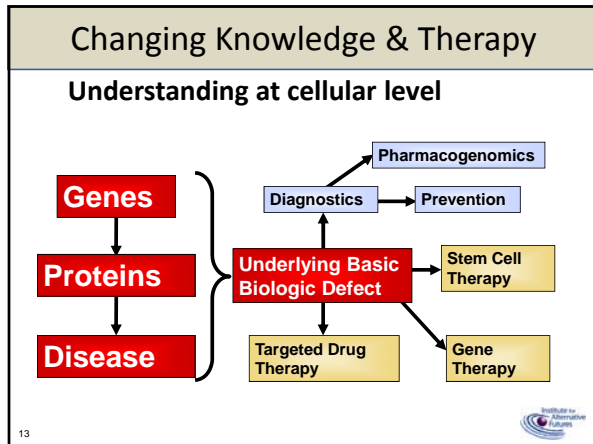
Eat food. Not too much. Mostly plants.



Research: What works? How do we get people to change behavior? How do we redesign the built environment to make healthy living come naturally?

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Prospective Medicine

Periodic screening:

- Genetic, proteomic & metabolomic profile
- Lifestyle & psychosocial profile
- Analysis of exposures

RESULTS

INCREASED RISK:

Condition	Relative Risk	Lifetime Risk
Type 2 Diabetes	4.3	70%
Heart Disease	3.2	60%

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Prospective Medicine

- Predictive
- Preventive
- Personalized
- Participatory
- Focused on pre-disease

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A Health Home that Works

Wellness and Prevention

- Education
- Coaching
- Incentives to stick with it

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A Health Care System that Works

Life-long continuity of care with **EASY** innovative access

Coordinated care by collaborative team of providers

Proactively involved in:

- Assessment and prevention
- Ongoing mgmt. of chronic diseases
- Focused on the entire patient

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A Health Care System that Works

Education and coaching  Shared decision-making  Electronic records 

Part of a health system (maybe virtual)  Global payment with incentives for outcomes  Systems for continuous improvement 

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Self-Care

Noninvasive monitoring   Facilitated Disease Network 

Wireless capture Text prompts  Personal health record  Telemedicine 

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Aging in Place

  Continuous Monitoring by smart agent & nurse 


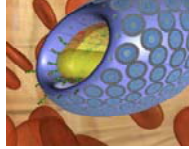


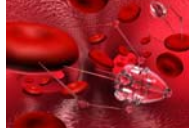
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Virtual Care



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Auto Health Care

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Health Care Progression

Prevention  Prospective Medicine  Health Home 

Home Self-Care  Virtual Care  Auto Health 

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Summary

- Obesity and Diabetes are serious problems resulting in chronic diseases and disability for seniors
- To address these epidemics we need healthy living, an effective health care system, and multiple options of advanced therapies
- Resources for innovative research are key

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