**Patient-Centered Diabetes Care**

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**Determinants of Health and Their Contribution to Premature Death**

Schroeder, NEJM 357; 12

![Pie chart showing contributions of different factors to premature death]

- Social: 30%
- Environmental: 15%
- Medical: 10%
- Behavioral: 5%
- Genetic: 5%

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**A National Crisis?**

- “Those With Multiple Conditions Cause Bulk Of Medicare Spending Growth”
  Sunday Health Policy UpDate (Health Affairs Web Exclusive) August 27, 2006
  - “Virtually all of the growth in Medicare spending over the past 15 years can be traced to patients who were treated for five or more medical conditions during the year, according to a new study by economists Kenneth Thorpe and David Howard released today as a Web Exclusive on the Web site of the journal Health Affairs. These beneficiaries alone accounted for 76 percent of total Medicare spending in 2002, up from 52.2 percent in 1987.”

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**Epidemiology of Diabetes**

- **Incidence**
  - Type 1: ~30,000 new cases/yr
  - Type 2: ~850,000 new cases/yr
  - GDM: ~3-8% of all pregnancies
  - Total: ~1.3 million ≥20 yrs new cases/yr

- **Prevalence**
  - ~18.2 million (~6.3%) people have diabetes in the U.S.
  - ~13.0 million diagnosed
  - GDM ~150,000
  - Type 1 ~750,000
  - ~5.2 million undiagnosed

- **Costs**
  - Total: $1.32 billion
  - Direct medical costs: $92 billion
  - Indirect costs: $40 billion

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Centers for Disease control and Prevention, 2004
**Diabetes Prevention Program (DPP)**

- 3,234 Pts with IGT (Followed for 3 years; BMI 34 kg/m²)
- Placebo (Basic Diet and Exercise info.)
- 11%/year Developed DM
- Intensive Diet and Exercise (Classes, coaches, weight reduction goal of 7%)
- 4.8%/year Developed DM
- Metformin 850 mg bid (Plus basic diet and exercise info.)
- 7.8%/year Developed DM
- 58% Risk Reduction vs. Placebo
- 31% Risk Reduction vs. Placebo

**Type 2 Diabetes**

- Fasting BG > 200 mg/dL
- Casual BG > 200 mg/dL

**Staged Diabetes Management**

- **Type 2 Diabetes**
  - Diabetes Self Management Skills
  - Medical Nutrition Therapy
  - Activity Plan
  - Patient Education
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**Incidence of MI and Microvascular Endpoints by Mean SBP and HbA1c in UKPDS**

- Adjusted incidence per 1000 person-years (%)
- Myocardial infarction
- Microvascular endpoints

**Risk of Complications**

Benefits of Lowering Hemoglobin A1c

- Relative Risk of Complications
- Average Glucose: 130, 150, 180, 210, 240, 270, 300

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**Patient Driven Care**

- Patients are the most important factor in their own outcomes (and need to do the heavy-lifting)
- Patients are the experts in themselves
  - Health 2.0 is a “Reformation”
  - What is role of Care Team?
  - What is role for community?
- Services designed from patient point-of-view to meet patient needs and preferences

**Delivery System Mismatch with Determinants of Premature Death…**

This is how it looks now…

**The Medical Home: It Depends on Your Point-of-View…**

The “empowered patient” view…a better match?

**New Actions in Practice**

- Examining Data
- Proactively engaging patients
- Team meetings
- PDSAs
- Population Management
- Internet Social Media
- Neighborhood Gym Recreation
- Place of Worship
- Community
- Family
- Friends and Family
- Workplace
- Family Clinician Practice
- Specialists
- Hospital Services

- Mental Health
- Primary Care
- Hospital Services
- Financing
- Patient
- Community
- Family
- Public Health
- Social Services
**Background On Humboldt IPA**

- Started in 1996
- 350 member IPA (210 physicians, 80 mid-levels, 60 mental health professionals)
- 7,000 HMO members, 3,000 PPO and self-insured
- > 95% of all providers including safety net, average practice size 3 MDs
- Rural county the size of Connecticut with 130,000 population
- 14 year partnership with multi-stakeholder Community Health Alliance

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**Humboldt Diabetes Project**

- CHCF-funded research project started 11/02
- PACES site for International Diabetes Center: Community Guideline
- County-wide effort coordinated by IPA (>95% of all clinicians in the county, including MDs, advanced-practice clinicians, behavioral health providers) but...
- IPA manages only 10% of lives in Humboldt County (little managed care)
- Solution: information must come from clinical setting (too many payers for administrative data solution)
- To accomplish goal, must win hearts and minds of clinicians (no “command-and-control”)

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The Care Model is about building the “productive relationship”
**Chronic Care Model Elements**

- Humboldt Diabetes Project - 2003
- Diabetes Registry - 2003
  - Web-based
  - Point-of-care
  - Prompts and reminders
- Self-Management Support
  - Health Education Alliance - 2004
  - Our Pathways to Health (CDSMP)
- Care Support - 2004
  - A1c > 9, Depression Screening
  - Admits/ED visits: Care Transitions
  - Co-morbidity
- Microsystem redesign
  - Primary Care Renewal Collaborative (PCMH) - 2009

**HDP Data: Sustained Improvement**

<table>
<thead>
<tr>
<th>Measure (not HEDIS-definition; includes only those tested for lab measures)</th>
<th>Results (n=802)</th>
<th>Results (n=778)</th>
<th>Results (n=6636)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HbA1c control: &lt;7% (good control)</td>
<td>52%</td>
<td>55%</td>
<td>62%</td>
</tr>
<tr>
<td>Patients with BP &lt;140/90</td>
<td>62%</td>
<td>59%</td>
<td>69%</td>
</tr>
<tr>
<td>Patients with BP &lt;130/80</td>
<td>32%</td>
<td>33%</td>
<td>36%</td>
</tr>
<tr>
<td>Patients with LDL&lt;130</td>
<td>60%</td>
<td>73%</td>
<td>83%</td>
</tr>
<tr>
<td>Patients with LDL&lt;100</td>
<td>32%</td>
<td>44%</td>
<td>56%</td>
</tr>
</tbody>
</table>

"Why wouldn’t a person at risk for or with diabetes do everything in their power to live long and feel well?"
Stepping into the patient’s world...

- "All I have to change is everything!"
- Our beliefs and attitudes, conscious or unconscious can have a positive or negative impact on the patient experience
- Patient ‘resistance’ = non compliance?

Patient Self-Management Barriers

- Social devastation (poverty, homelessness, lack of access to health care services, etc)
- Lack of information
- Social isolation
- Cultural disconnect
- Low functional health literacy
- Relative lack of life skills
- Anxiety/disease-specific distress/depression
- Perfectionism and guilt
FACTS AND FICTIONS

1. Diabetes is the leading cause of adult blindness, amputations and kidney failure. True or false?

A. False. Poorly controlled diabetes is the leading cause of adult blindness, amputations and kidney failure.

Why Do Our Patients Struggle?

(“strong” endorsements by physicians)

- poor self-discipline: 53.2%
- poor will-power: 50.0%
- not scared enough: 36.9%
- not intelligent enough: 16.3%

Polonsky, Boswell and Edelman, 1996

Key Competency: Motivational Interviewing

- Patient-centered, goal-oriented method for enhancing intrinsic motivation to change by exploring and resolving ambivalence
- MI is collaborative, evocative, and supports autonomy
- Express empathy, develop discrepancy, support self-efficacy, and roll with resistance
- Helping the patient build their own will, discover the change ideas that work for them, and execute an individualized plan of action

- Dancing vs Wrestling
**Self-Management Support is more than Patient Education: “Our Pathways to Health”**

- **Patient Education**
  - Information and skills are taught
  - Usually disease-specific
  - Assumes that knowledge creates behavior change
  - Goal is compliance
  - Teachers are health care professionals
  - Didactic

- **Self-Management**
  - Skills to solve patient-identified problems are taught
  - Skills are generalizable to all chronic conditions
  - Assumes that confidence yields better outcomes
  - Goal is to increase self-efficacy
  - Teachers can be professionals or peers
  - Interactive


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**Ecological Model**

Practice teams help effectively

Patients & families know what to do & are confident

Practices and communities work together

Patients & families, communities and health care flourish

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**Our Pathways to Health**

“New Year’s Resolutions Aren’t the Only Path to Health”
Carol Harrison/Tri-City Weekly
Posted: 01/05/2010 03:00:16 AM PST

New Year’s resolutions aren’t the only path to health.

Nearly 200 Humboldt County residents changed their lives last year and it didn’t cost them a cent.

Instead of ushering in the new year by spending hard-earned dollars on fitness clubs, special diets and personal trainers, they spent six weeks and 15 hours in one of the Pathways to Health workshops offered free in Eureka, Fortuna, Arcata and Blue Lake.

"I am amazed at how powerful and well thought out the program is, and the results are way more powerful than I would have imagined," said Betsy Stapleton, nurse practitioner and master trainer for the peer-facilitated workshops…
Our Pathways to Health

Bayside’s Nancy Ortiz is down 80 pounds from her all-time high. She credits her primary care provider, diabetes support groups and Pathways with the skills to help her manage her condition and find joy in living.

"Pathways changes the way you connect with yourself and with others," she said. "People tell me, 'Boy have you changed. You've really blossomed.' I feel like I have, but you don't know if others notice. They do."

"My doctor told me I had diabetes, which wasn't a surprise to me. I had like eight of the 10 risk factors. I was at least 100 pounds overweight at the time and had been heavier before that."

Today, her blood pressure is below the recommended guidelines and her cholesterol numbers are within the normal range.

Pathways in Humboldt

Developing an action plan around simple attainable goals is a program fundamental. So, too, are brainstorming sessions for multiple solutions to challenges everyone faces and linking with a buddy in the group for encouragement and accountability.

"You learn to communicate with your health care providers, hospital and insurance company because you are so much more knowledgeable," Ortiz said. "You know what to ask for and what to expect."

Pathways First Year

• 260 participants
• 70% completed 6 class series
• “Rate the increase in your ability to self-manage after this workshop?”
  – 48% excellent
  – 45% good
  – 1% fair
  – 2% didn’t respond

Stories