

A Program to Reach Women with Gestational Diabetes

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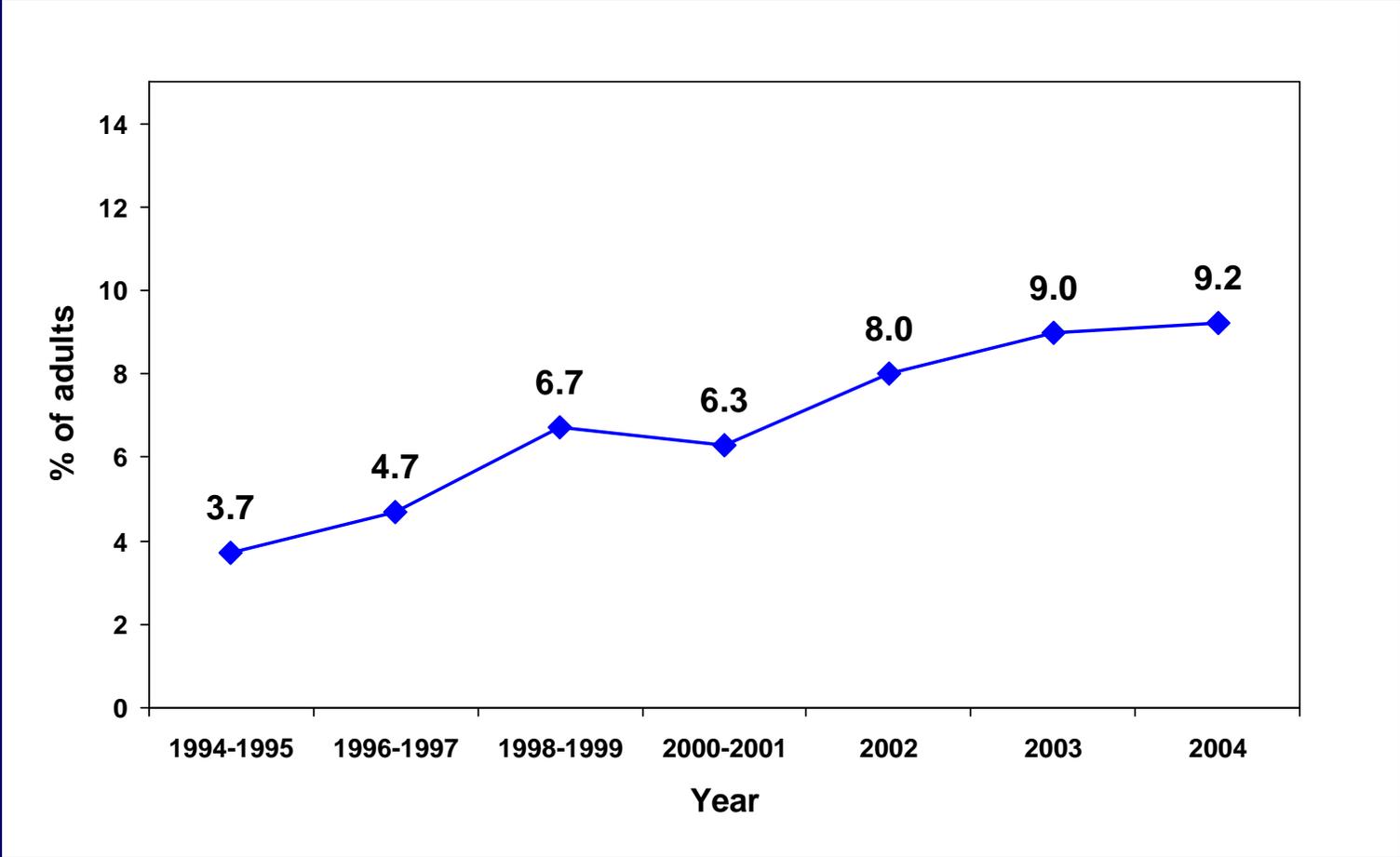


Overview

- **Rationale for implementing program**
- **Description of program**
 - **Timeline**
 - **Evaluation**
- **Challenges and future directions**

State of Diabetes and Gestational Diabetes in New York City in 2005

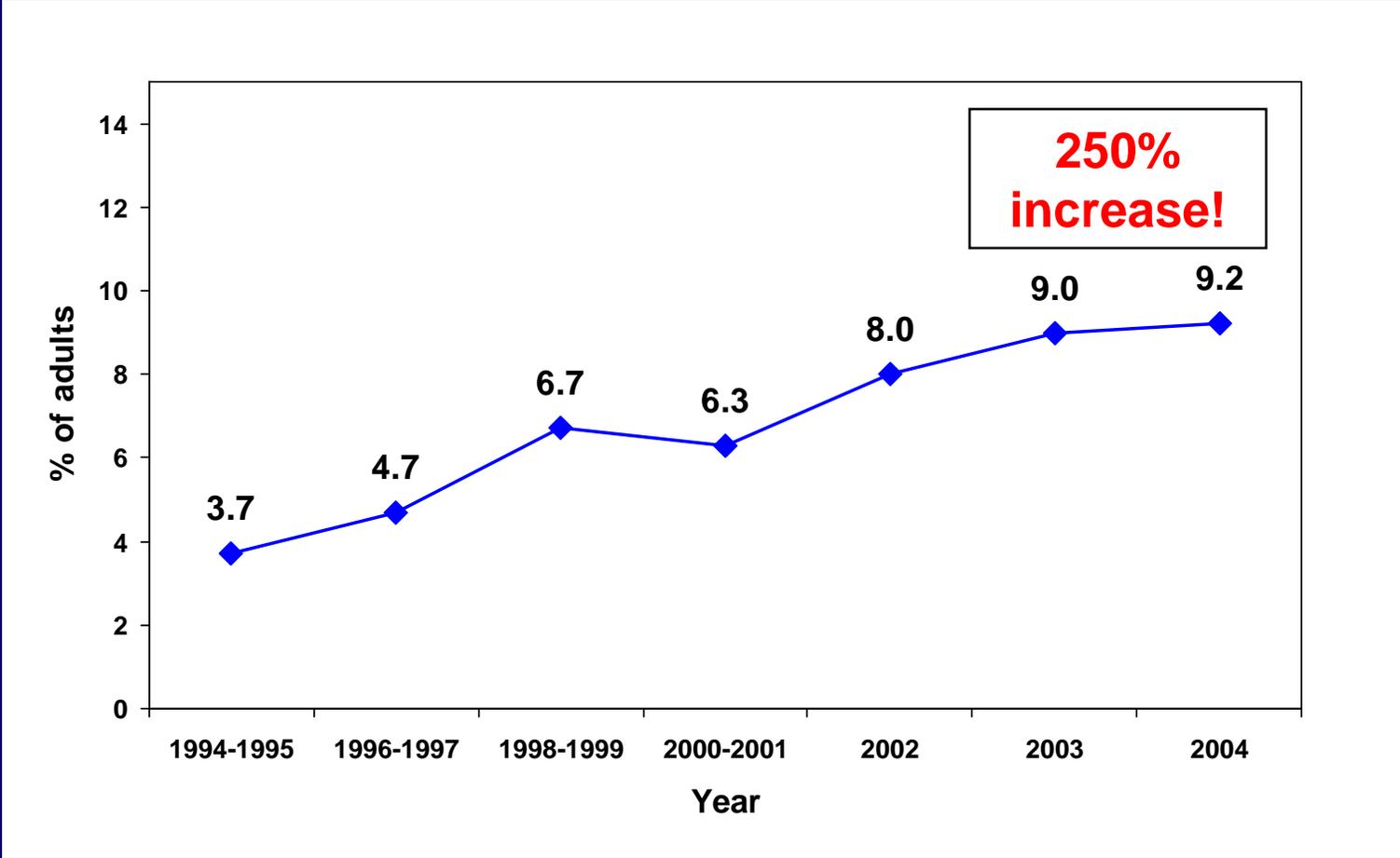
Increase in Diabetes Prevalence In NYC Adults



Source: BRFSS 1994-2001; NYC Community Health Survey 2002-2004 (age-adjusted)



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Was the Same Thing Happening with Gestational Diabetes?

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Examined birth certificate data from
1990-2001

Increase in GDM Prevalence between 1990 and 2001

CATEGORY	1990	2001	% change
ALL	2.6	3.8	46

Source: Thorpe et al. AJPH 2005;95(9):1536-1539.

Increase in GDM Prevalence between 1990 and 2001

CATEGORY	1990	2001	% change
ALL	2.6	3.8	46
Non-Hispanic White	2.2	2.4	9
Non-Hispanic Black	1.7	3.1	82
Asian	3.9	7.4	90
South and Central Asian	5.7	11.1	95
Other Asian	3.3	5.6	70
Hispanic or Caribbean	3.1	3.9	26
Puerto Rican	2.8	3.1	11
Mexican	2.5	4.9	96
Dominican Republic	3.3	3.4	3
Other Central or South American	3.3	3.6	3
Other Caribbean	3.5	5.2	49
Unknown	1.9	3.0	58

Source: Thorpe et al. AJPH 2005;95(9):1536-1539.

What Now?

Educational Mailings to Women with GDM

Goals

- **Raise awareness of diabetes risk**
- **Provide type 2 diabetes prevention messages for mother and baby**
- **Encourage women to get post-partum screening**
- **Provide tool (doctor letter) for women to prompt screening**

Components of Monthly Mailings

- Original packet from 2006 had 11 pieces of information
 - 1) Letter to mother (diagnosis, risks to her & baby, steps to prevent obesity and diabetes)—English, Spanish, Chinese, Urdu
 - 2) Letter to the doctor that the mother should take in the post-partum period as a prompt for diabetes screening
 - 3) Diabetes is Epidemic Health Bulletin
 - 4) Healthy Heart-Cholesterol Health Bulletin
 - 5) Healthy Heart-Eat Less Trans Fat Health Bulletin
 - 6) Healthy Heart-Blood Pressure Health Bulletin
 - 7) How to Lose Weight Health Bulletin
 - 8) Healthy Eating Can Help You Beat Diabetes Fact Sheet
 - 9) Physical Activity Can Help You Beat Diabetes Fact Sheet
 - 10) Helping Children Reach A Healthy Weight—Proven Tips for Parents
 - 11) Fitness and Nutrition Resource Guide (in certain neighborhoods)

Logistics

- Office of Vital Statistics creates Excel file with names & addresses of women with GDM on medical report of birth certificate
- File transferred to program staff securely
- Program staff label envelopes with folder containing educational pieces (pre-packaged by Communications office) and mail 3-4 months post-partum
- Cost per packet mailed=\$6
- Started mailings March 2006

Goals of Evaluation

- Are we providing new information?
- Are the packets helpful in making healthy lifestyle changes?
- Are women getting post-partum screening?
- Are women taking the letter to their doctor?

Evaluation Methods

- Identified all women with GDM on birth certificate between Oct and Dec 2007 and randomly sampled 800
- Made phone calls until interviewed ~100 women
- Interviews conducted via phone by an independent consultant Spring 2008
 - ~6-8 months post-partum
- 22-item survey designed by our program

Survey Results

Among all interviewed (N=97)

- **Characteristics**
 - Mean age=32
 - Language spoken at home:
 - 54% English; 23% Spanish; 3% E/S; 6% Bengali; 14% other
- **Awareness of GDM**
 - 96% of respondents reported being told they had GDM or DM in pregnancy
- **Blood sugar checked for diabetes after had baby**
 - 54% reported having blood sugar checked
- **Remembered packet**
 - 44% reported remembering the packet

Telephone Survey Results

Among those who remembered packet (n=43)

- Impact of packet on knowledge and behavior
 - 86% said the packet was helpful
 - 26% said b/c information was new, 26% said b/c information on prevention, exercise, and diet
 - 19% said they gave their doctor the letter
 - Among those who did not, 57% said no recall of letter or not yet to doctor and 33% said already had a glucose test
 - 76% said they changed some aspect of their life after reading the packet
 - 79% said attempted to change eating habits/watch what they eat for self and family

Changes Made to Packet After Evaluation

- Enclosed letter to doctor in an envelope with instructions on outside in all four languages
- Removed 5 pieces of material so new packet had:
 - 1) Letter to mother (diagnosis, risks to her & baby, steps to prevent obesity and diabetes)—English, Spanish, Chinese, Urdu
 - 2) Envelope with letter to the doctor
 - 3) Diabetes is Epidemic Health Bulletin
 - 4) How to Lose Weight Health Bulletin
 - 5) Helping Children Reach A Healthy Weight—Proven Tips for Parents
 - 6) Fitness and Nutrition Resource Guide

Outstanding Questions

- **What gaps are there in risk communication?**
- **Are there better ways to convey to mother what she should do and why?**
- **What are challenges women face with this diagnosis both during pregnancy and after pregnancy with regards to prevention and management?**

**DECIDED TO DO IN-DEPTH INTERVIEWS WITH
WOMEN WHO HAD GDM**

In-Depth Interviews Methods

- Sample identified from Newborn Home Visiting Program records in north and central Brooklyn
 - Had to be 18 yo or older
 - Self-report GDM during NHVP visit
- Among 98 potentially eligible, 74% black or Hispanic
 - 12/98 were interested and consented (majority could not be contacted)
- Interviewer trained in qualitative research methods conducted 1.5-3 hour long semi-structured interviews Summer 2009

Interview Tool

- **Part 1: Response to educational packet (all participants were asked to read before the interview)**
- **Part 2: Questions related to three main areas**
 - **Experience with diagnosis and treatment of GDM**
 - **Lifestyle changes**
 - **Treatment regimen**
 - **Blood sugar monitoring**
 - **Post-partum experience**
 - **Perceptions about GDM and type 2 diabetes**
- **Explored social, economic and cultural context in all three areas above**

Results (1)

- **Characteristics of 12 women interviewed**
 - 8 were part-time or fully employed
 - Aged 27-38
 - 7 were black or Hispanic
 - Number of children ranged from 1-4
 - 10 completed high school or above
- **Impression of educational packet**
 - Prefer to get from their doctor and prior to delivery
 - Did not find information relevant since viewed GDM as temporary
 - Actionable steps not clear
 - Too much information in some of the materials

Results (2)

- **GDM experience**
 - **Diet requirements are the most difficult GDM self-care changes**
 - **Information from doctors, family, and friends about GDM self-care is contradictory**
 - **View GDM as temporary with risk to unborn child but little to no risk to self, particularly after delivery**

Recommendations

- **Communicate long-term risks to mother more clearly**
- **Clearly delineate actionable steps**
- **Ensure literacy level is appropriate**
- **Consider disseminating materials through OB/GYNs to distribute before delivery**
- **Create tools for patients and providers that**
 - **Support providers in implementing daily routine changes that are tailored to the woman**
 - **Facilitate the dispelling of myths and contradictory information**

Changes Made After 2nd Evaluation

- Streamlined letter to mom with very clear steps
 - Read enclosed brochure to learn more
 - Learn about how to prevent diabetes
 - Take enclosed card to doctor to get tested
- Individual pieces will be replaced by one new brochure with three main sections
 - Overview of GDM
 - What is GDM?
 - Why me?
 - What can happen to me and my baby?
 - During pregnancy and childbirth
 - After childbirth
 - What do I do next?
 - Maintain a healthy weight
 - Be active
 - Breastfeed
 - Get tested to see if you have type 2 diabetes

Challenges

- **Mailings may not be reaching all women with GDM**
 - Underreporting of GDM on birth certificates
- **Intervention is a low-intensity one-time print intervention**
 - Limited resources
- **True impact is unknown since evaluations done were process rather than outcomes evaluations**

Next Steps

- **Mailings on hold until finalize new materials and method of dissemination**
 - **New materials have potential to be used before and after delivery**
 - **Determine if need additional information from women with GDM to craft materials (i.e., feedback from other populations)**
- **Exam 2002-2008 OVS data to see change in trends that suggest need to modify target population**
- **Explore ways to utilize existing and newly implemented systems**
- **Support large-scale implementation of evidence-based research**
- **Address social and environmental factors contributing to poor health**