Preconception and Postpartum Screening Guidelines

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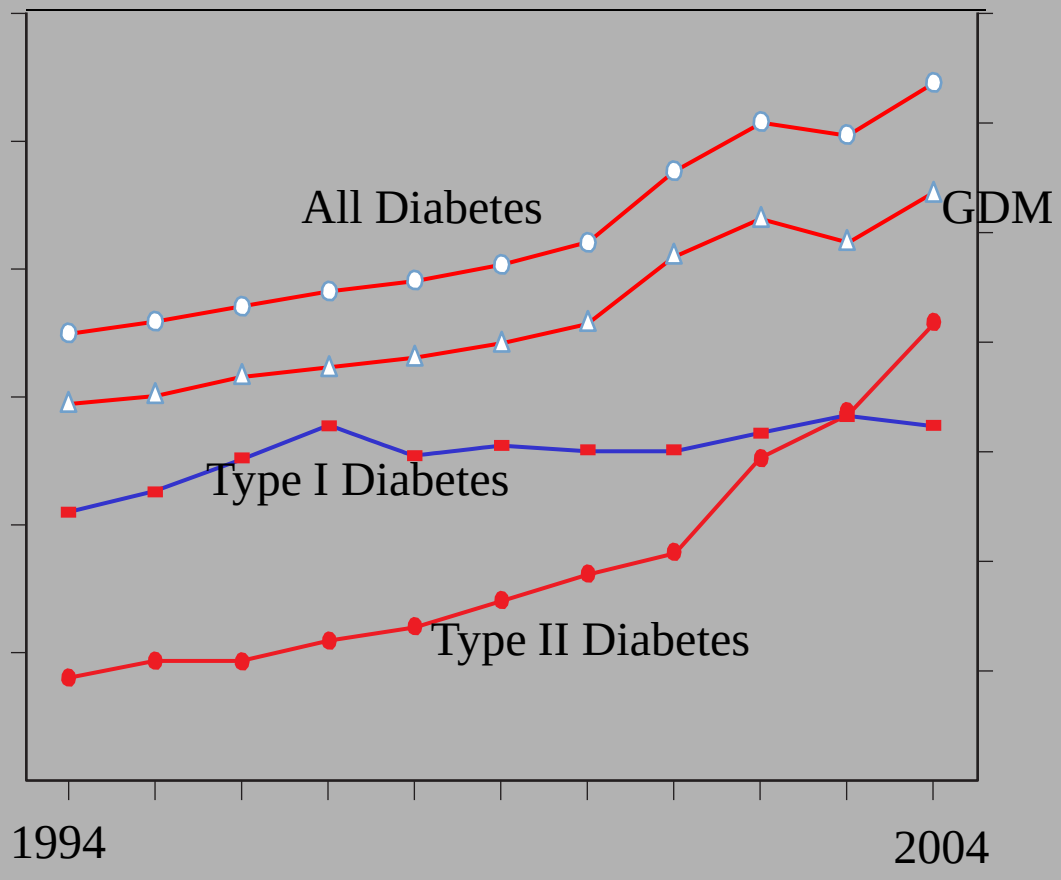
Trends for Diabetes in the United States 1994-2004



Diabetes Care 33:768, 2010

Outline

- Preconception Counseling
  - Why it is important
  - Critical elements of Preconception Care
    - Prior GDM with normal follow up testing
    - Preexisting Diabetes
- Postpartum Surveillance of Women with GDM
  - Immediate PP testing
  - Follow up screening recommendations

Preconception Care

- Is it important?
  - Lack of prepregnancy care increases risk of congenital anomalies 3 fold
    - Congenital anomalies account for 40% of perinatal loss in women with pregestational diabetes
    - Anomalies are more often complex, multiple and severe
      - Cardiac, neural tube and skeletal
  - Normalizing the HbA1C brings risk to near baseline
- But…only 35% of eligible women receive preconception care

Guidelines for Prior GDM

- Preconception care is important to ensure diabetes hasn't developed in the interim since last pregnancy
- Review follow up testing results since affected pregnancy
  - If normal, then counsel regarding:
    - Recurrence risk of GDM: 50-60%
    - Lifetime risk of diabetes
    - Optimizing prepregnancy weight
    - Diet and Exercise
    - Smoking cessation
  - If no follow up testing was performed since affected pregnancy:
    - HbA1C
      - If A1C $\geq$ 6.5% – follow preexisting diabetes guidelines
      - If A1C 5.7-6.4% – treat as prediabetes

Guidelines for Preexisting Diabetes

- Key Elements
  - Counseling and education
  - Assessment
  - Attaining optimal control
    - Contraception until HbA1C at target
  - Timing of conception
- Dedicated team of providers
  - Ideal world – in one location/center

Counseling and Education

- May be an extended process
  - Mom is ideally fully committed to healthy baby
  - Time intensive
- Review risks
  - To fetus:
    - miscarriage, anomalies, macrosomia, IUFD, NICU admission
  - To mother:
    - preeclampsia, preterm delivery, CS, DKA, extended antenatal hospitalization

Counseling and Education

- Positive impact of care
  - Normalizing HbA1C: Goal is < 7%*
    - Linear relationship between A1C >7% and adverse ob outcome
      - Each 1% increase in A1C – increases risk by 5-6%
  - Optimizing medication regimen
    - Discontinue teratogens
      - ACE-I, ARBs, Diuretics, Statins
  - Smoking cessation
  - Diet and exercise
  - Weight loss if appropriate
  - Significant other/Family involvement

**Diabetes Care 2013;36:S1:S11*

Counseling and Education

- Genetics of diabetes
  - Type I:
    - <25 y.o - 4% risk of offspring developing diabetes
    - >25 y.o - 1% risk
    - Both parents Type I: max 10%
  - Type II: double risk of general population

Assessment

- Complete history
  - Duration of diabetes – White classification
    - Current regimen and provider
  - Complications
    - Hypertension
    - DKA ?
    - Thyroid
    - Retinopathy
    - Nephropathy
    - Cardiac
    - Neuropathy
  - Current medications
  - Obstetric history
- Physical Exam

Assessment

- HbA1C
- 24 hour urine collection
  - Total protein
  - Creatinine clearance
- Urinalysis and culture
- TSH and free T4
- Opthomology exam
- EKG
  - Diabetes > 10 yrs
  - Any duration of diabetes if hypertensive
- Echo/Cardiology consult if any concerns for ischemic heart dis.

Indicators of Poor Outcome

- Ischemic heart disease
- Untreated proliferative retinopathy
- Renal involvement
  - Serum Cr >1.5-2mg/dL
  - CrCl <50ml/min
  - Proteinuria >2g/24 hr
- BP >130/80 despite optimal treatment
- Severe gastroenteropathy

Preconception Management

- Attain optimal control of BGs
- Treat hypertension if indicated
  - Maintain BP <140/90
  - Be careful of overtreatment during pregnancy
- Folic acid 4mg qd
  - Uncertain if alters risk of ONTD given mechanism in diabetics
  - No downside given they are at risk group
- Referral to specialists if indicated (nephrology, cardiology...)
- Consider referral to perinatologist
- Timing of pregnancy
  - Contraception until pregnancy recommended


Teamwork
...has it's sweet rewards!












Immediate PP Care for GDM

- Regular diet
  - No insulin or oral hypoglcemic
    - Unless BGs > 200mg/dL
  - Monitor FBG and 2 hr PP
    - FBG <100
    - 2 hr PP <140
    - Random BG <200
- Encourage continuation of diabetes diet after pregnancy
- ADA: check BGs “on several occasions”
- Suggest FBG and 2 hr PP twice a week after discharge from hospital
  - Particularly in patients with predictors of persistence
- If diagnosed prior to 24 weeks
  - Continued close monitoring after discharge as they are likely undiagnosed pregestational diabetic
  - Ongoing care with a Diabetes Care Team

Why Screen PP?

- Substantial prevalence of glucose intolerance at 3 months PP
  - IFG 3-6%
  - IGT 7-29%
  - Diabetes 5-14%
- Type II diabetes can be delayed or prevented by lifestyle intervention
- Women with prior GDM have high frequency of CVD risk factors
- Women entering subsequent pregnancy who are not identified have increased risk of miscarriage and congenital anomalies

Diabetes Care 2009;32:2242-44

Postpartum Screening

- All patients diagnosed with diabetes in pregnancy
- Perform 75g 2hr OGTT at 6-12 weeks PP
  - Compliance is, at best, 50%
- Predictors of persistent glucose intolerance:
  - Elevated FPG on 3 hr GTT
    - >130 – 95% of women have IGT within 1st year PP
    - 105-129 – 67% have IGT within 1st year PP
  - Diagnosis at <24 weeks
  - Obestiy
  - Excess weight gain in pregnancy
  - Insulin required for control during pregnancy

2 hour OGTT
6-12 weeks Postpartum

	Impaired Fasting Glucose	Impaired Glucose Tolerance	Diabetes
FPG	100-125 mg/dL		≥126
2 hr glucose		140-199	≥200

Prediabetes: IFG, IGT or HbA1C 5.7-6.4%

Diabetes Care 2011;34:S11

"Do I have to drink that stuff *again*?"

- Yes!
  - FPG is inadequate for screening
    - If only FPG is used
      - 40% of IGT patients are missed
      - 75% of diabetes patients are missed
    - 1/3 of patients who have diabetes or prediabetes have isolated 2 hr elevation
    - Even if FPG cutoff were lowered, estimate 56% of hyperglcemic patients would be missed with FPG only

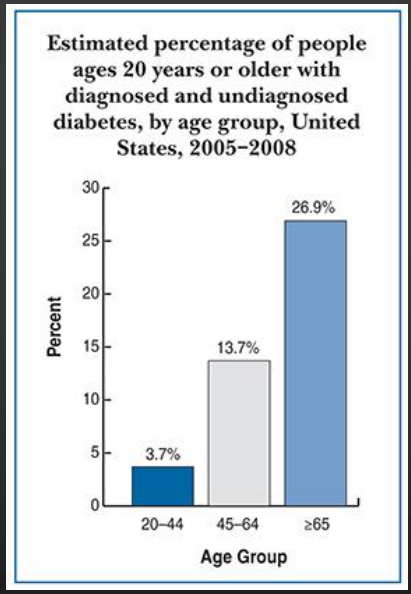
Diabetes Care 2009;32:269-74
Diabetes Care 2009;32:2242-44

Long Term Follow Up

- Women with history of GDM
  - Normal 75g OGTT
    - ACOG Aug 2013
      - Screening every 3 years
      - "For women who may have subsequent pregnancies, screening more frequently has the advantage of detecting abnl glucose metabolism before pregnancy"
    - HbA1C for long term follow up
      - No recommendation from ACOG on test to use
      - Adult diabetes screening recommendations for moderate to high risk
- Do you know your personal risk of Type II Diabetes ?
  - http://www.diabetes.org/diabetes-basics/prevention/diabetes-risk-test/

Challenges

- 50% of pregnancies are unplanned
  - 65% of women with diabetes don't receive/seek preconception care
- Coordination of the care team
  - Communication and planning among team members who are usually not in the same location/office
  - Protocols for care and follow up given lifetime risk of diabetes
- Patient compliance



2005–2008 National Health and Nutrition Examination Survey