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Gestational Weight Gain Prior to Glucola and Risk of Gestational Diabetes Mellitus

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Comments
Medical student Anna BuAbbud participated in this study as part of the Senior Scholars research program at the University of Massachusetts Medical School.

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Gestational Weight Gain Prior to Glucola and Risk of Gestational Diabetes Mellitus

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Materials and Methods

- **Inclusion Criteria** (n=1156):
  - Hispanic women
  - Delivered by UMass Memorial faculty between 4/1/06-3/31/11
  - Received prenatal care at faculty or resident practices
- **Excluded Criteria** (n=1316):
  - Hispanic women
  - Delivered by UMass Memorial faculty between 4/1/06-3/31/11
  - Received prenatal care at faculty or resident practices

Results

- **Subjects used in analysis** (n=1156, Fig. 2)
- **Demographic Characteristics, comparison between included (n=838) and excluded (n=318) subjects (Table 2):** BMI (n=838, Fig. 3) and GWG Adherence (n=838, Fig. 4) of included subjects.
  - Excluded subjects with significantly higher gravidity (p=0.049), and more English-only speakers (p=0.025).
  - 86 of 838 diagnosed with GDM (10.3%, Fig. 5)
  - By 2009 IOM guidelines, 13/189 (6.9%), 22/204 (10.8%) and 31/445 (11.5%) with inadequate, appropriate and excessive gain respectively diagnosed with GDM (Fig. 6). OR (95% CI) 1.07 (0.63-1.82) for undergainers and 0.61 (0.30-1.25) for overgainers.
  - No significant association between pre-glucola GWS & GDM (p=0.211).
  - GWG Adherence of subjects with diagnosed GDM (n=86, Fig. 7).

Conclusions

- **Rate of GDM in preliminary cohort of Latinas is almost double that of the general population (10.3%).**
  - Excluded subjects had more unknown demographic data (education level, family history of diabetes).
  - More overgainers diagnosed with GDM than under- or appropriate gainers.
  - Although there is a trend toward increased weight gain associated with increased gestational diabetes risk, this association was not statistically significant.
  - Further evaluation warranted within high-risk subgroups.
  - Data to be combined and re-assessed with larger study from UMass Amherst.