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PREVENTION OF GESTATIONAL DIABETES AND FUTURE DIABETES TO PREVENT CVD

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Rationale for GDM prevention

- GDM diagnosed late pregnancy
  - Defined as an insulin resistant state of pregnancy that unmasks (a likely chronic) defect in pancreatic β cells → cannot keep up with insulin production and hyperglycemia occurs
  - ***Pregnancy is considered a "stress test" unmasking a woman's susceptibility to type 2 diabetes (T2D)***
- GDM is associated with risk of preeclampsia and other adverse maternal and infant outcomes
- People with GDM have 10-fold increased risk of developing T2D after GDM
  - Risk increases linearly: ~20% at 10 years, ~30% at 20 years, ~40% at 30 years, ~50% at 40 years, and ~60% at 50 years
- GDM associated with future cardiovascular disease (CVD) (OR: 1.68 from systematic review), i.e., preventing GDM→ reduces CVD

Need to prevent GDM by addressing pre-conception obesity and gestational weight gain

- **Preconception interventions are challenging to plan as pregnancy not always intended**
  - **Gaps:** 1) mHealth interventions are so variable that evidence supporting their use to address obesity in preconception period is limited (Cochrane Database Syst Rev. 2024); 2) Need for trials to assess GLP1 agonists for weight loss prior to conception
- **Pregnancy interventions: USPSTF** showed moderate evidence supporting intensive behavioral interventions(coaching, goal setting, patient education) starting early in pregnancy to reduce GDM but risk reduction is small (13%)
  - Benefits also include reduction of postpartum weight retention, likely with continued reinforcement into postpartum period
  - Reduction of GDM risk for future pregnancies, prevent future T2D and CVD through improved lifestyle
  - **Gaps:** Few (if any) health systems offer weight management programs in pregnancy; no insurance coverage; commercial weight "loss" programs exclude pregnancy

U.S. Preventive Services TASK FORCE

Gap: Food insecurity and risk of GDM, future obesity and CVD

- **Food insecurity in non-pregnant adults** associated with *nutrient inadequacies and many chronic diseases (obesity, mental illness, chronic kidney disease, cardiovascular disease, diabetes, and asthma)*
  - However, USPSTF → Screening for food insecurity "insufficient" evidence due to inadequacy in tools
- **In pregnancy** – Few studies examined food insecurity and health outcomes, based on 2023 systematic review on healthcare-based intervention in pregnancy (WIC vouchers, produce prescription, connecting with food resources
  - Only 5 observational studies (no trials) – less food insecurity, preterm birth → improved BP trends; limited evidence on other outcomes.

Need to evaluate role for WIC and other safety net services in preventing GDM, future T2D and CVD

Systematic Review of 20 observational studies included (*Annals of Internal Medicine (2022)*, doi: 10.7326/M22-0604

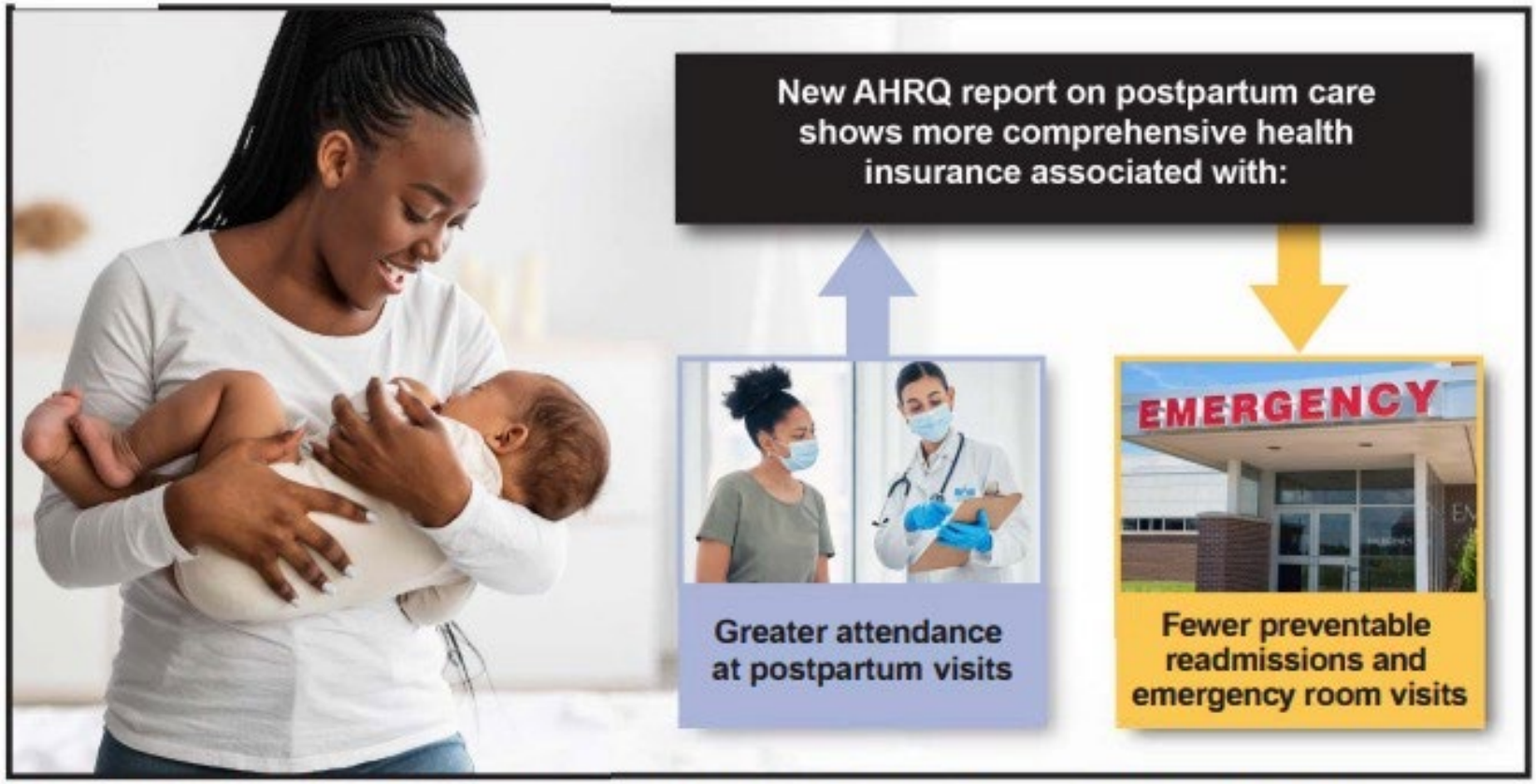
- WIC participation associated with lower risk of preterm birth, low birthweight infants and infant mortality

- **Gap**: Very little evidence on effect of WIC on pregnancy outcomes and future maternal obesity and diabetes

Improving preventive services to prevent future DM and CVD in people with recent GDM

1) **Gap: Improve postpartum health care**: 50% postpartum people in U.S. do not receive any routine health care, with significant disparities across groups marginalized by racism, geographic location, immigrant status, and socioeconomic status.
    - ADA Standards of Care in Diabetes recommends T2D screening with 75 gm OGTT at 4-10 weeks postpartum; with continued screening every 1-3 years in primary care
    - Need additional support to build, implement **broader partnerships for long term T2D prevention in community-based and public health settings**: workplace, daycare (HeadStart), neighborhood based, WIC, SNAP, early home visiting etc.
2) **Gap: Breastfeeding promotion before leaving hospital, ongoing pediatric care.** Breastfeeding associated with 30% reduction in DM
3) **Gap: Increase access to evidence-based T2D and CVD prevention programs like the Diabetes Prevention Program(DPP) -** <5% of eligible people participate
4) **Gap: Address Medicaid and private insurance coverage for long-term prevention-oriented strategies**

Benefits of Postpartum Care



Source: AHRQ Effective Health Care Program Comparative Review #261. Postpartum Care up to 1 Year After Pregnancy: A Systematic Review and Meta-Analysis.

This infographic is based on a PCORI-funded AHRQ systematic review: https://effectivehealthcare.ahrq.gov/products/postpartum-care-one-year/research

Questions?