Intervention strategy: preconception

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Every year 50 million children are put at risk because they are dangerously thin from acute undernutrition.

Long-term health of more than 40 million children is threatened because they are overweight.

Two billion people suffer from vitamin and mineral deficiencies,

Overweight and obesity are key contributors to the non-communicable diseases that account for almost two thirds (63%) of adult deaths globally.

These different forms of malnutrition: undernutrition, overweight and obesity, and micronutrient deficiencies affect people across the same communities and harm people of all ages.

Francesco Branca (WHO)
In urban Soweto, South Africa
• Overweight: 34%
• Obesity: 33%
• Anaemia: 31%
• Obesity + anaemia: 12%
• Gestational diabetes: 10%

In rural Mysore, India
• Underweight: 35%
• Anaemia: 58%
LIFECOURSE

• **First 1000 Days** (Pregnancy + Infancy)

• **8000 Days**: 1000 Days + 7000 Days (childhood + adolescence)
  • First 1000 Days alone may be insufficient to optimise nutrition, development & health
  • Next 7000 days augments interventions applied within the first 1000 days

• **Preconception**
Immediate initiation of breast feeding

Diet and micronutrients during pregnancy

Exclusive breast feeding to 6 months

Adequate complementary feeding from 6 months

Continued breast feeding

Energy and nutrient adequate diet

Micronutrient supplementation as necessary

School meals

Birth 7 days 28 days 1 year 10 years 20 years

Pre-pregnancy dietary advice for adolescent girls and women

Adolescent dietary advice
Mothers’ obesity or under-nutrition and similar factors in fathers can adversely affect the eggs, sperm and embryos with enduring consequences, increasing long-term cardio-metabolic and non-communicable disease risk in offspring. Pre-conception care and preparation for pregnancy is the right strategy for health of the nation across generations.
INTERVENTION STRATEGIES: PRECONCEPTION

**Strategy 1: Health system strengthening**

- Primary health care to target and support people planning a pregnancy
- Staff should be trained in skills to motivate and engage adults intending to become pregnant to improve their nutrition and health
- Jom Mama RCT (Malaysia)
  - Recruitment of couples
  - Training of primary health care nurses
  - On average pregnancy within 8 months (max 6 intervention sessions) – behaviour change to improve nutrition
INTERVENTION STRATEGIES: PRECONCEPTION

**Strategy 1: Health system strengthening**

- Preventing micronutrient deficiencies before pregnancy
- India success
  - Deworming
  - Folic acid supplementation to women preconception
  - Less success in combating anaemia
INTERVENTION STRATEGIES:
PRECONCEPTION

Strategy 2: Community outreach programmes

• Preventing micronutrient deficiencies before pregnancy

• India
  • Public distribution system provides food rations to households
  • Mumbai Maternal Nutrition Project: in the group of women who had 3+months of supplementation preconception with a food state supplement had improved birth weight
INTERVENTION STRATEGIES: 
PRECONCEPTION

Strategy 3: School curricula

• Ministries of Education need to adapt school curricula to reflect the impact of nutrition for both boys and girls and behaviours in adolescence in preparing for later parenthood.
INTERVENTION STRATEGIES: PRECONCEPTION

- Canada (urban), China (urban Shanghai), India (rural Mysore), South Africa (urban Soweto)
- 4x RCTs: approx 22000 young women enrolled
- Preconception-Pregnancy-Postpartum
- Primary outcome child at age 5 years (adiposity)
- Optimise nutrition, physical & mental health, social support & early child development
- Canada & China – health system based
- India & South Africa – community based
- Intervention team trained in Healthy Conversations
- Supplementation & behavior change (max 18mo in SA; 2x contacts per month)
Preconception health may provide opportunities for double-duty strategies to tackle malnutrition that may have significant benefit to women and men and their children.

We need more evidence of evaluation of these strategies in different settings.
INTERNATIONAL SYMPOSIUM ON
Understanding the Double Burden of Malnutrition for Effective Interventions

THANK YOU!