



USAID
FROM THE AMERICAN PEOPLE

SPRING
Strengthening Partnerships, Results,
and Innovations in Nutrition Globally

SPRING Extended Cost Effectiveness Model

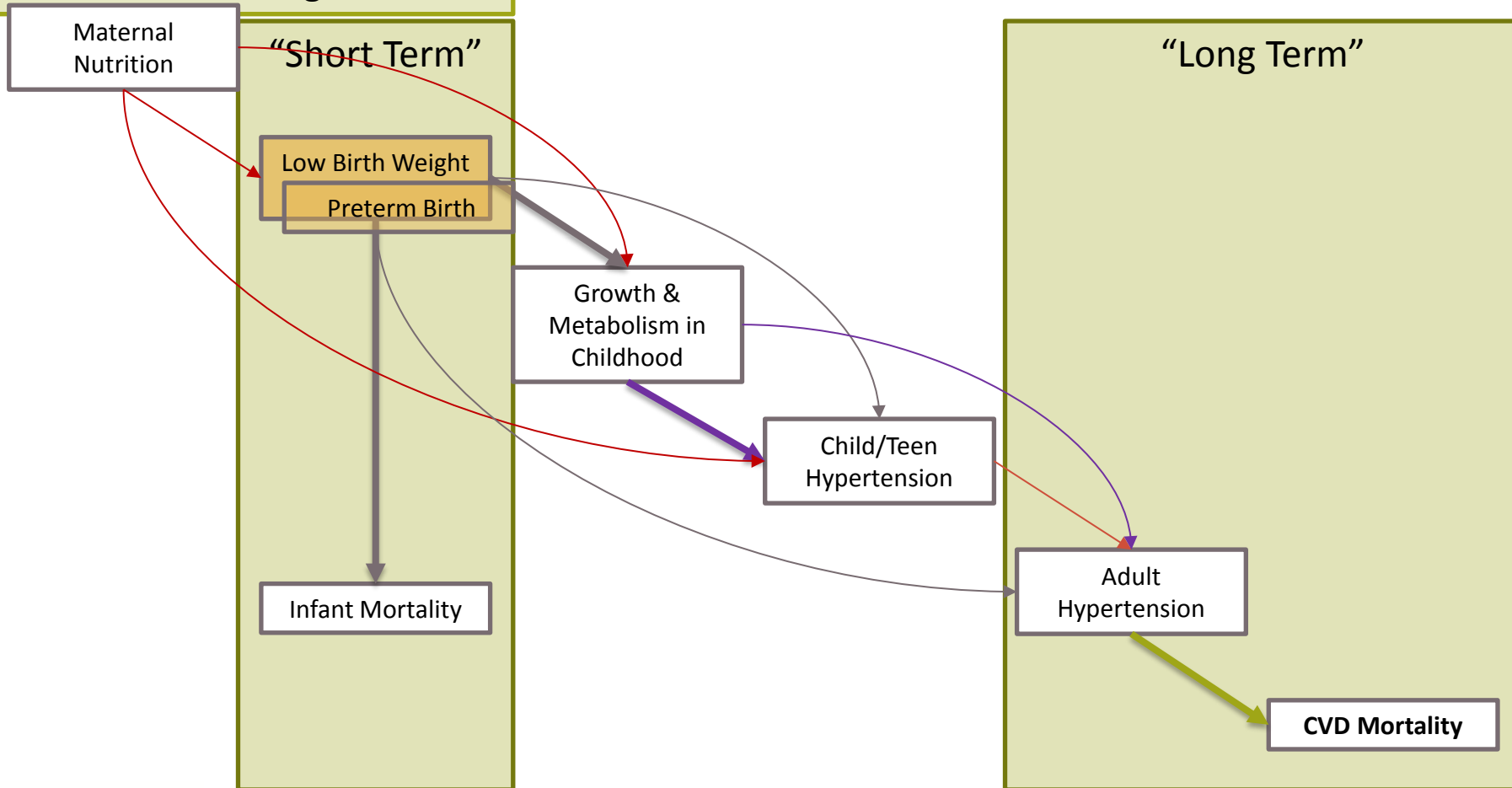
Maternal Interventions to Improve Birth Outcomes

SPRING Model Team

(Amanda Pomeroy; Warren Stevens; Marc Cunningham; Alexis
D'Agostino; Jolene Wun)

Pathway & Time of Impact

“Costs” = MCH Interventions:
MMS, BPE, IPI change via FP





Data and Methods

Data

- 2011 Bangladesh base population
 - DHS, UNICEF LBW Survey, IDB, GBD, BD Life tables
 - RRs: Evidence Review

Methods

- Provider perspective
- Decision Tree/Markov model
- Epidemiological Transition
- Variable Cost Function
- One Way Sensitivity Analyses

KEY FINDINGS

- Survivorship in the short term period has a significant confounding effect on long term results
- The inclusion of long term effects produced a increase in CER, showing a non-trivial additional value on later life health outcomes
- All interventions were **cost effective** when considering just short term effects
- MMS and BPE interventions were **highly cost effective** when both short and long term effects counted; FP was possibly not.

Cost Effectiveness Ratios *

| 3% Discount | Low Delivery Cost | High Delivery Cost |
|-------------------------------|--------------------------|--------------------------|
| Long- and Short-Term Benefits | | |
| MMS | \$160.03 (\$110 – \$253) | \$437.37 (\$299 – \$530) |
| BPE | \$529.76 | \$889.45 |
| FP/IPI | 1952.41 | 2722.94 |
| Short-Term Benefits Only | | |
| MMS | 161.99 | 442.73 |
| BPE | 536.47 | 900.73 |
| FP/IPI | 1976.12 | 2756.01 |

CERs improve by \$2 to \$33/DALY with the inclusion of long term effects

*WHO threshold for **cost effectiveness**: *three times GDP per capita per DALY*. Bangladesh CER Threshold: \$2229 (**Highly cost effective would be less than GDP, \$743**). Source: World Bank 2011 GDP per capita for Bangladesh