



## MULTISECTORAL APPROACHES TO NUTRITION IN BIHAR

### INTERVENTIONS TO ACCELERATE HEALTH AND ECONOMIC DEVELOPMENT

#### All sectors will benefit from stronger nutrition programming and outcomes

Poor nutrition can prevent a range of programs across different sectors—health, WASH, agriculture, education, and others—from achieving impact. But when sectors collaborate, evidence shows that they can all achieve greater outcomes. Collaboration between policy makers and program leaders across sectors can build human capital and fuel economic growth for generations to come.

Multisectoral actions improve nutritional outcomes in several ways. They can address the immediate causes of undernutrition by improving dietary intake, and they can also address underlying causes like improved sanitation, hygiene, and women’s education. When government nutrition policies and strategies are clarified across all sectors, the potential for greater impact and scale is tremendous.

**The case for investing in nutrition is clear.** Poor nutrition during the first 1,000 days—from pregnancy through a child’s second birthday—can cause life-long and irreversible damage. Ultimately, this damage limits the health and economic outcomes of individuals, communities, and entire nations.

## Water, Sanitation, and Hygiene Programs (WASH)

WASH and nutrition programs depend on each other to achieve impact. For example, diarrhea is one of the biggest killers of children in South Asia. These deaths are largely preventable through good nutrition, handwashing with soap, safe drinking water and basic sanitation, and vaccination.<sup>1</sup> Proper handwashing with soap at critical times, and especially before preparing food and feeding a child, is one of the most effective and cost-efficient ways to prevent diarrhea.

Improvements in sanitation, especially the elimination of open defecation, have been associated with a decrease in stunting of 4 to 37 percent (rural) and 20 to 46 percent (urban).<sup>2</sup>

When nutrition programs emphasize water, sanitation, and hygiene—and WASH programs emphasize handwashing before preparing food, feeding a child, and elimination of open defecation—both programs can maximize impact.

### Actions

- WASH programs should highlight the importance of washing hands with soap before preparing food and feeding a child. Messages that demonstrate impacts on common illnesses, like diarrhea, are most impactful.
- Include handwashing with soap in complementary feeding counseling. Include key messages in trainings with frontline workers from both sectors.
- Include nutrition indicators in strategies and action plans for WASH programs, with specific guidance on how it should be incorporated.
- Ensure a safe latrine and safe children's play areas for every family, and eliminate open defecation.

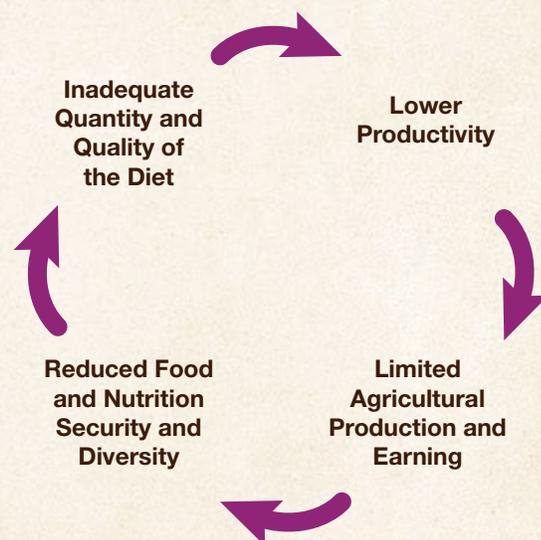
## Agriculture

Research in India has shown that increased crop diversification improves dietary diversification in the home and helps children recover from growth faltering.<sup>3</sup> As agricultural production grows and diversifies, households experience increased food security and better nutrition, leading to increases in human capital and productivity:

- ✓ Agricultural growth has shown a large and significant effect in reducing underweight, and also leads to reduced stunting in food-insecure settings.<sup>4</sup>
- ✓ Diversified agricultural production has the potential to improve access to more diverse and nutritious foods, a key component of meeting the “Minimum Acceptable Diet” for children.<sup>4</sup>

Agricultural programs that focus on producing energy-rich staple foods can also be more effectively designed to reduce undernutrition by promoting crops that reduce vulnerability to droughts and extreme climate, increase yields, or improve nutritional value.<sup>5</sup>

By putting more focus on nutrition outcomes (i.e., by including nutrition objectives at the outset), agricultural interventions can improve the capacity, productivity, and future prospects of agricultural workers—and also contribute to reducing undernutrition.<sup>5</sup>



## Actions

- Focus agriculture programs on improving nutrition security—not just food security. Stunting is often a result of children not consuming the right food—like animal source protein—in sufficient quantity.
- Include nutrition objectives and indicators from the outset in agriculture programs and implement impact assessments to understand the positive impact of producing foods high in protein, essential fats, and micronutrients.
- Support dairying, poultry, and fisheries to strengthen nutrition security and support efforts to diversify production by small farmers, such as vegetables, fruits, fish, and small animals. Focus efforts on reducing postharvest losses through better storage and processing.

Supplying cereals through the public distribution system or take-home rations is important for addressing hunger—but does not help in addressing child malnutrition or nutrition security.

## Education

Children can't learn and succeed in their education without a solid nutritional foundation:

- ✓ Good nutrition is essential for full development of cognitive and motor skills, behavioral abilities, IQ, and physical growth. Early childhood undernutrition, including poor nutrition in the womb, often results in stunting and can have permanent developmental effects on a child.<sup>6</sup>
- ✓ Stunted children are also less likely to complete school. Studies from 79 countries show that every 10 percent increase in stunting corresponds to an 8 percent drop in the proportion of children completing primary school.<sup>6</sup>



When education programs invest in nutrition, it improves academic achievement. One example is school feeding programs, which can improve learning and academic performance. Students participating in school feeding and take-home ration programs have improved cognition.<sup>7</sup> These programs yield the greatest impact when coupled with other programs like deworming, micronutrient supplementation, and fortification.<sup>6</sup>

Integrating nutrition programs into school curriculum initiates life-long healthy behaviors. Children connect what they learn in school to their broader communities by bringing messages home to their families and promoting good nutrition and healthy habits in the household.

## Actions

- Integrate strong nutrition and infant and young child feeding information into school curriculum. Ensure tailored information for girls—who need to practice good nutrition to have healthy pregnancies, develop good child feeding habits, and break the generational cycle of malnutrition. Keeping adolescent girls in school helps delay early marriage and the age of first pregnancy, lowering their risks of HIV and gender-based violence, and contributing to their empowerment and future earnings.<sup>8</sup>
- Expand fortified food supplements and school-based deworming programs and support the Weekly Iron and Folic Acid Supplementation Program, alongside direct nutrition interventions delivered during the first 1,000 days of life.

## Health

Health programs have specific opportunities to strengthen nutrition across a range of programs and interventions, including family planning and immunizations.

### Family Planning

Integrating maternal, infant, and young child nutrition with family planning programs has proven positive results for both mothers and their children. Synergies between these interventions exist throughout the reproductive life course.<sup>9</sup>

- ✓ Adolescence: Girls need to protect themselves from early pregnancies during this time, especially if unintended. But this is also an important time for their own nutrition, and for educating them about good maternal, infant, and young child nutrition. Currently, a staggering 75 percent of adolescent mothers are anemic, and these malnourished mothers are unable deliver healthy babies.<sup>10</sup>
- ✓ Pregnancy: Women have increased nutritional needs throughout pregnancy—including the consumption of micronutrient supplements—and also benefit from counseling on both maternal and newborn nutrition, and limiting and spacing of pregnancies.
- ✓ Postnatal period: Women need family planning advice during this time, alongside support for exclusive breastfeeding.



Exclusive breastfeeding in the first six months after birth not only protects infants from malnutrition but also acts a method of contraception for mothers—increasing spacing between births and helping to regulate family size.<sup>9</sup> Improved birth spacing reduces stunting, underweight, and infant mortality.<sup>10,11</sup> In addition, women experience lower risks for poor pregnancy outcomes, such as small for gestational age (SGA), pre-term delivery, and delivery of a low birth weight baby.<sup>11</sup>

### Actions

- Introduce life skills curriculum for teenage girls, including advice on nutrition and reproductive health, and policies supporting teenage mothers to complete schooling.<sup>12</sup>
- Offer counseling during pregnancy to educate mothers about the importance of nutrition and family planning actions to initiate immediately after birth.<sup>11</sup>
- Develop community-based approaches to reach women in their homes, in the community, and at health facilities. These should include child growth promotion counseling, community conversations, quarterly child health days, and household visits by community health workers or community volunteers to discuss child nutrition and birth spacing.<sup>12</sup>
- Establish male peer groups to encourage their support for family planning issues, such as delay of the first pregnancy, space between conceiving, and limiting the number of total pregnancies.

### Immunizations

Globally, infectious diseases and malnutrition are the leading causes of death, each increasing the risk of incidence of the other in a vicious cycle.<sup>13,14</sup> Malnourished children are more prone to contracting infectious diseases such as malaria and diarrhea, which in turn leads to poorer health and nutrition outcomes. Children who are malnourished are nine times more likely to die from infectious diseases such as pneumonia, diarrhea, malaria, and measles.<sup>15</sup>

- ✓ When children's health is compromised by infectious diseases, they are less able to retain essential nutrients and are at a higher risk of falling into a dangerous state of malnutrition.<sup>14</sup>

- ✓ Repeated bouts of diarrhea can disrupt normal functioning of the gut, causing up to 43 percent of all stunted growth in children in developing countries.<sup>14</sup>
- ✓ Losses of zinc through diarrhea can leave a child prone to further infection, prolonging diarrhea and further reducing nutritional intake.<sup>16</sup>

Immunizations help prevent chronic consequences of undernutrition, and reduce risks of mortality.

- ✓ In 2012, children in India with up-to-date vaccines against tuberculosis, diphtheria, tetanus, pertussis, measles, and polio were less likely to show signs of stunting.<sup>17</sup>
- ✓ Children given vitamin A supplements benefit from boosted immune systems and are less likely to die from diseases like measles.<sup>18</sup>

The global fight against infectious diseases must be paired with a fight against malnutrition. Together with critical nutrition interventions, improving access to vaccines against infectious diseases such as pneumonia, diarrhea, and measles will significantly advance child survival and development.<sup>19</sup>

## Actions

- Integrate essential services, including programs to address malnutrition and vitamin deficiencies, with national immunization delivery systems.
- Implement ‘vaccination campaigns’ that provide both immunizations and other well-baby care and maternal and child health interventions collectively. These will also help target hard-to-reach groups, introducing new vaccines and improving coverage.<sup>20</sup>
- Invest in a strong health system, including adequate planning, availability of trained health workers, and a functioning supply chain. Health system planning is essential for successful integration of health services and immunizations.<sup>20</sup>

## Social Protection

Social protection programs that include nutrition objectives can reduce the prevalence of malnutrition among women and children. They are often effective at improving nutrition because they:

- ✓ Target high-risk groups like pregnant women and children less than 2 years of age with cash and nutrition products, such as fortified food supplements
- ✓ Have infrastructure to promote good nutrition, including referral and targeting systems
- ✓ Can stipulate conditions for beneficiaries, such as attending prenatal care and participating in nutrition education, provided the quality of such services is assured

When poor families receive cash transfers, anywhere from 40 to 88 percent of the additional cash is used for household food expenses. This results in improved diet, nutrition, and other outcomes.<sup>21, 22</sup>

### Integrating nutrition into social protection programs improves outcomes:

- ✓ **Improved diet quantity, quality, and diversity**—Cash transfer programs provide additional resources for families to pay for everyday needs and services, allowing more money to be spent on non-staple foods, including fruits, vegetables, and animal products.<sup>23, 24</sup>
- ✓ **Decreased vulnerability to shifting patterns of agriculture and climate**—When households are more food secure, they are better able to adapt to changing climates and seasonal shifts in agricultural production, contributing to a reduction in seasonal increases in malnutrition.<sup>25</sup>

- ✓ **Helping children reach their full potential**—Some social protection programs have impacted child height and health, especially when children are young and poor.<sup>26</sup> They can also reduce low birth weight infants, which is a determinant of height, IQ, education, and earnings.<sup>27</sup>
- ✓ **Strengthened women's empowerment**—When social protection programs are targeted to women, it increases household investments in better nutrition for the whole family.<sup>21, 28, 29</sup>

## Actions

- Collaborate with health and nutrition policymakers to develop and implement social protection policies that are comprehensive and multisectoral, and that include nutrition requirements for beneficiaries.
- Unlocking and strengthening systems to deliver essential supplies such as IFA, Vitamin A, deworming tablets, etc.
- Support social protection programs in achieving nutrition objectives by:
  - Training social protection program staff and community health workers on appropriate nutrition practices.
  - Developing nutrition communication strategies and practical nutrition messages targeted to beneficiary households.
- Use nutrition indicators to monitor and assess effectiveness, such as child growth indicators or food diversity.

## Together, we can harness the power of nutrition for the benefit of all sectors

By supporting and investing in multisectoral approaches to nutrition, all programs can achieve greater impact. Collaboration across ministries is needed to develop linkages between health, WASH, agriculture, education, and social welfare. By working together and taking essential actions across sectors, we can achieve a Bihar that is healthier and more economically secure for all.

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