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Analyzing Intersectoral Convergence to Improve Child Undernutrition in India

Development and Application of a Framework to Examine Policies in Agriculture, Health, and Nutrition

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ABSTRACT

India's record of undernutrition presents a stubborn challenge. Given the multiple determinants of child undernutrition, effective action to tackle this problem in India and globally requires a range of inputs across various sectors. Delivering nutrition-specific and nutrition-sensitive interventions to entire populations requires that these various sectors come together at critical points and in meaningful ways to ensure delivery of key nutrition-related actions for communities and households. However, currently in India, a major challenge is bringing sectors together to deliver for a common goal. Although the lack of convergence is well documented, there lingers a substantial gap in articulating what needs to be assessed to ensure that convergence is indeed happening, or not happening. In an effort to close this gap, in this paper we describe a possible framework to enable convergence across sectors for action on nutrition. Our framework notes that issues related to convergence must be resolved in relation to three major steps in the policy process: policy formulation, implementation, and monitoring and evaluation. We articulate here questions related to convergence that must be asked at each of these stages of the policy process. We also conduct a desk review to analyze health and nutrition policies in India for evidence of attention to these aspects of convergence.

We find that although convergence between nutrition and health has long been recognized as a barrier to improving child undernutrition in India, actual convergence has been limited and somewhat ineffectual. Some factors underlying limited convergence include a range of multiple and diverse stakeholders; complexity of the technical issue; determinants of undernutrition that lie outside technical domains; and the view, based on an experiential understanding among implementers, that convergent action is an almost insurmountable barrier. We postulate that three factors lie at the heart of this incomplete convergence process: failure to include convergence in policy formulation, lack of attention to institutional modifications to facilitate convergence, and lack of monitoring mechanisms to assess convergence of programs on an ongoing basis. Further research is also necessary to trace the factors, related to context, stakeholders, and key implementation and monitoring mechanisms that either facilitate or hamper convergence.

Keywords: nutrition, multisectoral, convergence, policy, programs, India

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1. INTRODUCTION

Background and Definitions

India's record of undernutrition presents a stubborn challenge. Given the multiple determinants of child undernutrition, effective action to tackle this problem in India and indeed globally requires a range of multisectoral inputs (Bezanson and Isenman 2010). The field of nutrition recognizes the importance of nutrition-specific actions, such as behavioral interventions to improve feeding, care, and hygiene practices; and interventions to deliver micronutrients, to improve maternal nutrition, and to prevent and treat illnesses and severe malnutrition. The field also acknowledges the role of interventions and actions to address critical issues such as household poverty, food security, social equity, women's empowerment, and other underlying factors. Ensuring that all key actions for nutrition are implemented in turn necessitates convergent action between the fields of nutrition, health, agriculture, livelihoods, and women's empowerment. The relationships between these various fields and their potential for improving nutrition have previously been well explained through multiple pathways (Gillespie and Kadiyala 2011). These pathways elucidate the linkages between different sectors in relation to creating enabling conditions for improved nutrition or for improving nutrition directly. Overall, the conceptual frameworks suggest that effective convergence is desirable and that it either exists (in ideal situations) or can be forged through a set of strategic mechanisms related to policies and programs.

Before proceeding, it is worth pausing to define the terms *convergence* and *sector,* and to examine what these concepts might mean for nutrition. We note that what is essential in relation to convergence and nutrition relates to the notion of coming together or achieving a common result. Ultimately, convergence of various policies and programs needs to result in better services, conditions, and resources available to households and families, and better nutrition for children.

In this context, therefore, we define *convergence* in relation to nutrition as "strategic and coordinated policy decisions and program actions in multiple sectors, such as agriculture, nutrition, livelihoods, education, and women's empowerment, to achieve a common goal of reduced child undernutrition."

The use of the word *sector* in the context of this paper is related to the key fields that have proximal or distal effects on nutrition. Additionally, government departments or ministries, requiring certain technical expertise as well as operational and financial lines of functioning, are also organized around these distinct fields. These fields, departments, and ministries are therefore referred to as sectors, particularly in the literature on multisectoral action for nutrition.

With these definitions, then, the key outcomes of effective convergence would be a set of decisions and actions across different sectors that together will eventually lead to improved nutrition for women and children. The actions may or may not be joint actions, but they should be strategic and coordinated such that they lead to a common outcome that is agreed upon: improved nutrition.

Several studies have highlighted that realizing effective convergence across various sectors and delivery of convergent actions at the community level is perhaps one of the most significant challenges to improving child undernutrition in India, as well as globally (Gragnolati et al. 2005; Haddad 2009; Pelletier et al. 2012). Indeed, reviews of some of the success stories in reducing undernutrition reveal the importance of convergence of several different types of programs and interventions at the community level (von Braun, Ruel, and Gulati 2012). For example, in Thailand, successful reduction in undernutrition included a targeted community-based program for behavior change that relied on community volunteers; at the same time, scaling up of programs for education, water and sanitation, and minimum basic needs helped converge a set of direct and indirect interventions at the community level. Similarly, China's reductions in undernutrition also appear to have resulted from a coming together of health services, water and sanitation services, and investments in education, in the context of economic growth. Finally, recent analyses of Brazil's success at reducing undernutrition point to a package of health and nutrition services, linked to the main poverty alleviation programs, which helped to address socioeconomic inequity as a precursor to improved nutrition. On the flip side of these success stories,

which reveal the importance of convergent actions, evaluations and studies of child undernutrition policies and programs have highlighted the failure of convergence, at least between health and nutrition sectors, as being a key factor that has hampered impact. Similar experiences in India also reveal some of the operational challenges of building such convergence (CARE-India 2008; Kathuria et al. 2008).

In sum, there is broad recognition that intersectoral action for nutrition is likely essential to achieve sustained improvements in nutrition. Evidence also suggests that the challenges to building intersectoral commitment and action are quite substantial, as are the challenges to operationalizing convergent actions for nutrition (Garrett and Natalicchio 2011; Hoey and Pelletier 2011). Across the literature on policy processes in nutrition, however, there is little that provides a framework to enable the systematic analysis of the process and outcomes of convergence within policies and programs. This section is intended to help fill that gap.

Objectives

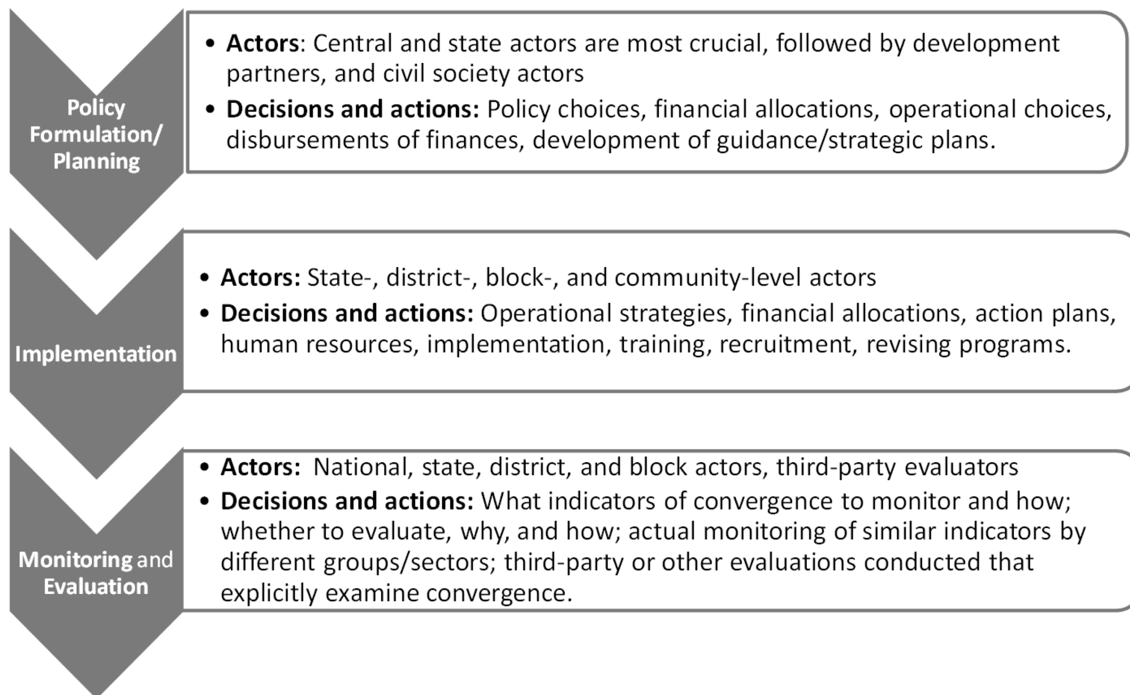
In Section 2 we lay out a framework for assessing convergence in relation to nutrition, considering a variety of factors that are relevant to the policymaking and policy implementation structures in India as well the literature on the nutrition policy process (Pelletier et al. 2012). In addition to laying out the conceptual and operational framework for convergence, Section 2 also identifies a set of key issues to be examined in order to assess convergence. Section 3 attempts to apply the framework to a review of the current status of convergence between the nutrition and health sectors in India. The concluding section identifies issues to consider and possible actions to overcome the key challenges highlighted.

2. FRAMEWORK TO ASSESS CONVERGENCE

In this section we describe the framework we propose for an assessment of the extent and nature of convergence between sectors. We bring to this framework an understanding of the structures and processes for policy decisions and actions in India, as well as the literature on policy processes in nutrition and maternal–child health.

Based on the policy process literature, we propose a framework for examining convergence across the continuum from agenda setting and policy formulation to monitoring and evaluation. Each of the stages of the policy process (Clark 2002) raises different implications for assessing whether or not convergence is enabled and in place. For simplicity, we combine agenda setting, policy formulation, and legitimization into a stage we call "policy formulation and planning," and thus examine three major phases of the policy process: policy formulation and planning, implementation, and monitoring and evaluation. In outlining these phases, we recognize explicitly that links between them are neither linear nor simple. Acknowledging the complex and multilayered policymaking and policy implementation structures in India, and indeed in other countries, the framework also takes into consideration the fact that convergence across sectors will involve actors, decisions, and actions at multiple national and subnational levels. Figure 2.1 illustrates the elements of the framework. Further description of the types of issues relevant to convergence at each level, and in relation to actors, decisions, and actions for each level, are described below. Box 2.1 also highlights some types of issues to examine when analyzing policies or programs for convergence. We also acknowledge here, especially for India, the critical importance of issues related to gender and social inclusion in examining the nature and extent of convergence.

Figure 2.1—Framework for assessing extent and nature of intersectoral convergence



Source: Authors' creation.

Box 2.1—Some important issues to consider in assessing the extent and nature of convergence

- What is new and what exists?
- How much organizational modification is necessary?
- What actions for convergence will cause what degree of disruption?
- What are the rewards of convergence and what are the incentives for convergent action?
- Who are the winners and losers?
- What is the nature of leadership?
- What hierarchies are affected?

Source: Authors' creation.

Description of Framework

The framework views convergence as a process resulting in an outcome rather than as an end point in itself. The process of convergence itself is a complex interplay of a multitude of actors, decisions, and resultant actions, which requires unpacking of the different ways in which decisions and actions by specific actors can either enhance or impede the process. Analysis of convergence within and across sectors is an important step not only in understanding and diagnosing the failures in intersectoral action but, more important, in identifying actions to improve convergence. In this subsection, we describe elements of convergence that are important to consider for each of the three critical policy process stages noted earlier, that is, in relation to the development of policies and design of policy instruments, in relation to implementation of programs, and in relation to monitoring and evaluation.

We recognize here that perceptions among different stakeholder communities that engage around a particular issue are shaped by a variety of actors whose influence ranges across issues such as technical content, advocacy, civil society, and media portrayal. Where issue portrayal by such actors, whose goals are to shape policy intent and action, does not display convergence, it is likely that there could be higher levels of dissonance in issue perception, which could, in turn, lower the possibility of convergence in identifying solutions to a given problem. As an example, the major discourse around nutrition in India has been linked to food-related causes of undernutrition, as a result of both civil society action and advocacy by the Right to Food campaign, and an emphasis on supplementary feeding within the Integrated Child Development Services program (the major policy instrument for nutrition in India). A result of this focus is that the discourse and consequent action on both food and nonfood (for example, health, gender, water, and sanitation) causes of undernutrition in India are limited. However, in relation to the overall framework for analyzing convergence, we do not explore factors related to convergence among these other communities that play a role in agenda setting and policy directions, except to flag them as important stakeholders around the issue.

Application of Framework

The convergence framework could be applied to the programmatic areas that require intersectoral, multisectoral, or convergent action that involves more than one sector, department, or agency. Examples in the social sector are health, nutrition, agriculture, and women's empowerment. In addition, sectors related to social determinants of health are important to consider, but they often lie well outside the boundaries of direct health interventions. They include water and sanitation, law, education, and occupational and environmental issues beyond the purview of clinical medicine or even public health.

The framework enables anyone undertaking an analysis to assess either the processes or the outcomes of convergence, or factors that influence either the processes or the outcomes. In that sense, it allows for a charting of the landscape within which convergence is desired and can serve as a diagnostic tool to assess the potential for convergence and enable mitigation of barriers to convergence.

The convergence analysis framework we propose is structured in relation to the three major steps in the policy process that we laid out earlier in this section: policy development, implementation, and monitoring and evaluation. It also focuses on three major features of convergence: actors, decisions, and actions. Below, we lay out how one might examine convergence in relation to policy development and policy choices, in relation to implementation, and in relation to monitoring and evaluation of programs and policies.

A first step in assessing the nature or extent of convergence is to decide whether the outcome of a policy formulation process—that is, the ultimate development goal—requires convergence or not. For this decision, it is helpful to have in place enough of a conceptual and empirical analysis of the problem to be able to understand the nature of the various sectoral inputs that contribute to the desired outcome. As an example, reduction in maternal mortality requires not just access to and availability of medical interventions, but also needs to converge with poverty alleviation and empowerment programs for women as well as policies related to female literacy, early marriage of adolescent girls, and women's education. For nutrition, the policy deliberation process requires consideration of nutrition-specific actions, nutrition-sensitive actions, and policy actions that can create an enabling environment for nutrition. In effect, we suggest that a first step is to ensure adequate clarity on the proximate and distal determinants of the outcome under consideration. Once this is done, a list of potential sectors with the greatest need to engage around a specific policy outcome should be developed. This list can then form the basis for prioritizing the sectors within and across which to assess the level and nature of convergence.

For nutrition in India, the following sectors[1] are useful to consider in relation to the different types of nutrition-related policy actions:

1. Direct: Nutrition-specific actions
    a. Women and child development (nodal Ministry for Nutrition)
    b. Health
    c. Water and sanitation
    d. Adolescent health
2. Indirect: Nutrition-sensitive actions
    a. Agriculture
    b. Food safety
    c. Education
    d. Water and sanitation
    e. Poverty reduction
    f. Social protection
3. Enabling environments for nutrition
    a. *Panchayati raj* (local government)
    b. Planning
    c. Finance

A few other considerations in the assessment should include the following.

[1] Note that *sectors* here does not refer simply to ministerial structures; actors in each of these sectors can also come from technical assistance agencies, donor agencies, or research and civil society groups.

Locus of Decisionmaking and Action

Where decisionmaking and action reside depends on the nature of policymaking and varies across countries and across the political spectrum. In federal structures, although decentralization is often the articulated preference, policymaking is still often the domain of the central government. In addition, the influence of external donors on policymaking is well recognized (Shiffman 2006). In a quasi-federal system such as India, where implementation and partial funding for programs is the business of subnational governments centrally designed and funded policies and programs need to be explicit about areas where interagency and interministerial convergence is required at the state level and below. Otherwise simply articulating convergence and delegating it to be evolved by decentralized structures of local levels of government may do nothing to facilitate convergence in implementation. Say, for example, the accredited social health activist, a community volunteer under the National Rural Health Mission, receives a financial incentive from the Department of Drinking Water and Sanitation for motivating toilet construction. This activity is linked to her work with the local village health and sanitation committee, with little input from the health department. However, the emphasis on water and sanitation in actual implementation is limited, with little resultant effect on this determinant of health and nutrition. While sector-specific policymaking is often driven by visionary leadership, policy decisions around convergent action for nutrition needs leadership that transcends the perspective of individual sector leaders. Thus, for instance in India, advocacy for convergent action is directed to the highest office, that of the prime minister, and it is expected that concrete actions for nutrition would be inspired and coordinated by this high-level office. In India, the prime minister has convened the National Council on India's Nutrition to bring together different sectoral perspectives on nutrition and develop actions, but meetings of this council have been infrequent and key actions for nutrition continue to be taken on by a single ministry rather than more broadly.

Required Systems Changes

It is also useful to consider the extent to which policy decisions will require extensive changes in existing systems, professional ethos, and hierarchies. As an example, medical professionals are often not in favor of delegating tasks to less qualified practitioners despite the evidence that multitasking and delegation would have minimal risks and could significantly improve coverage and outcomes. In human resource policies for health, for instance, even the consideration of having mid-level providers perform abortions or undertake tasks traditionally performed by specialists has raised much discomfort and active resistance.

Winners and Losers

Another facet to consider is whether certain sectors or actors win or lose, given engagement of other sectors in a certain policy arena. In India, discussions of providing more nutrition services through the health sector have often raised concerns that the nodal Ministry for Nutrition might lose funding. In Bangladesh, the recent *mainstreaming* of nutrition into the health system also reshapes the funding streams within the ministry.

Commitment to Convergence

Awareness of the broad scale causes, determinants, and consequences of undernutrition among policymakers and implementers, including mid-level and street bureaucrats, can play a significant role in enabling commitments to convergent actions for nutrition at different levels. The issue under consideration should be explicitly recognized within the sectoral policies and policy instruments. Such a commitment is reflected not only in the written text of the policy but also in the speeches and articulation of the issue by senior political leaders and bureaucrats responsible for shaping and influencing policy and related fiscal commitments. Following from this necessity for commitment, features of policies and instruments in relation to authority, responsibility, and accountability are crucial to consider in relation to assessing the potential for convergence. A governance body for ensuring convergent policymaking and

actions is often best situated at levels higher than any of the line ministries, and evidence from some countries suggests that this situation is a key element of success.

Substantive Policy, and Organizational and Financial Treatment

Is the issue of convergence treated in a substantive fashion in the policy? All too often the spirit of convergence is acknowledged but there is little beyond the domain of the policy that acknowledges the tactical considerations for ensuring convergence action. Substantive considerations could include explicit institutional arrangements, organizational modifications, human resource considerations, financing, and incentives to accommodate convergence or the goals thereof. In the area of human resources, for example, training of frontline workers and providers is an important part of ensuring convergence in action. Health workers need to know clearly their roles in addressing issues related to nutrition, and conversely nutrition workers need to understand the role of health in addressing undernutrition. Such an understanding, which can only be built with effective training mechanisms and clarity of operational plans, is a necessary step for convergence. Other issues in relation to implementation are incentives and workloads. An issue related to clarifying job descriptions and roles for convergence is that of ensuring synergy and ensuring that additional work is compensated, either through additional incentives or even by creating additional human resource capacity.

Convergent action often poses a threat to agencies that are independent, have systems from the grassroots to the policymaking levels, and have resources of their own. Threats to autonomy and lack of task consensus span organizations and constitute a barrier to effective convergence (Brinkerhoff and Crosby 2002). In areas where line or nodal departments are required to coordinate action for a particular outcome, organizational modifications are required. Lack of task consensus or shared understanding of the tasks to be done and the roles and responsibilities of workers at various levels also poses challenges. Convergent action implies that the roles and responsibilities of workers in each sector must reflect tasks for convergence.

Accountability

A related issue is accountability for the convergence-related actions to achieve the desired outcome. This accountability must be inherent in all levels for convergence to be effective and is linked to the process of monitoring. In the specific area of undernutrition, the lack of effective monitoring for convergence results in limited accountability for outcomes.

Scaling Up

Finally, a substantial challenge is the scaling up of convergent action. While convergence is likely possible when an intervention is being attempted at a pilot stage or on a small scale, the added complexity inherent in scaling up adds further challenges to convergence itself. The more complex the issue, and the bigger and more complex the network of actors who need to bring together actions at different levels, the more challenging it can be to scale up convergent actions.

Stages of the Assessment Process

Stage 1: Convergence in Policy Formulation and Planning Policy

Based on an understanding of the key sectors that are important for a given policy goal, the context of the policymaking process (whether central, state, or district), and the various issues related to convergence that are described above, the following questions under the domains of *actors*, *decisions,* and *actions* need to be considered to assess the extent to which the policymaking process and the policy outcomes and instruments display features of convergence:

- Actors
    - What were pre-policy debates like? Did they draw on an intersectoral set of actors? Which sectors had greater representation? Did the actors involved include government, external donors, civil society, and media?
    - Who were the key actors in policy formulation? And in decentralized policy formulation mechanisms, which actors were included at which level?
    - What features of the policy and the resultant policy instruments might shift power relationships and hierarchies?
    - To what extent does the inclusion of convergent action disturb status quo? Who wins and who loses?
    - What is the nature of leadership that drives policy convergence and what is the level of engagement of high-level leaders?

- Decisions and actions
    - What components need alignment or harmonization of policies?
    - Does the policy envisage the establishment of a high-level committee for guidance, oversight, and review of implementation?
    - Is there a recognition and articulated commitment in the policy to the desired outcome of the convergent action?
    - Does the vision statement of an overall policy or strategy document related to the issue reflect the fact that convergence with other agencies is an integral part of achieving the goals of the particular objective under consideration?
    - Do the goals of the *sectoral* policies also include goals related to the convergence issue?
    - Are there specific strategies with the objective of harmonizing the policy toward the objective(s) under consideration?
    - Budgetary commitment: To what extent are policies that need convergent action supported by financial commitments for actions related to convergence?
    - How has each *sectoral* policy been modified to accommodate the interest of the outcome for which convergence is critical?

Stage 2: Convergence in Implementation

- Actors
    - Is there an understanding of the issue, its causal determinants, and the rationale for convergence among staff in various agencies/ministries in central and state governments?
    - Is there a shared understanding at state and substate levels of the need for convergent action to achieve the outcomes of interest?

- Decisions and actions
    - What organizational modifications have been proposed to accommodate convergence action?
    - Are these modifications backed by policy and funding commitments?
    - Do implementation plans of various line departments adequately reflect the actions for convergence that are outlined in policy documents?
    - Is there provision for building capacity or competency in individual domain areas and for convergent action?
    - Do job descriptions and human resource plans include training, incentives, and the like for actions that relate to convergence?
    - Has scaling up of convergent action been considered?

Stage 3: Convergence in Monitoring and Evaluation

- Actors
  - Do frameworks for monitoring and evaluation take into consideration the broad spectrum of convergent actions required to address undernutrition?
  - Is there broad acceptance of monitoring frameworks among policymakers and implementers?
  - Is there an understanding of the critical nature of convergence action among nonimplementing actors such as researchers, civil society, and media that shape public opinion?
- Decisions and actions
  - Have common frameworks for monitoring been developed that have buy-in and ownership of convergent departments?
  - Are indicators that measure nutrition-linked outcomes drawn up across sectors?
  - Are the monitoring processes designed to allow for feedback and accountability?
  - Does the monitoring process capture issues of gender and social inclusion?
  - Are there clear, measurable indicators for processes and outcomes related to convergence?
  - Do the monitoring and evaluation frameworks include indicators to assess convergent actions?
  - What mechanisms are built in for accountability in relation to the process of convergence?
  - Is there specific assignment of monitoring for convergence as a key responsibility?

3. APPLICATION OF THE FRAMEWORK TO ANALYZE POLICIES IN INDIA FOR EVIDENCE OF CONVERGENCE

In this section, we apply the framework described above to analyze two major policies for how well they converge to ensure actions for nutrition. The policies to address undernutrition in India lie largely within the domains of the Ministry for Women and Child Development (MWCD) and the Ministry of Health and Family Welfare (MOHFW). We reviewed relevant sections of the available policy documents related to nutrition from both these ministries and analyzed them using the key elements of the convergence framework. This section is based on both the document review and the in-depth practitioner knowledge gained by the lead author of this paper in the course of many years spent supporting the strengthening of both the Integrated Child Development Services (ICDS) program and the National Rural Health Mission (NRHM). A caveat is that although further in-depth practitioner knowledge on how convergence is currently seen and operationalized in these two ministries would be valuable, the data collection that would have been needed to bring together the experiences of a large number of diverse practitioners was not within the scope of this paper.

The documents reviewed for the analysis presented here included the National Nutrition Policy (NNP, adopted in 1993) and the National Health Policy (NHP, adopted in 2002). The NNP's major strategic implementation platform is ICDS. The operational guidance for the NHP is provided by the implementation plan of the Reproductive and Child Health Programme Phase II (RCH II) and the implementation framework of the NRHM. Although no nutrition policy has been developed since 1993, the National Plan of Action for Children was issued in 2005. This plan document is an overarching piece that deals with issues of children and in which nutrition is just one area. A more recent strategy paper, *Addressing India's Nutrition Challenges,* was issued jointly in 2010 by MWCD and MOHFW (India, MWCD/MOHFW 2010). This was the first joint policy document between these two nodal line ministries. It is not yet operational, however, and thus is reviewed only in the first subsection below, on convergence in policy formulation and planning.

Convergence in Policy Formulation and Planning

Assessment of the process of policy formulation is an important component in analyzing convergence because the early processes in the agenda setting phase have the potential to set the tone and scope of the policy itself. A review of the documents, however, demonstrates that even while discussing the potential role of nodal departments and programs in convergence action, the documents under review are silent on which influential actors were most critical in setting the tone of the pre-policy debates and in formulating the policies. It is therefore difficult to gauge the specific influence of actors in pre-policy debates, and the forces and positions that shaped the policy formulation, without additional data collection on the history of the policy formulation process.

First, both the nutrition and the health policies acknowledge the importance of convergence, but the nutrition policy documents articulate the need for convergence more strongly. The NNP discusses, for instance, the centrality of convergence between nutrition, agriculture, and health in addressing undernutrition:

> Nutrition is a multisectoral issue and needs to be tackled at various levels. Nutrition affects development as much as development affects nutrition. It is therefore important to tackle the problem of nutrition both through direct nutrition intervention for especially vulnerable groups as well as through various development policy instruments which will create conditions for improved nutrition (India, Ministry of Human Resource Development 1993, 7).

Across the text of the NHP, child undernutrition is acknowledged as being an important determinant of infant and child health and a reflection of inequity. However, even while acknowledging the critical nature of convergence with nutrition and other sectors on health, and shifting some of the accountability to intersectoral action, the NHP accepts no responsibility for convergence:

> Sectoral policy documents are meant to serve as a guide to action for institutions and individual participants operating in that sector. Consistent with this role, NHP-2002 limits itself to making recommendations for the participants operating within the health sector. The policy aspects relating to inter-connected sectors, which, while crucial, fall outside the domain of the health sector, will not be covered by specific recommendations in this policy document. Needless to say, the future attainment of the various goals set out in this policy assumes a reasonable complementary performance in these inter-connected sectors (India, Ministry of Health and Family Welfare 2002; Section 2.27.2, 21).

However, while the issue of convergence is accepted as a principle in improving undernutrition in both policies, there are few details in either policy regarding actions for convergence or mechanisms for accountability around convergence. On the other hand, the joint strategy note (India, MWCD/MOHFW 2010) includes a detailed analysis of various actors involved in convergent action, as well as the actions that have been taken and items that still need to be addressed. In that sense, it goes well beyond the policy documents of the past and includes a substantive analysis of convergence. How this will roll out in practice remains to be seen.

Looking at the goals of the individual policies, it is interesting to note that the NNP has no specific goals related to convergence. The National Plan of Action for Children includes a comprehensive set of strategies related to health and nutrition but no specific goals for convergence. The NHP, RCH II, and NRHM documents all allude to the goals of undernutrition as being crucial for child survival, but none of these has any specific convergence-related goals.

Key strategic approaches mentioned in the NNP to address undernutrition include ICDS, improving nutrition for adolescent girls, improving coverage of all pregnant women, food fortification, and addressing micronutrient deficiencies. However, articulation of what health strategies affect undernutrition, and how, is far less specific, and lacks direction:

> The health and family welfare programs are an inseparable part of the strategy. Through "Health for All by 2000 AD" program, increased health and immunization facilities shall be provided to all. Improved prenatal and postnatal care to ensure safe motherhood shall be made accessible to all women. The population in the reproductive age group shall be empowered through education to be responsible for their own family size. Through intensive family welfare and motivational measures, small family norm and adequate spacing shall be encouraged so that the food available to the family is sufficient for proper nutrition of the members. Basic health and nutrition knowledge, with special focus on wholesome infant feeding practices, shall be imparted to the people extensively and effectively (India, Ministry of Human Resource Development 1993, 9).

The NHP explicitly recognizes the persistence and the consequences of undernutrition and linkages with health:

> Another area of grave concern in the public health domain is the persistent incidence of macro and micro nutrient deficiencies, especially among women and children. In the vulnerable sub-category of women and the girl child, this has the multiplier effect through the birth of low birth weight babies and serious ramifications of the consequential mental and physical retarded growth (India, Ministry of health and Family Welfare, *National Health Policy* 2002, section 1.7, 4).

When assessed by the indicators laid out in our framework, the NNP does well on listing the key sectors for convergence, recognizing the need for convergent action, explicitly identifying the actors to be involved in implementation, articulating the need for decentralized decisionmaking and action, and establishing high-level committees for enabling convergence. The narrative description of the policy instrument—ICDS—explicitly states that convergence is critical. However, the NNP does not progress beyond articulation to specific actions that promote convergence. Moreover, it is silent on the critical issues of the budgetary commitments, institutional arrangements, and human resources required for effective convergence.

The NHP (RCH II and NRHM), while recognizing convergence, focuses only on actions that improve child health, rather than those that improve nutrition. One platform offered by the NRHM for promoting convergent action is referred to as the Village Health and Nutrition Day (VHND, now called the Village Health, Sanitation and Nutrition Day). This is a monthly event organized at every village, where a range of services related to health and nutrition, including health education, is to be provided. However, the provision of immunization services, care of sick children, and attention to nutritional rehabilitation for severe acute malnutrition are really what the health policy commits to. There is also articulation on promoting actions for undernutrition in children under 2 years old, without reference to linkages with ICDS. More details on these issues are provided in the subsection on implementation.

The NNP also visualizes convergence between line departments and at the highest levels of government:

> There should be a close collaboration between the Food Policy, the Agricultural Policy, the Health Policy, the Education Policy, the Rural Development Programme and the Nutrition Policy as each complements the other. An Inter-Ministerial Co-ordination Committee will function in the Ministry of Human Resource Development under the Chairmanship of Secretary, Department of Women and Child Development, to oversee and review the implementation of nutrition intervention measures. A National Nutrition Council will be constituted in the Planning Commission, with Prime Minister as President. Members will include concerned Union Ministers, a few State Ministers by rotation, and experts, and representatives of non-governmental organizations. The Council will be the national forum for policy co-ordination, review and direction at the national level.

The responsibility for convergence is not fixed by either the nutrition or the health policy. In effect, while each is accountable for some indicators related to the final outcome, neither—in fact, no agency—is accountable for the reduction of undernutrition. The challenge of policy convergence for undernutrition is exemplified by the *divergence of actions* needed to reduce undernutrition, including such actions as behavior change related to feeding habits, prevention and recognition of undernutrition, and prevention and early management of illness. It is also made more complex by the self-perception of individual nodal departments of a certain set of competencies and the departments' unwillingness or inability to take on accountability for convergent action that involves actors from other domains. There is little evidence in the policy documents reviewed of any articulation of a modification in policy leading to institutional change to accommodate convergence.

Presently there is no effective overarching national-level institutional framework for convergence, but discussions among various actors in the nutrition space—for example, through groups such as the Coalition for Sustainable Nutrition Security in India—have the potential to create the space and advocacy for institutional frameworks.

Implementation

The key policy instrument to deliver programmatic actions that can address child undernutrition is the ICDS program. Initially launched in 33 community development blocks in India, its coverage now is about 60.6 million children under 6 years of age and 13 million pregnant women and lactating mothers (India, MWCD 2007). It "seeks to directly reach out to children, below six years, especially from vulnerable and remote areas and give them a head-start by providing an integrated programme of early childhood education, health and nutrition" (India, MWCD 2012). Following the philosophy of taking a life-cycle perspective on human development, it tries to meet the basic developmental needs of pregnant women, children, and adolescent girls: caring for the critical nine months of intrauterine growth, the vulnerable first six years of life, and the most neglected adolescent period (Nair and Mehta 2009). It is implemented through a network of village-level *Anganwadi* centers (AWCs) set up at the community level and run by two community-based workers, an *Anganwadi* worker (AWW), who is expected to deliver preschool education, health, and nutrition services, and a helper, who is expected to help the worker in delivering these services.

The objectives of ICDS are

- to improve the nutritional and health status of preschool children in the age group of 0–6 years;
- to lay the foundation of proper psychological development of the child;
- to reduce the incidence of mortality, morbidity, malnutrition, and school dropout;
- to achieve effective coordination of policy and implementation among the various departments to promote child development; and
- to enhance the capability of the mother to look after the normal health and nutritional needs of the child through proper nutrition and health education.

Thus the nutrition strategy for reducing child undernutrition hinges on convergence between health and nutrition. The ICDS program has been in operation now for 36 years, but unfortunately, many studies that have reviewed its implementation have highlighted the failure of convergence between the nutrition and health sectors around ICDS as a barrier to reducing child undernutrition (for example, Gragnolati et al. 2005).

The overall design of ICDS acknowledges flexibility and local adaptation; in principle, however, there is little evidence that changes to the design were attempted at the local level. The ICDS frameworks and strategies do not, therefore, go beyond articulation of convergence, possibly partly because the ministry overseeing the program has little authority over other ministries that play a role in nutrition. On the ground, the nucleus of ICDS—the AWC—is a potential, and in many cases an actual, convergence ground for many programs, including public health programs such as vaccination. However, there is little that an AWW worker or even her supervisors at block and district levels can do to ensure maternal or child health services, which are very much in the realm of the service delivery framework of the heath department.

Building capacity for convergence is another area where much remains to be done. All implementation plans articulate joint training of AWWs and auxiliary nurse-midwives (ANMs)—or now accredited social health activists (ASHAs)—but very little has happened so far. The training schools for AWWs in most states are barely functional, and the training of ASHAs and ANMs are conducted through independent institutional mechanisms. The lack of convergence in capacity building extends all the way from the fieldworkers to the district managers and medical officers. As in the nutrition sector, capacity building of health staff, from medical professionals to outreach workers, acknowledges convergence but not substantively, except in the health and medical interventions.

The guiding principles for implementation of the NHP are laid out in the project implementation plan of the RCH II program and in the implementation framework of the NRHM. Both documents are explicit about the institutional mechanisms for convergence of actions on the ground:

- The ASHA, the community-level worker, is expected to provide counseling on breast-feeding, complementary feeding, and management of illnesses in children under age 2.
- The VHND, a monthly event, is held at the AWC. The ASHA is expected to motivate or escort all pregnant women and children under 5 to attend the VHND. The ANM (outreach worker of the health system) provides immunization and antenatal examinations. The AWW is expected to conduct growth monitoring and provide take-home rations at the VHND.
- Village health and sanitation committees, comprising elected representatives and key community influencers including members of local women's groups, are expected to monitor the functions of the ASHA and VHND, as well as provision of village-level services. There is a recent proposal to include nutrition in their functions, but this is not yet approved.
- Management of severe acute malnutrition is undertaken at community- and facility-based nutrition rehabilitation centers.

There are also explicit budgetary commitments for these interventions, with incentives for the ASHAs but not for the AWWs, who are not directly linked to the Ministry of Health. The ANMs are also better supported with vaccines, and with the increasing numbers of second ANMs, their workload as center-based and outreach workers is now shared, enabling them to allocate more time to the VHND. None of these incentives, however, are extended to the AWWs. The VHND is entirely managed by the health departments, and there is no accountability of the ICDS system to ensure that the AWWs do their share to contribute to the success of the VHND. Although ASHAs are expected to perform a range of functions, recent evaluations show that their skills in infant and young child feeding and in illness management need substantial strengthening. However, a beginning has been made, although there is little to show for convergence.

A few program models (some of them at a large scale) have demonstrated effective processes and outcomes through convergent action. However, the inputs provided by these program models have been very intensive. The nature of externally funded interventions and the pressure to demonstrate results in a short time frame have tended to result in models and interventions that are difficult to institutionalize in the system. As an example, the Dular and RACHNA (Reproductive and Child Health and Nutrition) models were able to demonstrate reduction in undernutrition, and some of the processes adopted by RACHNA have been integrated into the overall system.

In terms of allocation of roles and responsibilities, successive strategy documents and policy notes show that several strategies have been proposed for convergence of tasks at the lowest levels (those of the AWW and the ASHA), but no strategy so far has actually been translated into specific job responsibilities. In terms of supervisory structures, each department has a vertical structure with little congruence between the horizontal levels. The supervisors of the AWW and the ASHA—the ICDS supervisor and the ANM, respectively—supervise a set of tasks that are cocooned in a particular structure and have poor linkage mechanisms. The ANM monitors tasks related to pregnancy, newborns, child health, and family planning, and the ICDS supervisor monitors tasks within the functioning of ICDS. Although both are expected to supervise home visits for children under two, the evidence suggests that little takes place in practice (National Health Systems Resource Center 2011).

Finally, convergence is hampered by issues of hierarchy at higher levels. The medical officer at the block level (the subdistrict-level unit) is the counterpart of the child development program officer (CDPO) in the ICDS system. However, the academic credentials of the CDPO do not match those of the medical officer, and the CDPO is much lower in administrative rank. Convergence and monitoring of convergence at the middle-management level of the programs therefore pose a challenge, especially in a social context where class and hierarchy often take precedence over professional competencies.

Monitoring and Evaluation

The postulated outcome of convergence is the reduction of undernutrition among children. One of the key processes that can assess the outcomes of convergence is monitoring. Continuous monitoring of program implementation, of supervisory systems, of feedback loops, and of performance indicators is critical to know not just if overall outcomes are being achieved but also if convergence is enabling the achievement of outcomes. Unfortunately, effective monitoring is one area that was not integrated into ICDS even in its early days, resulting in an ineffective monitoring and evaluation system, limited in its ability to measure nutrition outcomes and certainly not equipped to assess whether or not convergent actions were taking place. Overall, the monitoring of the ICDS program continues to focus substantially on the food component; there is little reporting of health indicators beyond growth monitoring. A recent publication, developed jointly by the nodal departments of health and nutrition, does contain a comprehensive monitoring framework (India, MWCD/MOHFW 2010). However, it is too early to tell if this is really being implemented in letter and spirit.

Surveillance for nutrition is expected to measure outcomes and provide information on the quality and effectiveness of convergence. It is interesting to note that the collection and reporting of almost all large, nationally representative surveys lie within the purview of the Ministry of Health—the National

Family Health Surveys and the District Level Health Surveys, for instance. In this one area, the data provided by these surveys are indeed quoted by the MWCD, but that agency has little participation in the collection, analysis, or reporting of these data. The National Institute for Nutrition is an arm of the Ministry of Health that is responsible for monitoring, research, and evaluation, but its monitoring surveys are limited in scope and scale, and the reliability of their data has been questioned.

Large-scale surveys at five-year intervals, such as the National Family Health Surveys, three rounds of which have been conducted since 1998, have provided information on key indicators of maternal and child undernutrition and health, which have enabled an understanding of the convergence-related aspects of the program. Since the last round in 2005/06, however, no national surveys that measure the status of health and undernutrition have been undertaken. The current Health Management Information System, which is the MOHFW's monitoring mechanism under the NRHM, has hardly any nutrition-related indicators, other than the percentage of low-birth-weight babies.

In relation to monitoring and evaluation, there is certainly a lack of convergence in developing monitoring mechanisms, implementing monitoring, and using the data from the monitoring systems. Developing better monitoring for assessing whether or not designed convergent actions are occurring as planned is going to be important. At the same time, the political economy of developing and incorporating monitoring indicators and systems is important to consider: Can MOHFW and MWCD agree on a core set of indicators that relate to services that should converge on the ground and on the systemic support mechanisms that should enable these services? And can data collection for this type of monitoring be set up in ways that enable action on the part of both ministries? These are all important questions to facilitate decisions about the best monitoring systems to capture the processes and outcomes of convergence.

4. SUMMARY AND CONCLUSIONS

Given the varied and multidimensional challenges to convergent action, the use of a framework to plan and review convergence has the potential to enable systematization of a process that is often relegated to ad hoc actions. Convergence between nutrition and health has long been recognized as a barrier to improving child undernutrition. Some factors underlying the limited convergence include a range of multiple and diverse stakeholders; complexity of the technical issue; determinants of undernutrition that lie outside technical domains; and the view, based on an experiential understanding among implementers, that convergent action is an almost insurmountable barrier.

As can be seen from this paper, the convergence between policies is not nonexistent, but it is incomplete and therefore somewhat ineffectual. We postulate that there are three factors lying at the heart of this incomplete convergence process: failure to include convergence in policy formulation, lack of attention to institutional modifications to facilitate convergence, and lack of monitoring mechanisms to assess convergence of programs on an ongoing basis. A key limitation to the methodology was that it was limited solely to a desk review. Further research is necessary to trace the factors related to context, stakeholders, and key implementation and monitoring mechanisms that either facilitate or hamper convergence.

While articulation of the importance of convergence is a feature of policy documents in most sectors, it is less clearly backed by goals and strategies for convergence. Most reviews focus on design issues and governance as being key barriers to convergence; convergence itself, in turn, is perceived as a barrier to implementing policy change and scaling up. Convergence assumes particular importance in scaled-up programs where varying sociocultural contexts, differential financing and planning approaches, and varying competencies need to be considered. Planning, implementation, and monitoring of convergence is an area that cuts across technical and programmatic boundaries and needs specific attention, particularly to address challenges with multiple determinants spanning several sectors, such as child undernutrition. The key challenges to convergence at scale appear to be shared vision, intensive capacity building, supportive supervision, and joint accountability.

REFERENCES

Bezanson, K., and P. Isenman. 2010. "Scaling Up Nutrition: A Framework for Action." *Food and Nutrition Bulletin* 31 (1): 178–186.

Brinkerhoff, D. W., and B. L. Crosby. 2002. Managing Policy Reform: Concepts and Tools for Decision-Makers in Developing and Transitioning Countries. Sterling, VA, US: Kumarian Press.

CARE-India. 2008. *Working with Existing Systems: Lessons from INHP.* Women and Child Health at Scale Working Paper 10. New Delhi: CARE-India RACHNA Program.

Clark, T. W. 2002. The Policy Process: A Practical Guide for Natural Resources Professionals. New Haven, CT, US: Yale University Press.

Garrett, J., and M. Natalicchio. 2011. *Working Multisectorally in Nutrition: Principles, Practices, and Case Studies.* Washington, DC: International Food Policy Research Institute.

Gillespie, S., and S. Kadiyala. 2011. "Exploring the Agriculture–Nutrition Disconnect in India." 2020 Conference Brief 20. Prepared for the IFPRI 2020 international conference Leveraging Agriculture for Improving Nutrition and Health, February 10–12, New Delhi.

Gragnolati, M., M. Shekar, M. Das Gupta, C. Bredenkamp, and Y.-K. Lee. 2005. *India's Undernourished Children: A Call for Reform and Action.* Health, Nutrition, and Population Discussion Paper. Washington, DC: World Bank.

Haddad, L. 2009. "Introduction—Lifting the Curse: Overcoming Persistent Undernutrition in India." *IDS Bulletin* 40 (4): 1–8.

Hoey, L., and D. L. Pelletier. 2011. "Bolivia's Multisectoral Zero Malnutrition Program: Insights on Commitment, Collaboration, and Capacities." *Food and Nutrition Bulletin* 32 (2 Suppl): S70–S81.

India, Ministry of Health and Family Welfare. 2002. *National Health Policy (India)*. New Delhi. Last accessed August 8, 2012. http://www.mohfw.nic.in/NRHM/Documents/National_Health_policy_2002.pdf.

India, Ministry of Human Resource Development. 1993. *National Nutrition Policy*. New Delhi: Department of Women and Child Development. Last accessed August 8, 2012. http://wcd.nic.in/nnp.pdf.

India, MWCD (Ministry for Women and Child Development). 2007. *ICDS Quarterly Progress Report 30 June.* New Delhi: Integrated Child Development Services.

———. 2012. *Integrated Child Development Services (ICDS) Scheme.* New Delhi. Accessed June 1. http://wcd.nic.in/icds.htm.

India, MWCD (Ministry for Women and Child Development)/MOHFW (Ministry of Health and Family Welfare). 2010. *Addressing India's Nutrition Challenges: A Strategy Note.* New Delhi.

Kathuria, A., D. Chaudhery, J. George, and U. Kiran. 2008. *Engaging Communities to Improve Health and Nutrition Outcomes: The Role of Community Volunteers in INHP.* Women and Child Health at Scale Working Paper 11. New Delhi: CARE-India Reproductive and Child Health and Nutrition (RACHNA) Program.

Nair, M. K. C., and V. Mehta. 2009. "Life Cycle Approach to Child Development." *Indian Pediatrics* 46 (Supplement): S7-S11.

National Health Systems Resource Center. 2011. *ASHA Which Way Forward: An Evaluation of the ASHA Programme in Eight States.* New Delhi: National Rural Health Mission.

Pelletier, D. L., E. A. Frongillo, S. Gervais, L. Hoey, P. Menon, T. Ngo, R. J. Stoltzfus, A. M. Ahmed, and T. Ahmed. 2012. "Nutrition Agenda Setting, Policy Formulation and Implementation: Lessons from the Mainstreaming Nutrition Initiative." *Health Policy Plan* 27 (1): 19–31.

Shiffman, J. 2006. "Donor Funding Priorities for Communicable Disease Control in the Developing World." *Health Policy Plan* 21 (6): 411–420.

von Braun, J., M. Ruel, and A. Gulati. 2012. *Accelerating Progress toward Reducing Child Malnutrition in India: A Concept for Action.* Research Briefs 12. Washington, DC: International Food Policy Research Institute.

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