

Situation Analysis

A Summary of School Health in India and in Four States:
Andhra Pradesh, Delhi, Gujarat and Tamil Nadu



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ABBREVIATIONS AND ACRONYMS

AIDS	Acquired immune deficiency syndrome	NCERT	National Council of Educational Research and Training
ARSH	Adolescent reproductive and sexual health	NGO	Non-governmental organization
CBSE	Central Board of Secondary Education	PCD	The Partnership for Child Development
CNSY SHS	Chacha Nehru Sehat Yojna School Health Scheme	SHARP	School Health Annual Report Programme
EFA	Education for All	SHN	School health and nutrition
EMIS	Education Management Information Systems	SSA	Sarva Shiksha Abhiyan
FRESH	Focusing Resources on Effective School Health	SWASTH	School Water and Sanitation Towards Health and Hygiene
GDP	Gross domestic product	U5MR	Under-5 Mortality Rate
HIV	Human immunodeficiency virus	UNESCO	United Nations Educational, Scientific and Cultural Organization
ICDS	Integrated Child Development Services	UNICEF	United Nations Children’s Fund
INR	Indian Rupee	UT	Union Territories
JBAR	Jawahar Bala Arogya Raksha	WASH	Water, sanitation and hygiene
MDG	Millennium Development Goal	WHO	World Health Organization
MMR	Maternal Mortality Ratio		
MMR	Measles, mumps and rubella		
MSHP	Modified School Health Programme		

INTRODUCTION



India's school-age population, aged between 5 to 14 years, currently stands at 192 million and is growing (Table 1). Progress towards the Millennium Development Goals (MDGs) for Universal Primary Education and health therefore stands to directly impact almost one-fifth the overall population (Government of India 2010a). However, efforts to reach the most marginalised including girls, scheduled castes and tribes and those from the poorest backgrounds must be enhanced to close the gap and bring India closer to the goal of Education for All (EFA). Over 100 million Indian children fall into the poorest wealth quintile and 37% of the total population live in abject poverty (UNICEF 2011). The disparities between rural and urban populations and classes are vast and approximately half of the poorest children are from scheduled castes and tribes.

In recent years, school health and nutrition (SHN) programmes have gained attention as effective means of “levelling the playing field” for all children, with particularly notable benefits for the most vulnerable and poorest children, thereby working to address disparities. SHN is now recognised as a catalyst for achieving EFA. Through programmes targeted to address highly prevalent school-age diseases such as worm infection, malaria and diarrhoeal disease, children, especially from the poorest backgrounds, are supported to access education and maintain their health to learn.

The FRESH (Focusing Resources on Effective School Health) framework, first launched in 2000 as a multi-agency initiative of the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Children's Fund (UNICEF), the World Health Organization (WHO) and the World Bank, offers a unified set of principles to guide development and implementation of effective school health policies and programmes with the following core pillars:

1. Establishment of **health-related school policies** as a vital aspect of ensuring effective school health programming.
2. Creating **safe, supportive school environments** that provide adequate water and sanitation facilities along with other physical and psychosocial support.
3. Screening, referral and provision of **school-based health and nutrition services** such as deworming, micronutrient supplementation, school feeding, and HIV prevention which have known impacts on improved education outcomes.
4. Provision of a proven platform to impact behaviour and inform choices of school-age children and adolescents through **skills-based health education**.

FRESH affirms the importance of multi-sectoral collaboration, particularly between health and education sectors; the full engagement of the community and pupil awareness and participation are essential for the success of SHN programming. Furthermore FRESH is a useful starting point by which to assess progress in SHN programming within a context such as India.

This rapid situation analysis examines the national and selected States' pictures of SHN (see Figure 1) and was conducted taking the internationally agreed pillars of FRESH into consideration and using mixed methods of literature review, secondary data analysis, and primary qualitative data analysis from key informant interviews with both national and State-level SHN practitioners and policymakers. It was conducted by The Partnership for Child Development (PCD – Imperial College London) to identify best practice, challenges and opportunities in school health programming both at national and selected State levels between May and September 2012.

India at a Glance

Table 1: Summary Statistics for India

Populationⁱ

Total population	1,210,193,422
Male population	623,724,248
Female population	586,469,179
Total school-age population (5-14 years)	192 million

Education Statisticsⁱⁱ

Survival rate to Grade 5 (%)	72
Transition rate from primary to secondary (%)	81
Expenditure on education as % of gross domestic product (GDP)	3.1
Primary school net enrolment ratio (%), 2007-2009	97

Health Statisticsⁱ

Adolescent birth rate (per 1,000 women)	37.2
Maternal mortality ratio (per 100,000 live births)	212
Under-5 mortality rate (per 1,000 live births) (MDG target of 39)	64
Death rate for 5-14 year olds (per 1000 children of this age group)	0.9

Poverty Statisticsⁱⁱ

% of population below international poverty line of US\$1.25 per day, 2000-2009	42
% of population using improved sanitation facilities 2008, urban	54
% of population using improved sanitation facilities 2008, rural	21

Genderⁱⁱⁱ

Child marriage 2000-2010, married by 18	47
Age at first birth, Women aged 20-24 who gave birth before age 18 (%), 2000-2010	22
Adult literacy rate: females as a % of males, 2005-2010	68

Nutritionⁱⁱ

% under-5s (2006-2010) suffering from: underweight (WHO), severe	16
% under-5s (2006-2010) suffering from: wasting (WHO), moderate & severe	20
% under-5s (2006-2010) suffering from: stunting (WHO), moderate & severe	48

Source: ⁱGovernment of India 2011d, ⁱⁱUNICEF ca. 2010, ⁱⁱⁱGovernment of India 2010b

India's population continues to rise with over 1.2 billion people as of 2011 (Government of India 2011a). Accompanying this rapid rise in population is an epidemiological shift including rising burden of non-communicable diseases, a growing elderly population, environmental challenges and a health system, which is currently struggling to address both communicable and non-communicable diseases facing its population (Lakshminarayanan 2012). Public health spending remains low at 1.4% of the national GDP, with three-quarters of health expenditure being privately funded and with hugely variable health infrastructure from the rural to urban contexts.

School-Age Child Health

In terms of school-age child health, recent data confirm that, as with under-five mortality, infectious diseases contribute to 60% of all deaths and more than half of those are due directly to diarrhoeal diseases and pneumonia, indicating that these are no longer to be seen as killers of only young children (Morris et al 2011). Parasitic infection is widespread in school-age children, with known negative impacts on school attendance and associations with illiteracy and lower earnings in adulthood (Jukes et al 2008). Finally, nutritional anaemia, pneumonia, measles, under-nutrition, overweight and obesity continue to challenge the health of school-age children. These all highlight the need for improved water and sanitation, enhanced nutrition, micronutrient supplementation, improved immunisation uptake and coverage, and informed and skills-based nutrition and health education for this age group and their carers.

India faces a number of challenges to achieving improved health of school-age children, with particular difficulty in the North East, East and especially Central regions of the country and continuing disparities between urban and rural contexts. Furthermore, gender remains a key issue. Girl children are disproportionately affected by infectious diseases with nearly 50% more girl-children dying of diarrhoeal diseases and pneumonia than their male counterparts (Morris et al 2011), reflecting continued gender-based challenges to preventing ill-health in girls and in addressing health- and treatment-seeking behaviour for girls and their caretakers. Girl children are also disproportionately more likely to suffer morbidity and mortality due to anaemia and are less knowledgeable about their risks and prevention of HIV and AIDS (UNICEF 2011). Girl-child marriage, high adolescent birth rate and maternal mortality across much of the country render girls more

vulnerable to ill-health and death from the beginning of their lives through their reproductive years.

Education in India

Between 2002 and 2008, India's primary school net enrolment ratio (NER) increased from 78% to 98% (UNESCO – UIS 2011), with a grade 5 survival rate of 72% in 2008 (Government of India 2010c). In recent years, there has been a decline in pre-primary enrolment of girl-children; however, efforts are being made to address girls' access and participation in school and to ensure they are reached by SHN programmes. For example, the Mid-Day Meal Scheme (MDMS) has seen notable improvements in girls' access to primary education. Supporting their health, especially during adolescence, and protecting their right to education through secondary school is an ongoing priority for the Indian Government. Though transition rates from primary to secondary school are higher for males and still much lower than primary enrolment, this is improving year-on-year.

School Health in India

India has a strong history of efforts to champion SHN, dating back to the early 1900s, however, as they lack a national policy and strategy it has been difficult to standardise and prioritise SHN across the country, resulting in mixed implementation. India is, however, one of the few countries to enshrine education in its national constitution as a constitutional right for all children between 6 and 14 years and that it is to be free and compulsory. Through the Sarva Shiksha Abhiyan (SSA) programme which works to ensure primary EFA and improvements to the long-running MDMS, India is on track to achieve universal primary school education. MDMS is a consolidated national programme, with strong policy and legal frameworks that have made the provision of a cooked school meal an entitlement of every school child in the country since 2001. The central government provides funding for food grains and their transportation, and a subsidy for food conversion costs into cooked mid-day meals, for kitchen devices and for monitoring. The responsibility for other food items and for implementing the scheme is vested in the State Governments and Union Territories (UT). The intervention is financially affordable and durably embedded in national and state budgets. (Government of India 2011c).

India lacks a comprehensive policy for SHN at national-level and responsibility is fully devolved to State-level.

While there are some programme guidelines at the national level, the decentralised approach and lack of national policy suggest minimum standards for SHN can be difficult to enforce. As a result, each of India's 28 States and 7 UTs address SHN through different approaches and to a different extent with varying levels

of success. Figure 1 presents a summary of the national SHN context across four key areas including policies and legal frameworks, key programmes, stakeholders, and funding. Subsections summarising four selected State-level SHN landscapes follow.

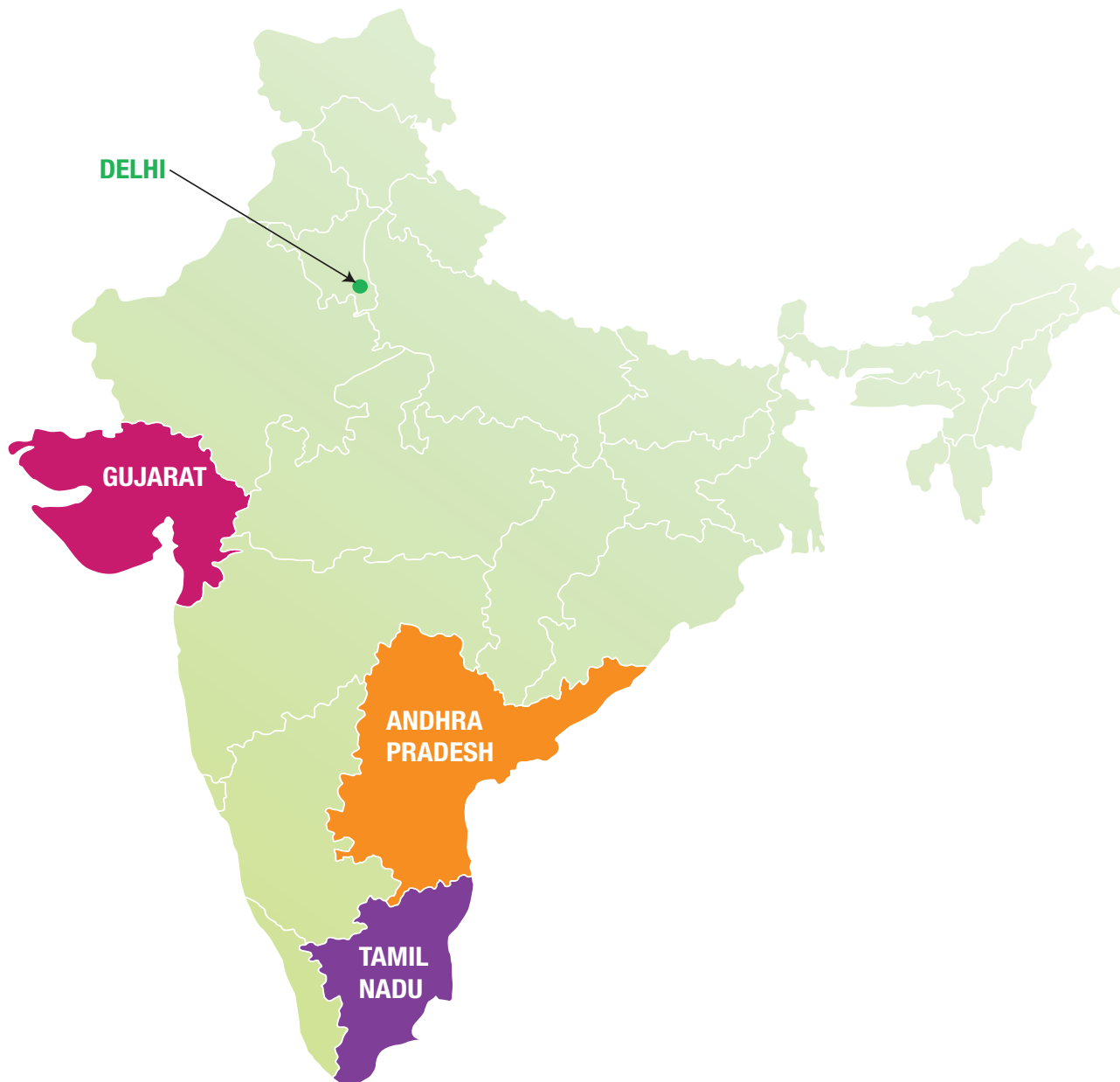
Figure 1: Summary of SHN at National-Level

POLICIES AND LEGAL FRAMEWORKS	SHN RELEVANT PROGRAMMES	STAKEHOLDERS	FUNDING
<ul style="list-style-type: none"> • National Health Policy, 2002. • Supreme Court orders related to school feeding in the case of PUCL v Union of India (2001). Follow up orders in 2004 and 2006. • National Curricular Framework (National Council of Educational Research and Training NCERT), 2005. • National Programme of Nutritional Support to Primary Education Guidelines (2006). • National School Health Programme Guidelines, 2006. • Right of Children to Free and Compulsory Education Act, 2009. • Central Board of Secondary Education (CBSE) School Health Policy, 2010. • Constitution of India – Right to education, 2010. • Supreme Court Judgement 2012 ordering provision of basic school infrastructure including drinking water and toilets in all schools, building on earlier court orders. 	<ul style="list-style-type: none"> • Adolescent Anaemia Programme. • Mental Health Control Programme. • Mid-Day Meal Scheme. • Ministry of Health and Family Welfare's National Rural Health Mission began National School Health Programme, 2006. • National AIDS Control Programme. • National Programme for Control of Blindness. • National Tobacco Control Programme. • Reproductive and Child Health Programme's ARSH Component. • School Health Check-up Programme. • School Health Scheme (1996-1997). • SSA. • Tuberculosis Control Programme. • WASH Programmes including Total Sanitation Campaign and SWASTH. 	<ul style="list-style-type: none"> • CBSE. • Department of Drinking Water Supply. • Department of School Education and Literacy. • District Nodal Agencies. • Gram Panchayat/ Municipality. • Mid-Day Meal Scheme: • Ministry of Health and Family Welfare. • National Rural Health Mission. • National Steering/ Monitoring Committee. • NCERT. • Non-governmental organizations (NGOs). • Parent-Teacher Associations. • School Management and Development Committee. • State Governments. • Union Territories. • Village Education Committee. • Women's groups. • Youth clubs. 	<ul style="list-style-type: none"> • Until recently, the Mid-Day Meals Scheme was the only school health programme to have a national level budget line. • MDMS funding held centrally is used for food stuffs and transportation and subsidies are provided for food conversion costs. • School health has recently been included as part of the National Rural Health Mission budget. • Funding for all other aspects of SHN is devolved to State-level.

SCHOOL HEALTH IN FOUR KEY STATES



Figure 2: Four Key States in India for Analysis



This rapid situation analysis examines SHN programming in four selected States: Andhra Pradesh, Delhi, Gujarat, and Tamil Nadu. This subset of India's 28 States and 7 UTs, was selected as it represents contexts in which a mixture of good practice, challenges, and early opportunities for robust SHN programming can all be observed. Please note that as a dearth of data on school-age child health exist for India as a whole and at State-

level, measures of health, morbidity and mortality of under-fives (U5MR) is often used as a proxy to indicate the status of child health in each of the four States explored below. Across all four States considered here and India overall, recent data reaffirm that high child mortality and morbidity, among other measures of health, persist.

ANDHRA PRADESH STATE

Table 2: Summary Statistics for Andhra Pradesh State

Populationⁱ	Andhra Pradesh	India
Population of 0-6 year olds	8,642,686	158,789,287
Population of 0-6 year olds by sex, Male	4,448,330	82,952,135
Population of 0-6 year olds by sex, Female	4,194,356	75,837,152

Educationⁱⁱ	Andhra Pradesh	India
% of population literate	67.66	74.04

Healthⁱⁱⁱ	Andhra Pradesh	India
Adolescent birth rate (per 1,000 women) (2010)	45.9	37.2
Maternal mortality ratio (per 100,000 live births)	134	212
Under-5 mortality rate (per 1,000 live births) (MDG target of 39)	52	64
Death rate for 5-14 year olds (per 1000 children of this age group)	0.6	0.9

Poverty^{iv}	Andhra Pradesh	India
% of population with electricity	88.4	67.9
% of population with access to toilet facility	42.4	44.6
% of population with improved (piped) drinking water	94	87.9

Gender	Andhra Pradesh	India
Currently married non-literate women 15-44 (%) ^v	50	41
Currently married women with 10+ years of school aged 15-44 (%) ^v	19	21
Girls married below age 18 (%) ^v	28.6	22.1
Child sex ratio (0-6 year olds) (females per 1000 males) ⁱ	943	914

Nutrition^{vi}	Andhra Pradesh	India
% children <5 classified as underweight	32.5	42.5
% children <5 classified as stunted	42.2	48
% children <5 classified as wasted	12.2	19.8

Source: ⁱGovernment of India 2011a, ⁱⁱGovernment of India 2011b, ⁱⁱⁱGovernment of India 2011d, ^{iv}International Institute for Population Sciences (IIPS) and Macro International 2007, ^vGovernment of India 2010b, ^{vi}Government of India 2009

As can be seen from Table 2, Andhra Pradesh has a large and quickly growing child population in part due to high total fertility rates and one of the lowest average ages at marriage. It has both high rates of girl-child marriage and early age at first birth. Though the State has better than the national average access to electricity and improved drinking water, poor toilet facilities are widespread contributing to increased risk of morbidity and mortality among the child population from common ailments such as diarrhoeal disease. Nutritional status of under-5s is better than average, however, more than one-third of under-5s are considered stunted. Numerous issues contribute to poor nutritional status; however, nutritional anaemia is a major public health problem in Andhra Pradesh especially among women of reproductive age and girl-children (Government of India 2009).

As statistics indicate above, Andhra Pradesh remains a particularly challenging State for addressing gender mainstreaming and the status of women generally. Literacy is poorer than the national average for both genders, but especially for women. Half of all married women are illiterate, which is in part a reflection of past perceptions of education, particularly for girls, which saw it as of little or no value resulting in no access to education for many girls or early dropout, often before finishing primary education. Andhra Pradesh experiences one of the highest rates of girl-child marriage compared to the rest of India, with almost one-third of girl children being married before 18 years of age, with the average age at just 16.1 years (NFHS-III 2009). 10.4% of total births in Andhra Pradesh in 2008 were to females aged 15-19 (DLHS-III), and two-thirds (62.7%) of females 15-19 years have had a live birth while over a quarter of 15-19 year olds report a birth order of two (NFHS-III 2009). Early marriage and subsequently early motherhood hold serious risks for child brides in maternal mortality and morbidity and for risk of child mortality or poor development of their offspring.

Andhra Pradesh faces complex cultural issues bearing significant health and social implications for gender-based violence/discrimination including the practice of female foeticide and infanticide (UNICEF ca. 2007), girl-child marriage and girls' lack of equal access to education and in particular health education which would stand themselves and subsequently their families in good stead. There is evidence these issues have not gone unnoticed and are improving as dedicated effort on the part of Andhra Pradesh's Government to address gender through school and community-based programming suggests gender and related issues of

adolescent reproductive and sexual health (ARSH) remain priority areas for the State's SHN agenda. Enhanced ARSH coupled with continuous and strong health education and community sensitisation could combat the resistance to girls' education that is still common in some districts in favour of preparing girl children for work and motherhood. In order to progress the gender mainstreaming agenda in Andhra Pradesh, policy and advocacy efforts with parents and communities, and SHN programming in which safe school environments are provided could be considered.

Andhra Pradesh's SHN agenda is driven through two main programmes including the Jawahar Bala Arogya Raksha (JBAR) Programme, which recently released plans to expand coverage to Grades 1 to 10 (government and government-aided schools) and the MDMS. JBAR positively, and rather uncommonly for the States considered here, does involve both health and education sectors, has an associated policy, and has implementation plans for 2012-13 available, presenting clear areas for scale-up including to intermediate years (11th/12th classes) and Hyderabad Urban District. The programme aims to involve health service providers at various levels, school headmasters and students in the form of CHINNARI doctors. Vaccination schemes are one sub-component of JBAR, but notably MMR (measles, mumps and rubella) uptake remains poor leading to high measles prevalence which is a risk for child health and for maternal and newborn health outcomes including stillbirths. Efforts to engage or strengthen partnerships with those championing child immunisation, for example GAVI Alliance, may be worth exploring. Funding for JBAR stood at INR 1.3 million crores for 2011-12 financial year, which is insufficient to cover all primary schools within their target and government associated high schools. Increased funding and efficiency of funding mechanisms may require review.

Andhra Pradesh's MDMS began in 2003 delivering cooked meals to primary school students in government, local body and government-aided schools. From 2008 the programme expanded to now provide cooked meals in high schools and to all those students attending school under the Education Guarantee Scheme. The MDMS is overseen and implemented by the Department of School Education and is linked with water and sanitation programmes such as SWASTH (School Water and Sanitation Towards Health and Hygiene). Improvement in the MDMS is possible as only one-third of schools currently have kitchens for food preparation and students attending non-government associated

schools may still be at risk of poor nutrition. Furthermore, key informants expressed concern regarding financial efficiency of the programme, with slow release of funds leading to delays across the procurement and delivery chain. Andhra Pradesh's Government does aim to support orphans and vulnerable children living in children's hostels/homes, however, enhanced effort to directly support nutrition of these especially vulnerable children is a recognised need.

A particularly interesting public-private partnership, led by the Naandi Foundation, in Andhra Pradesh (Hyderabad) has shown promise in utilising school feeding as a pro-poor targeting mechanism to incentivise children and their families to keep them in school. This has been especially effective in engaging with populations which have historically seen little value in education particularly for their girl children. This partnership's comprehensive approach to SHN has also

resulted in opportunities to monitor progress in child health and capture much needed data on school-age children. Efforts to understand how the Naandi Foundation and partners have been able to overcome social and cultural issues to education and gender mainstreaming may yield benefits for other programmes and contexts.

Finally, additional programmes delivered in Andhra Pradesh include the National Programme for Control of Blindness which is integrated as part of JBAR, the Aarogyasri Programme referring children for surgical treatment where needed, HIV and AIDS Special Programmes linked with the ARSH agenda, SHN links with Anganwadi Centres, FRESH celebration days in schools and the THENHE programme which creates awareness and educates children during the school Morning Prayer assembly.

Figure 3: Summary of SHN in Andhra Pradesh State

POLICIES AND LEGAL FRAMEWORKS	SHN RELEVANT PROGRAMMES	STAKEHOLDERS	FUNDING
<ul style="list-style-type: none"> Jawahar Bala Arogya Raksha (JBAR) programme: issued policy and programme implementation plan for 2012-13. 	<ul style="list-style-type: none"> Aarogyasri Programme connects children to surgery referrals. Anganwadi Programmes. ARSH. CHINNARI Doctors. Cooked Mid-Day Meal Scheme, 2003 onwards in primary government, local body and government-aided schools. From 2008 onwards now in high schools and those attending under Education Guarantee Scheme. FRESH Day Celebrations. HIV and AIDS Special Programmes. Hostels for 'poor' children. JBAR, 2011. Target population: Grades 1-10. Plans to expand from current coverage of 77,511 schools. National Programme to Prevent Blindness. Though a national programme it is conducted alongside the SHN JBAR programme. SWASTH on Wheels. THENHE. 	<p>For JBAR:</p> <ul style="list-style-type: none"> CHINNARI Doctors (students). Department of Education. Department of Health. District level JBAR Officers x 2 (Education and Health). Family Welfare. Indian Education Commission. Mandal Education Officers. Mandal health providers. Ministry of Health. PHC medical officers. School Headmasters. State School Health Cell. <p>For Mid-Day Meal Scheme:</p> <ul style="list-style-type: none"> CHINNARI Doctors (students). Department of Health and Family Welfare (Department of Education and Rural Development). Department of School Education. Link with SABLA Programme (Ministry of Women and Children). Naandi Foundation: Public private partnerships. SWASTH partners. 	<p>For JBAR:</p> <ul style="list-style-type: none"> INR 1.3 million crores (2011-12) which is insufficient to cover all primary students let alone secondary in government schools alone. <p>For Mid-Day Meal Scheme:</p> <ul style="list-style-type: none"> INR 403 million in 2006-07 for approximately 7 million children, raising questions around cost effectiveness. Releasing of funds needs improvement as it is currently regarded as very slow, causing delays throughout the implementation chain.

DELHI STATE

Table 3: Summary Statistics for Delhi State

Populationⁱ	Delhi	India
Population of 0-6 year olds	1,970,510	158,789,287
Population of 0-6 year olds by sex, Male	1,055,735	82,952,135
Population of 0-6 year olds by sex, Female	914,775	75,837,152

Educationⁱⁱ		
% of population literate	86.34	74.04

Healthⁱⁱⁱ		
Adolescent birth rate (per 1,000 women) (2010)	10.5	37.2
Maternal mortality ratio (per 100,000 live births)	-	212
Under-5 mortality rate (per 1,000 live births) (MDG target of 39)	37	64
Death rate for 5-14 year olds (per 1000 children of this age group)	0.6	0.9

Poverty^{iv}		
% of population with electricity	99.3	67.9
% of population with access to toilet facility	92.4	44.6
% of population with improved (piped) drinking water	92.1	87.9

Gender		
Currently married non-literate women 15-44 (%) ^v	24	41
Currently married women with 10+ years of school aged 15-44 (%) ^v	45	21
Girls married below age 18 (%) ^v	6	22.1
Child sex ratio (0-6 year olds) (females per 1000 males) ⁱ	866	914

Nutrition^{vi}		
% children <5 classified as underweight	26.1	42.5
% children <5 classified as stunted	42.2	48
% children <5 classified as wasted	15.4	19.8

Source: ⁱGovernment of India 2011a, ⁱⁱGovernment of India 2011b, ⁱⁱⁱGovernment of India 2011d, ^{iv}International Institute for Population Sciences (IIPS) and Macro International 2007, ^vGovernment of India 2010b, ^{vi}Government of India 2009

As the capital State of India, Delhi is home to a complex and densely packed population including almost 2 million young children who will soon be entering their school years. Despite having evidently better than average water and sanitation and poverty statistics, as well as high rates of literacy and schooling among both male and female populations and some of the lowest rates of girl-child marriage, over a quarter of young children are still deemed to be underweight, therefore highlighting the potential for improved nutrition. The sheer numbers and condensed multifaceted urban context in which Delhi's population lives is in itself a significant challenge to effective delivery of comprehensive SHN programming.

Currently Delhi does not have SHN or SHN-related policies. A recent evaluation highlighted the need for strengthened partnerships between Delhi's health and education sectors. Coverage of the Delhi School Health Scheme (which commenced in 1979) is low and SHN provision by NGOs and municipal agencies is reportedly more effective. For example, UNICEF is currently developing WASH guidelines for school health, and deworming is currently led by the charity, Deworm the World Initiative with limited government directive under the Worm Free Childhood initiative. It is not exclusively delivered through the school-based platform but is community-wide. Both the New Delhi Municipal Corporation and Municipal Corporation of Delhi report higher SHN coverage than the State Government (Chaturvedi and Aggarwal 2000). However, even with their efforts, SHN health teams are currently visiting less than 27% of schools and over a quarter of schools (27.5%) have no SHN services.

The Delhi School Health Scheme aims to provide health services through health clinics attached to government and government-supported schools. Currently 34 school health clinics are in place across the State. The number of clinics remains insufficient to properly support the health of all school-going children in government-linked schools. Challenges exist with the referral process, and the recent evaluation revealed this scheme takes a health focused and arguably overly-medicalised

approach to SHN (e.g. screening for heart disease rather than for refractive error). There is limited evidence of SHN elements being teacher-led, one of the cost-effective and recognised benefits of SHN. Furthermore, the approach is lacking in comprehensiveness, as there are no safe school environment guidelines or programmes and little to no mention of health education. New evidence suggests that health and nutrition problems increase in Delhi's school-age children during out-of-school periods (a pattern likely reflected across large parts of the rest of the country), including dramatically higher mortality rates from diarrhoeal disease. This highlights a need to focus on transferring good health behaviour back to the home through regular and structured skills-based health education.

The Chacha Nehru Sehat Yojna School Health Scheme (CNSY SHS), which began in 2011, was started to address the poor coverage and limited success of the Delhi School Health Scheme and aims to reach all children under 14 years in government schools. Similar to the Delhi School Health Scheme, this scheme is health service-based. At the time of writing no guidelines or plans for the programme were publically available. The prioritisation of better working partnerships by the State Government could strengthen the SHN response and in particular reduce replication (Government of Delhi 2012b). For example, CNSY SHS is considering developing a school health database to capture information on the health of students, however, India already has an established EMIS (Education Management Information Systems) which could instead be explored for adaptation to Delhi's context.

At the time of research, a rapid situation analysis was being carried out by the State Government on SHN and findings will be forthcoming. Additionally, at a Michael & Susan Dell Foundation hosted partnership meeting in New Delhi on September 28, 2012, the Ministry of Health and Family Welfare and Ministry of Human Resource Development announced plans to pilot a comprehensive SHN programme in the State in 2013.

Figure 4: Summary of SHN in Delhi State

POLICIES AND LEGAL FRAMEWORKS	SHN RELEVANT PROGRAMMES	STAKEHOLDERS	FUNDING
<ul style="list-style-type: none"> • No SHN policies. • UNICEF are currently developing WASH policies. 	<ul style="list-style-type: none"> • Chacha Nehru Sehat Yojna School Health Scheme (CNSY SHS), 2001 onwards; looks to reach all <14 year olds in government schools but is still health service-based and there are no guidelines. • Deworm the World – Worm Free Childhood, community-wide not just schools. • Delhi School Health Scheme, 1979 onwards. This provides health clinics attached to government and government supported schools and currently there are 34 clinics. • MDMS. • SHARP – coverage is unclear but collaboration would be beneficial. 	<ul style="list-style-type: none"> • Education Department (but not in practice). • Joint Directors. • Municipal Corporation of Delhi. • New Delhi Municipal Corporation. • NGOs for deworming. • Parent-teacher associations. • School management committees. • Steering Committee for CNSY SHS. • Teachers. • UNICEF. 	<ul style="list-style-type: none"> • INR 100 million*.

*No timeframe available

GUJARAT STATE

Table 4: Summary Statistics for Gujarat State

Populationⁱ	Gujarat	India
Population of 0-6 year olds	7,494,176	158,789,287
Population of 0-6 year olds by sex, Male	3,974,286	82,952,135
Population of 0-6 year olds by sex, Female	3,519,890	75,837,152

Educationⁱⁱ		
% of population literate	79.31	74.04

Healthⁱⁱⁱ		
Adolescent birth rate (per 1,000 women) (2010)	28.9	37.2
Maternal mortality ratio (per 100,000 live births)	148	212
Under-5 mortality rate (per 1,000 live births) (MDG target of 39)	61	64
Death rate for 5-14 year olds (per 1000 children of this age group)	0.8	0.9

Poverty^{iv}		
% of population with electricity	89.3	67.9
% of population with access to toilet facility	54.6	44.6
% of population with improved (piped) drinking water	89.8	87.9

Gender		
Currently married non-literate women 15-44 (%) ^v	42	41
Currently married women with 10+ years of school aged 15-44 (%) ^v	20	21
Girls married below age 18 (%) ^v	18.7	22.1
Child sex ratio (0-6 year olds) (females per 1000 males) ⁱ	866	914

Nutrition^{vi}		
% children <5 classified as underweight	44.6	42.5
% children <5 classified as stunted	51.7	48
% children <5 classified as wasted	18.7	19.8

Source: ⁱGovernment of India 2011a, ⁱⁱGovernment of India 2011b, ⁱⁱⁱGovernment of India 2011d, ^{iv}International Institute for Population Sciences (IIPS) and Macro International 2007, ^vGovernment of India 2010b, ^{vi}Government of India 2009

As Table 4 shows, Gujarat State's health and gender indicators are roughly in line with overall national averages with higher levels of access to electricity, improved drinking water, and toilet facilities compared to the average, but slightly poorer under-5 nutrition. Gujarat's School Health Programme, started in 1997 by the Department of Health and Family Welfare – is the single largest health programme in the State. Gujarat is currently regarded as a State of good practice for SHN, however, the programme itself is still predominately led by the health sector rather than a partnership between health and education. As the programme has gone through a number of revisions and as Gujarat State was advised by WHO in 2006 to construct the programme around the pillars of the FRESH framework, the school health programme has focused on detection, screening and health awareness which is intended to carry over to the community as children return to their homes with improved health information and skills. This may have particular benefits for addressing increased rates of mortality and morbidity in non-school attending months.

The current mechanism for delivery of the school health programme is through a designated 'School Health Week' in each school. It is ambitious in that it aims to cover all institutions with 0 to 18 year olds, capturing private, public and out-of-school youth. Due to this mode of delivery, it does suggest that ongoing and integrated SHN into regular school curriculum is lacking and potentially means those students not captured in the yearly 'School Health Week' activities may be missed entirely, especially as a recent snapshot survey in the state suggests approximately 15% of enrolled students are not in attendance on any one day, and this is higher still for children from scheduled castes and tribes (ASER 2011). High coverage and successful implementation is reported by key stakeholders, and although brief programme plans are available precise figures were not obtainable. The programme focuses predominately on screening, often of complex medical conditions requiring referral for surgical procedures including renal and heart disease. Although basic allocation of roles for teachers and medical officers assigned to the 'School Health Week' are available in government guidelines (Government of Gujarat 2012), specific roles and responsibilities for screening and referral processes remain unclear as does the effectiveness of referral mechanisms. The programme reportedly does have an M&E framework and is reviewed by a consortium of medical colleges on an annual basis. It may be worth considering whether the programme is able to conduct screening and referral for more common ailments such

as diarrhoeal disease more than once a year, while less common issues including renal and heart disease remain on an annual basis.

In addition to the State's school health programme, nutrition interventions including the MDMS and Mamta Taruni Abhiyan programmes are ongoing. Financial responsibility for the MDMS is currently divided between National and State Governments and although there appears to be no specific policy on the MDMS, there is an active Memorandum of Understanding between the State Government and several NGOs (see stakeholders in Figure 5) involved in design and delivery of the Scheme. Mamta Taruni Abhiyan aims to assess the prevalence and intensity of nutritional anaemia in 10 to 19 year olds in order to address malnutrition. Notably, this initiative successfully reaches both in- and out-of-school girls. Much of Gujarat's child nutrition work is concentrated and delivered through early child development (ECD) and even neonatal health platforms including partnerships with the single largest ECD programme globally, Integrated Child Development Services (ICDS) which is attached to Anganwadi Centres and Child Development and Nutrition Centres. Although crucial, it suggests a potential gap in comprehensive nutrition support for older school-age children. Key informants report deworming and iron folate supplementation does occur, however, were not able to provide information as to which age groups are covered, how often and through which mechanism, i.e. school- or community-based. Additionally, drug stock-outs for supporting nutrition and other health issues are reportedly common.

Efforts to improve WASH and other elements of safe school environments are being made on the part of the State Government by a multi-agency partnership including the Department of Health and Family Welfare, the Department of Human Resource Development, and the Department of Drinking Water Supply, among others. Both WASH and Safe Structures policies are in place as are standards for ensuring safe school environments and annual testing of a sample of school water supplies is conducted, a potential area of good practice that could be shared with other States and UTs.

Gender and caste discrimination are both actively being prioritised by the Government of Gujarat through a variety of programmes. As mentioned previously, Mamta Taruni Abhiyan aims to identify and subsequently support healthy nutrition of girls both in- and out-of-school. ARSH initiatives are in place, though their effectiveness and content could not be assessed here. Caste discrimination is a known challenge in Gujarat and in

response to this the Tribal Development Department's Tribal Programme has become critical in mainstreaming children from low socioeconomic groups, scheduled castes and tribes into the education system. Sanjeevani Dudh (a school milk programme), supported jointly by the State Government, Banas Dairy and Ambaji Temple Trust, provides flavoured milk to students attending school in the tribal belt of Gujarat and has proven itself a successful public-private partnership as attendance has significantly improved since the programme's inception, including among girl children. SHARP (School Health

Annual Report Programme), a Delhi-based NGO with projects across India, has been working with the Department of Education in Anand District to target underprivileged children for health check-ups. Each child's medical data is captured and stored in an electronic SHARP repository for follow-up and reference for future check-ups. Additionally, camps are established to provide the children's mothers with skills-based health education on nutrition, WASH, and other key health issues. (SHARP 2012)

Figure 5: Summary of SHN in Gujarat State

POLICIES AND LEGAL FRAMEWORKS	SHN RELEVANT PROGRAMMES	STAKEHOLDERS	FUNDING
<ul style="list-style-type: none"> • Memorandum of Understanding between State Government and Foundation implementing Mid-Day Meal Scheme. • Safe Structures policy and standards. • WASH policy/standards. 	<ul style="list-style-type: none"> • ARSH strategy. • Child Development and Nutrition Centres. • Gujarat School Health programme, 1997 onwards. Department of Health and Family Welfare. • ICDS largest ECD programme globally through Anganwadi Centres. • Mamta Taruni Abhiyan (10-19 year old girls including out-of-school) assessing haemoglobin and malnutrition. • Mid-Day Meal Scheme. • National Programme for Control of Blindness implemented at State-level. • SHARP targets poor. • Tribal Programme important for mainstreaming poor. Sanjeevani Dudh, great example of public-private partnership. 	<ul style="list-style-type: none"> • Akshaya Patra Foundation. • Ambaji Temple Trust. • Banas Dairy. • Department of Drinking Water Supply. • Department of Education (Ministry of Human Resource Development). • Gujarat State Civil Supplies Corporation Ltd. • Health Education Bureau. • Ministry of Health and Family Welfare. • Ministry of Women and Child Development. • National Informatics Centre. • Panchayat. • Sakhi Mandal Scheme. • Sri Shakti & Nayak Foundation. • State-level steering committee (health minister, medical colleges, independent agency for M&E). • Tribal Development Department 	<ul style="list-style-type: none"> • State budget allocated from national budget; primarily through the health sector with teacher training provided by education. Exact figures were not available. • Mid-Day Meal Scheme cost is divided between Government and State.

TAMIL NADU STATE

Table 5: Summary Statistics for Tamil Nadu State

Populationⁱ	Tamil Nadu	India
Population of 0-6 year olds	6,894,821	158,789,287
Population of 0-6 year olds by sex, Male	3,542,351	82,952,135
Population of 0-6 year olds by sex, Female	3,352,470	75,837,152

Educationⁱⁱ	Tamil Nadu	India
% of population literate	80.33	74.04

Healthⁱⁱⁱ	Tamil Nadu	India
Adolescent birth rate (per 1,000 women) (2010)	20.1	37.2
Maternal mortality ratio (per 100,000 live births)	97	212
Under-5 mortality rate (per 1,000 live births) (MDG target of 39)	33	64
Death rate for 5-14 year olds (per 1000 children of this age group)	0.5	0.9

Poverty^{iv}	Tamil Nadu	India
% of population with electricity	88.6	67.9
% of population with access to toilet facility	42.9	44.6
% of population with improved (piped) drinking water	93.5	87.9

Gender	Tamil Nadu	India
Currently married non-literate women 15-44 (%) ^v	21	41
Currently married women with 10+ years of school aged 15-44 (%) ^v	29	21
Girls married below age 18 (%) ^v	9.1	22.1
Child sex ratio (0-6 year olds) (females per 1000 males) ⁱ	946	914

Nutrition^{vi}	Tamil Nadu	India
% children <5 classified as underweight	29.8	42.5
% children <5 classified as stunted	30.9	48
% children <5 classified as wasted	22.2	19.8

Source: ⁱGovernment of India 2011a, ⁱⁱGovernment of India 2011b, ⁱⁱⁱGovernment of India 2011d, ^{iv}International Institute for Population Sciences (IIPS) and Macro International 2007, ^vGovernment of India 2010b, ^{vi}Government of India 2009

Tamil Nadu stands as one of India's exemplary states for effective and continuously improving SHN. As Table 5 indicates, Tamil Nadu fares better than the national average in many aspects including women's literacy and later marriage, underweight and stunting, and improved access to electricity and drinking water. The State's long running school health programme has recently undergone revision with new guidelines announcing the Modified School Health Programme (MSHP). Although the MSHP had only rolled out in 10 districts at the time of research, the State planned to scale up to cover all of Tamil Nadu's districts in 2012. Unlike many other States, the MSHP, which is supported and funded by the National Rural Health Mission – itself a respected provider of school health interventions – aims to target all school-going children regardless of type of institution. This does however, mean that out-of-school children are still unlikely to be captured by the programme. MSHP guidelines are examples of good practice in their comprehensiveness and level of detail regarding programme implementation, roles and responsibilities of respective stakeholders. Under the MSHP, health visits to each school are expected to occur on a weekly basis, which contrasts to other programmes in States such as Gujarat which are currently implementing annual health visits. Deworming is administered to all children through Grade 10 on a biannual basis, however, it is unclear which organisation, whether NGO or government, is leading this component of SHN. Both refractive error screening and hearing screening resulting in provision of spectacles and behind-the-ear hearing aids where needed are being implemented. States looking to replicate effective screening and referral processes for these and other areas of SHN may benefit from understanding Tamil Nadu's approach.

Health and education sectors are both actively and equitably engaged in advancing SHN throughout the State and through this partnership skills-based health education, often lacking or minimal in other health-led State SHN programmes, has become a central component of the programme. Teachers for Grades 1 to 8 are trained annually on emerging health issues and are supported to learn how to teach a standardised skills-based health education curriculum with up-to-date materials, across all districts as part of the Life Skills Programme.

MSHP guidelines stipulate that school medical inspectors are expected to administer an annual survey assessing safe school environments considering WASH and classroom safety for both students and teachers. Key

informants have stressed that WASH remains the main challenge for Tamil Nadu's school health programmes.

Efforts to address inclusion from gender, disability and caste perspectives have been prioritised by the State Government with promising results. Comprehensive screening on inclusivity for disabilities, stress and anxiety reflect a progressive agenda and attention to increasingly important (but often deprioritised) mental health issues. The importance of Tamil Nadu's Inclusive Education Programme cannot be understated and there are cross learning opportunities for other States (State Health Society-Tamil Nadu 2011). Using the Child-to-Child Approach and Sanitary Napkin Preparation Training, gender mainstreaming activities support girls to stay in school. As recent research indicates that nearly all women and girl children in Tamil Nadu are anaemic (Government of India 2006), the Adolescent Anaemia Control Programme was launched as an additional tool in addressing gender equity and health in schools. Ideally this programme would be linked with ARSH, which is occurring in only 6 districts under the MSHP, as anaemia is directly related to maternal mortality and child survival. Scaling up coverage of both the ARSH and the Adolescent Anaemia Control Programme could contribute towards achieving MDG4 and MDG5 and could be monitored as a reflection on women's status and value.

Tamil Nadu's Puratchi Thalaiver MGR Nutritious Meal Programme boasts impressive coverage of children in classes 1 through 10 in recent years (Government of Tamil Nadu 2012). Tamil Nadu's MDMS is situated within the Department of Social Welfare and it is viewed first and foremost as a social protection intervention. This contrasts to the national programme and most states, where it is housed in the education department.

Additional programmes include dental hygiene, micronutrient supplementation which is currently limited to iron folate, however, this is provided to all children and not just targeted to girls, the National Iodine Deficiency Disorder Control Programme that has been led by a partnering NGO since 1991, and the National Tobacco Control Programme.

Finally, Tamil Nadu's commitment to monitoring and evaluation is evident. Through MSHP guidelines and the School Education Department's Policy Note 2012-13, the Government emphasises the need for better information to be captured and utilised on a regular basis to inform decision making processes. Opportunities to further improve the evidence base and institutionalise M&E processes into the various SHN programmes are worth capturing.

Figure 6: Summary of SHN in Tamil Nadu State

POLICIES AND LEGAL FRAMEWORKS	SHN RELEVANT PROGRAMMES	STAKEHOLDERS	FUNDING
<ul style="list-style-type: none"> • Modified School Health Programme (MSHP) Guidelines. • School Education Department Policy Note, 2012-13 mentions the Inclusive Education Programme. 	<ul style="list-style-type: none"> • Adolescent Anaemia Control Programme. • ARSH pilot (only 6 districts). • Dental programme. • Inclusive Education Programme (including: Child-to-Child and Sanitary Napkin Preparation Training). • Life Skills Education Programme. • Micronutrient supplementation – just iron but to all children. • MSHP. • National Blindness and Deafness programmes are both being implemented at State-level. • National Iodine Deficiency Disorder Control Programme. • National Rural Health Mission is a successful programme in itself. • National Tobacco Control Programme. • Puratchi Thalaiver MGR Nutritious Meal Programme. • School environment annual reviews by health inspectors. 	<ul style="list-style-type: none"> • Class Monitors (students). • Department of Elementary Education. • Directorate of Teacher Education, Research and Training. • District-Level School Health Committee. • District-Level School Management Cell. • Directorate of Public Health & Preventive Medicine (Department of Health and Family Welfare). • Local NGOs for iodine programme. • Mid-Day Meal Scheme • National Rural Health Mission. • SSA • School Education Department. • School Health Promotion Committee. • School Health Teams. • School Management. • State Non-Communicable Disease Cell. • Teachers (very empowered/skilled here). • UNICEF (school environment). 	<ul style="list-style-type: none"> • MSHP is funded by the Ministry of Health and Family Welfare’s National Rural Health Mission at State-level. • SSA programme at national-level covers infrastructure. • State’s health sector budget allows for this.

CONCLUSIONS



India continues to face rising levels of non-communicable diseases, a need for neglected tropical disease prevention, population growth, climate change and complex social and cultural challenges around gender and other forms of mainstreaming and equity in access. Sustainable and cost-effective initiatives to support the mental and physical development of healthy, happy and educated children equipped to navigate these challenges become ever more necessary. SHN and HIV prevention programmes have globally offered one platform through which to contribute to this development. At national-level, India lacks a comprehensive SHN policy and budget line. An articulated political and financial commitment to SHN at the national level would help to ensure minimum standards of school-based health services, safe environments, inclusion and education are provided across all states, helping to catalyse investment to achieving EFA and health development goals.

This analysis of four of India's 28 States and 7 Union Territories indicates that SHN remains largely health-led and health *service* focused. Increased involvement of the education sector could ensure a comprehensiveness required for full gains in child health and education to be realised. To that end, increased attention to skills-based health education and safe and supportive school environments resulting in programmatic implementation would increase the comprehensiveness of India's SHN response. Only with both a curative and preventive approach can SHN be truly effective. Tamil Nadu's MSHP is currently a rare comprehensive model, however, as it is in its infancy, future programme evaluation will prove crucial for cross-learning to occur.

Cross-cutting issues from all four States and national indicators suggest challenges remain in achieving effective multisectoral collaboration. The education

sector often appears inactive leaving health to lead the way. States such as Tamil Nadu that have effectively established active and communicative steering committees with representation from a variety of SHN relevant fields may offer guidance to others. Human resource shortages and the need for improved teacher and health provider training is evident, particularly as a core benefit of SHN is utilising the teaching workforce as low-cost champions for basic child health. To that end, motivation and training of an effective SHN workforce is required, perhaps considering introduction of performance measures inclusive of SHN. As a result of limited multisectoral collaboration and workforce shortages and training needs, referral mechanisms in many settings are ineffective. As such, innovative approaches to designing or reinforcing clear referral mechanisms could first be piloted and subsequently brought to scale. Opportunities to standardise the referral process across school-age populations could be sought.

Importantly, community involvement is essential to the success of SHN. States like Tamil Nadu and groups like the Naandi Foundation in Andhra Pradesh have done particularly well in beginning to address cultural and social issues such as gender mainstreaming and caste discrimination to improve access for all children to health and education services. Parents and community leaders will remain central to the success of interventions and could be meaningfully engaged throughout policy and programme design and implementation. Concerted effort to involve students will create an empowered young population and a demand for sustainable health and education interventions, particularly for those from historically vulnerable groups such as girl children, scheduled castes and tribes, and children with disabilities. Finally, investment in improving the evidence base and using evidence for action could be prioritised.

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34	राधा	राम	देवरीया	कला	361	371
35	सी	राम	बडवा		362	372
36		राम	देवरीया	कला	363	373
37		राम	बडवा		364	374
38		राम	देवरीया	कला	365	375
39		राम	पासवान	" "	366	376
40	नाजेश्वर	राम	बडवा		367	377
41		चाधरी	बनाहा		368	378
42	क	राम	देवरीया	कला	369	379
43	समोहन	पास	खरी		370	384
44	देव	राम	कुराहा		371	385
45	देव	पास	पिरोटा		372	386
46					373	387