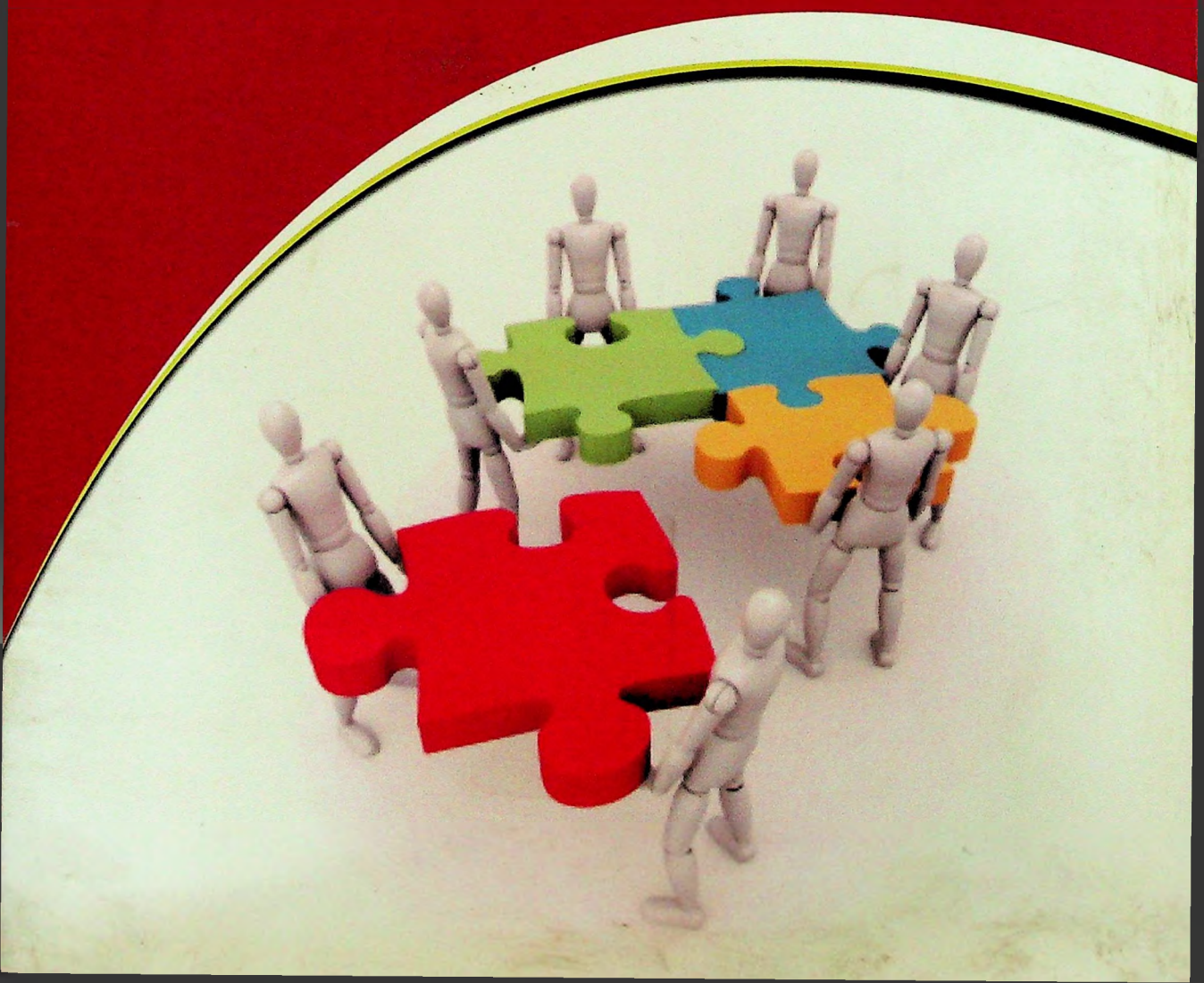
NORWEGIAN EMBASSY

PUBLIC HEALTH FOUNDATION OF INDIA

IDENTIFYING OPERATIONAL PATHWAYS FOR INTEGRATING NATIONAL DISEASE CONTROL PROGRAMMES WITHIN THE FRAMEWORK OF UNIVERSAL HEALTH COVERAGE

Executive Summary



'Identifying Operational Pathways for Integrating National Disease Control Programmes within the Framework of Universal Health Coverage'

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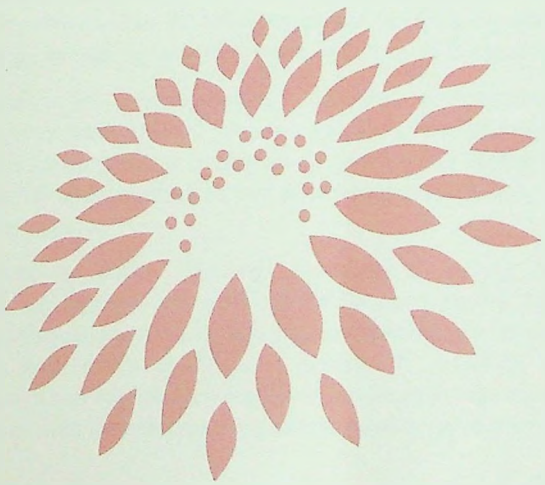


Key Recommendations from Identified Potential Pathways to Integration:

1. **Establish the National Health Mission (NHM)** as a pan-Indian institutional platform for facilitating integration among the various disease control programmes. Since programmes already fall under the ambit of the NHM in terms of common funding, the NHM could potentially serve as a common element in facilitating programme integration at various levels and with the larger health system framework assuring continuity of care from primary to tertiary level services;
2. **Reduce Centre-State dichotomy by accommodating State-centred priorities;** Involve States during policy making and programme planning processes in coordination with the Centre. **States should be allowed enough design and operational flexibility in the design and delivery of national health programmes.** State ownership is an important mechanism in determining under what circumstances vertical and horizontal programmes have a role in health systems and when implementing and managing integrated services;
3. **Encourage and evolve strong political leadership at regional and central levels** who understand and appreciate the value of integration;recognize champions among bureaucrats and implementers to facilitate funding and create conducive environments for better integration of programme components, promote task sharing and joint capacity building and initiate integrated delivery of services;
4. **Develop an autonomous National Health Regulatory and Development Authority** (NHRDA) to set quality assurance parameters and enforce monitoring and joint evaluation mechanisms in integrated systems;
5. **Foster coordination with different stakeholders including traditional medicine providers like AYUSH** to create an enabling environment and a shared ideology in making programmes function in an integrated manner;
6. **Identify areas of commonality** between programmes **(of similar epidemiological and clinical disease profiles)** for appropriate integration of programme components. Common or overlapping elements of compatible programmes will lend themselves better to integration at policy, procedural and service delivery levels;
7. **Make Proactive Data Sharing mandatory** among National Health Programmes. Strengthen and scale up HMIS components by investing in IT infrastructure and platforms to expand scope of data sharing between programmes and simplify data entry procedures. **Invest in training of programme administrators** and field staff in monitoring data quality, elimination of redundant data and use of data to improve programme quality, performance and coverage;

8. **Optimize and rationalize human resources for effective integrated delivery of services** through calibrated joint training of programme personnel (to overcome attitudinal barriers around in the integration processes), recruitment pools and joint skill building across programmes. Create and sustain an exclusive professional public health programme administrative cadre trained to manage integrated programme networks;

9. **Establish public–private sector collaboration at** equal terms without either sector wielding undue authority. Selective integration of the private sector with public health programmes in areas of management, services delivery, quality control, supply chain logistics, human resource training and infrastructure with contractually bound monitoring mechanisms;

10. **Initiate policy level reforms for National Programmes for Human Resource** recruitment, remuneration, career trajectory, incentives, joint guidelines, joint capacity building and roles/responsibilities. Pilot integrated pooled recruitment and training amongst the larger programmes;

11. **Empower programme implementers at State and Central levels** by delegating powers and responsibilities appropriately; giving implementers a sense of ownership of programmes at various levels motivating them and creating an environment for integration;

12. **Encourage wider inter-sectoral convergence** to integrate social determinants of health such as water & sanitation, infrastructure, and environment to achieve systems level integration.

'Identifying Operational Pathways for Integrating National Disease Control Programmes within the Framework of Universal Health Coverage'

Background

Universal Health Coverage (UHC) is a widely shared global health agenda. Over the last two decades healthcare demands across the world have risen steadily against a backdrop of increasingly limited resources. Health expenditures now regularly outstrip growth in gross domestic product (GDP) across many countries, providing a compelling need for health systems reform and evaluation.

The UHC policy for India first documented in the 12th Five-Year Plan aims to meet the healthcare needs of its population through a publicly financed system.[1] This effort however maybe hindered by a weak public health system. India's current mixed health sector presents numerous, diverse and highly interactive agents. While the public system is hampered by overt centralization, rigid planning and poor management, the mostly unregulated private health sector involves both formal and informal providers competing with government providers for secondary and tertiary care across the country.[2] The National health programmes nested within this system have patterns of interaction that are dynamic, non-linear and depend on multi-level networks of actors. Hence there was need to examine Integration both at the systems and programmatic levels.

Changing health priorities reflected in newer epidemiological transitions of ongoing chronic and resurgent infectious diseases, new technologies and treatments, and financial constraints have led healthcare systems around the world to seek fundamental changes in their design wherein integration strategies form major feature of reform efforts. According to Atun et al when viewed in the context of health systems the terms horizontal and vertical integration are widely used in health service delivery with each type describing a range of phenomena.[3] However, it appears that in practice, the dichotomy between them is not all that rigid, and the extent of verticality or horizontal integration varies between and within programmes. More recent debates around the benefits of integrating targeted health programmes have evolved beyond the vertical-horizontal divide and presents scenarios where vertical and horizontal systems can complement each other while forging selective linkages in areas of financing, human resources and primary health services.

If the country is to consider developing a larger framework for UHC it is important to take into account the nature and distribution of existing health programmes. While the 12th Five Year Plan advocated the integration of national health programmes it did not

[1]Planning Commission, Government of India-Twelfth Fiver Year Plan 2012-2017.Social Sectors Volume 3. 2012. Available at: http://12thplan.gov.in/

[2]De Costa A, Johansson E, Diwan V K. Barriers of mistrust: public and private health sectors perceptions of each other in Madhya Pradesh, India. Qual Health Res 2008; 18: 756-766.

[3]Atun, R, Jongh d T, Secci, F, Ohiri, K and Adeyi, O. Integration of targeted health interventions into health systems: a conceptual framework for analysis; Health Policy and Planning; 2010: 25: pp104-111

[4]World Health Organization. The World Health Report: The Road to Universal Coverage. Geneva, Switzerland: World Health Organization; 2010

specify the scope and nature of integration or the levels and depth of interaction between programmes. Most vertical programmes in the country were initialized in response to addressing and containing specific disease burdens across populations. India has 15 national health programmes (disease control and promotive programmes), 8 of which currently have varying levels of 'integration' with the National Health Mission (NHM) addressing point-of-entry primary healthcare delivery. However, many interventions remain fragmented due to the vertical nature of programmes resulting in replication of services and an absence of task-shifting and task-sharing which would otherwise maximize limited resources. The World Health Organization (WHO) estimates that 20-40% of health budgets globally are wasted due to health system inefficiencies that include demotivated health workers, service duplication, and inappropriate or overuse of medicines and technologies.[4]

Objectives of the Study

1. To assess the perceived level of integration existing among disease control programmes currently under the NHM in India.
2. To identify operational pathways for gradually integrating preventive (disease control) and promotive programmes into the UHC mandate;
3. To define 'integration processes' at the Centre and State levels with reference to;
    - Potential pathways of integration/ accommodation of various programmes;
    - Levels of integration;
    - Types of integration;
    - Role of the National Health Regulatory and Development Authority (NHRDA) in the integrative process;
4. Identify opportunities and barriers in the integrative processes.

Methods

A mixed methods study was conducted by the Public Health Foundation of India, New Delhi with the support of the Royal Norwegian Embassy (RNE) to capture perceptions of programme 'integration' among various stakeholders as well as explore potential pathways for further 'integration' within and amongst programmes. The study was carried out in two phases as detailed in **Figure 1** and involved systematic literature review and evidence synthesis followed by primary data collection. The mixed-methods design involved the collection of qualitative information in the form of semi-structured interviews and focus group discussions followed by quantitative data collection through the administration of a Likert Scale questionnaire as concurrent phases in the study. Six states were selected for primary data collection based on the NFHS-III (2005-2006) health indicators and their geographic locations so as to capture the national perspective

- High Health Indicator States – Kerala, Tamil Nadu
- Moderate Health Indicator States – Gujarat, Karnataka
- Low Health Indicator States – Assam, Madhya Pradesh

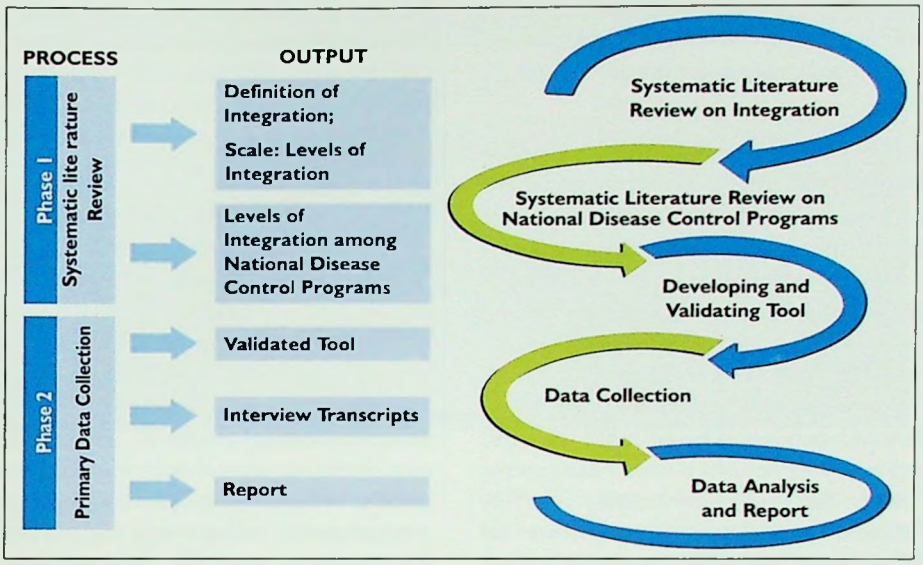
Sampling was purposive with 128 key informants selected from both the Center and six Indian States, involving policy makers, programme implementers, development partners and civil society.

Phase 1 of the study preceded field data collection and involved a comprehensive desk review and evidence synthesis that had two focus areas:

1. The first systematic review was conducted to arrive at a more nuanced and operationally relevant definition of integration and its levels and;
2. A second review concentrated on "mapping" i.e. documenting the history, architecture, and networks of preventive and promotive programmes at both

[4] World Health Organization. The World Health Report: The Road to Universal Coverage. Geneva, Switzerland: World Health Organization; 2010

Figure 1: Schematic Diagram of Methodology



central and state levels. The gaps generated from the desk review were filled by consultations with experts in the related disease control programme. Also, it was important to document fragmentation at the state level resulting from the establishment of state societies for preventive programmes.

Findings

While developing a conceptual framework for programme integration to address our study objectives, the multiple interpretations around the term 'integration' at the programmatic and system levels were taken into consideration. For this review the concept and vocabulary of integration were examined across 3 areas:

1. Functional and operational definitions of the term or activity of Integration;
2. Dimensions of Integration – Measuring Programme Centered vs Organizationally Centered vs Health System Centered aspects of integration;
3. Degrees of Integration – Evaluations of the range and depth of integration between and among programmes and the overall health system.

Programme integration can resolve health system inefficiencies and forms a crucial component in the overall implementation of UHC. However, a universally accepted definition of integration did not exist for vertical disease control programmes. Empirical literature often conceptualizes programme integration as being horizontal and/or vertical in nature, with disease control programmes commonly viewed as vertical structures.[5,6,7] While integration is often associated with service delivery, yet, linkages of health programmes between or within systems are less widely discussed. In the course of our review it emerged that the term 'integration' was used to describe a range of processes that included organizational arrangements and activities between individual agencies, across programme structures or components and involved multiple programme domains (such as policy,advocacy, administration, service provision and human resources).[8] The discordance in definitions of

[5] Atun R, Bennett S, Duran A: When do vertical (stand-alone) programmes have a place in health systems? World Health Organization Copenhagen, Denmark; 2008.

[6] Atun, R, Jongh d T, Secci, F, Ohiri, K and Adeyi, O. Integration of targeted health interventions into health systems: a conceptual framework for analysis; Health Policy and Planning; 2010: 25: pp104-111

[7] Williams, Paul; Sullivan, Helen. Faces of integration. International Journal of Integrated Care, [S.l.], dec. 2009.ISSN 1568-4156. Available at: <http://www.ijic.org/index.php/ijic/article/view/URN%3ANBN%3ANL%3AUI%3A10-1-100751/1016>. Date accessed: 06 Jul. 2014.

integration has led to the concept being used loosely at policy, implementation and operational levels, with sub-categories of integration such as coordination, collaboration and cooperation used inter-changeably.

While health systems combine both non-integrated and integrated interventions, the purpose, nature and extent of integration vary enormously among organizations and programmes. Seldom are interventions wholly un-integrated or fully integrated into health system functions. The Indian health system presents a scenario populated by diverse sets of actors, organizations and service delivery mechanisms. The large public sector which includes the National Health Programmes is comprised of agencies and institutions targeted at both individual and population based health services, while the largely entrepreneurial private health sector is mostly person-focussed and includes non-for-profit organizations and informal care providers. An operational definition of Integration that relates to this complex system of providers would have to address various levels and types of actors and their engagement.

Taking into account diverse interpretations of 'integration' from assorted literature, a functional definition of integration most relevant to disease control programmes in India was subsequently selected for the study from Atun et.al (2010, 2008)[5,6] and Atun and Menabde (2008)[9] where integration is defined as: **the extent, pattern, rate of adoption and eventual assimilation of health interventions/ programmes into each of the critical functions of a health system, which includes, inter alia: a) Governance b) Financing c) Planning d) Service Delivery e) Monitoring and Evaluation f) Demand Generation.**[10] An 'intervention' in this context refers to combinations of technologies, inputs into service delivery, organizational changes and modifications in processes related to decision making, planning, and service delivery. This definition was the slightly modified for the Indian disease control programme context with the addition of six programme-specific components that included: **g) Policy h) Health Information Systems i) Drugs & Logistics j) Management/ Administration k) Human Resources and l) Health Communication.**

Evolving from various empirical conceptualizations of degrees of integration, a spectrum of integration eventually emerged (between and within programmes and the health system), that ranged from non-integration or segregation on one end to complete consolidation or merger on the other. Based on this continuum, levels of integration as applicable to the Indian Health System were subsequently conceived. Since our study focused on potential pathways of integration for National Disease Control Programmes, we subsequently identified programmes as independent entities that possessed characteristic structural (organizational structure, funding, infrastructure) and functional elements (planning, procurement, data management).[11,12]

Using these various elements to better clarify the extent and depth of integration within programmes, a five-level scale (Table 1) was developed to describe the depth of integration based on both, policy and functional linkages within and/or between programmes. According to this scale, an increasing number of programme components involved correlates with increasing levels of integration. Within the continuum created, we have attempted to measure the degree of integration occurring according to number of programme components involved. For example the programme components we have included in our scale are policy, management, finance, operations, and architecture. In our table and scale as two programmes integrate to join more components, their defined level of integration increases across this continuum.

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[8] Newhouse Robin P, Mills ME, Johantgen M, PronovostPJ.. Is there a relationship between service integration and differentiation and patient outcomes?. International Journal of Integrated Care, [S.l.],nov. 2003. ISSN 1568-4156. Available at: <http://www.ijic.org/index.php/ijic/article/view/URN%3ANBN%3ANL%3AUI%3A10-1-100333>. Date accessed: 23 Jul. 2014.

[9] Ibid

[10] Atun R, Ohiri K, Adeyi O: Integration of Health Systems and Priority Health, Nutrition and Population Interventions: A Framework for Analysis and Policy Choices. In Health, Nutrition and Population Discussion Paper: The World Bank. Washington D.C., USA; 2008. Retrieved from http://bvsms.saude.gov.br/bvs/publicacoes/Population_Discussion_Paper.pdf

[11] Shigayeva, A. et al. (2010) Health systems, communicable diseases and integration. Health Policy and Planning, 25, pp: i4-i20.

[12] WHO(1996). Integration of Health Care Delivery: Report of a WHO Study Group. WHO Technical Report Series- 861.Geneva. Accessed on September 20, 2012. Retrieved from http://whqlibdoc.who.int/trs/WHO_TRS_861.pdf

Table 1: Five levels of Integration

Level	Name	Definition	Components Involved
1	Accommodation	Programs communicate and develop a working agreement to align their activities	Primarily at the Policy level, Management
2	Joint Funding	Programs share the disbursement, management, and accounting of funds	Policy, Some Management structures, Finance
3	Joint Programming or Joint Operations	Resources (such as staff, infrastructure) are pooled together	Policy, Management, Finance, Operations
4	Consolidation	Partial merger where one or more components of a program are fused	Architecture, Policy, Management, Finance, Operations
5	Merger	Complete fusion of two or more programs to a common structure	Architecture, Policy, Management, Finance, Operations

The situation analysis of 15 national health programmes (disease control and promotive programmes) documented existing levels of integration among and between programmes. Programme components were assessed at central, state and district levels (and included policy, management, human resources, infrastructure, service delivery, finance, logistics, M & E, and information education and communication (IEC). Service delivery at the block level was also included. A series of colour-coded matrix charts were subsequently developed by applying the integration scale developed earlier (Table 1) to programme level data generated by the mapping process that would graphically portray the nature and level of current relationships between individual programmes.

The information generated by this analysis assisted in developing and designing our tool for primary data collection accordingly. Examples of existing levels of integration taking program components like management and MIS are depicted in Figures 2 and 3 below

Figure 2, below shows the status of integration of 'management and administrative' programme components operational at the Centre and State level between and among programmes. Between the RCH and RNTCP, programmes integrative activities corresponding to the first level of integration (i.e. accommodation) was observed. Similarly integration at the accommodation level was also seen existing between RNTCP, UIP and the NVBDCP. However integration activities were appreciated at a higher scale (level 3) in joint operations activities seen taking place between RCH and the School Health programme as well as NVBDCP and IDSP. Programmes like NACP involve the participation of almost 2000 NGOs in programme implementation activities at the state, and district levels, in order to increase programme reach among highly stigmatized and marginalized target populations.

Figure 3, the mapping of Information, Education and Communication program components at State and Block level reveal a common IEC system that shows integration at level 5 that indicates a 'merger' implying incorporation of two or more programmes to form common IEC programmatic activities across almost all the programmes with the exception of the School Health Programme which is still at the consolidation level (level 4) integration. Indicating that at this component level the School Health Programme remains un-aligned with the other national programmes.

Overall information management is largely vertical along India's various National Health and Disease Control Programmes. Varying sources of health information have resulted in data being collected from both central and the state level agencies. The flow of data begins at the Sub-Centre level, which is the first point of contact for primary care. Monthly reports from Sub Centres are then dispatched to the Primary Health Centre where data is aggregated and sent to District level headquarters. Data collated at the district is finally sent to State authorities. However, in addition to these routine health information flows, national health programmes like Malaria, TB, AIDS and Leprosy

Figure 2: Component: Management: Centre & State Operation

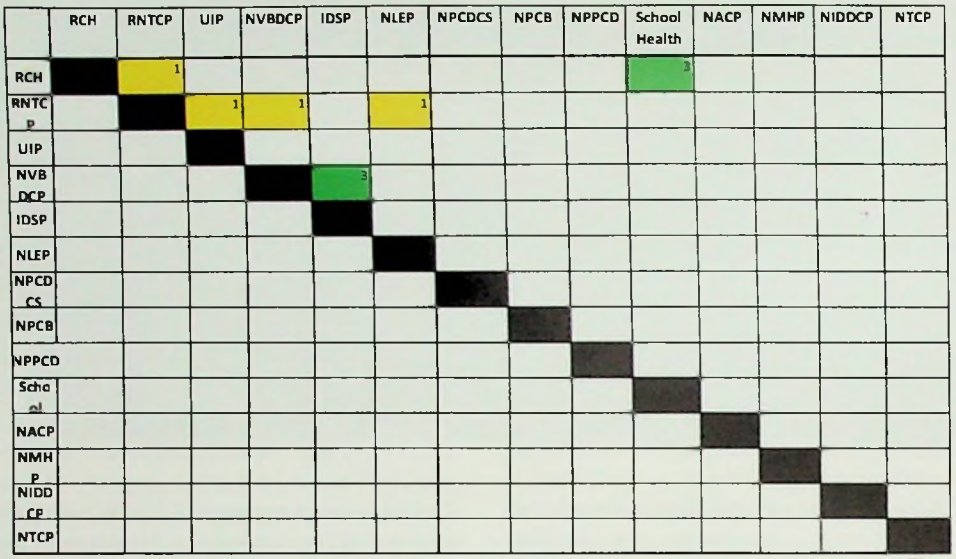
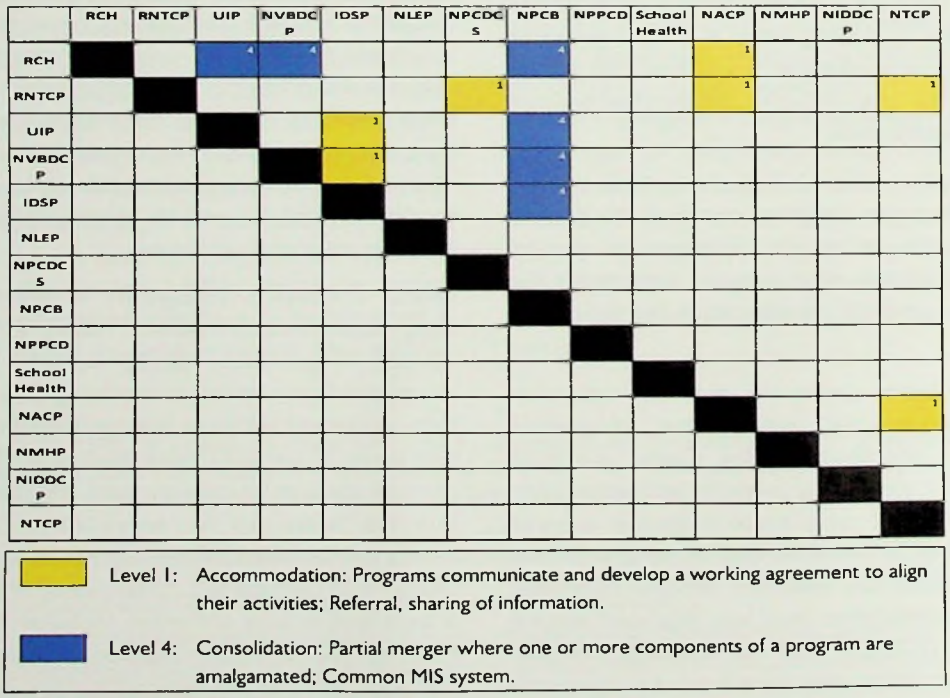


Figure 3: Component: Management Information System (MIS): All levels



Box 1: Colour index for schematic grids on programme integration

Level 1	**Accommodation:** Programmes communicate and develop a working agreement to align their activities.
Level 2	**Joint Funding:** Two or more programmes share the disbursement, management,and accounting of funds.
Level 3	**Joint Operations/Joint Programming:** Resources are pooled together to run operations that meet certain common objectives.
Level 4	**Consolidation:** A partial merger where one or more components of a programme are amalgamated.
Level 5	**Merger:** Incorporation of two or more programmes to form a new/common structure.
The, blank areas in the matrix indicates an absence integration taking place or lack of information on integrative activities at specific levels amongst the mapped programmes.	

have their own health information systems and report directly to the state health programme offices, often bypassing district level reporting. Currently, different information subsystems rarely interact or are used by disease-specific programmes in different ways resulting in variable data originating different information sources with no standard system for ensuring overall consistency and coherent reporting.

The Qualitative Study component covered nine broad thematic areas that emerged from interviews of key informants and focus group discussants. These include: 1) Understanding of Integration 2) Benefits of Integration 3) Disadvantages of Integration 4) Barriers 5) Overcoming Barriers to Integration 6) Facilitators for Integration 7) Potential Pathways to Integration 8) Models of Integration and 9) Implications of Integration for UHC.

The term integration had multiple interpretations and was used ambiguously and interchangeably with words like *'coordination'*, *'collaboration'*, *'convergence'*, *'cooperation' and 'merger'*. Several respondents included other health determinants in defining integration and equated the notion of integration with inter-sectoral convergence or inter-departmental coordination. When viewed In relation to disease control programmes, integration was regarded as a 'process' that involved programmes working together across different components of a health system (human resources, financing, monitoring and evaluation etc.) for optimum utilization of limited resources.

Integration at the service delivery level was conceptualized as a function of multiple stakeholders that included NGO's, CBOs and the larger community at which programme interventions are targeted. A majority of the respondents emphasized integrated service delivery within the community that would create a continuum of preventive and curative services delivered at a common or integrative point of care. In this case, the primary health centre would form the nucleus of this integrated care delivery system which would be staffed with shared human resources.

A common vision that emerged across all states and respondent groups was that service providers should function as focal points of integrative activities between a programme and its target population. Many respondents felt vertical programmes should eventually be integrated through a common stream of health staff at the Primary and Community Health Centre levels [PHC medical officer, ANM, Multipurpose workers, ASHA]. Respondents also viewed ASHAs, as the epitome of integrated service delivery at the field level. It is also interesting to note, that respondents also suggested incorporating private practitioners as well as semi-qualified healthcare workers in this model of integrated service delivery. Many viewed integration as the strategy to place common managers to implement multiple programmes at the district level with decentralisation of health system governance at the district and lower levels.

Most respondents stated that integrated delivery of services was beneficial since it would allow greater and more efficient utilization of resources through pooled funding and shared manpower, logistics and infrastructure across programmes. Integration of certain programme components like accounting, data-management, recruitment and procurement was also seen as a major cost cutting strategy. Respondents uniformly acknowledged that an integrated service delivery system would bring about improved health

outcomes through easier access, improved quality and more affordable care.

The disadvantages of programme 'integration' were also highlighted in the study as concerns around loss of programme focus. In their current setting, each disease control programme has its own focus and priority areas targeting specific health interventions. However, when components of such vertical programmes are integrated, the dissolution of programme boundaries could potentially dilute programme focus impacting efficiency and effectiveness. A well conceptualized implementation plan is therefore necessary in the integration of vertical programme components to bring greater clarity to programme roles and responsibilities. Power struggles are also anticipated when programmes integrate, especially at higher levels of programme management where programme directors, senior bureaucrats and political representatives could feel threatened at the prospect of overlapping programme boundaries. This could result in turf battles where programmes become protective in sharing of information, human resources and pooled funds.

The horizontal integration of programmes across the Centre and the State could also pose challenges, as every State has variations in their respective health infrastructure and institutional capacities along with diverse levels of engagement with the private sector and other stakeholders. Challenges were also identified around human resource (HR) development, their retention and coordination. Pooling work forces of different competencies, training, salary and job descriptions would require both team coordination and 'learning of new skills' to which existing staff may be resistant.

Barriers to programme integration were identified in Centre-State dichotomies where 'separate guidelines', for each programme were issued at the Central level with little consideration for State requirements and autonomy. The historical positioning of programmes into silos with each having separate mechanisms was also identified as a barrier by respondents. This caused programmes to focus only on their own priority areas with little interaction with other programmes leading to both inter and intra-sectoral isolation. The trust deficit between public sector programmes and the private sector with each domain having vested interests was also seen as an obstacle to integration.

Highly bureaucratic administrative structures and poor coordination mechanisms posed challenges to the easy integration of programmes. According to many respondents administrative set-ups fostered a culture of hierarchy where designations and contractual conditions influenced the behaviour of programme staff. Bureaucratic lethargy was manifested in many aspects of program functions making staff in secure positions in different to programme efficiency and effectiveness and complacent about promotions regardless of performance. Consequently, the inputs and opinions of long-time staff with practical knowledge of the field were often overlooked while recently appointed administrators were given priority.

The need to address issues related to HR in terms of their allocation, scarcity, remuneration and rationalization were stark features highlighted. The heterogeneity and rigidity in HR norms and policy among the national programmes and the state health system was a major barrier foreseen by respondents. With different systems of recruitment, differential remuneration and predominantly contractual staffing, the nationally funded disease control programmes may find it difficult to accommodate its staff into the rigid, tenure-safe and less incentivised general health systems at the state level. The inability of the programme managers and implementers in the speciality oriented medical community to view health in its totality and in in relation to the population was also recognized as an important barrier in maintaining verticality and preventing integration among programmes.

Programme funding occurring through several channels was also seen as an obstacle to integration, as this created multiple power and administrative control centres. Funding driven verticalisation stemmed from the fear that resources will be diluted and misused for other health priorities, mistrust of the capacity of state health systems and also from the control that a funder wants to exert on their limited resources. As an example, in the north-eastern states it is the central funding of health programmes that dominates and maintains programme verticality.

Potential pathways to integration defined along the lines of strategies, processes and enabling environments necessitates strong leadership and enterprise among policy makers and administrators. Identifying 'integratable' programme components for successful

integration as well as incorporating inter-sectoral convergence in moving towards integration was considered imperative. Reforming the health sector by strengthening monitoring and evaluation mechanisms and proactive data sharing among programmes were other suggested measures. Collaborating with different stakeholders including traditional medicine providers like AYUSH was recommended so as to create an enabling environment and a shared ideology in making programmes function in an integrated manner. Empowering implementers and giving them a sense of ownership of programmes would also prove as enablers in moving towards integration.

Quality control was identified an important component in achieving inter-sectoral integration. A suggestion that emerged in enabling better integrated programmes was to use quality control and assurance parameters in developing a brand for public sector services. A key informant from Assam gave the example of Guwahati Medical College, which consistently retained patients who could afford to patronize private hospitals. Maintaining a consistent quality of services motivated people to revisit this facility, resulting in considerable savings on out-of-pocket expenditures for primary health services. The Guwahati Medical College was able to achieve this through performance evaluations with service and quality control as an important indicator and a motivated staff that believed in the brand and reputation of the institution.

Potential models of programme integration emerged across three broad categories, namely: 1) programmatic level i.e. (integration of programmes at that involved joint policy making, planning, and funding) 2) at the systems level i.e. (where individual organizational components are integrated between and among programmes, such as M & E, HMIS, IEC, Operations etc.) and the at the 3) inter-sectoral level between the health systems and other sectors such as environment, water, sanitation and nutrition. While programmatic integration (across and within programmes) included integration of financial, administrative, human resource areas as well as service delivery at the field level, health systems integration involved the ability of vertical programmes to align themselves with the broader mandate of the National Health Mission (NHM), which could be one platform of delivery for Universal Health Coverage in the country.

Many respondents felt that all Disease Control Programmes should be eventually integrated with the National Health Mission, which in turn will facilitate integration and alignment with State health systems. In an example given on the integration of adolescent health at the Primary Health Centre (PHC) level, it was observed that no accountability was taken by both the PHC and Adolescent Health Programme cadres for integration activities as each felt it was the responsibility of the other. Integration at the systems level therefore needs to be strategically planned to prepare programme staff for their new roles and additional responsibilities

Concerns were raised by participants about expanding the implementation of an UHC framework without adequate consideration paid to the capacity of the existing health system to absorb the integration of multiple programmes along with adequate allocation of funds to sustain this effort. Programme integration will require rapid infrastructure expansion to keep pace with increased coverage. Also, in the absence of an essential health package recommended under a UHC framework, the health system is likely to be overwhelmed by an increased demand for diverse health services. Respondents felt that a list of services included as part of an essential health package (and that could be provided through national health programmes) should be affordable to state health systems who will ultimately be responsible for delivering them. Respondents cautioned that the roll-out of UHC in India will have to be phased to prevent health system overload exemplified by high expenditures, poor quality health services and inadequate health outcomes. Finally, the integration of traditional systems of medicine (AYUSH) as part of a larger UHC framework and with national programmes was also identified as a potential challenge.

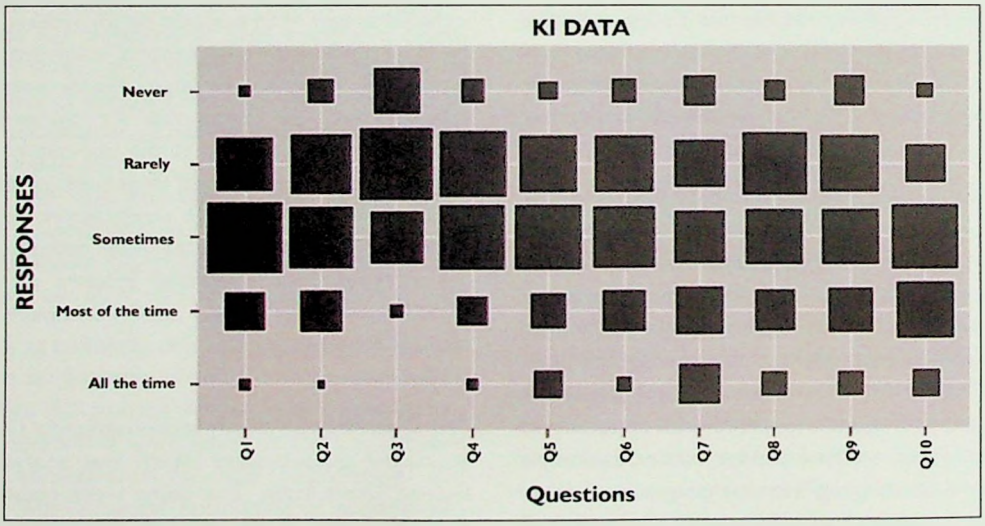
The Quantitative Study section utilized a 10-question structured questionnaire which was scored using a 5-point Likert scale. The items were coded so that a higher mean score on the instrument reflected greater frequency of programme linkages. The questionnaire quantified attitudes across all national health programmes (disease control and promotive programmes) irrespective of their integration with the NHM, focussing on eight programme components: 1) Policy level linkages; 2) Management and joint operations; 3) Activity-driven fund sharing and Infra-

structure sharing; 4) Drug supply and Logistics sharing; 5) Information, Education and Communication sharing; 6) Shared Data Management Information Systems; 7) Common Monitoring& Evaluation system; and 8) Integrated Service Delivery. The tool helped to identify potential barriers to integration and elucidate a potential role for a National Health Regulatory and Development Authority (NHRDA) in the integrative process (objective 4).

The frequency and level of integration of various programme components between and across the 15 national health programmes is presented in a mosaic plot in **Figure 4**. The plot illustrates the percentage of responses to the ten questions on the Likert questionnaire by all 128 respondents where the size of each square corresponds to the percentage of responses obtained for each question. The overall weighted responses in the plot depicts the frequency of integration of programme components that occurred between or among programmes and/or with the National Rural Health Mission (now National Health Mission) that ranged from 'Sometimes' to 'Rarely'.

The graph shows that within current programme contexts,integrative activities at levels of joint policy-making and establishing of programme guidelines was seen to occur some of the time. Following this, integration among programmes related to operations and management activities that involved strategic planning, formation of Program Implementation Plans (PIPs) and capacity-building activities like M & E, happened with much lesser frequency or rarely. Interestingly, the frequency of joint programming activities (where programmes shared common drug procurement and logistics systems) was observed as occurring 'all-the-time' and 'most-of-the-time' indicating the role of NHM in bringing these component together at the state level. Finally, integration activities around shared infrastructure and human resources related to the service delivery component of programmes was also observed to happen with relative frequency among programmes.

Figure 4: Mosaic Plot depicting frequency of responses to a questionnaire relating to integration of programme components (n=128)



Key

Q1: Programs communicate during policy making; Q2. Programs develop joint guidelines with other programs; Q3. Programs communicate during planning and formation of PIPs; Q4. Programs engage in joint capacity building activities; Q5. Programs collaborate on monitoring and evaluation activities; Q6. Program funds are shared for common intervention activities; Q7. Programs share a common drug procurement and logistic system; Q8. Information Education Communication (IEC) activities are shared among programs; Q9. Programs actively share Management Information Systems (MIS) data; Q10. Programs currently share infrastructure and human resources at the service delivery level.

Cooperation: Q1 & Q2; Collaboration: Q3, Q4, Q5; Joint Funding: Q6; Joint Programming: Q7, Q8, Q9, Q10

Conclusion & Recommendations

Review of integrated programmes shows that their effectiveness, and the factors that facilitate or impede success, depend substantially on the context in which the intervention takes place.[13] Attempts to integrate programmes cannot therefore be seen as separate from their service delivery, geographic, financial and policy contexts. Although the autonomy of individual jurisdictions have been sacrosanct in public health, extending this principle to the design and implementation of the country's disease control programmes has created challenges in conceiving a workable national health system. On the ground, a programme's context, the organizational capability of a health system and political clout of policy makers eventually influences the extent of horizontal and vertical integration within and between programmes and ultimately determines solutions for efficient programme design. Both vertical and horizontal approaches to program integration can be beneficial in different contexts and can coexist in health systems. In the long term, the limited evidence base, highly varied contexts and differences in health system capacity call for a pragmatic approach to programme integration rather than reactionary approaches driven by vested interests.

Political leadership along with the support of high-level bureaucracy were considered essential facilitators in catalysing programme integration at the policy and programme design level. This was evident when multiple programme staff repeatedly emphasized that the health secretaries at the central and state levels, along with the mission directors of the NRHM played an important role in bringing about integration across programmes at administrative, organizational and service delivery levels.

In their present state the national vertical programmes follow a bi-polar model; where some programmes work through State health departments and others work through State managed societies. Both arrangements tend to create multiplicity, fragmentation, and administrative inefficiencies. Programmes were created with top-down designs where the Centre provides funds and the States implement them. Both experience and evidence demonstrate that this method of planning or programme design does not work in the long term. Programme integration would result in using alternative design elements through joint planning and capacity building before they are eventually rolled out at the national and state level. The one-size-fits-all norms and design of many national programmes impose inefficient restrictions on States and annual State plans for programmes are made in a routine manner, without consideration for the widely varying requirements of the states. The result is a lack of state ownership and routine efforts at implementation. When state governments have the resources and freedom to address their development problems, they are more likely to generate accountability and effectiveness, often missing from the current paradigm

There is tremendous support at the Central and State levels for delivery of health services to all citizens under the umbrella of UHC. Respondents felt that that integrated national programmes could effectively contribute to a much needed care continuum for a UHC frame work that entailed cashless provision of four critical services: free generic medicines, diagnostic tests, provision for free transport to health facilities, and basic nutrition for mother and child. Services would be targeted at the entire population and not just for those below the poverty line (BPL). Some of the wealthier states were able to supplement their NRHM funding allocations with additional budgets for improving programme scope and activities. Integrated programmes could serve as an ideal platform for such holistic delivery of services to communities. However, integration is also a managerial art and each programme has varied needs for training and capacity-building for managing and implementing integration'. Caution needs to be exercised about the rapid expansion of UHC without adequate consideration for health system capacity and sufficient allocation of funds to sustain the effort.

Though programme stakeholders from different professional affiliations had different interpretations of the term 'integration', overall, the perceived benefits

[13] Powell Davies G, Williams AM, Larsen K, Perkins D, Roland M, Harris M. Coordinating primary health care: an analysis of the outcomes of a systematic review. Medical Journal of Australia 2008; 188(S8):S65-8.

of integrating programmes at Central and State levels to form coordinated networks that contributed to better quality of care for individual patients, improved population health outcomes and reduced costs was unanimously recognized. Some disadvantages that could result out of integration of programmes, such as loss of programme focus, conflict between HR needs of different programmes were highlighted by participants.

State wide differentials also emerged in the quantitative analysis with individual weightage given to specific categories. Overall across all States and the Centre the weighted ranks revealed that integration activities in programme components related to 'cooperation', 'joint programming' and 'collaboration' were low. This demonstrated that programmes still operated vertically at State level revealing gaps in program efficiency around policy planning, program design,operations, human resources and drug procurement.

The role of State governments is central to success in improving the capability and capacity of the Indian health system and could put faith back in publicly delivered services. Deep disengagement of those entrusted with the responsibility of delivering these services, not only in their role as providers but also as users, has depleted any incentive to improve performance. However, restoration of state capability is not easy, given its close interaction with political and civil society dynamics, the politicization of bureaucratic processes, administrative indiscipline, and erosion of accountability in the discharge of official responsibilities and weakened supervision and monitoring. Many progressive States have aggressively pushed health reforms, invested in health infrastructure, and courted private investment in State run enterprise models.

Effective integration of national health programmes are envisaged through both existing and evolving platforms like: (1) the recently conceived **National Health Mission (NHM)** that comprises of the rural and urban health components. The NHM aims to improve health outcomes by targeting phased increase in government funding up to 2-3% of the GDP in coming years, by addressing key health indicators; and (2) the **National Health Regulatory & Development Authority (NHRDA) proposed** in the High Level Expert Group on Universal health Coverage Report 3 designed as an independent national body linked to the Ministry of Health and Family Welfare (MoHFW). The main functions of the NHRDA will be to regulate and monitor public and private health service agencies with powers of enforcement and redressal. This regulator which will oversee contracts, accredit health service providers, develop standards for care delivery and quality control and enforce patients' charter of rights was also identified as an appropriate platform to legislate for the integration of preventive, disease control and promotive programmes at all levels of healthcare.

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