

Bridging the policy-implementation gap in federal health systems: lessons from the Nigerian experience

Andrew McKenzie,¹ Emmanuel Sokpo,²
Alastair Ager³

¹Health Partners International, Cape Town, South Africa;

²Health Partners International, Abuja, Nigeria;

³Mailman School of Public Health, Columbia University, New York, NY, USA

Abstract

The Partnership for Reviving Routine Immunization in Northern Nigeria - Maternal, Newborn and Child Health initiative supports efforts by the government of Nigeria to bridge primary health care (PHC) policies and services at three levels of government: federal, state and local. The paper suggests that understandings informed by complexity theory and complex adaptive systems have been helpful in shaping policy and programme design across these levels. To illustrate this, three initiatives are explored: *Bringing PHC under one roof*, enhancing access to funding provided by the Global Alliance for Vaccines and Immunization, and strengthening the midwives service scheme. These initiatives have demonstrated how concepts and experience developed at subnational level can influence national policy and practice, and how work at subnational levels can add value to nationally conceived and nationally driven plans for PHC.

Introduction

The 1978 Alma Ata Declaration codified the right to primary health care (PHC) for all. Nine years later, African Ministers of Health convened in Bamako, Mali, to emphasize the need to strengthen PHC on the continent, with a particular focus on maternal and child health.^{1,2} Decades later, however, PHC remains a lofty goal for many African countries, despite the impact on profile and funding for PHC of Alma Ata, the Bamako Initiative and their successor initiatives. The Alma Ata Declaration acknowledged the impact of good governance, economic and social development, inequality, health system functioning, inter-sector cohesiveness, and education on health outcomes. Recent work by Rohde *et al.*² illustrated how

these factors continue to influence progress in achieving PHC for all. Countries that have shown weak gains in life expectancy over the last couple of decades include those affected by conflict, those having a high HIV/AIDS prevalence, those plagued by poor governance and social inequality, and those experiencing specific adult mortality challenges. Nigeria fits within the third of these categories. The country continues to have low immunization rates and a low life expectancy, despite significant financial and political support for PHC since the 1980s.¹ Health inequities, pervasive corruption, and the autonomy of Nigeria's 36 states have prevented the country from establishing a national framework to support a PHC system that works for all.²

The autonomy of the states and local government authorities (LGAs) has complicated the building of a cohesive PHC system in Nigeria. In the Nigerian constitution, health is a concomitant responsibility of the three tiers of government: the Federal level, 37 States including the Federal Capital Territory, and 774 LGAs.³⁻⁵ According to the national health policy, the Federal level is responsible for tertiary care, the State level for secondary care and the LGA level for PHC. However, details in the policy regarding the roles and responsibilities for each level are unclear. Matters have become arguably even less clear since the end of military rule in 1999.^{5,6} Reality on the ground frequently demonstrates how actors within the health system are unable to distinguish the roles and responsibilities between each level of government. Stated policy is generally not backed up with adequate legislation. There exists a myriad of different departments, directorates and units at each level with overlapping responsibilities.⁷

Crucially, the way in which the three levels of government should interact has not been elaborated in policy. Thus, it can be a challenge for innovations, lessons from experience and planned activities to permeate from one level to the next. For example, how do practitioners who are operating on the ground within States or LGAs influence federal level policy makers and other States? Or, how do Federal level policy makers ensure that planned activities are implemented across the three tiers of government?

These are the sorts of questions that are crucial if sustained efforts towards coordination of health provision - and concomitant population health gains - are to be attained in the Nigerian context. They are particularly salient in the context of northern Nigeria, where the coverage of health services (and thus health outcomes) lags well behind even the modest achievements of other parts of the country. A systematic survey across three northern Nigerian states⁸ found that less than one-quarter of women who gave birth in the five years preceding the survey had ever received ante-

Correspondence: Andrew McKenzie, 14 Park Road, Rosebank, Cape Town 7700, South Africa. E-mail: jocadamckenzie@gmail.com; Alastair Ager, Department of Population & Family Health, MSPH, 60 Haven Ave, New York, NY 10032, USA. E-mail: aa2468@columbia.edu

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natal care (ANC) from a trained health professional, and only one in eight of those women had delivered in a health facility. Child health status indicators were also poor. Only one in twenty children had received the third dose of DPT by the age of one year. A range of initiatives has been established to address the strengthening of health systems in these northern states. These include a range of focused initiatives, addressing specific diseases or program areas. Bringing together as a combined programme two such initiatives - the Partnership for Reviving Routine

Immunization in Northern Nigeria (PRRINN) and the Maternal, Newborn and Child Health (MNCH) Programme - provided the opportunity to specifically address some of the wider systems issues that constrain health programming in Nigeria. PRRINN-MNCH - with co-funding from the Department for International Development of the United Kingdom (DFID) and the Government of Norway - has since 2007 provided a platform to specifically address the systems linkages required between federal, states and local structures to implement policy and service changes.

The Partnership for Reviving Routine Immunization in Northern Nigeria - Maternal, Newborn and Child Health

Programs for achieving the laudable goals set forth by Alma Ata and the Bamako Initiative have ranged from offering selective PHC services to more comprehensive packages.² The PRRINN-MNCH initiative was developed as a programme that sought to build upon the strategies outlined in the Bamako Initiative by explicitly addressing the broken linkages between PHC services at all levels of government. By facilitating better partnerships, the PRRINN-MNCH program supported the government's effort to integrate PHC services and strengthen its implementation at the district level, support child immunizations through improved funding mechanisms, and ensure maternal health is addressed at the community level.

This paper focuses upon three PRRINN-MNCH supported initiatives that sought to improve linkages between, and the functioning of, the Federal, State, and LGA levels of health system responsible for PHC: *Bringing PHC under one roof*; enhancing access to Global Alliance for Vaccines and Immunization (GAVI) funds; and strengthening the midwives service scheme (MSS). These three examples provide an opportunity to explore how concepts and experience developed at subnational levels were utilized to influence national policy and practice, and the way in which work at subnational levels can contribute to nationally conceived and driven plans for PHC.

Materials and Methods

This paper analyses the development of policy and programme implementation in these three areas by drawing upon documents from the Federal Ministry of Health in Nigeria, PRRINN-MNCH reports, and discussions - both informal and formal - at a range of national workshops and programme planning meetings.

The major analytic framework adopted is that of complexity theory. Complexity theory pro-

vides a way of understanding health systems as complex adaptive systems, and has been increasingly advocated as a tool for health policy development and health systems reform.⁹⁻¹² With complexity theory, health systems are seen as open systems in which different components are interdependent and influence each other in a non-linear fashion.¹³ Non-linearity and the notion of emergent behavior (*i.e.* behavior of a system that is not a property of any of the components of that system but a result of the interactions of the components) mean that a change in one part of the system can have unpredictable *ripple effects* in other parts of the system.¹¹ For example, the World Health Organization's report *Systems Thinking for Health System Strengthening*, heavily influenced by the ideas of complexity theory, acknowledges non-linearity and interdependence in a proposed framework for health system strengthening.¹⁴ This requires policymakers and health system reformers to adopt a *whole system* approach in order to ensure changes at one level will not impede changes at another. The complex adaptive systems approach reinforces concepts such as feedback loops (both positive and negative, that influence the pace and direction of change); path dependence (processes that have similar starting points can have very dissimilar outcomes resulting from different contexts and histories and different choices); scale-free networks (incorporating focal points - including key powerful people - that can dominate a structure); and phase transitions (when critical - *tipping* - points are reached and initiate change).⁹ The ideas of complexity theory are closely linked to the drivers of change (DOC) approach adopted by DFID.¹⁵⁻¹⁸ The DOC approach conceptualizes three interacting components operating within any system and influencing change within that system: *structural features/structures* - the history of the state; natural and human resources; economic and social structures; demographic changes; regional issues; globalization, trade and investment; and urbanization; *institutions* - the informal and formal rules that determine the realm of possible behavior by agents, such as political and public administration processes; and *agents* - individuals and organizations pursuing particular interests. Examples of agents include the political elite; civil servants; political parties; local government; the judiciary; the military; faith groups; trade unions; civil society groups; the media; the private sector; academics; and donors.

The DOC analysis and approach is essentially focused on power and the mechanisms through which that power is transacted within society and the health system.^{15,19} The DOC approach formed the basis of political economy assessments at Federal and State level health systems in Nigeria, which led to a deeper understanding of the structural features, the

power relations, the institutions (particularly the informal rules) and the agents operating in the sector.^{20,21}

Both complexity theory and the DOC approach to political economy see the health system as a whole system. Any new policy development needs to be understood in the context within which the potential change will be located. This context requires a deep and ongoing understanding of the structures, institutions and agents operating within the whole system. However, complexity theory requires a further understanding or analysis of the changes that a new policy will bring (especially an appreciation of non-linearity and likely emergent behavior; and an understanding of likely feedback loops, path dependent bifurcation points, focal points and transition points). Only then, and in an ongoing fashion as the context and the whole system is dynamic, can policy be developed and implemented.

Analysis

Bringing primary health care under one roof

The Bamako Initiative of 1987 supported strengthening health systems at the district and community-levels in parallel with efforts to decentralize political systems throughout Africa. Nigeria actually began devolving PHC services as early as 1986 to the LGA level.^{1,6} However, roles and responsibilities over PHC programs, facilities, human resources, and financing remained unclear - a mishmash of centralization and decentralization.^{4,5,22} Although the federal level is principally responsible for tertiary health care, the National Primary Health Care Development Agency (NPHCDA) and National Programme on Immunization were developed at the Federal level to maintain some control over PHC. These organizations frequently stray into the implementation arena at the local level. For example, the NPHCDA is intended to (and does) carry out supplemental immunization campaigns against vaccine preventable diseases including polio. The NPHCDA also took on the responsibility for building and establishing PHC facilities.

State Ministries of Health are also involved in the building and managing of PHC centers although, according to the national health policy, ostensibly responsible for managing secondary health care hospitals. The States provide health care services (including PHC services) through the State Ministry of Health (SMOH), the State Hospital Management Board (SHMB), and the State PHC Development Agency (SPHCDA).

Several bodies are involved in human resource management at the LGA level for PHC services: the Ministry of Local Government (MoLG), the State PHC Agency, the Local Government Service Commission, the Public

Service Commission and the LGA. The Local Government Service Commission is a state level organization that is responsible for all health professionals (*level 7* and above) while the LGAs managed admin, security, and lower level personnel.

Budget development and release is similarly fragmented. While finance was nominally devolved in block grants to both States and LGAs, State governments established joint accounts in which State and LGA financial resources were placed. The Governor of the State generally held control of these joint accounts.³ Adding to the confusion over financial control, external donors usually direct programmatic funding into Federal-level accounts, although ultimately implementation should occur at the local level. For example, large sums of money provided by the Millennium Development Goal (MDG) Office are given to the Federal Ministry of Health to implement the community-based National Health Insurance Scheme (NHIS) scheme. The diversification of responsible units at the Federal and State levels exacerbates the confusion of responsibilities between tiers.

Although PHC is the responsibility of local governments, the multitude of different agents actually involved in PHC services makes coordinated management across the Ministry of Health technically difficult. Thus, several States - starting with Enugu and Jigawa, and then Yobe and Zamfara - have been exploring strategies for *Bringing PHC under one roof*. This first occurred through the Partnership to Transform Health Systems (PATHS) programme from 2002 to 2008, and then through the PRRINN-MNCH programme, which began in 2006.

The possibility of the funding that would flow from the Federal Health Act drove policy and legislative changes regarding PHC in several States in Nigeria. Although implementation varies across states, relevant policy and legislative changes generally address three key issues. Firstly, health services - particularly PHC services - are being integrated, where previously all three tiers of government were involved in implementation. Secondly, health services are being decentralized - both through devolution and de-concentration. And thirdly, but not uniformly, through the de-concentration to sub-state bodies (the names are different in the different states), the balance of power in the management of key resources (especially financial and human resources) is shifting from the politicians to administrators and managers.

It is important to highlight the process adopted through these adjustments and how the outcome of integrated health services (at least of PHC) was achieved. Since both Federal government and States can pass legislation, both the PATHS and the PRRINN-MNCH programmes worked closely with the States to develop appropriate legislation and accompa-

nying regulations for PHC; to strengthen systems (especially financial, human resource and information); and to reposition the state level bodies for their new roles and functions. This process was not without challenges and extended over substantial periods of time.

At the same time, the States (with support from the programmes) lobbied at Federal level to gain acceptance and to provide access to materials and support for States willing to embark on this process. Three workshops were held with the NPHCDA in 2009, 2010 and 2012. Draft policy memos and an implementation guide were finalized during the second workshop, were approved by the NPHCDA Board in 2010 and submitted to the highest health policy body in Nigeria (the National Council for Health). As summarized in the official record of the Council: *Council noted the thrust of the National Health Bill in strengthening Primary Health Care (PHC) through the creation of PHC Boards/Agencies and the PHC Development Fund. Council noted efforts in Bringing PHC under one roof in line with the provisions of the National Health Bill. Council also noted the importance of enacting relevant state legislation and regulations that will facilitate the implementation of National Health Bill. Council therefore approved the implementation guide on Bringing PHC under one roof (PHCUOR) as a working document to be used by the three tiers of government and approved that all states establish Primary Health Care Boards.*²³

The National Council for Health not only adopted the policy document and implementation guide on *Bringing PHC under one roof* but encouraged the 36 States to proceed in implementing this concept (Table 1).²⁴ At the time of the 2012 workshop, 22 of the 36 States in Nigeria were in various stages of implementing *Bringing PHC under one roof*.

Enhancing access to Global Alliance for Vaccines and Immunization funds

GAVI has supported Nigeria's immunization system since 2001 to address extremely poor

immunization coverage, particularly in the northern states (<http://www.gavialliance.org/country/nigeria/>). States were able to access the first tranche of the GAVI funds, which were managed at the Federal level, following initial engagement with GAVI, but several States were unable to retire the monies appropriately. Thus in 2007, PRRINN-MNCH began at the State level supporting State Ministries of Health to effectively retire and access ongoing funding tranches from GAVI. This work shifted to the Federal level where PRRINN-MNCH assisted the GAVI office in NPHCDA to review the processes and tools for accessing and retiring the funds and participated in developing a set of 'master trainers' who would train others across all states in Nigeria.

In 2009, PRRINN-MNCH supported NPHCDA to develop Financial Guidelines for GAVI Fund management and provided appropriate training on the use of these guidelines for relevant staff at Agency Headquarters and in its programme States. The NPHCDA also requested that PRRINN-MNCH train focal NPHCDA staff on the use of the Financial Guidelines and tools in the non-programme States. The subsequent workshop enabled the participants to understand the use of the Financial Guidelines and equipped them with the capacity to train other relevant staff at the lower levels. The twenty-two participants compared six senior staff from NPHCDA Headquarters, two representatives of the NPHCDA Offices from each of the six geo-political zones of the federation, and GAVI Fund Accountants from the four PRRINN-MNCH focal States.

This example illustrates how State level experience of an international agency's funds was used to drive changes in how the funds were administered and accessed at Federal level. Initial work started within the States to ensure that the proposed system would work, and had significant impact on coverage (Figure 1). Later this was taken up to Federal level where capacity was built to maintain and nationally roll out the *new* system.

Table 1. Key elements of the *Bringing primary health care under one roof* policy.

Creating a single management body with adequate capacity that has control over services and resources (human and financial). This will require repositioning of existing bodies
Enabling legislation and concomitant regulations, inclusive of these key elements
Decentralizing authority, responsibility and accountability with appropriate span of control. Roles and responsibilities of the different levels will need to be clearly defined
Encouraging the principle of <i>three ones</i> (one management, one plan and one M&E system)
Establishing an integrated supportive supervisory system managed from a single source
Integration of all PHC services under one authority - at a minimum consisting of health education and promotion, MNCH/FP, immunization, disease control, essential drugs, nutrition and treatment of common ailments
Effective referral system between/across the different levels of care

Adapted from National Council for Health, 2011.²⁴ M&E, monitoring and evaluation; PHC, primary health care; MNCH/FP, Maternal, Newborn and Child Health/Family Planning.

Strengthening the midwives service scheme

Nigeria has a high maternal mortality ratio, low attendance for antenatal services, and few births are attended by a skilled birth attendant.²⁵ Thus, to improve access to care for pregnant women, the MSS was a federally conceived and driven scheme to place retired and unemployed midwives in health facilities; later this was extended to Community Health Extension Workers (CHEWs) to ensure remote communities have access to perinatal services. The NPHCDA initiated the MSS using funds from MDG fund.

In each State, four midwives were deployed to each of the selected PHC facilities to ensure provision of maternal and child health care services on a 24/7 basis. In each state, a selection of four PHC facilities is clustered around the referral General Hospital, with the creation of 156 clusters nationwide. Six of these clusters are in three PRRINN-MNCH target states (Katsina, Yobe and Zamfara). The first midwives were posted in late 2009/early 2010. This was followed by a second wave (both midwives and CHEWs) in late 2010.

Specific areas of collaboration between PRRINN-MNCH and NPHCDA under the banner of MSS have included: i) participation in the recruitment of midwives for the North-West zone in Nigeria; ii) sharing of relevant tools for health facility baseline assessment, participatory appraisal and continuous transformation (including IMPACT, a systems strengthening

and management capacity building initiative developed by Health Partners International: <http://www.healthpartners-int.co.uk/>; <http://www.prrinn-mnch.org/index.html>) and assessment of training institutions; iii) sharing experience on planning and conducting baseline assessments, development of a monitoring and evaluation framework, and the Comprehensive Emergency Obstetric Care (CEOC) cluster model used; iv) participation in the planning of refresher training of midwives countrywide by NPHCDA-MSS; v) developing national integrated supportive supervision (ISS) tools (the ISS tools have been institutionalized and the ISS teams oriented nationwide); vi) providing in-service training to MSS midwives in the three states based on training needs earlier identified during an induction workshop.

While there are multiple interventions in the clusters and the States, the increased presence of midwives (and CHEWs) is considered a major contribution to increased utilization of MNH services in all the PRRINN-MNCH supported facilities where MSS midwives are deployed (as compared to baseline data collected between August and October 2008; Figure 2). Overall, more significant increases were noted in ANC attendance when compared with intrapartum care (delivery). For example, in Furfuri PHC, Zamfara, the number of ANC visits increased from 0 to 455, and deliveries from 0 to 28 between April and June, 2010. MSS midwives initiated community mobilization activities to

increase utilization of MNH services, especially skilled care at delivery.

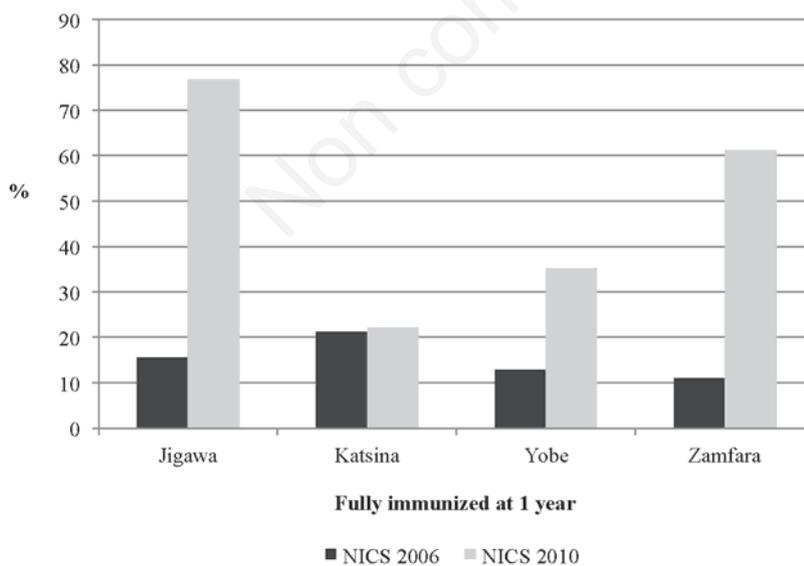
MSS has also shown improvement in documentation, including the keeping of registers and summary graphs and statistics in all facilities (and bar charts in some facilities). Additionally, all PRRINN-MNCH supported health facilities where there are MSS midwives (at least 3-4 MSS midwives per facility) now provide 24-h intra-partum care. For instance, a night shift was introduced by MSS midwives on arrival at Baimari Maternity PHC, Yobe. Problems experienced by the midwives continue to be largely administrative and systems related: *e.g.* payment issues, accommodation, poor working environment etc. Although there has been progress in most of these areas, they remain critical issues to monitor in support of retention of these important health workers.

This third example illustrates how State level practitioners can assist in supporting, and adding value to, nationally conceived and driven plans. In this case the NPHCDA had no formal jurisdiction but clearly needed support to implement a laudable scheme with promising results.

Results and Discussion

Informed by the whole systems approach of complexity theory, both the PATHS and PRRINN-MNCH programmes were either conceived or 'morphed' into broad health systems strengthening programmes, and engaged non-health ministries, departments, and agencies.

A key component of complexity theory is allowing - and often encouraging - variation in the system.¹⁰ This is a result of the path dependence principle noted earlier where, from similar starting points, different outcomes can emerge based on different contexts and different decisions at key bifurcation points. Thus, faced by similar challenges, some States adopted an integrated PHC system (*e.g.* Yobe and Zamfara) while other adopted an integrated PHC and secondary health care system (*e.g.* Enugu and Jigawa). This was a combination of history and context (*e.g.* Jigawa had no State Hospital Management Board) and of different choices at key moments (usually by the State Governor). In one example, key legislative changes in the *Gunduma* or district system in Jigawa meant that the previously fragmented management of financial and human resources was transferred to the *Gunduma* Health Services Board from state and LGAs. The outcome was that administrative management and procedures were strengthened at the expense of political power and control. Improvements in Jigawa, as demonstrated by the 2010 National Immunization Cluster Survey data, led to other States exploring variations of the *Gunduma* approach. This



Source: McArthur A. Comparison of immunization coverage results: National Immunization Coverage Survey (NICS); Multiple Indicator Cluster Survey (MICS); and routine national reporting (NHIS). Internal report to the PRRINN-MNCH programme (2012)

Figure 1. Immunization coverage from 2006 and 2010 National Immunization Cluster Surveys.

illustrates to further features of complex systems: the importance of positive feedback loops (as initially there was widespread scepticism of the changes in Jigawa) and the influence of phase transitions where a critical *tipping point* is reached to initiate change.

In the second strategy, States encouraged coordination with federal agencies in order to strengthen the system involved in accessing, spending and retiring GAVI funds. The whole systems principle meant that all had to be addressed. Improved state-level GAVI systems led to increased funding in the northern

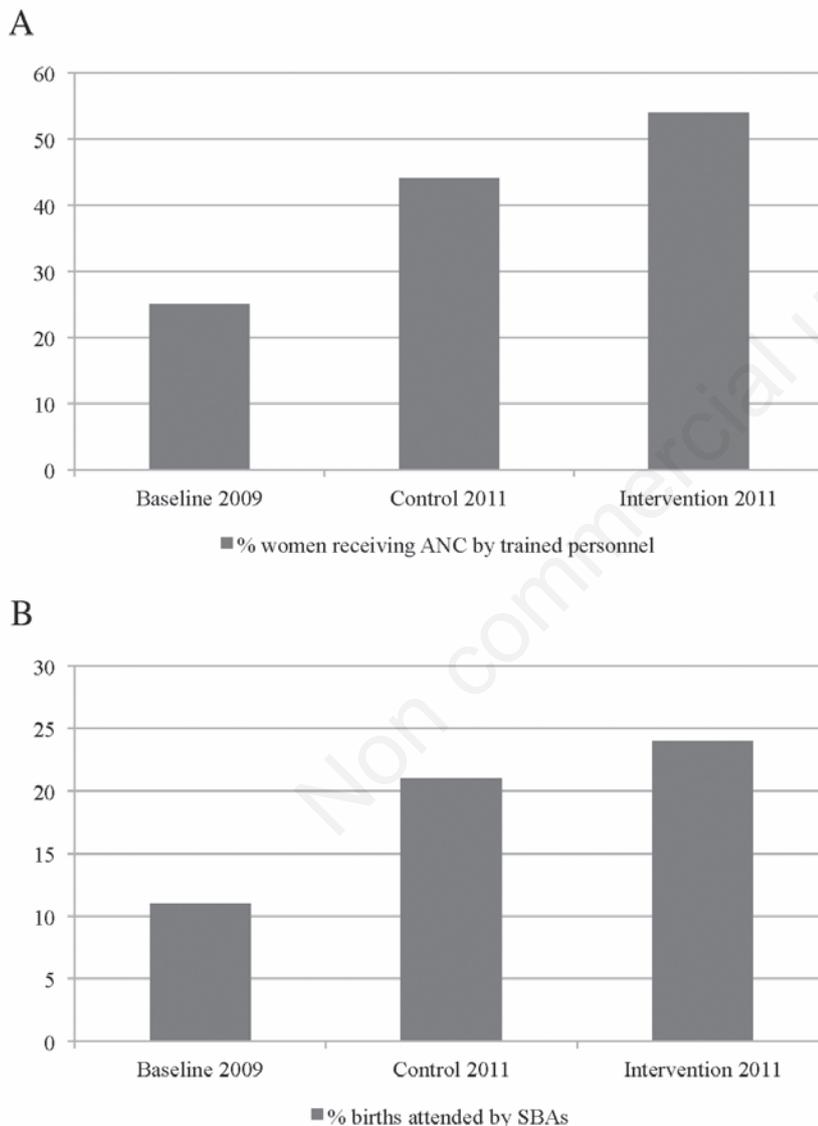
States, which led to the NPHCDA requesting assistance to strengthen the Federal level GAVI systems. This illustrates the non-linearity principle. Once the Federal level NPHCDA was made aware of the challenges at State level in accessing GAVI funds and the changes brought by strengthening State level processes, the NPHCDA was more amenable to changing processes for accessing the GAVI funds. Increased frequency of accessing, spending and retiring GAVI funds from PRRINN-MNCH supported States led to NPHCDA requesting assistance in rolling out the methodology to

other States. This highlights again the positive feedback loop principle. In addition, in one State (Jigawa) the positive experience with the GAVI funds led to the State applying the same methodology to other funds. Finally, the *tipping point* was the realization by the Federal level GAVI office that States that previously could not access the funds could now readily be assisted to comply with the guidelines.

MSS also involved both the Federal and State levels of government, except here coordination was initiated from the top-down. The Federal level NPHCDA realized that it needed to look creatively for options to redress the problem of poor maternal health indices, hence supporting retired and unemployed midwives to find jobs in underserved States. The interaction between the NPHCDA planners and the PRRINN-MNCH has identified tools and approaches that can be shared and experiences that can be built on to improve the MSS.

Each of these examples thus illustrated the influences on services and provision of multiple drivers, some within the health system and some outside of it. In advance, it would have been hard to anticipate all the factors that would prove influential on specific outcomes. Applied systems science seldom involves such comprehensive identification of influences ahead of time. Rather, a sensitivity to the potential for such influences in *real time* policy and implementation work served to highlight emerging opportunities - and barriers - and develop appropriate strategies with respect to them.

We consider that understanding and utilizing complexity theory and the complex adaptive systems approach has had a profound impact on how to strategize regarding health systems development in northern Nigeria. It has introduced flexibility in the implementation of key health systems strengthening initiatives that stands to significantly benefit health care services and improve longer-term health outcomes in this challenging environment. Such application of systems thinking is emerging as an important approach to tackling recurrent challenges in health systems development, on issues ranging from disease control programme sustainability and integration²⁶ and the management of user fees²⁷ to the resilience of health systems in times of civic crisis.²⁸



Source: Findley S, Uwemedimo O, Doctor H, Afenyadu G. Midterm Report: Assessment of Changes in MNCH outcomes and service use after 2 years of implementation. Internal report to PRRINN-MNCH programme (2012).

Figure 2. Coverage rates for A) antenatal care (ANC) and B) skilled birth attendants (SBA) for sites where midwives service scheme is operational (intervention) and not currently operational (control).

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