



IDEAS Phase 2: Measurement for Better Maternal and Newborn Health

Final Report
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Foreword

Back in 2010, the Bill & Melinda Gates Foundation in Seattle approached the London School of Hygiene & Tropical Medicine with a request to support the measurement, learning and evaluation of their new maternal and child health strategy. The IDEAS project was developed to respond to that request and started its first phase of research, working closely with collaborators in northeast Nigeria, Ethiopia, and India to improve understanding of “what works, why and how” for maternal and newborn health.

In 2016, the IDEAS project entered a second phase of work, building on lessons learned from phase one. Five key research themes were identified:

1. Research to track progress in maternal and newborn health in a setting where multiple actors formed a partnership to address health system building blocks, aiming to understand how demand and supply side actions worked together to improve outcomes.
2. Research to improve the measurement of priority indicators for maternal and newborn health, aiming to address the challenges in measuring some of the actions that save maternal and newborn lives, which make it difficult to track progress.
3. Research to understand how to foster innovation sustainability, aiming to address the problem that effective interventions often last only as long as donor funding is available.
4. Research on how best to support local decision-making, aiming to address the problem of limited capacity to synthesise and use data for decision-making.
5. Research on understanding quality improvement, aiming to generate new evidence that explains the mechanisms through which quality improvement in the health sector operates.

This report outlines this body of work and highlights key findings. We hope you enjoy reading it.

Professor Joy Lawn, Professor Debra Jackson, Professor Susannah Mayhew, Professor Mitzy Gafos and Associate Professor Brian Rice

Leadership for the Centre for Maternal, Adolescent, Reproductive & Child Health (MARCH) and Centre for Evaluation at the London School of Hygiene & Tropical Medicine

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Image credit:

Front cover left: Asamu Kanule and her children in Gombe State, Nigeria. IDEAS/ Noreen Seyerl 2019

Front cover right: IDEAS/ Christopher Smith 2019

Left: Fatima Adamu holds her baby and stands outside her house in Sebu Village Pindiga Ward in Gombe State, northeast Nigeria. IDEAS/Noreen Seyerl 2019

Executive summary

By Tanya Marchant



The IDEAS phase two project was launched in 2016 to build from learning generated in the first phase of research. Working across regions of Ethiopia, in Gombe State and Lagos State in Nigeria, and West Bengal in India, the quality of care provided to mothers and newborns was a central theme.

During the first phase it had become clear that programmes for maternal and newborn health did not have the data they needed to track progress in the delivery of high quality health care; that programme managers needed to be more agile in their use of data for decision-making to achieve the best quality of care from the health system; that innovations launched with donor funding were difficult to sustain; and that there was insufficient evidence about the mechanisms through which quality improvement interventions operated in different settings.

And so, five independent areas of research were developed by our multi-disciplinary team, with close attention paid to learning from one another and to learning with country partners.

1. Tracking progress: Research to track progress in maternal and newborn health programming.

Multiple actors working in the same geography may share the aim to improve health outcomes but lack the coordination needed to make progress. In particular, a failure to recognise dependencies between demand and supply-side issues can limit progress. In Gombe State, northeast Nigeria, the presence of multiple Bill & Melinda Gates Foundation investments presented an opportunity to enhance synergy between actors so that the health system as a whole could be strengthened.

In Gombe State, a Partnership for Maternal and Newborn Health was established, led by the State Primary Health Care Development Agency. This partnership combined actions across multiple health system building blocks: generating demand through a Village Health Worker scheme; improving supply through health worker training, better supply chain management and quality improvement in primary health facilities; and promoting leadership, finance and strong routine data. The IDEAS project joined this partnership to both evaluate progress of the Partnership and to help strengthen capacity in data generation and data use. A comprehensive package of primary data collection between 2016-2019 was developed, an intervention to support the quality of routine health management data implemented, six-monthly “Data Driven Learning Workshops” convened to support decision-making for adaptive management, and an evaluation plan designed and implemented.

2. Improving measurement: Research to improve the measurement of priority indicators for maternal and newborn health.

Data on the quality of facility-based care received by mothers and newborns was lacking; there was evidence that indicators from household surveys were not valid for some services, that definitions were not harmonised, that the methods to link data sources together needed development, as did the methods and indicators for respectful maternity care. The Partnership in Gombe State, Nigeria, presented an opportunity to dig deep into this topic.

The rich sources of data generated for tracking progress in Gombe enabled the IDEAS team to carry out research on improved measurement of priority indicators, particularly around different dimensions of health care quality during facility-based childbirth care, on effective coverage measurement and on respectful maternity care.

3. Fostering innovation sustainability: Research to understand how to foster innovation sustainability.

The sustainability of health programmes is critical, but effective interventions may only last as long as donor funding is available.

To address this problem, research was carried out in Ethiopia, Nigeria and India to investigate the transition from donor-funded innovations to government or community-led health programmes. Building from initial findings, a detailed qualitative study of the Gombe State Village Health Worker Scheme led to the development of a new framework with six critical actions that help to foster the sustainability of innovations. These actions were: reflection points and programme adaptation from the outset; ensuring government ownership of the innovation and a clear transition plan; fostering motivation for community health workers; institutionalizing innovations within existing health systems, managing financial uncertainties; and fostering community ownership.

4. Supporting local decision-making: Research on how best to support local decision-makers to synthesise and use local data.

Better data is essential to improve health outcomes, yet even where rich data sources are available there can be limited capacity to synthesise and use the data for decision-making.

Building on our previous research in Nigeria, India and Ethiopia, we developed an approach to support the use of local data in decision-making in Ethiopia: the “Data Informed Platform for Health”. This involved a structured five-step cycle running every three to four months at district level, with job-aids facilitated linking of input and process data from health and other sectors onto a common data sharing platform. Government and non-government stakeholders reviewed the findings at routine performance management team meetings, where they identified challenges and gaps and agreed on measures to be taken to resolve issues.

The “Data Informed Platform for Health” was first piloted in West Bengal, India. After co-creation to adapt the strategy for Ethiopia, IDEAS supported implementation in 12 districts over a period of 21 months. Using a cluster-randomised controlled evaluation design, we found strong evidence that the “Data Informed Platform for Health” resulted in improved health information system performance and data-driven decision-making in the 12 intervention districts compared to the remaining 12 districts of North Shewa zone.

5. Understanding quality improvement: Research on understanding quality improvement.

Despite increasing popularity, there was little evidence to explain why quality improvement initiatives have varied results across settings, nor were there good theoretical models to explain the role of leadership, teamwork, supervision or health system context. A better understanding of the mechanisms through which quality improvement operates was needed.

Working with government and implementers in Ethiopia, we conducted qualitative research to understand the mechanisms through which quality improvement collaboratives worked and the influence of local context, and econometric research to determine how health worker knowledge and motivation changed. We were also able to use the data we collected to explore the collaborative element of quality improvement collaboratives in a traditionally hierarchical setting, the health system drivers of data falsification, and the factors influencing motivation.

Working with government and implementers in Lagos State, Nigeria, we conducted qualitative research to understand how a quality improvement intervention was adapted to that complex health system, with both public and private sector actors, highlighting how quality improvement priorities changed according to implementing context.

And, working with the Quality of Care Network in Ethiopia, we conducted qualitative and quantitative research to understand Network functioning, including the individual, organisational and system capabilities that helped or hindered implementation and the actions taken to sustain the Network.

The following pages highlight key learning to have emerged from the second phase of IDEAS. Project outputs include a wealth of data sets, reports, journal articles, research briefs, and infographics. Collaborations and partnerships across these five research areas continue, with a particular focus on strengthening research capacity in the countries with the greatest needs.



Partnerships

By Joanna Schellenberg

Measurement, learning and evaluation work in global health is entirely dependent on partnerships at many different levels. Within IDEAS we have developed, and depended on, a series of partnerships with groups based in Ethiopia, Nigeria and India as well as with groups in the UK and the Bill & Melinda Gates Foundation in Seattle. We are acutely aware that without our partners, none of our work would be possible and we are deeply committed to embedding mutual capacity development in our work. With renewed energy and focus given by the movement to 'decolonise' global health, we have made particular efforts to work towards our partnerships being as equitable as possible. As LSHTM works to come to terms with our own colonial past, we know there is more to do in this area.

In Ethiopia, we would particularly like to acknowledge and thank the Ethiopia Public Health Institute and the Ministry of Health; the School of Public Health, Addis Ababa University; the Institute for Healthcare Improvement, Addis Ababa; and JaRco Consulting.

In Nigeria, we thank the Society for Family Health; Pact; Data Research and Mapping Consult Limited, Abuja; the Office of the Executive Secretary, Gombe State Primary Health Care Development Agency; ChildCare & Wellness Clinics; the Health Strategy and Delivery Foundation; and University of Lagos College of Medicine.

We also want to thank Tattva Foundation, Lucknow, India.

In the UK, we thank the Institute for Global Health, University College London.

Image credit: IDEAS/ Christopher Smith 2019

Tracking progress

Gombe Partnership for Maternal and Newborn Health

By Tanya Marchant

A government-led partnership came together in Gombe State, northeast Nigeria, to improve outcomes for mothers and newborns. Actions across multiple health system building blocks were coordinated and progress reviewed at regular intervals. Data was a key input to partner decision-making. Overall, there was improvement in indicators on access to care and on the quality of facility-based care, and government leadership was seen to be crucial, although the mechanism for sustaining progress remained uncertain.

Background

Gombe State is a predominately rural state in northeast Nigeria where the burden of maternal and neonatal mortality is higher than the national average, at 1,549 maternal deaths per 100,000 live births in 2015 and 33 neonatal deaths per 1,000 live births in 2017.^{1,2} In 2016, when this study started, 29% of women gave birth in a health facility, principally at primary health centres that were managed by the Gombe State Primary Health Care Development Agency.

The Gombe Partnership for Maternal and Newborn Health was a government-led intervention implemented between 2016 and 2019. It aimed to coordinate the actions of multiple partners from non-government organisations and academia toward the goal of equitably improving high quality maternal and newborn health services (see Figure). It applied an adaptive management approach with partners meeting regularly to track progress, examine monitoring data, and amend implementation as necessary.

Figure. Partnership interventions by health system building block

Building Block	Partner interventions
Service delivery	Quality improvement in health facilities; Village Health Workers linking communities to services; engaging mothers-in-law and males; mothers' groups; emergency transport scheme
Health Workforce	Task shifting and training Community Health Extension Workers; deployment of Village Health Workers; financial incentives
Information	HMIS strengthening; MPDSR information package; score cards; mass media events
Products	Enhancing supply chains to health centres
Financing	Advocacy for State government budget release
Leadership	Strengthening Ward Development Committees; organisational development



Image credit: IDEAS 2017

Contribution of IDEAS

The IDEAS project worked with partners to agree a results framework for tracking progress, to generate new data on quality of care³, strengthen routine data sources⁴, and to evaluate progress⁵. "Data Driven Learning Workshops" were convened every six months to guide the adaptive management process whereby all partners came together, reviewed evidence that had been packaged in accessible formats, looked back on progress that had been made in the recent past and then looked forward to plug implementation gaps.

Results and implications

After four years, this government-led partnership achieved improvements in life-saving interventions for mothers and newborns, demonstrating that even in settings where resources are constrained, the needle can be shifted in the right direction. In this example, multiple interventions that spanned different health system pillars were implemented together as a package, and we found that addressing demand and supply-side problems simultaneously was important. But we conclude that essential and reproducible elements of this programme lay not for the most part in the individual components of the intervention, but in the way the programme was designed and implemented through adaptive management, with its focus on government leadership and strong stakeholder partnership.

1 Izugbara CO et. al. Maternal health in Nigeria. A situation update. Nairobi, Kenya: African Population and Health Research Centre, 2016.

2 NBS and UNICEF. Multiple indicator cluster survey 2016-17, Survey findings report. Abuja, Nigeria, 2017.

3 Exley et. al. Provision of essential evidence-based interventions during facility-based childbirth: cross-sectional observations of births in northeast Nigeria. *BMJ Open*, 2020.

4 Bhattacharya, AA et. al. Improving the quality of routine maternal and newborn data captured in primary health facilities in Gombe State, Northeastern Nigeria: a before-and-after study. *BMJ Open*, 2020.

5 Willey B et. al. Improving maternal and newborn health services in Northeast Nigeria through a government-led partnership of stakeholders: a quasi-experimental study. *BMJ Open*, 2022.

Improving measurement

Measuring effective coverage for maternal and newborn health

By Josephine Exley

Our research aimed to improve the measurement of priority indicators for maternal and newborn health, including quality of care measures. A number of problems needed to be addressed: (i) generating greater clarity around what it was possible to measure, and how; (ii) understanding which data should be used to drive decisions; (iii) developing methods for linking household data on access to care with facility data on quality of care; and (iv) creating actionable effective coverage measures for facility-based childbirth care.

Background

In 2010 it was clear that accelerated progress was needed to achieve the Millennium Development Goals 4 and 5 on child and maternal survival. In addition to increasing the access to and uptake of facility-based care, focus had shifted to also prioritise the quality of care provided to families.

The discourse around quality of facility-based care had long been established, but the global health goals, carried forward through the Sustainable Development Goals, prompted new commitment to act. If 'what gets measured gets done' then the measurement community needed to contribute actionable solutions to track the coverage of high quality maternal and newborn healthcare at scale. Then, in turn, the proportion of the population in need of quality care who received quality care could be monitored and continuously improved.

To make progress it was important to explicitly recognise the gaps in knowledge. Quality of care indicators were relatively poorly defined and lacked harmonisation between time and place. The need for indicators to guide decision-making at different health system levels – within and beyond health facilities – was not yet fully described. The data sources available to measure those quality indicators were not always fit for purpose. And methods for linking data sources to construct quality-adjusted – or effective coverage – measures needed development.

Contribution of IDEAS

A key contribution of IDEAS was to work together with others to develop solutions: with country partners, university colleagues, and multilateral agencies. We worked especially closely with the Partnership for Maternal and Newborn Health in Gombe State, Nigeria. Four main areas of contribution are highlighted here, often reflecting collaboration across multiple stakeholder groups.



Image credit: A data collector during the annual IDEAS household survey. IDEAS/ Noreen Seyerl 2019

Results and implications



A Call To Action

Quality of care for mothers and newborns is a complex construct and challenging to measure. The renewed focus on ensuring high quality care for all families provided an opportunity to discuss, engage and reflect on how to address this complexity.⁶

Our research contributed to conceptualising the distinction between essential health care that could already be measured and health care for which measures needed development and investment, particularly measures related to processes and experiences of care. With a focus on tracking the coverage of high quality care in resource-poor settings, our team called for systematic approaches to effective coverage measurement that decision makers could use to drive change.



Examining available data

Actionable data is needed to drive decision-making for quality facility-based care. But not all data sources provide valid measures or are fit for the purpose of decision-making at a given level.

We examined the validity of household and facility-based data sources for maternal and newborn health, finding that a matrix of data sources was needed to estimate the various constructs of high quality facility-based care.⁷ We also found that this matrix of data sources could include routine data sources in settings where there was interest to use routine data for decision-making.⁸



Developing methods for linking data sources

Examples of linked household and facility data have become more prevalent. But individually linked household and facility data was scarce and the methods applied for "ecological" linking of data sources lacked harmonisation.

Our methodological work demonstrated that linked data should include adjustment for the size or level of health facility, to take account of the population level impact of facility quality in quality-adjusted coverage measures.⁹



Constructing effective coverage measures

Effective coverage measures should estimate the proportion of the population in need of quality care who went on to receive quality care. For maternal, newborn, child, and adolescent care and nutrition, our research revealed a total lack of harmonisation in the way this complex measure had been defined by researchers.¹⁰ Through our research to understand the most valid and actionable data sources, together with research on methods, we generated an effective coverage measure of childbirth care that could be generated using country-owned data sources, potentially leading to greater use for decision-making.¹¹

6 Marchant T, et al. Improved measurement for mothers, newborns and children in the era of the Sustainable Development Goals. *J Glob Health*, 2016.

7 Bhattacharya, A, et al. Monitoring childbirth care in primary health facilities: a validity study in Gombe State, northeastern Nigeria. *Journal of Global Health*, 2019.

8 Bhattacharya, A, et al. Improving the quality of routine maternal and newborn data captured in primary health facilities in Gombe State, Northeastern Nigeria: a before and-after study. *BMJ Open*, 2020.

9 Willey, B, et al. Linking data sources for measurement of effective coverage in maternal and newborn health: what do we learn from individual-vs ecological-linking methods? *Journal of Global Health*, 2018.

10 Exley, J, et al. A rapid systematic review and evidence synthesis of effective coverage measures and cascades for childbirth, newborn and child health in low- and middle-income countries. *Journal of Global Health*, 2022.

11 Exley, J, et al. Operationalising effective coverage measurement of facility-based childbirth in Gombe State; a comparison of data sources. *PLOS Global Public Health*, 2022.

Improving measurement

Improving measurement for respectful maternity care

By Nasir Umar



Image credit: LSHTM

We aimed to study positive and negative facility childbirth experiences and to determine best practices for measuring respectful maternity care. In Gombe State, Nigeria, we did research to understand i) mistreatment during facility childbirth, ii) the utility women placed on attributes of childbirth care experiences, iii) the validity of measures of childbirth care experiences derived from exit interviews, iv) the validity and acceptability of capturing childbirth care experiences through telephone interviews, v) the feasibility and acceptability of primary healthcare provider-led phone follow-up with mothers shortly after childbirth.

Background

Respectful maternity care, including effective communication, respect and preservation of dignity and emotional support, is widely acknowledged as a public health issue of global importance. WHO guidelines on positive pregnancy experience, positive childbirth experience and positive postnatal experience all emphasise the need to promote respectful maternity care and to eliminate mistreatment of women during facility childbirth.

However, generating accurate and reliable measures of women's childbirth care experience is challenging. For example, operational definitions may vary by context, and the optimal recall period for self-reported measures is a subject of debate. There is a dearth of evidence on the validity of self-reported measures of childbirth

care experience derived through exit interviews with women. Further, traditional survey methods are resource intensive, limiting their use for continuous monitoring in low and middle-income countries. To ensure timely data on women's childbirth care experience for health facility staff and managers, novel and sustainable methodologies are needed.

Contribution of IDEAS

Using primary data collected as part of the Gombe Partnership we carried out research on respectful maternity care that responded to local and global needs, and was conducted in collaboration with state actors and community stakeholders in Gombe state, Nigeria, as well as international collaborators. Major contributions are described here.

Results and implications



Understanding mistreatment during institutional delivery

Mistreatment of women during facility childbirth is increasingly seen as one of the leading reasons behind the low utilisation of maternal and newborn health services in settings with poor maternal and newborn health outcomes, such as Gombe state. We investigated the quality of care relating to the prevalence and manifestations of mistreatment during institutional birth, finding that mistreatment was reported in two-thirds of all institutional deliveries, with reported prevalence varying across the dimensions of care. Qualitative findings highlighted different forms of mistreatment that might take place during institutional births.¹²



The relative value (utility) associated with a range of childbirth care experience attributes

Widespread mistreatment has been reported but there is a limited understanding of the aspects that matter most to women. We interviewed rural Nigerian women to examine how specific attributes of a hypothetical facility birth experience of care influenced their stated preference for hypothetical place of delivery. We found that poor facility culture, including an unclean birth environment with no privacy, and unclear user fees, negatively impacted choices for facility-based childbirth.¹³



The validity of measures of respectful maternity care derived from exit interviews

Valid methods for assessing respectful maternity care are essential but validation research is sparse, reporting mixed results. We investigated the validity of eight positive and sixteen negative maternity care experience measures derived from exit interviews. We found that maternity care experiences self-reported in exit interviews by women were consistent with the observation of childbirth for all eight positive maternity care experience indicators and six of the sixteen negative maternity care experience indicators investigated.¹⁴

- 12 Umar, N, et al. Understanding mistreatment during institutional delivery in Northeast Nigeria: a mixed-method study. *Reproductive Health*, 2019.
- 13 Umar, N, et al. Toward improving respectful maternity care: a discrete choice experiment with rural women in northeast Nigeria. *BMJ Global Health*, 2020.
- 14 Umar, N, et al. Measurement of respectful maternity care in exit interviews following facility childbirth: a criterion validity assessment in Nigeria. *Journal of Global Health Reports*, 2022.
- 15 Umar, N, et al. To call or not to call: exploring the validity of telephone interviews to derive maternal self-reports of experiences with facility childbirth care in northern Nigeria. *BMJ Global Health*, 2022.
- 16 Umar, N, et al. Women's perceptions of telephone interviews about their experiences with childbirth care in Nigeria: a qualitative study. *PLOS Global Public Health*, 2022.



The validity of telephone interviews to capture data on childbirth care experiences

Health facility staff and managers need frequent and timely data on the experience of childbirth care. Telephone follow-up interviews may be a low-cost option. We investigated the validity of eight indicators of positive maternity care experience and 18 indicators of negative maternity care experience derived via telephone interviews. We found that the telephone interviews conducted 14 months after childbirth did not yield results consistent with exit interviews conducted at the time of discharge.¹⁵



Women's perceptions of telephone interviews about their childbirth care experiences

The high coverage of mobile phones in low-and middle-income countries has made telephone interviews a promising alternative or supplement to face-to-face interviews. But there is limited evidence on women's perceptions and acceptability of telephone interviews about their experiences with facility childbirth care in such settings. We investigated women's perceptions of phone interviews about their experiences with facility childbirth care, finding that most women had positive views about the phone interviews.¹⁶



Feasibility and acceptability of primary healthcare provider-led phone follow-up with recent mothers

An established system of integrating the experience of care measures within routine data capture exercises in health facilities is needed to improve women's experience of childbirth care. We investigated the feasibility and acceptability of primary healthcare provider-led phone follow-up with recently delivered women about their maternity care experiences, finding that it was feasible and acceptable.

Fostering innovation sustainability

How do you scale-up and sustain maternal and newborn health innovations?

By Neil Spicer

We studied how to scale-up and sustain maternal and newborn health innovations in Ethiopia, northeast Nigeria and Uttar Pradesh in India. We defined 'scale-up' as the adoption of donor-funded health innovations beyond original programme districts, and 'sustainability' as the longer-term implementation of donor-funded innovations that have been scaled-up.

Image credit: IDEAS 2018



Background

This is important because donors commonly fund health projects to test and develop innovative practices in low-resource settings, hoping that they will be adopted and scaled-up as part of existing health systems and programmes. But often these innovations are not adopted and scaled-up by country governments or sustained in the longer term. This wastes resources and time and can be counterproductive if it erodes trust in donor activities. It is important to understand how to sustain health innovations after donor funding ends.

Contribution of IDEAS

Our qualitative study involved interviewing stakeholders, including government decision makers, development agencies, civil society implementers of innovations, academics and experts. We carried out focus group discussions with frontline workers implementing innovations, such as community health workers, nurses and taxi drivers. In IDEAS' first phase, in 2012 and 2013 we interviewed 150 stakeholders about the barriers and enablers to scaling-up of innovations in maternal and newborn health, the actions to catalyse scale-up and the effects of donor and implementer behaviour; and between 2014 and 2016 we interviewed 60 stakeholders to identify the most important actions required for scale-up. Between 2017 and 2019 we focussed on factors influencing longer-term sustainability by interviewing 145 stakeholders and conducting 51 focus group discussions with frontline implementers.

- 17 Spicer, N, et al. 'The stars seem aligned': a qualitative study to understand the effects of context on scale-up of maternal and newborn health innovations in Ethiopia, India and Nigeria. *Globalization and Health*, 2016.
- 18 Spicer, N, et al. "The development sector is a graveyard of pilot projects!" Six critical actions for externally funded implementers to foster scale-up of maternal and newborn health innovations in low and middle-income countries. *Globalization and Health*, 2018.
- 19 Wickremasinghe, D, et al. 'It's about the idea hitting the bull's eye': how aid effectiveness can catalyse the scale-up of health innovations. *International Journal of Health Policy and Management*, 2018.
- 20 Wickremasinghe, D, et al. 'A seamless transition': how to sustain a community health worker scheme within the health system of Gombe state, northeast Nigeria. *Health Policy & Planning*, 2021.
- 21 Spicer, N, et al. 'Scaling-up is a craft not a science': catalysing scale-up of health innovations in Ethiopia, India and Nigeria. *Social Science and Medicine* 121, 2014.
- 22 Wickremasinghe, D, et al. 'A seamless transition': how to sustain a community health worker scheme within the health system of Gombe state, northeast Nigeria. *Health Policy & Planning*, 2021.

Results and implications

Based on our studies, our key messages on the factors influencing the scale-up and sustainability of innovations in maternal and newborn health:



1: Contexts

Whether donor funded maternal and newborn health innovations are scaled-up depends on where they are introduced. Contextual factors affecting scale-up in Ethiopia, northeast Nigeria and Uttar Pradesh included: how national health policy decisions were made; how maternal and newborn health issues were prioritised; government coordination of external partners; health systems capacity; and community demand for healthcare.¹⁷



2: Actions

Despite the challenges, we identified certain actions that increased the chances of maternal and newborn health innovations being scaled-up. Six critical actions for innovation implementers are: 1) designing innovations to be scalable from the outset; 2) building a strong evidence base; 3) gaining the support of well-connected advocates and government personalities; 4) planning for scale-up while also being responsive to changes in political priorities; 5) supporting government throughout the transition to scale; 6) embracing aid effectiveness principles – alignment, harmonization and country ownership.¹⁸



3: Behaviours

We found that scale-up and sustainability depend on donor and country government behaviours: country ownership of the innovation; alignment with national health policies, programmes and targets; harmonisation among multiple partners; transparency and accountability between donors and implementers and government; predictability of financial support, and civil society involvement in decision-making.¹⁹



4: Ownership

Without strong country ownership of an innovation, it is unlikely to be scaled-up and sustained. Our studies highlighted the problem of donors introducing health interventions in a top-down way; donors should respond to country priorities and government requests for support, and work in partnership with governments. Successfully scaled and sustained innovations are usually country-led programmes supported by donors, rather than donor programmes introduced into countries (see case study).²⁰



5: Craft

Scaling-up is a craft and not a science, meaning that multiple human factors influence scale-up beyond developing a technically effective innovation and generating evidence of impacts: responding to politics; gaining the support of powerful 'champions' and emotional buy-in are all very important.²¹

Case study: Village Health Worker scheme in Gombe, northeast Nigeria²²

The Village Health Worker scheme was set up to deliver maternal, newborn and child health information to communities, linking communities to healthcare by training women from those communities known as 'village health workers'. Our study revealed the six key steps that ensured the scheme was sustained by the Gombe state government:

1. The scheme was government-led and owned, with support from the civil society implementer and donor: a built-in phased 'seamless transition' meant responsibility for implementation and financing progressively shifted to government.
2. The scheme's 'adaptive management process' involved planned reflection points and adapting the design when necessary.
3. Village Health Workers were motivated through strong supervision, by generous stipends, maternity leave and the acceptance and gratitude of communities.
4. Efforts to secure longer-term financial resources included advocating for sympathetic state politicians' support and building a line-item for the scheme into the state health budget.
5. Considerable efforts were made to ensure the scheme was well institutionalised within the existing health system.
6. Efforts were made to foster community ownership and acceptance through key community structures known as Ward Development Committees.

Supporting local decision-making

“Data Informed Platform for Health”: enabling data-driven decision-making culture and practices in the local health system in Ethiopia

By Bilal Avan

We developed an intervention to support data-driven decision-making at district level in Ethiopia, supported implementation over a period of 21 months, and used a cluster-randomised controlled evaluation in 24 districts (woreda) in North Shewa zone, which showed strong evidence of improved health information system performance and data-driven decision-making.

Importance

In low-resource settings the use of local data for health system planning and decision-making is often limited: many health managers are poorly equipped for data-driven decision-making. The District Health Information Software (DHIS2)²³ is a transformative development, including routine data from all public health facilities, and leading to better data collection, validation, storage, analysis, and communication, albeit with a focus on service delivery. These improvements have exposed a long-neglected issue of how to use district-level data for problem-solving, and how to foster a data-sharing culture and collaborative action-planning among health-stakeholders.

Contribution of IDEAS

Building on ten years of collaborative research in Nigeria, India, and Ethiopia, led by our team, we co-created the “Data Informed Platform for Health” (DIPH) intervention in Ethiopia and supported implementation in 12 districts of North Shewa zone over a 21-month period.

Using a cluster-randomised design, we conducted an evaluation of the effect of the DIPH intervention on health information system performance and data-driven decision-making in all 24 districts of North Shewa zone, Ethiopia, between October 2020 and June 2022.

Results and implications

Developing the “Data Informed Platform for Health” strategy

The DIPH aims to enable district-level managers to make structured decisions, using elements of quality decision-making: defining problems using a health-system framework; reviewing all available data and evidence; considering alternative options for health-service solutions; value-based prioritisation; and a consultative process to develop a feasible action plan, commit to it, and follow up. The strategy has three main elements:

- Identifying and convening stakeholders in a virtual platform to deliberate on issues. Membership of this virtual platform was flexible according to the nature and needs of the problem in focus.
- Organising stakeholder meetings in five-step cycles (see Figure on page 17): Assess, Engage, Define, Plan, and Follow-up. These five steps together comprise one cycle and, in practice, took about four months to complete. Each cycle looked at a specific health theme identified in the early stages of the cycle itself.
- A digital interface so that all involved could regularly review data and check on progress.

We developed a package of job aids and guidelines for district health officers and staff in administrative and managerial roles, which included a training handbook²⁴, structured forms, and the digital interface.²⁵

23 <https://dhis2.org/>

24 Hashmi IE, Avan, BI. Data Informed Platform for Health – training handbook. 2020, <https://ideas.lshtm.ac.uk/tool/diph-training-handbook/>

25 <http://www.diphonline.org/>

“When I compare the time before DIPH came and now ... every decision is data-driven. We conduct a close follow-up until what we have planned is achieved. This is what I call change.”

District M&E officer



Figure: The five steps of each DIPH cycle

Implementation of the “Data Informed Platform for Health” strategy

The strategy was implemented in a randomly-selected 12 of the 24 woredas in North Shewa zone from October 2020 - June 2022, i.e. over 21 months including two fiscal years: the first year was used to refine and fine-tune the strategy. The strategy was embedded in existing routine performance review team meetings at the district level, because these meetings were mandated to integrate the planning and facilitating of data-driven, collaborative decision-making by the Zonal and Woreda health administration. Activities focused on strengthening the performance review team meetings for regularity and engagement of both health and non-health stakeholders, and on promoting critical review and regular use of diverse local data sources – DHIS2 and others – to understand health service performance gaps.

Evaluation

We used a cluster-randomized controlled trial to estimate the effect of the strategy on Health Information System performance and data-driven decision-making, comparing health-system outcomes in 12 intervention (DIPH) districts with 12 comparison districts, and using district-level surveys in September 2020 and 21 months later.

Difference-in-difference analysis shows that:

- Performance management team meetings were held more regularly in the DIPH arm than in the comparison arm. Moreover, within the DIPH arm, every meeting included discussion of quality of data reported by health facilities, resulted in structured feedback to the facilities on their performance, formulated theme-specific action points, and actively followed up action points through to completion.
- Beliefs and opinions of district health managers changed as a result of the DIPH strategy: in the DIPH arm, managers expressed increased commitment to local data quality and promoting evidence-based decision-making. They also felt empowered because of their increased capacity to understand and use data to create a culture of accountability within the health system.

Implications

In the context of DHIS2, the Data Informed Platform for Health strategy can improve district-level data use and structured decision-making in Ethiopia.

Understanding quality improvement

Understanding quality improvement collaboratives in Ethiopia

By Zelee Hill

Quality Improvement Collaboratives (QIC) are a common approach to bridging the quality of care gap in health facilities but little is known about implementation realities, especially in low-income settings. Implementation often occurs with little consideration of the mechanisms of change or the influence of context, and this may explain why QICs have had varied impact. A better understanding of QIC processes would help determine if they are suitable for all contexts and what adaptations are needed.

Background

We conducted research on a large-scale maternal and neonatal health QIC intervention in Ethiopia implemented by the Ministry of Health and the Institute for Healthcare Improvement²⁶. We conducted:

1. Research to understand the mechanisms through which the QIC worked and the influence of local context, in six health facilities and using qualitative methods.
2. Research to determine whether QICs change the knowledge and motivation of health workers, using a quantitative before-and-after comparison.²⁷
3. Research explore the collaborative element of QICs in a traditionally hierarchical setting, the health system drivers of data falsification²⁸ and factors influencing motivation.

Contribution of IDEAS

QIC mechanisms and the influence of context:

We found that between-facility learning sessions increased awareness and focus on quality, and that participants learnt from experts about quality improvement (QI) methods and from each other about their implementation. They were motivated to achieve more when good results were publicly acknowledged or by seeing peers performing well. The shame of poor achievement inhibited participation for some; and some lower cadres felt alienated by the language and content of learning sessions. Within facilities, new structures and processes were created, although these were often fragile. QI team members learnt from, and were both supported and motivated by mentors, to whom they felt accountable. Infrequent mentor visits or visits by less skilled mentors were discouraging and impacted QI functioning. In some facilities those outside of the QI team felt alienated by not being invited to learning sessions, a lack of knowledge transfer and not being visited and supported by mentors.

26 Magge, H., et al., The Ethiopia healthcare quality initiative: design and initial lessons learned. International Journal for Quality in Health Care, 2019.

27 Quaife, M, et al., Changes in health worker knowledge and motivation in the context of a quality improvement programme in Ethiopia. Health Policy and Planning, 2021.

28 Estifanos, A.S., et al., 'The false reporter will get a praise and the one who reported truth will be discouraged': a qualitative study on intentional data falsification by frontline maternal and newborn healthcare workers in two regions in Ethiopia. BMJ Global Health, 2022.



Image credit: IDEAS/Christopher Smith 2019

QIC mechanisms were more prominent, and QI more functional, in facilities with strong and supportive leadership, a culture of teamwork and openness and with fewer structural or resource challenges. These contexts worked together to form a positive environment for QI which enabled quality to become a priority; QI was seen as relevant because the foundations of health care were met. Where they existed, cultures of teamwork, shared goals and an active approach to solving problems meant that staff were flexible in their roles, more able to implement change ideas and that QI structures and processes were more stable as they were internally driven and owned. Teamwork and engaged leadership also meant that QI knowledge was transferred outside of the QI team, which enabled a culture of improvement to develop, reduced the impact of staff turnover and meant that those external to the QI team felt part of the process rather than alienated by it.

QICs effect on knowledge and motivation of health workers:

QIC improved knowledge of what history questions to ask a woman at the first ANC visit, what examinations and investigations should be performed and what drugs should be provided. Motivation was generally high and there was no evidence that it was influenced by QIC. Demotivating factors were beyond the influence of the QIC e.g. low salaries and lack of equipment.

Implications

The work confirms the need to carefully consider context in the planning and implementation of QICs.

Facilities that more successfully implement QIC have an enabling environment and are most likely to already have characteristics that foster quality.

In facilities with a less enabling environment, QIC structures and processes may be fragile and externally driven, with frequent visits by high quality mentors required. This has implications for implementation as well as for impact and sustainability.

- In health facilities where the essential foundations for health care are not met, staff may struggle to see how QICs can improve quality, and their ability to deliver quality care and to engage with QICs may be reduced. Implementers need to consider whether QIC can effectively function in such settings and what additional support is needed
- Collaboration and support for the facility QI team from others in the facility is not automatic and is influenced by existing workplace cultures. Without broad buy-in QIC structures and processes can be alienating and poorly understood
- QICs can improve knowledge but may not influence motivation levels where these are largely driven by factors external to the QICs

Understanding quality improvement

Investigating the quality of care network in Ethiopia

By Seblewengel Lemma Abreham

Under the leadership of WHO, the Quality of Care Network (QCN) was established in 2017 in 11 low- and middle-income countries to improve maternal, newborn, and child health. In Ethiopia, the goals of QCN were aligned with government policy and national-level engagement was strong. There was a good fit between QCN activities and past experiences of quality improvement in the country, and to a large extent the Network was institutionalised within the health system. However, two key limitations were apparent: (i) more engagement was needed at the sub-national level; and (ii) government financial commitment to continue activities beyond the initial implementation period was lacking. As a result, it is not likely that QCN would be sustained in its current format, although some characteristics of the Network were likely to be carried forward.

Background

The Quality of Care Network aimed to strengthen health system leadership for quality of care, accelerate and sustain quality improvement actions, facilitate learning, and develop mechanisms for accountability. The goal was, by 2022, to halve maternal and newborn mortality in health facilities in Network countries, as well as stillbirths, and to improve the experience of facility-based care. Network countries were Bangladesh, Cote d'Ivoire, Ethiopia, Ghana, India, Kenya, Malawi, Nigeria, Sierra Leone, the United Republic of Tanzania and Uganda. The vision was that the Network would be embedded within these member countries and continued beyond the initial implementation period.

Image credit: IDEAS/ Christopher Smith 2019

Contribution of IDEAS

Relatively little is known about how Networks such as QCN operate in low- and middle-income countries. To understand how QCN operated, the IDEAS project joined a UCL-led evaluation of the Network in Bangladesh, Malawi and Uganda, adding in the experience of Ethiopia. Research questions included:

- Which capacities were available to enable Network functioning?
- Which actions were taken to sustain QCN beyond the initial implementation period?
- What influenced the quality of QCN data in health facilities?



Capacity for Network functioning

Individual, organizational and system-level capacities all played an important role in shaping implementation success in network countries, and these levels were inter-linked. Across all levels, actions that enabled leadership, motivated and trained staff, and created a positive culture of data use were critical – from the policy making arena to the day-to-day frontline practice. Some characteristics of QCN actively supported these levels, for example shared learning forums for continuous learning, a focus on data and tracking progress, and emphasising the importance of coordinated efforts towards a common goal. However, inadequate health system financing and capacity hampered Network functioning, especially in the face of external shocks.



Actions taken to sustain QCN

Although vulnerabilities were observed, there was evidence that actions were taken to institutionalize QCN within country health systems, to motivate micro-level actors, plan opportunities for reflection and adaptation from the outset, and to support strong government ownership. But financial uncertainty was not pro-actively managed, community ownership not always fostered, and actions were least strong at the sub-national level.

Overall, evidence suggested that the QCN model would not be sustained in its original format, largely because of financial vulnerability and insufficient time to embed the innovation at the sub-national level. However, the efforts made to institutionalize QCN in existing systems meant that some characteristics may be carried forward within broader government quality improvement initiatives.



Quality of QCN data

QCN placed considerable emphasis on the importance of good quality data for learning and tracking progress. This emphasis had a positive effect on perceptions about data and data use for decision-making, with actors across the health system describing the potential power of data. However, in reality there were only limited improvements in the quality of data being generated. New data points were introduced to registers but not all data points were integrated with the routine health information system, causing some duplication of effort. Facilities also continued to lack the skills or resources needed to routinely record accurate data.



Image credit: IDEAS/Christopher Smith 2019

Understanding quality improvement

Understanding quality improvement in Lagos State, Nigeria

By Abimbola Olaniran

Quality improvement collaboratives are increasingly popular in low- and middle-income settings, often being implemented on a large scale. However, relatively little is known about the influence of context on implementation; consequently, new implementers may not benefit from the knowledge of what worked, what was adapted, and why. Working with partners in Lagos State, Nigeria, we studied the implementation of a complex quality improvement initiative that was driven by government and supported by a non-governmental organisation. Evidence revealed considerable influence of internal and external contextual factors, necessitating adaptations throughout implementation.

Image credit: IDEAS/ Noreen Seyerl 2019



Background

Since 2015, the Lagos State Ministry of Health, the Primary Health Care Board and managers of private facilities implemented the Nigeria Healthcare Quality Initiative (NHQI). NHQI was a QI intervention using a modified collaborative learning approach, guided by the principles described by the Institute for Healthcare Improvement, but contextualised to the Lagos health system. Three facility types were enrolled: public primary healthcare centres (PHCs), public secondary hospitals and private facilities. A broad set of shared change concepts was defined but it was anticipated that the complex needs of the different facility types would result in numerous local adaptations.

Contribution of IDEAS

Through a qualitative multiple-case study, in which we defined a case as a collaborative of each facility type, we sought to understand whether and how NHQI implementation differed between facilities in Lagos State. We examined:

- What adaptations were made to NHQI to enable implementation.
- How implementation differences were influenced by contextual factors relating to facility type, health system and the stakeholders.

Adaptations of NHQI²⁹

The theory of change for NHQI stated three core activities (collaboratives, measurement, and capacity building), each of which needed to be adapted to suit the implementation context in Lagos.

1. Establishment of collaboratives needed to be adapted according to the characteristics of each facility type, taking into consideration the size of the collaborative, the number and geographical spread of the facilities within that collaborative; the governance structures of facilities and where power lies, including political power; and the level of service, reflecting whether predominantly preventive, promotive or curative services were provided.
2. Measurement activities for facilities entailed identification of indicators to track performance, tools to measure accountability and QI readiness, and routine analysis of data for decision-making. Public hospitals could respond relatively easily to this activity but PHCs found it more difficult, and private hospitals had a weaker accountability mechanism for transparency in tracking data.
3. Capacity building activities needed to be designed for different levels: training for the state QI team and medical directors of private facilities focussed on governance; while facility QI team training focussed on QI skills and activities. In reality, plans for capacity building had to be adapted frequently because of high staff turnover.

Despite a common theory of change, implementation of the initiative needed to be adapted to accommodate the local needs, priorities and organisational culture of each facility type. Of note, in public facilities, the local governance structure could be adapted to facilitate QI coordination, but similar adaptations to governance were not possible for private facilities. Our findings underscore the importance of taking account of prevailing political commitment, the adaptability of available governance structures and the characteristics of facility types when planning QI implementation.

The influence of context on QI priorities³⁰

Our findings reveal that some QI priorities were common across facility types, often driven by the external context of health system leadership and external stakeholders. But many priorities were shaped by facility-level context such as the availability of clinical subject experts, available time and capacity of the facility QI teams, facility culture, the availability of data, and available finances.

The public hospitals and, to some extent, private facilities, but not PHCs, focused on complication management to enhance better health outcomes. This focus was explained by the level of care expected of public hospitals, a relatively high prevalence of maternal complications, availability of external support to conduct maternal death reviews, and availability of specialist doctors. Conversely, change concepts relating to tools, including utilities such as water and power supply, were mainly present in PHCs.

Individual leaders from government and NGOs play critical roles in influencing QI priorities at the facility level through coordination, support, mentorship and coaching to strengthen capacity of facility QI team and staff. These leaders, or sometimes the lack of them, were found to be important in Lagos State where facility teams with the least QI capacity prioritised many easy tasks, such as quality of meals, while failing to address problems that could have a greater impact on health outcomes.

29 Olaniran et. al. From Theory to Implementation: Adaptations to a Quality Improvement Initiative According to Implementation Context. Qualitative Health Research, 2021.

30 Olaniran et. al. Influence of context on quality improvement priorities: a qualitative study of three facility types in Lagos State, Nigeria. BMJ Open Quality, 2022.

Outputs

Compiled by Noreen Seyerl

We have included:

44 Journal articles

8 Reports

6 Research briefs

17 Blogs

6 Data collections

3 Infographics

24 Webinar and conference presentations

7 Videos

1 Podcast

Journal articles (44)

Women's perceptions of telephone interviews about their experiences with childbirth care in Nigeria: a qualitative study. Nasir Umar, et al. In press PLOS Global Public Health, 2022.

How valid are women's reports of the antenatal health services they receive from Community Health Workers in Gombe State north-eastern Nigeria? Emmanuel Olal, et al. BMC Pregnancy and Childbirth, 2022, DOI: 10.1186/s12884-022-05220-x

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Reports

<https://ideas.lshtm.ac.uk/resources/>

Data Informed Platform For Health - Training Handbook, ISBN 978-0-9957874-5-2

Final evaluation of the Community Based Newborn Care (CBNC) programme in Ethiopia, ISBN: 978-0-9957874-4-5

Strengthening the quality of routine MNCH data through learning workshops

External Evaluation Report - DIPH Prototype Phase ISBN 978-0-9957874-1-4

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Community Based Newborn Care (CBNC) Research Protocols

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Gombe MNH Partnership Leaflet English

Gombe MNH Partnership Leaflet Hausa

Recommendations from the Village Health Worker Scheme Sustainability Study

A qualitative study of the scalability and sustainability of the Village Health Worker scheme in Gombe State, Nigeria

Data-driven learning cycles and their impact on data use for decision making

A qualitative study of the scalability and sustainability of the Village Health Worker scheme in Gombe State, Nigeria

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First results from the Gombe State Maternal and Newborn Health Partnership Tanya Marchant

"I felt like I should have delivered at home" Nasir Umar

A new appreciation for data: Impressions from the MNCH partnership in Gombe State Noreen Seyerl

How have data-driven learning workshops contributed to the work of the Gombe Krystyna Makowiecka

State Primary Health Care Development Agency and its partners in enhancing the health of women and newborns in the State? Krystyna Makowiecka

Three lessons to improve quality of care for newborns in India Joanna Schellenberg

Listening to Gombe Mothers Nasir Umar

A new partnership with the University of Lagos Abimbola Ayodele Olaniran

Monitoring the quality of care for Nigerian mothers and newborns using DHIS2 Antoinette Bhattacharya

Collaborative Learning in Gombe Krystyna Makowiecka

"Their own project for their own people": Community participation in the Village Health Worker Scheme in Gombe State, Nigeria Deepthi Wickremasinghe

Who decides what and how? Making decision-making in health systems more effective Bilal Avan

What motivates you? Understanding what makes health care workers motivated to provide quality care for mothers and newborns in Ethiopia Matthew Quaife

Are women getting quality care? And how can we know? Measuring the coverage of high quality care Tanya Marchant

Slow and steady - validating health data in Gombe State line by line Antoinette Bhattacharya

Better quality routine health data through a WhatsApp group? What comes out of the Data Quality Workshops in Gombe State Antoinette Bhattacharya

Overcoming adversities: The sustainability of the Village Health Worker scheme in Gombe State Deepthi Wickremasinghe

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Infographics

<https://ideas.lshtm.ac.uk/resources/>

CBNC: Growth and development of children in Ethiopia

CBNC: A comparison infographic

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Understanding rural women's preference for telephone call engagement with primary health care providers in Nigeria: a discrete choice experiment, Nasir Umar

Operationalising routine data to support health system performance and accountability of childbirth care in low resource settings, Josephine Exley

Sustaining the quality of care network: lessons from Bangladesh, Ethiopia, Malawi and Uganda, Seblewengel Lemma Abreham

IDEAS webinar series 2022 <https://ideas.lshtm.ac.uk/news-item/ideas-webinar-series-2022/>

Enabling data-driven decision making in the district health system in Ethiopia

How collaboration is experienced within quality improvement collaboratives in Ethiopia

Women's experience of facility-based childbirth care in Nigeria

Operationalising effective coverage of childbirth care in Gombe State, Northeast Nigeria

Presentations on results from the Gombe State MNP Partnership: YouTube IDEAS TV for maternal and newborn health

Gombe State MNH Partnership: Results from research on routine data quality

Gombe State MNH Partnership Results from research to understand quality of care in health facilities

Gombe State MNH Partnership: results from research into respectful maternity care

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Do innovations enhance interactions between families and front-line health workers in Nigeria, Ethiopia and India?

Improving local health decision-making through the Data Informed Platform for Health

Evaluation of Community-Based Newborn Care in Ethiopia

How and why does scale-up happen?

GLOW 2018

Newborn resuscitation in Gombe State, north-eastern Nigeria, Josephine Exley

Exploring the prevalence and determinants of women experiencing disrespectful and abusive care during antenatal care visits in Ethiopia, Dr HZ Bazeer

ASTMH 2018

Equitable but not pro-poor change in maternal and newborn health, Tanya Marchant

Videos

[YouTube IDEAS TV for maternal and newborn health](#)

Can we use DHIS2 data to monitor maternal and newborn health? A case study from Gombe state, Nigeria

Sustainability of the Village Health Worker Scheme in Gombe State, Northern Nigeria

Improving coverage measurement in maternal and newborn health

Characterising innovations

The maternal newborn and child health partnership in Gombe State, Nigeria.

Understanding mistreatment during institutional delivery in Northeast Nigeria

What prevents women choosing a health facility to deliver their baby?

Podcast

Reimagining health systems for better health and social justice: Dr Bilal Iqbal Avan discussing Embedding Community-Based Newborn Care in the Ethiopian health system: lessons from a 4-year programme evaluation Podcast 32 <https://academic.oup.com/heapol/pages/podcasts, 2021>



The IDEAS project aims to improve the health and survival of mothers and babies through generating evidence to inform policy and practice.

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London School of Hygiene & Tropical Medicine

Keppel Street, London WC1E 7HT
United Kingdom

ideas.lshtm.ac.uk
