Strengthening human resources for health through information, coordination and accountability mechanisms: the case of the Sudan

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Problem Human resources for health (HRH) in the Sudan were limited by shortages and the maldistribution of health workers, poor management, service fragmentation, poor retention of health workers in rural areas, and a weak health information system.

Approach A "country coordination and facilitation" process was implemented to strengthen the national HRH observatory, provide a coordination platform for key stakeholders, catalyse policy support and HRH planning, harmonize the mobilization of resources, strengthen HRH managerial structures, establish new training institutions and scale up the training of community health workers.

Local setting The national government of the Sudan sanctioned state-level governance of the health system but many states lacked coherent HRH plans and policies. A paucity of training institutions constrained HRH production and the adequate and equitable deployment of health workers in rural areas.

Relevant changes The country coordination and facilitation process prompted the establishment of a robust HRH information system and the development of the technical capacities and tools necessary for data analysis and evidence-based participatory decision-making and action.

Lessons learnt The success of the country coordination and facilitation process was substantiated by the stakeholders' coordinated support, which was built on solid evidence of the challenges in HRH and shared accountability in the planning and implementation of responses to those challenges. The support led to political commitment and the mobilization of resources for HRH. The leadership that was promoted and the educational institutions that were opened should facilitate the training, deployment and retention of the health workers needed to achieve universal health coverage.

Abstracts in عربي, 中文, Français, Русский and Español at the end of each article.

Introduction

For many years, the Sudan – once the largest country in Africa by area – has faced political unrest, civil war and economic hardships. In 2011, the country was divided into two independent nations: the Sudan and South Sudan. As a result of the secession of South Sudan, the government of the Sudan lost oil revenue and donor support. These losses exacerbated the Sudan's slow development and health-system challenges, which included health worker shortages, a frequent mismatch between the skills that health workers had and those that were needed, and the maldistribution, migration and poor productivity and retention of health workers.[1] These weaknesses not only constrained the delivery of health care but also limited the potential for the Sudan to attain any of the health-related Millennium Development Goals (MDGs) or universal health coverage.[2,3] The country lacked effective systems for the collection and analysis of the data on HRH that are needed for evidence-based policy-making and the planning of health services. The governance of the Sudan's HRH was also constrained by a general lack of coordination between the main stakeholders in the health system and beyond. The national leadership – assisted by the World Health Organization (WHO) and the Global Health Workforce Alliance – therefore initiated several interventions that catalysed the involvement of many partners in the improvement of HRH.[4,5] A new national HRH observatory became a hub for the collation of information that would be used in evidence-based policy reform and action. The launch of the "country coordination and facilitation" process in the Sudan further enhanced the role of the observatory in engaging the diverse HRH stakeholders.[6] This paper aims both to describe the Sudan's experience with the establishment of a national HRH observatory, the country coordination and facilitation process and the related accountability, and to outline the main lessons learnt.

Local setting and context

The health system of the Sudan follows a devolved mode of governance with three levels: national or federal, state and local government. Health expenditure is generally low and the health financing that does exist is skewed towards cure rather than prevention. There are about 100 000 health workers in the Sudan – 80% employed by the public sector – but approximately 70% of this workforce serves just 30% of the population, and 36% of outreach health facilities were not functioning in 2006 because of HRH shortages.[7,8] Most health care relates to communicable diseases but the prevalence of many noncommunicable diseases is increasing. In a study conducted in 2010, only one third of the Sudan's facilities for primary health care was found to be providing the full package of primary-health-care services and 14% of the rural population had no access to any health facilities.[9] At the same time, the national health information system was weak in terms of coverage, data quality and capacity for data analysis. With infant and maternal mortality rates of 57 deaths per 1000 live births and 216 deaths per 100 000 live births, respectively, the Sudan is currently not on track to achieve any of the health-

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(*Submitted: 17 March 2013 – Revised version received: 1 August 2013 – Accepted: 6 August 2013*)

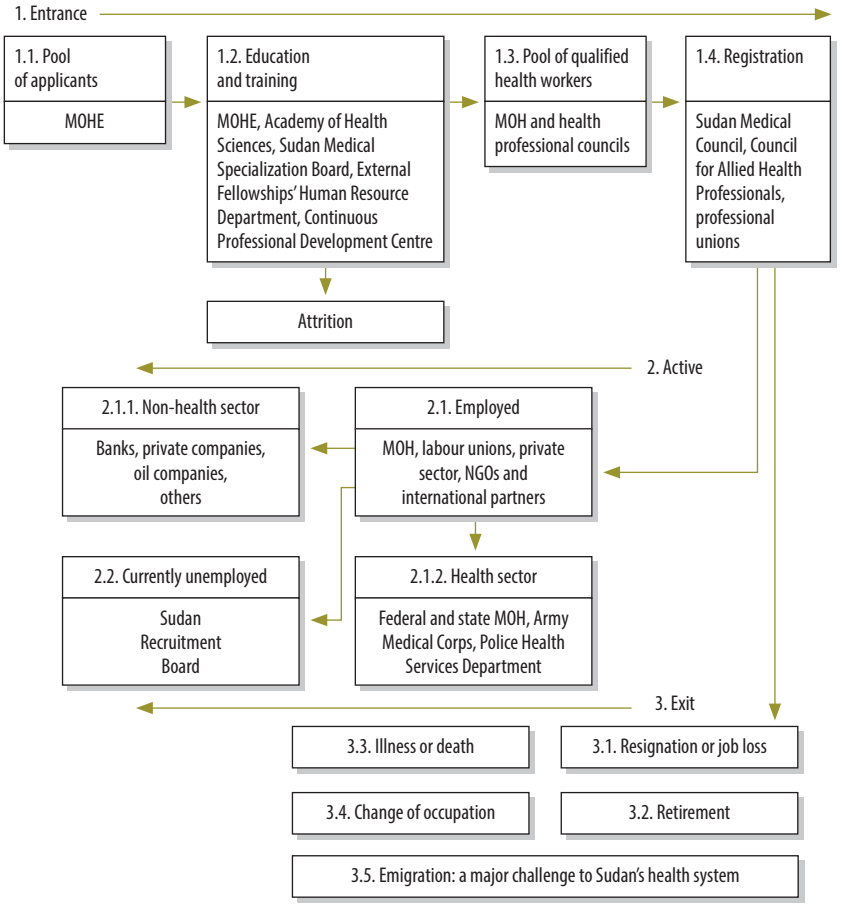
related MDGs by 2015.[8] The density of physicians, nurses and midwives in the Sudan – 1.23 per 1000 population – falls well short of the minimum threshold – 2.3 per 1000 – recommended by WHO.[4]

Interventions and progress

A national observatory and information system

The solid vision of the national leadership prompted a paradigm shift that was characterized by a sharp focus on human resource development as a key health system priority. Financial and technical support from the Global Health Workforce Alliance spurred the national leadership and facilitated the design of an HRH information system. In 2006, the new information system enabled a newly established national HRH observatory to conduct its first ever nationwide HRH census. This exercise generated comprehensive HRH data, unveiled the challenges facing the health workforce and provided useful evidence for policy- and decision-making.[10] The observatory became the hub for HRH stakeholder coordination and advocacy, developed capacity for data analysis and management and created an HRH research agenda that should produce a knowledge base for guiding future HRH development.[11] To institutionalize the HRH information system, the national observatory introduced a conceptual framework that is based on the WHO workforce lifespan model for HRH (Fig. 1).

Fig. 1. **Conceptual framework based on WHO's workforce lifespan model for human resources for health and governing stakeholders in each stage of workforce dynamics, Sudan**



MOH, Ministry of Health; MOHE, Ministry of Higher Education; NGO, nongovernmental organization; WHO, World Health Organization.

Coordination mechanisms

As a result of the Sudan's country coordination and facilitation process – which was introduced by the Global Health Workforce Alliance – the national HRH observatory was able to strengthen and expand its "umbrella" over HRH stakeholders and develop a stakeholder forum.[2,6] The stakeholder forum has enabled the formation of collaborative partnerships across sectors, eliminated duplication and fragmentation and encouraged coordinated implementation. It has brought representatives of the Federal Ministry of Health, other ministries and governmental institutions, health worker registration councils, professional associations and nongovernmental and international organizations around the same table. Although representatives of some private-sector institutions have joined the forum, the wider involvement of this expanding sector remains a challenge; further encouragement and regulatory measures may be necessary.

The forum meets once a quarter to discuss HRH issues, with the aim of setting strategic directions, devising solutions, building partnerships for implementation, consolidating the coalition between the federal- and state-level ministries of health, and building a culture of good ethics and accountability.[12] This has resulted in a coherent integrated response to each major HRH issue and in beneficial effects on the production, equitable distribution and retention of health workers.[2] The forum has also successfully promoted evidence-based policy dialogue and resource mobilization for an HRH action plan.[2] Some stakeholders initially appeared reluctant to join the forum and share the data that they had collected. An effective communication strategy for stakeholder engagement was therefore implemented, the support of data sharing and use by stakeholder institutions was improved, and the equitable participation of all stakeholders in the governance of the national HRH observatory was promoted through the pursuit of collective decision-making processes.

The coordination and "buy-in" of the stakeholders were achieved and strengthened through an acknowledgement of institutional interests, the offering of capacity-building opportunities, the provision of free and timely access to HRH data, and the granting of greater recognition and visibility to the stakeholders. Table 1 summarizes the major achievements and specific results achieved through the introduction of the national HRH observatory and the country coordination and facilitation process in the Sudan. Improvements in the Sudan's HRH situation were achieved through the collective actions

Table 1. **Status of human resources for health, Sudan, 2005 and 2012**

Challenge	2005[a]	2012[b]
Data collection and use	– Deficient HRH information	– A comprehensive electronic HRH database built
	– Weak capacity for data analysis and use	– Improved capacity for data analysis and knowledge translation
	– Lack of studies on HRH	– HRH operational research on key workforce issues commissioned – several studies accomplished
Partnerships	– No mechanism to bring HRH stakeholders together	– Stakeholder forum established and operational
	– Poorly coordinated HRH actions – leading to duplication and conflicts	– HRH analysis, decisions and actions are coordinated, coherent and jointly conducted
Policy and planning	– Lack of documented and coherent HRH policies	– Institution of an inclusive policy process in the domains of pre-service education, the scaling up of CPD and health-worker deployment and distribution
	– Absence of a national strategic plan for HRH	– Development of a costed national HRH strategic plan for 2012–2016
Institutional strengthening and leadership development	– Modest capacity for HRH leadership and advocacy	– Emergence of HRH champions – leading to the strategic positioning of HRH issues in higher government forums and, subsequently, supportive deliberations by the Federal Cabinet
	– Lack of a critical mass of HRH technical staff at the Federal MOH and inadequate HRH-focused training	– Number of HRH technical staff at the Federal MOH raised from 20 to 115
	– Limited capacity of training institutions for mid-level and community health workers	– More than 340 individuals in MOH exposed to HRH training opportunities
		– More training institutions for mid-level and community health workers at national and state level – and greater enrolment at older institutions
Coverage and skill mix to revitalize PHC services	– Critical shortage of health workers and a distorted skill mix	– Number of training institutions for nurses and midwives increased from 18 to 55
		– More than 5500 nurses and midwives produced in a year, with majority enrolled in the rural health network
		– More than 3400 individuals enrolled in a new programme for the training of community health workers
		– Number of medical schools increased from 27 to 33, with 3000 doctors produced per year
		– Mechanisms introduced for predicting future HRH needs and levels
CPD coverage	– Lack of CPD institutional structures and norms	– Establishment of a national CPD programme and a CPD centre – with 15 state-level branches
	– Sporadic in-service training covering only 24% of the workforce	– Mobilization of additional resources and extension of coordinated and harmonized CPD activities to 67% of the health workforce
Geographical distribution of health workforce	– Seventy per cent of health workers serving 30% of the population	– Over 10 000 new employment positions sanctioned, many of them in rural and other provincial areas
	– Limited job creation at state and rural level and poor workforce retention	– Improved bonding schemes to strengthen the implementation of training policies
		– Introduction of a major "discrete choice experiment" to help in the design of an appropriate and effective incentive package for rural retention
		– Improved staff retention through decentralized education and improved enrolment of students from rural areas
Emigration of health workers	– Few data on emigration of health workers	– Establishment of migration database – leading to several studies on health-worker migration
	– Lack of policy attention despite increasing levels of emigration	– Establishment of national Migration Studies Centre
		– Emigration issues raised in the political agenda – the problem being discussed by the Federal Cabinet to support a national policy on the subject
		– Movement to sign bilateral agreements with three destination countries – Ireland, Libya and Saudi Arabia – initiated

CPD, continuing professional development; HRH, human resources for health; MOH, Ministry of Health; PHC, primary health care.

[a] The situation in 2005 applies to the Sudan before the secession of what is now South Sudan.

[b] Six years after the establishment of a national observatory and the introduction of the country coordination and facilitation process in the Sudan.

Box 1. **Summary of main lessons learnt**

- The government's commitment and the creation of a stakeholder forum – as a coordination mechanism supported by a powerful information system and a solid accountability framework – have helped resolve many of the problems surrounding human resources for health in the Sudan.
- The decentralization of training institutions and recruitment of students from rural backgrounds can increase the production, deployment and retention of health workers in remote rural settings.
- If the growing private health sector is to be adequately involved in the pursuit of strategic policies for human resources for health, the sector's active participation in the stakeholder coordination process must be encouraged and regulatory measures may have to be introduced.

of the well-coordinated stakeholders – supported by the technical contributions of the observatory's secretariat, which rendered the procedures for engagement simple, practical and transparent. The HRH information system and the results of related HRH studies provided solid evidence of the main issues affecting HRH in the Sudan, including the numerical shortages, the skill-mix imbalances, the lack of programmes for the continuing professional development of health workers, and the geographical maldistribution and substantial emigration of health workers.

Government commitment and leadership

To substantiate its commitment, the Sudan's national government upgraded the HRH unit in the Federal Ministry of Health to a general directorate, increased the number of institutions providing health worker training and increased enrolment at all such institutions. These changes resulted in a substantial increase in the production and deployment of health workers. The national government also promoted the stakeholder forum and supported the collective pursuit of HRH-related activities. The President of the Sudan set up a special task force charged with reporting to a meeting of the Federal Cabinet on any bottlenecks in the creation and use of HRH. Presidential directives were issued to make HRH a main priority for the National Council for Health Care Coordination. Much of the progress recently made in HRH in the Sudan can be attributed to such high-level attention.

Accountability of stakeholder forum members

For the development of HRH, members of the stakeholder forum followed an evidence-based approach and assumed specific roles and responsibilities that matched their mandates. They also established accountability norms within the forum to promote the transparent involvement of each stakeholder institution in HRH issues and the pursuit of cooperation and joint action.[13] All members of the forum agreed to report periodically on their contributions to HRH in the Sudan. The accountability process enabled the state and local authorities to demand solutions to any HRH challenges that they encountered.

Lessons learnt

The main lesson learnt from recent Sudanese experience in HRH development (Box 1) is that a great deal of power can be created by combining an evidence-based HRH information system with the promotion and implementation of the country coordination and facilitation process and the institutionalization of a framework for shared accountability. Effective governance was critical for developing an HRH-related strategic policy and designing, funding and implementing a national HRH plan. Effective coordination spearheaded a public-sector commitment to HRH reform that was characterized by high-level involvement and the strategic positioning of HRH issues. The revitalization and decentralization of a large number of training institutions – particularly those for nurses, midwives and allied health professionals – reduced the workforce shortages in underserved rural areas. ■

Competing interests: None declared.

ملخص

تعزيز الموارد البشرية الصحية من خلال المعلومات والتنسيق وآليات المساءلة: حالة السودان

المشكلة كانت الموارد البشرية الصحية في السودان محدودة بسبب أوجه النقص وسوء التوزيع في العاملين الصحيين وسوء الإدارة وتشتت الخدمات وضعف استبقاء العاملين الصحيين في المناطق الريفية وضعف نظام المعلومات الصحية.

الأسلوب تم تنفيذ عملية "التيسير والتنسيق عبر البلد" لتعزيز المرصد الوطني للموارد البشرية الصحية، وتقديم برنامج تنسيق من أجل أصحاب المصلحة الرئيسيين وتسريع الدعم السياسي وتخطيط الموارد البشرية الصحية، وتنسيق تعبئة الموارد، وتعزيز الهياكل الإدارية للموارد البشرية الصحية، وإقامة مؤسسات تدريب جديدة وزيادة تدريب العاملين الصحيين المجتمعيين.

المواقع المحلية صدقت الحكومة الوطنية السودانية على تصريف شؤون النظام الصحي على صعيد الولايات، ولكن العديد من الولايات افتقرت إلى الخطط والسياسات المتسقة في مجال الموارد البشرية الصحية. وحالت ندرة مؤسسات التدريب دون إنتاج موارد بشرية صحية ونشر العاملين الصحيين في المناطق الريفية على نحو كاف ومنصف.

التغيّرات ذات الصلة تطلبت عملية التيسير والتنسيق عبر البلد تأسيس نظام معلومات قوي للموارد البشرية الصحية وتطوير القدرات التقنية والأدوات الضرورية لتحليل البيانات واتخاذ القرارات التشاركية المستندة على البيّنات واتخاذ الإجراءات.

الدروس المستفادة تم إثبات نجاح عملية التيسير والتنسيق عبر البلد عن طريق الدعم المنسق لأصحاب المصلحة، والذي اعتمد على بيّنات دامغة للتحديات في مجال الموارد البشرية الصحية والمساءلة المشتركة في تخطيط الاستجابات لهذه التحديات وتنفيذها. وأدى الدعم إلى الالتزام السياسي وتعبئة الموارد من أجل الموارد البشرية الصحية. وينبغي على القيادة، التي تم تعزيزها والمؤسسات التعليمية التي تم افتتاحها، تيسير تدريب العاملين الصحيين المطلوبين لتحقيق التغطية الصحية الشاملة، ونشرهم واستبقائهم.

摘要

通过信息、协调和问责机制强化卫生人力资源：苏丹的案例

问题 苏丹的卫生人力资源（HRH）受到卫生工作者短缺且分配不合理、管理不善、服务零散、农村地区留不住卫生工作者以及卫生信息系统薄弱等方面的限制。

方法 苏丹实施“国家协调和促进”进程，以便强化全国 HRH 观察，为关键利益相关者提供协调平台，促成政策支持和 HRH 规划，协调资源调动，加强 HRH 管理结构，建立新的培训机构，扩大社区卫生工作者培训规模。

当地状况 苏丹国家政府鼓励州一级的卫生系统管理，但是许多州缺乏一致的 HRH 规划和政策。培训机构的缺乏限制了 HRH 培养以及农村地区卫生工作者充分均衡的部署。

相关变化 国家协调和推动进程促进了强大 HRH 信息系统的建立、数据分析及基于证据的参与式决策和行动所需技术实力以及工具的发展。

经验教训 利益相关者的协调支持证明了国家协调和推动进程的成功，它建立在 HRH 挑战的确凿证据之上，并分担应对这些挑战的规划和实施方面的责任。这种支持促成了对 HRH 的政府承诺和资源调度。提升的领导力和开办的教育机构会促进实现全民医疗保障所需的卫生工作者培养、部署和留系。

Résumé

Renforcer les ressources humaines pour la santé par la mise en place de dispositifs d'information, de coordination et de responsabilisation: le cas du Soudan

Problème Les ressources humaines pour la santé (RHS) au Soudan étaient limitées à cause des pénuries et de la mauvaise répartition des agents de santé, d'une mauvaise gestion, de la fragmentation du service, d'une fidélisation médiocre des agents de santé dans les régions rurales et d'un système d'information sur la santé peu efficace.

Approche Un processus de «coordination et facilitation national» a été mis en place afin de: renforcer l'observatoire RHS national, fournir une plateforme de coopération pour les acteurs clés, catalyser le soutien des politiques et la planification des RHS, harmoniser la mobilisation des ressources, renforcer les structures de gestion des RHS, créer de nouvelles institutions de formation et élever le niveau de formation des agents de santé communautaires.

Environnement local Le gouvernement national du Soudan a sanctionné la gouvernance étatique du système de santé, mais de nombreux États manquaient de programmes et de politiques RHS cohérents. La rareté des institutions de formation a limité la production de RHS et le déploiement adéquat et équitable des agents de santé dans les zones rurales.

Changements significatifs Le processus de coordination et de facilitation du pays a favorisé la création d'un système d'information RHS solide, ainsi que le développement de moyens techniques et d'outils nécessaires à l'analyse des données et à une action et une prise de décisions participatives et fondées sur les faits.

Leçons tirées Le succès du processus de coordination et facilitation a été confirmé par le soutien coordonné des acteurs clés, basé sur des preuves solides des défis en RHS et sur la responsabilité partagée dans la planification et la mise en œuvre de réponses à ces défis. Le soutien a entraîné un engagement politique et une mobilisation des ressources pour les RHS. Le fait de promouvoir le leadership et l'ouverture d'institutions de formation devrait faciliter la formation, le déploiement et la fidélisation des agents de santé, qui sont nécessaires pour parvenir à la couverture de santé universelle.

Резюме

Укрепление кадровых ресурсов здравоохранения посредством механизмов информирования, координации и подотчетности: на примере Судана

Проблема Состояние кадровых ресурсов здравоохранения (КРЗ) в Судане характеризовалось нехваткой и неравномерным распределением работников здравоохранения, плохим управлением, фрагментированным оказанием услуг, слабым удержанием работников здравоохранения в сельских районах и неразвитой информационной системой.

Подход На уровне страны была реализована программа «координации и содействия», которая ставила целью усилить контроль КРЗ на национальном уровне, обеспечить платформу координации действий ключевых заинтересованных сторон, активизировать поддержку политики и планирования КРЗ, согласовать мобилизацию ресурсов, укрепить управленческие структуры КРЗ, создать новые институты подготовки кадров и расширить масштабы подготовки работников здравоохранения на местах.

Местные условия Национальное правительство Судана санкционировало управление системой здравоохранения на государственном уровне, однако у многих регионов отсутствовали последовательные планы и политика в области КРЗ. Нехватка учебных заведений ограничивала воспроизводство КРЗ, а также адекватное и справедливое распределение медицинских работников в сельских районах.

Осуществленные перемены Программа координации и содействия, реализованная на уровне страны, инициировала создание надежной информационной системы КРЗ, а также развитие технических возможностей и инструментов, необходимых для анализа данных и совместного принятия решений и проведения мероприятий на доказательной основе.

Выводы Успех программы координации и содействия в стране был подкреплен скоординированной поддержкой заинтересованных сторон, основанной на надежных доказательствах по сути проблем в КРЗ и общей ответственности при планировании и осуществлении ответных мер, позволяющих решить эти проблемы. Данная поддержка обеспечила политическую заинтересованность и мобилизацию ресурсов для развития КРЗ. Инициированная программой заинтересованность руководства и созданные учебные заведения должны способствовать профессиональной подготовке, развертыванию на местах и удержанию работников здравоохранения, что необходимо для достижения всеобщего охвата медико-санитарной помощью.

Resumen

Reforzar los recursos humanos para la salud a través de mecanismos informativos, de coordinación y responsabilidad: el caso de Sudán

Situación Los recursos humanos para la salud (RHS) en Sudán presentaban limitaciones debido a la escasez y mala distribución del personal sanitario, una gestión incompetente, la fragmentación de los servicios, la pérdida del personal sanitario en las zonas rurales y un sistema insuficiente de información sanitaria.

Enfoque Se puso en marcha un proceso de «asesoramiento y coordinación nacional» a fin de reforzar el observatorio nacional de RHS, proporcionar una plataforma coordinadora para las partes interesadas, catalizar el apoyo de las políticas y la planificación de los RHS, armonizar la movilización de los recursos, reforzar las estructuras administrativas de los RHS, establecer centros de formación nuevos y mejorar la formación del personal sanitario de la comunidad.

Marco regional El gobierno nacional de Sudán aprobó la autoridad estatal del sistema sanitario, pero muchos estados carecían de unos planes y estrategias de RHS coherentes. La escasez de instituciones de formación limitó en gran medida la creación de RHS y el despliegue adecuado y equitativo del personal sanitario en las zonas rurales.

Cambios importantes El proceso de coordinación y asesoramiento nacional impulsó el establecimiento de un sistema de información de RHS sólido y el desarrollo de las capacidades y herramientas técnicas necesarias para el análisis de datos y la toma de decisiones y acciones basadas en pruebas científicas.

Lecciones aprendidas El éxito del proceso de coordinación y asesoramiento nacional se consolidó gracias al apoyo coordinado de las partes interesadas, asentado sobre las pruebas sólidas de los desafíos en el ámbito de RHS y la responsabilidad compartida en la planificación y puesta en marcha de las respuestas para hacer frente a dichos desafíos. El apoyo tuvo como consecuencias el compromiso político y la movilización de recursos para los RHS. La promoción del liderazgo y la apertura de centros educativos deberían facilitar la formación, el despliegue y conservación del personal sanitario necesario para lograr una cobertura sanitaria universal.

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