Indian approaches to retaining skilled health workers in rural areas

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Problem The lack of skilled service providers in rural areas of India has emerged as the most important constraint in achieving universal health care. India has about 1.4 million medical practitioners, 74% of whom live in urban areas where they serve only 28% of the population, while the rural population remains largely underserved.

Approach The National Rural Health Mission, launched by the Government of India in 2005, promoted various state and national initiatives to address this issue. Under India's federal constitution, the states are responsible for implementing the health system with financial support from the national government.

Local setting The availability of doctors and nurses is limited by a lack of training colleges in states with the greatest need as well as the reluctance of professionals from urban areas to work in rural areas. Before 2005, the most common strategy was compulsory rural service bonds and mandatory rural service for preferential admission into post-graduate programmes.

Relevant changes Initiatives under the National Rural Health Mission include an increase in sanctioned posts for public health facilities, incentives, workforce management policies, locality-specific recruitment and the creation of a new service cadre specifically for public sector employment. As a result, the National Rural Health Mission has added more than 82 343 skilled health workers to the public health workforce.

Lessons learnt The problem of uneven distribution of skilled health workers can be solved. Educational strategies and community health worker programmes have shown promising results. Most of these strategies are too recent for outcome evaluation, although this would help optimize and develop an ideal mix of strategies for different contexts.

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

Introduction

The problem of lack of professional health service providers in rural areas has been an area of discussion in India since the 1960s. At the time of independence (1947), when there was approximately one doctor per 6300 people and one nurse for 43 000 people, the main focus was on expansion of medical and nursing colleges. However, the distribution of institutions was also very uneven. Recent figures show that 65% of medical and nursing colleges are concentrated in only six states. By 1961, the focus started shifting to the problem of skewed distribution of doctor and nurses. While the overall ratio of doctor to population had reduced to 1 per 4850 and 1 per 14 300 for nurses, only 2.2% of rural villages had allopathic (conventionally trained) doctors.[1] While the current ratios for doctors are 1 per 1507 and 1 per 1205 for nurses, the problem of maldistribution remains unchanged.

The launch of the National Rural Health Mission in 2005 marked a turning point for public health planning in India. One of its key features was the commitment to increase public health expenditure from 0.9% of gross domestic product to at least 3%. It set out public health standards that specify the human resources required for each facility.[2,3] The federal government provided funds for increasing the number of posts sanctioned by state governments to meet Indian public health standard norms. As an immediate measure, states were encouraged to hire, on a contractual basis, an additional auxiliary nurse-midwife for peripheral health subcentres, three nurses and a second doctor for primary health centres; nine nurses and seven doctors including five specialists in the 30-bed community health centres.

Within two years, this led to the appointment of almost 82 343 skilled health workers with medical or nursing qualifications in the public health system.[4] This includes 39 633 auxiliary nurse-midwives, 22 789 nurses, 9172 allopathic doctors and specialists, 5321 ayurvedic/homeopathic doctors and 5428 other technical staff. Impressive as this addition was, it still left a huge gap. There was also a clear problem in attracting nurses and doctors to more difficult areas, especially in tribal and hilly areas of central India and the north-east.[5]

Retaining workers

The main skilled health workers in rural areas work in the public sector. Before the National Rural Health Mission, state governments covered all human resource costs except for the auxiliary nurse-midwife. About 80% of total health expenditure is borne by the states and, of this, about 70% goes towards salaries. From 2007 onwards, state governments introduced a range of measures with financial support from the federal government to address the problem of retention in rural postings. The information presented in this paper was collected from the review of state programme implementation plans of the National Rural Health Mission and from responses to specific queries sent to state health directorates.

Monetary compensation

Since 2007, monthly financial incentives in addition to salaries have been widely introduced across all the states for doctors, nurses and midwives working in remote areas (Table 1). There

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Table 1. **Monthly incentives for doctors and nurses in "difficult area" postings in India**

State	Classification of "difficult area"	Incentive amount for Bachelor of Medicine/ Bachelor of Surgery/specialists	Incentive amount for staff nurses/ auxiliary nurse-midwives
Andhra Pradesh	Rural areas	Specialists Rs 7000 (US$ 152) / medical officers Rs 1000 (US$ 22)/female medical officers Rs 1500 (US$ 32)	n/a
	Tribal areas	Rs 2500 (US$ 54)/Rs 2000 (US$ 43)	
Andaman & Nicobar Islands	Tribal areas	Gynaecologists Rs 10 000 (US$ 217)/other specialists Rs 3000 (US$ 65)	n/a
	Rural areas	Gynaecologists Rs 7000 (US$ 152)	
Bihar		Rs 3000 (US$ 65)	n/a
Haryana	Difficult areas	Rs 25 000 (US$ 543) / Rs 10 000 (US$ 217)	Rs 3000 (US$ 65)
	Rural areas	Rs15 000 (US$ 326)	
Himachal Pradesh	Tribal areas	Rs 5000 (US$ 109)	n/a
	Rural areas	Rs 3000 (US$ 65)	
Jammu and Kashmir	Most difficult areas	Rs 10 000 (US$ 217)	n/a
	Difficult areas	Rs 3000 (US$ 65)	
Jharkhand		Rs 10 000 (US$ $217)/Rs 5000 (US$ 109)	Rs 1000 (US$ 22)
Kerala	Difficult areas	Rs 5000 (US$ 109)	n/a
	Rural areas	Rs 3000 (US$ 65)	
Madhya Pradesh		Rs 10 000 (US$ $217)/Rs 5000 (US$ 109)	n/a
Maharashtra	Extremist area	Rs 1500 (US$ 32)	Rs 1500 (US$ 32)
	Tribal area	Rs 1000 (US$ 22)	Rs 1000 (US$ 22)
Orissa	Remote areas	Rs 5000 (US$ 109) for contractual staff/Rs 8000 (US$ 174) for regular staff	n/a
	District headquarters	Rs 4000 (US$ $87) for regular staff	
Punjab		Rs 10 000 (US$ 217)/Rs 20 000 (US$ 435)/Rs 5000 (US$ 109)/Rs 10 000 (US$ 217)	n/a
Rajasthan	Hard area	Rs 7000 (US$ 152)	Rs 2500 (US$ 54)
	Rural area	Rs 4000 (US$ 87)	Rs 1500 (US$ 32)
Tripura	Primary health care	Rs 3000 (US$ 65)	Rs 1000 (US$ 22)
	Community health centre	Rs 2000 (US$ 43)	Rs 800 (US$ 17)
	State district hospital	Rs 1000 (US$ 22)	Rs 600 (US$ $13)
Uttrakhand	Upper Himalayas (most difficult)	Rs 5000 (US$ 109) for degree holders/Rs 3000 (US$ 65) for diploma holders	n/a
	Middle Himalayas (more difficult)	Rs 2000 (US$ 43)	
	Lower regions (difficult)	Rs 1000 (US$ 22)	

n/a, not available; Rs, Indian rupees.
Source: Information as reported by state mission directors in response to written queries and as taken from State Programme Implementation Plans of the National Rural Health Mission.

is a wide diversity between states in categorizing "difficult" areas. States have used criteria including: distance from urban areas; geographical terrain such as hilly, desert or forest areas; access by roads and public transport; availability of housing; and tribal areas or extremist insurgencies. The incentive amount depends on the cadre of the worker and on the way each state grades difficult areas.

The use of incentives increased significantly once integrated in the National Rural Health Mission. A national scheme for incentives for difficult areas is also proposed. Are incentives effective? It is still too early to comment. At the time of writing, most of these initiatives had been in place for less than two years. The workers welcome the use of incentives. However, whether they are adequate to increase willingness for rural postings has not yet been evaluated. There is reason to be cautious. Studies from other sources show a limited role of incentives, especially when the incentive amount is modest.[6] The threat is that if incentives are not found to make a difference, then there is a strong temptation to consider the problem of retention as unsolvable.

Workforce management

Recent experiences from Tamil Nadu and Karnataka states have shown that a major impact on worker morale can be achieved by providing rotational posting in difficult areas, ensuring that everyone spends some years there, after which they could choose to be posted to another area. The National Rural Health Mission is trying to encourage states to adopt workforce management policies that ensure transparent transfer and placement for doctors and nurses and better residential infrastructure for all health personnel. Al-

though this is apparently a simple reform, in practice it often proves to be the most difficult, given its linkages to basic issues of governance.

One key strategy of the National Rural Health Mission is to appoint workers on contracts, usually for one to three years' duration. There is a perception among health administrators that contractual appointments ensure more accountability, less absenteeism, more appropriate postings and therefore better workforce performance. Since contractual appointment is made to the facility, whereas permanent appointment is to the state public system, they may make it easier to prioritize rural and remote postings. But whether reduced job security from contractual appointments is the key to better performance and accountability is an open question.

Education

Another set of measures is through preferentially drawing students for medical and nursing education from those who are willing to work in underserviced areas. The pioneer programme in this regard is in West Bengal state and, as preliminary reports suggest, it has been quite successful.[7] The state faced the challenge of adding 10 000 auxiliary nurse-midwives within five years, while simultaneously addressing the problem of keeping the existing ones at their place of work. As a first step, 24 government schools for auxiliary nurse-midwives were revived and another 18 were started in partnerships with private hospitals. Then the local governance body (village *panchayats)* were given the power to select a woman resident in the village to train as an auxiliary nurse-midwife for that village to be employed by the local government institution. At the time of writing, more than 4000 such auxiliary nurse-midwives had been given appointments, with many more in training.

Another example is the "Swalamban Yojana (self-reliance plan)," launched in Madhya Pradesh state in 2006–07 with the objective of filling the gap of staff nurses. Women with rural backgrounds from under-served districts are selected and sponsored for the nursing courses. They are bonded to serve in the rural areas for 7 years after training or else they have to pay a penalty of 200 000 Indian rupees. The initial responses to this strategy are very encouraging though it is still too early to judge.

Alternative strategies

Almost all states have been addressing specialist shortages by providing doctors with short-term 18–24 week training courses in emergency obstetric care including Caesarean section and anaesthesia. Two states, Assam and Chhattisgarh, have created a cadre of rural medical practitioner with three years' training, exclusively for working in primary health care in rural areas. Assam has insisted on local selection and conditional licensing to work only in rural areas and in the public sector.

Another form of multiskilling is to train and deploy doctors trained in the indigenous streams of medicine to work as medical officers in primary health centres. This has been used extensively in some states. About 700 000 female community health workers called ASHA (accredited social health activists) are trained to provide basic, first-contact health care and to encourage families to seek pregnancy and child health services.[8] The pioneering effort for this was the "Mitanin" programme in Chhattisgarh (8). The first evaluations of this programme are promising but they also point to the need for much more investment to be made in this cadre for a greater outcome.[9,10] A summary of the main lessons learnt is given in Box 1. ■

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

- Measures to address the shortage of skilled health workers in rural India include: monetary compensation, workforce management, education and continuous professional development and alternative service providers.
- Considerable success has been achieved with education-related innovations, alternative service providers and the community health worker programme.
- Evaluations are needed to generate evidence for designing appropriate packages of retention strategies tailored to each state's different situation.

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ملخص

أساليب هندية للاحتفاظ بالعاملين الصحيين المهرة في المناطق الريفية

المشكلة أصبح نقص مقدمي الخدمات المهرة في المناطق الريفية في الهند أكثر العقبات أهمية أمام تحقيق الرعاية الصحية الشاملة. ففي الهند هناك حوالي 1.4 مليون طبيب، 74% منهم يعيشون في المدن حيث يخدمون 28% فقط من السكان، بينما يفتقر أهالي الريف إلى الخدمات.

الأسلوب أطلقت الحكومة الهندية في عام 2005 "البعثة الوطنية للصحة الريفية"، والتي طوّرت مبادرات مختلفة على صعيد الولايات والصعيد الوطني للتصدي لهذه المشكلة. وحسب الدستور الاتحادي الهندي، فإن الولايات مسؤولة عن تنفيذ النظام الصحي بدعم مالي من الحكومة الوطنية.

الأوضاع المحلية يقل توفر الأطباء والعاملين في مجال التمريض في الولايات الأشد حاجة بسبب نقص كليات التدريب هناك، إضافة إلى عزوف المهنيين المقيمين في المدن عن العمل في المناطق الريفية. وقبل عام 2005، كانت الاستراتيجية الشائعة المتبعة هي تعهد القيام بالخدمة الإجبارية في الريف والخدمة الريفية الإلزامية للحصول على أفضلية الالتحاق ببرامج بعد التخرج.

تغيرات ملائمة تضمنت المبادرات تحت مظلة "البعثة الوطنية للصحة الريفية" زيادة الوظائف الممنوحة لمرافق الصحة العمومية، وزيادة الحوافز، وسياسات إدارة القوى العاملة، والتوظيف في الأماكن المحددة، وتشكيل طاقم خدمة جديد للتوظيف في القطاع العام. ونتيجة لذلك نجحت "البعثة الوطنية للصحة الريفية" في إضافة أكثر من 82343 عاملاً صحياً ماهراً للقوة العاملة في الصحة العمومية.

الدروس المستفادة بالإمكان حل مشكلة عدم مساواة توزيع العاملين الصحيين المهرة. وقد أظهرت الاستراتيجيات التعليمية وبرامج العاملين في طب المجتمع نتائج واعدة. وأغلب هذه الاستراتيجيات حديثة للغاية لتقييم نتائجها، بالرغم من أن هذا سيساعد في تحقيق أقصى تحسين وتطوير لخليط مثالي من الاستراتيجيات تصلح للسياقات المختلفة.

摘要

印度农村地区专业卫生人员的聘任方式

问题 印度农村地区缺乏专业卫生人员已经成为该国实现全民医疗最重要的制约因素。印度有大约140万医师，其中74%居住在市区，仅为28%的人口提供服务，而农村居民在很大程度上未得到充分服务。

方法 印度政府2005年发起的“全国农村健康计划”促进了各州以及全国采取措施来解决这一问题。根据印度联邦宪法的规定，在国家政府的财政支持下，各州负责医疗系统的运转实施。

当地状况 因最需要医生和护士的州缺乏培训学校并且居住在市区的医疗专业人士不愿意前往农村地区工作，因而医生和护士的可用性受到限制。2005年之前，最常见的策略是义务农村服务契约和强制性农村服务作为进入研究生课程学习的优先条件。

相关变化 全国农村健康计划的举措包括增加卫生事业的批准职位、奖励、人力管理政策、地方特色招聘并且为企事业部门的人员雇佣专门创立一个新的服务骨干队伍。结果，全国农村健康计划已经为公共卫生服务业增加了82,343名专业卫生人员。

汲取的教训 专业卫生人员分布不均的问题能够解决。教育策略和社区卫生工作者方案已经显示出不错的效果。对大多数这些策略而言，要评价其成果为时尚早，尽管这种评价将有助于优化并制定不同背景下策略的理想组合。

Résume

Approches de l’Inde en matière de rétention du personnel soignant compétent dans les zones rurales

Problème La pénurie de prestataires de services compétents dans les zones rurales de l’Inde est apparue comme la plus importante entrave à la mise en place des soins de santé universels. L’Inde compte environ 1,4 million de médecins généralistes dont 74% vivent en zone urbaine et ne soignent que 28% de la population, laissant une population rurale très mal desservie.

Approche La Mission nationale pour la Santé rurale (National Rural Health Mission), lancée par le gouvernement indien en 2005, a encouragé différentes initiatives au niveau du pays et des états, afin d’apporter des réponses à ce problème. Selon la constitution fédérale de l’Inde, les états sont responsables de la mise en place du système de santé, avec le soutien financier du gouvernement national.

Environnement locale La disponibilité des médecins et du personnel infirmier est limitée par le manque d’établissements de formation dans les états présentant le plus grand besoin, ainsi que par la réticence des professionnels des zones urbaines à travailler dans les régions rurales. Avant 2005, la stratégie la plus commune consistait en des engagements de services ruraux obligatoires et en un service rural exigé en vue d’une admission privilégiée dans des programmes d’études de troisième cycle.

Changements significatifs Les initiatives de la Mission nationale pour la Santé rurale comprennent une augmentation des postes autorisés pour les établissements de santé publique, des incitations, des politiques de gestion de la main-d’œuvre, un recrutement spécifique aux localités ainsi que la création d’un nouveau cadre de service destiné à l’emploi dans le secteur public. Résultat : la Mission nationale pour la Santé rurale a permis d’ajouter plus de 82 343 professionnels de la santé compétents au personnel du secteur de la santé publique.

Leçons tirées Le problème de la distribution inégale des professionnels de la santé compétents peut être résolu. Les stratégies de sensibilisation et les programmes communautaires des professionnels de la santé ont montré des résultats prometteurs. La majorité de ces stratégies sont trop récentes pour en évaluer les résultats, même si cela pourrait favoriser l’optimisation et le développement d’un panachage idéal de stratégies pour différents contextes.

Резюме

Подход индийцев к стабилизации медицинских кадров в сельских районах

Проблема В сельских районах Индии возникла проблема дефицита квалифицированных поставщиков услуг, которая стала самым серьезным препятствием для достижения всеобщего охвата медико-санитарной помощью. В Индии насчитывается около 1,4 млн практикующих медицинских работников, из которых 74% живут в городах, где они обслуживают лишь 28% населения, в то время как значительная часть сельских жителей остается неохваченной.

Подход Национальная миссия по охране здоровья сельских жителей, осуществляемая правительством Индии с 2005 года, содействовала разнообразным инициативам на уровне отдельных штатов и страны в целом, направленным на решение этой проблемы. Согласно федеральной конституции Индии, штаты, при финансовой поддержке национального правительства, несут ответственность за внедрение системы охраны здоровья.

Местные условия Численность докторов и медсестер ограничена ввиду отсутствия учебных заведений в тех штатах, где в них существует наибольшая потребность, а также из-за нежелания городских врачей работать в сельских районах. До 2005 года наиболее распространенной стратегией были принудительное распределение в сельские районы и обязательная работа в деревне, дающая право поступать на последипломное обучение на льготных условиях.

Осуществленные изменения Инициативы в рамках Национальной миссии по охране здоровья сельских жителей предусматривают увеличение числа обязательных вакансий для государственных медицинских учреждений, стимулирование, политику управления кадрами, территориально-ориентированный наем кадров и подготовку кадров для работы в общественном секторе. В результате благодаря Национальной миссии по охране здоровья сельских жителей численность медицинских специалистов, работающих в государственных медучреждениях, увеличилась более чем на 82 343 чел.

Сделанные выводы Проблему неравного распределения медицинских кадров можно решить. Применение образовательных стратегий и программ для медработников на уровне общин позволило получить многообещающие результаты. Эффективность большинства этих стратегий еще рано оценивать, хотя это помогло бы оптимизировать их и разработать идеальный комплекс стратегий для различных условий.

Resumen

Estrategias en la India para retener a los trabajadores sanitarios cualificados en las regiones rurales

Situacíon La falta de proveedores de servicios cualificados en las zonas rurales de la India se ha convertido en el obstáculo más importante para conseguir la asistencia sanitaria universal. La India cuenta con alrededor de 1,4 millones de facultativos, de los cuales, el 74% vive en las áreas urbanas, donde atienden únicamente al 28% de la población, mientras que los habitantes de las regiones rurales siguen estando desatendidos en gran medida.

Enfoque La Misión Nacional de Salud Rural, puesta en marcha por el Gobierno de la India en 2005, ha promovido diversas iniciativas estatales y nacionales para tratar este problema. Según la Constitución federal de la India, los estados son responsables de implementar el sistema sanitario con el apoyo financiero del gobierno nacional.

Marco regional La disponibilidad de médicos y personal de enfermería se ve limitada por la ausencia de facultades en los estados que más los necesitan, así como por la reticencia de los profesionales de áreas urbanas a trabajar en las regiones rurales. Antes de 2005, la estrategia más habitual era el servicio obligatorio en zonas rurales para la admisión preferente en los programas de postgrado.

Cambios importantes Las iniciativas llevadas a cabo al amparo de la Misión Nacional de Salud Rural incluyen el aumento de puestos autorizados en los servicios públicos sanitarios, incentivos, políticas de gestión del personal, contratación local y la creación específica de un nuevo organigrama de servicios para la contratación pública. Como resultado, la Misión Nacional de Salud Rural ha incorporado más de 82 343 trabajadores sanitarios cualificados al personal sanitario de la función pública.

Lecciones aprendidas El problema de la distribución desigual del personal sanitario cualificado tiene solución. Las estrategias formativas y los programas comunitarios para el personal sanitario han dado resultados prometedores. La mayoría de estas estrategias son demasiado recientes para valorar sus resultados, aunque ayudarían a optimizar y desarrollar un conjunto idóneo de estrategias para su aplicación en diferentes contextos.

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