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SHORT COMMUNICATION

Private rural health providers in Haryana, India: profile and practices

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ABSTRACT

Introduction: Despite a widespread public health system, the private healthcare sector is the major provider of health care in rural India. This study describes the profile and medical practices of private rural health providers (PRHPs) in rural Haryana, India.

Methods: A cross-sectional study was conducted among PRHPs practicing in the villages of Comprehensive Rural Health Services Project (CRHSP) at Ballabgarh block located in the Faridabad district of Haryana State. The CRHSP is an Intensive Field Practice Area (IFPA) of the Centre for Community Medicine, All India Institute of Medical Sciences, New Delhi.

Results: Eighty PRHPs participated in this study (response rate 93%). The majority (96%) did not possess a qualification in any formal system of medicine. Half of the PRHPs had a separate space (private area) for the examination of patients. Almost all had stethoscopes, thermometers and blood pressure apparatus. The PRHPs were involved in a wide range of practices, such as dispensing medicines (98.7%), providing injections (98.7%) and intravenous fluids (98.7%), and conducting minor surgery (78.5%). Dumping biomedical waste was a common practice among these practitioners. Some PRHPs (8.7%) were involved in national health programs.

Conclusions: Unqualified PRHPs provide substantial outpatient healthcare services in rural Ballabgarh, India. Their biomedical waste disposal practices are inadequate. There is a need for training in waste disposal practices and monitoring of safe injection techniques among PRHPs. Consideration should be given to utilising PRHPs in important public health programs such as disease surveillance.

Key words: health care, health providers, India, rural health services, unqualified health providers.

Introduction

In India 68.8% of the population resides in a rural area[1]. The public health system for formal health care in rural India consists of three tiers: Sub-Centres, Primary Health Centres (PHC) and Community Health Centres (CHC). There is a Sub-Centre with a male and female worker for every 5000 population; a PHC with a medical doctor and para-medical staff for every 30 000 population; and a 30 bed CHC with basic specialists for every 100 000 population[2].

Even so, the rural health service is grossly inadequate. Rural areas have only 0.77 hospitals, 1.37 dispensaries, 3.2 PHCs and 44 hospital beds per 100 000 population, compared with the urban service of 4.48 hospitals, 6.16 dispensaries and 308 beds per 100 000 population[3].

In India, allopathic doctors exceed 0.5 per 1000 population (one allopathic doctor for 1440 population) and if qualified Ayurveda, Unani, Siddha, Naturopathy and Homeopathy (AYUSH) doctors are included, the doctor-to-population ratio is more than to 1 per 1000 (one doctor for 750 population)[4]. Despite the large number of trained medical practitioners available in the country, the majority of medical graduates (74%) serve in urban areas[5]. In 2010 there was a shortfall in the total requirement for male health workers at Sub-Centres (64%) and allopathic doctors in PHC (10.3% of approximately one doctor per PHC)[6]. When considered according to Indian Public Health Standards which recommend two medical officers per PHC for adequate, quality health care[7], the shortfall is more acute. This situation is compounded by endemic absenteeism among government health personnel in rural health centres[8]. As a result, unqualified private practitioners are likely to provide health care, especially to those living in urban slums, and remote rural and tribal areas[9].

In rural areas, the private health sector provides approximately 81% of outpatient care and 56% of inpatient care[10]. The private health sector in rural areas consists mainly of unqualified medical practitioners[11-13]. There are few studies on the profile and practices of unqualified rural medical practitioners in India. This article presents the profile and medical practices of private rural health providers (PRHPs) in rural Ballabgarh, located in Haryana State.

Methods

The study was conducted at the Comprehensive Rural Health Services Project (CRHSP), Ballabgarh, located in Haryana, India. The CRHSP is an Intensive Field Practice Area (IFPA) under Centre for Community Medicine, All India Institute of Medical Sciences (AIIMS), New Delhi. The IFPA consisted of 28 villages catering for a population of 85 590 in 2008. Public healthcare services in these villages are provided via two PHCs.

Data were collected from July 2007 to June 2008. The study subjects included all PRHPs practicing in the study area for more than one year who had a healthcare facility (clinic or hospital). Private Rural Health Providers were defined as[13]:

> *…'qualified' if they had received a formal medical training in any system of medicine (Allopathy or Indian) from a recognised college/institution and 'unqualified' if they had not received any formal training in any system of medicine.*

Traditional healers were excluded from the study. A list of the names, addresses and telephone numbers of all practicing PRHPs in the area was prepared with the assistance of key informants such as health workers and PHC medical officers.

The PRHPs were visited three times before they were classified unavailable. Written informed consent was obtained from all participating PRHPs. Interviews were conducted using a pre-tested interview schedule and data were entered and analysed using Microsoft Excel.

Ethics approval

Ethical clearance was provided by the ethical review committee of AIIMS, New Delhi (A-25/25.07.2007).

Results

There were a total of 101 PRHPs in 28 villages, of which 87 were eligible. Of these, four declined participation and three PRHPs could not be contacted, giving a total of 80 PRHP participants (response rate 93%).

Approximately half the participating PRHPs had completed up to 12th standard education. Most were unqualified; however, three providers claimed that they had received formal training in one of the Indian systems of medicine (Table 1).

A half of the PRHPs had a separate space or a screened area for patient examination. Five (6%) had laboratory facilities and two (2.5%) had an X-ray facility. Three PRHPs had a separate labour room and a dressing room. One unqualified PRHP had an emergency room, an operation room and a 15 bed ward. The average patient load per day per PRHP was 19 (range 2-100). All PRHPs had a stethoscope (100%), and almost all had a thermometer (99%) and blood pressure apparatus (96%). A nebuliser, weighing machine and needle destroyer were available for 22.5%, 8.7% and 2.5%, respectively.

Most of the PRHPs prescribed and dispensed medicines (98.7%), administered injections (98.7%) and intravenous (IV) fluids (98.7%), and conducted minor surgical procedures (78.5%). Almost all PRHPs reported administering IV fluids in cases of diarrhoea, and 15% used IV fluids to treat fever (Table 2).

Two-thirds of the PRHPs reported that they disposed of infectious and pharmaceutical waste with the general waste. Dumping 'sharps' (eg needles, scalpels, broken vials and ampoules) was reported by 43.7% of the PRHPs. Other waste disposal practices were reported to be burial and burning. Nine (11.3%) mentioned that they sold used syringes and needles to junk dealers.

Seven PRHPs (8.7%) reported that they were involved in a national health program: three worked as DOTS (Directly Observed Treatment-Short Course) providers under the Revised National Tuberculosis Control Program, three worked as polio vaccinators under the National Polio Surveillance Program; and one provider had worked as both DOTS provider and polio vaccinator.

Most PRHPs (93%) expressed a need for training. For one-third this need was for information about new diseases and new medicines, and for 7% it was for training in injection practices (techniques) and medicine dosages.

Discussion

The finding that most of the PRHPs were unqualified is similar to that of past studies[13-20]. According to the 53rd Annual report of AIIMS in 2008-2009, the total number of patients seen by PHC under CRHSP Ballabgarh was 43 090 in one year, which is equivalent to approximately 60 patients per PHC/day[21]. In contrast, the PRHPs in the present study reported seeing approximately 19 patients per day (total for all 80 PRHPs = approximately 1520 patients per day [19 x 80]). Therefore, the average number of patients seen per day by PRHPs in the field practice area was much higher than the outpatient departments of the two PHCs in the area (1520 vs 120), demonstrating that PRHPs cater for the most of the patients in this rural area.

A majority of the PRHPs disposed biomedical waste with general waste, and the colour-coded dustbins recommended for biomedical waste disposal were not observed in any of the clinics. This lack of knowledge and incorrect biomedical waste disposal was also evident in the harmful practice of selling of used needles and syringes to junk dealers. The Ministry of Environment and Forests of India Bio-Medical Waste (Management and Handling) Rules, 2011[22], which apply to all persons who handle biomedical waste, recommends deep burial in rural areas[22]. In the present study, less than 15% of PRHPs reported burial of biomedical waste, and none of these complied with the standard of deep burial. Thus there is a need for education in biomedical waste management to bring PRHPs into compliance with the regulations.

Table 1: Distribution of private rural health providers according to their profile (*N*=80)

Variable		Frequency *n* (%)
Mean age – years (SD)		37.4 (11.2)
Mean duration of practice – years (SD)		12.7 (10)
Average patient load per day (SD)		19.0 (13.8)
Sex	Male	78 (97.5)
	Female	2 (2.5)
Educational status	Graduate	7 (8.7)
	12th standard	39 (48.7)
	10th standard	32 (40.0)
	≤Middle	2 (2.5)
PRHP type	Unqualified	77 (96.2)
	Qualified	3 (3.7)
Source of pre-practice medical experience for unqualified practitioners (*N*= 77)	Worked under qualified practitioners	43 (53.7)
	Worked under unqualified practitioners	29 (36.2)
	Worked under both	3 (3.7)
	Previous job experience	2 (2.5)
Maintain records		27 (33.7)
Has Assistant/ helper		10 (12.5)

PRHP, Private Rural Health Provider.

Table 2: Distribution of private rural health providers according to practice type

Type of practice	Description†	Frequency *n* (%)
Drug dispensing (*N*=79)	Dispenses in original packing	67 (84.8)
	Dispenses after removing from original packing/loose	40 (50.6)
Administration of injections (*N*=79)	By disposable syringe	78 (98.7)
	By non-disposable syringe	1 (1.2)
Administration of IV fluids (*N*=79)		69 (87.3)
Surgical procedures (N= 63)	Wound suturing	61 (96.8)
	Abscess drainage	15 (23.8)
Method of surgical instrument sterilization (*N*= 64)	Simple cleaning with antiseptic solution	39 (60.9)
	Boiling	28 (43.7)
	Autoclaving	4 (6.2)

IV, Intravenous.
†Multiple responses for drug dispensing, surgical procedures and method of surgical instrument sterilization.

The PRHPs were not actively involved in national health programs. Successful utilization of unqualified medical practitioners in implementing family planning and malaria programs, and AIDS awareness campaigns has been reported by health authorities in the Khammam District of Andhra Pradesh[23], and also in the National Tuberculosis Control Program in Bangladesh[24]. The wide availability of rural PRHPs represents an untapped resource for supervised involvement in national health programs[25].

Although most of the PRHPs were unqualified and worked with only basic health infrastructure, they provided a wide range of health services (eg consultation, prescription and dispensing of medicines, administration of injections and IV fluids, minor surgical procedures). While past studies have reported poor knowledge and skills among PRHPs in managing common ailments[26-28], unqualified PRHPs are the preferred providers due to their wide availability[13] and accessibility[11]. The *Indian Medical Degrees Act, 1916*, Section 6-A(1)[29] and the *Indian Medical Council Act1956,* Sections 15 & 25[30], have been enacted to punish those who impersonate qualified practitioners in western medical science, and those not registered with state medical councils. However, to date these acts have been unable to check the existence of unqualified private practitioners[23], or to regulate their harmful practices. However, because they often serve as the first community contact in rural health care, it is recommended that unqualified PRHPs be utilized for disease surveillance, prevention and education programs.

Conclusions

Unqualified PRHPs do provide substantial outpatient healthcare services in rural Ballabgarh, India. This study revealed their inadequate biomedical waste disposal practices and the need for monitoring and training them in this and safe injection techniques. It is strongly recommended that they be utilised in important public health programs such as disease surveillance.

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References

1. Office of the Registrar General & Census Commissioner, Government of India. *Provisional Population Totals. Rural- Urban Distribution. Figures at a glance, India*. (Online) 2012. Available: http://www.censusindia.gov.in/2011-prov-results/paper2/data_files/india/paper2_at_a_glance.pdf (Accessed 9 July 2012).

2. World Health Organization. *India country health system profile*. (Online) 2009. Available: http://www.searo.who.int/en/Section313/Section1519_10852.htm (Accessed 16 May 2009).

3. Duggal R, Gangolli LV. Introduction. In: LV Gangolli, R Duggal, E Shukla (Eds). *A Review of Healthcare in India*. Centre for Enquiry into Health and Allied Themes, 2005; 3-18. (Online) 2009. Available: http://www.cehat.org/publications/PDf%20files/r51.pdf (Accessed 26 February 2009).

4. Central Bureau of Health Intelligence. Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India. Human resources in health sector. In: *National Health Profile (NHP) of India, 2010*. (Online) 2012. Available: http://cbhidghs.nic.in/writereaddata/mainlinkFile/Human%20Resources%20in%20Health%20Sector%202010.pdf (Accessed 10 April 2012).

5. Ministry of Health and Family Welfare, Government of India. *Report: Task force on medical education for the national rural health mission*. Chapter 1. Overview of the National Health System. (Online) 2011. Available: http://mohfw.nic.in/NRHM/Documents/Task_Group_Medical_Education.pdf (Accessed 24 December 2011)

6. Ministry of Health and Family Welfare, Government of India. *Rural health care system in India, Rural health statistics in India 2010*. Updated March 2010. (Online) 2012. Available: http://nrhm-mis.nic.in/UI/RHS/RHS%202010/RHS%202010/Rural%20Health%20Care%20System%20in%20India.pdf (Accessed 15 March 2012).

7. Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India. *Indian Public Health Standards (IPHS) for Primary Health Centres. Guidelines* (Revised 2010). (Online) 2012. Available: http://mohfw.nic.in/NRHM/IPHS_Revised_Draft_2010/PHC_Revised_Draft.pdf (Accessed 15 March 2012).

8. Bajpai N and Goyal S. *Primary Health Care in India: Coverage and Quality Issues*. Center on Globalization and Sustainable Development (CGSD): Earth Institute, Columbia University, New York; June 2004. Working Paper Series, No. 15. (Online) 2012. Available: http://globalcenters.columbia.edu/southasia/files/mumbai/content/pdf/3._bajpai_primaryhealth_2004_15.pdf (Accessed 9 July 2012).

9. Planning Commission, Government of India. *Tenth Five-Year Plan: 2002–2007. Sectoral policies and programs*, Vol. 2. 2002. (Online) 2009. Available: http://planningcommission.nic.in/plans/planrel/fiveyr/10th/volume2/10th_vol2.pdf (Accessed 10 May 2009).

10. National Sample Survey Organisation (NSSO). *Morbidity and treatment of ailments*. Report no. 441. New Delhi: NSSO, Government of India; 1998. (Online) 2009. Available: http://mospi.nic.in/rept%20_%20pubn/441_final.pdf (Accessed 16 September 2009).

11. Gautham M, Binnendijk E, Koren R, Dror DM. *'First we go to the small doctor': First contact for curative health care sought by rural communities in Andhra Pradesh & Orissa, India*. Indian Journal of Medical Research. November 2011; **134:** 627-638

12. Banerjee A, Deaton A, Duflo E. Health, health care, and economic development: wealth, health, and health Services in rural Rajasthan. *American Economic Review* 2004; **94(2):** 326-330.

13. Rhode JE, Viswanathan H. *The rural private practitioner*. New Delhi: Oxford University Press,1995.

14. Rao PH. Profile and practice of private medical practitioners in rural India. *Health and Population: Perspectives and Issues* 2005; **28(1):** 40-49.

15. Alexander CA, Shivaswamy MK. Traditional healers in a region of Mysore. *Social Science and Medicine* 1971; **5(6):** 595-601.

16. Bhat R. *Private medical practitioners in rural India: implications for health policy*. Report submitted to the Indian Institute of Management. Ahmedabad: Indian Institute of Management, 1999.

17. Neumann AK, Bhatia JC, Andrews S, Murphy AK. Role of the indigenous medicine practitioner in two areas of India, Report of a study. *Social Science Medicine* 1971; **5(2):** 137-149.

18. Chuttani CS, Bhatia JC, Vir D, Timmappaya A. Study of private medical practitioners in rural areas of a few states in India. *Indian Journal of Medical Education* 1973; **12(3-4):** 248-252

19. Kakar DN. Traditional healers in North India: a study. *Nursing Journal of India* 1983; **74(3):** 61-63.

20. Nandraj S, Duggal R. *Physical standards in the private health sector- a case study of rural Maharashtra*. Mumbai: Centre for enquiry into health & allied themes (CEHAT), 1997. (Online) 2009. Available: http://www.cehat.org/infocentre/annot3.html (Accessed 10 May 2009).

21. Centre for Community Medicine, All India Institute of Medical Sciences. *53rd AIIMS Annual Report, 2008–2009*. New Delhi: All India Institute of Medical Sciences, 2010; 177-204. (Online) 2011. Available: http://www.aiims.edu/aiims/annual-report/AIIMS%20Annual%20Repront%202008-2009.pdf (Accessed 20 December 2011).

22. Ministry of Environment and Forests, Government of India. *The Gazette of India, Extraordinary (2011), Part II- Section 3, Subsection (ii). Notification (24 August, 2011).* (Online) 2011. Available: http://moef.nic.in/downloads/public-information/draft-bmwmh.pdf (Accessed 21 December 2011).

23. Narayana K V. *The unqualified medical practitioners: methods of practice and nexus with the qualified doctors*. Working paper no.70. Begumpet, Hyderabad: Centre for Economic and Social Studies, 2006. (Online) 2009. Available: http://saber.eastasiaforum.org/testing/eaber/sites/default/files/documents/CESS_Narayana_2006.pdf (Accessed 16 May 2009).

24. Salim MAH, Uplekar M, Daru P, Aung M, Declercq E, Lönroth K. Turning liabilities into resources: informal village doctors and TB control in Bangladesh. *Bulletin of the World Health Organizatio*. 2006; **84:** 479-484

25. Yadav K, Jarhyan P, Gupta V, Pandav CS. Revitalizing rural health care delivery: Can rural health practitioners be the answer? *Indian Journal of Community Medicine* 2009; **34:** 3-5.

26. Alam S, Khan Z, Amir A. Knowledge of diarrhea management among rural practitioners. *Indian Journal of Pediatrics* 2003; **70:** 217-219.

27. Kanjilal B, Mondal S, Samanta T, Mondal A, Singh S. *A parallel health care market: rural medical practitioners in West Bengal, India*. Future Health Systems (FHS) Research Brief No. 2: 4. Jaipur: Institute of Health Management Research, 2007. (Online) 2011. Available: http://www.research4development.info/PDF/ Outputs/FutureHealth_RPC/ParallelHealthResBrief2.pdf (Accessed 10 January 2011).

28. Singh J, Bhatia R, Gandhi JC, Kaswekar AP, Khare S, Patel SB, Oza VB, Jain DC, Sokhey J. Outbreak of viral hepatitis B in a rural community in India linked to inadequately sterilized needles and syringes. *Bulletin of the World Health Organization*. 1998; **76(1):** 93-98.

29. Medical Council of India. *The Indian Medical Degrees Act, 1916* (ACT No. VII of 1916). Available: http://www.mciindia.org/acts/THE-INDIAN-MEDICAL-DEGREES-ACT.pdf (Accessed 16 March 2012).

30. Medical Council of India. *The Indian Medical Council Act, 1956* (102 of 1956). 30th December, 1956 (As amended by the *Indian Medical Council (Amendment) Acts*, 1964, 1993 & 2001). Available: http://www.mciindia.org/ActsandAmendments/TheMedicalCouncilAct1956.aspx (Accessed 16 March 2012).