Original article

Social inclusion in health services use: early changes following fee removal in rural Nepal

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Abstract

Introduction: User fees for primary health services were removed by a new leadership of health ministry as part of attempt to enhance access by underserved people. This study aimed to measure the changes in utilisation of health services by marginalised groups of people following fee removal.

Methods: Records of 1850 health services users were selected randomly from peripheral health facilities -the district hospital, the primary healthcare centre, and four of eight health posts in Jumla district. Proportions of health services use by privileged and underprivileged ethnicities, men and women, and rich and poor people at two periods, before and after user fee removal, were calculated.

Results: After fee removal, use of health services by women, underprivileged ethnicities, and poor people increased by 2.4% (P=0.303, 95% CI 1.41 to 3.39), 6.8% (P<0.001, 95% CI 5.27 to 8.13) and 9.2% (P= 0.003, 95% CI 6.72 to 11.68) respectively in comparison to their privileged counterparts. When service utilisation data were disaggregated by individual castes, 10.9% (95% CI 9.01 to 12.87) increment was observed in case of the Dalit caste.

Conclusion: Removal of user fees was followed by increased use of health services by marginalised people. Further works may be conducted to examine consistency of the results.

Key words: access to health care, Jumla, universal health coverage, user fees

Introduction

Health services at district hospital, primary health care centre (PHCC), health post (HP) and sub-health post (SHP) were available free of cost until 1995 when the Ministry of Health and Population (MoHP) introduced a scheme to recover the cost of medicines at these points of delivery. Few years later registration fees were charged to patients as the government handed over management of health facilities to local committees.

After 2006, MoHP removed user fees in a phased manner, based on the guiding policies and programmes of its 10-point concept paper.[1] This shift was contemporary with national and global observations that user fees impeded access to health services by impoverished people.[2-4] In the first phase fees were removed to targeted groups – ultra-poor, poor, destitute, elderly, disabled, and female community health volunteers (FCHV) – for emergency, and in-patient services, followed by outpatient services, at district hospitals and PHCCs. In the second phase, fees were universally abolished for everyone using any services available at HPs and SHPs.[5-6]

Objective of the research was to assess changes in utilisation of services by marginalised groups over a year's period, and to explore perspectives of users and providers following the fee removal programme. This paper illustrates quantitative component of the work, whereas qualitative aspects were disseminated earlier.[7]

Fieldwork was conducted in Jumla district, ranking 69th among 75 districts of Nepal by composite development

indicator,[8] frommid-August to end of September 2008. Jumli people were divided across hierarchical strata of gender, ethnicity and economic class.[9] The district's health care system comprised of a district hospital (providing emergency, in-patient and out-patient services), a district Ayurveda health centre, a PHCC, eight HPs and 20 SHPs (providing out-patient and preventive services), all managed by district health office (DHO).

Methods

Initially, we conducted a series of interviews with key informants in Jumla – farmers, local shopkeepers, women and all levels of staff of the DHO. The discussions identified that the district was geographically and culturally represented by four sub-regions. Further, we developed local definitions of dichotomised variables of privileged and under-privileged ethnicities and high and low economic classes based on criteria opined by the key informants.

In the next step, we selected four health posts (one from each of the four sub-regions), the PHCC and the district hospital as data collection sites. We used records of out-patient service users as sampling frame to manually conduct simple random sampling of the records for periods preceding and succeeding fee removal, as illustrated in Figure 1.

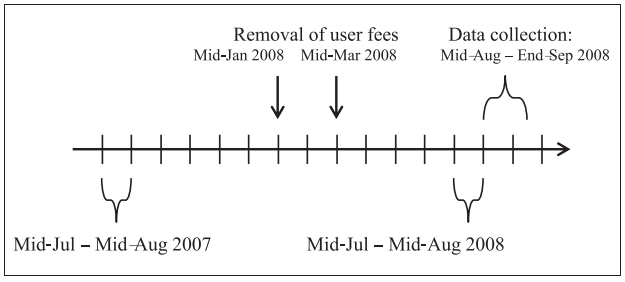

Figure1 Timeframe of data collection

The number of records thus drawn of the before and after periods (mid-July – mid-August 2007, and mid-July – mid-August 2008) was slightly more than 25% of the total number of records of the preceding year periods (mid-July – mid-August 2006, and mid-July – mid-August 2007). Then the number was distributed across the facilities. Records having incomplete information were replaced by another from the same facility and date. We excluded records of users who arrived to the facilities from districts other than Jumla. After these adjustments, we set the total sample size at 1850 records. Details of sample size are mentioned in Table 1 below.

Table 1 Sample size of patient records

Health facility	Sample size	
	Before removal of fee (Mid July-Mid August 2007)	After removal of fee (Mid July -Mid August 2008)
District hospital		
In-patient unit	150	150
Out-patient unit	200	200
Emergency unit	-	150
Kalikakhetu PHC	100	100
Depalgaon health post	100	100
Hanku health post	100	100
HatSinja health post	100	100
Bumra health post	100	100
Total records	**850**	**1000**

Aided by a group composed of health workers and clerical staff of the health facilities and a random selection of dwellers of the facilities' catchment areas, we disaggregated the records by gender (from sex as mentioned in the records), ethnicity and economic class. We identified ethnicity in two steps: first, identification of the caste from family names mentioned in the records; and second, a grouping into privileged and underprivileged ethnicities based on locally defined criteria suggested by key informants. Similarly, we dichomotised patients as belonging to high and low economic class on the basis of locally defined criteria. Such identification was possible in HPs and PHCCs because the group could individually recognise each user listed in the records and thus had an impression of their relative economic position. However, we could not identify economic class of users of district hospital services because they came from diverse locations within the district, and health workers of hospital and residents of district headquarters were unable to recognise them all. Therefore, we abandoned this variable during analysis of district hospital records.

We entered thus collected patient information in a database created in SPSS for Windows version 13.0. We performed frequency analysis to calculate proportions of health facility visits made by men and women, privileged and underprivileged ethnicities and high and low economic classes. Finally, we calculated difference in these proportions for the periods preceding and following fee removal. We calculated P values using McNemar's test, and 95% confidence limits to assess statistical significance of observed differences.

Before data collection we obtained verbal consent from key informants, and staff of DHO, district hospital, PHCC,

HPs and SHPs. Prior to fieldwork (in 2008), Institutional Review Board, Institute of Medicine, Tribhuvan University provided ethical clearance.

Results

Following MoHP directives, DHO in Jumla removed user fees universally for all services for all people at PHCC, HPs,and SHPs, and in a targeted approach to ultra-poor, poor, destitute, disabled, elderly and FCHVs for emergency and in-patient services of district hospital; both starting since mid-January 2008. Targeted removal was expanded to the hospital's out-patient services since mid-March 2008.

Overall, we found that the use of health services by marginalised people – women, underprivileged ethnicities and people of low economic class increased as compared to privileged groups. Significant change was observed in the use of services disaggregated by ethnicity whereby, share of health services use by underprivileged ethnicities increased by 6.79% points from 59.41% to 66.20% (P<0.001, 95% CI 5.27 to 8.13) in relation to their privileged counterparts and a 10.26% (95% CI 8.38 to 12.14) increase of service use by underprivileged ethnicities was attributable to fee removal. Similarly, the proportion of service use by women changed by 2.4% points from 48.00% to 50.40% (P=0.303, 95% CI 1.41 to 3.39) with an increase of 4.76% (95% CI 3.44 to 6.08) attributable to fee removal. The change in service use by low economic class was large: 9.2% points from 47.60% to 56.80% (P=0.003, 95% CI 6.72 to 11.68) with 16.20% (95% CI 13.92 to 18.48) increment attributed to fee removal. Table 2 illustrates the changes in services use following fee removal in the district overall including all the health facilities included in this study.

Table 2 Use of health services before and after removal of fees in the district (combined of the samples drawn from district hospital, PHCC and HPs)

Variable	Service utilisation						
	Before fee removal Number (Percent)*	**After fee removal** Number (Percent) †	**Percent change after fee removal i. e. risk difference**	**P value ‡**	**95% CI**	**Changes attributable to fee removal i.e. attributable fraction (exposed)**	**95% CI**
Ethnicity							
Privileged	345 (41.64)	338 (33.80)	-6.79	<0.001	-4.82% to -8.58%		
Underprivileged	505 (59.41)	662 (66.2)	+6.79		5.27% to 8.13%	10.256%	8.38% to 12.14%
Total	850	1000					
Gender							
Man	442 (52.00)	496 (49.60)	-2.40	0.303	-1.42% to -3.38%		
Woman	408 (48.00)	504 (50.40)	+2.40		1.41% to 3.39%	4.76	3.44% to 6.08%
Total	850	1000					
Economic class							
High	262 (52.40)	216 (43.20)	-9.20	0.003	-6.61% to -11.79%		
Low	238 (47.60)	284 (56.80)	+9.20		6.72% to 11.68%	16.20%	13.92% to 18.48%
Total	500	500					

* Percentage of total users included in the sample for the period before fee removal

† Percentage of total users included in the sample for the period after fee removal

‡ Calculated using McNemar's test

On disaggregating health service utilisation statistics by individual castes of Jumla, we found that the share of health services use by Dalit caste group increased substantially, attributed to fee removal. Table 3depicts the changes.

Table 3 Changes in use of services by caste

Caste	Utilisation of services						
	Before fee removal No. of users (%) §	After fee removal No. of users (%)**	Percent change of service use (risk difference)	95% CI	Change attributed to fee removal (Attributable fraction)	95% CI	Total No. of users (%) ††
Bahun	133(15.65)	110 (11.00)	-4.65	-3.34 to -5.96	42.27%	39.21% to 45.33%	243 (13.14)
Chhetri	101 (11.88)	99 (9.90)	-1.98	-1.12 to -2.84	20.00%	17.52% to 22.48%	200 (10.81)
Thakuri	92 (10.82)	105 (10.50)	-0.32	+0.03 to -0.67	3.05%	1.98% to 4.10%	197 (10.65)
Lama	7 (0.82)	6 (0.60)	-0.22	+0.07 to -0.51	36.67%	33.68% to 39.66%	13 (0.70)
Khasa	320 (37.65)	335 (33.50)	-4.15	-2.91 to -5.39	12.39%	10.35% to 14.43%	655 (35.41)
Dalit	185 (21.76)	327 (32.70)	+10.94	+9.01 to +12.87	33.46%	30.54% to 36.38%	512 (27.68)
Sanyasi	12 (1.41)	15 (1.50)	+0.09	-0.01 to +0.28	6.00%	4.53% to 7.47%	27 (1.46)
Newar	0 (0.00)	3 (0.30)	+0.30	-0.04 to +0.64	100.00%	100.00 to 100.00	3 (0.16)
Total	850 (99.99)	1000 (100.00)					1850 (100) (100.01)

§ Percentage of total users included in the sample for the period before fee removal

** Percentage of total users included in the sample for the period after fee removal

†† Percentage of total users included in the sample for the periods before and after fee removal, combined

The Percentage figures were rounded off at two places after decimal, so may not add up to 100.

Discussion

Proportional changes in utilisation of services by women, underprivileged ethnicities and low economic class as compared to their privileged counterparts is encouraging. A larger increase among the Dalit caste group is particularly impressive, because in Jumla they lay at the bottom of economic and cultural hierarchy. These changes are meaningful in context of an overall increase in service utilisation following fee removal – an assessment of fee removal programme, conducted in three districts including Jumla, revealed that service utlisation increased between 52% and 215% from district hospitals to SHPs.[10] Large change of service use in the economic class variable connotes to increased accessibility of health services by the low economic class as a major deterrent (user fees) was removed.

Findings of this research are similar with recent international works examining the effects of removing user fees.[11] While it is already known that removing user fees is associated with increased use of health services by all groups of people, our findings suggest that such policy may benefit marginalised groups more than others.

Conclusion

Removing user fees was followed by an increased utilisation of health services by marginalised groups of people in Jumla district. Further studies may be conducted to examine consistency of the results in other parts of the country.

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References

1. DoHS, MoHP, GoN. Annual report 2062/63 (2005/6). Kathmandu: Department of Health Services, Ministry of Health and Population, Government of Nepal; 2007.
2. Harper I, Brhikova P, Subedi MS, Bhattarai S. Drug procurement in Nepal. Edinburgh: University of Edinburgh, 2007. Accessed online 20 February 2014, available at http://www.csas.ed.ac.uk/__data/assets/pdf_file/0009/38826/DrugProcurementNepal.pdf
3. Nyonator F, Kutzin J. Health for some? The effects of user fees in the Volta region of Ghana.Health Policy Plan, 1999; 14:329-41.
4. Lagarde M, Palmer N. The impact of user fees on health service utilisation in low and middle income countries: how strong is the evidence? Bull World Health Organ, 2008; 86:839-48.
5. MoHP, GoN. Guideline for free essential health services for poor and vulnerable people. Kathmandu: Ministry of Health and Population, Government of Nepal; 2006.
6. MoHP, GoN. Free health services programme implementation procedure 2064. Kathmandu: Ministry of health and population, Government of Nepal; 2008 (In Nepali).
7. Bhurtyal A, Adhikari D. User-provider relations pertaining to health care delivery in Jumla district. Health Prospect, 2013; 12:31-6.
8. ICIMOD, CBS/GoN. Districts of Nepal: indicators of development, update 2003. Kathmandu: International Centre for Integrated Mountain Development, Central Bureau of Statistics/Government of Nepal; 2003.
9. Bista DB. Fatalism and development: Nepal's struggle for modernization. Kolkata: Orient Longman; 1991.
10. Witter S. Free healthcare in Nepal: findings of a rapid assessment. Kathmandu: German Technical Co-operation, Health Sector Support Programme; 2009.
11. Meessen B, Gilson L, Tibouti A. User fee removal in low-income countries: sharing knowledge to support managed implementation. *Health Policy* Plan, 2011; 26:ii-4.