

Determinants of Skilled Birth Attendant Utilization in Afghanistan: A Cross-Sectional Study

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Reduction of maternal and neonatal mortality are global priorities that are particularly relevant in Afghanistan, where the maternal mortality ratio (1600 per 100 000 live births) is one of the highest in the world.¹ Reliable estimates for neonatal mortality in Afghanistan do not exist, but available evidence indicates that 74% of infants born to women who died of maternal causes also died.¹ Causes of maternal death in Afghanistan include hemorrhage, obstructed labor, sepsis, pregnancy-induced hypertension, and indirect causes—diseases that reduce resilience of pregnant women—such as tuberculosis, malnutrition, and malaria.¹ Neonatal deaths in developing countries are caused by prematurity, congenital anomalies, birth asphyxia, and infections.²

Increasing the proportion of births assisted by skilled birth attendants—doctors, nurses, or midwives trained in safe care during delivery—is a central strategy for improving maternal and child health in Afghanistan. If 80% of pregnant Afghan women were assisted by skilled birth attendants, an estimated 10 000 maternal deaths and 40 000 neonatal deaths would have been prevented in 2002.^{1,3–5}

Several barriers to utilization of health services contribute to Afghanistan's high maternal mortality; these include decisionmaking processes related to care seeking, availability of skilled female health workers and supplies, and other geographical, financial, and cultural factors.^{1,6} In 2002, Afghanistan's health care system, destroyed after 25 years of conflict, had few trained health workers and little remaining infrastructure.^{7,8} The lifetime risk of maternal death for women was 1 in 9; 78% of maternal deaths were from causes that could have been prevented had adequate obstetrical care been received.^{1,3} At that time, only 9% of women were assisted by a skilled birth attendant, 8% of women received antenatal care, 10% of hospitals provided caesarean sections,

and one third of women were vaccinated against tetanus.^{7,9}

Challenges to health care provision are compounded by the fact that 77% of Afghans live in sparsely populated areas separated by large expanses of difficult terrain and poor transportation infrastructure.³ For women in some remote areas, more than 2 weeks of travel time is required to access a skilled birth attendant¹⁰; this is important because both infant and maternal deaths have been found to vary with distance from urban centers.^{1,9,11}

Use of skilled birth attendants is a central part of the Basic Package of Health Services (BPHS), a set of essential health services designed by the Afghan Ministry of Public Health to be provided to all Afghans. The BPHS addresses maternal and newborn health, child health and immunizations, nutrition, tuberculosis, malaria, mental health, disabilities, and the supply of essential medicines.¹² We sought to assess the extent to which women residing in facility catchment areas in Afghanistan use skilled birth attendants and to identify the household, community, and health facility characteristics associated with skilled birth

Objectives. We sought to identify characteristics associated with use of skilled birth attendants where health services exist in Afghanistan.

Methods. We conducted a cross-sectional study in all 33 provinces in 2004, yielding data from 617 health facilities and 9917 women who lived near the facilities and had given birth in the past 2 years.

Results. Only 13% of respondents had used skilled birth attendants. Women from the wealthiest quintile (vs the poorest quintile) had higher odds of use (odds ratio [OR]=6.3; 95% confidence interval [CI]=4.4, 8.9). Literacy was strongly associated with use (OR=2.5; 95% CI=2.0, 3.2), as was living less than 60 minutes from the facility (OR=1.5; 95% CI=1.1, 2.0) and residing near a facility with a female midwife or doctor (OR=1.4; 95% CI=1.1, 1.8). Women living near facilities that charged user fees (OR=0.8; 95% CI=0.6, 1.0) and that had male community health workers (OR=0.6; 95% CI=0.5, 0.9) had lower odds of use.

Conclusions. In Afghanistan, the rate of use of safe delivery care must be improved. The financial barriers of poor and uneducated women should be reduced and culturally acceptable alternatives must be considered. (*Am J Public Health.* 2008;98:1849–1856. doi:10.2105/AJPH.2007.123471)

attendant use, in the hopes of informing maternal health programs and policies. We conducted our study in 2004 among households residing in the catchment areas of facilities implementing the BPHS, defined as within a 90-minute walking distance from the facility.

METHODS

Study Design and Setting

This study, which was based on cross-sectional surveys of randomly selected health facilities and households in their catchment areas, was conducted between June and September 2004. In both surveys, data collection teams comprised health workers selected and trained by the Ministry of Public Health and employees of the Johns Hopkins University and the Indian Institute of Health Management Research. The health facility data were obtained through the National Health Services Performance Assessment, an annual survey of a stratified random sample of health facilities providing the BPHS.¹³

In each province, 15 basic health centers, 7 comprehensive health centers, and 3 maternity

wards and outpatient departments of district hospitals were randomly selected from comprehensive lists of health facilities that were expected to provide the BPHS. For the purposes of analysis, provinces were grouped into geographic regions. The central region included Bamyan, Kabul, Kapisa, Logar, Panjsher, Parwan, and Wardak. The southeastern region included Ghazni, Khost, Paktika, and Paktiya. The eastern region consisted of Kunar, Laghman, Nangarhar, and Nuristan. Northeastern provinces included Badakhshan, Baghlan, Kunduz, and Takhar. The northern region covered Balkh, Faryab, Jawzjan, Samangan, and Saripul. The southern region encompassed Helmand, Kandahar, Nimroz, Uruzgan, and Zabul. The western region contained Badghis, Farah, Ghor, and Herat. One new province, in which no health facilities existed, was created in 2004 and was not included in the analysis. A maximum of 25 facilities per province were surveyed for a total of 617 facilities nationwide.

The household survey included 13 843 households located in catchment areas of the selected health facilities. At the time of the survey, no national sampling frame or household listing existed; population estimates were sketchy, and sufficiently detailed aerial photographs were inaccessible to civilians. Villages to be surveyed were randomly selected from a list of villages within a 90-minute walking distance from each sampled health facility. Each sampled village was mapped and divided into quadrants. Clusters of 20 households in each village were sampled by randomly selecting a quadrant, a direction, and a starting point. Qualified doctors and nurses, who worked in couples comprising 1 man and 1 woman, were hired to conduct all interviews.

Households with at least 1 woman who met the eligibility criteria were included in the survey. These criteria included being aged between 18 and 45 years and having at least 1 child aged 3 years or younger. Within each sampled household, the respondent, who had consented to participate in the study, was asked a series of questions about household composition, illnesses or injuries experienced in the previous 30 days, care seeking and related expenditures, her reproductive history within the past 2 years, household assets, and dwelling characteristics. If more than 1 woman in a household met the eligibility criteria, 1 was

randomly selected by drawing slips of paper. A total of 13 843 respondents were included in the final sample; the current analysis includes the 9917 women from this sample who reported having given birth within the previous 2 years.

The survey instruments were developed by using standard methods of translation from English to Dari and Pashto, back-translation to English, and pretesting. Monitors and master trainers checked the quality of data through random resurvey of health facilities and households and daily verification of all survey forms. Informed and voluntary consent was obtained from all participants.

Data Analysis

The outcome variable of interest was the dichotomous variable skilled birth attendant: use of a doctor, nurse, or midwife to assist with a woman's most recent delivery. Alternatives to using a skilled birth attendant included being assisted in delivery by a traditional birth attendant, relative, neighbor, or friend. The explanatory variables included self-reports of the literacy and age of the respondent, whether she had heard of or been to the health facility, the usual mode of transport to the facility, distance between her home and the facility, and number of children in the household.

National asset quintiles were calculated with standard techniques based on principal component analysis on the reported ownership of household possessions, main sources of income, lighting, water, cooking fuel, and type of toilet.¹³

Data from the health facility survey were also used as independent variables. An equipment index for basic emergency obstetrical care was derived from observations made during the health facility assessments, and included the presence of 1 or more of each of the following: delivery kits, vaginal specula, delivery lights, partographs, fetoscopes, newborn resuscitation bags, aspiration bulbs, antibiotic eye drops, sterilizers, and vacuum extractors.¹⁴ Complete sets of observed, functioning equipment existed in only 1% of health facilities, so the analysis included 2 categories—having 1 or more of these items and the complete absence of equipment. The health facility director or health worker in charge provided information on the types of health

workers available at the facility, provision of antenatal or postnatal care, the existence of user fees, and the presence of community health workers (CHWs) and traditional birth attendants working in the catchment area of the health facility.

We first analyzed potential predictive factors by bivariate analysis, followed by multivariate logistical regression with the Huber–White sandwich estimator to account for the clustering of observations at the village level with Stata version 8 (StataCorp LP, College Station, TX). Statistical significance was set at *P* at less than .05. Independent variables were kept in the final model if they were either statistically significant in bivariate analysis or if they had been demonstrated elsewhere to be significant predictors of birth assisted by a skilled birth attendant.^{6,15} Multivariate models were stratified by gender of CHW to examine the differential effect of having a male CHW in the community compared with a female CHW. Terms were created to test for interactions, including mode of transportation and distance, mode of transportation and wealth quintile, literacy and wealth quintile, and geographic region and user fees. The statistical significance of each interaction term was tested in multivariate regression models and retained if the *P* value was less than .05.

RESULTS

Of the 9917 respondents who reported having given birth within the previous 2 years, 1310 (13%) said that their most recent birth was assisted by a skilled birth attendant (Table 1). In bivariate analysis, women who reported having used a skilled birth attendant and those who did not were comparable in terms of average number of children, average age of respondent, and proportion of respondents having heard of the facility. Literate women had higher odds of using skilled birth attendants compared with nonliterate women (unadjusted odds ratio [OR]=3.8). Several household factors were associated with higher use of skilled birth attendants, including being wealthier, having motorized transport, and having had a family member previously visit the health facility. In more than 80% of households, a member had previously visited the health facility, but only 5% of households reported having traveled to

TABLE 1—Characteristics of Individuals, Households, Communities, and Health Facilities, by Presence or Absence of a Skilled Birth Attendant at Most Recent Birth: Afghanistan, 2004

Characteristics	Total No. (%)	Most Recent Birth Assisted by Doctor, Nurse, or Midwife, No. (%)	Most Recent Birth Not Assisted by Doctor, Nurse, or Midwife, No. (%)	Unadjusted OR (95% CI)
Total sample	9917 (100)	1310 (13)	8607 (87)	
Individual factors				
Age, ^a y				
18–29 (Ref)	5758 (58)	791 (60)	4967 (58)	1.0
30–39	3567 (36)	448 (34)	3119 (36)	0.9 (0.8, 1.0)
40–45	592 (6)	71 (5)	521 (6)	0.8 (0.7, 1.1)
Literate	604 (6)	197 (15)	407 (5)	3.8* (3.2, 4.5)
Heard of facility	9212 (93)	1200 (92)	8012 (93)	0.8 (0.7, 1.0)
Household factors				
Been to facility	8098 (82)	1102 (84)	6996 (81)	1.7* (1.3, 2.1)
Mode of transportation usually used to access clinic				
By foot (Ref)	7536 (76)	969 (74)	6567 (76)	1.0
By motorized transport	445 (5)	127 (10)	318 (4)	2.7* (2.2, 3.4)
Not traveled or not known	1936 (20)	214 (16)	1722 (20)	0.8 (0.7, 1.0)
Wealth quintile				
1 (lowest; ref)	1998 (20)	83 (6)	1915 (22)	1.0
2	2019 (20)	154 (12)	1865 (22)	1.9* (1.4, 2.5)
3	1940 (20)	210 (16)	1730 (20)	2.8* (2.2, 3.6)
4	1992 (20)	309 (24)	1683 (20)	4.2* (3.3, 5.4)
5 (highest)	1968 (20)	554 (42)	1414 (16)	9.5* (7.6, 12.0)
Community factors				
Walking distance to clinic, min				
≤30 (Ref)	4317 (43.5)	705 (54)	3612 (42)	1.0
31–60	3234 (33)	377 (29)	2857 (33)	0.7* (0.6, 0.8)
61–90	1710 (17)	171 (13)	1539 (18)	0.6* (0.5, 0.7)
>90	656 (6.5)	57 (4)	599 (7)	0.4* (0.3, 0.6)
Region				
Central (including Kabul; ref)	2707 (27)	432 (33)	2275 (26)	1.0
Southeastern	1074 (11)	247 (19)	827 (10)	1.4* (1.2, 1.7)
Eastern	1016 (10)	99 (8)	917 (11)	0.5* (0.4, 0.7)
Northeastern	1390 (14)	96 (7)	1294 (15)	0.4* (0.3, 0.5)
Northern	1603 (16)	282 (22)	1321 (15)	1.0 (0.9, 1.2)
Southern	819 (8)	95 (7)	724 (8)	0.6* (0.5, 0.8)
Western	1308 (13)	49 (4)	1249 (15)	0.2* (0.2, 0.3)
Facility factors				
Type of catchment area by health facility				
Basic health center (Ref)	5087 (51)	623 (48)	4463 (52)	1.0
Comprehensive health center	4087 (41)	538 (41)	3548 (41)	1.1 (1.0, 1.2)
District hospital outpatient department	744 (8)	147 (11)	598 (7)	1.8* (1.4, 2.1)
Basic emergency obstetrical equipment				
None (Ref)	4728 (48)	594 (45)	4134 (48)	1.0
Some or all	5189 (52)	716 (55)	4473 (52)	1.2* (1.1, 1.4)
Female doctor or midwife				
None at health facility (Ref)	6621 (67)	815 (62)	5806 (67)	1.0
≥1 at health facility	3296 (33)	495 (38)	2801 (33)	1.0 (0.9, 1.2)

Continued

TABLE 1—Continued

Community health worker (male or female)				
None in catchment area (Ref)	7690 (78)	1097 (84)	6593 (77)	1.0
≥1 in catchment area	2227 (22)	213 (16)	2014 (23)	0.6* (0.5, 0.7)
Female traditional birth attendant				
None in catchment area (Ref)	7411 (75)	1018 (78)	6393 (74)	1.0
≥1 in catchment area	2506 (25)	292 (22)	2214 (26)	0.8* (0.7, 0.95)
User fees collected	7007 (71)	846 (65)	6161 (72)	0.7* (0.6, 0.8)
Antenatal care provided	5467 (55)	760 (58)	4707 (55)	1.2* (1.1, 1.3)
Postnatal care provided	8022 (81)	1005 (77)	7017 (81)	0.8* (0.7, 0.9)

Note. OR=odds ratio; CI=confidence interval. The average number of children younger than 18 years per respondent was 4 for total and both groups.

^aMean age in total and both groups was 26 years.

* $P < .05$.

the health facility by motorized vehicle. Community factors also appeared to be associated with use of skilled birth attendants. Seventy-seven percent of the households lived within a 60-minute walk of health facilities, and large regional differences in skilled birth attendant use were apparent.

In the unadjusted analysis, facility characteristics associated with a higher odds of skilled birth attendant use included the type of health facility, presence of obstetrical equipment, and availability of routine antenatal care. The presence of user fees was associated with a lower odds of skilled birth attendant use. Female health providers were scarce—female midwives and doctors worked in one third of health facilities, whereas female CHWs and traditional birth attendants worked in one fifth and one quarter of facility catchment areas, respectively. Overall, 71% of facilities charged user fees.

Table 2 shows the results of multivariate analysis. After other factors were controlled for, wealth was the strongest determinant of skilled birth attendant use. Women in the poorest quintile had lower odds of skilled birth attendant use than did women in each of the other quintiles; the strength of association increased with each wealth quintile. The OR of skilled birth attendant use in the wealthiest quintile compared with the poorest quintile was 6.3 (95% confidence interval [CI]=4.4, 8.9).

There were also strong geographical differences in the use of skilled birth attendants. Women had the highest odds of skilled birth attendant use in the southeast (OR=2.4; 95% CI=1.8, 3.0), compared with the central region, which includes the capital city, Kabul. The

lowest odds of skilled birth attendant use was in the western region (OR=0.4; 95% CI=0.2, 0.6). Increased distance from the household to the facility was associated with lower use of skilled birth attendants. Women who resided within a 60-minute walking distance from the facility were more likely to use a skilled birth attendant than were women who lived farther away from the facility (OR=1.5; 95% CI=1.1, 2.0).

Individual factors were found to be significantly associated with skilled birth attendant use. Literacy of the respondent was significantly associated with use of a skilled birth attendant from the facility (OR=2.5; 95% CI=2.0, 3.1). Women aged 30 to 39 years had lower odds of skilled birth attendant use than did younger women (OR=0.8; 95% CI=0.7, 0.98), but no statistical difference was evident between women older than 39 years compared with women younger than 30 years.

Health facility factors also appeared important, particularly the presence of user fees, which was associated with lower odds of skilled birth attendant use (OR=0.8; 95% CI=0.6, 0.96). Availability of a female doctor or midwife at the facility was associated with higher odds of skilled birth attendant use (OR=1.4; 95% CI=1.1, 1.8). Presence of CHWs in health facility catchment areas was associated with lower odds of skilled birth attendant use (OR=0.7; 95% CI=0.6, 0.95), although when male CHWs were excluded from the analysis, no association was observed (OR=0.9; 95% CI=0.6, 1.3). It is important to note that two thirds of CHWs were male and that a separate analysis that used male CHWs in the final

model indicated a negative association with skilled birth attendant use (OR=0.6; 95% CI=0.5, 0.9). Traditional birth attendants working in facility catchment areas (OR=1.3; 95% CI=1.0, 1.7), provision of routine antenatal care (OR=1.1; 95% CI=0.8, 1.5), and presence of some basic emergency obstetrical care equipment (OR=1.0; 95% CI=0.7, 1.3) were not associated with skilled birth attendant use. None of the interaction terms tested was statistically significant.

DISCUSSION

In this study, we found very low levels of skilled birth attendant use during the early postconflict period in Afghanistan despite the fact that qualitative research has demonstrated a high level of demand for skilled birth attendants in these areas. This underlines the need to address barriers to using skilled birth attendants.

Determinants of Skilled Birth Attendant Use

Wealth was the strongest determinant of skilled birth attendant use in this analysis, an observation consistent with findings elsewhere.^{16,17} The Afghan Ministry of Public Health has been promoting health care for the poor, and evidence from other studies has shown success in providing outpatient services to the poor in Afghanistan.¹³ However, we found that use of skilled birth attendants was highly inequitable in Afghanistan, with the poor being at a stark disadvantage. One solution is to reduce the financial barriers of poor

TABLE 2—Factors Associated With Use of a Skilled Birth Attendant at Most Recent Birth (N=9917): Afghanistan, 2004

	Adjusted OR (95% CI)	P ^a
Individual factors		
Age, y		.07
18-29 (Ref)	1.0	
30-39	0.8* (0.7, 0.98)	.03
40-45	0.9 (0.7, 1.2)	.70
Literate	2.5* (2.0, 3.2)	<.01
Household factors		
Wealth quintile		<.01
1 (lowest; ref)	1.0	
2	1.6* (1.2, 2.3)	<.01
3	2.2* (1.6, 3.2)	<.01
4	3.3* (2.4, 4.6)	<.01
5 (highest)	6.3* (4.4, 8.9)	<.01
Community factors		
Walking distance to clinic, min		.03
≤30 (Ref)	1.0	
31-60	0.8 (0.7, 1.0)	.13
61-90	0.7* (0.5, 0.9)	.01
>90	0.6* (0.4, 0.9)	.02
Region		<.01
Central (including Kabul; ref)	1.0	
Southeastern	2.4* (1.8, 3.0)	<.01
Eastern	0.7 (0.4, 1.2)	.20
Northeastern	0.6* (0.4, 0.9)	.02
Northern	1.4 (1.0, 2.0)	.05
Southern	0.6* (0.4, 0.8)	<.01
Western	0.4* (0.2, 0.6)	<.01
Facility factors		
Some basic emergency obstetrical equipment	1.0 (0.7, 1.3)	.86
Type of health worker		
≥1 female doctor or midwife at health facility	1.4* (1.1, 1.8)	.02
≥1 community health worker (male or female) in catchment area	0.7* (0.6, 0.95)	.02
≥1 female traditional birth attendant in catchment area	1.3 (1.0, 1.7)	.13
User fees collected	0.8* (0.6, 0.96)	.02
Antenatal care provided	1.1 (0.8, 1.5)	.5

Note. OR=odds ratio; CI=confidence interval.
 Hosmer-Lemeshow statistic: $\chi^2=12$; $P=.2$.

^aWald statistic.

* $P<.05$.

women. In both our study and those in other countries, user fees have been associated with a decrease in skilled birth attendant use, so reducing or removing user fees may be an effective strategy for increasing skilled birth attendant use.^{18,19} Other approaches to overcoming financial barriers could be tested. These include demand-side subsidies such as conditional cash transfers, vouchers, or gifts in kind given to women to encourage use of skilled birth attendants.^{18,19} Alternatively, grants could be provided to communities for transporting women in need of delivery services.^{20,21}

Other household factors related to poverty were shown to be important barriers to skilled birth attendant use. Illiteracy is a well-known barrier to recognizing birth-related complications and seeking appropriate health care.^{20,21} The results of our study confirm that low female literacy is associated with lower skilled birth attendant use in a country in which, nationwide, only 6% of women can read.⁹ It will take many years to increase literacy among women of childbearing age through existing programs in primary education and female literacy. Strengthening and expanding these programs should contribute to improving women's health in the long term.

Marked geographical variations in skilled birth attendant use were also observed, a finding demonstrated in other studies.^{17,22} Skilled birth attendant use was highest in the southeast region, where armed conflict and opium farming are most problematic and where constraints on movement of women are considered most strict. This finding highlights the need for a more detailed study of local factors that could provide valuable information for improving policies and programs. Further investigation of the effect of distance is warranted. Despite large geographical variation in the study sample and the fact that all respondents lived relatively close to health facilities, small variations in distance were still associated with significant differences in skilled birth attendant use. Given the sampling design of this study, we were not able to measure the effect on skilled birth attendant use of travel times greater than 90 minutes. Women who resided farther from health facilities were likely to be even more disadvantaged with respect to utilization of safe care during delivery.

One priority of the Ministry of Public Health aimed at addressing the barrier imposed by distance to care is increasing the supply of trained female doctors and midwives who practice in rural health facilities and midwives who provide community outreach. However, it will take many more years before a sufficient number of skilled birth attendants are trained and deployed to areas of need. Between 2004 and 2006, the proportion of BPHS facilities with at least 1 female doctor, nurse, or midwife approximately doubled and large gains were achieved in the proportion of facilities providing antenatal and delivery care.²³ As of 2007, 1864 midwives had been trained (Professor Mir Azizullah Akhgar, MD, General Directorate of Human Resources, Afghan Ministry of Public Health, Kabul, oral communication, October 2007). In community midwife programs, selecting local students from underserved sites should improve retention in locations where it is difficult to recruit and retain educated urban women.

Despite these initiatives, provision of midwifery services within a 60-minute walk for all Afghan women is unlikely in the near future.¹² Consequently, culturally acceptable options that increase demand or use health workers with lesser skill levels deserve consideration. Culturally acceptable, creative alternatives such as community maternity homes or use of mobile teams of at least 1 female CHW that can provide training and services should be considered.^{24,25} Behavior-change communication strategies would facilitate any new way of providing maternity services or demand-side subsidies by increasing awareness and demand for safe care during delivery. In Afghanistan, radio and television messages can provide channels for mass communications in much of the country, but these messages are unlikely to reach the poorest households. Interpersonal communication strategies through community opinion leaders such as mullahs, Shura a traditional village leadership group, health councils, or CHWs may be necessary for reaching poor households.

The negative association between male CHWs working in catchment areas and use of skilled birth attendants requires further investigation. It was reasonable to expect that male CHWs would have a positive influence on skilled birth attendant use in Afghanistan,

برای استفاده همراه با فورمه C1
فورمه رضایت لفظی (اجازه نامه) برای اعضای خانواده

هدایات برای مصاحبه کننده:

جملات ذیل را کلمه به کلمه قبل از شروع کردن مصاحبه برای اعضای خانواده بخوانید، رصورت موافقه آنها به سهم گری درجای مشخص منحیث شاهدپروسه رضایت در آخر فورمه امضاء نموده و تاریخ را نیز درجای مناسب آن بنویسید..

هدف ارزیابی:

وزارت صحت یک سروی را جهت بررسی خدمات صحتی روی دست گرفته است که پوهنتون جان هاپکن درین عرصه وزارت را کمک خواهد نمود.

مامیخواهیم چندسوالی را در رابطه به صحت شما و وقتیکه شما مریض میشوید از کجا تداوی را حاصل مینمایید پرسیم، این معلومات دولت افغانستان و موسسات همکار آن را کمک خواهد نمود تا خدمات صحتی بهتر را عرضه بدارند. قابل تذکر است که ازین سهمگیری شما کدام مفاد عاجل و مستقیم بدست نخواهید آورد.

طرز العمل:

برای بدست آوردن معلومات ضروری شما اتفاقاً به این منظور انتخاب شده اید در صورتیکه شما موافق باشید مایک سلسله سوالات در رابطه به صحت شما و وقتیکه شما مریض میشوید از کجا تداوی را حاصل مینمایید می پرسیم.

عواقب خراب و مشکلات:

سوالاتی که از شما پرسان میگردد در مدت کمتر از 30 دقیقه تکمیل خواهد شد اگر به کدام سوالی نمیخواهید جواب بدهید میتوانید از ادانه آن را رد کنید معلومات حاصله شما و یا فامیل شما را هیچگاه شناسای نخواهد کرد.

حریمیت:

در آئینای پرسیدن سوالات من تمام معلومات را که شما میدهید یادداشت می نمایم ثبت این معلومات هیچ نوع معرفی شما را در بر نخواهد داشت.

اشتراک داوطلبانه:

فیصله با شماست که درین پروسه اشتراک می نمائید یا خیر. شما میتوانید در هر زمان و یا هر قسمت این پروسه به آن خاتمه بدهید بدون اینکه کدام مشکلی ایجاد نماید.

یاسی باید تماس گرفت:

اگر فعلاً کدام سوال دارید من برایتان جواب میدهم و اگر سوال بعداً برایتان پیدا میشود با رئیس صحت ولایتی و یا بخش نظارت و ارزیابی وزارت صحت کابل در تماس شوید.

یا به سهم گری درین ارزیابی موافق هستید؟

شاهدپروسه رضایت (بعد از اینکه مراجعین به طور لفظی رضایت نشان داد این فورم توسط مصاحبه کننده امضاء گردد.)

امضاء مصاحبه کننده:

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FIGURE 1—Dari translation of consent form used for survey.

a country in which family decisionmaking is usually dominated by men.⁶ Male CHWs could have engaged men in the community and influenced their perceptions of skilled birth attendant use; this study suggests, however, that this was not happening in the early reconstruction period. Several factors may have contributed to this observation. The CHW program was beginning at the time of data collection in 2004, and few CHWs had completed all phases of training. Communities in which only male CHWs existed may be more conservative than those that had female CHWs. Increasing male CHW involvement in promoting safe delivery practices will likely require facilitating conversations on health between male CHWs and women, or conversations among men about “women’s issues.” By 2007, more than 17 000 CHWs had completed training and were deployed to communities. In 2006, 51% of CHWs were reported to be women.²⁶ The effect on skilled birth attendant use of increased deployment of CHWs, especially female CHWs, who have completed all phases of training, warrants further investigation.

Study Limitations

This study has a number of important limitations, notably the fact that conditions in Afghanistan changed rapidly during the 2 years prior to the survey, the recall period for questions related to use of skilled birth attendants. During this time, security conditions changed dramatically, as did road conditions, transport availability, and health facility characteristics. The deployment of health care workers, particularly female workers, also changed considerably. Many educated Afghans returned to Afghanistan, numerous training programs were implemented, and health services were expanded. Because skilled birth attendant use was determined for a 2-year period during which the numbers of health care workers increased rapidly—whereas the presence of health care workers was only measured at the end of this period—our analysis may have underestimated the true effect of health worker availability and other health facility characteristics on use of skilled birth attendants. Facilities with female health workers at the time of data collection may not have had them when some

respondents in the catchment areas had given birth.

A further limitation of the study relates to the measurement of the association between user fees and skilled birth attendant use. In this study, we measured whether user fees were charged for curative services. No data were available on whether facilities and other health workers in the community were charging fees for provision of care for delivery.

The lack of an available sampling frame outside areas served by the BPHS limits the generalizability of this study’s results to Afghanistan as a whole. Yet the negative effect of distance from health facilities on the use of skilled birth attendants even within facility catchment areas suggests that women living farther from health facilities likely have lower levels of skilled birth attendant use compared with women residing in facility catchment areas. A better understanding of health conditions of women who have lower geographic access to health services is a priority for research and interventions. It is important to consider that rising insecurity in many parts of Afghanistan likely poses an additional barrier to use of safe care for delivery, especially for women who have to travel long distances to reach health facilities.

In spite of its limitations, our study’s findings strongly indicate that effective strategies that generate demand for skilled birth attendants and reduce barriers to care seeking are needed, especially among poor women. Current efforts in Afghanistan’s health sector have led to improvements in health service capacity, with large gains achieved in the provision of routine antenatal care and safe care during delivery.²³ To keep pace with gains in the development of health services, improvements in maternal health in Afghanistan requires effective strategies that overcome financial, geographic, and cultural barriers to skilled birth attendant use. ■

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Contributors

M. Mayhew led the writing of the article, participated in the study design and data collection, developed the analytic plan, and analyzed the data. P. M. Hansen helped devise an analytic plan, provided feedback on data analysis and interpretation, and contributed to the data collection and revising drafts of the article. D. H. Peters led the study team during its conceptualization, design, and implementation, and contributed to the data analysis and writing of the article. A. Edward assisted with data interpretation and conclusions from a qualitative research and community-based perspective, and participated on the data collection team. L. P. Singh and V. Dwivedi assisted with primary data acquisition, preparation, and analysis, and contributed to the article. A. Mashkoor provided culturally specific interpretation of data. G. Burnham provided leadership to the study team and worked on all phases of the study.

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Human Participant Protection

The study protocol was approved by the Afghanistan Ministry of Public Health and by the institutional review board at Johns Hopkins University. All respondents signed informed consent forms.

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