Provision of Health Care in Rural Afghanistan: Needs and Challenges

Afghanistan's health system is severely limited in terms of preventive and curative services, referral systems, and human resources. Most of the country's citizens reside in rural areas, a majority of which are served by "basic health units" (small and simple facilities that provide primary care), and these rural residents face additional challenges regarding timely access to quality health care.

The analysis described in this article, which focuses on data derived from 2 rural health units during a 1-year period, revealed that infectious diseases, mainly acute respiratory infections, were a primary concern and that there is a clear need for increasing access to health services. In addition, our results showed that women are underrepresented as patients and appear to be at higher risk than men of tuberculosis. (*Am J Public Health*. 2004;94:1686–1688)

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BADGHIS IS A PROVINCE IN the northwest part of Afghanistan with an estimated population of 720 000. Large numbers of refugees have returned to Badghis since the end of the war in Afghanistan and continue to return, albeit in smaller numbers. The province is mainly rural and, as is the case with much of the country, suffers from a lack of trained health professionals; according to estimates, there are 0.8 physicians and 0.1 midwives per 15 000 persons.[1] In 3 of the 6 districts in the province, there are no physicians at all.[2] The capital city of Qala-I-Naw has the only hospital in the entire province; primary health care is provided by a system of "basic health units" (BHUs, small and simple facilities that provide primary care).

After mapping catchment areas and underserved areas in the region, Médecins Sans Frontières/Doctors without Borders (MSF) constructed and supported 3 BHUs in Badghis Province, providing training and medical supplies and hiring essential staff. We have summarized consultations that occurred during a period of 1 year (November 2002–October 2003) in the 2 BHUs—Khairkane and Char Taq—that have been in operation the longest.

The Khairkane and Char Taq BHUs are somewhat remote but not atypical of Afghanistan. Each BHU serves an estimated 12 to 16 villages in its catchment area, with a population of approximately 15 000 to 25 000 in each area. Each unit employs a medical clinical officer, a vaccinator, a laboratory technician, a pharmacist, and 2 outreach workers/health educators. Laboratory facilities are limited to confirmation of malaria via microscopy and rapid test. In addition, there is a midwife in Khairkane but no facilities for deliveries; the midwife provides antenatal care and consultations in regard to contraception and gynecologic complaints, educates traditional birth attendants, and sometimes attends home deliveries. The BHUs have some solar power available (for microscopes), and water is obtained from nearby hand-pumped wells.

According to medical records, in the 12 months between November 2002 and October 2003, the Char Taq and Khairkane BHUs had a combined total of 34 480 consultations. Of the leading 5 causes of morbidity, the top 2 were infectious diseases: acute respiratory infections (23.0%) and malaria (18.0%). Malaria cases were primarily caused by *Plasmodium*

vivax, but 649 cases (10.5%) were suspected or confirmed as originating from *P falciparum.* In the absence of resistance data, artemisinin combination therapy, in this instance artemisinin in combination with sulfadoxine–pyrimethamine (Fansidar), was used to address a large seasonal epidemic. Bed nets have been distributed to vulnerable communities for use in malaria prevention.

Other than acute respiratory infections and malaria, nonspecific but official diagnoses, specifically peptic disorder (5.4%), body pain (5.4%), and anemia (5.3%), were the most frequent causes of morbidity. These diagnoses are subject to some degree of interpretation. While certain risk factors for peptic disorder, such as alcohol and tobacco use, are rare in Badghis, many families experience a tenuous hand-to-mouth subsistence, and thus stress may be a contributing factor. To a degree, peptic disorders and certainly "body pain" appear to involve both biomedical and psychosomatic causes. Anemia diagnoses are clinical and appear to be largely related to pregnancy and malaria. However, the medical reasons behind anemia are still not well understood by health care workers.

The morbidity data just described point to limited training, limited diagnostic capabilities, and a health care system that is still in development in regard to such fundamental aspects as standard case definitions, resulting in some diagnoses being difficult to interpret. The rural medical workers are performing to the best of their ability; however, there is a need to upgrade their capacity, a process that will require in-depth training over an extended period of time.

A wide range of other infectious diseases were responsible for less than 5% of overall morbidity, including urinary tract infections, gastrointestinal parasites, dysentery, diarrhea, scabies/skin infections, suspected pulmonary tuberculosis, and typhoid fever. In addition, the BHUs treated some infectious diseases with emergency epidemic potential, including 7 cases of suspected cholera and 3 cases of suspected measles. Thus far, no HIV testing has have been conducted in the BHUs. In both of the study BHUs, women were more likely to present with pulmonary tuberculosis (357 female vs 230 male cases; relative risk [RR]=3.43; 95% confidence interval [CI]= 2.91, 4.04; $P<.000$). Women often must remain inside the home, in crowded conditions, and they often must attend cooking fires inside the home, a combination of factors that results in their being more prone to pulmonary complaints.

The data described thus far are illustrative of 4 principal obstacles to access to care in Badghis: lack of access owing to transport difficulties or substandard referral systems, lack of human resources, gender roles, and insecurity. In this predominantly rural country, transport options are few, and there is no reliable referral system. The Khairkane BHU is 62 km from Qala-I-New, but, as a result of poor road conditions, the travel time between the 2 locations is 3 hours. The Char Taq BHU is even farther from Qala-I-New, a 7-hour drive and approximately 9 hours in winter. Rural Afghans mainly travel by foot or by donkey, which means reaching the nearest BHU can take 12 hours.

Seeking prompt care for malaria at a BHU is difficult, and it is nearly impossible to obtain more advanced care for emergencies such as obstetric complications. Although MSF is initiating tuberculosis diagnosis and treatment at the Khairkane BHU, for the most part tuberculosis can be diagnosed only in Qala-I-New. This situation prompts most people in the region to attempt antibiotic self-treatment via pharmacies, which can lead to improper or incomplete treatment, in turn possibly leading to treatment failure and accelerated drug resistance.

Another notable constraint is lack of human resources. The lack of trained health professionals, especially women, is arguably the single greatest problem. Despite intense recruiting efforts, it has been extremely difficult to find physicians to work in rural areas. Although training with the present clinical officers is ongoing, they currently have only 3 to 6 months of formal medical training, representing the typical level of experience among the province's rural health care workers. In the face of still developing case definitions and extremely limited laboratory support, diagnoses are usually made on the basis of patients' self-reported symptoms.

As previously noted in regard to tuberculosis and respiratory illnesses, gender roles are important factors in susceptibility to certain diseases. During the study period, only 31.2% of consultations involved women. This underrepresentation of women is attributed in part to the shortage of female health care workers. In the case of some types of consultations, especially gynecologic or obstetric, cultural norms dictate that only female medical staff can attend patients.

Gender status is also an important factor in regard to access to care. Women must always be accompanied by an escort, or *maharam*, and this individual must be their husband or an adult male relative. With their husbands at work, many women cannot seek care or bring their children to seek care. Because of their inability to move about without a maharam, women remain in their residence, a situation that has been posited as a contributing factor to the much higher national rates of tuberculosis among females. (Maharam considerations are also critical in the search for female health professionals who can relocate to medically underserved areas.) It is important to note that, although the Taliban reinforced gender roles strongly curtailing women's rights, many aspects of gender status in Afghanistan long predate the Taliban. Gender status appears to affect even pediatric access to care; the fact that the majority (60.1%) of pediatric consultations involve boys is being explored.

Security continues to be a concern even in the "quiet" province of Badghis, representing another barrier to health care access. Incidents of violence have interrupted delivery of medical supplies and service. MSF had to evacuate its international staff from the province twice in 2003 owing to factional fighting, and there have been multiple incidents of armed robbery, some specifically targeting nongovernmental organizations (NGOs). Large parts of the neighboring province of Faryab are considered too insecure for international staff to visit. (In the southern and eastern parts of the country, home to approximately one third of the population, ac-

cess is extremely restricted. NGOs are perceived as part of the coalition forces' political agenda, and numerous aid workers have been targeted and killed.)

Certain data indicate that further investigation is needed into the population's treatment-seeking behaviors. For example, no deaths have been recorded in the BHUs, and the extent to which this fact indicates that gravely ill people choose not to seek care at the BHU, put off seeking care until they are too weak to travel, or bypass the BHU directly is not clear. At the provincial hospital in Qala-I-New, the primary causes of mortality among women are pregnancy related. As do the results of other studies,[3,4] these data suggest that reducing maternal mortality remains among the highest priorities, and one that presently cannot be addressed by most BHUs.

The unusual finding that there are more dysentery cases than cases of nonbloody diarrhea may also be related to treatment-seeking behaviors. For the most part, people believe that they have a good understanding of at-home treatments of diarrheal disease via oral rehydration, while they consider dysentery serious enough to seek care at a BHU. Alternative sources of care in rural areas include buying drugs directly from shops and seeking religious healing from priests or imams. Reasons for seeking alternative care other than proximity/travel constraints need to be explored.

In pursuing reconstruction of the health sector at the national level, the transitional government, with the assistance of donors and NGOs, has developed a basic package of health services for Afghanistan. This package of health services is intended to be available to all of the country's citizens through an integrated network of health posts, BHUs, comprehensive health centers, and district hospitals. Services, staffing, and salaries are all the responsibility of the Ministry of Health, which also serves stewardship and monitoring functions. Delivery of health services is contracted out to NGOs via 3 main donor programs: the US Agency for International Development, the World Bank, and the European Community. (MSF works independently of the reconstruction plan, and other NGOs will take over MSF health services in instances in which reconstruction plans are being realized.)

Improving quality of health care and access to care in Afghanistan will require sustained and long-term efforts; however, the country's health needs are acute. The areas of curative care, prevention programs, health education, medical human resources, health infrastructure, and access for vulnerable groups such as women need to be treated with greater urgency. In addition to the Ministry of Health, several international and national NGOs and international donors are working to improve health services when security conditions allow.

Curative care in rural areas will require more than a well-stocked pharmacy. Special programs such as tuberculosis outreach, reproductive health, and other services will require innovative local solutions (e.g., transportation to tuberculosis outreach services by donkey) to deal with immediate gaps in care, and critical needs, including increased numbers of qualified medical staff and sustainable allocation of staff to rural areas, must be addressed. ■

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Contributors

B. Reilley contributed to the analysis and interpretation of the data and to the drafting of the article. T. Frank and T. Prochnow contributed to the acquisition and interpretation of the data. G. Puertas and J. van der Meer contributed to the interpretation of the data and to critical revisions of the article.

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While this article was in press, gunmen killed 5 Médecins Sans Frontières (MSF) workers in an ambush in Badghis. MSF subsequently left Afghanistan because the Afghan government has not fulfilled its obligations under international law to investigate and prosecute those who planned and carried out the killings; a Taliban spokesman claimed responsibility for the murders, further stating that MSF could be attacked again for working for US interests. Continued insecurity and targeting of aid workers make delivery of health services, especially those offered by NGOs, even more difficult and will adversely affect the health of Afghans in many areas for the foreseeable future. Besmillah, Egil, Fasil, Helene, and Pim, you continue to be remembered and missed by your colleagues around the world.

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