Socioeconomic development has brought major improvements in global health. Advances in health care have played an important role. However, social determinants—social, economic, political, cultural, and environmental factors—heavily influence people’s demand for, access to, and use of health services. As a reflection of wider social inequalities, health systems tend to favour the better off, sustaining and sometimes amplifying health inequity (China). This is not inevitable. Healthcare systems and services can promote health equity if they are designed to maximise the “fit” between patients and providers.

We use examples of health programmes taken from low, middle, and high income countries (Cambodia, Iran, Mexico, and the United States) to show how designing health services to take account of and work with wider socioeconomic determinants can improve health equity by enhancing service delivery and promoting uptake, particularly among the poor. Limited availability of data and limited attention to equity when evaluating health programmes make it difficult to reach definite conclusions, but in each case we highlight aspects of the intervention that could plausibly improve equity of access.

**China: growth and inequity**

- Between 1978 and 1998 the number of people below the poverty line in China fell from 250 million to 42 million
- As per capita income has risen, so too has inequality—not only in economic terms but also in social terms that affect access to health services
- Changing patterns of income and employment have produced a “floating population” of 100-200 million migrant workers, who move from rural to urban areas
- Often on short term contracts, and without urban residency status, these people cannot access health care and other statutory benefits, including reproductive and sexual health services
- In 2005, around 80% of new HIV infections in Beijing were in migrant workers

**Health equity funds in Cambodia**

User fees are charged for public health services in Cambodia and high healthcare expenditure is a “major cause of indebtedness and destitution among the poor.” To alleviate problems caused by heavy use of unregulated private providers and high out of pocket health payments among the poor, Cambodia has been experimenting with “equity funds” to cover the cost of public health services provided to disadvantaged families.

Catastrophic health expenditure in Cambodia is a “major cause of indebtedness and destitution among the poor.” To alleviate problems caused by heavy use of unregulated private providers and high out of pocket health payments among the poor, Cambodia has been experimenting with “equity funds” to cover the cost of public health services provided to disadvantaged families.

The Kirivong health equity fund, established in 2003, is based on community level Buddhist temples (pagodas) to help identify poor beneficiaries and to administer exemptions. The Buddhist tradition in Cambodia “represent[s] a pivotal social institution ... The Buddhist clergy evokes widespread popular deference, and has exceptional power to influence social behavior at the grassroots level.” Eligibility for access to health equity funds is determined

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**Cambodia: Health equity funds**

- In 2001, Cambodia introduced user fees for health services. This significantly reduced access to services, especially in poorer households.
- Several operational health districts (each covering 100 000-200 000 people) have piloted health equity funds to promote use of public health care and provide fee exemptions for the poor.
- Health equity funds in Cambodia can use Buddhist temples (pagodas) to help identify poor beneficiaries and to administer exemptions.
- Eligibility for benefits is assessed using criteria such as quality of housing, land ownership, and daily household income. Additional criteria include no ownership of luxury goods or animals and seven or more economically inactive household members.
- Twenty six health equity funds were operational in late 2006. They mainly cover hospital costs, but some are starting to cover lower level services.
jointly by the district’s chief Buddhist monks and representatives of the civil administration. The system seems to work—income among fund beneficiaries is about a third of that of non-beneficiaries. Surveys of public perception carried out before and after the fund launch show that management of health services has improved in several categories, including leadership (with low levels of perceived nepotism), organisation (including collaboration between majority Buddhist and minority Muslim groups), and mobilisation of resources.

Involving an established, locally trusted institution such as the pagoda as an “honest broker” may have strengthened confidence in the health equity fund, both within communities—where targeting households for benefits in villages with high levels of poverty can lead to stigma or breakdown of community cohesion—and between service users and service providers, who may not provide services equitably to fee paying and fee exempted households. Moreover, although equity funds in low income countries often rely on external finance and administration (with high overheads and questions of sustainability), resources for this fund come mainly from the communities in which it operates.

**Tentative lessons**

- Targeting poor families to receive benefits can be costly and socially fraught. Using a third party broker, especially one that is locally embedded and trusted, to target funds shows potential in this role and may strengthen confidence in the fund.
- The widely accepted contribution of primary care to health equity suggests that equity funds should focus on local provision of primary care and strengthen upward referral.
- Although the pagoda works well as a local broker in the relatively homogeneous Buddhist communities of Cambodia, such a system may not work well in other sociocultural contexts.
- Evidence that user fees decrease the uptake of health services by the poor may argue for the removal of such charges, rather than their mitigation through exemption mechanisms.

### Iran: Community health workers

- Iran’s rural healthcare system emphasises the role of community health workers (behvarzes), who work through village level “health houses” (the lowest tier of the healthcare system and the primary interface between service providers and communities).
- Around 16 000 health houses (each with two to three behvarzes) serve about 65 000 villages and cover around 95% of the rural population.
- Behvarzes—usually one man and one or two women for each health house—are recruited from the local population. They are trained for 24 months (four months’ intensive training and 20 months’ in-service training) and cost around $2000 (£1020; €1280) each a year.

Soon after Iran’s 1979 Islamic revolution, the Health Ministry decided to focus on rural areas, where most of the country’s poverty lay and where health conditions were especially poor. Per capita income was less than 50% of that in urban areas, and infant mortality was nearly twice as high. Community assessments of Iran’s rural health needs in the early 1970s showed that around 80% of health problems could be dealt with by health workers with less training than a doctor; that malnutrition, infection, and conditions “not strictly medical” underpinned much of the rural health disadvantage; and that, consequently, interventions should focus on supporting “changes in behaviour and environment.” These insights provided the basis for a rural health services policy constructed around the behvarz. By 2000, rural infant mortality had dropped by 75%, and rural-urban disparities had been mostly eliminated. Between 1976 and 2000, total fertility rate fell from 4.5 to 1.8 births in urban areas and from 8.1 to 2.4 in rural areas. The behvarzes—young men and women—are recruited from the villages where they subsequently work. Village level surveys show that they have been widely accepted, although greater confidence is placed in older rather than younger workers. Behvarzes receive two years’ training, and the minimum educational requirement is a high school diploma. This training is intended to strengthen the reputation of the behvarzes and reduce the well known tendency of patients to bypass community health workers and go to higher level facilities. In 2000, uptake of health messages showed almost no difference between rural and urban areas. The behvarzes model promotes continuity of care. The health house itself acts as a community level health information system—crucial to effective monitoring, outreach, and follow-up. Each health house maintains a “vital horoscope”—a visual chart representing the health of the community, which allows quick identification of households needing attention. Not all of the reduction in health disparity in Iran can be attributed to primary health care alone. At the same time, the government invested in other programmes relevant for health, such as delivering clean water. However, health related performance is better in communities with behvarzes than in control villages—use of modern contraceptives by women is greater, fertility is lower, and fetal death and infant mortality are significantly lower. Moreover, the disparity in rural-urban incomes decreased only slightly at the same time that disparities in use of basic health services were largely eliminated.

### Tentative lessons

- The community health worker model is not unusual, but the high level of training in this model, which increases the behvarzes’ credibility, is noteworthy.
- The continuity of locally organised care supported by health information systems in the health houses also seems to be important (consistent with observations by others).
- This kind of universalist approach to primary health care was achieved only with high level political and financial commitment by the national government.

### Conditional cash transfers in Mexico

Mexico’s PROGRESA programme (Programa de Educación, Salud y Alimentación, renamed Oportunidades in 2001) is one of the best known and most comprehensively evaluated national initiatives designed to increase uptake of health and related services by the poor. The programme uses cash
incentives (conditional cash transfers) to encourage poor households in rural areas to take up services that help break the chain of poverty between generations—mainly services related to health, nutrition, and education. Participating families receive monthly food supplements, conditional on regular health checks for children, pregnant women, post-partum women, and other adults. A monthly payment is also available for children at specified grade levels, conditional on greater than 85% school attendance. Average monthly household transfers are around $36 (£18; €23), with a lower limit of $15 and an upper limit of $153.

Primary school enrolment under the programme has risen by 1.07% for boys and 1.45% for girls. Secondary school enrolment has risen by 14% for girls, and 8% for boys, with evidence of earlier entry into school, less grade repetition, and better grade advancement. Oportunidades children (age 1-5) had 12% less illness than other children and grew an average of 1 cm more. The scheme also seems to affect the health of adults in the household, with “19% fewer days of difficulty with daily activities due to illness.”

Importantly, the cash transfers are directed to the mother or female head of household. Funds flowing via female household members are more likely to be spent on children. In Bangladesh, the Grameen Bank’s work on microcredit showed that “each additional 100 taka of credit to women increased total annual household expenditures by more than 20 taka [while] there were no returns to male borrowing at all.” The Oportunidades’ transfer approach seems to increase women’s empowerment. In beneficiary households, husbands were less likely to be the sole decision maker and women were more likely to have sole power over decisions about the use of additional income.

**Tentative lessons**

Oportunidades recognises low take-up of vital health related services in the poorest households. In response, it provides carefully measured financial support, rather than a blanket subsidy, and it recognises the positive role that women play in utilising that support. However, three notes of caution exist.

- Firstly, although conditional cash transfers may increase demand for services, benefit depends as much on the quality of those services, and extra investment in service infrastructure is needed.
- Secondly, the success of the rural programme has inspired policy makers to expand it to poor urban households, but the different socioeconomic conditions in cities should be taken into account when redesigning the programme.
- Thirdly, making payments conditional on uptake of services may place too much emphasis on demand and the behavioural choices of poor households as the core problem, and it may underestimate the wider barriers presented by poverty itself to good and fair health.

**Women, Infant, and Children Nutrition Programme in the US**

The Women, Infant, and Children Nutrition Programme in the US is a non-entitlement programme, which—like Oportunidades—directs benefits to poor women and their children. This programme’s high rates of participation—71% of eligible women and 78% of infants—may be related to its strong focus on convenience of access to services. The programme runs through a wide range of community based sites: county health departments, hospitals, mobile clinics, community centres, schools, public housing sites, migrant health centres and camps, and Indian health service facilities. Nutritional benefits are generally agreed to accrue especially to the most disadvantaged women and infants.

There is some controversy surrounding the evaluation of positive outcomes in this programme. However, a national evaluation using data from 1980 to 1985 showed that children receiving such benefits were significantly more likely to have a regular source of health care, and that the incidence of iron deficiency anaemia was reduced in participating infants, with the strongest dietary effects seen in the poorest children and those from large families or from households with a female head. It also provided evidence of higher birth weights in newborns and fewer low birthweight babies, protection against preterm delivery, lower Medicaid costs, reduced infant mortality, and a positive effect on immunisation status in families receiving benefits.

**Tentative lessons**

- Like Oportunidades, this programme emphasises the benefit of supporting women in their health protective role within families.
- Operating under the national Department of Health, it raises the Stardard of living to help families escape poverty.
of Agriculture, but through health departments at the state level, the programme provides insight into how health and health equity can be built into cross sectional government working.

- From its inception, despite some critical evaluations, the programme has received support from both political parties. As in Iran, this underpinning (and long term) political commitment is vital to reducing health equity.

Conclusion
Social determinants matter for the design of health programmes intended to reach the poor. The examples discussed here show that healthcare services are a key determinant of health and health equity and also that policy needs to take account of both the demand for and the supply of services.

But effective action on equitable demand and supply depends on sustained attention to a wider set of social determinants outside the conventional health sector. These include the empowerment of women; the role of local civil society institutions in fostering trust between communities and service providers; the effect of poverty on demand for health services, not simply through reduced incentives to seek care, but through barriers, such as geographical or social marginalisation, that prohibit care seeking; and underlying all of these, the vital role of the public sector and of political commitment to invest in and fashion a healthcare system from which all can benefit equitably.

Fundamental to all of these actions is the need for better data, to evaluate more comprehensively and systematically the effect of policies and interventions on health equity. Such evaluation currently remains a distant poor cousin to cost effectiveness studies (which can disadvantage poor communities in which effective action usually costs more). Acknowledging and measuring health inequity—as political a process as any subsequent intervention—is the indispensable basis of health equity action.

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SUMMARY POINTS
Health services are in themselves an important determinant of health. Improving health care should not be seen as an alternative to—but rather as complementary to—action on social determinants of health.

Inequity in health services access, use, and benefit is determined by social, economic, political, and cultural factors

Health services design and delivery that accounts for social determinants can improve services and their impact in poor or excluded social groups

Such an approach must adapt to the local social, economic, political, and cultural context

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