



Published in final edited form as:

*Soc Sci Med.* 2009 February ; 68(3): 410–418. doi:10.1016/j.socscimed.2008.11.006.

## Public Health Works: Blood Donation in Urban China

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### Abstract

Recent shifts in the global health infrastructure warrant consideration of the value and effectiveness of national public health campaigns. These shifts include the globalization of pharmaceutical research, the rise of NGO-funded health interventions, and the rise of biosecurity models of international health. We argue that although these trends have arisen as worthwhile responses to actual health needs, it is important to remember the key role that public health campaigns can play in the promotion of national health, especially in developing nations. Focusing on an example set by China in response to a public health crisis surrounding the national need for a clean and adequate blood supply and the inadvertent spread of HIV by way of blood donation in the early 1990s, we argue that there is an important role for strong national public health programs. We also identify the key factors that enabled China's response to this burgeoning epidemic to be, in the end, largely successful.

### Keywords

China; Public Health; Blood Donation; interventions; HIV

### Introduction

The emergence in recent years of the “Global Health Sciences” field (or various versions thereof) in lieu of “International Public Health” has entailed a concomitant shift in focus of health interventions that potentially diminishes the strength and visibility of national public health programs. Although some have argued that this change in nomenclature reflects no more than old wine in new bottles (Brown et al. 2007), globalization itself (reflected in this redefinition of the field) has spurred at least three structural changes in health delivery systems that marginalize, or minimally overlook, national public health programs (Adams et al 2008; Novotny 2007). One of these trends is the globalization of pharmaceutical and biomedical research, which augments local participation in clinical trials research but diverts resources from national public health programs (and in the worst case, enrollment in clinical trials

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becomes the only way for the poorest to gain access to health resources) (Petryna 2006). Another trend is the growth of small- and large-scale NGO-based health and development organizations, which cumulatively pose a risk to the role played by large multilateral and bilateral aid organizations in helping countries design and deploy effective policy and practice through public health measures (McNeil 2008). A third trend is the rise of biosecurity programs in the guise of health interventions, which run the risk of undermining integrated health development programs by diverting resources to proposed (or imagined) biological threats response preparedness (Lakoff 2008; King 2002).

With these trends in mind,<sup>1</sup> it becomes increasingly important to consider the value and effectiveness of national public health programs in particular instances, especially in under-resourced nations. We focus on the case of China's national health campaign to promote safe donation that grew out of the contaminated blood crisis that fueled the spread of HIV in the countryside. Although China is not under-resourced compared to some nations, in its control of infectious diseases and its challenges in restructuring its blood donation and collection practices, China still looks very much like many other developing nations. With the economy and society undergoing massive reform, the nation must develop a modern health infrastructure to meet the needs of its population of 1.3 billion, the majority of whom are poor and rural. Thus, China's experience is instructive for examining how international public health standards and practices can shape national programs, and how national health programs transform such practices to successfully meet local needs.

This paper focuses on the effectiveness of China's public health system through the lens of the blood donation infrastructure. We recognize that China's public health programs have been widely scrutinized, not infrequently with political overtones. Widely divergent reports have ranged from initially positive reviews of the barefoot doctor movement of the 1970s to more recent, and much less laudatory, coverage of the national response to SARS and control of the Avian flu. Our exploration of China's donation system is haunted in particular by the public health crisis that emerged from China's initial inattention to HIV/AIDS prevention, and the mushrooming of HIV transmission from contaminated blood in the early 1990s. Kick-started by this crisis, China's public health infrastructure now actively undertakes HIV prevention efforts. We do not explore the larger HIV/AIDS epidemic and response here, and we recognize blood collection practices, and ensuring a safe blood supply, are only one dimension of the national epidemic. We focus on this component precisely because it highlights the role of a national health program in managing the conflicting problems of unsafe donation on the one hand, and the nation's need for safe blood on the other.

The success of the campaign arises in part from strategies used in China to publicize the need for blood, and the marketing of blood donation as a public good in ways that make cultural sense to Chinese donors. Relying on local knowledge to augment participation in public health efforts is not new, and China's example is a good one. Other reasons for the success of the blood donation campaign are particular to China's public health infrastructure and are surely peculiar to China alone. The story of that effort merits more widespread attention than it has received to date.

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<sup>1</sup>While recognizing that it is impossible to generalize these trends to all countries, and while we also recognize that some of these trends might contribute indirectly to strengthening public health programs in some instances, we begin with this scenario to make the point that we should be worried. So, for example, some will note that pharmaceuticals and bioscience research projects that are done collaboratively in under-resourced nations can help build local infrastructures for scientific research and potentially stem the net outflow of qualified biomedical researchers from poor to wealthy nations. Also, in some regions, NGO programs are required to work through national ministries or bureaus of health, enabling national public health programs to coordinate efforts to build a strong national public health system. Finally, we note that biosecurity programs can also augment local national public health infrastructures when they focus on eradication of vectors of transmission, even if they can undermine other programs, such as small business loans for chicken farmers, and other livestock businesses (which are eradicated in programs to eliminate vectors).

The data on which this analysis is made come from two years of interview and participant observation research in Shanghai, China, between 2006 and 2008. Eighty Seven adults were interviewed individually (n=50) or in focus groups (n=37), about their history of blood donation and about their attitudes about donating blood. We also interviewed representatives from work sites about their policies and practices of blood donation (n=10). Data was collected by a team of researchers, and questionnaires were designed in a collaborative process with Chinese and US researchers. Working together, a team of Chinese interviewers was selected representing a range of age, socioeconomic status and occupations. This team worked to achieve a representative cohort along lines of gender, age, and socio-economic status of the individuals and groups interviewed. They conducted interviews using snowball methods and focus groups. Interviews were conducted in homes, with IRB approved consent of informants. IRB approval for the research was gained from both US and Chinese collaborating institutions. Data analysis involved each investigator reading the interviews (in Chinese or in English, with translation). The investigators then discussed findings and analysis together over a period of several months. Results were agreed upon and formed the basis for publications that were written independently by American and Chinese authors, by request of the Chinese investigators.<sup>2</sup> The results are specific to data that come from Shanghai but we believe many of the insights are true for urban China in general, and are informative with regard to China's national public health response.

### The Problem of HIV and Blood Donation in China

The HIV/AIDS crisis in relation to blood donation in China has been well documented. (Shan, et.al. 2002; Zaller, et.al 2005, 2006; Jing 2006; Erwin 2006). Briefly, in the early 1990s, following accelerated post-socialist market reforms, China witnessed a rapid growth in the commercial procurement of blood (Erwin 2006). Provincial health centers hoping to augment income, as well as private businesses, established numerous blood and plasma donation centers where donors were paid for their donations. In some rural areas, blood sellers returned as often as twice a week. The blood was not tested for HIV, conditions for drawing blood often entailed re-use of needles and, in the case of plasma, donations were pooled by type, separated by plasmapheresis and donors were re-injected with pooled blood. By the mid 1990s, it had become apparent that blood donation and transfusion had become a major source of the spread of HIV, with some reports indicating that up to 60–80% of the adult population of some villages had been infected in this way (Wan 2002). Official statistics place the proportion of HIV infections attributable to contaminated blood at 8–17%, but the actual number is unknown, and some experts have suggested that the spread of HIV in China by way of blood donation and transfusion is much higher (see Erwin 2006). UNAIDS reports that of 75,000 living with AIDS in China in 2005, 22,000 were infected by contaminated blood (UNAIDS: China At a Glance). As disturbing as these figures are, they pale in comparison to the infection rates of Hepatitis B (and C) that – although less noted in the media – have accompanied this crisis. Indeed, Hepatitis B virus (HBV) is endemic in China, with a prevalence of about 10% in the general population (HIV prevalence is about .05% nationwide), and for many Chinese, HBV infection from contaminated blood poses a much more present danger.

Starting in 1996, the central government closed down many of the state-run commercial centers, and in 1998 outlawed commercial blood procurement. Since then it has invested more than 200 million Yuan in the construction of new blood centers, and the implementation of more stringent screening and collection - procedures. More importantly, it deployed effective propaganda campaigns to both promote voluntary blood donation, particularly in urban areas, and minimize public fears of the risk of contamination (Xinhua News Agency 2001). It is important to note that “propaganda” in China is understood as a form of mass public education,

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<sup>2</sup>The collaboration with Chinese researchers was initiated by Kathleen Erwin, who has a history of conducting research in urban China and who initiated the grant.

and does not have the negative political connotations with which it is attributed in the US and many other western countries.

Operating on the internationally-accepted assumption that eliminating “blood selling” would eliminate a source of contamination, China made this the linchpin of its campaign. It utilized a combination of educational and compulsory strategies to increase donation at legitimate blood centers – particularly in urban areas where demand is greatest, but donation has been historically low. Relying on the existing social structures of the universities and work units to which the large majority of healthy adult Chinese are affiliated, the Ministry implemented a “planned” (*jihua*) donation system, in which a quota was established for the work unit – not the individual. In China, the work unit, or *danwei*, refers to state-owned or state-run enterprises where most urban Chinese continue to work. Although a growing number of Chinese are now self-employed or work in private enterprises, the work unit remains a fundamental social and economic structure in China, and a primary reference point for Chinese. Simultaneously, mobile vans were deployed to make blood donation both more visible and more convenient. In its campaign, the Public Health Bureau took advantage of the media, the established relationships that people had with their work unit, and the knowledge that in order for citizens to trust in the state’s demands for blood donation they would have to be convinced of not only its safety, but its worthiness, as a contribution to the national good. We describe these techniques, and the intersection and synergy of the structural and educational strategies, below.

Suffice to say that Chinese public health officials and researchers note that this campaign has resulted in dramatically decreasing the proportion of blood supplied by paid donors and increasing the blood supply from voluntary donors. Shan et.al., report that in one city the number of voluntary whole blood donors increased between 1993 to 2001 from 55 donors to 96,320 donors. Wang (2004) reported similar increases in voluntary donations, such that by 2004, 58.6% of blood came from voluntary donors, 29.9% from employer organized donors, and 11.5% from paid donors. Recent statistics from the Shanghai Blood Center approximate that 30% of blood for clinical use is purchased from other provinces, and voluntary donations comprise another 21%. The remaining 50% comes from work units and universities fulfilling their quotas under the planned donation system (China Daily October 19, 2004 (eastday.com). Shanghai’s continuing reliance on commercial sources is in part due to the high demand for blood in the megalopolis with numerous hospitals and clinics and the medical infrastructure to engage in advanced medical and surgical procedures that may require more blood.

Whole blood donations represented by these statistics account for a large proportion of China’s overall procurement infrastructure, and are certainly the thrust of the public health campaign. But they do not account for all donated blood. In China, whole blood donation, primarily used in clinical settings, is regulated by the Ministry of Health, and is thus integrated into the public health system. Plasma donation, used in the blood products/derivatives industry, is regulated by the National Institute for the Control of Pharmaceutical and Biological Products. While we do not have statistics on the latter, we suspect that “commercial” donation remains a primary source of blood for these commercial plasma centers.

Nevertheless the concerted effort China has directed towards transforming its public health donation system in recent years has proven overall effective in attending to two national health needs: reducing the spread of transfusion transmissible infections (TTI) while increasing its supply of safe and clean blood.<sup>3</sup> We note that some evidence shows that voluntary donors at mobile units have a slightly lower rate of TTIs than at blood donation centers (which are often used by work units), and this number decreases for donors who give more than once (Zaller et al 2006). Still, donations by way of the work unit remain the most plentiful source of what is considered on the whole to be a means to ensure a safe blood supply. The details of how this

broad-reaching transformation was achieved are instructive, point to the critical importance of the public health campaign in accomplishing these dual goals.

## Addressing the Cultural and Social Impediments to Blood Donation

In addressing the challenge of eradicating unsafe donation, while ensuring an adequate, safe blood supply, Chinese public health officials had to address several issues at once. These were both cultural and sociological in the sense that one pertains to cultural notions derived from classical Chinese medicine and gender ideologies about blood and blood loss, while the other pertains to social evidence concerning the effects, and risks, of blood donation.

### Cultural Beliefs about Blood

Cultural beliefs about blood, and the health effects of its depletion, predispose many Chinese against blood donation (Erwin 2006; Shan 2002). In classical Chinese medicine (also called TCM), blood is understood as a vital bodily essence (similar to *qi*), and loss of this essence can lead to long term decline in health and vitality. Although educated urban Chinese are familiar with biomedical understandings of blood as a regenerative tissue, many nevertheless retain some intrinsic fear of lost health and vitality associated with blood donation. In many cases, this fear was enacted through overt resistance to donation, such as young women who would deliberately lose weight at the time their work unit was called upon to donate in order to fall below the 45 kg minimum weight requirement. We found that Shanghainese were forthcoming about their fears of donating:

Sometimes my friends would say impulsively “I’m going to donate blood.” But they never put their words into action. I heard a colleague in her 40s by then had donated blood and slept for a whole day after donation. Later when her son’s work unit called employees to donate blood, she desperately stopped him from donating, afraid that he would feel dizzy. Her son finally skipped it. About six or seven years ago when I was in school, people felt frightened upon hearing about blood donation. Girls stopped eating to lower their body weight so that they would be able to avoid donation.” #29 F24

(Wife): At first I believed that giving blood was scary and believed that taking blood out was harmful to the body... From my own experience, I felt fatigue no matter how much rest I took after donating. As I went out under the sun, I had a shock and sudden blindness that made me have to crouch to recover. I’m not sure if it was caused by blood donation or the extremely high temperature that day. (Husband): Actually there is a seasonal choice for blood donation. It’s suitable to donate in spring and autumn instead of summer and winter. The neighbors said my wife shouldn’t have donated on such a hot day. The *qi* could be harmed without proper rest and as much nutrition intake as possible.... Male donors would feel tired and listless after donation. Laborers work had to stop because of their inner deficiency of blood. It would be ok after 2–3 days rest. ...women would feel sore in the waist after donation. #24 F46 (wife), M49 (husband)

Sentiments about loss of vitality were sometimes expressed in relation to semen, which is known as another vital essence that is influenced by the strength of the blood:

We have a saying, that “one drop of semen equals ten drops of blood.” It refers to the relationship of blood and spirit. *Jing* (semen) may refer to the spirit of a person and link with blood, as we usually say “A flourishing *qi* and blood makes a person fit.” A healthy person means he or she has healthy blood, which leads to good spirit. Thus, taking blood out of the body may affect human spirit. This is my understanding. #11 F50



Semen is the essence of man, so is blood. Both are too precious to lose much. If you do, your health is impaired. Most emperors died at early ages. They had many concubines besides an official wife. This [early death] may be due to high frequency for their sex life, which affects health and longevity. This is told and passed from generation to generation. I'm not sure if it's scientifically correct, but it is widely accepted among Chinese. Now blood donation is encouraged. A normal and appropriate frequency for sex life is fine. Excessively high or low is harmful to health. This is why we say that ten drops of blood equals one drop of *jing*. #14 F34

Many feared that even a small amount of blood loss (200 to 400 cc) not only would compromise one's health temporarily – for example requiring a rest of a few hours and a nutritive meal to recuperate – but also could risk one's long-term health – requiring up to several weeks rest and the consumption of a special diet for several days to fend off. Thus, many Shanghainese described the ways that one could replenish one's health after blood loss through special nutritive foods (red dates, red beans, hen soup) as well as through traditional Chinese medicines and albumin supplements. Most felt that 3–5 days was the minimum required for a small donation (200cc) and that 2 weeks or more of rest was needed to recuperate from a donation of 400 cc. While many younger people felt these practices were sufficient to recuperate, others felt that even these remedies were not enough to undo the potential harm brought about by blood loss.

The value placed on blood as a vital essence, and the concomitant fears about blood loss, framed the perception that it was only people who were desperate for money who would willingly part with their blood. “Blood selling” in particular, was seen as compelled by poverty – a troubling act of desperation, or even “backwardness” (*luohou*) (Erwin 2006). Only someone who was in extremely dire condition already would consider selling his or her blood for money and suffering the ill-health effects (to self, family, and lineage) thereafter. Indeed, reframing the motivation, or conditions under which one would willingly donate blood, was one of the key challenges faced by the public health program that hoped to both eliminate paid and augment voluntary donation. We explain how this challenge was met follows.

### Social Fears of Contamination

Even before widespread public disclosure of the contaminated blood crisis in 2001, many urban Chinese already knew of blood selling practices in the countryside, and associated it with the desperate poverty of the rural population (Erwin 2006). Even those unaware of the threat of HIV already feared HBV contamination from blood donation, and it was not uncommon for Chinese to know someone who had contracted Hepatitis from blood donation. These extant fears were, to some extent, reinforced by the disclosure of the contaminated blood crisis, and reports of high rates of HIV infection and AIDS in the countryside. Zaller et al., (2005, 2006) reported that in 2002 in one region of Western China, up to 69% of 1280 interviewed (Han and Uyhgurs) said that fear of becoming infected with a TTI (hepatitis or HIV) from donating blood were inhibitory factors when considering donation..

For public health officials, the escalating rates of HIV-contaminated blood surely sparked concerns over how to set national policy for eliminating vectors of transmission while avoiding a sharp decline in the blood supply. Following standard recommendations of international blood banking first laid out by Titmus (1970(1987)) and promulgated by the International Red Cross, the Public Health Bureau implemented more rigorous screening and testing to identify TTIs, required the purchase and use of new and sterilized equipment (rather than reusing needles) and, importantly, advocated that donations should come only from voluntary, unpaid donors rather from paid ones.

Perhaps the most challenging aspect of China's campaign was eliminating paid blood donations without severely reducing the blood supply in an environment in which contemplation of blood donation instilled both fear of contamination and fear of depletion of vitality from blood loss. Resolving this quandary was the keystone to restoring a safe and adequate blood supply in China. The strategy relied on outlawing the practice of blood selling, while encouraging voluntary donations through the familiar infrastructure of the work unit. The resolution produced an interesting "fiction" in China's public health culture.

China's adoption of internationally accepted blood donation practices that rely on voluntary, unpaid donations to ensure a safe blood supply was taken up as a public health cause celebre. Commercial blood selling was outlawed and illegal donation centers shutdown. At the same time, campaigns to increase voluntary donations were widely promoted. This logic of this two-pronged approach rests on the assumption that offering compensation for blood is more likely to attract unhealthy donors (injection drug users, the poor) who will lie about their risk status and their likelihood of having contaminated blood. In the absence of foolproof screening techniques, deciphering the underlying blood health of donors becomes critical. Social measures, including evidence of drug abuse and poverty, end up standing in for biological measures of exposure. Although some critics have argued that blood donation systems could also entail various forms of compensation and still produce safe blood, the idea that blood donations should be unpaid still circulates as the best practices standard for ensuring safe blood. Although promulgated as the linchpin of China's strategy, we will see that such measures were nevertheless shaped by local social and institutional norms, producing the interesting fiction to which we alluded.

It is worth remembering that the contaminated blood crisis in China was less a direct result of rural populations being more "at risk" because of their poverty or drug use than they were a result of unhygienic practices at the collection centers themselves: the use of unclean needles, failure to screen and test blood, and the pooling of blood and re-injecting donors. These practices were allowed because commercial blood donation flourished in an environment of rural poverty and virtually non-existent government regulation. Indeed, Jing (2006) cogently argues that the sweeping market reforms authorizing the commercial selling of blood were part of a larger trend toward exploitation of the rural poor in post-Mao China. The phenomena offers a sad case of unregulated and unscrupulous commercialism that, as we will see below, was exactly how it was portrayed by the Health Bureau in a campaign to "clean up" practices of blood donation in the end.

While it took political will, financial resources, and technical training to outlaw the commercial blood centers, to create the infrastructure to support voluntary donation particularly in urban areas where demand is highest, and to implement hygienic clinical practices and stringent screening and testing procedures, these steps represent only one component of the transformation that needed to occur to ensure a safe and adequate blood supply. The deeper challenge, perhaps, was transforming the cultural and social framework in and through which people decided to willingly donate blood. Effectively deploying local knowledge and institutional structures facilitated this transformation of public perception and practice. The data we collected from Shanghai illustrate this larger story about how public health "works."

## Public Health Works

In looking at the outcomes of China's policies and strategies to eliminate the spread of HIV and hepatitis through blood donation, we do not intend to suggest that these effects were always deliberate on the part of officials within the health bureaus. Nevertheless, the public health outcomes were effective. We explore several here.

The effort to increase voluntary donation and eliminate blood selling as a way of stemming transmission of TTIs effectively convinced many Shanghainese that the element of risk in blood donation was swiftly contained. Public health campaigns used television commercials, movies, billboard advertisements, and leaflets within the work unit explaining how donating blood was “glorious.” Celebrities were depicted donating blood to show the public not only how safe it was but how good it made one feel to be part of a national movement.

The more important technique used by the Health Bureau in its media campaign however, was its subtle shift in identifying who and what were “risky” about blood donation. By acknowledging the experience of the desperately poor and rural “blood sellers” at the hands of unscrupulous, illegal commercial buyers -- as opposed to the unhygienic practices -- the government was able to deflect popular concerns about whether the state apparatus was in fact what should be feared. Urban Chinese already view rural inhabitants as uneducated, backward, and culturally unlike them. That the blood sellers were from rural areas made the problem seem a distant one that was unlikely to touch them. Moreover, criminalizing blood selling allowed for a popular understanding that giving blood in other ways—ie., through voluntary donations-- would NOT be risky because it was regulated and a public service (not for private monetary gain). Along the way, blood selling came to be portrayed as an occurrence that was confined in time and place. Television coverage of the contaminated blood crisis was effective in creating a popular understanding that the spread of HIV through blood donation was limited to rural poor communities and to a very small region of China. Listen to this 42 year old woman from Shanghai talk about the scope and boundaries of the emerging epidemic caused by blood donation:

I know [about AIDS and blood donation] from TV about the AIDS village in Henan province, where they are poor and short of medical facilities. Some people organized villagers to sell blood for money. I saw it on TV, and the village is dirty as hell. They are so ignorant and irresponsible for their own lives. People are dying everyday according to the TV report. Though recently we have heard less about it. This rarely happens in big cities like Shanghai where it is safer and has proper protections. #5 F24

In some cases, the emerging epidemic was not seen as national in scope, but rather limited to a single village, or even a single individual:

I heard on TV about AIDS [and blood donation]. It happened in a village. A villager was infected with AIDS and demeaned by other residents because it is hard to tell if he had done something bad or was infected through the blood he received. According to the TV coverage, he was given vigilant scrutiny by local residents. The disease is not easily transmitted, but AIDS infection was found in him after he donated blood. #27 M34

By containing media coverage from the outset, and framing the disclosure limited in time and place, the impact of the crisis on public perception about the safety of blood donation was effectively controlled. By 2006, we found that Shanghainese were largely convinced that the epidemic had been contained and in any case was limited from the outset. Although a few expressed concern about receiving transfusions, for the most part they reported that they were not afraid of contamination from donating blood -- an idea that was for them coupled with the assumption that urban hospitals and donation centers would be cleaner, safer and more modern than those in rural areas.

I have seen that from TV and newspapers. These events are more often in backward areas, I have not heard that happened in Shanghai. #43 M 57 There is a village in Henan where most residents sold blood for a living at unofficial places and were all infected with AIDS. In TV news, a pregnant woman received blood transfusion when



she delivered and her baby was infected. There are quite a few similar cases... They gave blood through unofficial channels. I believe such incidents would not happen in official hospitals. #31 F34

Despite successfully minimizing public concern for risk of infection from donation, public health campaigns still had to overcome widespread popular sentiment that donating blood was in and of itself deleterious to one's health. This cultural assumption was in place long before HIV, or even blood donation, existed in China. Hence, it is important to put blood donation in the historical context of China's efforts to augment donations in general, and then to recognize what the effort to outlaw "selling blood" accomplished in regards to overcoming this more deeply-held fear.

Worldwide, demand for blood for transfusion and other surgical or medical procedures grew after World War II. As medical techniques became more advanced, the need for blood also grew, and an increasing pace over time. China experienced a similar increase in demand, that grew slowly at first, and then increased more rapidly in the 1970s, spiking more dramatically in the 1980s with the combination of economic expansion and a growing population. Thus, for most of the Maoist era (1949–1976), China was able to meet its demand for blood by relying on a mandatory donation system managed by the state-run communes, work units and universities. Each unit was assigned its quota, and donations were minimally compensated. Since quotas were an integral part of the planned economy – in this case, "planned donations" – they were very much a part of the everyday landscape of Chinese socialism.

During the Cultural Revolution, my work unit was organized to give blood regularly. The work unit was Food Shop of North Station. We got 50 Yuan annually, donating blood once every two or three months. We donated quite frequently over a period of a year. We were organized to go traveling afterward for four to six days. The money was for compensation but the holiday was to replenish health.... I managed the manufacturing, and I was the assistant of the workshop director. The workers went to donate blood based on the job number, but we could not tell them just to donate blood. We went first, [but] I was not qualified... The factory prepared the tonics and money to pay the workers. We Ningbo people steam red dates, red beans, and walnuts [to replenish]. We cook soybean curd with a little steamed food [nutritional tonics]. The blood station gave a bottle of milk and two cakes. At the time nothing was compensated. Honestly, we had high morality. #1 M57

Nevertheless this same fifty-seven year old man goes on to say:

Nothing was compensated for us except for 300 RMB. We went to donate blood voluntarily, and we did not care about the money... [but] even if you gave 300 RMB, people would not donate blood. But 300 RMB was not a little amount in the 1980s. Workers from textile mills were rich then. They did not think much of 300 RMB, but they thought 200 cc of blood was more valuable. [He also took three days rest paid vacation.] #1 M57

This reference to compensation provides an interesting foreshadowing to practices under the current planned donation system. They point not so much to a break with the past, or creation of an entirely new means of encouraging donation today, but rather to the continuity and familiar infrastructure onto which current practices have been laid. What is perhaps "new" then is the fiction around unpaid donation that has arisen as a result of adopting international standards of blood collection and banking to make public health work in China.

Since the 1980s, with China's burgeoning economic growth, both the capacity and the demand for more advanced medical treatments – and the blood they require – grew. The system of compulsory donation through state-run unit continued during this era, but supply no longer

met growing demand. It was in this context that commercial blood donation began to flourish. The dismantling of the communes and centrally planned economy, and the underdeveloped private enterprise taxation system, meant the central government no longer had the resources to fully fund public health. Provincial health bureaus and other public and private entities saw an opportunity to raise capital by purchasing blood locally (and cheaply) and selling it to urban hospitals (or pharmaceutical companies) where demand was high. While uncompensated donation at the work units grew only slowly, purchased blood (from the countryside) escalated.

This system continued into the 1990s, until the crisis of contaminated blood – first discovered in 1995 – forced the government to reorganize blood donation and compensation systems, specifically re-emphasizing “planned giving” as its primary public health strategy for ensuring an adequate blood supply. Recognizing the need to respond to new economic realities, work units began increasing remuneration to those workers who agreed to donate on behalf of the work unit. Compensation from the work unit was not seen as the same as blood selling for two reasons: 1) workers were asked to voluntarily participate to meet the quota, and compensation was offered as an expression of caring and appreciation for the willing donation of one’s valuable essence (in press); and 2) the “profit” motive associated with selling blood to the urban public hospitals was removed. Although hospitals still had to pay for blood, the payment was to cover legitimate costs of screening, testing, and storage of blood, not for profit. Likewise, compensation to the donor was not motivated by personal profit (as in selling one’s blood), but by the willingness to contribute to the public good. Thus, by the mid- to late-1990s, receiving compensation for one’s donation was not only a legitimate practice, but one that was seen as furthering the adoption of modern blood procurement practices.

Compensations provided by work units to those who donate could be quite generous. Some work units gave donors up to 20% or 50% of their monthly salary in pay and a week or two of paid vacation, or a trip to a resort. In other work units, the standard was for money and a few days off, but no paid vacations.

As in other work units, donors at our *danwei* were given subsidy and a few days off. The subsidy was 1500 yuan (\$200) and one week vacation. #21 F23

The vacation was kind of incentive. It was given and allowed by the work unit and had nothing to do with the blood center. It was not payment. It was a kind of encouragement. It is usually referred to as a fund for nutrition because in the first day or two, donors need to take some supplements.

(Interviewer: Is the economic compensation standard high? I have heard that some work unit give 2000–3000 RMB.)

2<sup>nd</sup> Woman: So much? Our work unit only gives us 1000.

1<sup>st</sup> Woman: No work unit can give 2000–3000 RMB.

3<sup>rd</sup> Woman: The economic compensation is different in different units.

1<sup>st</sup> Woman: It is different, for the work unit has different profit. The country should unify this economic compensation, and it shouldn’t be given by the work unit. Work unit with good income, with abundant source, and work unit with poor income, the country should consider this.

2<sup>nd</sup> Woman: After blood donation, the work unit will send people to visit you, and they can not accompany you for long. This is the fact.

(Interviewer: Then should the country set the compensation standard? And according to the standard, how much do you think is proper for Shanghai?)

1<sup>st</sup> Woman: For Shanghai, I think it should be 2000–3000.

2<sup>nd</sup> Woman: It should be 2000–3000.

(Note: the average annual salary for this group was 46,000 Yuan) #49 F40

As noted above, the outlawing of commercial blood donation centers did not eliminate the practice of compensating donors for their blood. Rather, it occurred in the context of a set of social structures and cultural practices already in place, and was made possible by the clever distinction made between compensation from the work unit and “blood selling.” Blood selling had become identified as a public health disaster while providing compensation via the work unit was perceived as underpinning a voluntary and safe procurement system – quite antithetical to the coercion of poverty that compelled blood selling by rural peasants.

We found that Shanghai donors were clear on the distinction between blood selling and work unit compensation, even though both amounted to monetary compensation for donating one’s blood.

I don’t think it is payment [when asked about work unit compensations]. It is a humane way of showing care and friendship from leaders and colleagues. The kindness, which is more important than the gifts [or money], makes people happy to realize blood donation is glorious. #5 F24

Similar sentiments were expressed by a 46-year-old woman and her 49-year-old husband:

(Husband): Blood donation is public interest oriented and a kind of contribution, totally different from selling blood. Unpaid blood donation reflects the a person’s high morality. Selling blood for money is to survive poor living conditions.

(Wife): Selling blood is the last choice for poor people.

(Husband): It is an obligation for those employees in work units, who are allocated with a quota for blood donors who are compensated. We donated blood as a social contribution, not for money or fame. #24 F46 M49

A 42-year-old woman who worked as a household cleaner told us:

It is not payment. It is encouragement for this highly conscientious deed. A woman who had the same cleaning job as me once asked if donors were paid. I said “No. They would not do it then. If not for the certificate [showing it was not paid], it would be misunderstood as selling blood.” In my hometown, blood donation refers to selling blood. They don’t have the notion of blood donation not for payment. The payment from work units is more symbolic. It is not money-oriented as is blood selling. #26 F42

Part of the reason the public was able to distinguish between “bad” kinds of paid donation and “good” compensated donation was that the public health campaign created a media discourse that used celebrities to endorse the idea that giving blood was to be celebrated:

I had seen some ads on TV. Chen Rong (a popular star) donated blood, and there was the slogan, “A drop of blood may ignite hope.” #41 M 20

Q: Did you hear about blood donation through media?

3<sup>rd</sup> Man: Yes; in broadcast and TV

4<sup>th</sup> Man: On internet. There are advertisements with famous stars, like Yao Ming, Sun Li and Xu Rongzhen, and all of them participate in these advertisements.

3<sup>rd</sup> Man: Chen Rong also did. She donated blood herself, and told people the benefits, so it was convincing.

4th Man: Public advertisements advocate for all people to help, because the blood bank is in need, all types of blood are needed. #60 64M, 33M

Our interviewees repeated the sentiments they had garnered from public health campaign slogans that portrayed voluntary donation as glorious and patriotic:

Donors should take the opportunity to “spread love.” #9 F48

It is glorious to give blood as we donated blood to save lives. # 22 F22

Voluntary blood donation became seen as a “glorious” and “patriotic” gesture that was safe to the body, despite deep seated sentiments that it could harm one’s health. In the end, we found many donors who were compelled to give, and did so, sometimes simply as an act of individual patriotism rather than as a response to a work unit demand. However, in many of these cases, we found that donors still worried about the possibility that their donation would have residual ill-health effects. That is, the idea of donating blood became embedded in a larger set of sentiments about personal sacrifice to the larger society, to the nation, even at the expense of one’s own personal health. In a response to a question regarding where she learned about blood donation, a 24-year-old woman told us:

From TV commercials and news reports of insufficient blood supply of certain types of blood. The public was called to donate.... Many people think it harms health, but if it harms the body, there shouldn’t be so many blood donors. Some of them even donate annually. Giving blood was a taboo for my mother’s generation. I am influenced by TV and commercials, which are successful in promoting [it]. Actually blood donation is so simple to finish at once. It is far less complicated than marrow donation, which requires many steps and procedures. All we need is an incentive or compulsive measure. No extra compensation is necessary except a favorable policy for usage after donation. #29 F24

In another vein, a 31-year-old man reported:

Previously, I thought blood donation was harmful to health. There are many negative opinions about this, such as that it is harmful to *yuan qi*. I felt confused and that it was irrelevant to me. The public had no contact with information about it. Seniors usually think blood donation affects health in the long run. According to them, the side effects include dizziness, tiredness which influences daily work. Especially it causes male sterility, which I feared the most. Later more information has been made available on the media. More friends and colleagues devoted themselves to this public deed. The notions changed gradually. Blood donation became acceptable to more and more people, including the fact that it is harmless to health and even good. Also understanding the fact that the human body can restore itself after proper rest, made it appropriate to think that blood donation is absolutely good to your health and harmless. *As for my own understanding, I don’t believe blood donation has no influence on health. But it is recoverable, controllable, and temporary.* (emphasis added) #16 M31

Interestingly, this donor went on to explain how he was so motivated to give blood for the sake of his society that he donated on his own at a blood mobile one day while walking by the department store with a friend. He explained that he was “caught by the ‘patriotism bug’ and wanted to make a donation to feel ‘glorious.’” He then explained that his work unit organized blood drives and paid large compensation: two weeks vacation and 2,000–3,000 Yuan He did not donate when this was offered because he felt that the health risk must be high if the reward was so great. He felt the payment to donors should enable them to buy nutritious tonics after donating. At his van, he was only given cookies, mineral water and an umbrella.

Continuing, we found that this donor exemplified some of the ambivalence surrounding compensation versus no-compensation for blood donation, and it points to a delicate balance the work units must strike: Offering enough compensation to express appreciation for the individual's sacrifice and contribution, without instilling either coercion or a sense of fear among potential donors. Although this man begins by noting that uncompensated donation is the best kind of donation, he reveals that in the end, he would have wanted compensation in order to ensure his long-term health. He said that he donated without any need for compensation and when he went home he "didn't dare tell his parents." In fact he played badminton with a friend and went to swim, but on the third day he got a fever of over 38C. The febricide he took for his fever did not work at all. He was scared. He had to tell his parents under their questioning before going to the hospital for his fever (for an infusion). After three days of fluid infusions, his fever went down. He felt confused and was unsure if it was caused by the blood donation or if it was that he was overexcited and lacked proper rest after donating. He would be more conservative next time, he said, making sure to rest for 3–4 days after donating.

The idea of packaging donation as rewarding in and of itself caught on to some degree. A few donors considered the voluntary uncompensated donation to be the ideal for contemporary China. And indeed, the public media and blood center continue to emphasize that this is the ideal type, which should eventually replace even compensated donation through the work unit. But among donors, the ideal donation remains one that is compensated by the work unit. The idea that the donor has sacrificed for the social good was accompanied by the idea that society, by way of the work unit, should care for the donor. Compensated blood donation is thus distinguished from "blood selling" and understood as the best, most productive and effective way to ensure donations among the public. It also attended to cultural fears about the potential harm to one's health for donating. It did not eliminate such fears so much as answer them by rewarding the donor with ample resources to replenish his or her health and, more importantly, to be acknowledged as a person who sacrificed their health for their nation.

Making compensation a reward for glorious service to one's country distinguishes it from blood selling. Blood selling was represented as a societal failure, in the sense that it made visible the desperately poor citizens for whom the state had failed to adequately care. In contrast, compensated donations represented the success of both socialism and post-socialist reforms: they reinforced the idea that the social system worked to take care of its patriotic citizens. Remuneration by the work unit was seen as a way for the work unit to reward the donor, take care of him or her, and acknowledge the large sacrifice made on behalf of the donor for the good of society.

## Conclusion

For blood donation, propaganda has not many effects. People all have a caring heart, and their qualities are improved. If a hospital needs blood, and show a line of words on the TV, many people would go to donate blood, and they don't ask for compensation. We had a case before. In 1995 or 1996, we had a person with negative Rh blood [rhesus factor], and she bled much when delivering the baby. There was no such blood in blood bank, neither in the blood bank from the city, and we called the TV station. After the information was sent out, many people with negative Rh blood came and packed in the examination room. They came just to save a mother and a baby, and they went to visit the mother after blood donation. #46 F54

The story of how a nation which had a long standing cultural obstacle to voluntary blood donations, as well as an emerging epidemic tied directly to blood donation practices, was able to produce a group of willing donors is a compelling one. It is compelling not simply for what it can tell us about China's peculiar blood donation practices in relation to epidemics, but also for what it can tell us about effective public health programs.



The story begins for us with several important turns in China's public health campaigns. Minimizing the fear of contamination through unsafe blood donation practices was accomplished by depicting the problem of blood donation risk as one associated with an isolated time, place, and set of economic circumstances in which poverty served to coerce blood selling. Outlawing blood selling meant that legal blood donation centers could be identified as "safe" centers for donors to willingly contribute to a public good. Very quickly, much of the urban public came to think of contamination risk as limited to a single remote region where poor, rural blood sellers -- people who were quite different from them -- lived.

At the same time, longstanding cultural obstacles to blood donation because of its potentially deleterious affects on vitality and *qi* had already set in motion a slightly different set of fears. These too were in some sense addressed by the public health campaign to criminalize blood selling. Voluntary donation was depicted as glorious and patriotic reminding audiences of a higher moral calling. Celebrities endorsed this in media campaigns that called upon ordinary citizens to give "freely" and out of "love" for one's countrymen.

Still, the idea that one might suffer ill health effects from blood loss, even for a glorious cause, was deeply embedded in a cultural system of reciprocity that pre-dated socialism but was nevertheless sustained and re-made over time from the early days of collectivization through the contemporary years of post-socialist market reform. The idea that donors would sacrifice their blood, and potentially their health, for the work unit, for the larger society, or for the nation, was met with an expectation that such sacrifice would be compensated. Work units compensated donors with money, vacations and food. Despite that fact that compensation is an openly recognized part of an "incentive" system, it was still clearly distinguishable from blood selling. Compensations by way of work units are symbolic rewards for the sacrifice of the patriotic citizen rather than as payment since blood purchasing is not only illegal, but also operates external to, and separate from regulated, state-run enterprises.

In the end, the factors which probably made the most difference in China's ability to limit the spread of HIV by way of blood donation had little to do with actual elimination of financially remunerated blood, and much to do with improving upon screening systems and hygienic withdrawal and pooling practices at donation centers. However, given that the early health crisis could have led to egregious declines in blood donation, and in the national blood supply, it is remarkable how swiftly things turned around and how rapidly China was able to build its own blood banking systems based largely on local voluntary donations (keeping in mind that China contributes greatly to the international supply of plasma products but purchases no blood from outside for internal use). We suggest that it accomplished this, at least in urban areas, by being able to endorse types of donation that were already part of the culturally accepted repertoire of what was considered appropriate exchange between citizens and larger institutions of social welfare (namely the work units). Donation was not only done willingly (and in that sense, was voluntary), but was also a contribution to the work unit's (and by extension, society's) success only when the donor was sufficiently "taken care of" through compensation. Even though this type of donation represents a twist on (if not a break with) international standards for ensuring safe procurement, it works well in China.

One of the important lessons from China's experiences with blood donation is that it suggests the need for flexibility in defining international standards and strategies for public health when it comes to the safety of blood. Although international strategies for producing safe blood generally insist on voluntary unpaid donations, the case of China suggests that cultural specificity may require that different techniques of blood collection and compensation be used to ensure a safe blood supply. There is some debate in the international community regarding the ethics of compensation for whole blood (see Daar 1992), China's example suggests that this debate should remain open.

The importance of national public health programs is not that they can simply be a conduit for larger international agendas in health development, whether in the rise of pharmaceutical industries and research, in the decentralized practices of local NGO work, or in their ability to deploy risk-oriented security regimes. Rather, the importance of national public health programs is in their ability to tailor their methods, resources, and strategies in ways that are locally informed, and that make sense in a cultural context. Responsiveness to local health scenarios is best accomplished by working through national public health infrastructures that already have an understanding of what makes cultural sense, and what logistically is possible. Public debate about the structure of blood donation – or other public health or health promotion efforts – need be less about imposing a “universal” notion of ethics, and more about ensuring the implementation of effective strategies, and delivery of successful outcomes.

In some ways, the story of China’s response to the blood-donation related HIV epidemic is very specific to China, both in the sense of their large capacity for generating propaganda that penetrates to even the most rural villages and in the sense of their being able to criminalize activities and authorize others with an executive swiftness that is unfamiliar to most modern nations. At the same time, the example that China presents us with of a public health program that was able to attend to local crises in specific ways, and to respond to the emerging epidemic of both HIV and potential decline of blood supply, is one that reveals the importance of having strong local public health programs anywhere.

## Acknowledgments

Funding for this research was provided by the NIH R21 MHO73415. This grant was originally procured by Kathleen Erwin, who was PI on the project. Vincanne Adams took over as PI on the project in 2006, working collaboratively with Kathleen Erwin on the project since then. Phuoc V. LeMD, MPH, Global Health Equity Resident at Brigham and Women’s Hospital in Boston), has worked on the project as co-investigator since 2006. The authors would also like to thank and acknowledge the support and intellectual engagement of colleagues at the Shanghai Academy of Social Sciences.

Grant funding NIH R21 MHO73415 was awarded to Kathleen Erwin, and subsequently transferred to Vincanne Adams, who has held PI responsibilities since 2005. Phuoc V. Le, worked as a co-researcher on the award from 2005. All three worked collectively on data collection and analysis. We wish to acknowledge the funding from the NIH, as well as our generous colleagues at the Shanghai Academy of Social Sciences, Drs. Xu Anqi and Dr. Li Yihai.

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