

"Fertility-friendly hospitals": A key measure to promote long-term and balanced population development in China

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Abstract: In response to the twin challenges of an aging population and declining birth rates, Zhejiang, China pioneered the concept of "fertility-friendly hospitals" in 2022 to support families and individuals in navigating the complexities of childbirth. Although fertility-friendly hospitals have not yet scaled up in number, their potential benefits and the challenges they face are evident. These facilities aim to provide comprehensive services from preconception to postnatal care, necessitating a high level of specialization and resource allocation, with an emphasis on patient education and participatory decision-making. Currently, there is an uneven distribution of resources across regions in China, with the density of maternal and child health care facilities in developed areas exceeding that of less developed regions by more than tenfold. The establishment of fertility-friendly hospitals will help to slow the pace of population aging and mitigate further declines in birth rates, thereby balancing the population composition and promoting long-term equitable social development. However, they also face challenges in balancing resources, improving the quality of services, and improving accessibility across different regions. As the concept is promoted and practiced, fertility-friendly hospitals are expected to become a significant force supporting China's population policy.

Keywords: fertility rate, aging, maternal care, child health

Introduction

In recent years, significant shifts have occurred in the global demographic landscape, characterized by two prominent trends: population aging and declining birth rates. These trends are impacting social, economic, and health care systems. As the most populous country in the world, China is currently striving to deal with these social transformations. In this context, understanding the challenges brought about by population aging and declining fertility rates is crucial.

The international community is actively addressing the challenges posed by an aging population. According to a study published in the *Lancet*, human life expectancy is projected to increase gradually, with the global population reaching its zenith before the end of this century. Once the total fertility rate descends beneath the threshold of 1.5, the onset of a global population decline is anticipated to proceed in a sustained and inexorable manner (1). The array of strategies presently implemented by diverse nations is designed to modulate the trajectories pertaining to fertility rates, mortality rates, and migratory patterns (2). While the size and composition of the population are not factors that countries consider in their planning, they can be utilized to guide certain societal outcomes.

The aging and declining birthrate trends in China are particularly pronounced. Over the next twenty years, the issue of aging in China is projected to exacerbate, with densely populated metropolises facing more severe challenges. This demographic shift is anticipated to test the resilience of social security systems, health care, and the economy at large (3). China is transitioning from a period of a demographic dividend to one of a demographic burden, where the responsibilities of eldercare, social security expenditures, and government debt are expected to surge significantly. To address this issue, China must implement a raft of measures aimed at augmenting the birthrate. China has improved its fertility policies and provided moderate childcare support. The Chinese Government is incentivizing younger couples to have more children and it has established a more comprehensive childcare system, including facilities such as nurseries and kindergartens.

Concurrently, the Chinese Government has begun to underscore the necessity for health care systems and medical facilities to foster a supportive environment for families and individuals grappling with the complexities of fertility and family planning. The term "fertility-friendly hospitals" was coined in 2022 by the People's Hospital of Zhejiang Province, China, which pioneered an innovative approach to maternal and child health

care. The facility is seeking to create a comprehensive service model for maternal and infant health care and is committed to providing extensive health services for pregnant women and infants, thereby aiming to enhance the fertility rate (4).

The history of the development of fertility-friendly hospitals

The notion of "fertility-friendly hospitals," while having been explicitly conceptualized in the year 2022, is underpinned by a cadre of pre-existing, internationally recognized successful experiences and models, which serve as a valuable reference for health care facilities.

The first aspect is respecting the choices and wishes of pregnant and childbearing women. The University of São Paulo Clinical Hospital in Brazil has implemented a "humanized childbirth" program, offering a variety of birthing methods such as water birth, natural birth, and pain-free birth. This empowers expectant mothers to select the birthing method that best aligns with their physical condition and psychological needs (5). The autonomy of choice bolsters the agency and confidence of expectant mothers and also mitigates unnecessary medical interventions and complications, thereby enhancing both the safety and satisfaction associated with childbirth.

Second, the family should always be considered as a unit. Arkansas Children's Hospital in the United States implemented a "family-centered care" model by providing a familial inpatient environment (6). Parents and newborns can share the same hospital room, receiving 24-hour companionship services. These initiatives are intended to bolster emotional interactions and tactile engagement between parents and newborns, to encourage breastfeeding, and to facilitate the infant's early development, thereby reinforcing the bonds and sense of responsibility within the family unit.

Third, the provision of continuous health care is essential. The University College Hospital in London in the UK has consistently maintained a "community midwifery" program. By establishing a team of community midwives, the program offers comprehensive health services to pregnant and postpartum women, from pre-pregnancy to one year post-delivery (7). Such a framework fosters a stable patient-health care provider relationship, delivers personalized and professional health guidance and education, and facilitates the timely identification and management of various health issues, thereby reducing the rates of referrals and hospital admissions.

Fourth, the provision of diversified and innovative services is crucial. The Tokyo Women's Medical University Hospital in Japan has implemented a "fertility support" project, which incorporates experts and equipment from multiple fields such as assisted reproductive technology in human biology, genetics, and

psychology. This initiative provides a variety of services for individuals facing fertility challenges or with special needs (8). Such measures cater to the reproductive requirements and preferences of diverse groups, aiding them in fulfilling their aspirations to conceive, thereby enhancing societal diversity and inclusiveness.

Fertility-friendly hospitals in China

The development of fertility-friendly hospitals in China is of paramount importance to the improvement of maternal and neonatal health outcomes. It plays a crucial role in fostering breastfeeding, improving the overall experience of childbirth, mitigating social disparities, and safeguarding the nation's rich cultural legacy. Such hospitals can bolster the health of mothers and infants by creating breast milk banks and disseminating knowledge on breastfeeding, thereby lowering the incidence and mortality rates of newborns, as well as diminishing the risks of childhood obesity, type 2 diabetes, breast cancer, and ovarian cancer (9). Fertility-friendly hospitals are committed to fostering an environment that is warm and respectful and also deeply supportive of the childbirth process, ensuring a nurturing setting for both mother and child. This helps to alleviate the anxiety of expectant mothers and bolster their confidence in childbirth. By offering a more diverse range of services, these hospitals can somewhat narrow the gap between pregnant women from varying socioeconomic backgrounds. In addition, China's obstetric practices are distinguished by their deep historical roots, which include traditional Chinese post-natal treatment and specific dietary habits. The creation of fertility-friendly hospitals in China facilitates the harmonious blending of these enduring traditions with contemporary medical practices, thereby guaranteeing their perpetuation (10).

The extensive development of fertility-friendly hospitals in China has not yet come to fruition. Nonetheless, a partial comprehension of the pertinent circumstances within the country may be gleaned by examining the state of maternal and child health care facilities, as well as the provision of maternity health care, across diverse locales.

According to the China Health Statistics Yearbook 2022, the distribution of medical personnel in maternal and child health care facilities in China in 2021 was as follows: 39.34% in the eastern region, 29.46% in the central region, and 31.2% in the western region (11). Moreover, disregarding factors such as educational background, professional titles, and years of service, there is a certain imbalance in the distribution of medical manpower in maternal and child health care facilities. This imbalance is primarily evident in the disparities between urban and rural areas. Such disparities are detrimental to the achievement of equitable and accessible fertility services.

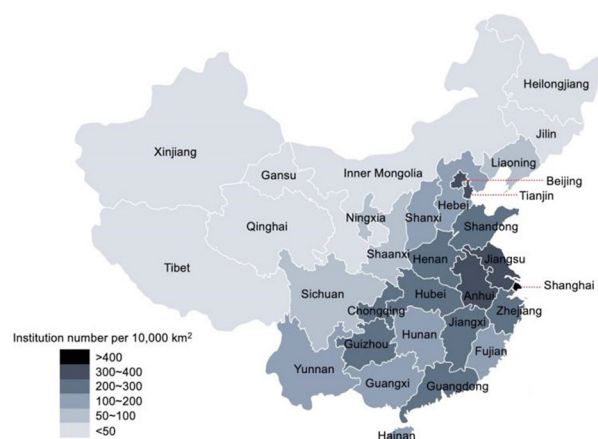


Figure 1. The distribution of maternal and child health care facilities in the Chinese Mainland in 2021. Excluding Hong Kong, Macau, Taiwan, and other archipelago, the distribution density of maternal and child health care facilities in major provincial-level administrative units of China is depicted here. Darker colors indicate a higher distribution density. Data source: *Ref.11*.

In general, the state of maternal health care across various regions in China is satisfactory, with extensive coverage of maternal health care. However, there are minor regional disparities that necessitate further augmentation and optimization of services. Overall, as indicated in Figure 1, the density distribution of maternal and infant health care facilities in China is demarcated by the Heihe-Tengchong Line from Heilongjiang to Yunnan. Density is higher in the east than in the west and higher in the south than in the north. Taking Shanghai and Xinjiang as examples, the total number of facilities in Xinjiang exceeds that in Shanghai, but the density of maternal and infant health care facilities in Shanghai is more than tenfold that in Xinjiang.

On one hand, the disparities in population distribution between the east and west lead to differing needs for maternal and infant health care; the southeastern coastal areas, being densely populated, have relatively comprehensive maternal and infant health care. On the other hand, the stark contrast in levels of economic development between these regions results in significant differences in the dissemination of advanced medical health care concepts and the implementation of supportive measures. The distribution of maternal and infant health care facilities and medical personnel is inextricably linked. In the western regions of China, challenging transportation conditions, higher altitudes, and limited communication with the outside world, coupled with the large seasonal temperature variations and relatively harsh natural conditions of the northern areas at high latitudes, as well as relative economic underdevelopment, diminish the attractiveness for medical personnel. This leads to a concentration of quality medical personnel and facilities in the southeastern provinces.

In addition, medical facilities in Shanghai are all

equipped with baby-care rooms, which facilitate care for mothers and infants and breastfeeding. Medical insurance in Beijing covers several therapeutic assisted reproductive technology programs, providing more options for patients in need of assisted reproduction. Cities with a high density of maternal and child health care facilities are more amenable to the establishment of fertility-friendly hospitals.

Characteristics and advantages

Currently, the conceptual framework for and inherent meaning of "fertility-friendly hospitals" remain ambiguous, and a standardized definition is lacking. However, fertility-friendly hospitals should possess the following characteristics compared to other medical facilities. First, health care facilities must provide comprehensive services that cater to populations across various life stages, encompassing family planning, gestation, parturition, postnatal care, and pediatric health care. Secondly, associated disciplines, including obstetrics, gynecology, pediatrics, and neonatology, should have a high level of expertise. Third, these facilities should have superior material resources, characterized by state-of-the-art medical equipment and facilities that prioritize patient comfort, such as humanized wards, labor rooms, and mother-infant units. Fourth, patient education campaigns should emphasize information promoting fertility, ensure that the information, its dissemination, and effectiveness align with patient-centric values, uphold patient rights, and actively involve patients in decision-making processes.

In comparison to conventional medical facilities, hospitals that are attuned to fertility concerns tend to adhere more to evidence-based practices that encourage lactation and intimate mother-infant bonding. Empirical research has indicated that the prevalence of exclusive breastfeeding is notably higher in regions where a substantial number of hospitals and maternal health care facilities advocate for fertility-friendly services (12). This correlation contributes significantly to the improvement of neonatal health outcomes. The creation of fertility-friendly hospitals is beneficial in preventing rapid population aging, slowing the decline in fertility rates, contributing to a balanced population composition, and promoting balanced population development over the long term. By providing more supportive medical care, these hospitals help parents balance child-rearing and employment, reducing the impact of childbirth on women's career development (13).

Conclusion and suggestions

First, the effective advancement of fertility-friendly hospitals within China's health care landscape requires the establishment of unambiguous standards and characteristics for such facilities. This clarity

will facilitate superior practical implementation and adherence. Fertility-friendly hospitals should possess the capability to cater to individuals across a continuum of reproductive stages, including but not limited to family planning, antenatal, intrapartum, postpartum, and pediatric care. These defining features and the scope of services need to be meticulously delineated, thereby empowering health care facilities to deliver all-encompassing support for fertility and childbearing.

Second, given the uneven distribution of medical resources in China, medical personnel need to be allocated more rationally to ensure that fertility-friendly hospitals can better serve the population.

Third, the concept of fertility-friendliness should be integrated into traditional culture. Modern scientific practices need to be balanced with traditional cultural practices, merging modern medicine with traditional culture to facilitate the passing down of culture.

Fourth, current investment in the creation of fertility-friendly hospitals in China is limited; thus, an increase in resources is imperative to achieve significant results.

In addition, the current gender inequality in the household division of labor can restrict women's career development to some extent, affecting their desire to have children. If women's rights to career development can be safeguarded during childbearing and fathers are encouraged to actively participate in childcare, a social atmosphere of gender equality, respect for fertility, and emphasis on family can be created through culture and initiatives. These efforts can also provide a favorable social environment for the creation of fertility-friendly hospitals.

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