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ABOUT THE REPORT

Care for the carers: The future of nursing in China is a report from The Economist Intelligence Unit (EIU). Jonathan Ley was the researcher, Nicholas Walton was the author and Charles Ross was the editor. The report draws on interviews with 10 key opinion leaders and nurses from class 3, class 2 and private hospitals. All respondents hail from Beijing, Chengdu, Guangzhou, Hangzhou and Shanghai. The survey findings were supplemented by wide-ranging desk research. The objective: to understand the current role of nurses within the Chinese healthcare system and the impact government policy reform is likely to have on nurses in the future.

Our thanks are due to the following people for their time and insights (listed alphabetically by city):

- Dr Christian Orejudos, a nursing expert and the Chief International Clinical Officer for Baijia International Group
- Key opinion leader, China Nursing Association, Beijing
- Senior nurse, Beijing Chaoyang Hospital, Beijing
- Senior nurse, Beijing Chuiyangliu Hospital, Beijing

- Senior nurse, Chengdu Huaxi Hospital, Chengdu
- Senior nurse, 1st Affiliated Hospital of Clinical Medicine of Guangdong Pharmaceutical University, Guangzhou
- Senior nurse, Guangzhou Developing District Hospital, Guangzhou
- Senior nurse, Zhejiang Tongde Hospital, Hangzhou
- Senior nurse, Shanghai Dongfang Hospital, Shanghai
- Senior nurse, Shanghai Shidong Hospital, Shanghai
- Senior nurse, Parkway Hospital, Shanghai

The EIU bears sole responsibility for the editorial content of this report.

EXECUTIVE SUMMARY

Nursing is a critical yet undervalued part of the Chinese healthcare system—historically, clinically, and institutionally. Following years of upheaval, nursing training was only reestablished as a post-schooling discipline in 1983, and the Chinese government has steadily reformed the system to improve nursing standards. However, the number of nurses remains very low by international standards and nursing remains a lower-status occupation.

Recent government reforms to the healthcare system outline an enhanced role for nursing, in line with contemporary thinking about healthcare, and against a background of dramatic economic and social change. China is becoming richer but it is also becoming older, with more chronic diseases. Globally, nursing is seen as a cost-effective response to such challenges, in conjunction with new technological methods and a focus on prevention rather than cure. Nurses are also heavily involved in running hospitals, whilst operating as the link between doctors and patients.

Central to China's reforms is a substantial increase in the number of nurses. It is also intended that nurses take on more clinical responsibilities, improving areas such as health education and clinical efficiency. Concurrently, it is hoped that the gradual expansion of private healthcare, introduction of new innovations and technology, and the demand for higher-performing nurses will drive improvements in the standard of nursing in China. For the moment,

however, nurses remain undervalued, and the rapid expansion in their numbers endangers necessary improvements in the quality of nursing education and their capacity to take on more responsible and demanding clinical roles.

The key findings of this research are as follows:

- The Chinese government understands that the current nursing situation imperils broader healthcare reform and is taking substantial steps to bring about reform. The government is trying to increase the number of nurses and empower them to take on more responsibilities in crucial areas such as primary healthcare, health education, and dealing with chronic diseases. Nursing in China needs these reforms to realise a new role as a vital, cost-effective part of a modern healthcare system that is driven by technology and innovation.
- However, government initiatives to vastly increase the number of nurses in China's healthcare system are having an impact on quality, and undermining nurses' capacity to take on more demanding clinical roles. The increase in numbers is putting training schools under significant strain, and an estimated 80-90% of newly qualified Chinese nurses are only trained to the equivalent level of a high school diploma. This means that few are equipped for the more demanding and responsible clinical roles that nurses elsewhere in the world are taking on, as envisaged in government reforms.



- A realignment is needed to the way healthcare is financed in China. Despite a growing emphasis on private insurance, Chinese healthcare is often financed by out-of-pocket payments from patients and hospitals are left to raise their own operating funds. This provides perverse incentives for hospital managers and doctors to overprescribe treatments, which command higher fees, while marginalising the role of nurses, whose services earn little revenue.
- Clinical opportunities for Chinese nurses are still being restricted by structural constraints. Nurses in China—in a similar way to other countries which are modernising their healthcare systems—traditionally fulfil a subservient role, and are mainly thought of as assistants to doctors and as menial hospital workers. Nurses' roles are only going to change if doctors, administrators and nurses themselves recognise the need for them to take on more responsibility.
- The nursing profession in its current state is a challenging career choice in a rapidly growing Chinese economy. Nurses in China earn very low salaries, and work unsociable hours (often with no compensation for overtime). Most new nurses are employed on insecure temporary contracts. There is often tension with patients, which sometimes turns violent. Rapid economic growth in China has opened up other career opportunities, while

- many nurses either leave the profession to start families or take on family responsibilities, or look for nursing jobs abroad.
- The growing and largely unmet demand for better-qualified nurses will help to drive up standards. Despite evident disquiet about the quality of new nurses qualifying from technical colleges, there is growing demand for more able nurses with bachelor degrees. The growth of private hospitals and specialist units will increase demand for these nurses, and this is likely to feed through to an eventual increase in higher-skilled nurses in the Chinese system.
- Important nursing issues such as safety are being tackled through better management.

 Managers are increasingly aware of the need to institute procedures and training to deal with common challenges, such as needle stick injuries and other safety issues. Staff are now encouraged to report incidents and problems, and safety is recognised as an important clinical issue that can be tackled by addressing factors such as workload and communication. However problems do remain, for instance in connection with the expense of safer new equipment.

INTRODUCTION: A HISTORY OF UNDERVALUING NURSING

Historically, the nursing profession has always been clinically, culturally and institutionally undervalued in China. The first training programme for nurses was established only in 1910, and Chinese healthcare remained focused on doctors for much of the 20th century, with a large 'traditional' or homeopathic medicine component. Nursing was side-lined during the Cultural Revolution, with all post-secondary nursing education abolished in 1952. Although bachelor degrees were revived in 1983, nursing has remained a subsidiary element of the Chinese healthcare system, and overall numbers of nurses have remained very low by modern international standards.

Many of the senior nurses who shared their experience with The EIU for this paper began their careers in this era, when nursing was slowly re-establishing itself as a formal profession. A senior nurse at Chuiyangliu Hospital in Beijing reports that she entered nursing training in 1978 "in order to avoid being sent to work in the countryside and mountainous areas." A senior nurse at the 1st Affiliated Hospital of Clinical Medicine of Guangdong Pharmaceutical University in Guangzhou noted that she faced a choice between nursing and kindergarten teaching, as they were the only options that would allow her to move from the countryside to a city. Others were allotted to nursing courses - one

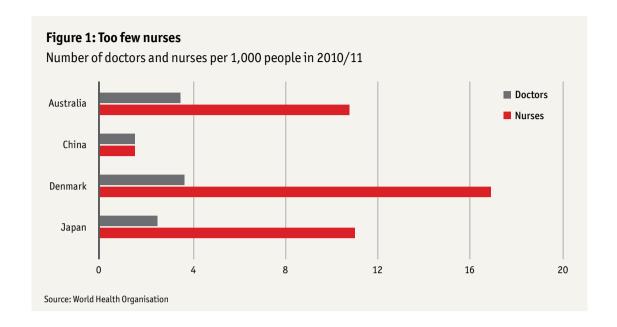
nurse said she had been assigned to a place at a nursing course in a secondary technical school after she just missed out on an elite university education.

All over the world, nurses have high social status and high income. But in our country, there is still a long way to go. Public conceptions of nursing and levels of respect all remain in the 1960s and 70s.

Senior nurse, 1st Affiliated Hospital of Clinical Medicine of Guangdong Pharmaceutical Universtity, Guangzhou

An important change to nursing education came with the introduction of a standard nursing qualification, the Nursing Practice





Certificate, in 1993. This meant students were required to pass a standard licensing exam, and often work for several months as nursing assistants before they gained qualification.

As well as on-the-job training, nurses were also able to pursue higher qualifications, such as master's degrees or doctorates. Prior to the certification's introduction, nurses could work in a hospital straight after graduating from a nursing course in a secondary technical school. The Chinese government has repeatedly emphasised the need for more highly educated nurses who are able to take on the greater responsibilities associated with modern, more specialised healthcare.

Long on doctors, short on nurses

Despite being re-established as a profession and increasing recognition of its importance,

the subsidiary nature of nursing in a Chinese healthcare system dominated by doctors is reflected in the figures. In 1990 there were 1.1 physicians per 1,000 population, but only 0.8 nurses. Even as late as 2010 there were marginally more doctors than nursing personnel (Figure 1). By contrast, Australia had 3.3 doctors per 1,000 people in 2011, and 10.6 nurses. The situation with midwives is even more striking, with around 3 practitioners per 100,000 people in China, compared to around 45 in the Philippines and 70 in Sweden.

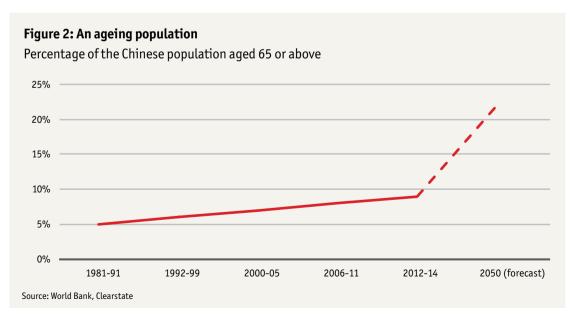
Nursing numbers have grown steadily over the last two decades as China has developed, and nursing is now seen as an important component of a revamped and modernised health service that's being driven by increased government investment: spending on health is expected to increase from 5% of GDP in 2010 to 6% in 2019. The overall government objective is for significant improvements in areas such as nurse to patient ratios, patient satisfaction with nurses, and working conditions by 2020. In the Party's 13th five year plan, China's leaders have emphasised improving and strengthening nursing training, limiting the use of non-qualified staff in nursing roles, raising management standards, improving technical and specialised training, and continuing to reform and improve nursing through better policies.

Spending on health is expected to increase by 20% between 2010 and 2019.

Forecast by The Economist Intelligence Unit

Richer but older

This plan also acknowledges the challenge posed by China's demographics, and a rapidly ageing population. In the year 2000, 7% of the population (or 90m people) were over 65 years of age; in 2050 that figure is expected to rise to 22% (or 300m people) (Figure 2).1 This will lead to an increase in chronic diseases, which place the greatest burden on healthcare systems because of the long-term treatment they require and which already account for 80% of deaths. The 13th five year plan also includes proposed improvements to children's, women's, and reproductive health services (in keeping with the abolition of the onechild policy), which will address some of the disparity between healthcare in cities and rural areas. An enhanced role for nurses is complementary to these aspects of the government plan and is in line with current international thinking.



¹ "Navigating through China's evolving healthcare market: healthcare by 2020" The Economist, 2015



Doctors don't run the hospitals; nurses run them.

Dr Christian Orejudos, a nursing expert and the Chief International Clinical Officer for Baijia International Group

Nurses are seen as a cost-effective solution to the challenges facing healthcare systems that are under significant financial strain from greater numbers of elderly patients and a consequent increase in chronic illnesses. Nurses can play a valuable primary care role, for instance in community-based healthcare, which moves the focus from treatment to prevention and emphasises health education and lifestyles. This can be seen to follow on from the 'barefoot doctors' who took basic healthcare, hygiene and traditional medicine services to remote and rural areas after 1949.

Modern systems also make use of highly trained nurse practitioners, who take over more clinical responsibility from doctors, for instance in carrying out basic treatments and procedures, and prescribing common medicines. This is backed by the use of new technologies, which lessen the need for some of the more routine aspects of the job, for instance by allowing easier and more effective monitoring of patients.

Nurses are also required to perform more administrative work in modern healthcare systems. Doctors often work across clusters of hospitals and clinics, meaning that senior nurses take on the responsibility of running units from wards up to hospitals. Dr Christian Orejudos, a nursing expert and the Chief International Clinical Officer for Baijia International Group, a healthcare company focused on women and infants, notes that "Doctors don't run the hospitals; nurses run them."

CHINA'S NURSING REFORMS: BALANCING QUANTITY, WITH QUALITY

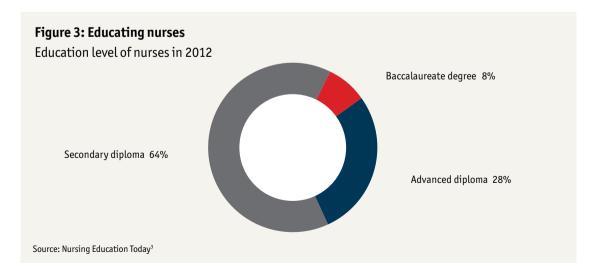
China presently has around 3m qualified nurses and although numbers increased at an annual rate of 8.8% between 2004 and 2014, there is still a significant shortfall. It needs a further 3m to 5m nurses (depending on variations in international standards) just to match current population levels.

However, there is a danger that the rapid increase in nursing numbers is coming at the expense of quality.

Training the nurses

Part of this danger lies in overstretching the nursing training schools: 80 to 90% of new nurses entering the profession have been educated at secondary technical school or junior college

level—associate degree programmes akin to high school diplomas—rather than the more demanding bachelor degree level (Figure 3). Many of the teaching institutions have also undergone a rapid expansion to cope with the dramatic rise in student numbers, but without commensurate funding or an expansion in teaching capacity. The cost of nursing training in China is less than in either India or the average for sub-Saharan Africa.² This lack of adequate financing has led to overstretched faculties, with education concentrated on the theoretical and technical aspects of nursing work. Clinical application and 'soft skills' such as problem solving and effective communication with doctors and patients are neglected despite these critical skills being widely seen as enabling nurses to play a crucial role in a modern healthcare system.



² "Challenges and a response strategy for the development of nursing in China: a descriptive and quantitative analysis" (Wang, Wei, Li, Deng, Luo, Li) – Journal of Evidence-Based Medicine, 2013

³ "The development and issues of nursing education in China: a national data analysis" (You, Ke, Zheng, Wan) – Nurse Education Today, February 2015



It had been hoped that the introduction of the mandatory Nursing Practice Certificate would raise the entry standard of new nurses, but there is concern is that despite this the rapid expansion in numbers is leading to a reduction in overall quality among new nurses. One senior nurse in Beijing suggested that her two and a half years of training in the 1980s were far superior to the four years many new nursing hires at her class 3 hospital have experienced. The standards "were dwindling and worsening and cannot be mentioned in the same breath," she argues, before concluding that "we are not very satisfied with the quality of nurses."

It is not difficult to employ nurses, but it is difficult to employ outstanding and well-qualified nurses

> Senior nurse, Shanghai Shidong Hospital, Shanghai

Inexperienced nurses are especially evident in crucial areas of reform, such as 'Community Healthcare'. A study by the International Nursing Review in 2010⁴ in Zhejiang Province found that three-quarters of community nurses lacked

equipment, and over half had no significant professional training. One senior nurse in Beijing was scathing about community healthcare in more remote areas of China, suggesting that some community nurses "aren't even capable of changing basic dressings." The senior nurse of the private Parkway Hospital in Shanghai told The EIU that new nurses struggled with responsibilities as they were "too young to give birth to a baby themselves."

Modernising contracts

The push for more nurses is also leading hospitals to shift to cheaper temporary and part-time contracts more akin to those seen in western healthcare systems, and away from customary 'bianzhi' contracts. Bianzhi contracts include a raft of increasingly unsustainable benefits including a state quarantee of lifetime employment, along with 'iron rice bowl' benefits such as housing, health insurance and a pension. They were the standard type of contract for the first three decades of Communist Party rule, until employers in China's rapidly developing coastal regions during the 1980s began using more flexible contracts. One 2014 study found that these newer, cheaper contracts were used for up to 91% of nurses (the average was 51% of nurses in the hospitals surveyed), and that they were on the increase as hospital managers used them to balance tight budgets with demands for higher numbers: nurses hired five to 10 years ago tended to enjoy bianzhi status, while new hires tended to be rewarded with bianzhi contracts only if they were in the minority with bachelor degrees.⁵

[&]quot;Development of community nursing in Zhejiang Province, China: a report of the driving measures" (Fu, Bao, Meng) International Nursing Review, June 2010

⁵ "Nurse employment contracts in Chinese hospitals: impact of inequitable benefit structures on nurse and patient satisfaction" (Shang, You, Ma, Alatares, Sloane, Aitkin) Human Resources for Health, 2014

RESPECT FOR NURSES

The question of quantity versus quality is not the only challenge facing the Chinese government as it attempts to reform the role of nursing in its health care system. The way that healthcare in China is structured is a challenge to the nursing profession, as it can trap nurses in low-status roles. Without considerable reform of the entire system it is unlikely that the wider benefits of an enhanced role for nursing can be realised.

Nurses interviewed for this paper all stressed status as a particular problem for Chinese nurses when compared to their foreign colleagues. A senior nurse of Zhejiang Tongde Hospital in Hangzhou noted how "in China, patients look down on nurses." She gave the example of one nursing course that included training in washing the hair and feet of patients, as that represented what was culturally expected of nurses. Another spoke of Chinese nurses being little more than "executors of medical orders." Such a low status contributes to the undervaluing of nursing as a profession, and undermines the potential for nurses to assume more responsible roles within China's health system.

One important aspect of this is the primacy of doctors within the Chinese system. Chinese citizens have tended to shun the shift towards primary healthcare, which carries a more prominent clinical role for nurses, in favour of heading directly to

larger tertiary hospitals that are dominated by physicians. These in turn are vastly over-subscribed, with long waiting lists and over-stretched budgets. The role of nurses in these hierarchical hospitals is subservient to doctors, giving hospital managers looking for cost savings little incentive to improve the quality of nurses rather than their quantity. This reinforces the tendency to hit numerical targets by shunning bianzhi contracts. Nursing expert Dr Christian Orejudos asks the question, "Will the doctors allow the nurses to do more? Nurses can no longer simply say they'll play the role of just following what the doctor says."

It will be difficult for nursing to develop to its potential if the profession must fight to remove physicians from the bedside

Marilyn W Edmunds, "China's nursing shortage" Medscape, 2010

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Aligning funding with performance

This financial undervaluing of nurses is compounded by the way hospitals fund themselves. Despite plans to increase the use of private medical insurance, many healthcare expenses are funded through out-of-pocket payments by the patients themselves. Physicians, forced to generate their own salaries, make money by prescribing drugs and providing treatments and procedures, and taking a cut of the fee. Hospital managers face a comparable situation: the government generally covers 5-10% of operating costs, and have agreed fees that patients pay for other services and treatments. Unlike doctors. nurses' fees tend to be low. For instance, in 2001 the government set a daily nursing fee of just 9 yuan (US\$1.40), and the fee for nurses to cut the hair of patients is less than a standard barber's fee. As a result nurses are not seen as revenue-generators for hospitals. This system creates incentives for inappropriate and inefficient overtreatment, as well as the domination of services by physicians, who will jealously quard their responsibilities. Reforms aimed at curbing over-prescribing and corruption—such as the 'Essential Drugs List' initiative—have yet to have a significant impact.

Both the low revenue-earning potential of nurses and their confirmation in supporting roles requiring little knowledge or skill, have contributed to their low wages. A report in Global Times in 2011 found that starting salaries for nurses in the city of Weifang in Shandong were as low as 500 yuan (\$77) a

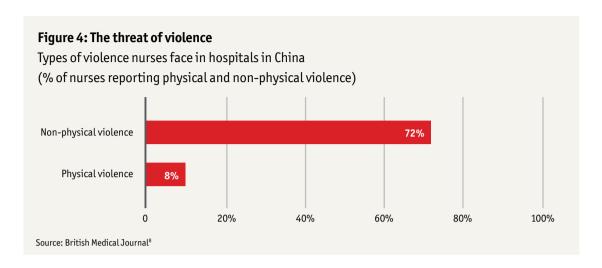
month, with even lower salaries in rural areas and remote provinces. Marilyn W. Edmunds noted in an article on Medscape that "The average salary for entry-level nurses in some Chinese urban hospitals is equivalent to that of a janitor." And similar to nurses abroad, all the senior nurses interviewed by The EIU stated that nurses were often expected to work beyond the standard 40-hour contracted week. Only one indicated that her nurses were compensated (in time or money) for this. Because of the nature of their work, nurses were also on rotas that involved compulsory unsociable hours such as night shifts and national holidays.

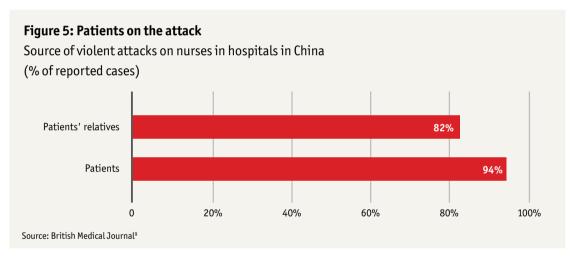
Violence against nurses

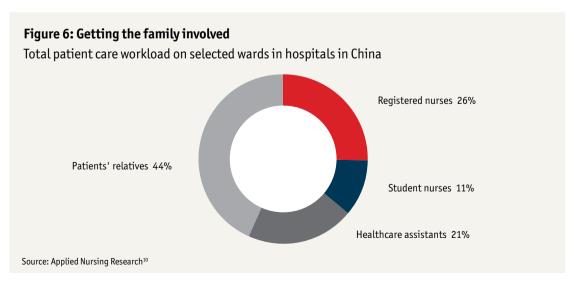
An unsavoury aspect of the poor relations between patients and nurses (and other medical staff) is the increasing levels of violence in Chinese hospitals. Violent incidents more than tripled in the eight years from 2002 to 2010 (from around 5,000 reported incidents per year to 17,000). One report in the British Medical Journal (BMJ) found that almost threequarters of nurses surveyed reported incidents of non-physical violence, and 8% reported physical violence (Figure 4). In 2013 there were around 70,000 recorded 'medical disputes', clashes between medical staff and patients (and their families), some of which involved physical violence. Responding to the needs of nurses in 2012, the ministries of health and public security were moved to issue a joint declaration on the issue, recommending that hospitals employ one security quard for every 20 beds.

^{6&}quot;Nursing in crisis", Global Times, 2011

^{7 &}quot;China's nursing shortage", Marilyn W Edmunds, Medscape.com, 2010







^{8&}quot;Workplace violence against nurses in Chinese hospitals: a cross-sectional study" (Jiao, Ning, Li, Gao, Cui, Sun, Kang, Liang, Wu, Hao) BMJ Open, 2015

^{9&}quot;Workplace violence against nurses in Chinese hospitals: a cross-sectional study" (Jiao, Ning, Li, Gao, Cui, Sun, Kang, Liang, Wu, Hao) BMJ Open, 2015

 $^{^{10}}$ "Nurses' roles in direct nursing care delivery in China" (Jiang, Li, Ma, Gu) Applied Nursing Research, 2015



According to the BMJ, in 94% of reported cases patients were responsible for the attacks on nurses (Figure 5). This violence is often a result of frustration among patients who, thanks to widespread media reports, are aware of a hospital's tendency to over-prescribe drugs and treatment, and therefore react to the prospect of paying large—often financially crippling—out-of-pocket fees. The medical charges relating to a serious illness can cost the life savings of an entire family. 11 Communication with staff tends to be poor, and the patients' families often find themselves shouldering large amounts of routine caring work (Figure 6). There is also widespread distrust of authority and a lack of faith in legal recourse in malpractice cases. Some patients and their families have taken recourse in the services of 'Yi Nao' gangs that threaten medical staff to force a reduction in fees. 12

Choosing not to nurse

Although some of the senior nurses we interviewed entered nursing in preference to the limited opportunities available to them three or four decades ago, those considering the profession in modern China have other attractive alternatives. Thanks to the rapid development of the economy there are now many more employment opportunities, especially in the big cities and in the more advanced coastal areas.

Those who do choose the nursing profession also have alternatives to the standard nursing jobs available in the large tertiary hospitals that dominate the health system. The gradual

expansion of private health insurance—which is being encouraged by the government—is leading to the growth of a private medical sector. In 2014, 8% of hospital beds in Shanghai were in the private sector, and investment levels are increasing. The senior nurse of a private hospital in Shanghai who was interviewed for this paper said that nurses were keen to move into the private sector because the higher standards and levels of responsibility offered opportunities for career progression missing in the public sector, and the pay is better.

In 94% of reported cases patients are responsible for attacks on nurses

British Medical Journal

Leaving China or leaving the profession

Given the challenging conditions for nurses in China it is unsurprising that many are looking for opportunities abroad, primarily in locations such as Saudi Arabia, Singapore and Australia. However, low levels of nursing responsibility in China, coupled with generally poor foreign language skills—English in particular—means that relatively few Chinese

[&]quot;Stop violence against medical workers in China" (Yao, Zeng, Peng, Ren, Chen, Wang) Journal of Thoracic Disease, 2014

^{12 &}quot;Workplace violence against nurses in Chinese hospitals: a cross-sectional study" (Jiao, Ning, Li, Gao, Cui, Sun, Kang, Liang, Wu, Hao) BMJ Open, 2015

¹³ Economist Intelligence Unit Industry Report – China; 4th Quarter 2015

nurses are able to move abroad for work. Even when they are able to find overseas employment, many are not able to work as qualified nurses: many in Britain, for instance, work as lowerskilled assistants in geriatric care homes, reflecting their lower skills base. However, as other countries experience shortages of nurses—Australia for instance is projected to have a shortage of 109,000 nurses by 2025¹⁴—demand for Chinese workers looking for work abroad is likely to rise. On the positive side, this also results in some highly trained nurses bringing their experience and skills back into the Chinese health care system when they choose to return home.

After working abroad, nurses returning home bring valuable experience and skills back into the Chinese health care system.

All of the senior nurses interviewed by The EIU reported that the constant loss of nursing staff was an issue. Although some said that staff turnover was under control in their hospitals, others suggested that they faced a turnover rate of around 10%, leading to constant pressure to recruit and retrain new nurses. This was in part thanks to poor

working conditions, from lowly status to relatively low wages, but family related factors also contributed.

Family comes first

Our interviewees reported that many nurses left the profession after giving birth. Their low wages and the need to care for young families meant that returning to nursing work was a poor option for many women. The lack of widespread care for the elderly, and the Chinese cultural norm that younger female relatives care for parents and grandparents, has also led to women dropping out of nursing. This has been exacerbated by the impact of China's one-child policy, which led to women taking sole care of two sets of parents and grandparents. A senior nurse from Shanghai Dongfang Hospital told us that she avoided recruiting nurses from other provinces, as there was a general expectation that they would eventually have to leave to fulfil their family duties in their home region.

^{14 &}quot;Why do China-educated nurses emigrate? A qualitative exploration" (Zhou, Roscigno, Sun) - International Journal of Nursing Studies, 2016

Reasons to be cheerful: Improvements in management, safety and technology

This report's headline finding, that nursing remains undervalued in China, risks obscuring the advances that are being made within the profession. The senior nurses that we spoke to all emphasised the greater effectiveness of the more highly trained nurses, and more responsive management. There are innovations in management, such as resource deployment and staff scheduling, service innovations such as communication techniques, and technical innovations, such as improvements in systems and methodologies, and new technologies.

Safety is one area where this is evident. All the respondents mentioned needle stick injuries as the largest safety concern for nurses. In the recent past, underfunding and time pressures meant nurses often gave injections without simple precautions such as wearing gloves, and incidents went under-reported. One respondent suggested that safe needle disposal boxes used to be kept on the floor, and nurses used to simply drop used needles into them without bending down, which led to injuries.

The respondents listed various measures introduced to mitigate the risk and deal with incidents. There was specific training on safety issues, and a management emphasis on reporting. Where possible, new equipment such as safer needle systems was purchased, and management developed systems and procedures around risks and incidents. For instance there was greater awareness of whether patients suffered from HIV or Hepatitis B, and this information was used to ensure nurses who were exposed to infection were treated promptly.

This greater responsiveness from management was also evident in other areas. Although money remains a limiting factor, all the EIU's respondents emphasised the provision of specialist training, often complementing new technology. A 25-point training scheme is meant to ensure the constant upgrading of nurses' skills, although this is unevenly applied and for financial reasons specialist nurses are sometimes the only ones able to access the courses. A senior nurse at Shanghai Shidong Hospital noted that in the absence of government support, medical companies are increasingly playing a role in funding training, and that their courses tend to be aimed at specialist skills, such as intensive care nursing. Our interviewees also spoke of a growing awareness of the importance of non-technical skills, such as communication with patients and other medical staff. The growing demand for better trained and more able nurses was recognised as long ago as 2005, when one study found that 90% of hospitals surveyed needed more staff for specialist units.

Although many senior nurses expressed grave doubts about the general quality of new nurses, they also spoke about the enhanced abilities of the best educated nurses. They agreed that the best tended to come from nursing schools attached to major universities, such as Peking Union Medical College. In addition, all were optimistic about the impact of new technologies and healthcare systems, such as ways to remotely monitor the health of patients, or electronic diagnostic tools. These would also allow better-trained Chinese nurses to take on more clinical responsibility.

CONCLUSION: BETTER NURSES MAKE FOR BETTER HEALTHCARE

The difficulties facing the Chinese government's efforts to make nursing an important part of a modernised health care system are obvious. Thanks to a history of cultural, institutional and clinical undervaluation, China has far fewer nurses than it needs. However, as it seeks to rapidly increase numbers there is a potential conflict between quality and quantity that is especially important given the benefits that come from nurses taking on more responsible and demanding clinical duties.

successful candidates, at exactly the time that the government is trying to get more people into nursing.

A hospital can operate without doctors, but cannot operate without nurses for one day

Senior nurse, Shanghai Shidong Hospital, Shanghai

Professional skills are improving all the time, but inter-personal and 'soft skills' still need to improve

Senior nurse, Zhejiang Tongde Hospital, Huangzhou

Nursing in China is also caught in a low status trap that is exacerbated by the way healthcare is funded, and the preferences of citizens for physician-led healthcare. This keeps nurses in subsidiary roles and confirms their low pay and poor working conditions. It also compounds the quality question, as a career in nursing is an unattractive prospect for more academically

Grounds for optimism

There are some grounds for optimism. The Chinese authorities are aware that nursing numbers must be increased, and that its richer and older population needs a different type of healthcare. This involves both enhanced clinical roles for nurses in tertiary hospitals and more emphasis on areas such as community and primary health care where nurses can play an important part. Nurses are internationally recognised as a particularly cost-effective element of a modern healthcare system. Despite an overall lack of quality, the best nurses in the Chinese system are able to take on these more demanding roles.



The government must support nurses having more responsibility. The doctors need to allow nurses to have more responsibility. And the nurses themselves need to want more responsibility. All three have to happen—it's got to be the perfect storm.

Dr Christian Orejudos, Chief International Clinical Expert, Baijia International Group.

Advanced medical technologies and innovations are now penetrating the health system, from data digitisation to remote monitoring and tracking devices. Modern management techniques are making strides in areas such as safety and communication. These can help change the status quo, by driving the need for more able nurses rather than simply more of them. The advance of private health insurance and the rapid growth of the private sector will also contribute, raising demand for better qualified nurses and in turn driving up both wages and standards. Doctors and nurses returning from more advanced healthcare systems abroad will improve standards and change perceptions about roles and responsibilities.

The Chinese government recognises that a modernised and efficient healthcare system that fits the changed circumstances and challenges of modern China needs an enhanced role for nurses. This requires attention to both the quality versus quantity question and the status trap. Increasing the numbers of nurses requires adequate funding for nursing education, and improved pay and conditions to attract good students into an undervalued profession. The relatively low cost of nursing training in China suggests there is the potential for extra spending to make a substantial difference to educational standards. Modern teaching methods and updated equipment and textbooks would help. Standards are also likely to rise thanks to a combination of demand from the private sector and specialised medical units, greater use of new innovations and technologies, performance-related pay, and more demanding consumers. Structural issues such as the way hospitals and doctors' salaries are funded must also be addressed, to allow the best nurses to take on more responsibilities. This value must also be reflected in the status of nurses, and the way their services are priced within the system. The status trap must be addressed, and nursing be considered as far more than a simple numbers game. One solution might be to formalise the higher status, greater responsibilities, and better pay of better trained nurses, differentiating them from their less well-trained colleagues. (A pathway for lower-trained nurses to reach the higher status would be kept open for the ambitious and able.) For nursing to play the effective and cost-effective role that it can in China's modernising health system, it needs to be given respect - institutionally, culturally and clinically.

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