

An in-depth look at Community Healthcare Centers in Beijing

China's hospital system can be characterised by the Chinese saying "kan bing nan" and "kan bing gui", roughly translated to mean "proper health care is difficult to get" and "proper health care is expensive." Traditionally, China's healthcare system has been predominantly hospital-based with citizens going to hospitals for even the most minor of ailments which is an inefficient, time-consuming and expensive system. The inadequacies in the Chinese healthcare system have led to increasing focus on the need to improve, culminating in the government releasing the Healthcare Reform Plan in 2009. Whilst it is not yet entirely clear how all of the reforms will be implemented, one of the key features of the plan is the development of a primary care system which will include both a focus on rural township hospitals and urban community healthcare centers (CHCs).

According to the Community Healthcare Association of China, CHCs will be responsible for between 30,000 – 100,000 patients per community, with a smaller number of community healthcare stations attached to the centers. Healthcare stations will be distributed within the community, serving a population of around 10,000. CHCs will primarily be set up by transforming existing Level I hospitals into CHCs, or larger scale Level II hospitals of an adequate size and staffing levels may set up a CHC within their hospital.ⁱ The aim of urban CHCs will be to provide access to a primary care physician, within the local community, at a lower cost when compared to a hospital physician. CHCs will be responsible for managing the chronic and common conditions whilst additionally filling a preventative health role. Development of community healthcare centers began in 1997 when the State department initiated a policy stating that the focus of healthcare should be preventative and at a primary care level.ⁱⁱ By 2007, Beijing was recorded as having 108 community healthcare centers and 1,081 community healthcare stations.ⁱⁱⁱ

To better understand this area of growth Synovate Healthcare conducted a pilot study of community healthcare centers in Beijing. Synovate interviewed CHC physicians collecting information on physician and CHC demographics as well as asking physicians to fill in patient record cards, collecting key treatment information, for diabetes, hypertension and dyslipidemia patients. Each physician filled in a record card for the next 10 patients they saw for each condition ensuring a random sample, a total of 500 record cards were collected for each condition. Synovate Healthcare interviewed 50 individual CHCs across Beijing's 8 urban districts, with the following general data being collected.

The Beijing CHCs interviewed have around 30 physicians working in them, focusing on a multitude of roles including general medicine, vaccination, Traditional Chinese Medicine and health education. The average length of time physicians have been qualified is around 20 years with a subsequent focus on community medicine for

around 10 years. The level of qualifications of CHC physicians is primarily to a university undergraduate level with around an additional 1/3 only educated to junior college level. CHC physician education levels are generally perceived to be lower than Level III hospital physicians and in fact, it was not until 1999 that family medicine formally became an academic discipline with the establishment of the family medicine training center at the Capital University of Medical Science in Beijing.^{iv}

Focusing now on the patients visiting Beijing CHCs, there is an even split between male and female patients who are aged over 50, in over 2/3 of cases. Overwhelmingly patients are repeat visitors implying that once patients first visit their local CHC they will continue to use the service. The CHCs interviewed were responsible for a patient population of around 60,000 people with physicians treating an average of 200 patients per week. Figure 1 shows that the most frequently seen conditions are hypertension, Type II diabetes and cold & flu, and these conditions take up the the bulk of CHC physicians' work load. It should be noted that research was conducted during December and January affecting the high volume of cold and flu patients.

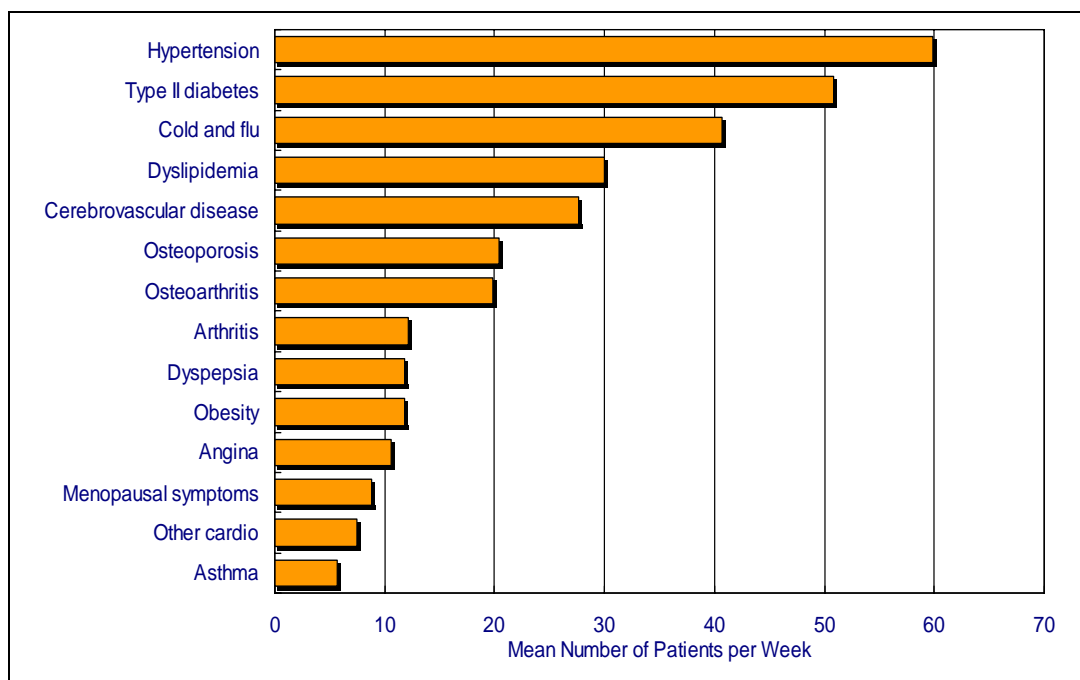


Figure 1: Average number of patients seen per condition, per week (most frequently seen conditions only)

Patients with chronic conditions, such as those shown in Figure 1, take up over 80% of Beijing CHC physicians' patient load, and physicians stated they were relatively confident in diagnosing these chronic conditions, particularly the conditions seen most frequently at CHCs, namely hypertension, Type II diabetes and dyslipidemia. The CHCs also have a range of diagnostic equipment including ECG, blood pressure monitors, X-ray and ultrasound machines.

One area of particular interest is what level of prescription leakage occurs between the prescriptions written for branded treatments at tiered hospitals and the proportion of switching away from those treatments that occurs when a patient visits a CHC. When asked to rate their overall level of switching away from treatments, physicians estimated that switching occurs only in around 20% of cases. When asked to rate what factor had the greatest impact on their prescribing habits, CHC physicians most frequently chose the CHC hospital drug list. As with most studies, representative visits were rated lowest in terms of impacting prescribing habits, and in fact, nearly all CHCs said they were not allowed to receive visits from pharmaceutical representatives.

Interestingly, when asked if they still saw representatives, around 1/3 of respondents had seen a representative in the last two weeks. Of the MNC pharmaceutical companies Bayer, Pfizer, Novartis and MSD have the strongest representative presence being seen by the greatest number of physicians interviewed and it should be no surprise that there is a bias to Beijing based MNCs. These companies additionally all have a strong presence in terms of prescription rates for the key conditions treated at CHCs. Unusually, when CHC physicians were asked which information sources they use to keep up to date on treatment practices, one of the higher mentions was the patient themselves. This is likely to be due to patients visiting Level III hospitals and then passing their treatment information back to CHC physicians; it does imply an information need and a need to fill this knowledge gap with more training for physicians.

Moving on now to look more in-depth at the three conditions covered, nearly all the diabetes patients seen at CHCs suffer from Type II diabetes, and around 2/3 of the diabetes patients seen received their initial diagnosis at a Level III hospital. Around 10% of patients received their initial diagnosis at a CHC and we can only expect this proportion to grow as the number of patients visiting CHCs for the first time increases and physicians become more confident in diagnosing.

The most popular diabetes treatment classes used at CHCs are AGIs (Bayer's Glucobay) and Metformin. Generic metformin is the most commonly prescribed of all the diabetes treatments, closely followed by Bayer's Glucobay and this is despite it being a branded treatment. Over 80% of diabetes patients are receiving oral treatment only for their diabetes with low use of combination regimens. In contrast to treatment of Type II diabetes at Level III hospitals, only around 20% of patients are on an insulin treatment, primarily as a monotherapy treatment; and within this segment Novo products dominate.

When comparing data from the Synovate Healthcare 2008 diabetes therapy monitor it becomes clear that there is a notable difference in the prescribing habits of

physicians at Level III hospitals and CHCs. Figure 2 illustrates this difference in prescribing habits.

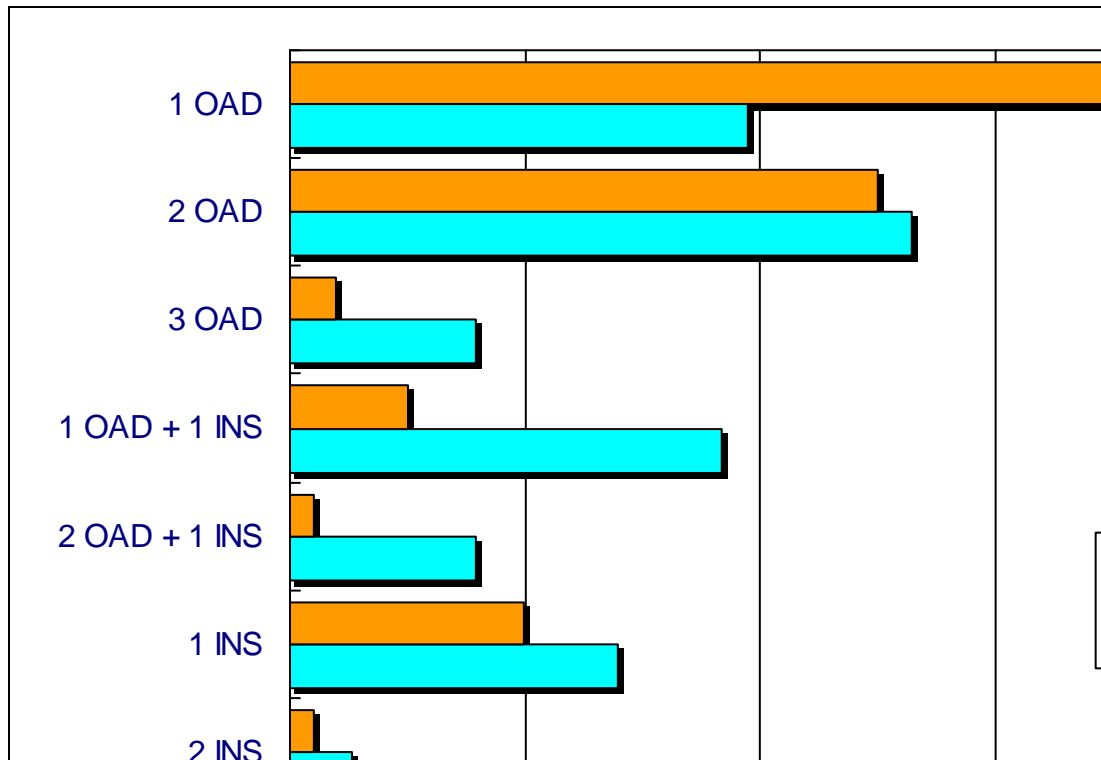


Figure 2: Prescribing habits of physicians at Level III hospitals and CHCs

Patients seen at Level III hospitals are far more likely to receive combination therapy and are more likely to be on an insulin treatment. Diabetes patients at CHCs will most frequently receive only 1 treatment despite a similar distribution of HbA1c levels amongst patients, when compared to Level III hospitals, illustrated in figure 3.

HbA1c levels	Good (<6.7)	Moderate (6.7 -7.8)	Poor (>7.9)
Tier III hospitals	26%	44%	30%
CHCs	18%	48%	34%

Figure 3: A comparison of diabetes patients HbA1c levels at CHCs and tier III hospitals

The similarity in HbA1c levels implies that the difference in prescribing habits may not be related to how well the patient's condition is controlled.

Prescribing of diabetes treatments at CHCs is fairly stable, with around 80% of prescriptions written as repeat prescriptions. Overall, physicians will initiate treatment for diabetes patients in around 1/3 of cases mainly with generic or local treatments, with the exception of Glucobay which is initiated more frequently by CHC physicians than generic arcabose. The AGIs and Metformin see the greatest proportion of treatment initiation, and patients are most frequently switched to insulin therapy.

Within the hypertension treatment group, around half of patients have stage 2 hypertension with a further 1/3 classified as stage 1. Unlike the diabetes market, which shows a clear dominance by generic Metformin and Bayer's Glucobay, the hypertension space is much more crowded and shows a slighter higher proportion of international branded treatments prescribed than local / generic treatments. Bayer are clearly strong in this area too, however, Pfizer, Novartis, BMS, AZ and MSD all show notable prescription rates. Figure 4 shows the breadth and depth of prescribing of the different MNCs active within the hypertensive space in CHCs and their relative position.

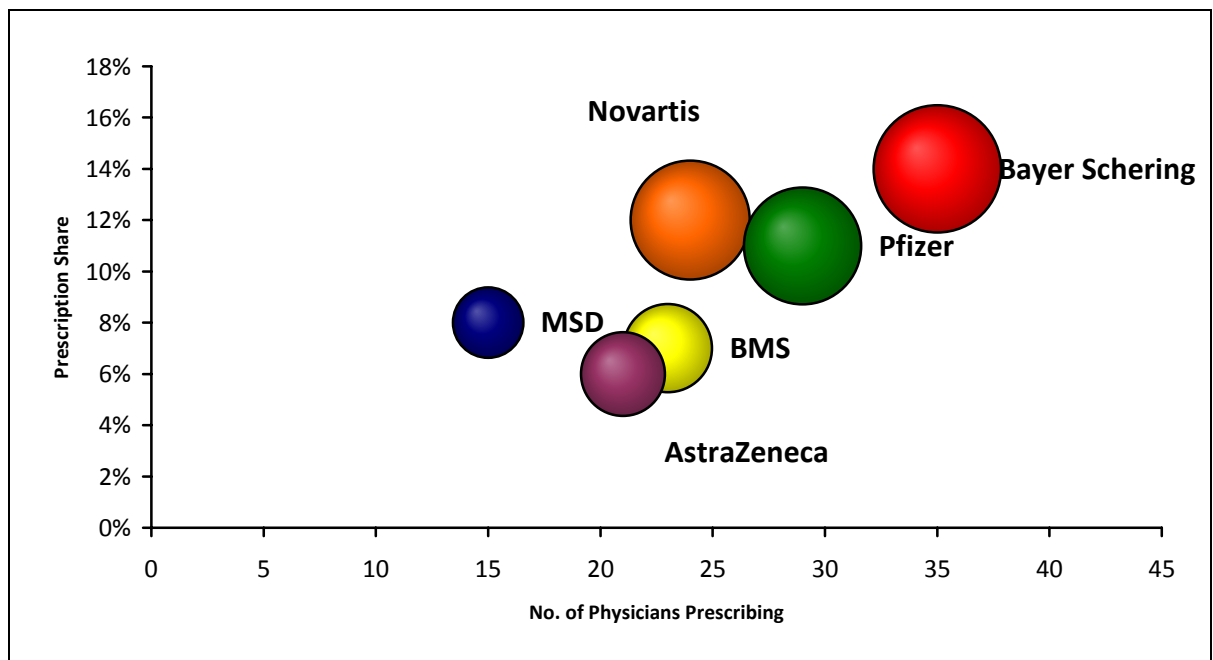


Figure 4: Breadth and depth of hypertensive prescriptions at CHCs (size of bubble represents no. of patients on treatment)

As with diabetes, monotherapy is the most common treatment prescribed for hypertensive patients; only around 1/3 of patients are taking a combination regimen. The majority of patients are receiving a calcium antagonist as a monotherapy with either an AIIA or ACE added in as a combination regimen. As with diabetes, the seriousness of the patient's hypertension appears to have little impact on the number of treatments a patient receives with a patient's pill burden remaining consistent regardless of the patient's hypertensive stage.

The most frequently prescribed antihypertensive treatments at Beijing CHCs are Adalat (Bayer), Norvasc (Pfizer) and Lotensin (Novartis). CHC physicians will initiate patients onto treatment in around 40% of cases and of all the treatment initiations made by CHC physicians Bayer's Adalat holds the largest prescriptions share. Perhaps not unsurprisingly, overall, the treatments CHC physicians will most commonly initiate patients on to are locally produced / generic products, although they will also initiate patients onto branded treatments in around 40% of cases. The

greatest amount of switching away from treatments at CHCs occurs primarily with generic and locally produced treatments. These treatments are most frequently initiated by the CHC physicians themselves and little switching occurs from treatments that physician in tiered hospitals have recommended.

Finally, looking at the treatment of dyslipidemia, of all the three conditions covered dyslipidemia prescription rates showed the lowest usage of internationally branded treatments with over 70% of treatments prescribed being local / generic treatments. Of all the internationally branded treatments prescribed at Beijing CHCs only MSD (Zocor), Pfizer (Lipitor), Solvay (Lipanthyl) and Novartis (Lescol) treatments were prescribed.

Around 80% of all prescriptions written for dyslipidemia at CHCs are for Simvastatin, with around 1/4 of all Simvastatin prescriptions written for Zocor. Switching within this therapy area is also particularly low with the large majority of prescription dynamism coming from treatment initiations. CHC physicians will initiate treatment for dyslipidemia patients in around 40% of cases and will prescribe generic Simvastatin in the majority of cases and Zocor in around 10% of cases. Of all the Zocor prescriptions, around 80% are prescriptions that are carried over from tiered hospitals. Switching happens rarely within this treatment area and when it occurs patients are generally switched to generic Simvastatin.

It is clear from the data collected, that in Beijing CHCs at least, there is a strong leaning towards prescribing monotherapy treatment vs. combination therapy which will unquestionably have an impact on the revenues for pharmaceutical companies should the government be successful in their reform plan. Additionally, as physicians become more confident in diagnosing, they will initiate treatment themselves more frequently, likely leading to a further increase in the usage of locally produced / generic treatments. The key question for pharmaceutical companies will be how to access this new market and how to ensure their products are used over locally produced / generic treatments. Bayer has demonstrated that in Beijing CHCs, physicians are willing to prescribe internationally branded treatments. Their excellent portfolio of products and strong leadership presence make them a major player in the Beijing CHCs market. With CHCs forming one of the key areas of the 2009 healthcare reform plan the landscape of the Chinese healthcare system will permanently shift and it will be essential for the pharmaceutical industry to move with it or risk getting left behind.

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- ⁱ http://www.chs.org.cn/index.php?option=com_content&module=25&sortid=35&artid=285&menuid=37
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