

The China Health Policy and Management Society

China Health Review

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China Health Review (CHR), published quarterly, is the official online magazine of the China Health Policy and Management Society (CHPAMS). The CHR is intended to promote health research, policy, practice, and education related to China and the general population health sciences by providing research and policy updates, topical reviews, and other appropriate information. Targeted audience includes (1) academic researchers within and outside of China; (2) policymakers within China; (3) other interested parties including nonprofit organizations and business leaders as appropriate.

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Instructions for Authors

China Health Review (CHR) is soliciting submissions of manuscript for the following sections: *Topical Review*, *Perspectives*, and *History Speaks*.

Topical Review is systematic, critical review and assessments of literature and data sources pertaining to a topical issue determined as appropriate by the Editorial team. The articles generally should be kept within 2000 words. Manuscripts in the **Perspectives** section are short reviews that, in most instances, highlight an article(s) that appears in the same or recent issue of the CHR. Perspectives that are not tied to an article are narrower in scope than Topical Review articles and allow more lively and timely discussion of a topical issue. The articles generally should be kept within 1000 words. **History Speaks** is devoted to historical events and prominent figures of significance to population health among the Chinese people within and outside of China. The articles generally should be kept within 1500 words.

In addition, the CHR welcomes short submissions to two other sections, *Research Twitter* and *Policy and Practice Updates*. **Research Twitter** provides brief summary of most recent research reports appeared in academic journals and grey literature that are relevant to health issues in China and Chinese people. **Policy and Practice Updates** provides brief summary of updates in health policy and practice that appeared in relevant policy briefs, news release, and popular news sources. Submissions to both sections should be kept within 200 words per summary in general. Please contact section Editors listed below for questions, information or submission.

All submissions should be typed, double-spaced, as Word documents only. Manuscripts should conform to the style of the fifth edition of the Publication Manual of the American Psychological Association. All submissions should be submitted electronically to the attention of the Editor. Authors must ensure that their manuscripts are appropriately identified. All submissions, if accepted, shall indicate author's consent to assign CHR rights to disseminate in its final form. However, authors retain the copyright. In particular, publication in the CHR does not preclude authors to submit and publish an edited version of the manuscript in a peer-reviewed journal or as a book chapter.

Review Process: Submissions will be reviewed and edited by the CHR's editorial team.

Contact Information: Inquiries about the CHR and submissions can be addressed to Dr. Zhuo (Adam) Chen (CHR@chpams.org). Submissions to the **Research Twitter** and **Policy and Practice Updates** should be addressed to Dr. Feijun Luo (frankie_luo@yahoo.com) and Dr. Xuezheng Qin (qin.econpku@gmail.com), respectively.

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China Health Review

VOLUME 3 ISSUE 2



A magazine of
the China Health Policy and Management Society

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EDITORIAL INTRODUCTION

The second issue of China Health Review in 2012 includes the following sections.

The *Interview* section features a lively conversation between Dr. Yi Pan and Prof. YU Hai from the Zhejiang University School of Medicine, on life, career development, and certainly health policy and systems sciences!

In the *Perspective* section, Lua Wilkinson and coauthors review the challenges for infant feeding in China's current economic and social climate.

Research Twitter provides summaries of ten recent publications on China's health issues, including risk factors for the 2009 Pandemic Influenza A (H1N1) in mainland China, particulate air pollution and daily mortality, voluntary HIV testing and counseling, body mass index and mortality using a 15-year prospective study of 220,000 Men, aspects of the New Cooperative Medical Scheme, overprescribing, and drug-Resistant Tuberculosis.

Policy Practice and Updates includes six updates covering topics including Diagnostic Related Groups (DRG) based hospital payment system, management of the New Rural Cooperative Medical Scheme, essential drug system, the "zero mark-up" policy, and pharmaceutical market, etc.

In *About CHPAMS*, we introduce to you Yusheng Zhang, MD, MPH, MBA, who returned to Beijing last year. You will also find recent career updates from Drs. Zhanlian Feng, Xinzhi Zhang, words to CHPAMS by Dr. Jian Ni, and a report by Dr. Tzesan Lee on his recent trip to China.

Happy Reading!

2012年第二期《中国卫生评论》包括以下内容。

潘羿博士与浙江大学医学院余海教授进行了**访谈**，设计人生，职业发展，当然还有卫生政策和系统科学！

在**观点**栏目中，路依依及其合作者回顾了**中国婴幼儿营养的挑战**。

研究动态列出了十篇最新有关中国卫生的文章，包括 2009 年流感的致病因素，空气污染与死亡率，艾滋病自愿诊断，用 15 年 220,000 男性追踪调查所作的体重与死亡率的研究，新农合，处方滥用，及抗药性结核等。

政策与新闻提供了有关新农合管理，基本药物制度，零差价政策，和制药业市场等相关的六篇新闻。

在 **CHPAMS 之声** 栏目中，我们介绍了张遇升医学博士，提供了冯占联博士及张心治博士的工作变化，倪剑博士写给 CHPAMS 的信，以及李子酸博士的杭州之行报告。

INTERVIEW

A CONVERSATION WITH PROF. YU HAI, ZHEJIANG UNIVERSITY SCHOOL OF MEDICINE

By *Yi Pan*, PhD, Emory University
潘羿, 博士, 艾默里大学

Dr. YU Hai is a Professor in Zhejiang University School of Medicine. He also serves as the Director of International Education Program and the Director of Center of Distance Education in Zhejiang University School of Medicine. Dr. Yu studied at Shanghai First Medical College (now Fudan University Shanghai Medical College) from 1962 to 1968. During 1968-1978, Dr. Yu served as a physician in Longde County in the Ningxia Hui Autonomous Region. He was enrolled in the graduate program in Ningxia Medical College in 1978 and then studied in Leeds University in U.K. during 1980-1983. Dr. Yu received his PhD degree in Cancer Research from Leeds University and returned to China in 1983. He has served as a Professor, Deputy Director of the Cancer Institute, Zhejiang Medical University, Vice President of Zhejiang Medical University, and Associate Dean of Zhejiang University School of Medicine. His main areas of interest are cancer immunology, cancer biotherapy, and cancer prevention studies. Dr. Yu has authored and co-authored over 100 publications. He has won more than 10 times the Award for Science and Technology Progress at the national and provincial levels.



余海教授简介：余海教授现任浙江大学教授，浙江大学医学院国际教育项目主任，医学远程教育中心主任。他1962至1968年毕业于上海第一医学院医学系，1968年至1978年任宁夏回族自治区隆德县医生。1978年余教授考取宁夏医学院研究生并于1980年留学英国，1983年取得英国LEEDS大学肿瘤研究所博士学位，同年学成归国。余教授历任浙江医科大学教授，浙医大肿瘤研究所副所长、浙江医科大学副校长、浙江大学医学院副院长。他主要从事肿瘤免疫学、肿瘤生物治疗和肿瘤预防学研究，在国内外发表论文100多篇，曾10多次获国家级和省级科技进步奖。

This interview was conducted by Dr. Yi Pan, Emory University, through phone on June 2nd, 2012. Dr. Zhuo Chen also joined the conversation.

艾默里大学潘羿博士于2012年6月2日代表中国卫生政策与管理学会（海外）电话采访了余海教授。美国卫生部疾病预防控制中心陈茁博士也参与了访谈。

1. Personal Experience and Educational Background

个人成长和教育经历

Yi: Dr. Yu, I know that you studied in Shanghai First Medical College from 1962 to 1968. What prompted you to choose medicine as your life-long career?

潘羿：余老师，您在1962到1968年在上海第一医学院学医。是什么促使您选择医学作为自己的终身职业呢？

Dr. Yu: My father passed away with health issues when I was very young so that I understood early on the importance of a healthy body to a person and to a family. My first wish was to become a doctor and treat patients with my medical knowledge and training. Unfortunately I only practiced for about 10 years. Although I'm not practicing anymore, I haven't changed my goal

to improve the health of human kind through my efforts in both medical education and public health.

余海教授：我的父亲去世得很早。在经历了幼年丧父之后，我知道了健康的身体对个人和家庭的重要意义。所以我最初的愿望是想做一名医生，用自己的医学知识去救助更多的病患。但很遗憾我行医的经历只有短短的十年，现在虽然当不成医生了，但是希望通过自己的努力为人类健康作出贡献的愿望却一直没有改变。

Yi: After graduating from Shanghai First Medical College, you left Shanghai for Longde, Ningxia Hui Autonomous Region and worked there for 10 years because of the Cultural Revolution. What do you think of your experience in Longde?

潘羿：从上海的医学院毕业以后，由于当时历史的特殊原因，您从上海来到了宁夏的隆德，而且一呆就是 10 年。您觉得这 10 年给您今后的人生带来了哪些启发？

Dr. Yu: In 1968, I graduated from Shanghai First Medical College but my medical training was not completed due to the Cultural Revolution. I was assigned to the poorest county, Longde, in Mountain Liupanshan, which belongs to the Xihaigu Prefecture, Ningxia. It is one of the worst areas for human beings to live as reported by the United Nations Food and Agriculture Organization [in 1972]. But I worked there for 10 years. I worked in Shangliang community health center which is about 20 kilometers from the Longde county seat. There were no paved roads, no electricity, no tap water, and the temperature was about -20 degrees Celsius during winter time and there was no heating when I arrived. Before my arrival, there were only two local practitioners who treated both animals and people. There was no high-pressure sterilizer so the syringes were only boiled in a cooking pot for repeated use. The local people were very poor and most of the times they couldn't afford their medical bills. They would trade eggs, grain, pork, or even house to see a doctor, and only when it was absolutely necessary.

I don't think that those 10 years were wasted -- I learnt that there were very poor people who even struggled to survive in China during that time. I learnt that medical technology alone can solve the whole problem. Instead, economic development and social safety nets were desperately needed. For me, it was the most profound field lesson on social medicine and health economics that I took for ten years.

余海教授：1968 年我在上海第一医学院结束了没有完成的医学教育后（三年基础课，然后是一年“四清”，两年“文革”，唯一的临床训练是在复课闹革命期间的短短几个月时间医院实习），被分配到了宁夏六盘山区穷困的隆德县，属于西海固地区，是被联合国粮食开发署[于 1972 年]确定的最不宜人类生存的地区之一，而我在那里却生存和工作了整整 10 年。到了隆德没有留在县城，去了当地的条件最差的上梁公社卫生院，离城有 20 多公里，没有公路，没有电，没有水，冬天零下二十几度，刚去时还没有火炉取暖。在我去之前卫生院只有两位土郎中，既看牲口又看人。没有高压消毒锅，注射器只能在锅里煮沸使用，但奇怪的是从来没有发生过输液反应。当地老百姓温饱都未解决更遑论看病就医，往往是小病拖，大病捱；拖不过，捱不住了，才卖鸡卖猪拆房卖房樑，看病换药吃。

现在想想十年时间并没有虚度，让我知道了中国还有那么苦的地方，还有那么多的穷人；让我知道单靠医疗技术解决不了老百姓的健康问题，还需要有经济的支撑，制度的保障，这是我所上的印象最深刻的第一堂社会医学和卫生经济学课。当然经过哪些艰苦岁月磨练之后，人生态度的改变，心理生理承受能力的提高，是这十年赋予我的最大精神财富。

Yi: After the Cultural Revolution, you were enrolled as a graduate student in Ningxia Medical College with the highest score in Ningxia. So you never gave up your dream and goals?

潘羿：文化大革命结束后，您以宁夏地区第一名的成绩考上了研究生。您是不是从没有放弃过对于理想和未来的追求，坚信自己一定会通过努力走出这里？

Dr. Yu: Before 1978, without the return of Deng Xiaoping, nobody in China had any idea about personal dreams and the future of our country. Living in a place without electricity, tap water, TV and not even mention internet, there was no way to know what was going on in the outside world. The only connection I had with the outside world was a shortwave radio. Reading books under a kerosene lamp was also a great fun. I started to study English using the radio during that time. I still remember vividly the moment when I heard the words "VOA (Voice of America) special English, the news" that came from thousands of miles away.

余海教授：在十一届三中全会之前，在邓小平还没有复出的时候，中国人就像身处一条看不到尽头的黑暗隧道中，没有谁知道该往哪里走，没有谁知道国家的前途在哪里，当然谈不到什么个人的理想和未来的追求了。在那个思想禁锢的年代，在那样一个没有电，没有水，没有电视，当然更没有互联网的与世隔绝的贫困山区，生活的艰苦还是其次，最痛苦的是消息的闭塞。我是通过一架短波收音机和所订的一份《参考消息》，获取外界的信息，不至于离开世界潮流太远。在晚上无所事事的时候，在煤油灯下看书也是一大乐趣，我的英语也是这个时候跟着收音机学的，印象最深的是从万里之外的播音员口中慢慢腾腾地播报的一句话“V.O.A, special English, the news”。

Yi: You were among the first generation of students who were sent overseas. How did you get such an opportunity? Did you feel a cultural shock considering the differences between China and the western countries at that time? Did it take long for you to adapt to the new setting?

潘羿：在 80 年代去英国博士深造,应该算是当年中国第一代的在文化大革命以后的公派留学生.您是怎样争取到这样的机会的呢? 从当时还不算开放的中国来到了西方世界,当时有没有觉得有一种巨大的改变?您觉得您很快适应这种转变吗?

Dr. Yu: The Cultural Revolution ended in 1978. I was enrolled as a graduate student in Ningxia Medical College. I learnt English by myself and passed the test organized by the Ministry of Education in China for the government-sponsored overseas study. Finally, on December 26, 1979, the birthday of Chairman Mao, I travelled with other 12 Chinese students for 11 days by train and over the sea from Beijing to London, passing through Erenhot of Inner Mongolia, Zamyn-Uud of Mongolia, Ulaanbaatar, Siberia, Moscow, Warsaw, East Berlin, West Berlin, and Hague. We finally arrived in London on January 5th, 1980. After studying English for three months at the Ealing College in London, I started my cancer research in Leeds University in April 1980. I graduated in May 1983 with a PhD degree from the Institute of Cancer, Leeds University. I did experience the cultural shock coming from China to England. But fortunately I adapted to the life in England quickly.

余海教授：1978 年，文化大革命结束了，中国恢复了研究生招生，邓小平高瞻远瞩决定派遣留学生出国。这一年我顺利考上了宁夏医学院的实验病理研究生，同年又参加了教育部组织的出国留学考试。我在高中、大学学的都是俄语，英语是自学的，基本是“哑巴英语”，我的英语笔试考了高分，但口试时张口结舌，答非所问，主考老师也许是出于同情或者是出于怜悯，给了我 60 分，总算勉强过了关。经过一年多的等待，终于在 1979 年的 12 月 26 日毛主席生日这一天踏上了西行之路。我们一行 13 个中国留学生，在北京搭乘火车，从二连浩特出境到蒙古的扎门乌德，经乌兰巴托，西伯利亚，莫斯科，华沙，东柏林，西柏林，海牙，再改乘轮渡，最终辗转到英国伦敦已是 1980 年的 1 月 5 日了，全程 11 天，时间却跨越了一年。在伦敦 Ealing College 补了 3 个月英语后，1980 年 4 月到 Leeds 大学开始了我的肿瘤学研究生学习，第一年注册的是 Mphil，第二年转成 PhD，1983 年 5 月顺利通过答辩拿到学位。从一个封闭的中国到一个开放的西方社会，当然有很多生活、思想、文化的冲击，好在我的适应性比较强，三年当中几乎没有对我的生活和学习有多大影响。

2. Back to China

回到中国，成就事业

Yi: When you came back to China in 1983, did you encounter any difficulties?

潘羿：在您 1983 年回到祖国后，您怎样所学为所用？您当时遇到了什么困难吗？

Dr. Yu: After attending the commencement at Leeds University in July 1983, I returned to China in September the same year. It's the most natural thing for me to do because China paid for my tuition and living expense while I studied at Leeds University. I first returned to the Ningxia Medical College and after a year, I took a position with the Institute of Cancer Research at Zhejiang Medical University, led by Prof. ZHENG Shu. The school is located in the city of Hangzhou, my parents' hometown. There was a huge gap in advanced research between China and western countries back in the 1980s. I still remember that I received my first National Natural Science Grant of RMB Yuan 30,000, which was considered quite a lot of money at the time. The two pipettes I brought back from England were the only "imported equipments" in our lab. The two packets of disposable pipette tips were washed and dried for repeated use.

余海教授：1983 年 7 月参加了 Leeds 大学的学位典礼之后，9 月份回国。当时并没有像众多的有关海归的报道中所写的那样“婉拒国外高薪聘请，毅然回国”，没有那么高尚，只觉得是国家出钱供我留学，回国工作是最自然不过的事了。但是回到了宁夏之后，发现国外所学在这里发挥不了多大作用，但是要离开又觉得对不起宁夏医学院，很纠结。当时的社会和我出去时已经有所不同，对于人才流动自主择业有一定程度的宽容，这样经过近一年的坚持我终于调到了我父母出生地杭州，到郑树教授领导的浙江医科大的肿瘤研究所工作。八十年代的中国和西方国家在科研上的差距还是很大的。我记得在 80 年代申请到的第一笔国家自然科学基金只有 3 万元，当时还算是不少的。我从英国带回的两个移液器（pipette），还是实验室唯一的“进口设备”，而带来的两包一次性的移液头（tips）用了以后舍不得丢掉，还要冲洗烘干后反复使用。

Yi: You have served as a consultant for the World Bank and also the World Health Organization. How did you transform from a clinical and laboratory researcher to a pioneer and advocate for health policy and systems science?

潘羿：您有过在世界银行，国际卫生组织担任咨询顾问的经历，这些对您从纯粹的临床，实验室的专家变成了卫生政策和体系科学研究的一位先行者和推动者，有怎样的影响呢？

Yu: I started with biochemistry and immunology research when I first arrived in Hangzhou. At that time, Zhejiang Medical School was in charge of the colorectal cancer prevention project. I threw myself into studying public health, epidemiology and statistics, and conducted field research in Jiashan and Haining, both areas with high prevalence of colorectal cancer. This project received the Third Class Award of the National Science and Technology Research. Starting in 1980s, the World Bank funded health projects in China through soft loan, and I was invited by the World Bank Loan Office to evaluate implementation of China's health projects. I participated in the Second Health Sector Study in China conducted by the World Bank, leading to a World Bank Report released in 1990 titled "China, Long-term Issues and Options in the Health Transition". This report pointed out that China was experiencing a health transition, from the end of the first health revolution to the beginning of the second health revolution. Chronic non-communicable diseases have replaced communicable disease as the biggest health problem in China. The report also pointed out that cigarette use is a preventable risk factor of multiple chronic diseases associated with heavy burden of mortalities, and proposed tobacco control policies and measures including raising tobacco tax. Now, 20 years later, the report is proven to be correct in its assessment and the proposed solutions effective. Participating in such projects

was an enriching experience for me. It also got me involved in public policy and health economics, which were not a familiar topic to researchers in China at that time. Through the World Bank projects, I also met a lot of domestic and international experts, including Dr. Jeffery Koplan (Director of the U.S. Centers for Disease Control and Prevention (CDC), 1998-2002), currently the Vice President for Global Health, Emory University, and the Director of the Emory Global Health Institute. Jeff visited China more than 50 times. He loves the Chinese culture and contributed significantly to the development of China's public health. We have maintained a close friendship for nearly 30 years.

余海教授：刚到杭州时和在英国一样，我做的是肿瘤的生物化学和免疫学的实验研究，当时浙医大肿瘤所承担的是国家“六五”，“七五”攻关的大肠癌防治研究项目，由于课题需要，自己恶补了些公共卫生、流行病学、统计学的知识，在浙江省的大肠癌高发区嘉善、海宁从事大肠癌的人群筛检和预防研究，这个课题还得过国家科技攻关三等奖。从八十年代开始，世界银行通过软贷款形式资助中国的卫生项目，我受卫生部世界银行贷款办的邀请参加了世界银行在中国的卫生贷款项目的评估，实施监督工作，并参与世界银行第二次中国卫生部门报告（Health Sector Study）的调研工作。世界银行的报告“China, Long-term Issues and Options in the Health Transition”（1990年发布）就是在这次调研的基础上写成的。报告指出中国正在经历着一场健康模式的转型（health transition），从第一次卫生革命基本完成转换到第二次卫生革命，慢性非传染性疾病已经成了中国最大的健康问题，报告明确将吸烟定位为导致慢性病死亡的第一位的可预防的危险因子，并提出了控烟的具体政策和措施，包括提高烟草税。这个长期是指40年，是真正的长期。20多年过去了，当时报告的观点和措施还是那么正确有效，这就是科学的力量：远见卓识，经得起时间的考验。这段时间的工作开阔了我的视野，学会从一个宏观的角度来观测评价卫生问题，也使得我对中国当时还没有多少人研究的公共政策学，卫生经济学有所了解。在世行项目的工作中，我也结识了不少国内外的专家，包括 Jeffery Koplan，他在1998到2002年间当过美国CDC的主任，现在是埃默里大学副校长兼全球卫生研究所主任。Jeff到过中国五十多次，热爱中国，热爱中国文化，对中国的公共卫生事业的发展贡献甚大，我和他保持了近30年的友谊，至今还有紧密的工作联系。

Yi: How do you view the future of health policy and systems sciences (HPSS) in China?

潘羿：您对中国未来的公共政策和体系有怎样宏观上的认识呢？

Dr. Yu: Here I should mention the China Medical Board (CMB). I have been in charge of the CMB projects in Zhejiang Medical University since 1989, which has since merged into Zhejiang University. The CMB made significant contributions to medical health services and medical education in China. Dr. Lincoln Chen, President of the CMB, proposed that the focus of CMB in phase IV [in CMB's history] should be promoting HPSS among Chinese medical schools. The medical colleges in China and China's public health system were built on the Soviet model in the 1950s. Due to the lack of research in HPSS in China, health policies implemented in China were not necessarily evidence-based. Of course, this situation has seen improvements in recent years. In March 2009, "Opinions of the CPC Central Committee and the State Council on Deepening the Reform of the Medical and Health Care System" was issued and based on proposals from several academic institutions, WHO and the World Bank. The first CMB project after Dr. Lincoln Chen became the president of CMB was to sponsor Zhejiang University to organize the first Westlake Forum. The Westlake Forum became a series of meetings discussing critical health policy issues, and provided a platform for communication between the medical schools, health policy researchers and government officials. The first Westlake Forum was hosted in Hangzhou in 2007, with a focus on health equity. The second Westlake Forum in 2009 focused on the strategic plan "Healthy China 2020". In 2011, Zhejiang University School of Medicine and Emory Global Health Institute successfully co-organized the third Westlake Forum to discuss the similarities and differences of health care reforms in China and the United States. In November 2012, the fourth West Lake forum will be held in Shanghai to explore ways to strengthen China's academic health systems. The series of CMB sponsored Westlake forums and CMB's strategies

significantly promoted and enhanced HPSS development in Chinese medical schools and made profound impact on China's public health.

余海教授：这里必须提到美国中华医学基金会（China Medical Board, CMB）对我的影响。我从 1989 年起就参与浙江医科大学第一个 CMB 项目的工作，到现在 CMB 换了三任主席，我还负责学校的 CMB 项目，20 多年来唯一的变化是浙江医科大学变成了浙江大学医学院。CMB 对中国医学卫生事业和医学教育的贡献是巨大的，特别是 Lincoln Chen 2006 年接任主席后，经过一年多的战略规划，提出了 CMB 历史上第四个时期（phase IV）的工作重点是提高中国医学院校卫生政策和体系科学（Health policy and system science, HPSS）的能力建设。这真是真知灼见，一针见血地指出了中国医学院校的短板，中国公卫的体系是 1950 年代参照前苏联的模式建立起来的，重点是疾病预防和“五大卫生”。全国的医学院校卫生政策卫生系统科学的研究能力普遍薄弱，对国家卫生政策的影响力非常有限，而政府的决策往往也不是建立在研究证据的基础上（Evidence-based）。当然这种情况近年来有所改变，2009 年 3 月出台的“中共中央国务院关于深化医药卫生体制改革的意见”就参考了国内几所高校和世卫组织、世界银行提出的几套方案。Lincoln Chen 担任 CMB 主席所批准的第一个 grant 就是资助浙江大学举办西湖论坛，该论坛讨论当前重要的卫生政策问题，为医学院校，卫生政策专家和政府官员的对话提供平台。2007 年在杭州举办的第一届西湖论坛探讨了中国卫生公平性问题，2009 年的第二届西湖论坛讨论了“健康中国 2020”战略规划。2011 年浙江大学医学院和埃默里大学全球卫生研究所(Emory Global Health Institute)在美国亚特兰大成功组织了第三届西湖论坛，探讨了中美医疗体制改革的异同问题。今年 11 月份将在上海举办第四届西湖论坛，论坛的主题是探讨加强中国教育研究型医学体系（Academic health system）问题。近年来 CMB 通过召开会议，人员培训，建立研究中心，公开招标项目和合作项目的资助等手段切切实实地推动中国医学院校的 HPSS 能力建设，可以预计，由于 CMB 的远见卓识的资助战略，必将对中国 HPSS 人才的培养，卫生政策研究能力的增强和卫生事业的发展产生深远的影响。

3. Words to Young Students and Scholars

寄语年轻的海外学子学者

Yi: Since China's economic reform and open-up in late 1970s, more and more Chinese students could study abroad. After graduation, some students return to China while some choose to continue working abroad. What do you think of their career choices?

潘羿：改革开放浪潮和互联网的引入给中国带来了许多新鲜的东西，从那时起，越来越多的学子走出国门，接受西方的先进教育。他们有些选择学成归国，有些选择继续在国外就业，从事科研教育工作。您是怎样看待现在的留学生和他们的职业选择呢？

Dr. Yu: There is a great tradition among overseas Chinese scholars. No matter what their nationalities are, and no matter how advanced their career achievements are, they have close ties with their home. This tradition is rooted deeply in the Chinese culture. Prominent examples include Professors William Hsiao and Teh-wei Hu. Although they work and live overseas, they visit China numerous times to contribute to the development of health reform and public health in China. Personally I'm happy to see more students of the young generations have the opportunities to study abroad. Whether they choose to return to China or not after completing their studies, they care about China's development, just in different forms. The CMB pays close attention and has devoted investment to the collaboration between overseas scholars and domestic institutions. In the 2009 Westlake Forum II, 12 overseas young scholars were invited to join the Forum and met with the Vice Chairman of National People's Congress, Professor HAN Qide during the meeting. More overseas scholars participated in the third Westlake Forum held in Atlanta in 2011. For the coming Hangzhou Westlake Summer Youth Forum in August, nearly 20 overseas young students and scholars working in HPSS areas were invited to participate.

余海教授：中国的旅外学者有一个很好的传统，不管现在是什么国籍，也不管他们的地位成就多高，对祖国的感情血浓于水，一如既往，至死不变，这是由血缘联系和文化基因所决定的。老一代的旅美学者像萧庆伦教授（William Hsiao）、胡德伟(Teh-wei Hu)教授人在海外，心系祖国，改革开放 30 年来，他们无数次飞越重洋，为祖国的事业呕心沥血、出谋划策、秉正直言，他们为中国医疗卫生事业的现代化所作出的贡献是不可估量的。现在的大环境和以前相比有了很大的不同，互联网的进入使得国际交流越来越容易，我也很高兴看见这么多年轻的学子有机会去海外学习。我很希望有更多青年学者能像前辈学人一样，身在国外，心系祖国，关注国内的问题，研究国内的问题，不管回来不回来，以各种形式关心国家的发展，促进中国的进步。CMB 非常关注海外学者和国内高校的合作，2009 年第二届西湖论坛，就邀请了 12 位海外青年学者的参与，会议期间全国人大副委员长韩启德教授还同他们进行了亲切的交谈。在亚特兰大召开的第三届西湖论坛更有数十名旅美的中国学者参加，今年 8 月在杭州举办的“西湖之夏青年论坛”也将邀请近 20 名从事卫生政策和体系科学研究的海外青年学者参加。

Yi: We appreciate your strong support to CHPAMS. Do you have any words to share with CHPAMS members and readers of the China Health Review?

潘羿：我们非常感谢您对我们 中国卫生政策与管理学会（海外）（CHPAMS）的大力支持，为我们提供了各种支持和帮助，您对我们 CHPAMS 的会员和《中国卫生评论》的读者还有什么寄语呢？

Dr. Yu: CHPAMS is an influential organization that made substantial contributions to public health advocacy and provided communication channels between Chinese and international public health researchers. CHPAMS members played a critical role in the second Westlake Forum in 2009 and the overseas scholars invited to the 2012 Westlake Summer Youth Forum were selected with help from CHPAMS. China Health Review is a very good platform to promote public health and HPSS in China. Dr. Lincoln Chen commented that “based on the very little amount of money and the hard dedicated volunteers” the magazine is a success. I hope that these efforts and communications could be continued. I recommend the magazine to strengthen outreach to domestic readers and authors [in China], to better facilitate the communication between scholars in China and abroad.

余海教授：CHPAMS 是一个很有影响力的组织，为宣传和沟通国内外的公共卫生的学术人才作出了不少贡献。在 2009 年在杭州召开的第二届西湖论坛上，CHPAMS 的成员就发挥了很好的作用；而即将召开的西湖之夏青年论坛的海外青年学者就是通过 CHPAMS 协助遴选的。China Health Review 也是一个非常好的宣传和探讨中国公共卫生的平台。CMB Lincoln Chen 主席也对 China Health Review 给予了好评，认为是用有限的资源办了很好的一份杂志。我很希望这些交流和宣传能够很好地继续延续下去。并且我建议杂志要加强发展国内的读者群和作者群，更好的便利于海内外学者的交流并且更贴近国内的现实需求。

PERSPECTIVE

UNDERSTANDING INFANT AND YOUNG CHILD FEEDING CHALLENGES IN CHINA

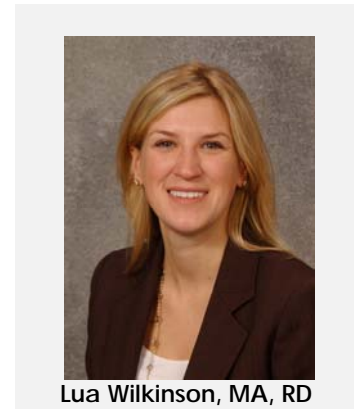
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ABSTRACT

This paper reviews infant feeding challenges China faces in the current economic and social climate. Infant and young childhood is a critical period of growth and development and losses due to under-nutrition are often irreversible. In urban areas, there has been a rapid increase in childhood obesity since the market reform policies of the early 1980's, with interventions focusing on school-aged children or young adults. Under-nutrition continues to be widespread in many rural areas of China, and while improvements have taken place, most efforts are focused on school-aged children. In both under- and over-nutrition, little attention has been paid to the role infant feeding plays. Through observations and interviews with healthcare workers, mother's groups and rural-urban migrant women in Shanghai and Yunnan, we attempt to deconstruct social and economic determinants of infant and young child feeding practices in order to illuminate specific barriers and possible solutions. Infant feeding decisions, particularly those regarding breastfeeding, are closely linked to cultural, economic and social values. Education, a crucial component of improving nutritional outcomes, does not alone change infant feeding behavior. Rural-to-urban migration, re-negotiation of family roles, and media as the main source of nutrition information for households each pose unique barriers to providing infant and young children with proper nutrition. Infant feeding and nutrition programs should take a multi-pronged approach that includes education, awareness, and policy.



摘要： 本文讨论在当前经济和社会环境下，中国所面临的婴儿喂养问题。婴儿和幼儿期是生长发育的关键期，在此阶段由于营养不足而造成的不利影响常常是无法弥补的。在中国很多农村地区，营养不足仍然相当普遍，虽然相应的改进措施已经实施，但是大多数只关注于学龄期儿童。在城市中，自 80 年代市场改革开放以来，儿童肥胖迅速增长，而相应的干预措施也只关注于学龄期儿童及青少年。无论是营养不足还是营养过剩，都没有注意到婴儿喂养在其中所起的作用。教育，虽然是改善营养状况的关键因素，但是单靠教育难以改变婴儿喂养习惯。从农村到城市的移居，家庭成员角色的重新定位，以及家庭营养信息主要来自于媒体等，各自从不同方面对婴幼儿获得适宜营养发挥着独特的作用。因此，婴儿喂养和营养计划应该多管齐下，包括教育、宣传、政策制定等。

INTRODUCTION

The recent change from a centrally planned, socialist economy to one that is market-driven has stimulated economic growth and generated an increase in food availability scarcely seen before in China's history. China has decreased the number of malnourished children between 1990 and 2006 by half (United Nations, 2008), yet a divide persists between the nutritional status of rural and urban children. Rural children are up to five times more likely to be underweight than their urban counterparts (United Nations, 2008). In China, where the majority of children still live in rural areas, understanding the problems contributing to malnutrition is of unprecedented importance.

Childhood obesity is also becoming a serious health threat in China. China's approach to economic development, i.e. promoting consumerism, has been wildly successful in urban areas by

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improving access to capital, healthcare, education and expanding the labor market. By focusing on consumption to alleviate poverty and malnutrition, however, China now faces a rise in obesity and morbidity from non-communicable diseases such as congestive heart failure, chronic kidney disease and type-2 diabetes (Gong, et al., 2012).

Before the problems of both under- and over-nutrition can be fully assessed, they must be contextualized into China's rapidly changing social and economic climate. For example, family planning policies are causing a re-adjustment of family roles, especially where breastfeeding is concerned. Consumer culture is driving an obesity epidemic in urban areas where choice and individuality are increasingly valued. Current infant feeding messages may not resonate with current issues families face, such as migration, consumerism, and emphasis on individuality. As more and more mothers migrate to larger Chinese cities for employment, their children's caretaking, including infant feeding, is left in the hands of other family members such as grandparents. Little research has been done to understand how infant feeding decisions are made in this context.

Therefore, our purpose is to explore rural and urban perceptions of infant and young child feeding (IYCF) knowledge and behaviors, including education of healthcare workers and socio-cultural barriers to optimal infant feeding practices. We endeavor to make sense of China's IYCF and nutrition challenges so that policy makers can begin to assess existing infant feeding practices and implement appropriate interventions. We begin this perspective with an overview of breastfeeding and infant nutrition, and move on to discuss childhood obesity, the use of infant formula and the one-child policy in urban China. We then outline issues in rural China, including maternal migration and the community health worker. We present trends in infant feeding between rural and urban China differently in order to highlight relevant differences between the two areas. Observations are included at the end of both sections to illuminate how individual, household, community, and national experiences are shaped in Chinese healthcare settings. We end with a discussion on the role of nutrition education and community participation in order to improve health outcomes.

METHODS

The bulk of the research on which this perspective is based comes from 14 months the lead author (LW) spent in China from August 2010-October 2011 collaborating with Xiaoyang Sheng and her team at the Shanghai Jiaotong University School of Medicine. The focus of this research was to explore IYCF practices in Shanghai and Xichou, Yunnan using the socio-ecological framework (McLeroy, Bibeau, Steckler, & Glanz, 1988; Stokols, 1996). Specifically, we looked at individual factors such as maternal identity in rapidly changing family and socio-economic systems, family-level factors involving decision-making between family members, and structural factors related to media advertising of formula and healthcare practices and policies.

Interviews with healthcare workers, mother's groups, migrant women and nutrition researchers were conducted in order to gain an understanding of IYCF. Relevant experiences include shadowing SJTU medical students on an IYCF study at the Kongjiang Community Health Clinic in Shanghai, collaborating with community advocates at La Leche League for breastfeeding education, and observing a randomized control trial, evaluating meat as a complementary food to breastfed infants, in rural Yunnan. Because of their exposure doing nutritional research in many provinces across China, medical students and community health workers were invaluable sources of information. They understood many problems in the healthcare system, including the different needs of rural and urban areas. The ability to triangulate our findings with local cultural and medical authorities, as well as scientific literature, provided us with a deeper insight of complex questions surrounding infant feeding perceptions and practices.

BACKGROUND

Breastfeeding and Infant Nutrition

Breastfeeding exclusively for the first six months promotes ideal infant growth patterns, has maternal, infant, and societal benefits, and remains the number one preventative measure to reduce infant mortality world-wide (Agency for Healthcare Research Quality, 2007). Infant and young child feeding practices have a direct effect on the nutritional status, growth and development of children less than two years of age (World Health Organization, 2008). Chief among IYCF practices that can have an effect on a child's growth and development is breastfeeding. Exclusive breastfeeding, defined as no liquids or solids other than breast milk, for six months continues to be strongly recommended by the Chinese Pediatric Society. Despite efforts such as the "Breast-feeding Friendly Hospital Initiative to promote exclusive breastfeeding for infants until six months (Gottschang, 2007), rates of "exclusively breastfed" infants in China continue to decline from 78% at 4 months in 1996 down to 45.3% in 2002, with large differences between regions, ranging from a low of 22.4% of exclusive breastfeeding through 4 months in Chongqing to a high of 76.3% at 4 months in Chengde (Xu, Qiu, Binns, & Liu, 2009). In short, women and their families often choose a "mixed-feeding" regimen, providing both breast milk and infant formula.

The many reasons for the societal switch from exclusive breastfeeding through 6 months to mixed feeding are multi-factorial and include families having inadequate household resources to support a mother staying with her child, the effects of the media on influencing public opinion on breastfeeding, and a lack of policy and educational programs directed toward the public (Gottschang, 2007; Guldan, 2000). Families often display an inadequate understanding of the nutritional value of breast milk, and report that infant formula is superior for an infant's growth and development (Jiang, et al., 2012; Wilkinson, 2011).

There are many reasons the decline in exclusive breastfeeding is concerning. First, it can be immediately deleterious to an infant's health. Contaminated water may be used to mix formula, parents or other caregivers may dilute formula to save money, and families may use inappropriate breast milk alternatives that do not meet the child's nutritional needs, such as cow milk or rice porridge (Li, Li, Ali, & Ushijima, 2003). If the child has an allergic reaction or does not tolerate infant formula, there are few appropriate alternatives if the mother's milk supply has already diminished or ceased completely. Perhaps most concerning to Chinese parents, however, are the recent "milk scandals" surrounding infant formula products. In 2008, a total of 296,000 children fell ill and 4 infants died from contaminated milk powder used for infant formula (BBC News, 2010). Contaminants have been found in infant milk powder in China as recently as June 2012, where a top selling brand recalled 6-months worth of formula tainted with mercury (Hornby & Lee, 2012).

Longer-term concerns include the protective role that exclusive breastfeeding plays against obesity. There are strong correlations between bottle-feeding and obesity in children, including among children in China (Liu, et al., 2009). Infant formula may be obesogenic for multiple reasons, including promoting prolonged bottle use (Gooze, Anderson, & Whitaker, 2011), inappropriate programming of leptin receptors (Singhal, et al., 2002), increased insulin response from formula (Lucas, et al., 1980), and the inability of formula-fed infants to self-regulate their intake as effectively as breastfed infants (Dewey, Heinig, Nommsen, Peerson, & Lonnerdal, 1993).

URBAN CHINA

Market reforms during the late 1970's and early 1980's have revolutionized life in urban China, creating improved standards of living for millions with an emphasis on consumption to promote economic growth. At the same time, family planning policies have changed family dynamics, with single-children attended to by multiple family members. Known as "Little Emperors" (French & Crabbe, 2010), these children often garner the exclusive attention of their parents and

grandparents. Together, economic demands and the one-child policy have affected IYCF practices and outcomes, including increased dependence on infant formula, perceptions of overweight infants as “healthy”, and changing caregiver-infant feeding behaviors.

Trends in Infant Feeding

- Obesity

Almost unheard of prior to market reforms thirty years ago, rates of childhood obesity in Shanghai are now up to 13.25% (Luo, Shen, & Tu, 2004), and incidence of type 2 diabetes has tripled among school-aged children (French & Crabbe, 2010). Discussions centered around infant feeding and its effect on obesity are especially salient as rapid weight gain in infancy is positively correlated with obesity later in life (Monteiro & Victora, 2005).

- Use of Infant Formula

Economic demands of life in urban China require that many new mothers retain employment after birth, which may interfere with exclusive breastfeeding. As women continue working through their child’s infancy, infant formula becomes an attractive option for busy, working mothers. At the same time, infant formula companies continue to increase spending on artificial infant feeding research as well as ad campaigns in China. Nestlé, for example, paid \$11.85 billion U.S. dollars to acquire Pfizer’s baby food market in China in early 2012 (Jones & Mao, 2012), and Mead Johnson boasted a 12% increase in net income, led by China and Hong Kong (The Associated Press, 2012).

- Perceptions of Overweight Infants

Positive attitudes towards overweight and “chubby” babies continue to be pervasive throughout Chinese society, where overweight children are featured in advertisements and television shows (French & Crabbe, 2010) and may be perceived as the healthy growth pattern for infants and children. Indeed, many parents in China perceive their children being underweight when they are normal or normal when they are overweight (von Deneen, Wei, Tian, & Liu, 2011). Due to past years of famine and poverty, having an overweight infant may be seen as a sign of prosperity. Due to beliefs of the nutritional superiority of infant formula, a woman who wishes to exclusively breastfeed may be discouraged if her child is not growing “normally” according to her perceptions (Jiang, et al., 2012). In these cases, caregivers often add formula to promote perceived ideals of growth.

- Complementary Foods

Delaying complementary foods until 6 months shows a protective effect against obesity (Schack-Nielsen, Sorensen, Mortensen, & Michaelsen, 2010). Grandparents often become the caregiver of choice when both parents are working, are most likely the ones who initiate complementary foods. As primary caregiver, grandparents set the stage for feeding behaviors once the mother returns to work. As is typical in Chinese culture, these first foods include rice porridge (粥), egg yolks, but may quickly turn to higher calorie sweets or “junk” foods. Later, praise and affection is oftentimes given through snacks, food “treats”, fast-food and pocket-money (French & Crabbe, 2010).

Observations

Kongjiang Community Health Center is situated in a typical middle-class neighborhood in Shanghai, where observations of SJTU medical students conducting an infant feeding study were made during the winter/spring of 2011 (Ma, et al., In press 2012). Infant feeding questionnaires were administered orally to caregivers (either grandparents, parents, or nannies) about breastfeeding duration, bottle-feeding, and introduction of complementary foods. In addition, counseling was

provided to caregivers on proper IYCF techniques. Multiple family members would often accompany single infants, each of whom was actively engaged in asking questions, caring for the child, and interacting with clinicians. The average adult to infant ratio was between 3-4 adults to every child. Posters promoting formula were prominently displayed on the clinic walls, and a glass cabinet showcased “proper” infant feeding techniques, which included introducing complementary foods at 1-2 months.

Consistent with findings elsewhere (Jiang, et al., 2012), caregivers at the Kongjiang Community Health Center were concerned with the child being underweight when they were normal. Few caregivers were concerned with their child being overweight even as the prevalence of overweight and obese infants was high at almost 33% at 12 months, the majority of which were already obese at 6 months (Ma, et al., In press 2012).

Infant formula advertisements were seen throughout clinic walls, tolerated by clinicians who understood that women had to be away from their infants for large stretches of the day when working, or that grandparents and other family members wanted to take part in feeding the newborn. Education materials in the display case also recommended adding foods at as young as 1 month. Whether explicitly counseled by the clinic’s practitioners or not, the message from the display is that breast milk is not enough.

Clinicians and medical students showed a clear understanding of the dichotomy between infant feeding messages from health organizations (exclusive breastfeeding until 6 months is recommended, then continuing to breastfeeding with the addition of complementary foods until two years) and practice (mixed-feeding with infant formula and premature addition of complementary foods). Breastfeeding discussions regarding the nutritional superiority of breast milk often became less relevant than concerns regarding work, family opinion, and insufficient milk supply. These messages, coupled with the display case and posters on the walls promoting infant formula, illustrate ways in which this particular clinic does not promote 6 months of exclusive breastfeeding.

La Leche League (LLL), an international organization that supports breastfeeding through mother-to-mother support, has formed groups in Shanghai and Beijing. In China, mothers as well as fathers, grandparents and nannies attend meetings. Run exclusively by volunteers, the meetings take place in a semi-formal lecture format, with families socializing casually with each other before and after. Certified Lactation Consultants and physicians were available for specific questions in Shanghai, which were answered to the group. In this way, family members have the opportunity to ask questions freely and obtain answers from healthcare professionals.

This environment was much more attuned to the needs of new mothers and families for a number of reasons. First, families are free to mingle with each other and exchange advice on how to optimize breastfeeding outcomes while a competent healthcare professional gently guides new mothers through difficulties. Barriers could be discussed with professionals or other families, and myths are quickly dispelled. Infant feeding education in a community setting such as LLL is much more suited to the new socio-economic environment where collective “parenting” of mothers, fathers, and grandparents is reality.

RURAL CHINA

The economic and social status of rural Chinese has greatly improved over the last thirty years. Compared to urban Chinese, however, those living in rural areas overall have unequal access to food, healthcare, and resources (Wang, Wang, & Kang, 2005). While malnutrition in infancy and early childhood is closely linked to poverty in rural areas, inappropriate infant feeding and care, limited access to health services, and inaccurate health and nutrition information also contribute.

Poverty alleviation and improving the quality of rural life in China will no doubt help improve nutritional status of rural infants, but an examination of China's urban obesity epidemic suggests that appropriate policies addressing other issues related to nutrition education are needed as well. Treating malnutrition with consumption leads to obesity.

Trends in Infant Feeding

- Breastfeeding

Historically in China, breastfeeding was commonplace in rural areas up through twelve months and later (Shen, Habicht, & Chang, 1996). Recent trends show while breastfeeding rates remain high (98.22%), a smaller number of infants are exclusively breastfed (24.36%). These rates are much lower compared to urban areas (52%), due to early introduction of complementary foods (Wang, et al., 2005). Those who are exclusively breastfed show lower rates of pneumonia and diarrhea, leading to better growth and development.

If the mother is unable to breastfeed, there is often little for her infant in terms of breast milk alternative support. This is especially true after the 2008 Sanlu Milk Powder scandal, where families in China have become extremely cautious about what brand of infant formula they feed their children (Seror, Amar, Braz, & Rouzier, 2010). This has had a positive effect on breastfeeding rates overall in China, but poses a special challenge to rural mothers. Caregivers will often buy foreign brand formulas in urban areas to avoid domestic tainted formula; this tends to be prohibitively expensive for rural families, who often have no choice but to buy domestic formula.

- Complementary Feeding

Very little is currently known about complementary feeding practices in rural China or what drives weaning behavior (Guldan, et al., 2000). Protein intake in infants is most likely insufficient because of a lack of health knowledge, and rural people may be more influenced by traditional feeding practices than nutritional recommendations from clinicians. The extent of caregiver's knowledge has not been systematically studied.

- Maternal Migration

Due to urban growth and development, rural Chinese are migrating to urban areas in order to find better financial opportunities. According to China's State Council, there are now over 221 million Chinese migrants, representing over 17% of China's total population (Wang, 2011). Women of childbearing years represent more than one-third of these workers. Pregnant women will many times deliver their child in their natal township and return to work in the city post-partum in order to provide needed income to their family. Children and infants of migrant women are often left behind in their natal village with grandparents as caregivers when the mother migrates. Estimates put these "left-behind children" at 58 million (Stack, 2010).

While statistics show that overall breastfeeding rates in rural areas are high, infant feeding patterns and preferences of migrant women have not been studied.

- Community Health Workers

China's rural healthcare system is comprised of government run village clinics, township health centers, and county hospitals run by doctors and nurses who are mainly educated through a junior college or secondary school programs (Meng, Yuan, Jing, & Zhang, 2009). Training programs typically take two years, but may be more or less depending on the needs and resources of the community (Anand, et al., 2008). Responsibilities range from providing vaccinations to HIV prevention strategies.

Community health workers are often extremely effective as health educators in rural areas as they have an intimate understanding of how traditional beliefs can be incorporated into nutrition and health education. Successful intervention studies based on community based participation, led by community health workers, (Israel, Eng, Schulz, Parker, & Satcher, 2005) have been effective in reducing the prevalence and incidence of infant malnutrition among certain minority populations in rural areas of China (Y. Li, et al., 2007). These programs have taken into account traditional and cultural beliefs of individual women and families, and have coupled them with participation at the community level. The role of the community health worker in IYCF programs in rural China warrants further investigation, as there is promising evidence that this cadre can help nutrition and growth outcomes to be successful (Zhang, Shi, Wang, & Wang, 2009).

Observations

Xichou is a rural community in southern Yunnan province, where two authors (LW and XS) worked with a team of physicians at the Xichou Women and Children's Preventative Hospital. Throughout discussions on IYCF, poverty and inadequate education were the two most frequently mentioned reasons for undernutrition among children in rural areas. When asked about major nutrition challenges in rural areas, many turned directly to economic policy. "It is more important to influence economic policy so [rural people] can buy a refrigerator for meat", explained one urban medical student who had spent time in Xichou. Many parents must migrate to an urban area to find economic opportunities in order to alleviate poverty. A young mother expressed financial hardship by explaining how she had to make the painful choice of leaving her child in the village while she moved to the city to make money for her aging parents, whose farm was unable to support a family in the current economic environment.

One young woman we spoke with had to leave her son when he was two-months old as her husband was from a different rural area than she, neither of them sharing a hukou, China's household registration system. An individual's hukou determines many social services, including insurance, childcare, and education. Her parents were taking care of her son, and she expressed concern about having to give him domestic infant formula because of the "milk scandal".

Structural barriers such as these pose challenging difficulties for migrant women to be with their infants. In order to promote successful programs, these women will need additional support to translate the desire to breastfeed with the ability for her to be with her baby.

Along with attention being paid to structural barriers, multiple physicians and community health workers also noted nutrition education as an important component of improving the health of rural Chinese infants. According to the Department Head of Pediatrics at the Xichou Women and Children's Preventative Hospital, Xichou has between 225-270 community healthcare workers to serve a population of 200,000. Interviews revealed perceptions of community health workers being too busy with other tasks to bother with infant feeding education. Grandparents and individuals reported low level of understanding of child appropriate foods (foods high in iron, zinc, or protein), but according to both rural physicians and urban medical students working in rural areas, community healthcare workers also knew very little in terms of IYCF nutrition. This has been reported elsewhere in the literature (Wang, et al., 2005).

THE ROLE OF INFANT FEEDING EDUCATION

In the changing landscape of an increasingly mobile society, designing nutrition education programs that are easily translatable from urban to rural areas is essential. As the disease burden shifts from communicable to non-communicable, healthcare policies that promote better IYCF practices must be implemented across economic regions.

With China's family planning policy, nearly all mothers are inexperienced with infant feeding and rely heavily on advice from close relatives or media sources such as the internet and advertisements. New mothers in China are influenced more by family members than healthcare workers in IYCF practices (Zhang, et al., 2009), yet perinatal information regarding breastfeeding is rarely directed at entire families. If healthcare workers are able to reach out to the whole family for breastfeeding education, however, breastfeeding is likely to be more successful (Hector, King, Webb, & Heywood, 2005; Jiang, et al., 2012; Wilkinson, 2011).

Accurate, unbiased information regarding appropriate breastfeeding practices is difficult to find in the new consumer-driven economic system (Gottschang, 2007). Formula companies have opportunities to capitalize on low public understanding of optimal infant nutrition and may provide inaccurate or inadequate information to healthcare practitioners who have been charged with public health education. Providing proper IYCF training to healthcare workers, who can then be trained to educate mothers and their families, should be a priority of policy-makers and healthcare professionals.

Table 1. Barriers to optimal infant and young child feeding

Level	Urban	Rural
Individual	Mother returning to work Perceived inadequate milk production	Migration Traditional beliefs
Household	Desirability of overweight infants One-child policy causing restructuring of family roles	Economic hardship Migration Grandparents as primary caregivers Lack of knowledge
Community	Consumer culture driving formula use	Poorly trained community health workers
National	Corporate advertising Absence of IYCF counseling	Corporate advertising Economic inequality

CONCLUSION

Exclusive breastfeeding through 6 months, and continued breastfeeding with the addition of complementary foods until two years thereafter, continues to be recommended for all infants in China. Due to the current economic and social situation, however, women and families often lack appropriate support for the success of exclusive breastfeeding. On one hand, clinicians and families understand that breastfeeding is the preferred method to infant feeding. On the other, issues such as migration, economic stability, the one-child policy, and cultural perceptions of healthy infants reduce exclusive breastfeeding.

As China moves towards an urban, consumer-based society, childhood obesity rates rise, and influencing factors of under- and over-nutrition are continually affected by fluid changes in economic, political, social and technological systems. In rural areas, barriers include the separation of parents from their child, a decline in breastfeeding rates, and low-level understanding of age-appropriate foods. In urban areas we also observe a decline in breastfeeding rates, although there we see a rise in childhood obesity and an increase in morbidity from non-communicable disease.

Costs from health problems associated with obesity promise to be massive due to rising demand for healthcare (French & Crabbe, 2010). Lifestyle habits and choices that may lead to obesity are much easier to shape from early childhood. Obesity programs for adults tend to be costly and have poor outcomes.

Up to 600,000 deaths could be avoided each year if exclusive breastfeeding and appropriate weaning practices were utilized worldwide. Societal costs of undernutrition include hospitalizations and loss of future income due to cognitive difficulties. Breastfeeding promotion remains the single most cost-effective intervention to decrease child mortality (Jones, et al., 2003).

Policy-makers should focus on reforms that promote more appropriate infant-feeding practices that span geographic and economic regions, including cultivating nutrition-training programs, breastfeeding promotion that welcomes family participation, and limiting infant formula advertisement.

Community participatory techniques have been successfully piloted in rural China and should be utilized wherever feasible. In Beijing and Shanghai, La Leche League utilizes community participation in order to promote breastfeeding, and comparable programs would likely succeed in rural areas, headed by a trained community healthcare worker. This is an extremely cost-effective way to improve outcomes associated with infant feeding practices in China.

In summary, revising IYCF programs to acknowledge barriers such as migration, household resources, and the effects of the media and advertisements in shaping public opinions must be addressed before successful breastfeeding policies and programs can be created. We suggest that along with enhancing nutrition education of community health workers, larger issues of family dynamics and community participation must be investigated further. Infant feeding programs can be an incredibly cost-effective lever for improving population health, and can and should be seized to help China fully realize its potential.

Key Points

- Optimal infant feeding is critical for the health of a nation, and can reduce both over- and under-nutrition
- In urban China, major barriers to optimal infant nutrition include re-negotiating the role of the working mother, the desirability of overweight infants, the one-child policy causing a restructuring of family roles, and a consumer culture driving formula advertisement and use
- In rural China, major barriers to optimal infant nutrition include rural-to-urban migration, grandparents as the primary caregivers, a lack of knowledge, poorly trained community health workers, and economic inequality
- Solutions to optimize IYCF practices include taking a community-based participatory approach to infant feeding education, including the entire family in infant feeding discussions, and limiting infant formula marketing.

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RESEARCH TWITTER

Li-Qun Fang, Li-Ping Wang, Sake J. de Vlas, Song Liang, Shi-Lu Tong, Yan-Li Li, Ya-Pin Li, Quan Qian, Hong Yang, Mai-Geng Zhou, Xiao-Feng Wang, Jan Hendrik Richardus, Jia-Qi Ma, and Wu-Chun Cao. **"Distribution and Risk Factors of 2009 Pandemic Influenza A (H1N1) in Mainland China."** *American Journal of Epidemiology*, 2012, 175(9): 890-97.

Data from all reported cases of 2009 pandemic influenza A (H1N1) were obtained from the China Information System for Disease Control and Prevention. The spatiotemporal distribution patterns of cases were characterized through spatial analysis. The impact of travel-related risk factors on invasion of the disease was analyzed using survival analysis, and climatic factors related to local transmission were identified using multilevel Poisson regression, both at the county level. The results showed that the epidemic spanned a large geographic area, with the most affected areas being in western China. Significant differences in incidence were found among age groups, with incidences peaking in school-age children. Overall, the epidemic spread from southeast to northwest. Proximity to airports and being intersected by national highways or freeways but not railways were variables associated with the presence of the disease in a county. Lower temperature and lower relative humidity were the climatic factors facilitating local transmission after correction for the effects of school summer vacation and public holidays, as well as population density and the density of medical facilities. These findings indicate that interventions focused on domestic travel, population density, and climatic factors could play a role in mitigating the public health impact of future influenza pandemics.

Renjie Chen, Haidong Kan*, Bingheng Chen, Wei Huang, Zhipeng Bai, Guixiang Song, and Guowei Pan , on Behalf of the CAPES Collaborative Group. **"Association of Particulate Air Pollution With Daily Mortality: The China Air Pollution and Health Effects Study."** *American Journal of Epidemiology*, 2012, 175(11): 1173-81.

The study objective was to examine the association of particulate matter with an aerodynamic diameter of less than 10 μm (PM10) with daily mortality in 16 Chinese cities between 1996 and 2008. Two-stage Bayesian hierarchical models were applied to obtain city-specific and national average estimates. Poisson regression models incorporating natural spline smoothing functions were used to adjust for long-term and seasonal trends of mortality, as well as other time-varying covariates. The averaged daily concentrations of PM10 in the 16 Chinese cities ranged from 52 $\mu\text{g}/\text{m}^3$ to 156 $\mu\text{g}/\text{m}^3$. The 16-city combined analysis showed significant associations of PM10 with mortality: A 10- $\mu\text{g}/\text{m}^3$ increase in 2-day moving-average PM10 was associated with a 0.35% (95% posterior interval (PI): 0.18, 0.52) increase of total mortality, 0.44% (95% PI: 0.23, 0.64) increase of cardiovascular mortality, and 0.56% (95% PI: 0.31, 0.81) increase of respiratory mortality. Females, older people, and residents with low educational attainment appeared to be more vulnerable to PM10 exposure. Conclusively, this largest epidemiologic study of particulate air pollution in China suggests that short-term exposure to PM10 is associated with increased mortality risk.

Li Qin, Ronald P. Stolk, and Eva Corpeleijn. **"Motorized Transportation, Social Status, and Adiposity: The China Health and Nutrition Survey."** *American Journal of Preventive Medicine*, 2012, 43(1): 1-10.

This study examines the hypotheses that increased dependence on motorized transportation is related to adiposity and that this effect will be more pronounced in adults with high SES or those who live in urban regions. Data from the longitudinal China Health and Nutrition Survey conducted from 1997 to 2006 were used to examine the association between motorized transportation and changes in body weight and waist circumference (WC) by using multivariate regression. The results showed that use of motorized transportation for >5 years was related to ~1.2 kg greater weight gain and ~1.0 cm larger WC gain in men, when compared with the nonmotorized transportation group and adjusted for baseline age, anthropometry, dietary intake, and follow-up time. These changes

were slightly more pronounced in men with higher income or from rural areas, but the difference was not significant. In women, the tendency to have motorized transportation with weight gain was less pronounced. Low education and high income were the most predominant factors. In 2006, motorized transportation was associated with a 1.3-fold higher OR for obesity and abdominal obesity in men, and a 2-fold higher OR of obesity in women.

Tiejun Zhang, Jinling Zhang, Meiyang Gao, Na He, and Roger Detels. **"Knowledge, Attitudes and Practices of Voluntary HIV Counselling and Testing among Rural Migrants in Central China: a Cross-Sectional Study."** *European Journal of Public Health*, 2012, 22(2): 192-7.

This study aimed to document knowledge, attitudes and practices of voluntary HIV counselling and testing (VCT) among rural migrants in central China. A cross-sectional study with face-to-face anonymous questionnaire interviews was conducted. Among 1280 participants, 87.9% reported having had sexual intercourse during their lifetime, with 69% of singles reporting having had sexual intercourse and 49.1% having had sex in the past month. Only 21% always used condoms, 84.4% knew HIV infection was diagnosed through blood testing, 56.6% had heard of VCT, but only 3.8% perceived their own risk for HIV infection. Only 43 (2.3%) had ever been tested for HIV, and none had ever been tested at a VCT site. About two-thirds would be willing to use VCT services upon awareness of HIV risk. A logistic regression model showed that females, those having little knowledge of HIV/AIDS, those unwilling to work with HIV-infected individuals, never having been tested for HIV and having low awareness regarding HIV risk were less willing to use VCT. The results of this study indicated that much greater efforts are needed to improve HIV/AIDS and VCT knowledge, to promote safer sex and to improve VCT acceptance among rural migrants in central China, particularly those engaging in risky behaviours.

Kaili Wang, Hongmei Yan, Yanlin Liu, Zhiwei Leng, Binyou Wang, and Jinkou Zhao. **"Increasing Prevalence of HIV and Syphilis But Decreasing Rate of Self-Reported Unprotected Anal Intercourse among Men Who Had Sex with Men in Harbin, China: Results of Five Consecutive Surveys from 2006 to 2010."** *International Journal of Epidemiology*, 2012, 41(2): 423-32.

To monitor the prevalence of HIV and syphilis as well as behaviours, a sentinel site for men who have sex with men was established in Harbin in 2002. Behavioural and serological data collected in five consecutive cross-sectional surveys were analysed. The prevalence of HIV and syphilis increased from 1.0% in 2006 to 7.5% in 2010 and from 9.2% in 2006 to 22.4% in 2009, respectively, whereas the rate of unprotected anal intercourse decreased from 61.3% in 2006 to 47.1% in 2010. Syphilis positivity and HIV infection are independently associated with each other across years. The rate of unprotected anal sex remains high although it has decreased over the years. Findings support an increasing prevalence of HIV and syphilis among men who have sex with men in Harbin. Targeted behavioural intervention and syphilis treatment are urgently needed to prevent the epidemic from growing.

Zhengming Chen, Gonghuan Yang, Alison Offer, Maigeng Zhou, Margaret Smith, Richard Peto, Hui Ge, Ling Yang, and Gary Whitlock. **"Body Mass Index and Mortality in China: a 15-year Prospective Study of 220 000 Men."** *International Journal of Epidemiology*, 2012, 41(2): 472-81.

This paper employed a prospective cohort study of 224 064 men, of whom 40 700 died during follow-up between 1990-91 and 2006. Analyses were restricted to 142 214 men aged 40-79 years at baseline with no disease history and, to further reduce bias from pre-existing disease, at least 5 years of subsequent follow-up were included, leaving 17 800 deaths [including 4165 stroke, 1297 coronary heart disease (CHD), 3121 chronic obstructive pulmonary disease (COPD)]. Adjusted hazard ratios (HRs) and 95% confidence intervals (95% CIs) per 5 kg/m² were calculated within either a lower (15 to <23.5 kg/m²) or higher (23.5 to <35 kg/m²) range. The association between BMI and all-cause mortality was U-shaped with the lowest mortality at 22.5-25 kg/m². In the lower range, 5 kg/m² higher BMI was associated with 14% lower mortality (HR 0.86, 95% CI 0.82-0.91); in the upper

range, it was associated with 27% higher mortality (HR 1.27, 95% CI 1.15–1.40). The absolute excess mortality in the lower range was largely accounted for by excess mortality from specific smoking-related diseases: 54% by that for COPD, 12% other respiratory disease, 13% lung cancer, 11% stomach cancer. The excess mortality in the upper BMI range was largely accounted for by excess mortality from specific vascular diseases: 55% by that for stroke, 16% CHD. In this range, 5 kg/m² higher BMI was associated with ~50% higher mortality from stroke (HR 1.61, 95% CI 1.36–1.92) and CHD (HR 1.48, 95% CI 1.12–1.95).

Yuqin Ma, Lulu Zhang, and Qian Chen. **“China’s New Cooperative Medical Scheme For Rural Residents: Popularity Of Broad Coverage Poses Challenges For Costs.”** *Health Affairs*, 2012, 31:1058-64;

One of the components in China’s massive health reform effort is the New Cooperative Medical Scheme. This program offers three options with different benefits and costs to county health officials, who select one of the options to make available to local residents. Data were obtained from the New Cooperative Medical Scheme survey conducted by the Chinese Ministry of Health and the World Bank in 2005, which covered more than 47,000 people living in twenty-seven counties, to determine participation levels, identify which option was most attractive, and characterize the impact that each option had on care and costs. This study found that those participants with the most limited coverage might have delayed seeking care, while the broadest coverage—the “Cadillac option”—was the most popular. Yet if this generous package were to be broadly offered, health costs would become unsustainable. Therefore, the Chinese government must consider which costs to cover for people in economically depressed rural areas.

Kimberly S. Babiarz, Grant Miller, Hongmei Yi, Linxiu Zhang, and Scott Rozelle. **“China’s New Cooperative Medical Scheme Improved Finances of Township Health Centers But Not The Number of Patients Served.”** *Health Affairs*, 2012, 31:1065-74.

This article reported findings from a longitudinal study of how China’s New Cooperative Medical Scheme affected the use of health care services, out-of-pocket spending on medical care, and the operations and financial viability of China’s township health centers. It found that between 2005 and 2008 the program provided some risk protection and increased the intensity of inpatient care at township health centers. Importantly, the program appeared to have improved the centers’ financial status. At the same time, the program did not increase the overall number of patients served or the likelihood that a sick person would seek care at a township center. These findings served as a benchmark of the program’s early impact. The results also suggested that the composition of health care use in China had changed, with people increasingly seeking outpatient care at village clinics and inpatient care at township health centers.

Yongbin Li, Jing Xu, Fang Wang, Bin Wang, Liqun Liu, Wanli Hou, Hong Fan, Yeqing Tong, Juan Zhang, and Zuxun Lu. **“Overprescribing In China, Driven By Financial Incentives, Results in Very High Use of Antibiotics, Injections, and Corticosteroids.”** *Health Affairs*, 2012, 31:1075-82.

Inappropriate prescribing is a global problem. It is especially salient in China, where drug sales constitute a major portion of health care providers’ incomes, price distortions are rampant, and oversight is lax. However, few data exist on the prevalence of inappropriate prescribing in China. This study, the first of its kind in China, examined 230,800 prescriptions written between 2007 and 2009 by 784 community health institutions in 28 cities across China. The data show substantial overprescribing, including twice as many prescriptions for antibiotics as recommended by the World Health Organization and rates of injection that are three times higher than in similar countries. These findings point to the need to integrate rational prescribing into China’s ongoing health care reform.

Yanlin Zhao, Shaofa Xu, Lixia Wang, Daniel P. Chin, Shengfen Wang, Ph.D., Guanglu Jiang, Hui Xia, Yang Zhou, Qiang Li, Xichao Ou, Yu Pang, Yuanyuan Song, Bing Zhao, Hongtao Zhang, Guangxue He, Jing Guo, and Yu Wang. **"National Survey of Drug-Resistant Tuberculosis in China."** *New England Journal of Medicine*, 2012, 366: 2161-70.

The authors carried out a national survey of drug-resistant tuberculosis in China in 2007. They estimated the proportion of tuberculosis cases in China that were resistant to drugs by means of cluster-randomized sampling of tuberculosis cases in the public health system and testing for resistance to the first-line antituberculosis drugs and the second-line drugs. They used the results from the survey and published estimates of the incidence of tuberculosis to estimate the incidence of drug-resistant tuberculosis. The authors found that among 3037 patients with new cases of tuberculosis and 892 with previously treated cases, 5.7% and 25.6%, respectively, had multidrug-resistant (MDR) tuberculosis. Among all patients with tuberculosis, approximately 1 of 4 had disease that was resistant to isoniazid, rifampin, or both, and 1 of 10 had MDR tuberculosis. Approximately 8% of the patients with MDR tuberculosis had extensively drug-resistant (XDR) tuberculosis. In 2007, there were 110,000 incident cases of MDR tuberculosis and 8200 incident cases of XDR tuberculosis. Most cases of MDR and XDR tuberculosis resulted from primary transmission. Patients with multiple previous treatments who had received their last treatment in a tuberculosis hospital had the highest risk of MDR tuberculosis (adjusted odds ratio, 13.3; 95% CI, 3.9 to 46.0). Among 226 previously treated patients with MDR tuberculosis, 43.8% had not completed their last treatment; most had been treated in the hospital system. Among those who had completed treatment, tuberculosis developed again in most of the patients after their treatment in the public health system. The authors concluded that China has a serious epidemic of drug-resistant tuberculosis. MDR tuberculosis is linked to inadequate treatment in both the public health system and the hospital system, especially tuberculosis hospitals; however, primary transmission accounts for most cases.

POLICY AND PRACTICE UPDATES

An Evaluation of Beijing's Medical Insurance Payment Reforms

Source: 21st Century Economic Report 2011-8-19

<http://www.21cbh.com/HTML/2011-8-19/wMMDY5XzM1ODQwMQ.html>

The Diagnosis-Related Groups (DRGs)-based payment system has long been proposed as a solution to high medical costs. This prospective payment system allocates payments according to related diagnosis groups that are established according to similar patient age, disease diagnosis, disease comorbidities, disease severity, treatment methods, and other factors.

After years of research and testing, Beijing will lead the way by piloting this new system in six hospitals beginning Aug 1st, with 650 locally identified DRGs. Under the new system, if hospitals charge more than the set price for a certain disease, they will be responsible for the difference. This new reality will exert outside pressure for hospitals to reform their organization and management systems.

There have been high expectations for DRGs-based payment system to reduce ever increasing medical costs. As early as 1993, hospital management research in Beijing had shown feasibility of DRGs system, but nothing came from the research due to infrastructure limitations, such as lack of a reliable computer information system. Since then, DGRs-based payment system has been widely adopted in many countries with success. Currently in China, there is still reluctance to implement the system, partly due to worries about resistance from medical professionals.

"Implementation of DRG will not affect doctors' day-to-day work," said Mu Hu, director of the DRG Beijing project technical team, "because this is just a new hospital management system with little impact on how doctors diagnose or treat their patients. They only need to get use to a new management system."

As to the worry that DRG system might reduce hospital service quality, Mu Hu also disagrees. "By using this system, all medical services could be clearly viewed and compared across hospitals. It will be obvious who provides better or worse services."

For DRGs-based payment system to reach its full potential in cost reduction, other supporting systems and policies need to be in place, and Beijing's foray into payment system reform is complemented with three supporting policies. First, medical insurance foundation will establish a pre-pay system to distribute funds to the six pilot hospitals. Distribution for the first month will be based on the case load in these hospitals during same time period in 2010. Subsequent distributions will be based on hospital performance in the previous months. Second, pilot hospitals will be able to independently purchase medicine and medical supplies, but they must do so at a price lower than or comparable to their previous records. Third, attending doctors will be responsible for their own cases, in direct contrast to the existing system where departments are responsible for everything.

Piloting Urban-Rural Medical Insurance Integration: The New Rural Cooperative Medical Scheme to Be Administered by Ministry of Labor and Social Security

Source: 21st Century Economic Report 2011-9-14

<http://www.21cbh.com/HTML/2011-9-14/5OMDY5XzM2NDQ5OA.html>

In August 2011, the city of Kunming in Yunnan Province transitioned management of the New Rural Cooperative Medical Scheme to the Ministry of Labor and Social Security, achieving unified management of insurances for residents and workers in either rural or urban settings. Together with other regions that implemented the same measure, such as Ningxia, Chengdu and Wenzhou, unified rural and urban medical insurance management is becoming reality at local level.

According to Social Insurance Law implemented in July 2011, State Council will issue detailed blueprints for how to integrate urban-rural medical insurances. However, no document has been produced to date, and reform has been carried out at localities under their own initiative. Currently, the Ministry of Health still manages the New Rural Cooperative Medical Insurance Plan, while the Ministry of Labor and Social Security is managing urban residents and worker insurances. This dual management presents an obstacle to human resource movement between rural and urban areas, also urbanization. To truly integrate urban and rural insurances, all related agencies need to be combined and form a single responsible agency, to streamline human and material resources management and distribution.

The “Obsolete” Essential Drug Policy: Some Provinces Reauthorize Non-listed Drugs

Source: 21st Century Economic Report 2011-9-15

<http://www.21cbh.com/HTML/2011-9-15/1NMDY5XzM2NDg1NA.html>

While the central government continues to optimize the Essential Drug System, some provinces provide tacit approval for non-listed drugs to reenter the primary medical care system.

Anhui, the first province to adopt the Essential Drug System, recently allowed health care system to add drugs from New Rural Cooperative Medical Care and Medical Insurance catalogue, but not exceeding 15% of total expenditure. Shandong, Zhejiang and Jiangsu have already added non-listed drugs to their health care systems.

The Essential Drug List was introduced in August 2009 and instructed primary health care systems to equip and utilize all 307 types of essential drugs listed. Ideally, only the listed drugs should be used. However, since its introduction, there has been continued feedback that the list could not meet local demands. According to a hospital administrator in Jiangsu Province, one secondary hospital utilizes 600 to 1000 types of medicine daily. If they strictly follow the Essential Drug System, some specialty departments could not continue their functions.

Even with the added drugs, the demands of primary health care system still could not be met, resulting in loss of patients and thus revenue. Many field experts suggest that local health care systems should be allowed to add non-listed drugs as their financial situations permit.

The Conundrum of “Zero Markup”

Source: Finance 2011-9-13

<http://magazine.caijing.com.cn/2011-09-13/110857233.html>

During a recent conference organized by the Ministry of Public Health, the “Zero Markup” policy was called into question. Several provincial and city health departments requested modifications to the existing essential drug policy, including stopping “Zero Markup” practice.

The essential drug policy is a systematic approach that regulates production, wholesale bidding, distribution, sales, and patient use. Other than wholesale bidding, the “Zero Markup” sales strategy is the most essential component and could highly impact implementation of the entire policy. However, without an effective government reimbursement system, many primary care facilities sustained significant financial losses.

In Anhui, some primary care facilities separated their services into essential and specialized. On the essential service side, only drugs on the Essential Drug List are utilized with zero markup, while on the specialized side, additional drugs are used with markup, to increase revenue. In Beijing, “Zero Markup” was only strictly implemented for half a year. Facing significant patient and revenue loss, the policy was relaxed to include non-listed drugs with markup. If current policy is continued without modification, local primary care systems would be forced to implement their own changes.

Hengpeng Zhu, a researcher from the Chinese Academy of Social Sciences, Institute of Economics, suggested that the markup regulation could be relaxed to allow further price negotiations between local health care system and drug companies. A price ceiling could be set using provincial negotiations as standard, but allow primary health care systems to generate revenue from drug sales. He pointed out that "internationally, countries that implemented zero markup policy do not have comprehensive medical insurance. Since we already have medical insurance, there is no need to establish an essential drug policy. Based on past international experience, medical expense reduction could be achieved through reforming insurance payment system." Competitions between public hospitals, drug stores, and private hospitals will help ensure lower drug prices.

Ministry of Health Plans to Adjust the Essential Drug List: Expanding the Regular Used Drug List

Source: Economic Observer 2011-10-31

<http://epaper.xplus.com/papers/jjgcb/20111031/n17.shtml>

The Ministry of Health will start evaluating implementation of the Essential Drug List by end of 2011, in preparation for its modification in early 2012.

The Essential Drug List was released in August 2009 for primary care setting, with the intention of continued modification and eventual implementation for all public medical facilities. The list contained 307 drugs, and if patients utilize only these drugs, they could receive 100% reimbursement from medical insurance. However, as coverage of the policy increased, problems also surfaced.

The main issue is that the Essential Drug List could not satisfy patient demand. In many regions of China, especially regions with higher levels of income, additional drugs were added to the list to meet the demand. In order to remedy the situation, the list needs to be updated. . According to Zheng Hong, an official from the Ministry of Health, the new list will better accommodate clinical needs, and put more emphasis on treatment and prevention of major diseases and chronic diseases.

Foreign Pharmaceuticals "Got Lost" in China's Health Reforms: Norvatis Admits Reduced Profit

Source: 21st Century Economic Report 2011-11-2

<http://www.21cbh.com/HTML/2011-11-2/wNMDcyXzM3NjMwNA.html>

2011 marks the third year of China's Health Reform, and foreign pharmaceutical companies started to see their profitability being eroded. On October 31, 2011, Lars Rebien Sorensen, CEO of Norvatis, revealed that even though their company would maintain a 15% growth rate for the entire year, their profit was reduced in the third quarter, due to influence of China's Health Reform and the medicine pricing policy. Norvatis is the leading manufacturer of insulin, occupying over 60% of world market and 63% of Chinese market.

The China's Health Reform is a double-edged sword for Norvatis. The new bidding system on essential drugs helped Norvatis expanding its market share; however, the reform also decreased drug retail price, and the latter outweighs the former. A good example is the company's main product, insulin. Since September 1 2011, every province in China adjusted price of insulin, bringing the price of this brand medicine close to generic ones, nearly canceling any profitability. Additionally, it has become increasingly difficult to obtain approval for newly developed medicine. Reduced profitability on older drugs, coupled with limited approval for new drugs, is slowly eroding foreign pharmaceutical companies' market share in China.

ABOUT CHPAMS: FEATURE MEMBER

Yusheng Zhang, MD, MPH, MBA



**Yusheng Zhang, MD,
MPH, MBA**

Yusheng Zhang was trained as a physician and public health professional in Peking Union Medical College and John Hopkins University. He is the founder and CEO of Apricot Forest, Inc. (www.xingshulin.com), a mobile internet company located in Beijing and specialized in developing smart phone applications for physicians in China. The company won the Beijing Startup Weekend Competition in 2011 and received venture capital investment from the Silicon Valley.

Dr. Zhang's passion on innovations in medical technology and their applications in daily medical practice can be traced back to his days in medical school between 2003 and 2008. He developed the first professional Multi-Media-Messaging services for physicians in China. Because of its successful application and popularity, it was later adopted by several multinational companies in 2007.

After graduating from Peking Union Medical College in 2008, Dr. Zhang went on to pursue his MPH and MBA degrees at Johns Hopkins University. He was a Sommer Scholar from 2008 to 2009, a scholarship at Johns Hopkins' Bloomberg School of Public Health aiming to develop the next generation of public health leaders. After graduating from Johns Hopkins, Dr. Zhang worked at Wellpoint, Inc as a clinical research manager until his return to Beijing in September 2011.

1. *What has been the greatest achievement of your career?*

Establish the company Apricot Forest, Inc in Beijing.

2. *Who is your favorite politician and why?*

My favorite American politician is Abraham Lincoln because he "failed his way to succeed."

3. *What inspired you?*

Always my father, who is never afraid of trying.

4. *If you had not entered your current profession, what would you have liked to do?*

I would like to be a professor/lecturer of Medicine and Public Health. I love teaching.

5. *Who was your most influential teacher, and why?*

It must be Jesse Huang (Jian-shi Huang) because he showed me the power of public health and the importance of integrity.

6. *What would be your advice to a newly qualified doctor?*

To cure sometimes, to relieve often, to comfort always. ---- E. L. Trudeau

7. *How do you relax?*

Reading, exercising, drinking coffee, and calling friends randomly.

8. *What are you currently reading?*

Onward (浪潮之巅)

9. *You can have dinner tonight with a famous person of your choice (dead or alive), who would it be?*

张謇

ABOUT CHPAMS: MEMBERS' UPDATES

CAREER AND PROFESSIONAL APPOINTMENT

Zhanlian Feng, Ph.D., Assistant Professor of Health Services, Policy and Practice (Research), Center for Gerontology & Health Care Research at Brown University, is joining the Research Triangle Institute (RTI) International in Boston this July. At RTI International, Dr. Feng will work with a team of research scientists on projects related to aging, disability, and long-term care.

Xinzhi Zhang, M.D., Ph.D., previously with the National Center for Chronic Disease Prevention and Control at the Centers for Disease Control and Prevention, joined the National Institute on Minority Health and Health Disparities (NIMHD), the National Institutes of Health (NIH) in Washington D.C. in July as a Health Scientist Administrator.

MEMBERS' REPORTS

Dr. Jian Ni, Johns Hopkins University, writes to the Editor as below.

"Thanks for the opportunity provided by CHPAMS. Through the conferences and meetings organized [facilitated] by CHPAMS, Prof. Dongfu Qian from Nanjing Medical University and I got to know each other and started to form academic partnership to explore some research ideas. In June 2011, Prof. Dongfu Qian applied the China Medical Board (CMB) young faculty seed grant with me. We propose to study the effects of special outpatient reimbursement policy for common chronic diseases under China's new rural cooperative medical scheme. We focus on the reimbursement/insurance policy design and patient/physician incentive under the new rural cooperative medical scheme. Achieving this goal will enable us convey these findings to the policy makers and educate the patients and even business leaders in China. With the help from CHPAMS, Prof. Dongfu Qian and I got the chance to sit down and know each other's research interest better. We are very confident that this joint research effort will turn out to be fruitful from both academic and policy perspective."

Dr. Tzesan Lee, US Centers for Disease Control and Prevention (CDC), originally from Taiwan, writes on his recent, also his first, mainland China trip.

With an invitation from Dr. S.K. Zhu, Executive Dean, School of Public Health (SPH), Zhejiang University (ZJU), I taught a course in biostatistics during the summer session to medical students in ZJU's International Program. This is a six-year (five-year study plus a one-year internship) MBBS program offering Bachelor of Medicine and Surgery in which the language of instruction is English. The course is titled "Medical Statistics: An Overview". To facilitate my teaching, I prepared my lecture notes in power point presentations and printed hard copies for the students.

The summer session at ZJU started on April 16, 2012 and lasted for 8-weeks. Due to my limited vacation time available from the CDC, ZJU redesigned this course so that I could teach 6 hours per week for the first 4 weeks and then another faculty member would teach the SAS software for the remaining 4 weeks.

I had 78 students in my class who were in their third year with the ZJU. They came from all over the world, including the United States. Some students were of Chinese descent from Malaysia, Singapore, Thailand, and Mauritius. By and large, students are smart and diligent. Predictably, they will become good patient-caring doctors after a solid 6-year training in medical education.

Besides teaching the course, I was invited by the Hangzhou CDC to give a talk entitled "Forest Fires and Landslides: Public Health Hazards". In addition, I held two seminars with faculty members of the ZJU SPH entitled "Medical Statistics: Integrating Biostatistics and Epidemiology" and "A Poisson Regression Model for Female Radium Dial Workers", respectively.

My wife was accompanying me during the China visit. We stayed in a four-star hotel on the campus. The campus is huge. It took 30 minutes to walk from the hotel to my office. Our day began with a delicious breakfast buffet. For lunch and dinner, we ate at the cafeteria with the charge card provided by the ZJU. We did a lot of walking after dinner on the beautiful campus. Also, we took this rare opportunity to visit many wonderful scenery spots in China during our free time. Overall, I enjoyed very much my teaching there. It was an unforgettable experience. My wife and I had a wonderful time in China.

NEWS AND ANNOUNCEMENTS

CMB NEXT GENERATION FELLOWSHIPS†

2012 年度 CMB 新星奖学金公告 (注: 本公告以英文版本为准。)

美国中华医学基金会 (China Medical Board (CMB), www.chinamedicalboard.org) 新星奖学金资助学者在国际一流的院校攻读卫生政策与体系科学的硕士学位。本奖学金致力于为中国培养卫生政策和体系科学的新一代学者。临床医学和生物医学领域不在本奖学金的资助范围。

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2012 年度申请截止日期: 2012 年 12 月 1 日

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学位学习: 支持获得本奖学金的学者在国际一流的院校完成硕士学位学习。

学习领域: 卫生政策与体系科学, 参见 http://www.iiebeijing.org/cmb/HPSS_description.pdf。

资助额度: 奖学金为获得资助的学者提供 10 至 24 个月在国际一流院校以英文授课的全日制 (正式注册) 攻读硕士学位的学习和生活费用。奖学金资助上限为 6 万 5 千美元, 具体的资助金额因人因学校项目而异, 基本能够负担大多数国家和院校一年制研究生学习所需的学费、生活费和国际旅行费用。但一些美国和欧洲的著名院校学费较高, 学制两年, 研究生学习的总费用会超过本奖学金上限 (约超出 1-5 万美金)。如果你仅申请学制为两年的学校, 超出部分需要学者寻找其他资金或自行承担。本奖学金获得者不允许在资助期间带薪工作。

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申请资格

- 申请者必须是中华人民共和国公民, 目前居住在中国大陆;
- 申请者必须在本年度申请截止日 (2012 年 12 月 1 日) 前未满 40 周岁 (即在 1972 年 12 月 1 日后出生);
- 在同等条件下, 有一年以上全职工作经验或硕士学习经历的申请者将会在评审中被优先考虑。申请者至少在 2013 年 9 月之前获得国家承认的全日制大学本科学士学位。我们尤其鼓励青年教职员工申请本奖学金。
- 考虑到卫生政策和体系科学具有跨学科的性质, 申请者的多种背景、技能和兴趣尤其宝贵。本奖学金对申请者以前的学习领域和经历并没有设置严格的界限。学术、职业背景是临床医学或实验室研究方向的申请者可以在决定以卫生政策和体系科学为今后职业发展方向后, 选择学习卫生政策和体系科学相关专业。临床医学和生物医学领域不在本奖学金的资助范围;
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申请过 CMB 新星奖学金 (递交正式申请表) 但未通过的申请者须至少隔一年以后才可以再次申请。已经申请过两次本奖学金而未入选者将不能再申请本奖学金。申请了 2012 年度 CMB 师资进修计划的学者不能同时申请 2012 年度 CMB 新星奖学金。

† 《中国卫生评论》仅转载此公告。具体问题请联络国际教育协会 (IIE)。

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本奖学金考察申请者诸多方面，其中包括：

- 已经展示出来的优异的学术成绩和学习能力
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- 所学专业与卫生政策与体系科学的相关性和重要性
- 具有领导潜能
- 通过学习自我提升的潜力
- 热爱卫生保健事业，愿意为他人服务的意愿

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申请 CMB 新星奖学金和国际一流院校硕士学位学习的过程 不能够有留学中介或者相关机构的参与 否则取消申请资格

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申请者请到 www.iiebeijing.org/cmb/ng/ng.html 下载空白申请表。申请者必须在申请截止日期 2012 年 12 月 1 日之前（以当地邮戳与电子邮件日期为准）提交申请表。逾期或填写不完整的申请不予受理。

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- 有效的托福或雅思成绩单（请参见各个院校网站上对硕士研究生语言的要求）
- 有效的 GRE 成绩单（如你申请的美国院校需要 GRE 成绩）
- 其它 CMB 新星奖学金申请书上所要求的附加文件

第二步：阅读评审，面试

2013 年初，独立的专家评审委员会将对申请资料进行阅读初审。大约在 3 月份对通过初审的申请者进行面试。经过评审委员会评审、面试和 CMB 新星奖学金资助方批准的申请者将成为奖学金候选人。IIE 将于 4 月初向申请人公布面试评审结果。

第三步：授予 CMB 新星奖学金

CMB 新星奖学金候选人在获得本人申请表中 5 所国际一流的院校之一的当年秋季无条件录取通知书并与 IIE 签署资助信后，最终成为 CMB 新星奖学金的获得者。如果入选后，CMB 新星奖学金候选人在 2013 年 9 月前未获得上述院校的录取通知书并成功注册入学，其入选资格则不再有效。

IIE 北京办公室联系方式：

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