

**A Comparative Analysis on Medical Expenses and
Reimbursement of the Inpatients with New Rural
Cooperative Medical Insurance in One County in Shandong
Province**

by

WANG YAO

Master of Science

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Institute of Chinese Medical Sciences

University of Macau

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硕士学位论文

新型农村合作医疗住院病人医疗费用及其报销机制研究

---2011 年山东省某县的个案分析

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中文摘要

目的:

了解参加新型农村合作医疗的病患医疗相关信息,分析新农合病患的支付方式、经济负担以及报销比例,探讨样本县新农合支付方式改革现状,所遇到的问题,以期继续完善新型农村合作医疗制度。

方法:

应用统计软件 SPSS19.0,对病人特征、疾病构成作描述性分析,对正态分布的变量采取参数检验,对非正态分布且经转换仍不具有方差齐性的变量采取非参数检验。参数检验用到的主要方法为 one-way ANOVA 和均值的 t 检验,非参数检验主要用到非参数 Kruskal- Wallis 检验和 Wilcoxon 符号秩和检验。

结果:

1、样本县参加新农合患者的年龄分布:门诊病人的年龄分布主要集中在 41-70 岁的中老年患者组,住院病人的年龄分布以 1-5 以及 51-60 年龄段为主。

2、样本县参加新农合患者的疾病分布:门诊病人的疾病相对集中,排名前三位的疾病是呼吸系统疾病、消化系统疾病以及循环系统疾病,这三类疾病的患者超过样本量的 85% 以上。住院病人疾病种类较多,排名前七位的为呼吸系统疾病,循环系统疾病,妊娠、分娩和产褥期,肿瘤,损伤、中毒和外因的某些其他后果,消化系统疾病,泌尿生殖系统疾病,这七大大类病患超过样本量的 75%。

3、样本县参加新农合患者的总费用分析:门诊患者次均费用为 30.52 元,总费用排位前一百的患者中,年龄分布前三位的分别是 71-80 岁 (21 例)、41-50 岁 (17 例)、61-70 岁 (14 例),超过所选样本的 50%,疾病分布的前三位分别是脑血管类疾病 (18 例)、各种类型的感冒 (17 例)、各种类型的气管炎 (12 例) 超过所选样本的 50%。不同性别、年龄、疾病组之间门诊费用经非参数 Kruskal-Wallis 统计检验,组间差异具有统计学意义 ($P<0.01$)。

住院患者次均费用为 3799.4208,总费用排位前一百的患者中,年龄分布前二位的分别是 61-70 岁 (26 例)、71-80 岁 (24 例),超过所选样本的 50%。疾病分布的前二位分别是各类型癌症 (34 例)、心脑血管疾病 (25 例),超过所选样本

的 50%。不同性别、年龄、疾病组之间住院次均费用经 one-way ANOVA 统计检验，组间差异具有统计学意义 ($P<0.01$)。

4 样本县患者报销比例的分析：门诊患者次均自付费用 20.1，报销比例均值为 32.16%。门诊病人报销比例最少的一百名患者中，年龄分布前三位分别是 71-80 岁 (23 例)、81-90 岁 (17 例)、61-70 (16 例)，超过所选样本的 50%。疾病排位前三位分别是各种类型的感冒 (28 例)、关节炎 (12 例)、高血压 (9 例)，超过所选样本的 50%。经非参数 Kruskal- Wallis 统计检验，组间差异具有统计学意义 ($P<0.01$)。

住院患者次均自付 2611.11，报销比例均值为 32.33%，报销比例最少的一百名患者中，年龄分布主要集中在 1-5 岁 (46 例)，接近所选所选样本的 50%。疾病主要集中在各种小儿呼吸道感染症状。经 one-way ANOVA 统计检验，组间差异具有统计学意义 ($P<0.01$)。

5 影响住院费用的因素按影响程度大小依次是：疾病、年龄、报销比例、住院天数、处方数、性别。

结论：

1、该县的 739140 例新农合参保患者不考虑女性正常分娩的生理现象，门诊和住院的男性患者均多于女性患者，患者年龄主要集中在 41-70 岁，疾病主要集中在呼吸系统疾病。医疗费用较高的患者主要集中在有心脑血管疾病的中老年人以及癌症患者，报销比例相对较低的则主要集中在小儿因上呼吸道感染所致的疾患。

2、门诊和住院患者的实际报销比例均低于政策规定的报销比例

3、新农合参保患者的住院费用占农民年人均收入的二分之一，经济负担重。

政策建议：

1、合理管控新农合基金（合理制定起付线和封顶线，设置合适的基金结余，提高报销比例）。

2、加强管理控制卫生费用

3、全面推行医疗服务支付方式改革

4、针对重大疾病、特殊疾病、花费较高疾病结合当地流行病谱制定因地制宜的补偿政策

关键词： 新型农村合作医疗；住院费用；经济负担；报销比例



Abstract

Objective:

To understand the relevant information of patients who join in the New rural cooperative medical system, to analyze their payment, economic burden and proportion of reimbursement, to examine the status quo of the payment transform of the new rural cooperative medical system in the sample county, as well as the problems encountered

Methodology:

The statistics software SPSS19.0 is used to conduct a descriptive analysis of patient diagnostics and disease constituents, to take-parametric test for normally distributed variables and the non-normal distributed variables which have no homogeneity of variance after conversion. The main method employed in the parametric test is one-way ANOVA and the t-test, and in the non-parametric tests is nonparametric rank sum test and Wilcoxon signed rank sum test.

Results:

1. Patients' age distribution of the sample county: the age distribution of outpatients is mainly the elderly group of 41-70 years old, the age distribution of hospitalized patients 1-5 and 51-60 years old.
2. The disease distribution in the sample county: outpatient disease is relatively concentrated with the top three diseases: respiratory diseases, digestive diseases and circulatory system diseases, which account for more than 85% of the sample size. The diseases of the hospitalized patients are more diversified, with the top seven diseases: the respiratory diseases, circulatory system diseases, pregnancy, childbirth, puerperium, cancer, injury, poisoning and the consequences due to external causes, digestive diseases, urinary and reproductive system diseases, which account for more than 75% of the sample size.
3. Analysis of the total cost of the new rural cooperative patients in the sample county: outpatient average cost of 30.52. Among the patients whose total cost is the top 100, the top three age distribution is 71-80 years old (21 cases), 41-50 years old (17 cases), 61-70 years (14 cases), which account more than 50% of the sample size, and the top three diseases in the disease distribution are cerebrovascular (18 cases), various types of cold (17 cases), various types of

bronchitis (12 cases), which account for more than 50% of the sample. Outpatient costs between different gender, age, and disease group have significant difference ($P < 0.01$).

The average of hospitalized patient cost is 3799.4208. Among the patients whose total cost is the top 100, the age distribution of the top two is 61-70 years old (26 cases), 71 - 80 years (24 cases), which account for more than 50% of the sample, and the top two diseases in the disease distribution are various types of cancer (34 cases), cardiovascular and cerebrovascular diseases (25 cases), which account for more than 50% of the selected sample. The average hospitalization cost between different gender, age, disease group average cost have a significant difference ($P < 0.01$).

4. Analysis of patients' proportion of reimbursement in the sample county: outpatient pays 20.1 every time on average with the reimbursement proportion of 32.16%. Among the 100 outpatients who have least reimbursement, the age distribution of the top three are 71-80 years old (23 cases), 81-90 years old (17 cases), 61-70 (16 cases), which account for more than 50 of the sample. The top three ranked diseases are all types of influenza (28 cases), arthritis (12 cases), hypertension (9 cases), which account for more than 50% of the samples. The average outpatient reimbursement proportion between different gender, age, disease group average cost have a significant difference ($P < 0.01$).

The hospitalized patients pay 2611.11 themselves with an average of 32.33% reimbursement. Among the 100 outpatients who have least reimbursement, the age is mainly distributed in the 1-5 years old (46 cases), nearly 50% of the sample selected. The disease mainly concentrated in a variety of symptoms of respiratory tract infections among children. The average outpatient reimbursement proportion between different gender, age, disease group average cost have a significant difference ($P < 0.01$).

5. The factors that affect the cost of hospitalization are ranked according to their impact: the disease, age, reimbursement proportion, hospitalization duration, number of prescriptions, gender.

Conclusion:

1, The county's 739,140 cases of patients with new rural cooperative medical insurance do not consider the physiological aspects of female normal childbirth. In terms of gender, there is more male outpatient and inpatients whose age is mainly concentrated in the 41-70 year-old, and the

disease is mainly the respiratory system diseases. Patients with high medical costs are mainly connected with the heart and cerebrovascular diseases in the elderly and cancer patients; the relatively low reimbursement is mainly linked to the children with diseases caused by upper respiratory tract infection.

2. The actual reimbursement proportion of outpatient and inpatient are lower than the reimbursement proportion provided in the policies and regulations.

3. The hospitalization costs account for half of the farmers' annual per capita income for the patients with new rural cooperative medical insurance, thus with heavy economic burden.

Policy recommendations:

1. Control of the new rural cooperative funds at reasonable level (set reasonable pay line and cap line, set the appropriate fund balances to improve the reimbursement proportion).
2. Strengthen management of health costs
3. Fully implement the medical services payment reform
4. For major diseases, specific diseases, and high-cost disease, set proper compensation policy in combination with local epidemic spectrum

Keywords: new rural cooperative medical system, medical expenses, economic burden, reimbursement proportion