ASSESSING CUSTOMERS PERCEPTION OF ONLINE SHOPPING RISKS

ADEL AL KHATTAB

Dean of Scientific Research and Graduate Studies Al Hussein Bin Talal University Ma'an, 71110, Jordan
E-mail: adel.alkhattab@yahoo.co.uk

Abstract - This study seeks to compare the utilization of health services and expenditures between two groups and to assess the effect of socioeconomic factors (income, age, gender education and family size) on utilization of medical care sercives among AHU university. The first one is the staff of Al-Hussein Bin Talal University (under cost sharing plans) and the second one is the staff of Ministry of Education (Under free care). Data on health care services utilization were collected for the periods (2009-2014). Utilization of health services for both groups was measured by several variable including, inpatient care, routine checkups, specialty care, dental care, laboratory tests, X-ray, prescription drugs, and hospital length of stay. In this investigation there were several sources for error. The main error is that some individuals in both samples may be covered through other health insurance plans such as public health insurance, military health insurance, and other private health insurance arrangements. Preliminary analysis of the current research show that employees' visits under the free care plans provided by the Ministry of Education were around 30% higher than the employees' visits covered by the cost sharing plans This a quasi-experimental retrospective study is aiming to compare the utilization of health services and expenditures between two groups. The first one is the staff of Al-Hussein Bin Talal University (under cost sharing plans) and he second one is the staff of Ministry of Education (Under free care). Medical records of the year 2001 will be used to collect data regarding utilization of health care services for both groups.

Keywords - Cost Insurance and Freight

I. INTRODUCTION

The rapidly rising cost of health services has resulted in an increase of insurance plans designed to contain these costs. At the same time there has been increasing demand from both governments and consumers to provide equitable access to care for these population underserved.1
Researchers suggested cost sharing to contain costs of health care services.2 The basic types of cost sharing are:

1. deductibles (payment of the first x pounds of care each year)
2. co-insurance (payment of a fixed percentage for care up to a fixed maximum limit)
3. co-payments (payment of a fixed amount for each services).

Any society seeks for a method to finance health care services it had to chosen between two controversial conceptions:

1. health care principle that patients have a right to health care
2. insurance principle that get a value of their money.

These two principles are in conflict. Societies had to allocate an adequate fund of its total resources to health services, this means the right to health services. Patients also had to share of such services as determined by medical need rather than by income, political power, or social status. 3

Greater access to care may have decreased the prevalence of certain symptoms through prevention, more timely care, or better control of disease. 4 researchers found that lack of health insurance lead to reduces access to medical care; patients who did not have insurance had fewer physicians visits. 5

How did the insurance industry contribute to the cost crisis? Insurance plans increase access to health care. As a result of offering health insurance patients and providers have a tendency to use the medical care services more, patents increase their use because they feel they need the medical care and providers because they earn income from offering such services. Commercial insurers also contribute to health cost inflation because they tend to pay to hospitals and physicians whatever they charge. 3
Civilizations have recognized the physician's obligation to treat the infirm regardless of their ability to pay. Hippocrates explicitly recognized this duty:
"I advise no excessive demands, but to take into account the means and income of the patient. In certain circumstances the physician should give treatment for nothing" 6

Jonathan et al suggested that governments have the prime responsibility to protect all citizens and permanent residents against having to pay a large out –of-pocket money for health care. He suggested also inter generalization solidarity, which acknowledges that younger working generation will subsidize the older generation.

In an ideal health care system, people would tend to use those that were necessary and appropriate but not those that were unlikely to provide meaningful benefits. As the escalation in medical care cost continues to rise, several authors have proposed that

co-insurance may be an effective mechanism for reducing unnecessary use of care. 8 others suggest to decrease direct health care cost by earning a sizable-out-of –pocket expense from the patient for each visit. 9

Generous insurance (that covers many services with low percentages of co-insurance) that reduces incentives to economize spending on heath services is widely cited as a factor in the rapidly rising of health care costs. 10. the rapidly rising of medical care costs of providing primary health led many health departments to reducing or withdrawing services because of the shortage of money. 11. many observers believe that providing insurance with low amount of cost sharing is a major cause of the large increase in health care costs over the past few decades in U.S.A per capita constant dollar expenditure for health care. 12

When patients have financial stake in efficient health care delivery then efficiency in the health care system can be achieved. This involves cost sharing which is being widely introduced in a number of European countries to control the cost sharing. because cost sharing can be introduced easily in a social insurance system, it is being widely used for cost containment. 13

Western nations vary by more than 200% in per capita expenditures for health services, but studies conducted to measure health status between them found differences of less than 5 % and they did not find any correlation between spending on health services and health status. 13.

Both opponents and supporters of cost sharing would agree that spending some money on medical care is worthwhile, but that there is a limit to how much can profitability be spent. 16. proponents of cost sharing in health care assumed that cost sharing will reduce the use of medical services without preventing individuals from obtaining needed care and they maintained that these savings are achieved by reducing unnecessary care. 17

Cost sharing in health care services is proposed to contain health care cost. The basic motive for the introduction of cost sharing is economic, and this measure becomes particularly important in critical economic period for the benefits gained from introducing it in insurance plans.20

Some of medical care use over the past 25 years was inappropriate. Economic theory suggests that cost-sharing would be expected to reduce medical care use inappropriately when the costs of care exceeded the possible benefits such as inappropriate services. 21

Previous studies suggested that in the absence of comprehensive insurance coverage, there is a significant effect for socioeconomic factors for the utilization of inpatient and out patient services. 22. insurance coverage reduces but does not entirely eliminate racial and location differentials. 23 once the person is in the health care system the role of demographic and socioeconomic factors diminishes considerably regarding utilization of health services.24 . even thought uninsured person use fewer health services that insured persons, but nobody clearly demonstrated that uninsured persons are less healthy than the insured.25

Public insurance programs tend today to increase the amount of cost sharing paid by patients. " the central question now, is how much of the cost burden can be borne by patients without inducing reductions in utilization that are harmful to health" 26.

If patients did not receive medical care that they needed or if their health suffered from assignment to a co- insurance plan, cost sharing would be a less attractive policy option for them. 8. the most frequently used argument for eliminating cost sharing is that medical services are a right for all people and should not be rationed by price or other social factors. 27

"all insurance plans must;

1. be available to all people without regard to race, religion origin, economic status, health / functional status or existing health insurance coverage
2. include participation of both private and public sectors
3. support the development of comprehensive, community based systems of personal health care for the chronically ill persons
4. contain cost through managed care and other means and,
5. require some financing from the people in proportion to their ability to pay". 28

studies indicated that the co-insurance percentage must be high to let families know that needed care is not " free". However, the level of co-insurance must also be low enough to ensure that needed care will not be missed because of an excessive cost sharing.28

Goal

This study seeks to improve people's health in low- and middle-income countries by supporting health sector reforms that ensure equitable access to efficient, sustainable, quality health care services. This study might help of building integrated approach to health reform and builds capacity in the following key areas:

- Better informed and more participatory policy processes in health sector reform;
- More equitable and sustainable health financing systems;

- Improved incentives within health systems to encourage agents to use and deliver efficient and quality health services; and
- Improved organization and management of health care systems and institutions to support specific health sector reforms.

Objectives

1. To compare the effect of cost sharing and free care on utilization of health care services between AHU (Al-Hussein Bin Talal University) University staff and M.O.E (Ministry of Education) staff.
2. To assess the effect of socioeconomic factors (income, age, gender, education, family size) on utilization of medical care services among AHU university.

II. LITERATURE REVIEW

The Rand health insurance experiment which randomize families in six communities in the United States to receive free care, to a Health Maintenance Organization, or to various levels of co-insurance, demonstrated that overall medical expenditure were about 25 % lower among those assigned to a co-insurance plan, compared with those receiving free care. 27

People who paid a part of their medical costs made only about two thirds as many outpatient visits as those receiving free care. The relative risk of dying for high risk members of the free care plan at exit was 1.9 as contrast with 2.11 for those in the cost sharing plans. If one thousand 50-year-old men at elevated risk were enrolled in a free insurance plan, Brook et al. anticipated that 10.5 of them, who would otherwise have died, would be a live five years later, but for women the anticipated period is two years rather than 5 years. 29

Free medical care increased expenditures by one third over what occurs when introducing moderate cost sharing. Outpatient visits were responsible for the most increases in the expenditures. 30. other studies found that persons who were fully covered for medical services spent up to 50 % to 60 % more than those with substantial cost sharing. 31

In another study it was found that patients under free care plan were 22% more likely to have an office visit during the year, and were 34 % more likely to be hospitalized than patients under the 95 % co-insurance plan. As cost sharing increased the average number of outpatient visits per year declined. Free care plan and deductibles showed significantly greater hospital use than the cost sharing group. 31. the Rand health insurance experiment for children indicated that the average child in the United States made 3.9 visit per year to a physician, but patients under free plan made 4.2 visits. 32

Studies found that patients would pay less when they were responsible for it themselves. Results from Keeler et al. study showed large differences in health services use between participants whose insurance paid for all their care, and those participants under different levels of co-insurance. Participants under cost sharing plans had many fewer out patient episodes of treatment, on average, then those with free care. The cost per episode was similar on the free and the pay pans. 10. prepaid group practices reduced total per capita costs of medical care in U.S.A by 10-40 %. 13

Previous studies demonstrated that cost sharing reduced the use of health services, but patients under free care had better visual acuity at the experiments end than those patients under cost sharing plans. The study argues that the differences among cost sharing plans with respect to vision outcomes were negligible. Poor patients with natural eye examination than those on the free care plan. According to purchasing lenses necessary to correct vision to 20/20, " 8 % of the poor and 25 % of the non poor on the cost sharing plans purchased lenses, while there were no statistically significant in the purchase of lenses between poor and non poor on the free care". 33

Cost sharing had reduced the percentage of enrollees seeking care and had a marked effect on the volume of preventive visits. 34. to provide maximum incentive for the use of preventive services, Newhouse included a set of plans in which all outpatient care is free but inpatient care is subject to co-insurance. This permitted statements about the possibilities of shifting the place of care from an inpatient to an outpatient basis by using insurance. 35

Studies confirm that the likelihood of seeking care for both serious and minor symptoms declined as cost sharing increased. 8. " Among the persons who reported minor symptoms, the percentage seeking care was 30 % lower in the cost sharing plans relative to the free plan. Among the people who reported serious symptoms, the percentage seeking care was not significantly different for cost sharing and free plan, the difference between plans in the prevalence of serious symptoms was significant only in the group in the lowest 40 % of both socioeconomic and health status distributions". 4

Emmet et al . reported that patients with limited cost sharing had approximately one-third less use of medical services. Of 20 measures of physiological health studied on 3565 adults, people under cost sharing plans scored better on 12 measures and significantly worse only for functional near vision.

People who pay part of their medical cost had less worry and pain from physiological conditions on 33 of 44 comparisons. There were no significant differences between plans in nine health practice, but those with cost sharing fared worse on three types of cancer screening. The effect of cost sharing on health were minor except for patients with hypertension or vision problems. The improvement in vision, blood pressure, and risk of dying were largest in the group with low income and elevated risk. Emmet et al . were unable to detect that free care offered much benefit to physiological health over limited cost sharing insurance plans. 16

Insurance coverage increases utilization, both inpatient and outpatient care. Insured patients use almost twice as much inpatient care as do the uninsured patients. 23. Cost sharing decreases the probability of visiting a doctor from 44 % to 28 %. The probability of hospital admission was reduced significantly but there was an increase in length of stay. 36. hospital admission rate varied among the insurance plans, adults under free medical care plans were hospitalized 31 % more than those under plans that required cost sharing. Under cost sharing plans 22 % of admissions and 34% of hospitals days were classified as inappropriate use, as compared with 24 % of admissions and 35 % of hospital days in the plan under which is considered free to the patients.

Authors estimate that the price elasticity of demand for hospital services with respect to co-insurance rate changes in the 0 to 25% range is probably on the order of 0.1, possibly smaller. This means that the differences in demand between 0 and 25 % co-insurance is on the order of 20 %. 37.

The relationship between co-insurance level and use of outpatient mental health care services is negative.9. participants with free care use psychotherapy services about twice as those with an insurance plan with 95 % co-insurnce.38. the free care group spend 73 % higher on all ambulatory mental health services than the 95 % co-insurance plan group. Free care group spend, 133% on outpatient psychotherapy than for the 95 % plan group. 39. individuals under free care had insignificantly better mental health status on average than those with the family cost sharing pans.38.

Because of the proportional amount of money each day's charges co-insurance may lower hospital length of stay. 18. there is a 30% decrease in the use of hospital care according to a 40% co-insurance. Some suggested that sharing medical costs can reduce ambulatory care at least in the short run. They also found that for ambulatory care visits the effect of co-payment on utilization of health care services appeared to be relatively short-lived.40. other investigations found that patients with no cost sharing had 42% more emergency department expenses than those on the 95 % co-insurance plan and about 16% higher than those for patients under smaller amounts of cost sharing. Lack of cost sharing resulted in more visits for less serious diagnosis as much as did visit for more serious diagnosis. Poor patients had emergency department expenses that were 64% higher than those rich patients. Most of the responses to cost sharing regarding utilization of health care services occurred between the free care plan and 25 % co-insurance plan. As out of pocket payment decreased, expenditure for emergency department services increased, 95 % co-insurance plan spend 70% of that on the free care plan. Co-insurance plans affect all income levels, low income persons appear to reduce their use of ambulatory services to about the same extent as persons at other income levels./ 14

Having free care plans increase expenditure on health care services.44 and antibiotics use, compared with individual in the cost sharing plans. " poor women with free care use about 250 % more antibiotic. Poor men use about 244 % more, and poor children about 72% more than non poor". Cost sharing reduce the number of visits, therefore, the antibiotic reduction comes principally throughout the reduction in visits rather than the reduced in the antibiotic prescribing in a given a visit. On average, cost sharing lowered antibiotic use by 46%. Cost sharing reduced inappropriate and appropriate antibiotic use to a similar degree. 45.

Testing the effect of prepaid group practice over fee for service found that " the prepaid group practice mode of delivery resulted in overall cost savings of 37% over fee for services mode of delivery. This saving is a weighted composite of a decrease of 15% in ambulatory physician, a decrease of 18 % in drug use, decrease in hospital admission of 30 % and a decrease in hospital days of 32 %". 46.

Hypothesis

There is a negative relationship between the presence of co-insurance and utilization of health care services.

III. RESEARCH METHODOLOGY

This study will be conducted to examine the effect of co-insurance on utilization of health care services of AHU University (cost sharing group) and M.O.E (free care group). Both the expenditure on all aspects of health care services and the effect of socioeconomic status on variation of health care services utilization will be analyzed.

The conceptual frame work of this study perceives co-insurance as one of the determinants of utilization of health care services. The other factors that have an impact on utilization of services and insurance status are as follow:

Utilization of health services will be measured by: inpatient care, routine checkups, specialty care, dental care, laboratory tests, X-ray, prescription drugs, and hospital length of stay. For AHU University, the services are provided by the university's clinic. If the treatment is not available in AHU health centre, the staff can refer to either Public Health Centers or private health centers. also, participants have to share the cost of their medical care. AHU university lacks a health service facility, therefore, staff can seek health care from any provider. In this case, staff are supposed to share cost as follow:

- 0 % of the bellows for Ministry of Health (M.O.H) clinics and hospitals.
- 20 % of the bills for private hospitals which have contracts with the university.
- % of the bills for other private hospitals.
- % of the bills for private Physicians.
- % of

Some services are excluded from coverage in AHU University . Including Maternity and obstetric care, cosmetic orthodontia, mental health services, optometrists,

Study variables
The measure of health care utilization is based on determination of the following:

I. Utilization of :
1. inpatient care
2. routine checkups
3. specialty care
4. dental care
5. laboratory and X-ray
6. prescription drugs

II. Expenditure (cost of health services) and out-of-pocket payments(the real amount of money that the official paid) on health care services.

The main independent variables
Other independent variables that will be included to estimate their effect on utilization of health care services are:

1. age
2. education
3. sex
4. family size

Study limitations
Some individuals in both samples may be covered through other health insurance plans such as public health insurance, military health insurance, and other private health insurance arrangements.
Those individuals may seek health care from other providers.

Sampling
Eligibility: the sample frame will be limited to Jordanian staff, since non Jordanians have different socioeconomic background.

Sample size: previous studies reported : that the annual probability of having a visit to the physician under free care was 0.84, and hospital admission 0.102, but under 25% co-insurance, the probability of having a visit to the physician and a hospital admission was 0.78 and 0.18 respectively. 36. these probabilities will be used to estimate the sample size for the two groups using the Rosner formula. 47.

Data collection
Data on health care services utilization will be collected for a year 2000. AHU university reimburses staff upon receipt of an application, with all bills and prescriptions needed attached. These reimbursement forms are kept in the finance office. Socioeconomic status for the staff will be collected from personnel records.

Data analysis
1. T. test to test the differences in health care utilization and expenditures by the cost sharing group and the free care one.
2. F-test to test the differences in out-of-pocket payment.
3. Chi-square test to analyze association between co-insurance levels and the number of drug prescriptions utilized.

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