



## Model for reform consumption drug in chemical veterans

Parviz Ghaffari<sup>1</sup>, Mohammad Mahboubi<sup>2</sup> and Fezollah Foroughi<sup>3</sup>

<sup>1</sup>Department Orthoped Surgery, Sch. Med, Kermanshah University of Medical Sciences, Kermanshah, Iran.

<sup>2</sup>Health Service Management, Kermanshah University of Medical Sciences, Kermanshah, Iran.

<sup>3</sup>Vice-chancellery for Research and Technology, Scientometrics Unit, Kermanshah University of Medical Sciences, Kermanshah, Iran.

### ARTICLE INFO

#### Article history:

Received: 8 August 2012;

Received in revised form:

20 September 2012;

Accepted: 27 September 2012;

#### Keywords

Chemical ventures,  
Model of drug consumption,  
Nesar Deereh.

### ABSTRACT

**Title:** Model for reform Consumption Drug in chemical veteran

**Background:** Drug is one of strategic goods and strategic goods are often deal with nutrition, defend & health of community and it consist of basic needs of community. Drug need in chemical ventures may undeniable but not having comprehensive knowledge about drug consumption in high risk patients may harm injuries hardly during time that one of its affects is living with intensive cares because of this reason this survey is aimed to study this rate of chemical ventures' awareness about drug consumption and designing a model for reforming consumption.

**Objective:** This research was aimed to study knowledge of drug consumption in chemical ventures in Nesar Direh village in the first half of 2009 solar year.

**Methods:** This research is a case comparison study that has done with longitudinal method in the first half of 1388 in 80 chemical ventures of Nesar Direh village in Gillan-e-gharb area in Kermanshah province that separated this sample in 2 groups: 40 persons as intervened group and 40 as comparison one regarding with the same condition. Data was collected by research team with using conversation, observation, survey on documents such as medical descriptions, drugs, inpatient documents, drug basket and etc with using questionnaire and checklist that are designed by researcher (consist of 10 aspects) that is used after measuring it's validity and reliability by professionals idea during 3 stages in 2 weeks and finally acceptance of university teachers. Finally data was analyzed with SPSS12 software and using descriptive statistics methods.

**Findings:** findings are shown that the sex of comparison group is 18 men and 22 women and also the same in intervened group. Other details of both groups are shown in table 1. The rates of knowledge are the same in 10 aspects in both intervened and comparison group before intervention but after that this rate increased in 8 aspects but not increased in 2. Will fully drug consumption and using emergency drugs such as calming and conforming drugs are the uncontrolled factors during the research. Also the findings showed that there is significant meaning between the sex and consuming emergency drugs.

**Discussion & Conclusion:** The results are shown that consuming drugs are critical now and guide to using maintenance system beside increasing knowledge of high risk injuries such as chemical ventures and designing a model for reforming consumption. Spending time leads Iran's pharmaceutical system to critical path compare with other countries, in addition lead to exit money and increasing health expenses from GNP and this issue cause disability for inventing and making new drugs in Iran that are already made in the other countries.

© 2012 Elixir All rights reserved.

### Introduction

Drugs are one of strategic goods and strategic goods deal usually with food, defence and health of society and encompass the basic needs of society.

Prescribing unreasonable medication is created risks for the health system beside the economic losses. In fact, with prescribing irrational drug, the risk of lethal of hospital infections be important every.

Self medication is one of wrong health habits and behaviour which bring more costs to the individual and society.

Unfortunately, the rate of people referring to physicians is high in the country, so that Iran is one of the first twenty

countries in the world and has the second place in Asia, after China regarding drug consumption.

Conducted Research in the country shows that the Iranians take drug over the global standard. So that 10 to 15 percent of medicines is taken arbitrary and without consulting a doctor. However, correcting bad behaviour likes irrational drug prescription and arbitrary in consuming drug which has been changed to a wrong kind of culture, needs to a universal and national efforts.

Do not follow scientific criteria, delivery without a prescription of some pharmacies and high pharmaceutical items in the prescription of the physicians are the important reasons of

indiscriminate use and show the irrational drug prescription process in the country.

Official statistics of Health Ministry shows that in the past eight years the average number of prescribed drugs in each prescription was more than four items which currently the country average is 3 / 6 items, While the world average in this area is less than two items in each prescription.

Although drug is the key element of treatment in the world and 75 percent of treatments is done through it but increasing in people's indiscriminate use of drugs without physician's prescription occurs while the research shows that arbitrary and indiscriminate use of drugs increases the incidence of suicide.

Increased consumption of drugs and use of drugs without physicians' prescription has a significant impact on people's health and quality of life which now the best approach can be drug's reasonable prices.

Basically, the drugs can be divided into three groups like basic drugs, secondary drugs and non-essential drugs. Essential drugs are those drugs that without them and even with a shortage of them physical and mental health of the community will be at serious risk. Of this group can be mentioned to anti-diabetic, cardiovascular, diuretics, antibiotics and...

Secondary drugs are not essential in the treatment of disease but without them, the physicians face with severe problems in the treatment of the patients and patient will suffer pain as well like pain killers which in many cases their role is important as far as basic drugs. Non-essential Drugs are those that don't have approved use cases or medicinal effect in doses which are prescribed. It is essential to do some reform and correction in areas which there are possibilities in abuse, unreasonable use, improper and indiscriminate use.

Most used drugs are in the antibiotics and psychiatric groups. Pain killers are also those that are used arbitrary.

Beside painkillers, eye drops and antibiotics have the most arbitrary consumption, however, antibiotics are the worst drugs that are used in this manner, because in the case of that the body don't have any need to them, and they act as a toxin and resistant body microbes to drugs. And in the case of infection in the body they will not be effective in treating disease.

Always thousands of deaths and various diseases and medical error severe side effect of illness are announced statistically. In most of the time statistical view to the medical issues hides the importance of them somehow put down them. However, we can say with confidence that all these issues are related to the unreasonable prescription of drug (2).

One successful way for prevention of being ill in adulthood is childhood vaccination. No considering this fact ready people to being ill in the future will provide life associated with treatment instead of prevention.

Among the public care Vaccination has most efficacy in prevention of diseases and disabilities (3).

#### **Research Objective:**

The study has been done to Survey the Drug Consumption in Chemical Ventures & Designing a Model in the first half of 2009.

#### **Methods:**

The study is an intervention study which has been done longitudinally on 80 Chemical veteran which were living in the same place ( Nasar deireh village in Kermanshah province) during the first 6 months of 1388. The study community was divided to two intervention group (40) and Compare group (40). In this study was tried to select the intervention group in terms

of demographic and some side indicators (metabolic diseases, mental and ...) homologous with compared group. It means that the intervention and comparison groups were selected with attention to their age, sex, work, the percentage of veterans (15-40 percent), type of injury (eye, internal, skin).

Firstly, two groups get tested based on research tools like observation, interview and questionnaire then within six months, intervention group (40 persons) were visited average monthly. Meanwhile, there was not any intervention in the manner of reference to clinical and Para Clinical centres.

In this survey and monitoring, decuple specific training has been done by two local partners which had academic degree and were answered to their questions. Data was gathered regularly at the end of the study by the rating check list and was analysed by SPSS12 software and descriptive statistics.

#### **Results**

Findings show the frequency of intervention group 40 and compared group 40. These numbers consist of 45 percent of men 55 percent of the women. The most frequency in intervention group is in 40 - 60 years old group (45 percent) and above 60 years old group (45 percent). In compare group, 35 percent are between the ages of 40-60 years and 5 / 37 percent over 60 years.

About Education the most frequency in the intervention group is in the elementary level (40 percent) and in comparison group is in illiterate group 35 percent (Table 1).

Research Findings before the intervention between two comparison and intervention groups about ten important indicators have shown that both groups, despite of drug consumption, don't have any certain knowledge about the reviewed factors and study population had consume equally specific drugs related to their disease. 0.76 percent of the population had consumed drug without a physician order at least once during the study arbitrarily. All veterans had consumed drugs on average two times a day during 6 months study. Research findings have been shown that in the case of inaccessibility to medical centers have been tried to consume emergency medicines arbitrarily which results have shown not application of intervention (Table 2).

Researcher and colleagues by using face to face education to the patient or one of the members of family, providing educational pamphlet, monthly inspection and continues monitoring during the study, studying patients prescriptions and recorded in related check-list, and based on the progress of patients' knowledge on the studied components and assigning the points, eventually calculate the awareness rates. Study findings show the impact of the intervention after 6 months in Table 2.

#### **Conclusion**

Drugs are one of strategic goods and strategic goods, usually deal with food, defence and overall health of society and encompass the basic needs of society.

Chemical Ventures are a risky group of the society who need care more than other patients and it depends on the type and severity of injury. War victims need to mental welfare more than physical welfare and one way for providing this welfare is providing preventive and therapeutic possibilities in the society. These patients due to different injuries have certain conditions for access to medication and perhaps are one of the high consumption groups.

So surveying the drug consumption style and knowledge of this group, which have the twentieth position in the world and second position in Asia, is important.

Tofighi (2000) in a study entitled necropsy poisoning in the prison concluded that death rate in people which had consumed Cleaning and pain killers drugs arbitrarily (9 / 20 percent) is more than ones that consume drugs with caution and awareness. Hair removing drug which is used as a suicide complementary drug in prison has the most destructive effects and death than others because of acceptability and awareness of some people with a history of depression and arbitrary drug addiction which this study is in line with our research on side effect of drugs. Between Chemical veterans Only 1 percent were aware of Side effects of drugs which after intervention was improved to 73 percent while comparison group was aware averagely 5.4 percent on side effects of drug (4).

In a study which had been published by Iranian relief website in 2009 was shown that the correct way of taking the medicine doesn't happen according to the prescription of physicians. This study also shows that averagely 40 percent of the patients don't observe the correct way on taking drugs but after the intervention using the correct way of taking medicine had been improved to 93 percent and this confirms the lack of knowledge about how taking drugs. For example, some intervention cases only used to swallow drugs (37 percent), some had taken antibiotics without enough water (40 percent) and 59 percent of study population hadn't observed the physician orders in taking drugs.

Women during pregnancy due to depression are candidate for taking additional drugs and mismanagement of it during pregnancy time endangers her and fetus lives.

Klariv (2007) in his research about antidepressants drug during pregnancy writes that women more than men are prone to depression and it can be a sign on childhood and it increase the drug use in adults that this results don't consist with the results of our research (5).

Marlow (2009) in his article titled results of community participation in hospital care for pneumonia, noted that bad consumption of antibiotics beside having bad risks for the community leads to long time hospitalization while with community participation people who are prone to pneumonia with awareness of side effect of diseases, not using drugs arbitrary and with referring to pneumonia association can participate in community health (6). We hope that the public culture improve to the level that people considers others as a partner in their health beside self-care.

Irrational drug consumption, drug storage in unsuitable place, improper and arbitrary vitamins use, lack information of antibiotics side effects are important reasons for drug resistance to some antibiotics that the results of this study consistent with our findings about irrational drug use (91 percent), lack of drug maintenance (35 percent) and arbitrary use (85 percent) (7).

Simple and easy access to doctors and medicine sometimes lead to request drugs more than need and in this cases demand intense which presenting a model by this research can be a solution for reducing induced demand.

Afzali in his research entitled determined model of deaths cause from drug and chemical poisoning in Hamedan during 2005 to 2006 has mentioned that the rate of death in men than women was 5 to 1. Deliberate drug consumption with 52.2 % had allocated the most cases to itself. Study findings show that easy access to drug was the important reason for increasing

toxicity and deaths which its increased access is in line with this study (8).

Averagely, before intervention, Pharmaceutical Basket per household, included 18 cases of drug that four cases was useable. 20 percent of drugs had passed their expiration date and the other pharmaceutical drugs in the basket were sedatives and painkillers.

Vernon (1385) regarding the problems and excessive consumption of painkiller has mentioned that interest for prescribing these drugs has grown so much that other drugs of this group is going to be used in inappropriate manner which result of this study is in line with arbitrarily taking of painkillers(9).

As was previously mentioned, average drug consumption in our country is above the world average.

54 percent of intervention patients consume average two tablets and taking prescribed treatment two times a day. While this number with taking arbitrarily and use of emergency drugs had reached to five.

Afzali (2002) in a study entitled Comparison of therapeutic effects of atropine + Aksym with organophosphate poisoning emergency in the muscarinic symptoms mentioned that response to drug treatment in the two methods compared to single drug showed no preference. All the results of treatment (no improvement Complications, healing complications, death) and the time response to single-drug therapy compared with two drug, had better results, and the results of this study isn't in line with average drug case (10).

Present of Importance of drug knowledge is mission of medical universities. Not explanation on taking drugs to patients beside impose Costs to Gross National Income can also threat the health of people. Therefore Garbr (2008) (11) and Vilsinky (2008) (12) have noted in their studies that information is necessary for cost effectiveness of treatment.

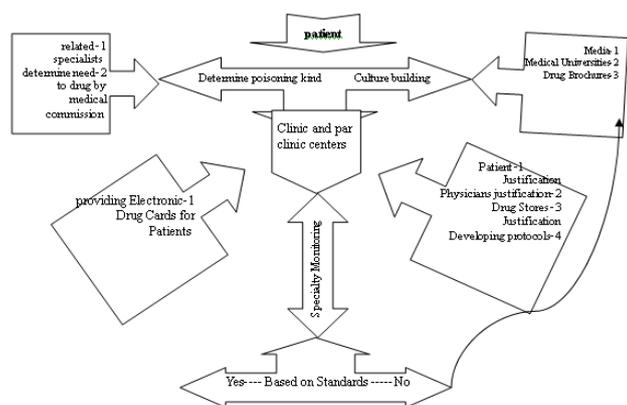
Two important components that are needed for the drug consumption include: the effectiveness of health care decision making and rational understanding.

All studies imply to the importance of awareness and knowledge in consumption drug because drug in logical consumption is drug otherwise is poison.

Nicola (2009) in a research entitled non-hospital health care in hepatitis B and C expressed that public information on distribution of disease, how regular consumption of drugs, pregnancy status during infected to virus can protect others to risk of virus infection without hospital care (13).

Hashemian (2008) in his study entitled providing a model for analyzing the relationship between drug subsidies and health insurance with expanding equity in community has noted that general policies in the fifth development plan, has been planed based on eight centres: originality and efficiency of Islamic culture, justice and human dignity, technological development in the shadow of religious knowledge, equity based economic growth, strengthening the overall security, expand international relations, reform the administrative and managerial structure and Promote judicial structure which health is in the second center because for achieving the equity, improving health status is necessary (14).

This article provides a model for improving the government economic situation and reform patients' consumption pattern which is hoped that application of this model could improve the defective drug cycle.



**Figure 1: Model of reforming drug consumption pattern in Chemical Ventures**

This model present simple and comprehensive process with regard to developed countries methods and adaptation of local culture, which considering this model will be effective in recovery of drug cycle.

In the model, actual injury of patients will be recognized by specialized commissions. In line with this, culture building about correct pattern of drug consumption is going to be done by media like TV and Radio, holding conferences, newsletters, magazines, medical staff, and on the other hand by their believe on the impact of this pattern. Finally, patient by their Electronic Drug Cards can use of clinics or paraclinics care.

**Conclusion**

Drug consumption in the world is based on certain principles and rules. Legislation in this regard can help to control of correct pattern of drug consumption and prevent of currency exit for providing rare drugs. The results show that awareness and knowledge regarding the correct use of drug is weak and in line with increasing awareness, developing drug e-cards for chemical Ventures can improve the consumption situation in this group, so it is necessary that planners provide the intelligent electronic payment system and developing ID for medical file of injuries as soon as possible.

**Thank**

Hereby appreciate all dear veterans that helped us and answered to our questions during the study with sincerity and patience. Also, thank colleagues that helped us during the study and facilitate research process.

**References:**

1. Salehi, N. Drugs Condition in Iran, retrieved from [www.niksalehi.com/news/archives/034987.php](http://www.niksalehi.com/news/archives/034987.php)

2. Hossein Abadi, M. Looking to the drug over consumption in Iran, Siahat-e-Gharb monthly journal, 2001, No.50, retrieved from [www.ir.monediplo.com](http://www.ir.monediplo.com)

3. Maclosek, MV., Coffield, AB., Edwards, NM., Fbttneresch, TJ., Goodman, MJ., Solberg, LI. Priorities among effective clinical Preventive services: Results of a systematic review and analysis. *AMJprev Med.*2006; 31:52-61.[PM ID:1677453].

4. Tofighi, H. Autopsy of poisoners in prison, scientific journal of legal medicine, 6(21), 2000, pp 10-14.

5. Claudio, N. Antidepressant during pregnancy: Treating the condition while Acknowledging the risks, published in journal of women’s health, April 26,2007.

6. Marlo, V., Marco, F., Salvador, C., et al. outcomes of patients hospitalized with community-Acquired, Health care-Associated, and hospital-Acquired pneumonia, *Annal of internal medicine*, 2009, 150:19-26

7. Tablan OC., Anderson LJ., Besser R., Bridges C., Hajjeh R., for the health care infection control practices Advisory committee. CDC Guidelines for preventing health-care-associated pneumonia 2003: recommendations of CDC and the health care infection control practices Advisory committee. *MMWR Recommend Rep*, 2004; 53:1-36. [PMID: 15048056].

8. Afzali, S., Kashani, M., Abbasi KH., Kolsoum, F. Defining the model of chemical and drugs poisoning deaths in Hamedan during 2005-2006, *Scientific journal of Qom university of medical science*, 2(3), 2008, pp 27-31.

9. Verton, K. comforting drugs, *Siahat-e-Gharb monthly journal*, 2006, No.32, retrieved from [WWW.BENZO.org.uk](http://WWW.BENZO.org.uk)

10. Afzali, S. Atropine and signs of Moskarini with Organophosphorage, *Scientific journal of Hamedan university of medical science*, 3(40), 2002.

11. Garber, AM. A menu without prices [additional]. *Ann intern Med.*2008; 148:964-6.[PMID:18483127].

12. Wiknsly, GR .Cost-effectiveness information: yes, it s important, but keep it separate, *Ann intern Med.*2008; 148:967-8[PMID: 18483126].

13. Nicola, D., Joseph F., Anne C., et al, no hospital health care-Associated Hepatitis B and C virus transmission: united stated, 1998-2008. *Annal of internal Medicine*, 2009, 150, 33-39.

14. Hashemian Bojnoord, N., Banihashem Rad, S.H., designing a model for analyzing the relations between drugs subsidies and health insurance regarding with developing equity in community, *scientific Journal of health information management(special issue)*, No.2, 2008, p.68.

**Table 1: descriptive frequency of Chemical Ventures in two intervention and comparison groups based on sexes, age, and education**

	Intervention Group		Comparison Group	
	man	woman	man	woman
Frequency	18	22	18	22
age				
20-30 years	1	2	2	2
31-40 years	3	2	4	3
41-60 years	6	10	7	7
More than 60 years	8	8	5	10
education				
Illiterate	7	5	6	8
Elementary	6	10	5	6
Secondary	2	3	3	3
Diplomas and higher	3	4	4	5

**Table 2: Comparison of the effect of the intervention rate in Chemical Ventures in two intervention and comparison groups in the first half of 2009**

	Intervention Group		Comparison Group	
	before	after	before	after
Maintenance drugs	35	91	45	40
Drug consumption	41	93	35	39
Drug sensitivity	2	100	5	2
Drug Injection	7	87	10	17
side effects	1	73	3	6
Nutrition and medicine	5	89	3	4
Vitamin consumption	14	52	15	11
Pregnancy and drugs	19	87	7	5
Arbitrary use	85	90	79	91
Emergency medicine	91	89	47	59