



**USAID**  
FROM THE AMERICAN PEOPLE

# Domestic Perception of Armenian Pharmaceutical Products: Market Research Report

SEPTEMBER 2008

This publication was produced for review by the United States Agency for International Development. It was prepared by AM Partners as part of the Competitive Armenian Private Sector Project (CAPS).

# Domestic Perception of Armenian Pharmaceutical Products: Market Research Report

**DISCLAIMER:** The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

## Contents

<b>EXECUTIVE SUMMARY</b> .....	<b>4</b>
Awareness.....	4
Perception.....	5
Behavior.....	5
<b>INTRODUCTION</b> .....	<b>7</b>
<b>1. METHODOLOGY</b> .....	<b>9</b>
Definition of Terms.....	9
Research Tool—Face-to-face Interviews.....	10
Research Geography.....	10
Sampling.....	10
<b>2. RESPONDENTS' PROFILES</b> .....	<b>12</b>
Consumers.....	12
Clinics and their Representatives.....	14
Profile of Clinic Pharmaceutical Procurers.....	16
Profile of Physicians.....	16
Pharmacies.....	17
Profile of Pharmacy Managers.....	17
Profile of Pharmacists.....	18
<b>3. LEVEL OF RESPONDENTS' AWARENESS</b> .....	<b>19</b>
Armenian Pharmaceutical Products.....	19
Products Familiar to Respondents.....	19
Sources of Information on Pharmaceutical Production.....	23
Armenian Pharmaceutical Producers.....	24
Armenian Producers Known to Respondents.....	24
Sources of Information.....	31
<b>4. RESPONDENTS' PERCEPTION IN USING PHARMACEUTICAL PRODUCTS</b> .....	<b>36</b>
Respondents Experience in Using Pharmaceutical Products.....	36
Consumers' Experience in Using Armenian Pharmaceuticals.....	36
Clinics' Purchasing Practices.....	38
Pharmacies' Purchasing Practices.....	38
Elements of Respondents' Perception.....	39
Importance of the Origin of Pharmaceuticals.....	39
Characteristics of Pharmaceuticals.....	42
<b>5. PECULIARITIES OF RESPONDENTS' BEHAVIOR</b> .....	<b>48</b>
Consumers.....	48
Clinic Representatives.....	50
Pharmacy Representatives.....	51
<b>6. CONCLUSIONS &amp; RECOMMENDATIONS</b> .....	<b>53</b>
Conclusions.....	53
Consumers.....	53
Clinics.....	54
Pharmacies.....	55

General	55
Recommendations.....	56
<b>APPENDIX.....</b>	<b>58</b>
Breakdown of Consumers by Residence.....	58

## List of Figures

Figure 1-1 <i>Geographic Distribution of Interviews with Consumers</i> .....	11
Figure 2-1 <i>Consumers by Gender</i> .....	12
Figure 2-2 <i>Consumers by Age</i> .....	12
Figure 2-3 <i>Consumers by Area of Residence</i> .....	12
Figure 2-4 <i>Consumers by Level of Education</i> .....	12
Figure 2-5 <i>Methods of Purchasing Pharmaceuticals by Clinics (average)</i> .....	14
Figure 2-6 <i>Sources of Pharmaceutical Purchases by Clinics (average)</i> .....	15
Figure 2-7 <i>Procurers of Pharmaceuticals at Clinics, by Gender</i> .....	16
Figure 2-8 <i>Procurers of Pharmaceuticals at Clinics, by Age</i> .....	16
Figure 2-9 <i>Procurers of Pharmaceuticals at Clinics, by Tenure of Employment</i> .....	16
Figure 2-10 <i>Procurers of Pharmaceuticals at Clinics, by Level of Education</i> .....	16
Figure 2-11 <i>Physicians, by Gender</i> .....	16
Figure 2-12 <i>Physicians, by Age</i> .....	16
Figure 2-13 <i>Physicians, by Tenure of Employment</i> .....	16
Figure 2-14 <i>Physicians, by Level of Education</i> .....	16
Figure 2-15 <i>Pharmacy Managers, by Gender</i> .....	17
Figure 2-16 <i>Pharmacy Managers, by Age</i> .....	17
Figure 2-17 <i>Pharmacy Managers, by Tenure of Employment</i> .....	17
Figure 2-18 <i>Pharmacists, by Gender</i> .....	18
Figure 2-19 <i>Pharmacists, by Age</i> .....	18
Figure 2-20 <i>Pharmacists, by Tenure of Employment</i> .....	18
Figure 4-1 <i>Frequency of Consumers' Visits to Pharmacies, January–April 2008</i> .....	36
Figure 4-2 <i>Quantity of Pharmaceuticals Bought per Purchase</i> .....	37
Figure 4-3 <i>Armenian Pharmaceuticals Most Commonly Purchased by Pharmacy Managers</i> .....	39
Figure 4-4 <i>Armenian Pharmaceuticals Most Commonly Sold by Pharmacists</i> .....	39
Figure 4-5 <i>Importance of Pharmaceuticals' Origin among Consumers</i> .....	40
Figure 4-6 <i>Importance of Pharmaceuticals' Origin among Representatives of Clinics</i> .....	41
Figure 4-7 <i>Importance of Pharmaceuticals' Origin among Pharmacy Representatives</i> .....	42
Figure 4-8 <i>Comparative Assessment of Some Characteristics of Pharmaceuticals by Consumers</i> ...	43
Figure 4-9 <i>Comparative Assessment of Some Characteristics of Pharmaceuticals by Procurers of Pharmaceuticals at Clinics</i> .....	44
Figure 4-10 <i>Comparative Assessment of Some Characteristics of Pharmaceuticals by Physicians</i> ..	44
Figure 4-11 <i>Comparative Assessment of Some Characteristics of Pharmaceuticals by Pharmacy Managers</i> .....	44
Figure 4-12 <i>Comparative Assessment of Some Characteristics of Pharmaceuticals by Pharmacists</i> 44	44
Figure 4-13 <i>Assessment of Additional Characteristics of Armenian Pharmaceuticals by Procurers of Pharmaceuticals at Clinics</i> .....	45
Figure 4-14 <i>Assessment of Additional Characteristics of Armenian Pharmaceuticals by Pharmacy Managers</i> .....	47
Figure 5-1 <i>Consumers' Buying Behavior by the Groups they Consult</i> .....	48
Figure 5-2 <i>Factors Influencing Consumers' Decision to Buy Pharmaceuticals and their Importance</i> .49	49
Figure 5-3 <i>Decision Makers at Pharmacies when Procuring Pharmaceuticals</i> .....	51

## List of Tables

Table 1-1 <i>Objects of Research</i> .....	9
Table 1-2 <i>Sample Size and Geographic Distribution</i> .....	11
Table 2-1 <i>Consumers by Age: Yerevan vs. Marzes</i> .....	12
Table 2-2 <i>Consumers by Educational Level: Yerevan vs. Marzes</i> .....	13
Table 2-3 <i>Consumers by Number of Family Members Residing under the Same Roof</i> .....	13
Table 2-4 <i>Consumers by Number of Children in Family</i> .....	14

Table 2-5	<i>Consumers by Number of Senior Citizen Members</i>	14
Table 2-6	<i>Clinics by Type of Ownership</i>	14
Table 2-7	<i>Clinics by Methods (Private or Public) of Pharmaceuticals Purchase</i>	15
Table 2-8	<i>Clinics by Source of Pharmaceuticals Purchased</i>	15
Table 2-9	<i>Pharmacies by Source of Pharmaceuticals Purchased</i>	17
Table 3-1	<i>Pharmaceuticals of Armenian Production Named Most Often by Consumers</i>	20
Table 3-2	<i>Pharmaceuticals and/or Armenian Product Groups Named Most Often by Physicians</i>	21
Table 3-3	<i>Producers of Armenian Pharmaceuticals known to Physicians by the Products they are Familiar with</i>	21
Table 3-4	<i>Pharmaceuticals and/or Armenian Product Groups Named Most Often by Pharmacists</i>	22
Table 3-5	<i>Armenian Pharmaceutical Producers Known to Pharmacists and Share (%) of Pharmaceuticals Made by Producer</i>	23
Table 3-6	<i>Main Sources of Information on Armenian Pharmaceutical Products, by Respondent Group</i>	23
Table 3-7	<i>Armenian Pharmaceutical Producers and their Products Known to Consumers</i>	24
Table 3-8	<i>Armenian Pharmaceutical Producers and their Products Known by Procurers at Clinics</i>	26
Table 3-9	<i>Armenian Pharmaceutical Producers and their Products Known by Physicians</i>	27
Table 3-10	<i>Armenian Pharmaceutical Producers and their Products Known by Pharmacy Managers</i>	29
Table 3-11	<i>Armenian Pharmaceutical Producers and their Products Known by Pharmacists</i>	30
Table 3-12	<i>Companies Mentioned by At Least One Pharmacist and Real Status of Company</i>	31
Table 3-13	<i>Main Sources of Information on Armenian Pharmaceuticals among Consumers<sup>a</sup></i>	32
Table 3-14	<i>Main Sources of Information on Armenian Pharmaceuticals among Procurers at Clinics and Share (%) of Respondents Citing that Source<sup>a</sup></i>	33
Table 3-15	<i>Main Sources of Information on Armenian Pharmaceuticals among Physicians and Share (%) of Respondents Citing that Source<sup>a</sup></i>	34
Table 3-16	<i>Main Sources of Information on Armenian Pharmaceuticals among Pharmacy Managers' and Share (%) of Respondents Citing that Source<sup>a</sup></i>	35
Table 3-17	<i>Main Sources of Information on Armenian Pharmaceuticals among Pharmacists and Share (%) of Respondents Citing that Source<sup>a</sup></i>	35
Table 4-1	<i>Share (%) of Respondents Able to Make Comparative Evaluation of Pharmaceuticals</i>	43

## EXECUTIVE SUMMARY

An assessment of the domestic perception of Armenian pharmaceuticals was conducted April–July 2008. The research was initiated by the USAID-funded CAPS Project and was conducted by AM Partners Consulting Company. The assessment resulted in outputs that uncover pharmaceutical market participants' awareness, perception, and purchasing behavior. Answers to all questions are important for implementing promotional projects for Armenian pharmaceuticals in the domestic market.

The main evaluators of Armenian pharmaceuticals comprise the public and medical community. Their perception of consuming pharmaceuticals of Armenian origin has a direct influence on local producers' operations. Thus, the current assessment aims to answer the following questions:

- ▶ To what extent is the public and medical community aware of Armenian pharmaceuticals?
- ▶ What is the public's and medical community's perception of Armenian pharmaceuticals?
- ▶ Which are the main factors affecting behavior in purchasing pharmaceuticals of Armenian origin?

Consumers, clinic representatives, and pharmacy representatives were surveyed. Clinic representatives were broken down into pharmaceutical procurers and physicians. Representatives of pharmacies were broken down into managers or owners and pharmacists. Thus, the assessment of the Armenian pharmaceutical market was conducted among five groups of respondents.

### **Awareness**

To determine awareness of Armenian pharmaceuticals, respondents were separated into two main groups—end users (hereafter consumers) and the professional community (representatives of clinics and pharmacies). Awareness levels are incomparably different for these two groups. Consumers' awareness of Armenian pharmaceuticals is low because of the nature of the products: pharmaceuticals are not an everyday consumption commodity. Consumers simply do not recall details about them. However, they are somewhat informed about the main types of pharmaceuticals they have at home, which are mainly for first-aid. Even the awareness rating of the best known Armenian pharmaceutical (Valerian) does not exceed 5 percent.

Consumers get information about pharmaceuticals from physicians and pharmacies, but not frequently enough to allow them to accumulate significant information or aid recall. The picture is worse concerning pharmaceutical producers. Almost no consumer could recall even one local pharmaceutical producer without prompting. After hints, a few respondents recall some names; the most popular company, PharmaTech, has a consumer awareness rate of 7 percent.

The opposite is true for representatives of clinics and pharmacies. This community has daily contact with pharmaceutical producers and is well aware of all producers and their nomenclature. Those groups, in turn, have special features. In particular, physicians are completely aware of the pharmaceuticals that they use in their practice and narrow specialty. They may not have much information about other pharmaceuticals. For example, surgeons may have very limited information about pharmaceuticals used by therapists. The most well-known pharmaceuticals among physicians are infusion solutions (85–86 percent awareness rating).

Representatives of pharmacies are more informed about Armenian pharmaceuticals and producers than consumers. This is expected given the nature of their business. Representatives of pharmacies try to secure as wide a nomenclature of pharmaceuticals as possible and have close relationships with pharmaceutical producers. The most well-known pharmaceutical among pharmacy representatives is Amlodypin, with a rating of 54 percent; and the most well-known producer is Liqvor, with a rating of 98–100 percent.

A deeper analysis of respondents' awareness identified the five leading local pharmaceutical producers: Liqvor, PharmaTech, Arpimed, Esculap, and Yerevan CPF. These companies produce 75–80 percent of the total volume of domestic pharmaceuticals sold within a market of 15-16 local producers<sup>1</sup>. These leading companies have enhanced their activities and increased their sales volumes not only in the domestic market, but also abroad.

### ***Perception***

Respondents had ambiguous attitudes toward Armenian pharmaceuticals. Generally they prefer imported pharmaceuticals, but sometimes they prefer locally produced medicine. However, the assessment of nomenclature shows that the assortment of preferred imported pharmaceuticals is much wider. One of the main reasons for this is the small number of locally produced pharmaceuticals; Armenian producers produce only 500 of the 3,500 pharmaceuticals registered in Armenia, but there are other reasons, too. Another advantage of imported pharmaceuticals is their image. Foreign producers, such as Krka, Hexal, Novartis, Glaxo and Gedeon Richter, are well known. These producers have achieved high standards of business management and organization, and have applied Good Manufacturing Practice (GMP) standards. They produce high-quality products and penetrate many national markets throughout the world. The image of these companies is especially high among the professional community, leading to a bias in prescribing.

According to the assessment, no representative of the professional community unambiguously prefers pharmaceuticals of Armenian origin, but 31 percent of clinic representatives prefer to use only imported pharmaceuticals.

A general observation, based on respondents' answers, is that Armenian pharmaceuticals are considered to be less expensive and more widely available than imported products. All respondents agree on this issue. At the same time, they agree that imported pharmaceuticals have better quality (in terms of effect) and better packaging than Armenian products. Considering that respondents generally prefer imported products over Armenian pharmaceuticals, the most important characteristics of pharmaceuticals are perceived to be quality and presentation (packaging). If quality is high, the high price becomes an issue of secondary importance. This is natural, because pharmaceuticals are special products; their use is directly related to people's health, and people are unlikely to save money at the cost of their health.

This does not mean that the future of the Armenian pharmaceutical industry is not bright. Moreover, the industry has made tangible achievements already. Armenian infusion solutions, complexes of vitamins, and eye drops have strong market positions. This is proof that domestic pharmaceuticals have the potential to capture market share from imported products.

### ***Behavior***

For consumers, pharmaceuticals are not everyday consumption items and represent a special group of products related to health about which consumers have little knowledge.

---

<sup>1</sup> Information is provided by local pharmaceutical producers

However, since sooner or later everyone buys pharmaceuticals; a second individual usually gives advice on what should be purchased. The survey results show that these advisers are spouses, friends, physicians, or pharmacists. Consumers can ask for advice from more than one of these individuals. But regardless of whose and which kind of advice consumers use to make their decisions about purchasing pharmaceuticals, consumers do listen to their physicians the most.

The survey results show that 86 percent of consumers rely exclusively on physicians' opinions or prescriptions when purchasing pharmaceuticals. Consumers mention that physicians' advice is more important than such factors as the price, packaging, pharmacy remoteness, and service quality. Consumers do not usually substitute a prescribed pharmaceutical with an analogue. This wide reliance on physicians' opinions is not only because of low level of awareness among consumers, but also because they perceive physicians as the only knowledgeable specialists who can solve their health problems. This makes consumers directly and psychologically dependent on physicians. Physicians are aware of this phenomenon and benefit from it.

Forty-four percent of consumers very frequently face the situation when physicians clearly direct them in purchasing pharmaceuticals. Physicians make them "purchase pharmaceuticals of this or that origin, produced by this or that company." Moreover, sometimes physicians mention "pharmaceuticals should be purchased from this or that pharmacy." Such behavior from physicians can be explained by "cooperation" between physicians and producers and importers; physicians are motivated by suppliers to promote their pharmaceuticals. Physicians are not happy to discuss this topic; they are quick to explain their official position: they prescribe the most effective pharmaceutical.

Pharmacy managers are responsible for making purchases of pharmaceuticals at their entities. They make decisions about purchasing pharmaceuticals on their own or after consulting with pharmacists. Meantime, only pharmacists (without managers) are engaged in the further selling of pharmaceuticals. The latter group has some conflict of interest with physicians. Consumers with physicians' prescriptions look for specific pharmaceuticals and reject advice and direction from pharmacists. Pharmacists claim that they do not even have the opportunity to suggest analogue pharmaceuticals.

But if a consumer visits the pharmacy without seeing a physician, the pharmacist has "full control" and can direct the purchase. In these cases, consumers usually ask for the pharmacist's advice and get it. Suppliers of pharmaceuticals are well aware of this situation, too. They target pharmacists as well as physicians and apply various motivational measures. Small pharmaceutical producers are especially active in this field; they target pharmacies intensively.

Pharmacists are more open to discuss "motivational" issues than physicians; 21 percent of pharmacists clearly accepted that they are motivated to cooperate with pharmaceutical suppliers. These relations exist; producers must take into consideration all current realities of the market.

This chapter merely summarizes the topics addressed in this report; the more detailed assessment provides a deeper understanding of the Armenian pharmaceuticals market. The information is presented to make reading easy; outputs are presented in tables, charts, and pictures.

## INTRODUCTION

The assessment of the ‘Domestic Perception of Armenian Pharmaceutical Products: Market Research’ was carried out from April to July 2008 by AM Partners Consulting Company for the USAID-funded CAPS project. CAPS focuses on the applied cluster approach. Clusters include various groups performing different functions in an economic sector, including producers of goods and services, regulatory authorities, educational institutions preparing specialists for the sector, and business development service providers. The project aims to strengthen cluster participants and their relationships to achieve substantial development and progress in several economic sectors, including pharmaceutical production.<sup>2</sup>

The pharmaceutical production subcluster includes

1. The regulatory authority, the Ministry of Health, which has a wide range of rights and responsibilities, drafting legislation, supervision and regulation, and developing public policy. Other institutions that participate in the regulation of the healthcare sector include the State Healthcare Agency and the Pharmaceutical and Medical Technologies’ Expert Center CJSC
2. Specialists in the healthcare field— more than ten state and private educational institutions, including universities, institutes, colleges and specialized colleges
3. Twenty newspapers and magazines about healthcare, published in Armenia.
4. More than 20 healthcare NGOs, including unions and associations of medics and physicians, producers and importers, and organizations implementing healthcare projects.
5. In pharmaceutical production there are 170 licensed importers of pharmaceuticals<sup>3</sup>, and about 10 charitable organizations.
6. Seventeen companies licensed for producing pharmaceuticals.<sup>4</sup>
7. State and private clinics providing healthcare services and medical help; among them, 140 hospitals, 460 polyclinics, 145 dental clinics, and six private medical offices.<sup>5</sup>
8. More than 20 companies engaged in wholesale and distribution of pharmaceuticals and about 800 retail pharmacies.

This research aims to reveal respondents’ awareness and perception of Armenian pharmaceutical production and the peculiarities of consumer behavior. Thus, the technical task is narrow and specific: the targets of this research were groups (7) and (8) from the above list.

The Armenian pharmaceuticals market is dominated by imported products. In 2006, the market size was US\$89 million,<sup>6</sup> of which imported products accounted for 89.9 percent. The pharmaceuticals market has developed at a fast pace; sales are increasing at 16–19 percent per annum on average. Both importers and local producers benefit from growth in the market through increased sales. However, not only the market size grows but also requirements of standards and quality. Discussions about quality, appearance, and price of pharmaceuticals become more and more frequent.

A substantial part of pharmaceutical imports meets these requirements, because they are from world-leading producers such as Krka (Slovenia), Hexal (Germany), Novartis

---

<sup>2</sup> The other two sectors are IT and tourism.

<sup>3</sup> As of October 1, 2007. Source: State Commission for the Protection of Economic Competition.

<sup>4</sup> As of October 1, 2007. Source: State Commission for the Protection of Economic Competition.

<sup>5</sup> As of October 1, 2007. Source: the Ministry of Healthcare of RA. Information-analytical state center of the Ministry of Healthcare of RA.

<sup>6</sup> Source: interstate statistical committee of CIS countries.

(Switzerland), and Gedeon Richter (Hungary). These companies are already very well known among consumers both in their countries and Armenia.

In Armenia, pharmaceutical production is a relatively new and developing field and has much to do in terms of increasing competitiveness. However, there are mixed feelings concerning domestic production; respondents giving both subjective and objective opinions. Thus, this research asks questions such as: What is the respondents' perception of Armenian pharmaceutical production? What is the level of respondents' awareness of Armenian pharmaceuticals? What experience do respondents have with Armenian pharmaceuticals and what is the attitude formed as a result of such experience? Answers to these questions are needed by

1. The CAPS project, which will be able to target its assistance more effectively to solve urgent problems in the Armenian pharmaceuticals' production subsector, and
2. Local producers, which can use these answers to target their promotional activities more effectively.

The Armenian pharmaceuticals' production subsector is represented by 17 producers, five of which are obvious leaders given the scale of their operations and their sales volumes: Liqvor, PharmaTech, Arpimed, Esculap, and Yerevan Chemical-Pharmaceutical Firm (Yerevan CPF). There are also dynamically developing companies— including Vitamax-E, Arsemi, and Noki—that intend to take leading positions. The report is about these and also smaller producers, which can conditionally be called beneficiaries of the research.

# 1. METHODOLOGY

## *Definition of Terms*

Certain terms used in this report need to be defined. This report covers research into pharmaceutical products' end consumers. Although other terms besides "pharmaceutical product" are often used—"medicine," "medicament," "drug preparation," or "drug"—in this report we use the term "pharmaceuticals" or "pharmaceutical product" for all types, including pills, tablets, drops, liquids for injection, in solid, liquid, or gas form. However, other health products such as sanitary or hygiene goods are excluded from the research.

Research respondents were all buyers of pharmaceutical products, regardless of the ultimate use of the products. Table 1-1 describes respondents by target group. Collectively, the five targets are termed "Respondents".

**Table 1-1**  
*Objects of Research*

Objects	Description
1. Consumers - Armenian residents (citizens)	Individuals who buy (or already bought), independently of who directed the purchase, pharmaceuticals for their own use or for use by others are referred to as "consumers" in this report.
▶ Clinics	Clinics include hospitals, polyclinics, and dental clinics. Although final consumers of these pharmaceuticals are the clients (patients) of these entities, from the perspective of the producer or seller of pharmaceutical products, the clinics are considered as consumers. Hence, clinics are among the objects of this research. To present clinics' "opinions" on the topic of this research, the following expert groups have been selected:
2. Procurers at clinics	In clinics are individuals responsible for managing procurements of pharmaceutical products. In small institutions these are the managers/directors, while in bigger hospitals or clinics, the purchasing manager or manager of the pharmacy is responsible.
3. Physicians	In clinics, physicians also deal directly with pharmaceutical product turnover. Only physicians who prescribe pharmaceuticals and sign prescriptions have been included in this survey sample.
▶ Pharmacies	Pharmacies are the intermediary between suppliers of pharmaceuticals and final consumers and are considered such from the perspective of pharmaceutical producers or sellers. Respondents representing pharmacies are divided in two groups, pharmacy managers and pharmacists.
4. Pharmacy managers	Although pharmacy managers do not always participate directly in purchasing pharmaceuticals and may be only the nominal manager while another employee coordinates and supervises purchasing, most pharmacy managers are direct participants of the pharmaceuticals' turnover process.
5. Pharmacists	In the pharmaceuticals' turnover process, pharmacists have some similarities with physicians. Besides being a simple seller of pharmaceuticals they sometimes also consult with clients and direct them in purchases.

### **Research Tool—Face-to-face Interviews**

Face-to-face interviewing was used to conduct the survey and collect data. Interviews were based on questionnaires designed by the research implementer and approved by CAPS experts. For each group of respondents, a separate questionnaire was used. The questionnaires included both general (common) questions and questions specific to each group. Throughout the research process, especially during questionnaire development, the consultant cooperated with CAPS specialists and the management and members of the Union of Medicine Producers and Importers.<sup>7</sup>

Face-to-face interviewing is the most resource-intensive form of data collection. Although a significant part of the respondents (particularly physicians and pharmacists) asked to fill the questionnaires in themselves and send them back to the researchers, the research implementers remained loyal to the methodology throughout the period of data collection, and all questionnaires were filled in during live interviews. Face-to-face interviews allowed the research implementer to collect additional information than was indicated in the questionnaires but that had real value. A significant part of that information is presented in this report.

For consumers, the research implementer interviewed not random people, but actual pharmaceutical purchasers. The interviews were conducted inside pharmacies or nearby. Respondents were chosen from customers going out of pharmacies every 30-40 minutes. This allowed speaking with users of pharmaceutical products while ensuring randomness in sampling.

### **Research Geography**

Data required for this research was collected in Yerevan and three marzes of Armenia—Lori, Kotayk, and Ararat. Yerevan is the largest market of pharmaceuticals in Armenia, and the other three marzes were chosen for the following reasons:

- ▶ The proportions of rural and urban populations are different.
- ▶ The marzes have different distances from Yerevan.
- ▶ Opportunities for information accessibility are different.
- ▶ Poverty levels are different.

The assessment covered areas where about 60 percent of the Armenian population resides. Such a geographical coverage allowed the inclusion of consumers with different social status, rural and urban populations, workers and service providers, scientists and students, and young and old in the survey sample.

### **Sampling**

The sampling of respondents was based on the principle of forming a substantially representative sample from target groups (sample frames). For calculation of the sample size, absolute figures of targeted groups were adopted as bases; for instance, for consumers, the general population in the area; for clinics and pharmacies, the number of institutions or pharmacies in the area.<sup>8</sup> From the general population of each target group a sample was formed, with a size that would enable

---

<sup>7</sup> Special gratitude to CAPS Project specialists and experts: Frans Stobbelaar, Alan Saffery, Armine Yeghiazaryan, Sevak Hovhannisyan, Head of The Union of Medicine Producers and Importers Armen Aghayants, and to the management of Liqvor, PharmaTech, Yerevan CPF, Esculap, Arpimed, Vitamax-E, Medical-Horizon, Bizon-1

<sup>8</sup> See Technical Assignment for more details.

- ▶ In the case of consumers, 95 percent confidence that the survey results correctly represent the general population of consumers; and the possible error in absolute value does not exceed 5 percent,
- ▶ In the case of clinics and pharmacies 95 percent confidence that the survey results are true for all clinics and pharmacies; and the possible error in absolute value does not exceed 10 percent.

Following this logic the sample shown in Table 1-2 was formed.

**Table 1-2**  
*Sample Size and Geographic Distribution*

Target Group	Total	Yerevan	Lori	Kotayk	Ararat
Consumers	384	219	57	54	54
Procurers at clinics	74	34	12	13	15
Physicians	74	34	12	13	15
Pharmacy managers	85	73	4	5	3
Pharmacists	85	73	4	5	3
TOTAL	702	433	89	90	90

**Figure 1-1**  
*Geographic Distribution of Interviews with Consumers*



Interviews with all groups of respondents, in the marzes, were conducted in several residential areas. Consumers were interviewed in Yerevan and 11 towns in three marzes. The distribution is presented in Figure 1-1. Interviews with the representatives of clinics and pharmacies were conducted in the same towns. To ensure the required number of interviews with clinics, interviews were organized with some polyclinics in several villages of Ararat marz.

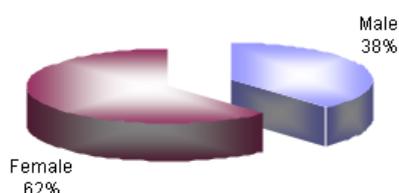
## 2. RESPONDENTS' PROFILES

### Consumers

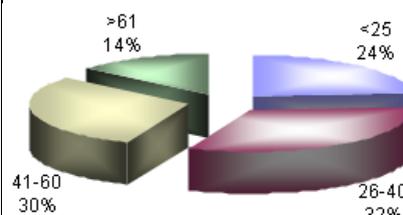
According to the survey results, the average pharmaceutical consumer is a married woman with a university or secondary education who lives in an urban area, usually separately from her or her husband's parents; has one or two children; and is unemployed, mainly for social reasons (housewife, caring for relatives, etc).

Figures 2-1 through 2-4 break respondents down by gender, age, area of residence (urban or rural), and level of education, respectively.

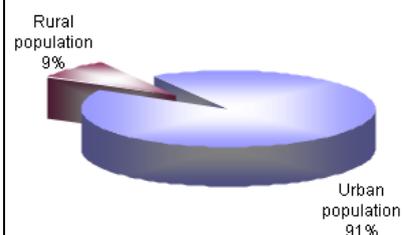
**Figure 2-1**  
*Consumers by Gender*



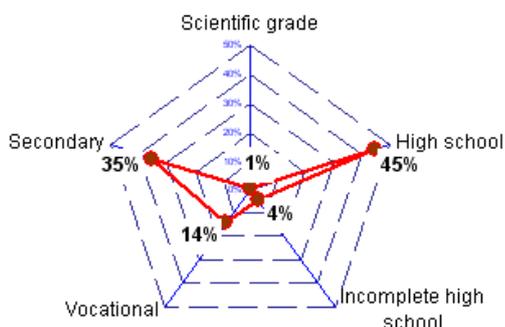
**Figure 2-2**  
*Consumers by Age*



**Figure 2-3**  
*Consumers by Area of Residence*



**Figure 2-4**  
*Consumers by Level of Education*



Although interviews were conducted only in towns, some respondents declared themselves to be from rural areas: people who came from villages to towns to buy pharmaceuticals. In 12 towns, 41 residents of urban and rural communities were interviewed. More detailed information on residence of consumers is provided in the Appendix.

More than half, 53.4 percent, of consumers (205 respondents) declared themselves to be from Yerevan, and 46.6 percent (179 respondents) from the marzes. The difference in ages of respondents from Yerevan and the marzes is tiny.

Notable differences were registered only in the educational level of consumers from Yerevan and the marzes.

**Table 2-1**  
*Consumers by Age: Yerevan vs. Marzes*

Age Group (Years)	Yerevan (%)	Marzes (%)
< 25	29	18
26-40	30	36
41-60	26	34
> 61	16	12
Total	100	100

**Table 2-2***Consumers by Educational Level: Yerevan vs. Marzes*

Educational Level	Yerevan (%)	Marzes (%)
Scientific grade	1	0
High school	57	31
Incomplete high school	4	5
Vocational	11	18
Secondary	27	45
Total	100	100

The largest group of surveyed consumers—22 percent—has no specific profession. The next-largest professional groups are as follows:

- ▶ Consumers with technical specialization (engineers, mathematicians, physicists, chemists, energy experts, architects, construction engineers, mechanics), 17 percent
- ▶ Lawyers, economists, accountants, financiers, traders, sociologists, 16 percent
- ▶ Scientists, teachers, lecturers, professors, 13 percent
- ▶ Employees of services sector, 11 percent
- ▶ Physicians and other medical workers, 7 percent
- ▶ Laborers, craftsman, artisans, 7 percent
- ▶ Journalists, philologists, linguists, 5 percent
- ▶ Housewives, 1 percent
- ▶ Police workers, military servants, 1 percent.

Women make up the majority in the following groups of consumers: respondents with no special profession, physicians and medical workers, teachers and lecturers, journalists, philologists, and linguists. Survey results show that only 44 percent of consumers are employed, of which the largest group, or 54 percent, are employed in private companies. The rest are employees of state enterprises (28 percent), civil servants (8 percent), sole proprietors (7 percent), or employees of NGOs (4 percent).

Unemployed consumers (56 percent of total) can be divided into two groups:

- ▶ Consumers with objective reasons, including students (21 percent of unemployed or 11 percent of total) and pensioners (22 percent of unemployed or 12 percent of total);
- ▶ Those who do not work for family and other social reasons or simply cannot find a job (56 percent of unemployed, or 31 percent of total).

**Table 2-3***Consumers by Number of Family Members Residing under the Same Roof*

No. of Family Members	Share of Consumers (%)
1-2	15
3-4	40
5-6	39
7-8	4
9	1
13	0.3 <sup>9</sup>
16	0.3
Total	100

<sup>9</sup> 1 case in 384 families.

In terms of pharmaceutical consumption, information on consumers' family structure is important. According to some expert estimations, families with small children (<10 years) and elderly relatives buy medicine more often. The assessment results indicate that families with three to four or five to six members are predominant. These are young families that have one or two children, living either with or separately from their parents. The breakdown of family size by children (<18 years) and elders (>60 years) is presented in Tables 2-4 and 2-5..

**Table 2-4**

*Consumers by Number of Children in Family*

No. of Children in Family	Share of Consumers (%)
0	43
1	33
2	18
3	4
4	1
7	0.3
8	0.3
Total	100

**Table 2-5**

*Consumers by Number of Senior Citizen Members*

No. of Senior Citizens in Family	Share of Consumers (%)
0	61
1	21
2	18
3	0.3
Total	100

### ***Clinics and their Representatives***

Clinics include hospitals, polyclinics, and dental clinics; both state and private. The breakdown by type of ownership is presented in Table 2-6.

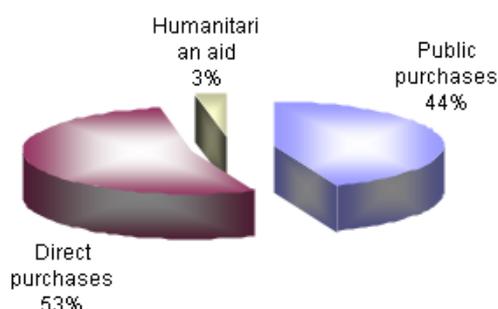
**Table 2-6**

*Clinics by Type of Ownership*

Type of Ownership	Number	Share of Clinics (%)
State	41	55
Private	33	45
Total	74	100

**Figure 2-5**

*Methods of Purchasing Pharmaceuticals by Clinics (average)*



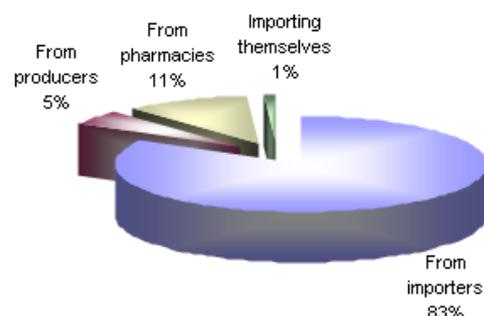
Such distribution is not a coincidence. The healthcare sector is one of the rare sectors in Armenia with government predominance. Among 140 hospitals operating in Armenia, 106 are state owned; of 460 polyclinics, 386 are state owned. The share of private clinics in the sample is larger than expected because of the geography of the assessment: the major part of the survey was conducted in Yerevan, where the number of private clinics is higher than in regions. Therefore, government procurement of pharmaceuticals is very popular, although the volume of direct procurement of pharmaceuticals is the biggest (see Figure 2-5). Table 2-7 breaks the data down further.

**Table 2-7**  
*Clinics by Methods (Private or Public) of Pharmaceuticals Purchase*

Share (%) of Surveyed Clinics	% of Pharmaceuticals Purchased Through...
Government Purchase	
43	76-100
4	51-75
2	26-50
1	1-25
50*	0
Direct Purchase	
51	76-100
2	51-75
2	26-50
7	1-25
38	0.
Received as Humanitarian Aid	
3	26-50
39	1-25
58	0

\* All private clinics are included in this figure (45%)

**Figure 2-6**  
*Sources of Pharmaceutical Purchases by Clinics (average)*



As concerns the sources of pharmaceutical purchases by clinics, the picture is in compliance with the general situation in the market: imported pharmaceuticals are in leading positions (see Figure 2-6).

At question here is not product origin but the agents from whom clinics buy products. For instance, if clinics say that they do not purchase from importers, it does not mean they do not use imported pharmaceuticals. Table 2-8 presents the data on the sources of purchase for clinics.

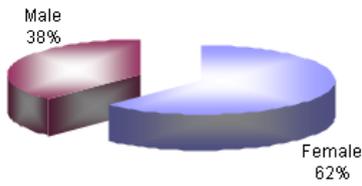
**Table 2-8**  
*Clinics by Source of Pharmaceuticals Purchased*

% of Surveyed Clinics	Share (%) of Pharmaceuticals Purchased from*
Importers	
73	76-100
12	51-75
7	26-50
1	1-25
7	0
Producers	
11	26-50
7	1-25
82	0
Import Directly	
1	51-75
99	0
Pharmacies	
8	76-100
4	26-50
3	1-25
85	0

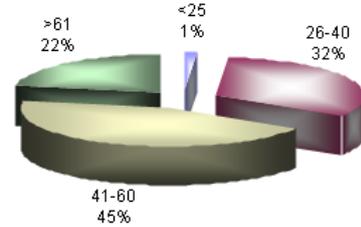
\* Including companies engaged in pharmaceuticals wholesale and distribution in Armenian market

**Profile of Clinic Pharmaceutical Procurers**

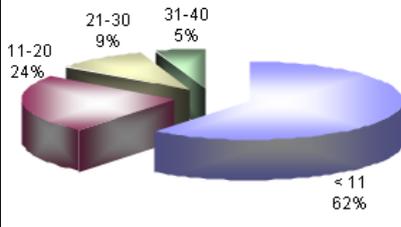
**Figure 2-7**  
*Procurers of Pharmaceuticals at Clinics, by Gender*



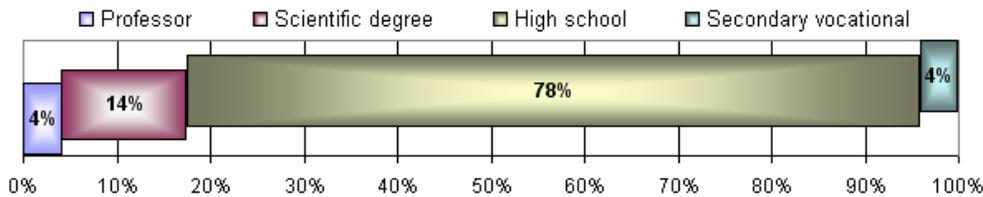
**Figure 2-8**  
*Procurers of Pharmaceuticals at Clinics, by Age*



**Figure 2-9**  
*Procurers of Pharmaceuticals at Clinics, by Tenure of Employment*

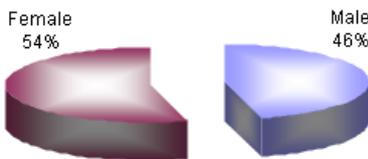


**Figure 2-10**  
*Procurers of Pharmaceuticals at Clinics, by Level of Education*

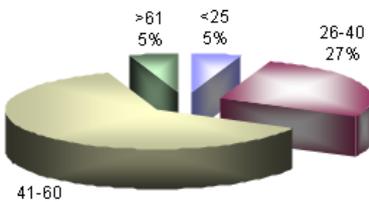


**Profile of Physicians**

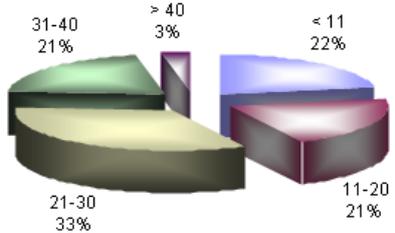
**Figure 2-11**  
*Physicians, by Gender*



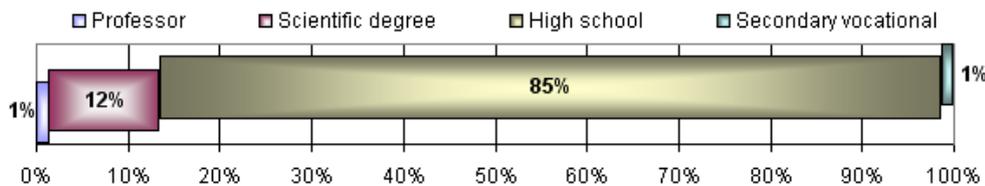
**Figure 2-12**  
*Physicians, by Age*



**Figure 2-13**  
*Physicians, by Tenure of Employment*



**Figure 2-14**  
*Physicians, by Level of Education*



### Pharmacies

The assessment included 85 pharmacies, 9.4 percent of which belong to pharmacy networks<sup>10</sup>. All assessed pharmacies are private commercial entities and operate under market rules and conditions; there is no state sector or system of government purchases here. Table 2-9 breaks down pharmacies by the source of pharmaceuticals purchased.

**Table 2-9**  
*Pharmacies by Source of Pharmaceuticals Purchased*

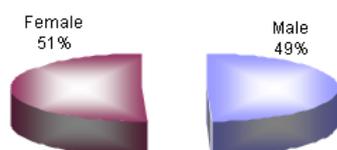
% of Surveyed Pharmacies	Share of Pharmaceuticals Purchased
From Importers*	
89	76-100
5	51-75
4	26-50
2	0
From Producers	
5	26-50
54	1-25
41	0
Import Directly	
1	76-100
2	26-50
8	1-25
89	0

\* Including companies engaged in pharmaceuticals wholesale and distribution in Armenian market.

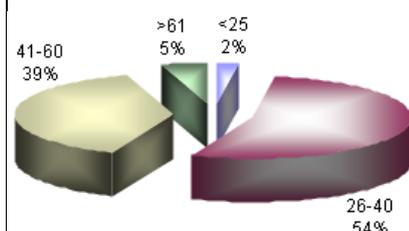
### Profile of Pharmacy Managers

A large majority of pharmacy managers (98 percent) have educational and scientific degrees. Although the pharmacy business is specific in nature, some pharmacy managers' education and experience had nothing to do with pharmaceuticals. For instance, among respondents in the pharmacy manager group was one winemaker, one environmentalist, four engineer-mechanics, one mathematician, and one physicist. In most of these cases, the main tasks of pharmacy management and the procurement of pharmaceuticals are carried out by one of the employees, who might serve as the *de facto*, although nonofficial manager.

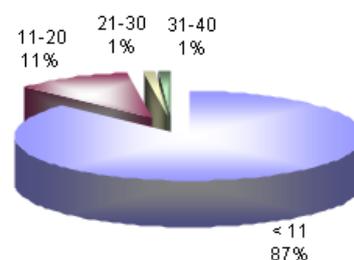
**Figure 2-15**  
*Pharmacy Managers, by Gender*



**Figure 2-16**  
*Pharmacy Managers, by Age*



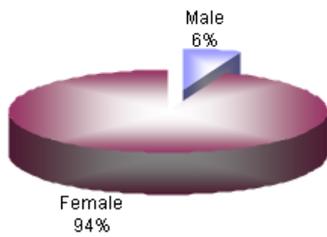
**Figure 2-17**  
*Pharmacy Managers, by Tenure of Employment*



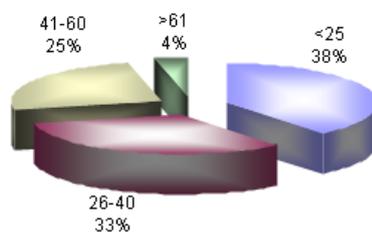
<sup>10</sup> From each network of pharmacies interviews were done in only one pharmacy

**Profile of Pharmacists**

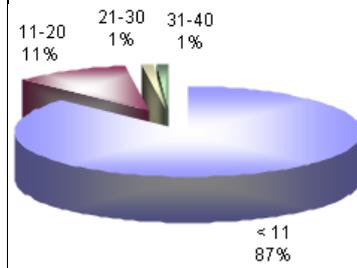
**Figure 2-18**  
*Pharmacists, by Gender*



**Figure 2-19**  
*Pharmacists, by Age*



**Figure 2-20**  
*Pharmacists, by Tenure of Employment*



Among pharmacists, 58 percent have higher educational and 42 percent professional college or technical degrees. The latter graduated from medical college. By specialization, 48 percent of pharmacies' employees are pharmacists, and 52 percent are pharmaceutical chemists.

### 3. LEVEL OF RESPONDENTS' AWARENESS

#### *Armenian Pharmaceutical Products*

##### *Products Familiar to Respondents*

Although all five target groups of the assessment are purchasers of pharmaceuticals in some way, they are very different in all other aspects, which make analyzing respondents within one common group meaningless. This refers to significant differences among consumers and other target groups of the assessment. These differences are based on objective reasons.

- ▶ For wide groups of the population, pharmaceuticals are not for daily consumption. These products are required mostly for illness, and the demand for them disappears after successful treatment. Depending on the type of the pharmaceutical, frequency of use is different. There are pharmaceuticals that are used frequently and their names remembered forever (such as Aspirin, Analgin and Ascophen). There are other pharmaceuticals that are used once or twice in a person's life or may be never used. Names of these types of pharmaceuticals can be forgotten or never known. Besides, often people do not make the decision to take this or that pharmaceutical by themselves; this is done by healthcare professionals, i.e. by physician's prescription or advice. In this case consumers buy the pharmaceuticals from a pharmacy and may not even know the name of it. Given this, consumers can be conditionally called an "unaware" or "relatively unaware" consumer group in comparison with other target groups of the assessment. The statement does not refer to chronic patients. Respondents were not asked about the nature of their illness.
- ▶ Unlike consumers, the representatives of clinics and pharmacies are healthcare professionals, and their knowledge of pharmaceuticals is not just a matter of awareness, but a question of being knowledgeable and professional. Hence, it is natural that awareness between this group and consumers is incomparable. In this context the representatives of clinics and pharmacies can be considered relatively "knowledgeable" or "relatively aware" respondent groups.

Given these circumstances, the research implementer analyzed awareness by target group, which revealed the profiles of each group and the role of each in pharmaceuticals' turnover. Awareness about Armenian pharmaceuticals among consumers, physicians, and pharmacists was assessed.

#### **Consumers**

Twenty-three percent of consumers could name at least one Armenian pharmaceutical product. "Aware" consumers<sup>11</sup> named 173 product types. The 10 Armenian pharmaceuticals mentioned most often by consumers are listed in Table 3-1.

---

<sup>11</sup> An "aware" consumer knows two pharmaceuticals of Armenian production on average.

**Table 3-1**  
**Pharmaceuticals of Armenian Production Named Most Often by Consumers**

Pharmaceutical	Share (%) of Consumers Aware of the Type of Product		Share (%) of Consumers Aware of Imported Analogues of Products Familiar to them <sup>c</sup>	Share (%) of Consumers Aware of Imported Analogues Availability but Giving Preference to Armenian Products <sup>d</sup>
	Of Total Number of Consumers <sup>a</sup>	Of Number of Consumers Aware of at Least One Product <sup>b</sup>		
	A	B	C	D
Valerian	4.7	20.7	67	92
Ascophen	2.9	12.6	64	71
Narine	2.6	11.5	20	100
Iodine	2.3	10.3	44	100
Haw	2.1	9.2	38	100
Motherwort	1.8	8.0	43	100
Albucid	1.6	6.9	50	100
Analgin	1.6	6.9	100	67
Samomile	1.6	6.9	50	100
Aspirin	1.0	4.6	100	100

<sup>a</sup> Based on total number of surveyed consumers (384)

<sup>b</sup> Based on the number of consumers that are aware of at least one Armenian Pharmaceutical (23% of consumers)

<sup>c</sup> Based on the number of consumers aware of at least one Armenian pharmaceutical (Column B).

<sup>d</sup> Based on the number of consumers aware (or think they are aware, even if mistaken) that in the Armenian pharmaceutical market there are imported analogues they are familiar with (Column C).

Among consumers, the most popular are pharmaceuticals that are available in almost any home. These are mainly pharmaceuticals normally used without a physician's prescription, for first aid, as pain relievers (analgesics), for nerve relaxation, heart regulating, and lowering blood pressure.

To assess the honesty and objectivity of consumers during interviews, they were asked about their preferences (imported or Armenian pharmaceutical products) twice. In Table 3-1 we see that in the beginning of the interviews, among the top 10 pharmaceuticals, consumers gave preference to Armenian products. However, during the interviews of consumers, different outputs were received. This question has been also reflected in the section Respondents' Behavior in relation to Armenian Pharmaceuticals.

### **Physicians**

Most surveyed physicians are aware of Armenian pharmaceuticals, and the average physician knows at least 4.6 names of pharmaceutical products. Only 4 percent of physicians—mainly medics who work at dental clinics—are unaware of any Armenian pharmaceutical. Physicians named not only individual pharmaceutical products but also groups that products belong to.

Table 3-2

**Pharmaceuticals and/or Armenian Product Groups Named Most Often by Physicians**

Pharmaceutical	Share (%) of Physicians Aware of a Special Product Type		Share (%) of Physicians Aware of Imported Analogues of Products Familiar to Them <sup>c</sup>	Share (%) of Physicians Aware of Imported Analogues Availability but Giving Preference to Armenian Products <sup>d</sup>
	Of Total Number of Physicians <sup>a</sup>	Of Total Number of Physicians who know at Least One Product <sup>b</sup>		
	A	B		
Infusion solutions	35.1	36.6	96.2	72.0
Analgin	14.9	15.5	100.0	27.3
Lidocain	14.9	15.5	100.0	36.4
Antibiotics	12.2	12.7	100.0	11.1
Ringer	12.2	12.7	77.8	57.1
Vitamins	10.8	11.3	100.0	12.5
Narine	9.5	9.9	100.0	57.1
Metronidazole	8.1	8.5	83.3	0.0
Sodium chloride 0.9%	8.1	8.5	100.0	50.0
Ceftriaxone	6.8	7.0	100.0	40.0

<sup>a</sup> Based on total number of surveyed physicians (74)

<sup>b</sup> Based on the number of physicians that are aware of at least one Armenian pharmaceutical (96% of physicians)

<sup>c</sup> Based on the number of physicians that are aware of at least one Armenian pharmaceutical (Column B)

<sup>d</sup> Based on the number of physicians who are aware (or think they are aware, even if mistakenly), that in the Armenian market of pharmaceuticals there are imported analogues they are familiar with (Column C).

Armenian physicians were also asked the question: Which company produces the Armenian pharmaceuticals familiar to you? Twenty-nine percent had difficulty in answering this question. The answers of the remaining respondents are given in Table 3-3.

Table 3-3

**Producers of Armenian Pharmaceuticals known to Physicians by the Products they are Familiar with**

Producer	Share (%) of Pharmaceuticals Familiar to Physicians Made by this Producer
Liqvor	24.2
Arpimed	19.3
Yerevan Chemical-Pharmaceutical Firm	9.8
PharmaTech	4.9
Vitamax-E	4.3
Esculap	2.8
Noki	1.5

Pharmaceuticals of other companies (Antaram, Arsemi, Eda-tech, and Ghazaros) were mentioned rarely.

Physicians' answers indicate that all the pharmaceuticals they mentioned have imported analogues in the Armenian market. Physicians claimed their preferences based mainly on

their experience in comparing imported analogues with local products. Thus, for named pharmaceuticals, 41 percent of physicians who are aware of imported analogues give unequivocal preference to Armenian products. Others (23 percent) either prefer imported products or are indifferent (36 percent). Preferences of physicians and their reasoning are described in more detail in the section 'Peculiarities of Respondents' Behavior' in relation to Armenian Pharmaceuticals.

### **Pharmacists**

There are obvious differences between physicians and pharmacists in level of awareness about Armenian pharmaceutical products. Physicians work within narrow specializations (e.g., therapist, surgery specialists, or gynecologist). They are well aware of pharmaceuticals related to their specialization but may be unaware of pharmaceuticals used out of their field. Pharmacists and pharmacy workers, however, know almost by heart the names of all pharmaceuticals that are sold in their pharmacies as well as other features, such as the name of the producer, although these may number in the hundreds. Pharmacy workers therefore should be considered not only people aware of medicine and pharmaceuticals, but also as sales persons who must know all the products they sell.

Pharmacists named more than 800 pharmaceuticals of Armenian production. It is difficult to compute the average number of Armenian pharmaceuticals each pharmacist is aware of, but this number is certainly more than 10, since after naming 10 products, pharmacists were able to continue.

**Table 3-4**

#### ***Pharmaceuticals and/or Armenian Product Groups Named Most Often by Pharmacists***

Pharmaceutical	Share (%) of Pharmacists Aware of Certain Pharmaceuticals <sup>a</sup>	Share (%) of Pharmacists Aware of Availability of Imported Analogues of Products Familiar to Them <sup>b</sup>	Share (%) of Pharmacists Aware of Imported Analogues Availability but Giving Preference to Armenian Products <sup>c</sup>
	A	B	C
Amlodipine	54	98	16
Enalapril H	42	97	14
Erythromycin	33	68	16
Taufone	33	89	28
Naphthyzine	25	90	26
Escard	18	33	60
Ringer	16	57	50
Hexiloc	15	62	50
Lisinopril	15	100	0
Pasta Teimurovi	14	25	67

<sup>a</sup>Based on total number of surveyed pharmacists (85)

<sup>b</sup>Based on the number of pharmacists aware of at least one Armenian pharmaceutical (Column A)

<sup>c</sup>Based on the number of pharmacists aware (or think that are aware, even mistakenly) that in the Armenian pharmaceuticals market there are imported analogues they are familiar with (Column B).

Pharmacists' were also asked if they know the producer of Armenian pharmaceuticals familiar to them. Unlike physicians, pharmacists know the producers of pharmaceuticals—of almost 97 percent of the products named. Table 3-5 lists the shares of pharmaceuticals known to pharmacists that are made by a given producer.

**Table 3-5**  
**Armenian Pharmaceutical Producers Known to Pharmacists and Share (%) of Pharmaceuticals Made by Producer**

Producer	Share (%) of Pharmaceuticals Familiar to Pharmacists Made by this Producer
Arpimed	39.0
Esculap	18.8
Liqvor	15.8
Arsemi	7.5
Yerevan Chemical-Pharmaceutical Firm	4.5
PharmaTech	3.9
Eda-tech	1.6

Besides these pharmaceuticals, pharmacists also mentioned pharmaceuticals produced by small producers, including Insi, Nectar-bonus, Noki, Medical Horizon, Hagenas, OdZet vars, and Finea.

### **Sources of Information on Pharmaceutical Production**

Some respondents were more aware of Armenian pharmaceuticals than others and were able to answer questions about the source of their information. This question was especially difficult for consumers—most could not answer. More knowledgeable respondent groups follow developments in the pharmaceutical industry and get information from several sources (see Table 3-6).

The main information suppliers for respondent groups, other than consumers, are direct producers. However, the large producers state that they distribute most of their pharmaceuticals through distributors rather than direct to clinics or pharmacies. Nevertheless, producers maintain direct relations and communication with product buyers, thereby ensuring domestic procurement in the market.

**Table 3-6**  
**Main Sources of Information on Armenian Pharmaceutical Products, by Respondent Group**

Source of Information	Consumers	Procurers at Clinics	Physicians	Pharmacy Managers	Pharmacists
TV program related to healthcare	3%				
Ads on TV	1%				
Posters, advertising, brochures			20%		
Mass media (newspapers, magazines), not professional					
Professional media: newspapers and magazines		18%		39%	52%
Physicians	7%		39%		
Pharmacies	11%				
Colleagues, friends, relatives	6%	36%		60%	51%
Direct producers		57%	50%	81%	73%
Presentations organized by producers		32%	20%	55%	51%
Basic education		15%	14%	40%	60%

*Note: Computation of shares based on the total number of assessed respondents.*

## Armenian Pharmaceutical Producers

### Armenian Producers Known to Respondents

To collect information on respondents' awareness of Armenian pharmaceutical producers, two approaches were applied. First, the consultant tried to find out how many and which producers respondents are aware of without prompting. Next, the same question was asked but producers were named to refresh respondents' memories.

The analysis of awareness of Armenian pharmaceuticals is divided into two parts, consumers and other respondent groups, because the level of awareness is very different for these groups.

### Consumers

According to the assessment results, consumers' awareness of local producers is very low. Of 384 consumers, only 11 could name at least one producer without being prompted; moreover, most of the consumers that could name a pharmaceutical producer work in the healthcare sector. Nine companies were named, two of which are not actually domestic producers, but importers. Consumers mentioned more often (if it can be said to be often) such companies as Esculap, Arpimed, and Yerevan Chemical-Pharmaceutical Firm. This suggests that consumers are extremely unaware of Armenian pharmaceutical producers.

The difference between the results of aided recall and unaided recall is substantial. After interviewers prompted consumers, giving the names of Armenian producers and asking if the consumer knew the company, some consumers recognized or recalled the companies. This, however, did not seriously change the picture of awareness. Not surprisingly, having no clear information about producers, consumers are not aware of pharmaceuticals produced by them. Even if consumers are familiar with the name of a producer, they generally do not know what the company produces. Table 3-7 supports this statement.

Furthermore, the relatively well-known status of Vitamax-E is because consumers identify—or rather, confuse—it with a multivitamin with the same name. This statement is supported by the fact that none of the consumers mentioned Vitamax-E without being prompted, while after being prompted, a large share of respondents recalled that name. However, consumers are well aware of Narine, the leading product of Vitamax-E. The fame of Yerevan CPF is based to some extent on the older generation's memories. In many cases, consumers know this company as "Yerevan-Pharm." Consumers are more familiar with Esculap as a chain of pharmacies than as a pharmaceutical producer. The availability of the company's pharmacy network might have brought some fame to the company name.

**Table 3-7**

### Armenian Pharmaceutical Producers and their Products Known to Consumers

Producer	Share (%) of Consumers Aware of the Producer...			Pharmaceuticals Cited as Made by Producer	Correctness of Information
	Unaided Recall	Aided Recall	and Which Pharmaceuticals It Produces		
PharmaTech	0.3	6.8	11.5	Iodine Citramone	Totally wrong
Vitamax-E	0.0	6.5	27.5	Narine Vitamins Salts	Only Narine is correct
Arpimed	0.8	6.3	25.0	Betadinok Sodium	Partly correct

Producer	Share (%) of Consumers Aware of the Producer...			Pharmaceuticals Cited as Made by Producer	Correctness of Information	
	Unaided Recall	Aided Recall	and Which Pharmaceuticals It Produces			
				Enalapril H chloride Expectorant Triflazine		
Yerevan CPF	0.5	4.9	26.3	Vitamins Ditiline Ichthiol ointment	Mainly correct	
Esculap	1.0	3.9	40.0	Castor oil Narine Medicinal herbs Narine ointment	Iodine Motherwort Valerian Haw	Partly correct
Hagenas	0.3	1.6	16.7	Apricot oil	Pumpkin oil	Correct
Antaram	0.3	1.0	100.0	Medicinal herbs		Correct
Liqvor	0.3	1.0	50.0	Betadinok	Iodine	Totally wrong
Ghazaros	0.0	0.5	50.0	Medicinal herbs		Correct
Medical Horizon	0.0	0.3	100.0	Suppository		Correct
Arsemi	0.0	0.3	0.0	?		

For some pharmaceutical producers, the lack of consumer awareness is not a big problem. These are producers whose production is not for mass consumption but is purchased mostly by clinics. For these producers, it is more important to be recognized by representatives of clinics, particularly by procurers of pharmaceuticals at clinics and physicians.

### **Clinic Representatives**

The level of awareness of Armenian pharmaceutical producers among representatives of clinics is substantially different than the level of consumers' awareness. The main reason is that clinic representatives, particularly pharmaceuticals procurers, have direct and regular relations with suppliers.

### **Procurers of Pharmaceuticals at Clinics**

Procurers of pharmaceuticals at clinics are required by their job to be in close communication with pharmaceuticals suppliers (in this case, producers), independently from the mode of purchase (i.e., directly from the producer or through an intermediary). Therefore, procurers of pharmaceuticals at clinics are one of the groups most aware of Armenian producers. Whereas among consumers, only 0.3 of every 100 knows at least one Armenian pharmaceutical producer (without being prompted), 73 procurers of pharmaceuticals at clinics out of 100 know at least one Armenian pharmaceutical producer without being prompted. (These rates diverge so widely as to be incomparable.)

However, a large gap of awareness among procurers of pharmaceuticals at clinics must be addressed: Only about half were aware of the most known local producer of pharmaceuticals without prompting. This is a very low figure, which suggests that the promotional campaigns of local producers are not effective. Table 3-8 summarizes the level of procurers' awareness.

To assess the awareness of a particular company, Armenian producers should consider the data in this table as important, because they show the level of awareness among the largest, “most knowledgeable/aware,” and most decisive buyer group.

There is no doubt that among clinics the most well-known company is Liqvor: nine of 10 procurers of pharmaceuticals are aware of this company and its main products. Six Armenian producers—Liqvor, Arpimed, PharmaTech, Esculap, Vitamax-E, and Yerevan Chemical-Pharmaceutical Firm—are substantially more well known than other Armenian producers. Less well known but worth mentioning because those who know about the companies are also well aware of their products, are producers Ghazaros and Antaram. The data show that procurers of pharmaceuticals at clinics are well aware of what each producer makes. They made few mistakes, and the mistakes they did make concerned small producers. But is the level of awareness high or low? The figures indicate that the level of awareness of large producers is probably not high enough.

Procurers of pharmaceuticals at clinics, comparing producers and importers’ efforts in this field, also expressed a wish for better communication with producers. More procurers of pharmaceuticals in marzes expressed this wish than in Yerevan, perhaps because producers focus marketing on the Yerevan market (the largest, most accessible, and least expensive market in Armenia).

**Table 3-8**  
**Armenian Pharmaceutical Producers and their Products Known by Procurers at Clinics**

Producer	Share (%) of Procurers of Pharmaceuticals Aware of the Producer ...			Five Pharmaceutical Types Most Frequently Cited as Made by Producer
	Unaided Recall	Aided Recall	... and Which Pharmaceuticals It Produces	
Liqvor	55.4	89.2	90.9	Infusion solutions Eye drops Lidocain Ringer Dextrose
Arpimed	43.2	78.4	70.7	Psychotropic agents Antibiotics Amlodipine Diazepam Lisinopril
PharmaTech	28.4	81.1	53.3	Infusion solutions Rheopolyglucinum Sodium chloride Dextrose Ringer
Esculap	17.6	71.6	41.5	Iodine Ointments Valerian Antibiotics Perhydrole
Yerevan CPF	13.5	52.7	69.2	Analgin Dimedrol Vitamins Novocaine Ointments
Arsemi	5.4	29.7	63.6	Medical alcohol Iodine* Amlodipine* Betamethazone* Galazoline
Noki	4.1	24.3	72.2	Gangleron Amoxicillin Aspirin Ditilin Vitamins*
Vitamax-E	4.1	64.9	75.0	Narine Narimax Narine caps. Apricotabs*

Producer	Share (%) of Procurers of Pharmaceuticals Aware of the Producer ... ... and Which Pharmaceuticals It Produces			Five Pharmaceutical Types Most Frequently Cited as Made by Producer	
	Unaided Recall	Aided Recall			
				Vitamins*	
Hagenas	1.4	17.6	53.8	Apricotabs Seat Buckthorn oil Medical alcohol	Volatile oils Samomile
Ghazaros	1.4	20.3	93.3	Medical herbs Biological preparation* Samomile	Cortex Quercus Medical gargle*
Medical Horizon <sup>a</sup>	1.4	6.8	0.0	?	
Antaram	0.0	24.3	94.4	Medical herbs Samomile	Tea Cortex Quercus
Bizon-1	0.0	12.2	66.7	Seat Buckthorn oil Aspirin* Medical herbs*	Rosehip oil

\* —Not produced by the producers mentioned.

<sup>a</sup> Could not give the name; it was mentioned as "Masis factory."

### Physicians

Among buyers of Armenian pharmaceuticals, physicians (as representatives of clinics) made up one of the most aware groups. Physicians' level of awareness is just a little less acute than that of procurers of pharmaceuticals at clinics (see Table 3-9).

**Table 3-9**

#### **Armenian Pharmaceutical Producers and their Products Known by Physicians**

Producer	Share (%) of Physicians Aware of the Producer ... and Which Pharmaceuticals It Produces			Five Pharmaceuticals Most Frequently Cited as Made by Producer	
	Unaided Recall	Aided Recall			
Liquor	55.4	86.5	84.4	Infusion solutions Ringer Eye drops	Lidocain Sodium chloride
Arpimed	45.9	78.4	60.3	Antibiotics Captopril Fluconazole	Hexiloc* Psychotropic agents
PharmaTech	20.3	79.7	37.3	Infusion solutions Sodium chloride Normodipine*	Polyglucinum Ringer
Yerevan CPF	14.9	47.3	57.1	Vitamins Dimedrol Analgin	Ointments Distilled water
Esculap	10.8	64.9	27.1	Iodine Hydrogen peroxide Eludril*	Escard Rivanol
Vitamax-E	8.1	60.8	66.7	Narine Narimax Vitamins*	Bioactive substance Narine forte

Producer	Share (%) of Physicians Aware of the Producer			Five Pharmaceuticals Most Frequently Cited as Made by Producer	
	Unaided Recall	Aided Recall	... and Which Pharmaceuticals It Produces		
Noki	8.1	10.8	37.5	Antibiotics Aspirin Gangleron	Caprofer <sup>*</sup> Vitamins <sup>*</sup>
Ghazaros	5.4	18.9	92.9	Medical herbs	
Arsemi	4.1	13.5	70.0	Iodine Medical alcohol Galasiloc	Hexiloc Medical herbs <sup>*</sup>
Bizon-1	1.4	10.8	66.7	Oils	
Eda-tech <sup>a</sup>	1.4	?	?	?	
Antaram	1.4	13.5	100.0	Medical herbs	
Hagenas	0.0	12.2	55.6	Oils Apricotabs Bioactive substance <sup>b</sup>	Seat Buckthorn oil Medical alcohol
Medical Horizon	0.0	5.4	0.0	?	

<sup>a</sup> Not mentioned when prompted with the names of local producers

<sup>b</sup> Active biological additions

\* Not produced by the producers mentioned

Again, the gap between unaided and aided recall is large. The conclusion can be made: Market participants are not effectively informed about the local pharmaceutical producers. In general, this problem refers mostly to producers, which must intensify their promotional campaigns.

Among physicians, cases of knowing a certain producer but inability to recall the company name are frequent. Physicians sometimes substituted names; for example, "Abovyan Factory" for Arpimed, and "Vitamin Factory," "Multi Group" and "Yerevan Pharm" for Yerevan CPF.

### **Representatives of Pharmacies**

The level of awareness of Armenian producers is highest at pharmacies, largely for the same reasons as mentioned above for clinics. Additionally, pharmacy representatives know more producers, including those that clinic representatives had never heard of. Small producers are sometimes better known among pharmacies than larger producers, apparently because they target their marketing to pharmacies.

The data clearly indicate that pharmacy managers are aware of almost all producers and their product lines. This is because producers properly position themselves and "inform" pharmacies about their products. Among companies mentioned, only Medical-Horizon still has to self-position, because it is in the process of doing the first steps in the market.

Among pharmacy managers, especially impressive are the positions of Liqvor, Esculap, and Yerevan Chemical-Pharmaceutical Firm. Liqvor Company, which sells its products mainly through distributors and does not communicate with pharmacies much directly (according to Liqvor), is still very well known among pharmacy managers. This is, indeed, due to successful marketing. The popularity of Esculap among pharmacy managers is due to the universal nature of its activities; the company produces and imports and has a network of its own pharmacies. The apparent lack of awareness of Yerevan CPF is to some extent

misleading, since this company is frequently mentioned under erroneous names (e.g., “Vitamin Factory” and “Yerevan Pharm”).

Pharmacists, however, make up the most knowledgeable/aware group. Only in this group of respondents is every respondent aware of at least three producers. Also, only in this group does the most widely known rating go not to Liqvor but to Arpimed. Furthermore, Arpimed is the only company whose production is known to all pharmacists.<sup>12</sup>

Table 3-10 lists producers and products known to pharmacy managers and Table 3-11 products known to pharmacists.

**Table 3-10**

**Armenian Pharmaceutical Producers and their Products Known by Pharmacy Managers**

Producer	Share (%) of Pharmacy Managers Aware of Producer			Five Products Cited Most Often	
	Unaided Recall	Aided Recall	... and its Product		
Liqvor	71.8	98.8	97.6	Taufone Albucide Sodium chloride	Ciprofloxacin Dolex
Esculap	68.2	98.8	96.4	Escard Motherwort Sintomycine	Haw Furaciline
Arpimed	65.9	97.6	95.2	Amlodipine Enalapril H Expectorant	Benzonal Lisinopril
Arsemi	27.1	89.4	92.1	Nasiloc Medical alcohol Hexiloc	Galasiloc Naphthyzine
PharmaTech	18.8	90.6	90.9	Dextrose Ringer Sodium chloride	Iono-tech Albu-tech
Hagenas	18.8	87.1	90.5	Seat Buckthorn oil Apricotabs Apricot oil	Medical alcohol Peach oil
Eda-tech <sup>a</sup>	16.5		?		
Yerevan CPF	10.6	64.7	89.1	Vitamins (B, B1, B6, B12, C) Aloe Dimedrol	Analgin Gangleron <sup>b</sup>
Vitamax-E	8.2	95.3	97.5	Narimax Bifidomax Narine tabs	Narine caps. Narine forte
Noki	3.5	69.4	91.5	Aspirin Albendazole <sup>b</sup> Betadinoc	Gangleron Thiodine
Bizon-1	1.2	78.8	100.0	Seat buckthorn oil Nut oil Grape oil	Peach oil Rosehip oil

<sup>12</sup> Theoretically all pharmacists are aware of Antaram and its production, too, but it will be incorrect to compare Arpimed and Antaram, since product nomenclature and structure are significantly different for these companies.

Antaram	0.0	96.5	97.6	Medical herbs Helichrysum Calendula	Valerian Hypericum
Ghazaros	0.0	85.9	94.5	Medical herbs Salvia Samomile	Mentha Urtica
Medical Horizon	0.0	4.7	75.0	Castor oil <sup>b</sup> Cetamole Suppositoria and syrup	Diclone

<sup>a</sup> Not mentioned during reminding the names of local producers

<sup>b</sup> These pharmaceuticals are not produced by the mentioned producers

**Table 3-11**

**Armenian Pharmaceutical Producers and their Products Known by Pharmacists**

Producer	Share (%) of Pharmacists Aware of the Producer			Five Products Most Commonly Mentioned	
	Unaided Recall	Aided Recall	...and its Products		
Arpimed	97.6	100.0	100.0	Amlodipine Lisinopril Benzonal	Enalapril H Erythromycin
Esculap	90.6	100.0	96.5	Escard Motherwort Haw	Sintomycline Furacilin
Liqvor	87.1	100.0	98.8	Taufone Albucide Ciprofloxacin	Floxadex Optipred
Arsemi	56.5	94.1	91.2	Hexiloc Medical alcohol Nasiloc	Naphthyzine Galaziloc
PharmaTech	44.7	94.1	85.0	Dextrose Sodium chloride Ringer	Iono-tech Haemodesum
Eda-tech <sup>a</sup>	30.6	?	?		
Yerevan CPF	27.1	68.2	94.8	Vitamins (B, B1, B6, B12, C, E) Aloe	Analgin Dimedrol
Hagenas	21.2	81.2	85.5	Sea Buckthorn oil Apricotabs Apricot oil	Pumpkin oil Peach oil
Vitamax-E	10.6	92.9	97.5	Bifidomax Narimax Narine	Narine caps Narine tabs
Noki	10.6	78.8	97.0	Aspirin Albendazole Betadinoc	Aspirin 325 Neuralgin*
Bizon-1	7.1	72.9	95.2	Sea buckthorn oil Pumpkin oil Apricot oil	Rosehip oil Nut oil
Antaram	7.1	90.6	100.0	Samomile Helichrysum Salvia	Calendula Urtica
Finea <sup>a</sup>	4.7	?	?		

Producer	Share (%) of Pharmacists Aware of the Producer			Five Products Most Commonly Mentioned	
	Unaided Recall	Aided Recall	...and its Products		
Ghazaros	3.5	85.9	95.9	Samomile Cortex Quercus Hypericum	Salvia Foalfoot
Medical-Horizon	1.2	7.1	83.3	Cetamol suppositoria Castor oil* Cetamol	Diclofenac Ibuprofen syrup

<sup>a</sup> Not mentioned during prompting of the names of local producers

\* Note: These pharmaceuticals are not produced by the mentioned producers

The list of producers named by pharmacists is longer than in the table above. Pharmacists mentioned an additional 13 companies (Table 3-12) of which only three are Armenian producers of pharmaceutical products. Some—11.7 percent—pharmacists mistakenly named foreign producers of pharmaceuticals as Armenian, and some also named importers as producers.

**Table 3-12**  
**Companies Mentioned by At Least One Pharmacist and Real Status of Company**

Product	Real Status of Company
Alpha-Pharm	Importer
Armenia-Masis	No producer with this name is known; respondents may have meant one of two producers operating in Masis (Medical-Horizon or Vitamax-E)
Delta-Pharm	Importer
Insi	Small producer, produces INSI Anti-acne
Egida	Unknown producer
Evalar	Russian producer
Evera	Importer
Leyko	Small producer
Natali Pharm	One of the largest importers
Nektar Bonus	Produces oils and does not have a license for the production of pharmaceuticals
Nib-Pharm	Importer
Armen-Pharm	Importer
Sopharma	Bulgarian producer

At the outset of the survey, CAPS and the researchers assumed that respondents would be able to distinguish between Armenian and foreign producers, and between producers and importers. The results of the table suggest otherwise. The questionnaire focused on awareness of names of pharmaceutical companies rather establishing whether respondents could distinguish these companies from foreign companies or whether they were as familiar as importers or producers. Further research in this area would be useful.

### Sources of Information

Given significant differences in the levels of awareness of Armenian pharmaceuticals among consumers and other groups of respondents, one may infer that the sources of their information are different both in quantity and structure. Assessment results confirm this statement.

**Consumers**

Very few respondents replied to the question about the source of their awareness of Armenian producers: these data are based on only 10 percent of respondents. Consumers mentioned the following sources of information (listed by frequency of response):

- ▶ TV shows, advertisement on TV, radio and other advertisement,
- ▶ Unknown (do not remember or do not know the source),
- ▶ Friends, relatives,
- ▶ Experience of buying and using the pharmaceutical product,
- ▶ Has relevant profession (works in health care sector),
- ▶ Physicians,
- ▶ Pharmacies.

Among consumers, forgetting how they heard about a particular producer was frequent. It can be inferred that the link between producer and consumer in the Armenian pharmaceuticals market is weak, if not nonexistent.

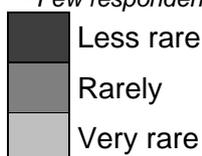
Information sources of consumers, by producer, are shown in Table 3-13.

**Table 3-13**

**Main Sources of Information on Armenian Pharmaceuticals among Consumers<sup>a</sup>**

Source of Information	PharmaTech	Vitamax-E	Arpimed	Yerevan CPF	Esculap	Hagenas	Antaram	Liqvor	Ghazaros	Medical-Horizon	Arsemi
TV shows, ads on TV, radio and other advertisement	Less rare	Rarely	Rarely	Rarely	Very rare	Rarely	Rarely	Very rare	Very rare	Very rare	Very rare
Friends, relatives	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	Very rare	Less rare	Very rare	Rarely	Rarely
Experience of buying and using the product	Very rare	Very rare	Rarely	Very rare	Rarely	Very rare	Rarely	Rarely	Rarely	Very rare	Very rare
Physicians	Very rare	Very rare	Very rare	Very rare	Very rare	Very rare	Very rare	Rarely	Very rare	Very rare	Very rare
Pharmacies	Very rare	Very rare	Very rare	Very rare	Very rare	Very rare	Rarely	Very rare	Very rare	Very rare	Very rare
Could not recall	Rarely	Rarely	Very rare	Less rare	Rarely	Rarely	Very rare	Very rare	Very rare	Very rare	Very rare

<sup>a</sup>Few respondents answered this question; the highest figure is the 3.84% for the TV shows for PharmaTech.



**Clinics**

Assessment results show that sources of information for representatives of clinics and consumers differ significantly in structure. Consumers receive most information from television healthcare programs and advertisements, while at clinics; the information on producers comes mostly directly from producers. According to the assessment results there is a link between clinics and producers and communication between these groups.

**Table 3-14**  
**Main Sources of Information on Armenian Pharmaceuticals among Procurers at Clinics and Share (%) of Respondents Citing that Source<sup>a</sup>**

Sources and ways of getting information	Liqvor	Arpimed	PharmaTech	Esculap	Yerevan CPF	Arsemi	Noki	Vitamax-E	Hagenas	Ghazaros	Antaram	Bizon-1
Producer visited and presented the company	36	24	23	15	5		4	8				
From the pharmaceuticals box or packaging						5	3	8				
From pharmacies	8							8	3	8	5	1
From co-workers				7	11	4			3	3		
From databases of distributors		8	7		5							
From information catalogues (producers, business catalogues, etc.)									3		4	1
Could not recall	16	20	26	30	15	9	14	27	4	3	4	8

<sup>a</sup>Computation of shares based on total number of respondents in the group.

	Less rare
	Rarely
	Very rare

The respondents that had difficulty mentioning a particular source either forgot how they heard of the producer or gave answers from which it is hard to identify the source of information. For instance, some respondents said they heard about the producer “as a result of buying and using their product,” “during working time,” or “because it is a famous company.” One may assume that most of these types of uncertain answers are due to forgetting the source of information. This may be the case, because many Armenian pharmaceutical producers have only 10–15 years of history. Three “more definite” sources were mentioned by procurers at clinics:

- Producers, which spread information about themselves
- Colleagues, who disseminate information
- Pharmacies, which exchange information with clinics and are in strong communication with them.

The situation is almost the same with physicians, with one exception. Here, the cases when physicians are familiarized with a producer’s name by reading it on the packaging are frequent, possibly as a result of pharmaceutical companies providing samples of their products.

**Table 3-15**  
**Main Sources of Information on Armenian Pharmaceuticals among Physicians and Share (%) of Respondents Citing that Source<sup>a</sup>**

Sources and ways of getting information	Liqvor	Arpimed	PharmaTech	Esculap	Yerevan CPF	Arsemi	Noki	Vitamax-E	Hagenas	Ghazaros	Antaram	Bizon-1
Producer visited and presented the company	32	18	8	11		3		8	4		3	1
Read on the pharmaceuticals boxes/packaging	12	16	12	9	9	1	4	15		5	4	
From pharmacies								8		7	4	3
From colleagues			12		4				3		3	1
Could not recall	22	27	35	32	26	9	7	19	4	4		5

<sup>a</sup> Computation of shares based on total number of respondents in the group.

	Less rare
	Rarely
	Very rare

Here again, Liqvor Company is distinguished by its skill in disseminating information about itself. Almost one-third of physicians precisely remember in what circumstances they became acquainted with Liqvor; no other local producer is so well known.

### **Pharmacies' Representatives**

About one-third of pharmacy managers and employees cannot precisely tell how they were introduced to Armenian pharmaceutical producers. The most common answer is that they got the information while working at a pharmacy, but it is difficult for them to recall how exactly it happened. If this group is separated, two main sources of information among pharmacy managers and pharmacists are left: direct producers and distributors.

Tables 3-16 and 3-17 show that all producers work in close cooperation with pharmacies, providing pharmacies with sufficient information about themselves. What is left or missed by producers is complemented by distributors.

**Table 3-16**  
**Main Sources of Information on Armenian Pharmaceuticals among Pharmacy Managers' and Share (%) of Respondents Citing that Source<sup>a</sup>**

Sources and Ways of Obtaining Information	Liqvor	Arpimed	Pharma Tech	Esculap	Yerevan CPF	Arsemi	Noki	Vitamax-E	Hagenas	Ghazaros	Antaram	Bizon-1
Producer visit	27	35	18	18	19	15	13	20	14	13	14	13
Database of distributors	24	9	25		18		28	33	31		34	33
Catalogues				8		7				8		
Could not recall	32	33	29	33	19	29	20	32	28	24	31	24

<sup>a</sup> Computation of shares based on total number of respondents in the group.

	Less rare
	Rarely
	Very rare

**Table 3-17**  
**Main Sources of Information on Armenian Pharmaceuticals among Pharmacists and Share (%) of Respondents Citing that Source<sup>a</sup>**

Sources and ways of getting information	Liqvor	Arpimed	PharmaTech	Esculap	Yerevan CPF	Arsemi	Noki	Vitamax-E	Hagenas	Ghazaros	Antaram	Bizon-1
Producer visited and presented the company	19	22	22	22	14	25	24	28	18	27	28	21
From databases of distributors/bases	13	12	9	11	9	8	8		11	9	9	8
From information catalogues						8		7				8
Could not recall	40	38	34	36	22	35	27	36	32	33	32	25

<sup>a</sup> Computation of shares based on total number of respondents in the group.

	Less rare
	Rare
	Very rare

## 4. RESPONDENTS' PERCEPTION IN USING PHARMACEUTICAL PRODUCTS

### *Respondents Experience in Using Pharmaceutical Products*

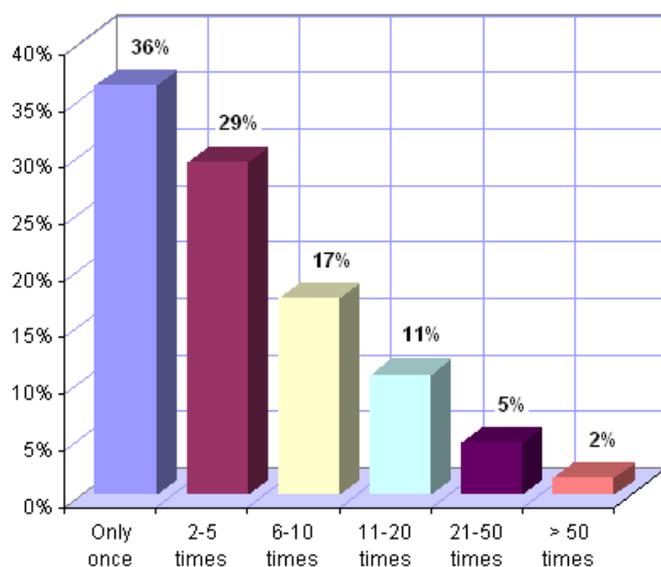
Respondents' experience in using pharmaceuticals could be considered as the most objective basis for the formation of respondents' perceptions. It has nothing in common with either superstition or with information from secondary sources (which are sometimes wrong or misleading). Therefore, before examining buyers' attitude toward Armenian pharmaceuticals, the level of respondents' experience should be assessed.

### *Consumers' Experience in Using Armenian Pharmaceuticals*

Consumers buy pharmaceuticals exclusively from pharmacies. The timeframe for assessing the frequency of their visits to pharmacies and the frequency of purchasing pharmaceuticals was defined as the four-month period preceding the assessment, i.e., January–April 2008. The results show that during that period, consumers averaged 8.3 visits (weighted average) to pharmacies to buy pharmaceuticals. Such frequency might have been considered sufficient experience in purchasing pharmaceuticals, if not for one other fact—the standard deviation (deviation from mean attendance) is high among consumers: 36 percent visited pharmacies only once in the four months, and 29 percent only two to five times (see Figure 4-1): These people cannot be considered as experienced in buying pharmaceuticals.

**Figure 4-1**

*Frequency of Consumers' Visits to Pharmacies, January–April 2008*



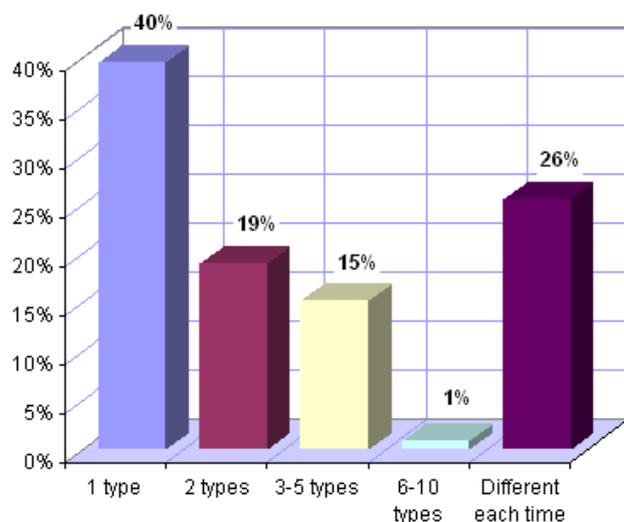
Consumers buy an average of 1.31 pharmaceuticals (weighted average) on each visit. The share of consumers buying one type of pharmaceutical is 40 percent (see Figure 4-2). What do these data suggest? First, that there are people in our society who have no reason or occasion to go to a pharmacy, or who do it rarely, or cannot because of poverty.<sup>13</sup> If we add the large sample of people who visited pharmacies at least once in four months, we will get a picture according to which almost half of the consumers of pharmaceuticals rarely deal with pharmacies and pharmaceuticals. This fact reduces the possibility of their awareness of pharmaceuticals, which means that unaware consumers will

find it difficult, if not impossible, to make objective inferences about pharmaceuticals. This is clearly proved by the finding that 53 percent of consumers do not know (or had difficulty answering) if there were any Armenian pharmaceuticals among those they had ever bought.

<sup>13</sup> The research Implementer is unable to assess the share of people in our society who do not attend pharmacies, since the interviews within the scope of this research have been conducted either inside pharmacies or in surrounding areas, i.e. among actual consumers.

Clearly, a part of that 53 percent bought or used pharmaceuticals of Armenian production, but how many consumers and which pharmaceuticals are impossible to determine.

**Figure 4-2**  
**Quantity of Pharmaceuticals Bought per Purchase**



Representatives of this group, even if all of them bought Armenian pharmaceuticals, could not make experience-based inferences about their perception, since their attitude was formed through other factors such as the advice and opinion of friends, relatives, physicians or pharmacists. Almost one of five (21 percent) consumers claimed to have never bought pharmaceuticals of Armenian origin. Only 26 percent of consumers claimed the “conscious” purchasing of Armenian pharmaceuticals.

Ninety-nine people made up the 26 percent of consumers experienced in consuming Armenian pharmaceuticals. All together they bought 100 types of

pharmaceuticals, or 1 pharmaceutical for each person in April 2008. Among these consumers, the following five pharmaceuticals are the most popular:

- ▶ Valerian—12 percent
- ▶ Haw—9 percent
- ▶ Iodine—8 percent
- ▶ Askophen—6 percent
- ▶ Motherwort—5 percent.

There is another interesting finding. As mentioned above, interviews with consumers were conducted at pharmacies or nearby areas, i.e. among people, who had just purchased pharmaceuticals and were leaving pharmacies. The data show that at that point, 384 consumers purchased 549 pharmaceuticals (on average 1.4). Consumers were unable to distinguish whether 42 percent of these products were imported or locally produced. This implies one of two things: (1) the pharmaceuticals’ origin was not important for consumers, or (2) consumers bought the pharmaceuticals with a prescription without going into detail about what had been bought. As concerns other pharmaceuticals, the origins of which were familiar to consumers, the breakdown is as follows: 48 percent imported, 10 percent locally produced.

The 48 percent of respondents who purchased imported pharmaceuticals declared that for 77 percent of pharmaceuticals they purchased they do not know if Armenian analogues exist. Consumers think that for 20 percent of pharmaceuticals purchased, there are no Armenian analogues available. Only for 3 percent of pharmaceuticals purchased were consumers definitely told that Armenian analogues were available. Consumers also said that no one in the pharmacy had suggested substituting locally-produced pharmaceuticals for the imported ones.

### ***Clinics' Purchasing Practices***

Representatives of clinics are more informed or aware of Armenian pharmaceuticals and producers than consumers. However, around 20-25 percent of them could not recall how they became familiar with the Armenian pharmaceutical producers. The vast majority of this group told that it was during their work activities. This suggests that clinic representatives are forming a perception on Armenian pharmaceutical producers, but through little contact with them. They are forming their perception based on other factors.

But what is the share of clinics consuming Armenian pharmaceuticals? Eighty-four percent of procurers of pharmaceuticals at clinics reported buying Armenian production for their clinics. The majority of Armenian pharmaceuticals purchased are produced by Liqvor, PharmaTech, and Arpimed, and the leading product types are infusion solutions. Among mostly consumed Armenian pharmaceuticals are Lidocain and Analgin. Twelve percent of procurers of pharmaceuticals at clinics reported that they never bought pharmaceuticals produced by Armenian companies. The majority of these people are representatives of dental clinics, who claimed to have no information on availability of Armenian products used in their field. Procurers explain their behavior of not buying Armenian pharmaceuticals by low quality and inefficiency of locally produced pharmaceuticals. There were opinions such: "There is no adrenalin in locally produced Lidocain" or "Psychotropic agents affect very inefficiently." Four percent of purchasers could not recall if they ever bought Armenian pharmaceutical products.

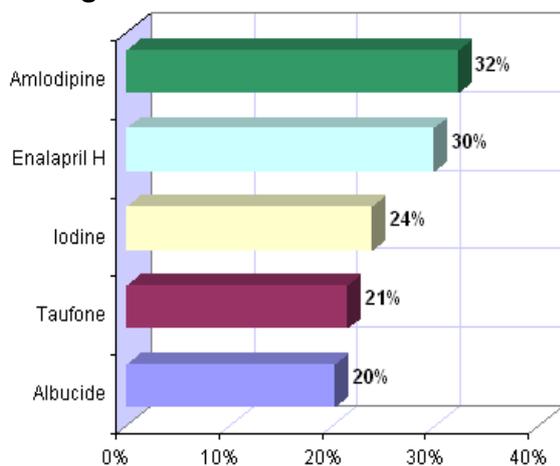
The picture with experience in using (or prescribing) Armenian pharmaceuticals is almost the same for physicians. 84 percent in practice uses (prescribes) Armenian pharmaceuticals, of which most popularly used are: infusion solutions, antibiotics, lidocain, and vitamins, while 16 percent do not use (prescribe) Armenian pharmaceuticals. Some physicians are not even aware of Armenian pharmaceuticals or do not use them because their managers (i.e., the procurers of pharmaceuticals at clinics) do not buy them. However, in this group, physicians that simply do not trust Armenian production are more common. Moreover, often this mistrust is not even explained or justified ("simply do not trust").

### ***Pharmacies' Purchasing Practices***

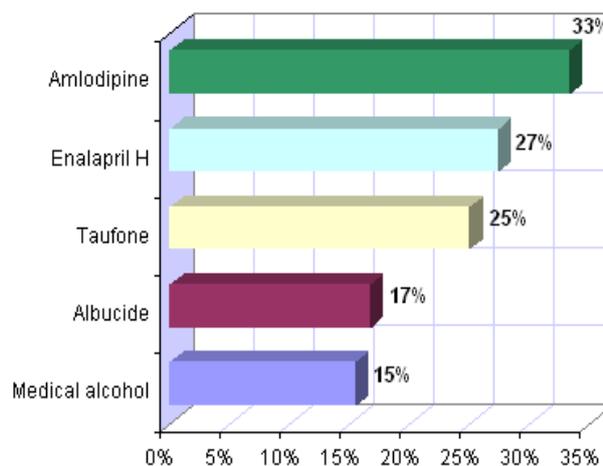
There is no pharmacy in Armenia that did not or does not sell Armenian pharmaceuticals. Pharmacies seem to take the approach applied by commercial entities: "the wider the nomenclature and choice, the greater the number of customers." Pharmacies sell numerous analogues of the same pharmaceutical, of different origin, producer, and price. Physicians prescribe various analogues of the same pharmaceutical to different patients, according to their purchasing ability. Pharmacies must meet this changing demand, as well as the demand of diverse physicians, who have different opinions on different analogues of the same pharmaceutical and apply different approaches, which are sometimes not objective (the reasons are discussed later).

Pharmacy managers purchase pharmaceutical supplies, although frequently this task is assigned to a pharmacist. Figure 4-3 shows the five Armenian pharmaceuticals bought most frequently by pharmacy managers. Pharmacists' answers (see Figure 4-4) mirror those given by pharmacy managers on the most commonly purchased and sold pharmaceuticals.

**Figure 4-3**  
**Armenian Pharmaceuticals Most Commonly Purchased by Pharmacy Managers**



**Figure 4-4**  
**Armenian Pharmaceuticals Most Commonly Sold by Pharmacists**



## ***Elements of Respondents' Perception***

### ***Importance of the Origin of Pharmaceuticals***

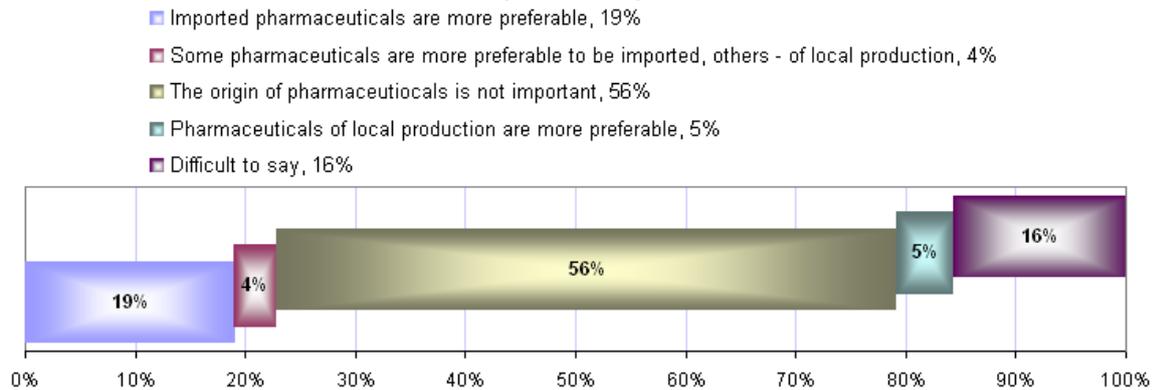
When describing their perception of Armenian pharmaceuticals almost all respondents compared these products with imported analogues. In the Armenian market, imported pharmaceuticals are considered of “higher quality” and “more efficacious”. This preference for imported products over local products has increased over time.

However, assessment results show that the image of imported pharmaceuticals is not that unshakable. When assessing certain pharmaceuticals, a positive or negative opinion is given not only about the producer, but about the country of origin, too. Thus, pharmaceuticals of German, French, Hungarian, and Slovak production are known for higher quality, while Indian, Chinese, and Iranian products were strongly criticized.

### **Consumers**

As with responses to previous questions, for consumers' perceptions of the importance of pharmaceuticals' origin, consumers are not at the same level as those of other respondent groups. The low level of their awareness does not allow consumers to make sound judgments. Not surprisingly, 72 percent of respondents gave nonspecific answers to the question about pharmaceuticals' origin: 16 percent had difficulty answering, 56 percent said that the origin is unimportant (see Figure 4-5). In other words, for almost 72 percent of respondents, the origin of pharmaceuticals does not matter. If consumers believed pharmaceuticals' origin was important, they would have to explain why, and give objective reasons for their preferences, which is hard to do with a low level of awareness.

Figure 4-5

**Importance of Pharmaceuticals' Origin among Consumers**

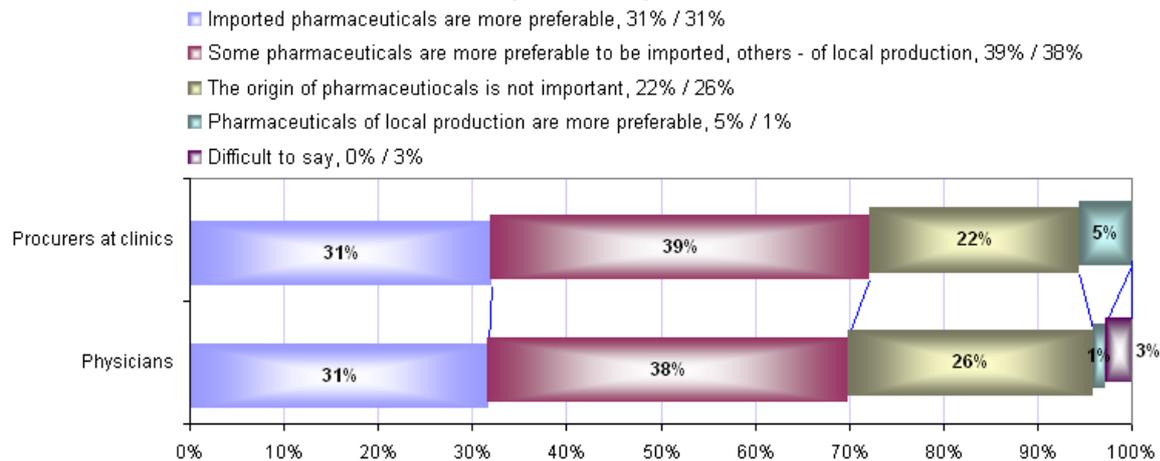
Some consumers that have formed preferences (regardless of whether the preferences are justified, or are results of superstitious or psychological complexes) prefer imported pharmaceuticals. This group of consumers is four times bigger than the group that preferred Armenian pharmaceuticals. Why are imported pharmaceuticals preferred? The most popular reasons given by consumers who prefer imported pharmaceuticals are that “imported pharmaceuticals have higher quality and are more trustworthy,” “are more efficacious,” “experience shows their trustworthiness.” A part of this group (21 percent), prefer imported pharmaceuticals because they “do not trust Armenian pharmaceuticals,” and 12 percent “are not even aware of availability of Armenian products.” Four percent of consumers were able to compare imported and locally produced pharmaceuticals and mentioned that in some cases they prefer imported, while in other cases Armenian products. However, it is worth mentioning that compared to imported pharmaceuticals, product nomenclature for preferred Armenian pharmaceuticals is much scarcer. The list of preferred Armenian pharmaceuticals is comprised of herbs, aspirin, and Narine.

**Representatives of Clinics**

Representatives of clinics show a more professional, objective attitude because the quality of their services depends on pharmaceutical products, but they also consider pharmaceutical origin when selecting a pharmaceutical. Procurers of pharmaceuticals at clinics and physicians expressed similar opinions on the importance of pharmaceutical product origin (see Figure 4-6).

Among representatives of clinics, 31 percent prefer imported pharmaceuticals, because “these products have substantially higher quality and efficacy than those of Armenian producers,” and they explain loyalty to imported products by saying “they have no right to prescribe less effective pharmaceuticals and make experiments with people’s health, when there are high-quality pharmaceuticals available (i.e., imported pharmaceuticals).” Representatives of clinics justify the mistrust toward Armenian pharmaceuticals by the following examples: (1) Armenian psychotropic agents (Arpimed) do not have the required effect on patients, (2) liquid pharmaceuticals’ packages do not close firmly and liquid flows out of the flacon (Esculap), (3) there are no instructions for use (did not specify whose product). It is not possible to try to quantify these answers, because only a few respondents tried to explain their positions or back up their statements. More generally, they simply “don’t trust.”

Figure 4-6

**Importance of Pharmaceuticals' Origin among Representatives of Clinics**

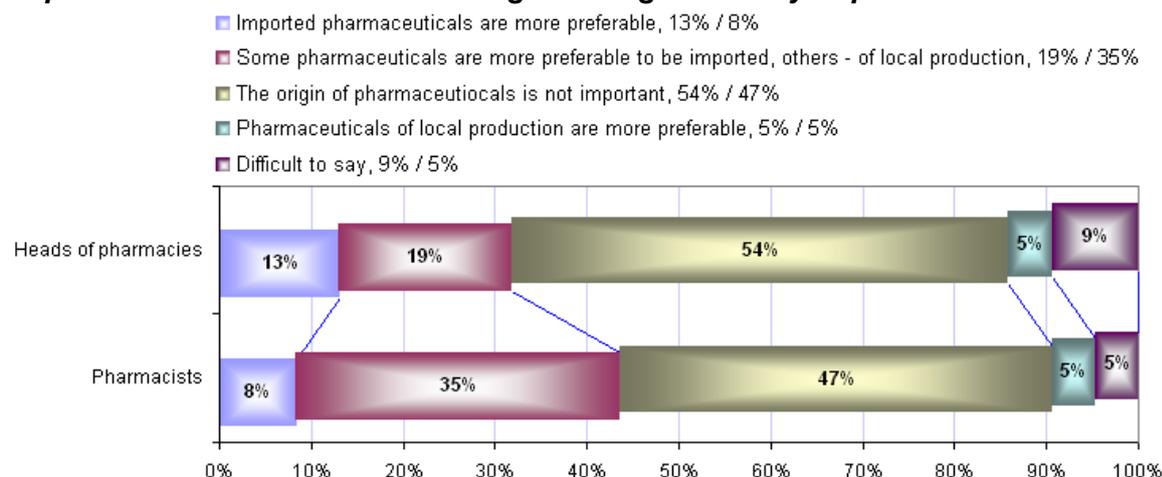
The largest group of representatives of clinics (38–39 percent), though, appears to be more pragmatic and mentioned that among pharmaceuticals they prefer are both imported and Armenian pharmaceuticals. The most popular Armenian pharmaceuticals preferred by representatives of clinics are infusion solutions, dimedrol, vitamins, analgin, caprofer, and Narine.

Unfortunately, in professional society, the Armenian origin of pharmaceuticals is not considered an advantage, but a disadvantage. In this respect, Armenian producers should make serious efforts to change that image. Figure 4-6 shows that the number of representatives of clinics giving preference to Armenian pharmaceuticals is small. This small group of people could not justify or explain why they prefer Armenian pharmaceuticals, which suggests that obvious and weighty arguments in favor of Armenian pharmaceuticals are still lacking.

**Representatives of Pharmacies**

Analysis of the answers given by pharmacy representatives suggests that the importance of pharmaceuticals is assessed by them both from a professional viewpoint and as representatives of commerce. Especially in the case of pharmacy managers, for 54 percent of which the origin is not important, they give more importance to sales realization of pharmaceuticals. This is, perhaps logical, but it is important that many buyers get information on pharmaceuticals from pharmacies. This means that pharmacy representatives (particularly pharmacists) also give advice to their clients, and their attitude or preference can become a factor in buying pharmaceuticals. In this respect, the preferences of pharmacy representatives are important to note (see Figure 4-7).

Like all other groups of respondents pharmacists also prefer imported pharmaceuticals more than local ones. However, this gap is not as wide as for representatives of clinics. Only among pharmacy representatives are those who prefer Armenian pharmaceuticals because of patriotic sentiments. This small group of people (5 percent of pharmacy representatives) takes the position that they “would like to promote Armenian production and producers, since development of Armenian producers is beneficial to the economy of Armenia.”

**Figure 4-7****Importance of Pharmaceuticals' Origin among Pharmacy Representatives****Characteristics of Pharmaceuticals**

Respondents' attitudes toward the origin of pharmaceuticals does not enable an understanding of which advantages form respondents' positive perception of imported products, and which disadvantages form respondents' critical attitude toward Armenian pharmaceuticals. Therefore we asked two further questions to obtain this information.

Respondents were asked to evaluate four main characteristics of pharmaceuticals: quality (efficacy), price, packaging, and availability. These characteristics were evaluated for both imported and locally produced pharmaceuticals, thereby getting a comparative picture. Imported pharmaceuticals were divided into two groups by origin—international (American and European pharmaceuticals) and Russian (as a group, positioned, in terms of image, between international and Armenian pharmaceuticals). The questions about the comparative assessment of pharmaceuticals were asked to all consumer groups.

Respondents from clinics and pharmacies were asked to evaluate Armenian pharmaceuticals separately, based on a wider list of product characteristics (profit margin, quality of distribution, and nomenclature were added to the four characteristics that consumers were asked to rate), which enabled a deeper understanding of the strengths and weaknesses of Armenian pharmaceuticals. Questions about Armenian pharmaceuticals were asked to only two groups of respondents, procurers at clinics and pharmacy managers.

**Armenian vs. Imported**

Respondents were asked to rank characteristics of pharmaceutical products on a scale of 1 to 4, where 4 stands for the most positive, and 1 for the most negative response. Exhibit 4-1 presents definitions of the scales for each characteristic.

## Exhibit 4-1

**Definitions of Scales Used for Comparative Evaluation of Pharmaceuticals****Efficacy (Quality)**

4—very efficient

3—efficient

2—weak

1—inefficient

**Packaging**

4—nice and convenient

3—not bad

2—not nice

1—bad looking and inconvenient

**Price**

4—very inexpensive

3—inexpensive

2—expensive

1—very expensive

**Availability**

4—always available

3—can be found

2—is hardly found

1—deficit

Among all groups of respondents, few had difficulty comparing pharmaceuticals. The shares of respondents in the five groups who were able to make evaluations of the four characteristics are presented in Table 4-1.

Table 4-1

**Share (%) of Respondents Able to Make Comparative Evaluation of Pharmaceuticals**

Consumer Groups	Efficacy (Quality)			Price			Packaging			Availability		
	A	R	I	A	R	I	A	R	I	A	R	I
Consumers	26	57	49	27	52	49	27	54	50	27	51	46
Purchasers at clinics	76	82	88	84	95	97	88	84	100	93	99	100
Physicians	82	91	93	82	95	99	95	99	99	97	99	97
Pharmacy managers	89	93	94	96	99	99	99	99	99	98	98	98
Pharmacists	92	95	98	99	95	98	99	99	100	99	100	96

Note: A—Armenian; R—Russian; I—International

When comparing average scores, only answers from those able to make a comparative evaluation were taken into account.

Figure 4-8

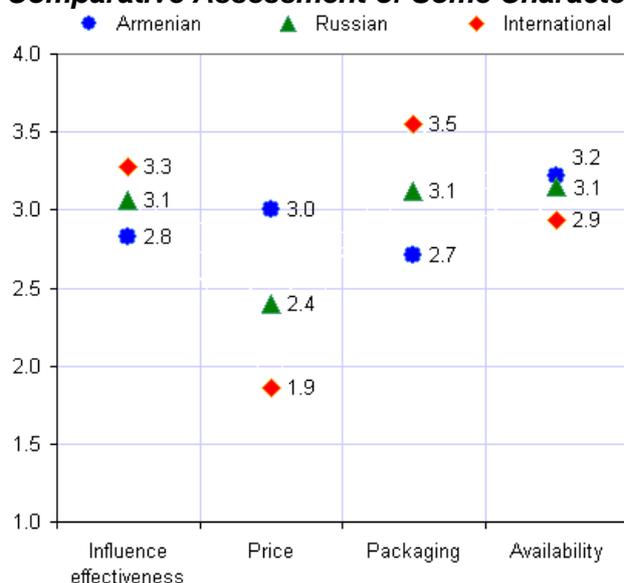
**Comparative Assessment of Some Characteristics of Pharmaceuticals by Consumers**

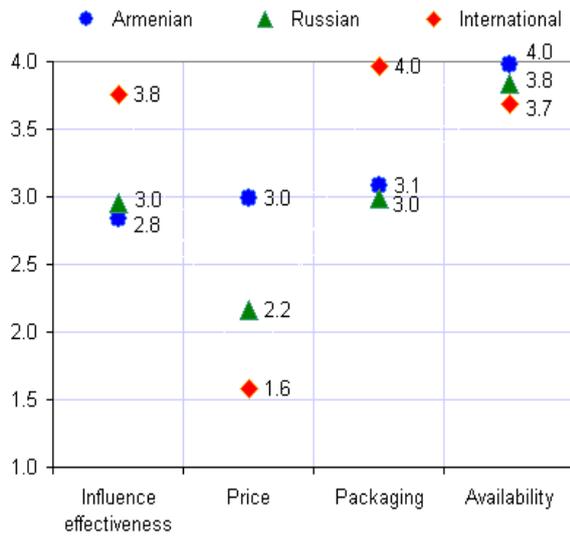
Figure 4-8 presents the results of a comparative assessment of Armenian and imported pharmaceuticals by five consumer groups. In comparing Armenian and imported pharmaceuticals, consumers had the most difficulty; 36 percent were unable to give any estimation of any characteristic of Armenian or imported pharmaceuticals.

Only 36 percent of consumers make estimations based on their own experience of using pharmaceuticals. Within this group the influence of indirect or secondary sources is significant. Thus, 24 percent of consumers based their

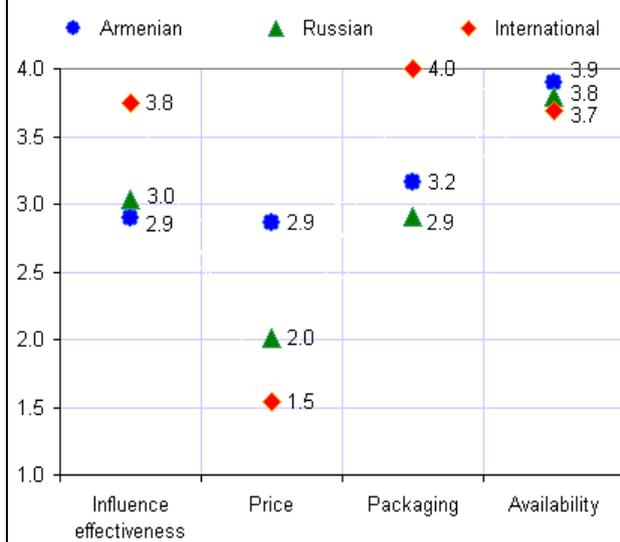
estimations on the advice of friends or relatives, 17 percent on television programs related to healthcare and advertisements, and 11 percent on the advice of physicians and pharmacists.<sup>14</sup>

A comparative assessment by representatives of clinics is shown in Figures 4-9 and 4-10.

**Figure 4-9**  
**Comparative Assessment of Some Characteristics of Pharmaceuticals by Procurers of Pharmaceuticals at Clinics**



**Figure 4-10**  
**Comparative Assessment of Some Characteristics of Pharmaceuticals by Physicians**



A comparative assessment by pharmacy representatives is shown in Figures 4-11 and 4-12.

**Figure 4-11**  
**Comparative Assessment of Some Characteristics of Pharmaceuticals by Pharmacy Managers**



**Figure 4-12**  
**Comparative Assessment of Some Characteristics of Pharmaceuticals by Pharmacists**



<sup>14</sup> Many respondents mentioned that 2-3 sources served as bases for forming their estimations of pharmaceutical products.

In assessing the four characteristics of pharmaceutical products, almost all representatives of clinics and pharmacies based their evaluations on their own experience. A general observation based on consumers' assessment is that Armenian pharmaceuticals are less expensive and more available than imported products. All respondents agree on this issue. At the same time, they agree that imported pharmaceuticals have higher quality (in terms of efficacy) and better packaging than Armenian products. Considering the fact that respondents prefer imported pharmaceuticals over Armenian pharmaceuticals, the most important characteristic of pharmaceuticals is perceived to be quality. If quality is good, the high price becomes an issue of secondary importance. This is natural, because pharmaceuticals are a special type of product and their use is directly related to people's health; people are not inclined to save money at the cost of their health.

### **Respondents' Assessment of Armenian Pharmaceuticals**

A deeper assessment of Armenian pharmaceuticals was carried out with two groups responsible for the wholesale purchase of pharmaceuticals: procurers of pharmaceuticals at clinics and pharmacy managers. They were asked to make an assessment on the basis of the following characteristics:

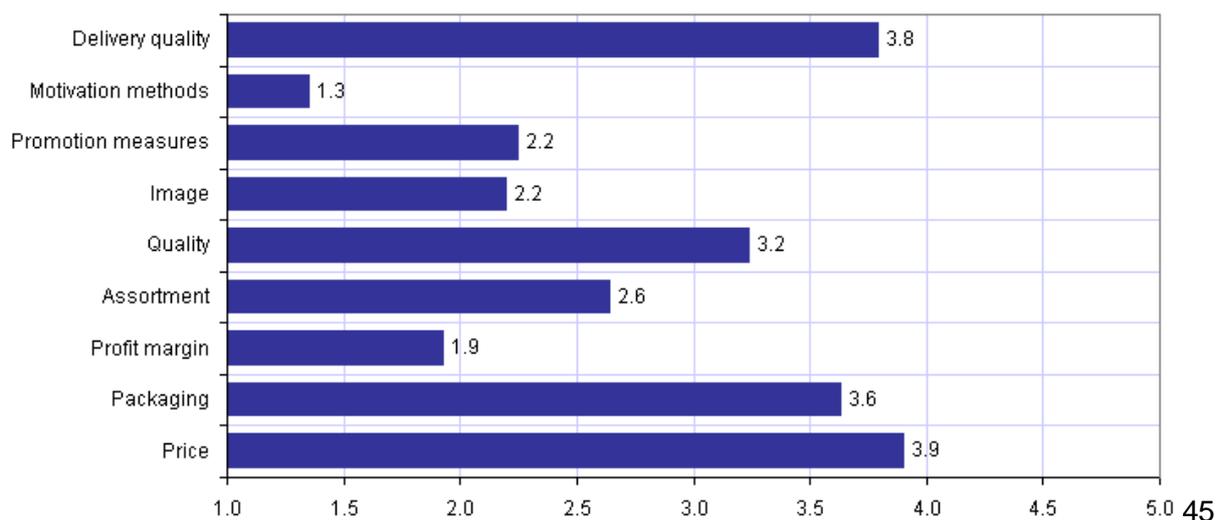
- ▶ Price
- ▶ Nomenclature
- ▶ Promotion
- ▶ Packaging
- ▶ Quality
- ▶ Motivation
- ▶ Profit margin
- ▶ Image
- ▶ Quality of distribution

These characteristics were assessed on a scale of 1 to 5, with 5 the most positive and 1 the most negative response.

According to procurers of pharmaceuticals at clinics, the most attractive factor of Armenian pharmaceuticals is the lower price compared to the price of imported analogues. For instance, the Armenian Enalapril-H containing 20 pills is sold for AMD 750 at pharmacies, while the Slovenian analogue Enap-H (producer, Krka) for the same size costs AMD 2,000; and the Armenian liquid Paracetamol 60 ml flacon costs AMD 250, while 100 ml of the English analogue Panadol (producer, Glaxo) costs AMD 1,000 at pharmacies. Therefore, Armenian pharmaceuticals received the highest scores on price (3.9 out of 5) Figure 4-13 summarizes the scores.

**Figure 4-13**

### ***Assessment of Additional Characteristics of Armenian Pharmaceuticals by Procurers of Pharmaceuticals at Clinics***



Relatively high scores were given to packaging and quality of distribution (method) of Armenian pharmaceuticals. According to procurers of pharmaceuticals at clinics, the packaging of Armenian pharmaceuticals needs to be improved, but it is not so bad that it can hinder product sales. The fact that every year Armenian producers improve the quality of packaging was assessed positively, and in this respect, the efforts of Liqvor, Arpimed, and PharmaTech are especially noticeable. As concerns distribution, Armenian pharmaceuticals have a well-organized distribution method -- the chain of producer–distributor–consumer -- where distributors are specialized and perform warehousing functions for producers and distributors. Indeed, efficient distribution is not an advantage just of Armenian pharmaceutical enterprises but of imported pharmaceuticals as well.

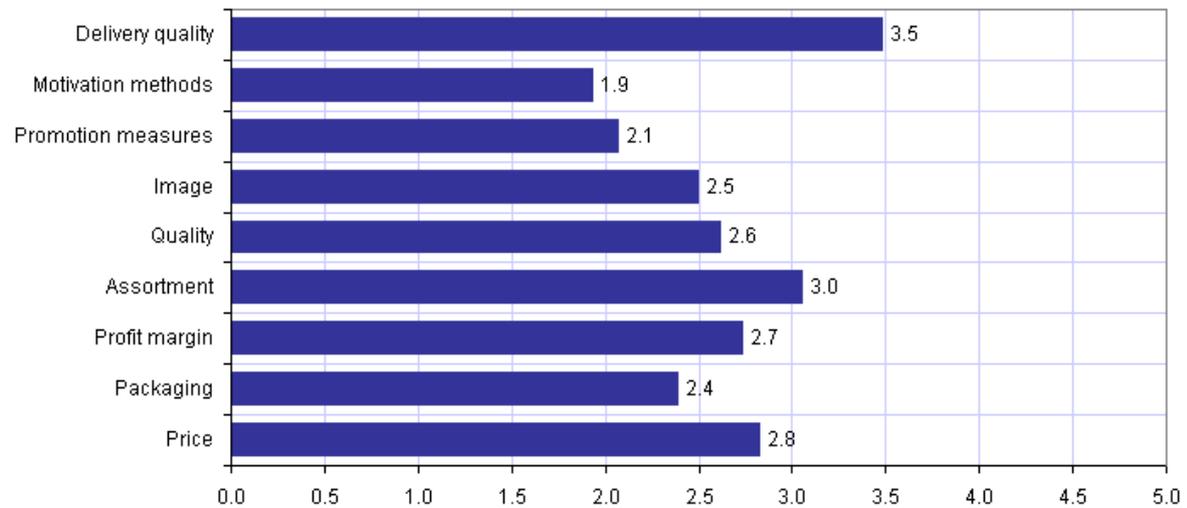
The quality of Armenian pharmaceuticals was assessed at above average (positive). According to procurers at clinics, Armenian producers still have much to do to improve production quality. Psychotropic agents (do not affect) and Lidocain (is like “water”) in particular were cited for their low quality. These opinions are rare, however, and cannot be taken as general opinion, which is that the most popular pharmaceuticals, particularly infusion solutions (produced by Liqvor and PharmaTech) are of quite high quality, which proves the dominant market position of these products.

The nomenclature of Armenian pharmaceuticals received average ratings; Armenian producers together produce only about 500 types of pharmaceuticals, while more than 3,500 pharmaceutical types are available in Armenia. Respondents’ average rating suggests that if demand increased for Armenian pharmaceuticals, producers could not meet the demand.

A “not satisfactory” rating was given to such characteristics of Armenian pharmaceuticals, and tools of realization, as methods of promotion and motivation, profit margin from sales of Armenian pharmaceuticals. According to procurers at clinics, the efforts of Armenian producers to promote their products seem to be an imitation of importers’ efforts. Advertising by Armenian producers, product presentations, and other actions of information dissemination and explanation, are not sufficient to make Armenian pharmaceuticals well known and trustworthy. Regarding producers’ efforts to motivate their clients (money awards, gifts); these are rare and mainly episodic. The profit margin on Armenian pharmaceuticals’ sales is small. This is natural, because in the local market Armenian pharmaceuticals are positioned at a low price niche, which affects the absolute value of profit margin after sales.

These ratings indicate that the image of Armenian pharmaceuticals is still not high, and this is a serious barrier to competing with imported products.

Estimations of pharmacy managers to some extent differ from the estimations of procurers of pharmaceuticals at clinics (see Figure 4-14). Pharmacy managers do not agree with their colleagues from clinics regarding price, packaging, profit margin, and methods of motivation of Armenian pharmaceuticals. According to them, prices are relatively low, but not low enough to be considered a competitive advantage. Pharmacies expect more from packaging; therefore they rate packaging of Armenian pharmaceuticals lower than they do profit margin and methods of motivation.

**Figure 4-14*****Assessment of Additional Characteristics of Armenian Pharmaceuticals by Pharmacy Managers***

Pharmacy managers are a little more satisfied with the motivation methods that Armenian producers use. Because of the particularly high activity of small Armenian producers in pharmacies, a significant proportion of producers manage to motivate pharmacy managers or pharmacists, sometimes through material motivation.

## 5. PECULIARITIES OF RESPONDENTS' BEHAVIOR

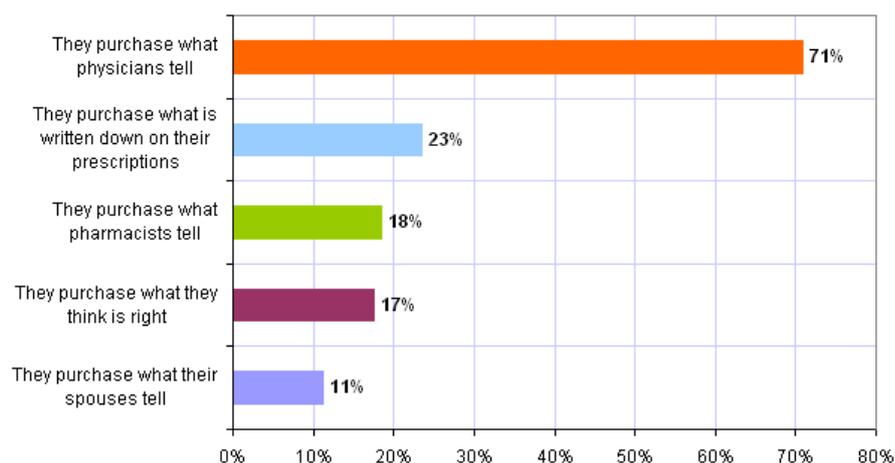
Not only do respondents have different levels of awareness and different perceptions about Armenian pharmaceuticals, respondents also behave differently when making purchases. Respondents' purchasing behavior is based on several factors.

### Consumers

As mentioned previously, pharmaceuticals for consumers are not for everyday consumption and represent a special group of healthcare products about which final consumers are not well informed. However, because sooner or later each consumer will have to buy pharmaceuticals (frequently or rarely), a second agent usually gives advice. The survey results show that such advisers can be spouses, friends, physicians, or pharmacists. Consumers can ask for advice from more than one of these individuals. And regardless of whose and which kind of advice is used by consumers to make a decision to purchase pharmaceuticals, the group of people whose advice or opinion has exceptional importance and meaning for consumers is physicians.

The assessment results show that 71 percent of consumers rely exclusively on physicians' opinions or prescriptions when purchasing pharmaceuticals (see Figure 5-1). This heavy reliance on physicians' opinions is not only because of a low level of awareness among consumers, but also because physicians are perceived to be the only knowledgeable specialists who can solve their health problems. This makes consumers directly and psychologically dependent on physicians.

**Figure 5-1**  
**Consumers' Buying Behavior by the Groups they Consult**



Consumers often (18 percent) also follow pharmacists' advice. This usually happens in two cases: when a consumer cannot find the pharmaceuticals prescribed by a physician at the pharmacy and asks for a pharmacist's advice on a substitute; or when a consumer goes to the pharmacy to buy pharmaceuticals without consulting a

physician; usually for "light" illnesses (e.g., flu, allergy, fever).

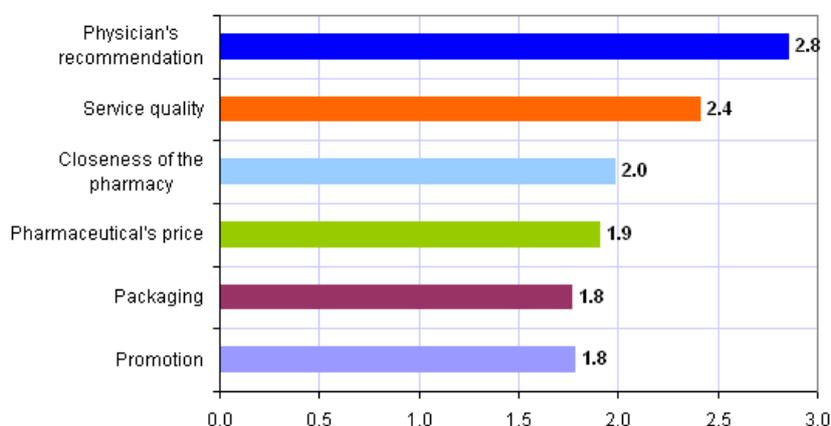
After the consumer has solved his/her main problem, i.e. consulted someone and learned the names of pharmaceuticals he/she needs, the following factors arise that affect the consumer's decision to buy:

- **Price.** Different pharmacies charge different prices for the same product, and analogues of the prescribed pharmaceuticals can be sold at significantly different prices.

- ▶ **Physician's guarantee.** A physician's guarantee can be so important that a consumer can import the pharmaceuticals from abroad, just to make sure this is the one prescribed by his/her physician (although the analogue is sold at pharmacies).
- ▶ **Packaging.** Consumers can buy pharmaceuticals with nicer packaging if given the choice.
- ▶ **Location of the pharmacy.** Consumers may be short of time and substitute the prescribed pharmaceuticals with the analogue purchased from the closest pharmacy.
- ▶ **Quality of service at pharmacy.** Consumers may prefer to make purchases only from pharmacies with high-quality service.
- ▶ **Advertising.** Consumers may prefer to buy pharmaceuticals that are familiar to them from an advertisement, if given the choice.

Consumers assessed the importance of these factors on a scale of 1 to 3, where 3 stands for very important, 2 important, and 1 not important. The results of assessment are presented in Figure 5-2.

**Figure 5-2**  
**Factors Influencing Consumers' Decision to Buy Pharmaceuticals and their Importance**



All consumers intuitively mentioned that most of all they give importance to the efficacy of pharmaceuticals. This is normal, but how they can know whether or not the pharmaceuticals have high quality before taking them? And if it has been taken once and they find that pharmaceuticals are not satisfactory, are consumers ready to ignore a physician's prescription?

We think that the answer is no. As Figure 5-2 shows, a physician's guarantee is the most important factor influencing consumers' decision to buy. Hence, people are inclined to buy the pharmaceuticals prescribed by a physician, even if they are more expensive than analogues or are not sold in the nearby pharmacy, or even if they have never heard of the pharmaceuticals.

Physicians are very well aware of this perception of consumers. And in many cases, they take advantage of this fact. More than one-third (34 percent) of consumers stated that they faced situations when physicians prescribed a medication and "advised" that "the pharmaceuticals of a particular producer or particular origin must be bought." Five percent of consumers always and 39 percent very often face this kind of situation.

But how do consumers deal with these situations? As expected, 88 percent of them follow the physician's advice. The rest behave differently: 5 percent consults with other physicians, and 3 percent also consult pharmacists and other specialists.

And what do consumers do when they do not find the prescribed pharmaceuticals at the pharmacy? Eighty-three percent try to find the pharmaceuticals in other pharmacies or contact other individuals, even relatives that live abroad. Only 14 percent of consumers are

inclined to substitute the prescribed pharmaceuticals with analogues. This is another fact proving the loyalty of patients to the physician's advice.

### ***Clinic Representatives***

Clinics, as organizations providing healthcare services, are greatly interested in the quality of services they provide. Quality is ensured by having highly skilled and professional medical workers, by civilized and cooperative service, as well as by using high quality-pharmaceuticals. Hence, it is not surprising that procurers of pharmaceuticals at clinics claim that they purchase pharmaceuticals that have high quality and provide high-quality service to clients.

The most trustworthy answers to this question are given by those representatives of clinics that make purchases independently. This refers mostly to private institutions. According to Armenian producers, state clinics or hospitals, which organize the purchase of pharmaceuticals through government procurement systems, can provide unfair competition. Sometimes, the government purchases imported and expensive pharmaceuticals, while Armenian producers supply the same pharmaceuticals. Taking into consideration that these imperfections exist in the system, however, one should not make unambiguous statements regarding this issue. State clinics are also interested in providing high quality services, since their financing is directly related to the number of clients serviced. Indeed, the better the service quality, the more clients, and hence, the more funding they will get.

Physicians are also interested in providing high-quality services. Based on the results of applied treatment methods and clients' replies, physicians accumulate experience and can make objective judgments about the quality of pharmaceuticals. Physicians enjoy complete freedom in prescribing pharmaceuticals. Ninety-three percent of officials responsible for prescribing pharmaceuticals at clinics state that none of the institution managers interferes in physicians fulfilling their professional duties. Rarely does the management give directions or orders physicians about the use of particular pharmaceuticals.

Thus, at clinics, physicians have freedom of action, which makes them one of the most important players in the process of pharmaceutical circulation within and from clinics.

Many participants in the pharmaceuticals market, including producers and representatives of pharmacies and physicians, confirmed that at clinics, cases of "cooperation" between suppliers of pharmaceuticals and physicians is very common. They may cooperate in the following way: physicians are motivated by suppliers of pharmaceuticals to write prescriptions and give advice that promote sales of the "motivator's" products. Among methods of motivation are money, awards, and gifts. Producers emphasize importers' intensive efforts in these processes. According to experts, physicians make deals with suppliers and break several ethical norms, because pharmaceuticals have a direct relation to people's health, and therefore, physicians should prescribe the most efficacious pharmaceuticals rather than those the sales of which make a profit for him/her.

What are the counterarguments that physicians bring against these claims? Only 4 percent of physicians mentioned that they include names of analogues in the prescription, leaving the choice to patients. Eighty-nine percent did not confirm, but also did not deny, cooperating with suppliers of pharmaceuticals, and claimed that they prescribe the most efficient and the highest-quality products, independent of their origin or price or the availability of analogues. Physicians do not deny that while writing prescriptions they are directing patients, i.e., making them purchase pharmaceuticals of a certain origin and produced by a certain firm. Sixty-two percent of physicians do this. However, they explain that the only purpose is to direct patients to the highest-quality pharmaceuticals. Some physicians wished to keep their answers anonymous and mentioned that not physicians, but the officials responsible for

purchasing pharmaceuticals at their institutions are “cooperating” with importers and producers. It is hard to assess how close this statement is to reality, but it is a fact that “cooperation” with importers/producers is not denied.

The existence of “cooperation” between physicians and importers/producers was completely rejected by 77 percent of procurers at clinics. The rest, or 23 percent, did not exclude the possibility of this relation. Nine percent from this group confirms its existence and mentions that they are aware of this cooperation and think it is normal. Another 9 percent mentioned that this kind of cooperation exists, but they stop these relations as soon as it is revealed, because it is forbidden in their clinics.

Thus, we might conclude that relationships between pharmaceutical suppliers and procurers at clinics result in the promotion of sales (through incentives) of particular products.

### **Pharmacy Representatives**

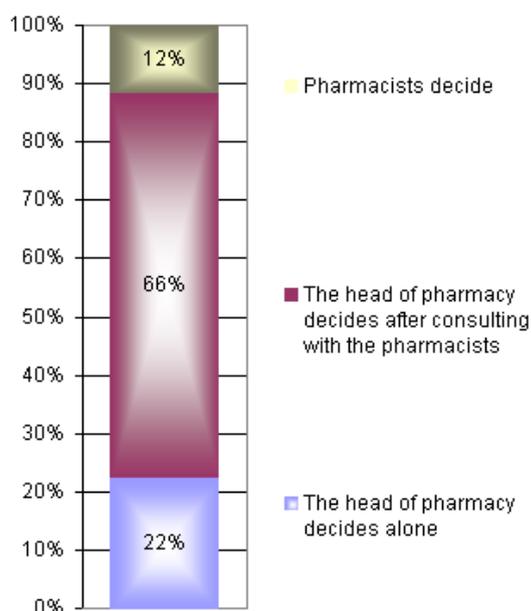
The analysis of awareness of pharmacy representatives of Armenian pharmaceuticals revealed that pharmacy managers and pharmacists are well aware of producers and their products, and even of small producers, a part of which are not even mentioned in product catalogues. This proves a high level of activity of producers within pharmacy networks. This activity is aimed at their own sales promotion. The survey results reveal that in this context the most important role belongs to pharmacists, as individuals who directly communicate with clients.

Because when purchasing pharmaceuticals, pharmacies follow the principle: “as many types of pharmaceuticals at the pharmacy as possible,” pharmacy managers’ task is not to buy products of a particular producer, but to buy as many types as possible.

At pharmacies, managers are the main decision makers when buying pharmaceuticals (see Figure 5-3). This is done by either only the manager (22 percent), or by consulting pharmacists (66 percent). Figures show the decisive role of pharmacy managers and the simultaneously high level of involvement of pharmacists.

**Figure 5-3**

#### **Decision Makers at Pharmacies when Procuring Pharmaceuticals**



As concerns other factors influencing sales of pharmaceuticals in the pharmacy network, these relate to the peculiarities of behavior of the pharmacy manager and pharmacists. Thirty-six percent of pharmacy managers interfere with pharmacists’ work, giving commands and directions to sell particular pharmaceuticals. Sixty-four percent do not promote any producer or product. Thus, it seems that the role of pharmacists is usually, but not always, predominant in selling pharmaceuticals at pharmacies.

The majority of clients who visit pharmacies with physicians’ prescriptions have been clearly directed to buy pharmaceuticals produced in a particular country or by a particular producer, excluding the possibility of substitution with analogues. Eighteen percent of pharmacists

mentioned that all clients that come from physicians' have clear directions, and 76 percent think that this phenomenon is observed with every other client. In this case, clients are not left any opportunity for choice. Pharmacists do not approve of this approach: what if they do not sell the prescribed pharmaceuticals? In that case, they attempt to convince the client that it is also possible to buy the analogue, but as has been described above, clients are not inclined to divert from a physician's prescription. In such cases, the pharmacy loses its customers.

What is the behavior of the pharmacists when they do not have the prescribed pharmaceutical at their pharmacy? Pharmacists declare that in almost all cases they suggest analogue pharmaceuticals to the client. Seventy-nine percent of pharmacists suggest all available analogues, another 21 percent propose only those analogues they want. In such cases, most clients hesitate before making final decisions. Only 27 percent of pharmacists said that clients do not hesitate and purchase the suggested analogue pharmaceuticals. Most consumers reject to substitute the analogue, but some do upon the strong recommendation of pharmacists. Pharmacists therefore can influence consumers and change their opinions. For this purpose they should offer only proper and professional explanations.

There is a completely different picture, when a client goes to a pharmacy without consulting a physician for a prescription, or has visited a physician but is inclined to get alternative advice as well. According to information from pharmacists, 66 percent of such clients consult with them when deciding what to buy and 62 percent follow pharmacists' advice, buying the pharmaceuticals advised.

Some physicians mention in the prescription not only the pharmaceuticals' name (country, producer), but also the address of the pharmacy where it needs to be bought. Such cooperation between physicians and pharmacists theoretically is possible only by intermediation of a third party, which can be importers/producers. But it is possible only if the pharmacist is somehow interested or motivated. This is where it is important to understand how honest pharmacists are when giving advice to clients: Do they offer all the available analogues of the prescribed pharmaceuticals or do they offer the one that they benefit from? Twenty percent of pharmacists honestly confessed that in some cases they offer only one analogue even if more than one is available, while 21 percent confirmed that they receive dividends from importers/producers for sales of some pharmaceuticals.<sup>15</sup> These figures are possibly higher in reality, because some pharmacists "cooperate" with importers/producers but do not admit it. Fifteen percent of pharmacists who have not been "motivated" by importers/producers would like to be.

What do pharmacy managers think of such behavior by their employees? Twenty-seven percent of them are aware of their employees being motivated financially by importers/producers and think this is normal. Two percent of pharmacy managers said that they found out about such cases and stopped it. Fourteen percent simply are not aware of such cooperation. Fifty-five percent of pharmacy managers are sure that at their pharmacies there are no cases of employees being motivated by importers/producers, which does not necessarily mean that this is the case.

Thus, some pharmacists, like physicians, are also involved in the promotion of pharmaceuticals' sales, acting as interested and non-objective parties.

---

<sup>15</sup> We do not name these pharmaceuticals to maintain the principle of anonymity.

## 6. CONCLUSIONS & RECOMMENDATIONS

This report addressed the awareness, perception, and behavior of buyers of Armenian pharmaceuticals, analyzing from various sides, and resulting in reasoned conclusions, both general and specific. Conclusions and recommendations are outlined below. The implementation of these recommendations may significantly contribute to the development of the Armenian pharmaceutical industry, as well as the promotion of local pharmaceuticals.

### *Conclusions*

#### *Consumers*

This research has revealed answers to questions concerning consumers' awareness of Armenian pharmaceuticals that are hardly surprising: Consumers have very little information about local pharmaceuticals. This is not only the shortcoming of local pharmaceuticals, but also of consumers. This statement is confirmed by consumers' lack of awareness of imported pharmaceuticals as well. This lack of awareness comes from three main factors, which will always exist and play an important role:

- ▶ Pharmaceuticals are not an everyday commodity. Pharmaceuticals are consumed irregularly, and the majority of consumers do not gain "consuming experience" on which to base awareness.
- ▶ Pharmaceuticals are not a monolithic product. Consumers find several thousands of pharmaceuticals on the market and simply cannot remember even a small number. Moreover, consumers have no chance of knowing or consuming the overwhelming majority of pharmaceuticals in their life.
- ▶ Consumers have left decision making about specific pharmaceuticals to professionals, i.e., physicians and pharmacists. This is a rational choice, but one that results in a situation in which consumers cannot recall even pharmaceuticals that they consume or have consumed. In the physician–prescription–pharmacy chain, the consumer undertakes a passive function. The consumer just purchases the pharmaceuticals that he or she was told to purchase. Besides, very few consumers can even read physicians' handwritten prescriptions.

Consumers have scarce opportunities for receiving information about pharmaceuticals. In Armenia, television has the biggest audience for information distribution. Pharmaceutical promotion is restricted by law, and healthcare programs become the only opportunity for promoting pharmaceuticals, but these programs serve mainly as information sources for physicians and pharmacists, who are the main sources of information about pharmaceuticals for consumers. The assessment results revealed that physicians and pharmacists have a certain motivation for providing skewed, incomplete information. Thus, consumers in fact have no opportunity to receive complete information about pharmaceuticals. This turns them into unaware and passive participants in the market.

The low awareness level of consumers directly affects their perception of local pharmaceuticals. Their perception cannot be well-grounded, whether it is positive or negative. Even during the 20-minute interview for this assessment, many consumers expressed contradictory opinions about local pharmaceuticals. The majority declared that they would prefer Armenian analogues of pharmaceuticals, if available; but after 10 minutes only 5 percent confirmed this position. This is not accidental. Consumers do not have sufficient objective bases for substantiating their perception. To avoid having to substantiate and back up their answers, the majority of consumers do not find the origin of

pharmaceuticals important. Therefore the lack of information can cause subjective and sometimes erroneous perceptions.

Consumers psychologically depend on physicians: they consume pharmaceuticals largely on the bases of physicians' advice. Besides professional advice (what pharmaceuticals should be used, in what doses, etc.), consumers receive other advice as well about the brand to buy and the pharmacy to buy it from. The overwhelming majority of consumers follow the advice (orders) of their physicians. And when the consumer goes to the pharmacy without first visiting a physician, he or she relies on the pharmacist. Pharmacists, to their credit, do not direct clients as intensively as physicians do.

To summarize the conclusions regarding consumers of pharmaceuticals: they are unaware, their perceptions are not founded on objective reasons, and they are dependent on others' advice.

### ***Clinics***

Representatives of clinics (procurers at clinics and physicians) are part of the professional healthcare community, and legitimately, their level of awareness, perception, and behavior about local pharmaceuticals is much higher than that of consumers. The role of physicians in disseminating information about local pharmaceuticals and in forming perceptions and behavior is dominant. In fact they dictate the rules of the market by their functional role and behavior.

Clinics' representatives' are more aware of local pharmaceuticals than consumers, although they are not as aware as they could be, given that the awareness rate of the most well-known pharmaceutical producer does not exceed 55 percent. The most well-known producers consist of three or four firms with the biggest production volumes. Neither can the awareness level be considered low. There is an explanation for their "low" awareness. In their practice, clinics' representatives (especially physicians) are restricted by their narrow specialization. Physicians can hardly be expected to be completely informed about local pharmaceuticals and producers (which, in turn, may specialize in production of this or that line of pharmaceuticals).

There is a notable difference between the awareness levels of clinics' representatives in Yerevan and the regions. In fact, local pharmaceutical producers have distributed their marketing efforts unequally and have targeted mainly the capital Yerevan. This is normal, since Yerevan is the center of the provision of healthcare services by both volume of services and number of beds.

There was another interesting finding: large producers focus their marketing efforts mainly on clinics, while smaller producers focus mainly on pharmacies.

Both groups of clinic representatives have the same perception of local pharmaceuticals: they do not like them and prefer imported medicine. Imported pharmaceuticals have prevailed in the past 15 years. In this period, good partnerships, trustful, and sometimes profitable relations have been established between representatives of clinics and importers. Those strong relations create serious problems for producers.

Imported pharmaceuticals are better than local in their wide range of offerings and, as physicians mention, by their quality and effectiveness. There are both objective and subjective bases for this assertion. The majority of imported pharmaceuticals are produced in famous American, European, and Russian pharmaceutical firms, which have already applied GMP standards, which secures high quality for their products. Meantime,

representatives of clinics often prefer imported pharmaceuticals because “it should be like that.” Unfortunately, this statement is confirmed not only by physicians, but also by pharmacists and producers. In any case, relations between importers and procurers at clinics, and between importers and physicians do exist. Breaking these relations is difficult for local producers, and even impossible unless alternative “cooperation” is offered; in these cases local producers simply replace importers.

In the pharmaceutical market, prescribing physicians have the strongest role. They can significantly affect the consumption of specific pharmaceuticals; end-users are in almost complete dependence on physicians. Prescribing physicians take advantage of their role and obtain personal benefit from the situation. Thus, physicians tend to be subjective and prescribe pharmaceuticals they think right. Some physicians even “cooperate” with pharmacies. Given the established cooperation network, producers sometimes have no other choice than to suggest similar or alternative cooperation to physicians and pharmacies.

### ***Pharmacies***

Representatives of pharmacies are the group of respondents most aware of the local pharmaceutical industry. They have one-and-a-half to two times more information about local pharmaceuticals and producers than representatives of clinics. This higher awareness among the pharmacists is not accidental. Pharmacies should be treated as simple trade outlets that are interested in presenting as wide a range of choice as possible. Pharmacy managers secure the supply; other employees sell pharmaceuticals. Thus they are permanently very well informed about local pharmaceuticals and their producers.

Pharmacists are intensively affected by producers, which give a huge volume of printed materials to pharmacies. Smaller producers are more active in this area, and are therefore better known there as well. Representatives of pharmacies (especially pharmacists) read the most of any respondent group. Printed professional media is their second source of information about local pharmaceuticals and producers.

Pharmacists' perception of local pharmaceuticals is different than that of representatives of clinics. Some pharmacists have a strong preference for imported pharmaceuticals, but for more of them (about 50 percent) the origin of pharmaceuticals does not matter. Pharmacies are more anxious about delivery, quality, range of choice, and price of pharmaceuticals. In fact, pharmacies should be treated as simple trade entities.

In the pharmaceuticals market, pharmacies do not limit themselves to the technical function of retail. Some pharmacies undertake other functions, too. When we say that smaller producers actively cooperate with pharmacies, we do not mean only marketing measures. One-fifth of pharmacists declared that they cooperate with producers for mutual financial benefit.

### ***General***

We have to note, that aside from producers and importers, there are other suppliers of pharmaceuticals in the market. They also dictate rules in the market. Clinics and pharmacies are real intermediaries in the distribution network of pharmaceuticals. They can't be ignored. Maybe this is the reason for oversupply of pharmaceuticals in such a small market as Armenia. In all this, the “huge army” of end-users is completely outside of the market, and is completely under the control of other market participants.

### **Recommendations**

We make recommendations in this section based on our analysis and conclusions. The implementation of these recommendations will allow the enhancement of the competitiveness of Armenian pharmaceuticals in the local market and increase production and consumption volumes domestically. To present reasonable and consistent recommendations, it is necessary to segment recommendations by market participant and define goals.

There are two main types of recommendations presented for increasing the awareness and perception of locally produced pharmaceuticals: general (for the whole pharmaceuticals subsector) and segmented (for specific segments of consumers). Specific recommendations are presented below:

Assessment results show that a range of consistent steps and activities may bring about changes in perception of pharmaceutical market-makers. The most desired output is to eliminate the perception that pharmaceuticals of Armenian origin are worse than their foreign analogues. Examples of proposed activities:

- ▶ Organization of exhibitions and fairs
- ▶ Implementation of explanatory seminars
- ▶ Presentation of new lines of pharmaceuticals
- ▶ Television and radio programs presenting and promoting the whole subsector
- ▶ Presentation of the achievements in the subsector in printed media (especially in specialized publications) and presentation of comparisons with international best practices and products.

Another question that must be addressed is the correct segmentation of buyers of locally produced pharmaceuticals. Consumers' awareness of locally produced pharmaceuticals is very low, but the level of awareness will not change substantially even after an intensive promotional campaign because consumers are not market-makers. The market is regulated by other participants. In other words, no special promotional activities targeting consumers should be carried out at this stage.

Specific measures should target the professional community of the pharmaceuticals market in Armenia, however. That community consists of physicians, procurers of pharmaceuticals at clinics, and representatives of pharmacies. Each group of market-makers is interested in specific features of proposed pharmaceuticals. In the case of physicians, the most important factor is the quality of pharmaceuticals (efficacy); procurers of pharmaceuticals at clinics are interested mostly in pharmaceutical prices; pharmacies prefer suppliers that offer the widest product range and procurement options.

Each local producer should develop and apply specific promotional measures for each group of market-makers. In particular, theoretical and practical (clinic or laboratory) seminars may be organized for physicians, during which they have the opportunity to review evidence of the high quality of locally produced pharmaceuticals.

Prices of local pharmaceuticals are more competitive, and there is no need for additional measures in that regard.

Local pharmaceutical producers should develop a special policy for pharmacies: they should offer as wide a range of products as possible, secure regular supplies, respond to requests of pharmacies as soon as possible, provide technical assistance, supply pharmacies with accessories (show-stands, boards, leaflets and booklets, plastic bags, etc.), and provide commodity credits and delayed payment schemes.

Many importers and producers carry out various schemes and activities for motivating buyers, and the motivated market-makers successfully direct consumers' purchases. Opinion is divided on the motivation of market-makers. On the one hand this kind of direction of end-users' behavior can be considered unethical, while on the other hand there is no law restricting this kind of activity. If local producers of pharmaceuticals do not practice motivation schemes for pharmaceutical market-makers in Armenia, they will find themselves in worse competitive conditions from the beginning.

In general, it could be suggested that producers practice motivation schemes such as those that almost all importers use. This does not mean that producers should bribe market-makers, but must find legal ways of motivation. In this situation, unions and associations that advocate for the interests of local pharmaceutical producers may play an important role.

During the survey, representatives of clinics recommended the implementation of the following major measures (in order of priority):

- ▶ Measures should be taken to promote local pharmaceuticals and prove their quality to physicians (e.g., study tours to factories, seminars, presentations, regular TV programs, conclusions of independent authoritative experts).
- ▶ The range of products should be widened extensively.
- ▶ The quality (efficacy) of locally produced pharmaceuticals should be improved consistently; high quality inputs must be used in processing; dosage requirements should be strictly followed, and product expiration dates should be respected.
- ▶ The packaging and appearance of locally produced pharmaceuticals should be improved notably.
- ▶ The local production of pharmaceuticals should be organized in accordance with GMP standards.

Representatives of pharmacies recommended the implementation of the following major measures (in order of priority):

- ▶ Local producers should substantially improve the appearance and packaging of pharmaceuticals they produce.
- ▶ The range of products should be widened extensively.
- ▶ Local production of pharmaceuticals should follow GMP standards.
- ▶ Local producers should intensify measures of presentation and promotion of locally produced pharmaceuticals (e.g., seminars, presentations, exhibitions).
- ▶ The quality of locally produced pharmaceuticals should be improved (e.g., efficacy improved, production conditions improved, standards of production should be secured).
- ▶ Local producers of pharmaceuticals should intensify their cooperation with physicians and follow their advice.
- ▶ Ensure and secure price competitiveness for the whole range of pharmaceuticals produced.

The recommendations of representatives of clinics and pharmacies must be taken in context. Recommendations are provided by each group of respondents, above, based on their subjective opinions. The inclusion of their recommendations here should not be considered as those of the report authors. Nor should they be relied upon to bring about the necessary changes in local producer and product image.

## APPENDIX

### *Breakdown of Consumers by Residence*

Location	No. of Consumers	Location	No. of Consumers
YEREVAN	205	v. Ayntap	2
LORI Marz	55	v. Avshar	1
Vanadzor	37	v. Ararat	1
Stepanavan	6	v. Burastan	2
Tashir	6	v. Getazat	1
Spitak	5	v. Goravan	3
v. Debet	1	v. Dalar	1
KOTAYK Marz	70	v. Dashtaqar	1
Hrazdan	28	v. Hovtashat	1
Abovyan	20	v. Masis	1
Charentsavan	17	v. N. Dvin	2
v. Alapars	1	v. Nshavan	1
v. Solak	1	v. Noyakert	1
v. Fantan	1	v. Nor Kyank	1
v. Myasnikyan	1	v. Jrahovit	1
v. Gegharot	1	v. Taperakan	2
ARARAT Marz	48	SHIRAK Marz	2
Artashat	9	v. Bagratavan	1
Masis	9	v. Marmarashen	1
Ararat	2	TAVUSH Marz	3
Vedi	4	Ijevan	3
Zod	1	NAGORNO KARABAKH	1
v. Azatavan	1	<b>TOTAL</b>	<b>384</b>