On the data of biochemical and molecular-genetical researches conducted per 70-s' among the population living in Azerbaijan, the presence of heterogeneity of thalassemia gene carriers in the different regions of respUBLIC was discovered (Figure 1).

According to the submitted slide, frequency of thalassemia gene carrying achieved a high figures (above 10%) in Sheki, Oguz, Agdash, Udjar cities of respUBLIC, and comparatively lower, but still
comparatively high, was in geographically nearby stipulated districts - Ismailli, Geokchay, Agsu, Zardab, Imishli. At the same time in some areas, in which the screening was carried out (Kedabek, Lerik) a frequency was comparatively lower. On the basis of the researches it is possible come to the conclusion, that as a whole on republic the frequency of thalassemia gene carrying is very high and makes about 10% (i.e. about 1.000.000 persons are the carriers of thalassemia gene).

The number of the revealed patients with thalassemia major was higher in areas with high frequency of a thalassemia gene carrying, whereas detectability of disease in other regions, even in where the carriers screening was not carried out, was rather low.

By comparison of frequency a thalassemia gene carrying indices, designed in various regions, with the number of patients with thalassemia major, revealed in the same areas (figure 2), direct dependence between two these parameters, as one would expect, came to light: as a rule the revealed big percent of thalassemia gene carrying results in higher quantity of the registered patients with thalassemia major (with a rare exception).

Thus, situation existing in Azerbaijan demanded steadfast attention to the specified problem and supports from the government for creation of the system directed on the prevention of the further distribution of disease in republic on the one hand, and improvement of conditions of therapy for already existing patients with thalassemia.

After careful analysis of a developed situation, President of Republic in 2005 had been authorized 2 Laws have been suppoted each other: «The Law on a state care on patients with hereditary
blood diseases - hemophilia and thalassaemia» and «The Law on a donors of blood, its components and blood service».

In 2006 under the decree of President the governmental programs on maintenance of the positions of above-stated laws have been developed and authorized by Cabinet of Ministers of Azerbaijan Republic.

The main purposes of the state program were:

Improvement of quality and prolongation of the life of persons with hereditary blood diseases – hemophilia and thalassaemia;

reduction of physical inability and the cases of death arising from complication of hemophilia and thalassaemia;

organization of preventive maintenance of complications due hemophilia and thalassaemia diseases;

creation of a prevention system of a birth of children with hemophilia and thalassaemia;

improvement of structure of the medical service rendered by the patients with hemophilia and thalassaemia;

creation of the register of the persons with hemophilia and thalassaemia diseases;

establishment of rules of financing inspection and treatment in the state medical institutions of the persons with hemophilia and thalassaemia blood diseases;

establishment of rules of financing of the prevention of a birth of children with hemophilia and thalassaemia;

training of medical experts on the treatment and preventive maintenance of hemophilia and thalassaemia and increase of there qualification;

organization of sanatorium treatment for the persons with hereditary blood diseases – hemophilia and thalassaemia.

Since 2006 when the governmental program on the national care of patients with thalassemia and hemophilia has been authorized, began the governmental financing of purchases iron chelator desferal, pumps for its administration, filters and systems for blood transfusion by the patient (figure 3).
As the state program has been authorized right at the beginning of 2006, financing of the program has not been stipulated in the budget for that year, and only partial financing from the middle of 2006 began due to reserve financial assets. Due to inclusion of a financial part of the state program in the national budget at the end of 2006, since 2007 financing has considerably increased. Financing of the state program should increase every next year for 5-10% in view of inflation and other factors.

If previously financing of such positions as purchase of desferal, leucocyte filters, pumps occurred in insufficient amount mostly due to the humanitarian help and private purchases by parents of ill children with the beginning of state financing the situation has radically changed. Especially it would be desirable to emphasize the importance of acceptance in the same year of other state program on maintenance of blood service and development of a blood donorship in the country which has radically changed a situation in rendering transfusion help to the population as whole, including the patient with thalassemia, constantly requiring blood transfusions. Purchases of transfusion systems, blood bags, tests-systems for good safety of donors blood have begun since 2006 on the part of the state. In 2007 Central blood bank have been repaired.
and reconstructed, new modern equipment and furniture for blood banks departments and laboratories was supplied. Since February 2008 blood service, as well as all governmental health services, became free-of-charge. Thus, the state has completely taken up maintenance of the state system of public health services. The basic maintenance with donor blood, which long years was did not sufficient, appreciably occurs for the account of annually growing voluntary donor movement (figure 4).

As it is submitted on the following slides, development of a voluntary blood donors movement based on a constant departures of the special mobile brigades, created from the employees of the central blood bank of our institute, visited various governmental and non-official organizations and began, gradually growing, from the end of 90th years. First initiative was begun by employees of public health services, also the important role in development of voluntary gratis blood donorship was played by religious directed humanistic motivations, constantly propoganded by Muslim clergy of our republic (figure 5).
The general requirement of donor erythrocytes for all existing thalassaemia patients in the country at the moment hardly more than 2 tons per 1 year with corresponding distribution depending on blood groups and rhesus factor, as presented in the table 1. Thus, donors blood, received from organised mobile blood service brigades brings a significant mite in maintenance of this need.

Table 1. The register of required erythrocytes for thalassaemia patients per 1 year, distributed accordingly with blood groups and rhesus factor.

<table>
<thead>
<tr>
<th>Blood Group</th>
<th>Requirement (litres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 I (+)</td>
<td>690</td>
</tr>
<tr>
<td>0 (-)</td>
<td>62</td>
</tr>
<tr>
<td>A II (+)</td>
<td>680</td>
</tr>
<tr>
<td>A (-)</td>
<td>75</td>
</tr>
<tr>
<td>B III (+)</td>
<td>412</td>
</tr>
<tr>
<td>B (-)</td>
<td>62</td>
</tr>
<tr>
<td>AB IV (+)</td>
<td>120</td>
</tr>
<tr>
<td>AB (-)</td>
<td>43</td>
</tr>
<tr>
<td>AB (-)</td>
<td>215</td>
</tr>
</tbody>
</table>

Totally per 1 year = 2144 litres (10720 donations).

As was reported previously, the treatment program of patients with thalassemia major is realizing in the specialized day-time hospitals - 2 hospitals in Baku city (at our institute and Republican children's hospital), 1 - in Ganja city and 1 - in Sheki.

Now 323 patients registered and undergoes treatment in a day-time hospital of our institute, 109 patients - in republic children's hospital, 40 - in Sheki and 14 – in Gandja. The structure of day-time clinic is closely similar.
The obligatory standard for normal functioning a day-time hospital is its permanent connections with other divisions of the institute - blood bank, the specialized laboratories and polyclinic. Employees of institute constantly carry out an explanatory work among the population, organised the special programs using TV and broadcasting, producing booklets and brochures concerning thalassaemia.

At the moment due to an initiative of Heydar Aliyev fund president, ambassador of good will of UNESCO and ISESCO, deputy of Parliament of Azerbaijan Republic Mekhriban Aliyeva, approaches to the end a construction of the new center for treatment of patients with thalassaemia, in which alongside with laboratories and the clinical divisions, equipped according to the modern requirements, for the first time in Azerbaijan the genetic laboratory for prenatal diagnostics of thalassaemia will be created. It will allow to prevent completely in short terms the further spread of this disease in republic, thus, due to economy of the certain budgetary funds spent on growing every year number of new patients with thalassaemia (more than 100 children in one year) in the even greater degree to improve quality of rendered medical aid by the existing patients.

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