Global Alliance for Vaccines and Immunisation (GAVI)

Application by the Republic of Azerbaijan for the Introduction of New Vaccines

2009

2. Signatures of the Government and National Coordinating Bodies

Government and the Inter-Agency Coordinating Committee for Immunisation

The Government of **the Republic of Azerbaijan** would like to expand the existing partnership with the GAVI Alliance for the improvement of the infants immunisation programme of the country, and specifically hereby requests for GAVI support for new vaccines, namely introduction of Haemophilus influenzae type B vaccine through the implementation of the combined DTP-HepB-Hib liquid vaccine (1 dose vials)

The Government of **the Republic of Azerbaijan** commits itself to developing national immunisation services on a sustainable basis in accordance with the comprehensive Multi-Year Plan presented with this document. The Government requests that the GAVI Alliance and its partners contribute financial and technical assistance to support immunisation of children as outlined in this application.

Pages 18 and 19 of this application show the amount of support in either supply or cash that is required from the GAVI Alliance. Table No. 6.4 (6.4b) of this application shows the Government financial commitment for the procurement of this new vaccine.

Minister of Health:

Signature: .....

Name: Ogtay Shiraliyev

Date: 07 September 2009

Minister of Finance:

Signature: .....

Name: Samir Sharifov

Date: 09 September 2009

National Coordinating Body - Inter-Agency Coordinating Committee for Immunisation:

We the members of the ICC/HSCC met on the 25 July 2008 to review this proposal. At that meeting we endorsed this proposal on the basis of the supporting documentation.

- The endorsed minutes of this meeting are attached as DOCUMENT NUMBER: 1

Name/Title	Agency/Organisation	Signature
Viktor Gasimov	Ministry of Health	
Sultan Aliyev	Ministry of Health	
Samir Abdullayev	Ministry of Health	
Svetlana Zmitrovich	Republican Center for Hygiene & Epid	
Kamran Garaklinov	WHO AZECO	
Shafag Rahimova	UNICEF Azerbaycan Co	
Soltan Mammadov, Director	Rostropovich-Vishn. Foundation	

In case the GAVI Secretariat has queries on this submission, please contact:

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The GAVI Secretariat is unable to return documents and attachments to individual countries. Unless otherwise specified, documents may be shared with the GAVI partners and collaborators.

The Inter-Agency Coordinating Committee for Immunisation
Agencies and partners (including development partners and CSOs) supporting immunisation services are organised and co-ordinated through an inter-agency coordinating mechanism (ICC/HSCC). The ICC/HSCC are responsible for coordinating and guiding the use of the GAVI ISS and NVS support. Information about the ICC/HSCC in your country is provided in the spaces below.

Profile of the ICC/HSCC

Name of the ICC/HSCC: Intersectional Coordination Committee on International Projects (ICCIP)

Date of constitution of the current ICC/HSCC: ICCIP was established on 15 May 2008, based on MoH order # 70
Organisational structure (e.g., sub-committee, stand-alone): stand-alone committee under Ministry of Health of Azerbaijan
Frequency of meetings: quarterly based and ad hoc in case of MoH request
Composition: the full composition is indicated below

Function	**Title / Organization**	**Name**
Chair		
Dep. Chair	chief of medical care organization department /Ministry of Health	Dr. Sultan Aliyev
Secretary	adviser of sanitary-epidemiological sector of the Ministry of Health	Ms. Xanim Salakhova
Members	chief of sanitary epidemiological surveillance sector/ Ministry of Health	Dr. Victor Gasimov
	dep. chief of international relations department/Ministry of Health	Dr. Samir Abdullayev
	dep. chief of medical care organization department, responsible coordinator on mother and child health/Ministry of Health	Dr. Elmira Aliyeva
	director/ Public Health and Reform Center	Dr. Jeyhoun Mammadov
	dep. director/ Republic Center of Hygiene and Epidemiology, EPI manager/ Ministry of Health	Dr. Svetlana Zmitrovich
	director/Center of Analytical Expertise of Pharmaceuticals and medical equipment	Dr. Abulfaz Abdullazadeh
	head/ WHO CO	Dr. Kamran Garakhanov
	health and nutrition officer/UNICEF	Dr. Shafag Rakhimova
	health program coordinator/USAID	Dr. Tara Milani
	director/ VRF CO	Mr. Soltan Mammadov
	health program coordinator/ World Bank	Dr. Elvira Anadolu
	expert/ Ministry of Finance	Mr. Javid Mammadov
	expert/Ministry of Economical Development	Mr. Jamaladdin Guliyev

Major functions and responsibilities of the ICC/HSCC:

- Definition and coordination of main strategic trends of international projects in healthcare sector
- Consideration and approval of projects and their implementation plans
- Synchronization of international projects with main terms of Azerbaijan Healthcare Reform Conception, National strategies and State Programs
- Ensuring appropriate and cost-effective allocation of resources available through international projects
- Coordination of international projects to support MOH and implemented reforms

Three major strategies to enhance the ICC/HSCC's role and functions in the next 12 months:

1. Increase high-level commitment to immunization programme through cooperation of healthcare sectors beyond immunization, particularly maternity and child, health systems, health information, and health planning and financing.

2. Establish regular communication flow on information sharing and feedback to national health and financing sector authorities.

3. Strengthen coordination between national and international partners for comprehensive planning state program on infection diseases immunoprophylaxis for 2011-2015

3. Immunisation Programme Data

Table 3.1: Basic facts for the year 2007 (the most recent; specify dates of data provided)

	Figure	Date	Source
Total population	8 703 301	01.01.2009	State Statistic Committee
Infant mortality rate (per 1000)	11.4	2008	State Statistic Committee
Surviving Infants*	150 371	2008	State Statistic Committee
GNI per capita (US$)	3 335.2	2007	WHO Statistical Information System
Percentage of GDP allocated to Health and social services (%)	0.9	2008	WHO Statistical Information System
Percentage of state budget expenditure on Health (%)	3.2	2008	WHO Statistical Information System

* Surviving infants = Infants surviving the first 12 months of life

Please provide some additional information on the planning and budgeting context in your country:

Please indicate the name and date of the relevant planning document for health

Development of the healthcare sector and protection of public health have been identified by the Azerbaijan President among priority directions of the country's long-term development. In 2006 the Ministry of Health developed the National Health Strategy. Health Policy Concept Paper was developed in 2007 and covered all aspects of health sectors reform. The latest documents regulating the health care financing are:
The President Decree No 2592 on approval of establishment of a "State Mandatory Medical Insurance Agency" under the Cabinet of Ministers – 27 December 2007
The President Decree No 2620 on approval of a "Health System Financing Reforms Concept and introduction of mandatory medical insurance in the Republic of Azerbaijan – 10 January 2008

Is the cMYP (or updated Multi-Year Plan) aligned with this document (timing, content etc)

The Azerbaijan cMYP was developed in accordance to the National Health Strategy, Health Policy Concept Paper and the National Immunization Program for 2006-2010 and reflects their vision, goals, strategies and targets.

National health budget planning
In line with National Health Strategy, the Cabinet of Ministers approved 9 state programs on target areas of health care with separate budget line covering 2006-2010, including maternity and child health, infection diseases immunoprophylaxis, medical check up card, etc. In addition to budget under these programs, the Ministry of Health has annually approved budget for overall functioning, which includes routine expenses for heath staff etc. In general health financing is decentralized system, except sanitary–epidemiological surveillance sector.
For vaccines and injection safety supplies The Republican Center for Hygiene and Epidemiology defines resource requirements for the next fiscal year by the end of July and submits the budget of the national immunization program to the MOH. The MOH develops the consolidated budget for entire health sector and submits it to the Ministry of Finance.
The Government submits the state budget to the Parliament for the review and adoption.
As soon as the Parliament approves the state budget, the MOH becomes responsible for the execution of the state budget in health sector. It means that the MOH receives budgeted funds from the Ministry of Finance and manages these funds on its own in accordance with needs of the national health programs. The MOH can reallocate the flow of resources between different national health programs based on emergency or priority needs.

National planning cycle for immunisation

The first National Program on Infection Diseases Immunoprophylaxis was issued by Cabinet of Ministers Decision no. 177 of 19.07.2006 and covers a 5-year period (2006-2010).

The annual national planning cycle for immunization includes the issuing specific guidelines and recommendations by the MoH, conducting vaccine planning workshops at district level with participation of rayon level epidemiologists and primary health care workers; updating lists of population served by health facilities, preparing population counts for the age groups targeted for specific immunizations; compiling figures at rayon level and submitting them to the Republican Center for Hygiene and Epidemiology.

Vaccination coverage is monitored on monthly base and vaccine stocks in the field are reviewed at the end of each quarter.

Performance of the programme is assessed against target population groups.

Based on the vaccination schedule, plans to introduce new antigens, vaccine stocks in the field and at the national level, in July each year estimates on financial needs for procurement of vaccines and supplies are prepared by RCHE and submitted to the MoH and Ministry of Finance for preparing the budget for the next year.

Table 3.2: Current Immunoprophylaxis Schedule: Traditional, New Vaccines and Vitamin A Supplement *(refer to cMYP pages)*

Vaccine *(do not use trade name)*	**Ages of administration** *(by routine immunoprophylaxis services)*	**Indicate by an "x" if given in:**		**Comments**
		Entire country	**Only part of the country**	
Hep B	At birth within 12 hours; 2, 4 months	**X**		
BCG	At birth- first week	**X**		
OPV	At birth- first week; 2, 3, 4, 18 months	**X**		
DTP	2, 3, 4, 18 months	**X**		
DT	6 year	**X**		
MMR	12 month and 6 year	**X**		
Vitamin A	12 and 18 months, 6 year	**X**		

Table 3.3: Trends of immunoprophylaxis coverage and disease burden
(as per last two annual WHO/UNICEF Joint Reporting Form on Vaccine Preventable Diseases)

Trends of immunoprophylaxis coverage (in percentage)							Vaccine preventable disease burden			
Vaccine		Reported			Survey***		Disease	Number of reported cases		
		2006	2007	2008	2006	200…		2006	2007	2008
BCG		98.1	97.8	98.2	82		Tuberculosis*	3 678	3 602	3 962
DTP	97.1 [79]	97.1	81	97.3			Diphtheria	0	4	3
	95.3 [78]	95.0	71	95			Pertussis	60	12	5
Polio 3		97.1	97.0	97.5	72		Polio	0	0	0
Measles (first dose)		95,9	97.4	97.3	67		Measles	264	0	5
TT2+ (Pregnant women)							NN Tetanus	2	2	6
Hib3							Hib **	-	-	-
Yellow Fever							Yellow fever	0	0	-
HepB3		93.1	97.2	97.2	NA		hepB sero-prevalence*	342	360	409
Vit A supplement										
	94.7	96.2	94.1	93	NA					

* If available
** Note: JRF asks for Hib meningitis
*** Azebaijan Demographic and Health Survey, 2006, Percentage of children aged 18-29 months vaccinated at any time before the survey

Table 3.4: Baseline and annual targets

Number	Baseline and targets					
	Base year 2007	**Year 1 2009**	**Year 2 2010**	**Year 3 2011**	**Year 4 2012**	**Year 5 2013**
Births (State Statistical Committee estimates)	151,963	152,422	154,190	155,979	157,788	
Infants' deaths	1,756 (#)	4,268	4,163	4,055	3,945	
Surviving infants	150,207	148,154	150,027	151,923	153,844	
Pregnant women	151,963	152,422	154,190	155,979	157,788	
Target population vaccinated with BCG	*123,716*	131,083	137,229	141,941	146,743	
BCG coverage*	*81%*	86%	89%	91%	93%	
Target population vaccinated with OPV3	*120,813*	125,931	132,024	136,731	141,536	
OPV3 coverage**	80%	85%	88%	90%	92%	
Target population vaccinated with DTP3***	*118,118*	60,743	NA	NA	NA	
DTP3 coverage**	79%	41%	-	-	-	
Target population vaccinated with DTP1***	*120,915*	41,977	-	-	-	
Wastage[1] rate in base-year and planned thereafter	*25%*	20%	20%	20%	20%	
Target population vaccinated with **3rd dose** of Hib-DTP-HepB	*NA*	60,743	127,523	133,692	138,460	
Hib-DTP-HepB 3 Coverage**	*NA*	41%	85%	88%	90%	
Target population vaccinated with **1st dose** of Hib-DTP-HepB	*NA*	83,954	132,024	136,731	141,536	
Wastage[1] rate in base-year and planned thereafter	*NA*	5%	5%	5%	5%	
Target population vaccinated with **1st dose** of Measles	*118,526*	125,931	132,024	136,731	141,536	
Target population vaccinated with **2nd dose** of Measles	*107,430*	114,142	119,664	123,930	128,286	
Measles vaccination coverage**	79%	85%	88%	90%	92%	
Pregnant women vaccinated with TT+	*NA*	NA	NA	NA	NA	
TT+ coverage****	*NA*	NA	NA	NA	NA	
Vit A supplement **NA**	NA	NA	NA	NA	NA	
Annual DTP Drop out rate [(DTP1-DTP3)/DTP1]x100		NA	NA	NA	NA	
Annual Measles Drop out rate (for countries applying for YF)	*2,31*	2,5[1]	2,5[1]	2,5[1]	2,5[1]	

1-Based on 2007 data
* Number of infants vaccinated out of total births
** Number of infants vaccinated out of surviving infants
*** Indicate total number of children vaccinated with either DTP alone or combined
**** Number of pregnant women vaccinated with TT+ out of total pregnant women
(#) The reported officially number of deaths under one year of age might be significantly underestimated, according to DHS2006 findings. Therefore the projected number of deaths is higher comparing to the baseline data.

[1] The formula to calculate a vaccine wastage rate (in percentage): [(A – B) / A] x 100. Whereby : A = The number of doses distributed for use according to the supply records with correction for stock balance at the end of the supply period; B = the number of vaccinations with the same vaccine in the same period. For new vaccines check **table α** after Table 7.1.

Table 3.5: Summary of current and future immunisation budget

	Estimated costs per annum in US$					
Cost category	**Base year**	**Year 1 2009**	**Year 2 2010**	**Year 3 2011**	**Year 4 2012**	
Routine Recurrent Costs						
Vaccines (routine vaccines only)	2 959 994	4 824 362	4 281 844	4 240 844	4 198 135	
Traditional vaccines	469 682	590 212	597 589	605 056	612 618	
New and underused vaccines	2 490 307	4 234 150	3 684 256	3 635 789	3 585 518	
Injection supplies	111 392	163 330	154 278	156 212	158 171	
Personnel	67 110	76 834	82 213	87 968	94 125	
Salaries of full-time NIP health workers (immunisation specific)	3 440	3 939	4 215	4 510	4 825	
Per-diems for outreach vaccinators / mobile teams	49 174	56 300	60 241	64 457	68 970	
Transportation costs	8 625	17 947	18 306	18 672	19 045	
Maintenance and overheads	1 168 883	1 315 273	1 359 462	1 404 892	1 322 097	
Training	20 000	72 828	77 468	82 265	87 222	
Social mobilisation	2 500	14 045	14 857	15 695	16 561	
Disease surveillance	15 000	19 768	21 543	23 381	25 283	
Program management	3 800	5 618	5 943	6 278	6 624	
Other						
Subtotal Recurrent Costs	**4 357 304**	**6 510 006**	**6 015 913**	**6 036 207**	**5 927 266**	
Routine Capital Costs						
Vehicles		43 264				
Cold chain equipment	31 770	282 479	14 390	14 678	14 971	
Other capital equipment		10 404	10 612	10 824	11 041	
Subtotal Capital Costs	**31 770**	**336 147**	**25 002**	**25 502**	**26 012**	
Campaigns						
Polio						
Measles						
Yellow Fever						
MNT campaigns						
Other campaigns						
Subtotal Campaign Costs						
GRAND TOTAL	5 430 870	8 034 257	7 309 873	7 417 134	7 401 176	

The tables below show the funding sources for each type of cost category (if known). Also indicated is which immunisation program costs are covered from the Government budget, and which costs are covered by development partners (or the GAVI Alliance).

Table 3.6: Summary of current and future financing and sources of funds

		Estimated financing per annum in US$ (,000)					
Cost category	**Funding source**	**Base year**	**Year 1 2009**	**Year 2 2010**	**Year 3 2011**	**Year 4 2012**	
Routine Recurrent Costs							
Traditional vaccines	Government	469 687	590 212	597 589	605 056	612 618	
New and underused vaccines	Government	619 705	2 322 698	2 340 821	2 392 927	3 585 518	
	GAVI	424 623	1 911 452	1 343 434	1 242 862	-	
	VRF	1 445 979	-	-	-	-	
Injection supplies	Government	71 899	114 230	115 833	118 274	158 171	
	GAVI	39 493	49 100	38445	37 938	-	
Salaries of full-time NIP health workers (immunisation specific)	Government	3 440	3 939	4 215	4 510	4 825	
Per-diems for outreach vaccinators / mobile teams	Government	49 174	56 300	60 241	64 457	68 970	
Transportation costs	Government	8 625	17 947	18 306	18 672	19 045	
Maintenance and overheads	Government	1 168 883	1 315 273	1 359 462	1 404 892	1 322 097	
Training	Government	-	-	-	-	87 222	
	WB "Health Sector Reform" Project	20 000	-	27 000	82 265	-	
	GAVI	-	72 828	-	-	-	
Social mobilisation	WHO	2 500	-	-	-	-	
	GAVI	-	14 045	-	-	-	
	UNICEF	-	-	14 857	14 695	16 561	
Disease surveillance	UNICEF	15 000	-	-	-	-	
	WB "Health Sector Reform" Project	-	19 768	-	-	-	
	GAVI	-	-	13 127	-	-	
	WHO	-	-	8 416	23 381	25 283	
Program management	WHO	3800	5618	5943	6278	6624	
Routine Capital Costs							
Vehicles	Government	-	43 264	-	-	-	
Cold chain equipment	Government	31 770	282 479	14 390	14 678	14 971	
Other capital equipment	Government	-	10 404	25 002	10 824	11 041	
GRAND TOTAL		4 374 568	6 829 557	5 987 081	6 014 709	5 932 946	

6. Newly-Used Vaccines

A summary of the cMYP sections that refer to the introduction of new and under-used vaccines. It outlines the key points that informed the decision-making process (data considered etc):

Hib disease burden: There are no currently direct estimates of the burden of Hib related diseases in Azerbaijan. WHO estimates, based on the regional and global evidence, shows that incidence rate of HIb invasive diseases might vary from 34 to 62 per 100,000 population, and case fatality rate might vary from 14 to 18%.

The State Statistic Committee data show that respiratory diseases ranks first in the list of main causes of death in children under one, accounting for 32-53% of causes. Bacterial meningitis were not part of the routine surveillance and available data mainly represent number of hospitalized cases in the Baku infectious disease hospital. According to those data, the number of registered cases of bacterial meningitis (excluding cases of TBC origin) varied from 51 to 88 during 2005-2007. The mandatory reporting of bacterial meningitis is going to be introduced since January 2009.

The cost of introduction of Hib vaccine was only assessed in combination with DTP and HepB vaccines, by replacing them with the pentavalent DTP-HepB-Hib vaccine. Therefore it was assumed that the new vaccine would not increase salary and operational costs, as it would not involve any additional injections. Reducing the number of injections (2 injections provided previously for 2nd and 3d dose of hepatitis B monovalent vaccine), would likely generate cost savings to the primary health care system. However, due to the Hib vaccine was no part of the current immunization schedule, the schedule update is necessary. According to the existing national immunization schedule, hepatitis B vaccine is currently delivered at birth, 2 months and 4 months of age. After the pentavalent vaccine is introduced, four doses of hepatitis B will be delivered; at birth (monovalent HepB) and at 2, 3 and 4 months (using pentavalent vaccine), in line with the current DTP primary vaccination schedule.

Countries eligible for support under GAVI phase II starting in 2007 must co-finance a part of the vaccine costs. The level of co-financing is dependent on income category. Azerbaijan is classified in the "least poor group" of countries. In this group the co-financing level for the first vaccine to be granted under GAVI phase II is US$30 per dose (letter to Ministers of Health from GAVI, 12 March 2007). Azerbaijan is expected to increase its co-financing level by 15% each year.

The first year costs of introducing Hib vaccine are summarised in Tables 6.4 and 6.5 according to the financial contributions made by the Azerbaijan Government and GAVI.

The incremental analysis in total vaccine and injection equipment costs due to the introduction of Hib-containing vaccine revealed that the least costly option is pentavalent liquid vaccine in a single dose vial. The cost of the second choice - DTP-HepB-Hib vaccine is slightly higher due to the higher expected wastage as well as additional costs related to reconstitution supplies. Implementation of the Pentavalent liquid vaccine would increase the total budget of the NIP for vaccine procurement (as estimated for 2010, when pentavalent vaccine will replace fully the DTP primary doses) by 114%, while implementation of the lyophilized vaccine would increase it by 116%. The relatively small increase over the current NIP expenditures is explained by two factors: first, the Government has implemented already new and expensive vaccines, like Hepatitis B and MMR, and second – the local procurement prices for the vaccines the Ministry of Health procures through local tenders are significantly higher comparing to UNICEF prices. Thanks to the GAVI assistance provided during the 2nd phase of support to countries, the introduction of new vaccine is likely to generate savings under the current policy of co-payment. During first two years after the pentavalent vaccine is introduced the annual Government expenditures related to the introduction of the new vaccine would constitute 83% of the expected expenditures in case the pentavalent vaccine is not introduced and the existing immunization schedule is followed. This estimate assumes the Government procures its co-payment portion of vaccine and injection safety devices at the UNICEF prices.

Vaccine supply formulation: Monovalent Hib-vaccine does not represent a feasible choice due to increasing number of injections and logistical inconveniences. Azerbaijan is among the European countries with intermediate burden of viral hepatitis B infection. Vaccination against hepatitis B of infants has been introduced countrywide in 2001 with the first dose given at birth following the approval of GAVI support

for implementation of the new vaccine. That support ends in 2008. In order to ensure a continuous protection of children against hepatitis B and introduce vaccination against Haemophilus influenzae type b as well, two main alternative presentations of the pentavalent DTP-HepB-Hib vaccine were considered in the GAVI application for the introduction of Hib antigen: DTP-HepB-Hib liquid vaccine in 1-dose vials versus DTP-HepB liquid + Hib lyophilized vaccine in 2-dose vials.

The following advantages were considered for the pentavalent vaccine: reduced number of injections (2 less), operationally and logistically simple to manage, cost saving.

Liquid presentation of the combined vaccine achieves low wastage and increases cost-efficiency of immunization.

Goal: To reduce morbidity and mortality resulting from severe Hib diseases in children under 5 years of age in Azerbaijan.

Objectives: to vaccinate all infants (by age 12 months) with 3 doses of pentavalent (DPT-HepB-Hib) vaccine, attaining a coverage of 90% at the national level and at least 85% at district level by the year 2012.

Strategies: Strengthening and building capacity of the immunization staff; Increasing access to EPI services; Strengthening vaccine management and quality of immunization services; Strengthening monitoring, evaluation and supervision system; Communication & Advocacy activities; Improving Surveillance for Hib-related diseases.

Pentavalent vaccine introduction: Azerbaijan has achieved coverage rates of 80% for the NIP vaccine showing continuous commitment to protect children by providing life saving vaccines. Implementation of the Hib vaccination through pentavalent vaccine represents a good opportunity to increase efficiency of its immunization services by gaining more health and preventing disease and death.

Introduction of immunization against Hib-related diseases in Azerbaijan will be achieved through the implementation of Pentavalent DTP-HepB-Hib vaccine starting May 2009. That would allow reasonable time for implementation of preparatory activities for the new vaccine introduction, as well as a time frame of 6 months for vaccine supply following the anticipated approval (October-November 2008) of country application for GAVI support.

A national working group for pentavalent vaccine implementation will be set up by the Ministry of Health in cooperation with ICC in order to monitor implementation of the vaccine introduction plan.

The immunization schedule of the national immunization programme currently does not include Hib vaccination and its update will constitute one of the first priority steps on commitment of the Government for the implementation of the new vaccine. The pentavalent vaccine will replace in the immunization schedule doses of DTP provided currently at 2, 3 and 4 months of age, as well as monovalent HepB provided at 2 and 4 months of age. Birth dose of monovalent HepB vaccine and the booster dose of DTP vaccine will be provided continuously as per current schedule.

The pentavalent vaccine will be introduced nationwide starting May 2009 to children coming at the age of two month for their routine vaccine.

Children that have already started their primary immunization with DTP before the above mentioned date will continue using DTP vaccine to finalize the primary immunization series.

Immunization with DTP 2nd and 3d dose is expected to be finalized in June, and in July 2009 all children will receive primary immunization for DTP-HepB-Hib vaccine.

No matter of the vaccine used for primary vaccination, all children will receive a booster dose with DTP vaccine at the age of 18 month. The supply of DTP vaccine will be scheduled for 2009 in such a way to cover the needs for finalization of primary vaccination of all children that started using that vaccine, as well as for continuous providing of the booster dose. For 2010 and subsequent years DTP vaccine will be supplied only for booster immunization at 18 months of age.

The supply of HepB vaccine will be also adjusted according to the new schedule.

The Pentavalent vaccine introduction plan is integrated with the comprehensive multi-year plan for NIP implementation, 2009-2011, allowing integration of the main activities and of financing and providing a good opportunity to the main partners and contributors to coordinate and align their efforts toward overall strengthening of the NIP.

The strong involvement of the Health Coordinating Committee in preparation of the application for New vaccine Support, development in the mean time of the Health System Support proposal for GAVI support, the ongoing projects supported by the World Bank, Vishnevskaya-Rostropovich Foundation, other partners and the enhanced commitment of the Government of Azerbaijan for increasing the financial support to the NIP should make it possible to implement successfully the pentavalent vaccine, ensuring sustainability, high coverage and high quality of services.

Please summarise the cold chain capacity and readiness to accommodate new vaccines, stating how the cold chain expansion will be financed and when it will be in place. Please use attached excel annex 2a (Tab 6) on the Cold Chain. Please indicate the additional cost, if capacity is not available, and the source of funding.

Cold chain capacity: Azerbaijan uses vaccines in a variety of presentations: HepB vaccine was supplied in 10-dose and 2-dose vials, MMR vaccine in 10-dose and 1-dose vials (ratio 3:1), BCG is supplied in standard 20-dose vials and OPV, DTP and DT is traditionally used in 10 dose vials. The country conducted in 2006 mass immunization campaigns against measles and rubella and for the next years it is foreseen to re-establish immunization against diphtheria and tetanus. The national vaccine store is used as well to store other vaccines for high risk groups (rabies vaccine and immune globulin, influenza, antitoxins and serums, tuberculin). Al these products require panning for adequate capacity of the cold chain.

Estimates of cold chain capacity for the current schedule included BCG-1 dose, HepB-3 doses, DTP-4 doses, OPV-5 doses, DT-1 dose, Td-1 dose (to be implemented), Rabies vaccine, Tuberculin, Antitioxin/serums.

Estimates of cold chain capacity for the new schedule included BCG-1 dose, HepB-1 dose, DTP-1 dose, Pentavalent vaccine-3 doses, OPV-5 doses, DT-1 dose, Td-1 dose (to be implemented), Rabies vaccine, Tuberculin, Antitioxin/serums.

Implementation of the Hib immunization using pentavalent vaccine either in 1 dose liquid presentation (DTP-HepB-Hib) or 2 dose DTP-HepB liquid + Hib lyophilized, and continuous immunization of newborns with HepB monovalent vaccine using 2-dose vials requires additional storage functioning capacity both at the central/intermediary and peripheral levels. The net storage volume for positive temperature at the central and intermediate stores measured in cm3 per fully immunized child per year will change from 81 cm3 in the existing schedule to 99 cm3 (22% increase) in case of implementation of the liquid 1-dose presentation of DTP-HepB-Hib, or to 95 cm3 (17% increase) in case of implementation of 2-dose/vial DTP-HepB liquid + Hib lyophilized presentation. At the service provision level, due to inclusion in the positive temperature storage capacity of all vaccines and diluents, it will change from 120 cm3 currently to 138 cm3 (15% increase) for the first choice pentavalent vaccine and to 134 cm3 (12% increase) in case of the second choice.

The available net storage capacity (12408 Lt) at the national vaccine store currently meets 97% of the required maximal capacity for one supply period (additionally required 400 Lt). It is worth mentioning that this is valid for a 3 shipment per year scenario, when all vaccines arrive the same day in a proportion equal to one third of the annual supply.

A new cold room will be installed at the national vaccine store (Hojasan site), with the net storage capacity of at least $12m^3$ in order to fit comfortable and safe the vaccine. Moving there and installing successfully the old cold room too, will contribute almost doubling the vaccine storage capacity, which would allow reducing the number of shipments to the national vaccine store, and ensuring the vaccine is distributed to rayons at least on a quarterly base. It also would allow fitting emergency supplies of vaccine, such as in case of influenza pandemic preparedness etc.

Intermediate vaccine stores are represented in Azerbaijan by rayon (district) levels. Rayons rely on different types of refrigerators and freezers to store vaccines: ice-lined refrigerators and domestic refrigerators of local production are used as well. The inventory of the cold chain conducted by the MoH in 2005 shows most of the rayons have sufficient capacity to store their vaccines for a supply period. It also showed most of the rayons have experienced frequent voltage fluctuations and power cuts, limiting their capacity to store vaccines for long time.

In order to address those problems, and as part of preparatory activities for the measles-rubella campaign, in 2005 UNICEF provided to intermediate stores 50 ice-lined refrigerators MK304. Same year, VRF supplied to rayons 50 generators of 5kVA , 320 of 2.4kVA and 395 voltage regulators, 320 refrigerators of local production (Chinar, net storage capacity – 40 Lt). That allowed setting up a functional cold chain down to the rayon and health centres level.

Furthermore, the scheduled upgrading of the capacity of the national store and procurement of an additional refrigerated vehicle for vaccine distribution will allow increasing the frequency of supplies to rayons at least once a quarter and reduce the supplied volumes.

Owning a functioning refrigerator with net storage volume of 20 Lt. and more would be sufficient to incorporate any current and further new vaccines to be introduced into the schedule at the health facility level. Updating the inventory of cold chain at that level will allow identify problematic areas and focus on improving the cold chain at health facility level.

For transportation of vaccine to the health facilities and during outreach sessions more than 2400 vaccine carriers were distributed and are available at the health facility level.

Table 6.1: Capacity and cost (for positive storage)

		Formula	Required volume calculation	Year 1- 2009	Year 2- 2010	Year 3- 2011
A	Annual ***positive*** volume requirement, including new vaccine (specify: Hib- DTP- Hep B vaccine, liquid in one dose vial) (litres or m3)[2]	*Sum-product of total vaccine doses multiplied by unit packed volume of the vaccine*	Net Volume Reserve- 3 months Lead time-3 months Total volume	15.15 м^3 3.79 м^3 3.79 м^3 22.73 м^3	15.32 м^3 3.83 м^3 3.83 м^3 22.98 м^3	15.5 м^3 3.88 м^3 3.88 м^3 23.26 м^3
B	Annual ***positive*** capacity, including new vaccine (specify: Hib- DTP- Hep B vaccine, liquid in one dose vial) (litres or m3)	*#*		12.4 м^3	*24.8 м^3	24.8 м^3
C	Estimated minimum number of shipments per year required for the actual cold chain capacity	*A / B*		1.83	0.93	0.94
D	Number of consignments / shipments per year	*Based on national vaccine shipment plan*		3	3	3
E	Gap (if any)	*((A / D) - B)*		0	0	0
F	Estimated cost for expansion	*US $*		$35,000	0	0

* A 12.4m3 net storage capacity cold room will be procured and installed in 2009

Azerbaijan procures its NIP vaccines and injection safety supplies locally by organizing competitive biddings. Its expenditures for vaccine and immunization supplies procurement have gradually increased and covered 72% of the vaccine and injection safety supplies needs for EPI in 2007. Hepatitis B vaccine and accompanying injection safety supplies were provided by GAVI through UNICEF during the 1st phase of assistance ending mid-2008. Vishnevskaya-Rostropovich Fund was also supporting country with procurement of MMR vaccine during 2003-2008. Actually, starting 2009 the MoH has scheduled to cover 100% of country needs for the existing schedule.
With the adoption by the Government of the "National Immunization Program of Azerbaijan Republic" (Decree of Cabinet of Ministers Resolution No. 177 of 19.04.2006) a specific budget line was established for financing procurements of NIP vaccines and injection safety supplies. It also envisages the gradual annual

[2] Use results from table 5.2. Make the sum-product of the total vaccine doses row (I) by the unit packed volume for each vaccine in the national immunisation schedule. All vaccines are stored at positive temperatures (+5°C) except OPV which is stored at negative temperatures (-20°C).

increase of dedicated funds. In 2010 the NIP is going to be reviewed and a new program for the next 5 years is anticipated to be approved by the Government. That would allow updating the Program budget and specifying financial commitments of the national and local health authorities, as well as of international partners.

Another important precondition to ensure the adequate financial support to the NIP is the legal ability of the MoH to mobilize and allocate additional funds for that purpose.

The incremental analysis in total vaccine and injection equipment costs due to the introduction of Hib-containing vaccine reveals that the least costly option is pentavalent liquid vaccine in a single dose vial. The cost of the second choice - DTP-HepB+Hib lyophilised vaccine is slightly higher due to the higher expected wastage as well as additional costs related to reconstitution supplies. Implementation of the Pentavalent liquid vaccine will increase the total budget of the NIP for vaccine procurement (as estimated for 2010, when pentavalent vaccine will replace fully the DTP primary doses) by 114%, while implementation of the lyophilized vaccine would increase it by 116%.. The relatively small increase over the current NIP expenditures is explained by two factors: first, the Government has implemented already new and expensive vaccines, like Hepatitis B and MMR, and second – the local procurement prices for the vaccines the Ministry of Health procures through local tenders are higher comparing to UNICEF prices.

One of the important opportunities to generate savings related to vaccine procurements is to implement an efficient vaccine management system, allowing monitoring vaccine wastage rates and vaccine stocks throughout the immunization delivery system.

Thanks to the GAVI assistance provided during the 2nd phase of support to countries, the introduction of new vaccine is likely to generate savings under the current GAVI policy of co-payment. During first two years after the pentavalent vaccine is introduced the annual Government expenditures related to the introduction of the new vaccine would constitute 83% of the expected expenditures in case the pentavalent vaccine is not introduced and the existing immunization schedule is followed. This estimate assumes the Government procures its co-payment portion of vaccine and injection safety devices at the UNICEF prices.

Those savings provide an excellent opportunity for a smooth financial transition to the new vaccine and allow the Government gradually increase its financing year by year.

At the last, but not the least, Azerbaijan enjoys over the last decade one of the highest economical growth in the region: its GDP per capita raised to AZN 2 980,9. That creates a sound base for increasing its financial commitment for health programmes, including immunization.

Summary of financial sustainability strategies:

Areas of the funding gap	Proposed Strategies	Main activities	Indicators	Responsible
Cold chain equipment	1. Mobilize additional resources (government, local administrations & external donors)	– Advocating with local administrations to provide financing for lacking cold chain equipment. Development of rayon level annual immunization programmes with specific budgeting and their endorsement by local administrations – Organize consultations and advocacy meetings with high level officials including the parliament members and sub-national authorities – Develop project proposals for strengthening cold chain and transportation means and their submission to external donors	• Output indicator(s): – number of meetings organized – number of high level officials informed – number of /rayons that have endorsed immunization programs and budgets – number of development partners (donors, international agencies) approached • Outcome indicator(s): % of the funding gap related to cold chain decreased by 2010 (50% as target)	MoH
	2. Improve vaccine and cold chain management	– Developing and implementing protocols for vaccines storage and handling using available cold chain capacity on the rayon and local levels – Implement regular supervision on cold chain and vaccine management practices – Implement open vial policy – Implement monitoring of vaccine wastage – Implement monitoring of vaccine stocks at rayon and health facility level – Conduct regular cold chain inventories – Ensure timely reparation of the broken cold chain equipment	• Output indicator(s): – Vaccine management protocols developed – Supervisory checklists developed – No. of supervisors trained – Percentage of districts monitoring vaccine wastage – Percentage of districts monitoring vaccine stocks – Percentage of districts having a complete inventory of cold chain equipment – Percentage of refrigerators maintained in working condition • Outcome indicator(s): % of district and health centers having sufficient cold chain storage capacity by 2010 (> 90% as target) % of the NIP budget saved by reducing vaccine wastage 2010 (> 5% as target)	MoH, RCHE

IEC/Social Mobilisation	1. Mobilising local resources and donors support for IEC/Social Mobilisation	– Conduct prioritization of program areas for sustainable financing – Negotiating with UNICEF and WHO representative offices assistance in IEC/Social Mobilisation Programs underlining – Participate actively in the budgeting process to secure annual funding – Approach Health Insurance Fund to finance IEC & social mobilization activities	• Output indicator(s): – Lists of priority areas issued and endorsed – Budget proposals submitted – Number of IEC & social mobilization projects financed by Health Insurance Fund • Outcome indicator(s): % of the funding gap related to program activities decreased by 2010 (50% as target)	MoH, RCHE, ICC
Short-term training	1. Mobilising local resources and donors support for Short-term training support	– Negotiating with UNICEF and WHO representative offices assistance in IEC/Social Mobilisation Programs – Discussing with the MHIF feasibility of funding short-term activities and its potential impact on achieving broader MHI goals. – Identify opportunities to integrate training with other programmes or activities (campaigns), postgraduate education etc. – Train trainers and develop cascade training	• Output indicator(s): – No. of ICC meetings where the subject was discussed – number of development partners (donors, international agencies) approached – MoU signed with MHIF – No. of trainers trained • Outcome indicator(s): % of the funding gap related to campain decreased by 2010 (50% as target)	MoH, RCHE

Table 6.2: Assessment of burden of relevant diseases *(if available)*:

Disease	Title of the assessment	Date	Results
Haemophilus influenzae, type b	WHO estimates on burden of severe diseases and death caused by *Haemophilus influenzae*, type b (Hib), and *Streptococcus pneumoniae* (Spn) in Azerbaijan	20.08.2007	Estimated annual number of severe diseases caused by Hib – from 2912 to 5285 cases Estimated annual number of deaths caused by Hib – from 398 to 942 cases
Diseases of respiratory system	State Statistical Committee published data: Proportion of death in children under one caused by diseases of respiratory system	2008 2007 2006 2005 2004 2003	32% 41% 41% 51% 53% 46%
Bacterial meningitis	Reported cases of bacterial meningitis (excluding cases of Tbc origin)	2008 2007 2006 2005	 88 55 51

If new vaccines have already been introduced in your country, please give details of the lessons learnt from storage capacity, protection from accidental freezing, staff training, cold chain, logistics, drop out rate, wastage rate etc., and suggest solutions to address them:

Lessons Learned	Solutions / Action Points
Hesitation of parents to accept new vaccines	National conference is targeted to gain support from the leading professionals; Enhanced training will be provided to health workers providing immunization; Information and communication campaign for population will be performed;
High contraindication rates for the new vaccine	Enhanced training will be provided to health workers providing immunization on indications, contraindications and AEFI; National guidelines on AEFI monitoring and response will be developed.
Accidental freezing due to lack of knowledge of the new vaccine characteristics by the health personnel	Samples of the new vaccine will be used during the vaccine management training before the introduction of the new vaccine; Enhanced supervision will be performed before and after introduction of the new vaccine; Cold water packs will be used for packaging vaccine transportation boxes and carriers.
Updated vaccine coverage monitoring forms, including the new vaccine were not available in all health facilities	Vaccination coverage monitoring forms will be reviewed updated, duplicated and distributed in advance to all facilities Supportive supervision will contribute identifying any gaps in preparedness to introduce new vaccine

List of the vaccines to be introduced with support from the GAVI Alliance:

Azerbaijan is applying for support to introduce in its immunization programme the Hib antigen using the following presentation**: pentavalent DTPw-HepB liquid-Hib combined (1-dose vials)** as the first preference.

If the first preference presentation is not available or is available in insufficient quantity, the country is requesting **DTPw-HepB liquid + Hib freeze-dried combined in 2-dose-vials** presentation as the second preference.

First Preference Vaccine

The country plans to introduce *Hib (antigen)* vaccinations, using **Hib- DTP- Hep B vaccine, in *one dose vial, liquid*** form.

Table 6.3: Specifications of vaccinations with new vaccine (1st Option)

Vaccine: Hib-DTP- HepB	*Use data in:*		**Year 1: 2009**	**Year 2: 2010**	**Year 3: 2011**
Number of children to be vaccinated with the third dose	*Table 3.4*	#	60,743	127,523	133,692
Target immunization coverage with the third dose	*Table 3.4*	#	41%	85%	88%
Number of children to be vaccinated with the first dose	*Table 3.4*	#	83,954	132,024	136,731
Estimated vaccine wastage factor	*Annex 2a or 2b Table E - tab 5*	#	1.05	1.05	1.05
Country co-financing per dose *	*Annex 2a or 2b Table D - tab 4*	$	$0.30	$0.35	$0.40

* Total price pre dose includes vaccine cost, plus freight, supplies, insurance, fees, etc

Table 6.4: Portion of supply to be co-financed by the country, 1st Option (and cost estimate, US$)

		Year 1: 2009	**Year 2: 2010**	**Year 3: 2011**
Number of vaccine doses	#	26,600	47,800	55,900
Number of AD syringes	#	28,400	50,800	59,100
Number of re-constitution syringes	#	0	0	0
Number of safety boxes	#	325	575	675
Total value to be co-financed by country	**$**	$99,500	$159,000	$174,000

Table 6.5: Portion of supply to be procured by the GAVI Alliance, 1st Option (and cost estimate, US$)

		Year 1: 2009	**Year 2: 2010**	**Year 3: 2011**
Number of vaccine doses	#	304,000	406,000	378,600
Number of AD syringes	#	324,600	431,000	400,400
Number of re-constitution syringes	#	0	0	0
Number of safety boxes	#	3,625	4,800	4,450
Total value to be co-financed by GAVI	**$**	$1,134,000	$1,350,000	$1,177,500

Second Preference Vaccine

Alternative vaccine presentation if the first preference of vaccine is in limited supply:

In case if the first preference vaccine presentation is not available, the alternative vaccine presentation would be DTPw-HepB liquid + Hib freeze-dried combined in 2-dose-vial presentation.

- See tables 6.3-6.4 for new vaccine presentation

Table 6.3b: Specifications of vaccinations with new vaccine (2nd Option)

Vaccine: Hib-DTP- HepB	*Use data in:*		**Year 1: 2009**	**Year 2: 2010**	**Year 3: 2011**
Number of children to be vaccinated with the third dose	*Table 3.4*	#	60,743	127,523	133,692
Target immunization coverage with the third dose	*Table 3.4*	#	41%	85%	88%
Number of children to be vaccinated with the first dose	*Table 3.4*	#	83,954	132,024	136,731
Estimated vaccine wastage factor	*Annex 2a or 2b Table E - tab 5*	#	1.11	1.11	1.11
Country co-financing per dose *	*Annex 2a or 2b Table D - tab 4*	$	$0.30	$0.35	$0.40

- Total price pre dose includes vaccine cost, plus freight, supplies, insurance, fees, etc

Table 6.4b: Portion of supply to be co-financed by the country, 2nd Option (and cost estimate, US$)

		Year 1: 2009	**Year 2: 2010**	**Year 3: 2011**
Number of vaccine doses	#	28,800	50,200	58,800
Number of AD syringes	#	29,400	50,700	58,800
Number of re-constitution syringes	#	16,000	27,900	32,600
Number of safety boxes	#	525	875	1,025
Total value to be co-financed by country	**$**	$105,000	$168,000	$184,000

Table 6.5b: Portion of supply to be procured by the GAVI Alliance, 2nd Option (and cost estimate, US$)

		Year 1: 2009	**Year 2: 2010**	**Year 3: 2011**
Number of vaccine doses	#	320,800	429,600	400,500
Number of AD syringes	#	327,900	433,500	400,900
Number of re-constitution syringes	#	178,100	238,400	222,300
Number of safety boxes	#	5,625	7,475	6,925
Total value to be co-financed by GAVI	**$**	$1,171,500	$1,438,000	$1,252,500

Procurement and Management of New Vaccines

a) Please show how the support will operate and be managed including procurement of vaccines (GAVI expects that most countries will procure vaccine and injection supplies through UNICEF):

Two ways of operation were considered for managing support operation and procurement of the new vaccines:

The support provided by the GAVI will follow the traditional GAVI-UNICEF-country collaboration mechanisms. The vaccine and injection safety supplies will be delivered to Azerbaijan trough the UNICEF Supply Division.

The Ministry of Health of the Republic of Azerbaijan has demonstrated its intention to manage the procurement of its co-payment portion of the DTP-HepB-Hib vaccine and injection safety supplies through a mechanism of competitive local procurement as it does with other NIP vaccines.

b) If an alternative mechanism for procurement and delivery of supply (financed by the country or the GAVI Alliance) is requested, please document:

- *Other vaccines or immunisation commodities procured by the country and description of the mechanisms used.*

Azerbaijan procures independently most of its NIP vaccines and injection safety supplies by organizing local competitive biddings. Its expenditures for vaccine and immunization supplies procurement have gradually increased and covered 72% of the vaccine and injection safety supplies needs for EPI in 2007. Hepatitis B vaccine and accompanying injection safety supplies were provided since 2001 by GAVI through UNICEF SD during the 1st phase of assistance, that ends mid 2008. Vishnevskaya-Rostropovich Fund was also supporting country with procurement of MMR vaccine during 2003-2008. Starting 2008 the ministry of Health plans to cover 100% of the national needs for procuring vaccine and injection safety supplies.
Azerbaijan provides to its population free of charge other (rabies) vaccines and plans for expanding diphtheria and tetanus vaccination to the age group 16 years of age.
The Innovation and Supply Centre (ISC) has recently been made responsible for all Ministry of Health procurements including all vaccines and supplies for the NIP.
The Republican Center for Hygiene and Epidemiology, which is in charge of EPI management, prepares estimates of quantities of vaccines and injection safety supplies and submit it to the Ministry of Health (MoH). The MoH approves the request and pass it down to the ISC for implementation. The ISC obtains its funds directly from the MoH budget. In the case of immunization supplies, the allocated funds are used for the purchase of vaccines, vitamin A, syringes and safety boxes. This same Center is responsible for storing drugs and delivery to end-users.
Starting 2009 the Government will take over the procurement of 100% of needs of BCG, hepatitis B monovalent vaccine, DTP, DT, OPV, MMR and injection safety supplies.

- *The functions of the National Regulatory Authority (as evaluated by WHO) to show that they comply with WHO requirements for procurement of vaccines and supply of assured quality.*

Conducting direct vaccine procurement from manufacturers requires developing a strong National Vaccine Regulatory System in order to ensure safety of purchased goods. A WHO assessment of the NRA functions in 2007 revealed its developing status: the national legislation provides clear requirements for vaccine registration procedures. The licensing and control unit of the NRA part of the MoH should license medical practice. The Center of Analytical Expertise and Control was established and includes the control laboratory for pharmaceuticals. A list of recommendations was provided to ensure establishing a quality system in place to implement the 4 essential NRA functions.
Based on the mission recommendations, the MoH developed a plan of actions for strengthening the NRA capacity to implement the 4 essential NRA functions.
As long as the lot release is not fully functional in place, the only vaccines and related supplies that are WHO pre-qualified or licensed by a renown NRA (EMEA; FDA, etc) will be procured and used in Azerbaijan.

c) Description of the vaccine introduction

Detailed description of introduction of immunization against Hib-related diseases in Azerbaijan is provided in the "Introduction Plan for Hib-DTP-Hep B vaccine into the National Immunization Programme of Azerbaijan Republic, Annex XXX of the application form.

Immunization against Hib antigen will be achieved through the implementation of Pentavalent DTP-HepB-Hib vaccine (liquid, 1 dose vials) starting May 2009.
A national working group for pentavalent vaccine implementation will be set up by the Ministry of Health in cooperation with ICC in order to manage and monitor implementation of the vaccine introduction plan.
The immunization schedule of the national immunization programme currently does not include Hib vaccination and its revision and update will constitute one of the first priority steps of enfoRCHEng commitment of the Government for the implementation of the new vaccine. The pentavalent vaccine will replace in the immunization schedule doses of DTP provided currently at 2, 3 and 4 months of age, as well as mono-valent HepB provided at 2 and 4 months of age. Birth dose of monovalent HepB vaccine and the booster dose of DTP vaccine will be provided continuously as per current schedule.
The pentavalent vaccine will be introduced nationwide starting in May 2009 to children coming at the age of two month for their routine vaccine. Children that have already started their primary immunization with DTP before the above mentioned date will continue using DTP vaccine to finalize the primary immunization series. Immunization with DTP 2nd and 3d dose is expected to be finalized in June and starting July 2009 all children will receive for primary immunization only DTP-HepB-Hib vaccine.
No matter of the vaccine used for primary vaccination, all children will receive a booster dose with DTP vaccine at the age of 18 month. The supply of DTP vaccine will be scheduled for 2009 in such a way to cover the needs for finalization of primary vaccination of all children that started using that vaccine, as well as for continuous providing of the booster dose. For 2010 and subsequent years DTP vaccine will be supplied only for booster immunization at 18 months of age.
The supply of HepB vaccine will be also adjusted according to the new schedule.

d) Please indicate how *funds* should be transferred by the GAVI Alliance (if applicable)

GAVI will pay directly to UNICEF Supply Division for procurement of its share of DTP-HepB-Hib vaccine and accompanying injection safety supplies.

GAVI funds to facilitate the introduction of pentavalent vaccine should be transferred to the Ministry of Health of Azerbaijan Republic to the account opened in the International Bank of Azerbaijan Republic for Immunization Services Strengthening.

The main areas of use of funds is provided in the vaccine introduction plan and a summary by main categories of expenditures is provided in the table 6.6.

Reports on funds implementation will be submitted for review at Intersectional Coordination Committee on International Projects (ICC/HSCC) every 6 months.

Persons accountable for cash grant implementation are: Mr. Azad Valiyev, chief of financial-economic department; Dr. Svetlana Zmitrovich, deputy director of Republican Center of Hygiene and Epidemiology.

e) Payment of co-financing amounts (and responsible party)

The responsibility to ensure that sufficient funding is allocated for procuring all vaccines and injection safety supplies belongs to the Ministry of Health. The Intersectional Coordination Committee on International Projects (ICC) will monitor for the timeliness of provision of funds.
The allocation of the funds for procuring the co-payment share of the pentavalent vaccine and of corresponding injection safety supplies will follow the traditional budgetary process. The Republican Center for Hygiene and Epidemiology will prepare each year (in May) estimates on the requested quantity of

pentavalent vaccine and injection safety supplies, calculate the GAVI and the Government shares, and will submit it to the Ministry of Health (MoH). The calculation process will be based on Annual GAVI reports.
The MoH will approve the GAVI annual report and the request for new vaccine. It will pass down its share of the quantity to the ISC for organizing local competitive procurement.
The ISC will be provided with funds directly from the MoH budget.
The ISC will prepare vaccine procurement specifications and the assessment of offers for vaccines and injection safety supplies in coordination with the NRA (Center of Analytical Expertise and Control) and the RCHE.
All vaccines and supplies procured will be stored at ISC. ISC will communicate to RCHE on arrival of each shipment. VARs will be completed upon arrival of each shipment by both ISC and RCHE staff. Vaccine distribution and transportation will be integrated within existing routine mechanisms.

f) Please outline how coverage of the new vaccine will be monitored and reported (refer to cMYP)

The monthly vaccination coverage reporting form No. 5 will be reviewed and updated to allow monitoring of pentavalent DTP-HepB-Hib, appropriate forms will be printed and distributed before the vaccine is introduced.
The monitoring and supervision tools will be reviewed to incorporate specificities pertaining to the new vaccine as well as the requirements imposed by the transition phase from the old to the new schedule. Particularly that would mean ensuring separate monitoring of DTP1, DTP2, DTP3, HepB2, HepB3 doses that still would be provided for some time during 2009 (till June) as well as including separate cells in the report for monitoring each of the 3 doses of the pentavalent vaccine.
Regular supervisory visits will be paid to each level to monitor progress and take appropriate corrective measures if necessary.
In April each year the coverage will be reported in the MoH-WHO-UNICEF Joint Reporting Form and in May each year it will be reported as well in the GAVI Annual Progress Report. Coverage estimates will based on the population data supplied by the State Statistic Committee of the Republic of Azerbaijan.

The following key activities will be performed to strengthen vaccination coverage monitoring:

Update integrated checklists for supervision, under IIP monitoring;

Training of supervisor from oblast and district level on supervision techniques (Integrated with MLM training);

Conduct monthly monitoring activities at lower levels;

Conduct quarterly supervision visits from national level to the rayon / municipality level;

Conduct monthly visits from the rayon / municipality level to health facility levels;

Conduct operational research to improve the performances of the programme;

Introduce and train staff on the data quality self assessment (DQS) tool;

Conduct annual NIP review at national and subnational level;

The monitoring system will produce systematically the following indicator estimates for children under 12 months of age:

The proportion of the target population receiving 1, 2 and 3 doses of DTP-HepB-Hib vaccine,

The number of fully immunized, which will now be defined as including 3 doses of DTP-HepB-Hib, as well as the traditional NIP vaccines (BCG, OPV, MMR);

The drop out rate between the 1st and 3rd dose of pentavalent vaccine;

No. of Adverse Events Following Immunization reported and investigated by rayon epidemiologists.

New Vaccine Introduction Grant

Table 6.5: Calculation of lump-sum

Year of New Vaccine introduction	No. of births (from table 3.4)	Share per birth in US$	Total in US$
2009	152 422	$ 0,30	45 727

How the one-time Introduction Grant[3] will be used to support the costs of vaccine introduction and pre-introduction activities.

Table 6.6: Cost (and finance) to introduce the first preference vaccine (US$)

Cost Category	Full needs for new vaccine introduction	Funded with new vaccine introduction grant
	US$	**US$**
Training		**$15,000**
Social Mobilization and Advocacy		**$20,000**
Cold Chain Equipment & Maintenance		**$40,000**
Vehicles and Transportation		**$25,000**
Programme Management		-
Surveillance and Monitoring		-
Human Resources		-
Waste Management		-
Technical assistance		-
Other (please specify)		
Other (please specify)		
Other (please specify)		
Other (please specify)		
Total		**$100,000**

- Please complete the banking form if required

Complete the table for the second preference vaccine (if applicable) as shown in the table above and write **Table 6.7: Cost (and finance) to introduce the second preference vaccine (US$)** in the headline.

From Azerbaijani into English translated by: Heydarov Elchin Ali

"20" 08 2009

Mən, Bakı şəhəri 24 saylı dövlət notariat kontorunun dövlət notariusu
Abıyeva G.A.
(soyadı və inisialları)
I, Public Notary of Baku city Public Notary Office No. 24 Abiyeva G.A.
Mənə məlum olan tərcüməçi _____ Heydarov E.A. _____
(soyadı və inisialları)
imzasının həqiqiliyini təsdiq edirəm.
Certify the authenticity of signature of Heydarov E.A. known to me as a translator.
Reyestrdə 41-9197 № ilə qeyd edilib.
Register No.
0,25 manat dövlət rüsumu alınıb.
0,25 manat duty was paid.
Dövlət notariusu _____
(imza)
Public Notary _____
(signature)
TRANSLATION OF THE SEAL: Ministry of Justice of Azerbaijan Republic
Baku city Public Notary Office No. 24
Public Notary Abiyeva G.A.

ANNEX 1

Banking Form

In accordance with the decision on financial support made by the GAVI Alliance dated . . . . . , the Government of the Republic of Azerbaijan hereby requests that a payment be made, via electronic bank transfer, as detailed below:

Name of Institution: *(Account Holder)*	The Ministry of Health (Səhiyyə Nazirliyi)
Address:	Azərbaycan, Bakı, Kiçik Dəniz küçəsi, 4
City – Country:	Bakı - Azərbaycan
Telephone No.:	(+99412) 493-1907 **Fax No.:** (+99412) 498-8559
Amount in USD:	**Currency of the bank account:**
For credit to: ***Bank account's title***	Səhiyyə Nazirliyi (Ministry of Health)
Bank account No.:	CCS 328492 USD 331701
At: ***Bank's name***	International Bank of Azerbaijan

Is the bank account exclusively to be used by this program? **YES ( ) NO ( )**

By whom is the account audited? **Ministry of Finance of the Republic of Azerbaijan**

Signature of Government's authorizing official:

Name:	Abbas Valibayov
Title:	Deputy Minister of Health Republic of Azerbaijan
Signature:	
Date:	11.09.2009.
Seal:	AZƏRBAYCAN RESPUBLİKASI SƏHİYYƏ NAZİRLİYİ AZERBAIJAN REPUBLIC MINISTRY OF HEALTH

FINANCIAL INSTITUTION		CORRESPONDENT BANK (*In the United States*)
Bank Name:	International Bank of Azerbaijan	CITIBANK NA,
Branch Name:	"BAKU" Branch	New York
Address:	Baku, Nizami, 67	
City – Country:	Baku, Azerbaijan	
Swift code:	IBAZAZ2X	CITIUS33
Sort code:	–	ACH 36083186
ABA No.:	–	
Telephone No.:	493.00.91	
Fax No.:	493.00.91 (15-29)	

I certify that the account No. 33318018409328492120 **is held by** *(Institution name)* Health of Azerbaijan **at this banking institution.**

The account is to be signed jointly by at least ..... *(number of signatories)* **of the following authorized signatories:**	**Name of bank's authorizing official:**
1 Name:	**Signature:**
Title:	**Date:** 11.09.2009
2 Name:	**Seal:**
Title:	"AZƏRBAYCAN ... BANKI" ASC 11 SEP 2009 4 "BAKI" FİLİALI
3 Name:	
Title:	
4 Name:	
Title:	