June 2003

Progress Report

to the
Global Alliance for Vaccines and Immunization (GAVI)
and
The Vaccine Fund

by the Government of

COUNTRY: Republic of Moldova

Date of submission: …29.09.2003……

Reporting period: 2002-2003 *(Information provided in this report MUST refer to the previous calendar year)*

(Tick only one) :

Inception report	❒
First annual progress report	✔
Second annual progress report	❒
Third annual progress report	❒
Fourth annual progress report	❒
Fifth annual progress report	❒

Text boxes supplied in this report are meant only to be used as guides. Please feel free to add text beyond the space provided.
**Unless otherwise specified, documents may be shared with the GAVI partners and collaborators*

Progress Report Form: Table of Contents

1. Report on progress made during the previous calendar year

To be filled in by the country for each type of support received from GAVI/The Vaccine Fund.

*1.1 Immunization Services Support (ISS) - **NOT APPLICABLE***

1.1.1 Management of ISS Funds - NOT APPLICABLE

Please describe the mechanism for management of ISS funds, including the role of the Inter-Agency Co-ordinating Committee (ICC).
Please report on any problems that have been encountered involving the use of those funds, such as delay in availability for programme use.

1.1.2 Use of Immunization Services Suppor t- NOT APPLICABLE

In the past year, the following major areas of activities have been funded with the GAVI/Vaccine Fund contribution.

Funds received during the reporting year _____
Remaining funds (carry over) from the previous year _____

Table 1 : Use of funds during reported calendar year 20_ _

Area of Immunization Services Support	Total amount in US $	Amount of funds			
		PUBLIC SECTOR			PRIVATE SECTOR & Other
		Central	Region/State/Province	District	
Vaccines					
Injection supplies					
Personnel					
Transportation					
Maintenance and overheads					
Training					
IEC / social mobilization					
Outreach					
Supervision					
Monitoring and evaluation					
Epidemiological surveillance					
Vehicles					
Cold chain equipment					
Other ……. *(specify)*					
Total:					
Remaining funds for next year:					

If no information is available because of block grants, please indicate under 'other'.

Please attach the minutes of the ICC meeting(s) when the allocation of funds was discussed.

→ *Please report on major activities conducted to strengthen immunization, as well as, problems encountered in relation to your multi-year plan.*

1.1.3 Immunization Data Quality Audit (DQA) (*If it has been implemented in your country)* - *NOT APPLICABLE*

→ *Has a plan of action to improve the reporting system based on the recommendations from the DQA been prepared?*
If yes, please attach the plan.

YES ☐ *NO* ☐

→ *If yes, please attach the plan and report on the degree of its implementation.*

Please attach the minutes of the ICC meeting where the plan of action for the DQA was discussed and endorsed by the ICC.

Please list studies conducted regarding EPI issues during the last year (for example, coverage surveys, cold chain assessment, EPI review).

1.2 GAVI/Vaccine Fund New & Under-used Vaccines Support

1.2.1 Receipt of new and under-used vaccines during the previous calendar year

Please report on receipt of vaccines provided by GAVI/VF, including problems encountered.

	2002	2003
Date(s) of receipt of vaccines:	**28.06.2002-165.600 doses**	**13.03.2003 – 134,900 doses**
Date(s) of receipt of syringes:	**15.04.2002-176,000 units**	**04.02.2003 – 142,700 units**
Date(s) of receipt of safety boxes:	**15.04.2002-1,975 units**	**04.02.2003 – 1,575 units**

Moldova's NIP has introduced the universal infant immunization of newborns against Viral Hepatitis B (VHB) in 1995. Since 1998 procurement of HepB vaccines and syringes is ensured from financial funds made available by the Government of Japan/ JICA under a five year (1998-2003) Multi-bi Agreement. Rapid achievement and maintenance of high immunization coverage in the subsequent birth-cohorts resulted in a reduction of acute clinical VHB cases in children under seven years of age by more than 97% (See attachments 1 & 2).

The hepatitis B vaccine provided by GAVI came to further support immunization against Hepatitis. During first eight months of 2002 immunization was conducted using the vaccine provided previously by JICA for immunization of high risk population (health workers, contacts with acute cases, drug users etc.) and syringes procured by The Government of Moldova. It ensured avoiding any shortage of vaccine and syringes, and allowed a smooth shift to the GAVI vaccine. Futhermore GAVI assistance in 2002 allowed redirecting the rest of complementary JICA funds toward strengthening the immunization services and fortification of cold chain at all levels ([procurement of 15 autonomous power generators to be installed at regional level vaccine storages throughout the country, 200 refrigerators, spare parts, 400 vaccine carriers and thermometers). These efforts boosted up the preparation efforts for the National Measles elimination and congenital rubella control programme which unveil November 2002-February 2003.

During 2002 no problems were encountered in reception of the GAVI provided vaccines and supplies.

1.2.2 Major activities

Please outline major activities that have been or will be undertaken, in relation to, introduction, phasing-in, service strengthening, etc. and report on problems encountered.

a. Undertaken activities:

Since Hepatitis B vaccine was in use in Moldova starting with 1995, the shift to vaccine provided by GAVI have not required specific activities related to its implementation. Nevertheless, activities to reinforce the National Immunization Program and the Multi-Year Plan of Action for Immunization 2002-200 7 were rather intensive. A number of activities can be clustered as follows:

- **Training:** (1) (2) ***Vaccine and AEFI management****:* 2 national, 4 interregional and 45 district level training workshops with participation of 5, 350 health care workers on cold chain, injection safety and management of AEFI were conducted during October 2002 within the frame Measles-Rubella campaign,. (3) ***Routine Immunization Practices****:* A one-day training curricula and modules on Routine Immunization for family doctors and medical assistants were developed and the course has started September 2003 with support from UNICEF Moldova. It is planned that the course will be offered to 750 family doctors and 1, 500 assistants over a period of 2.5 years. An extended curriculum and modules are now under work and will form the base for an intensive 3-day training course for healthcare providers. The training itself is planned for 2004 and support will be provided from UNICEF Moldova ***Information Systems:*** Four national workshops on data management, new vaccination coverage monitoring system, computation and analysis of indicators were conducted for epidemiologists and primary health care workers. Another round of training on Management of Information System took place in July and is also planned for October in two pilot regions with support from

- **Cold Chain:** (1) The cold chain inventory was carried out at each health care facility and a register of data were established at district and national level. (2) A cold chain maintenance project was launched in August 2003 to ensure provision of assistance and repair services to all districts. (3) The country's cold chain system was supplemented with 11 refrigerators MK302 at district store level and 279 refrigerators MK144, 400 vaccine carriers and 2000 thermometers primary health care facility level. (4) An evaluation of the stock management system and storage conditions at the national vaccine storages was performed with assistance from WHO Euro using EVSM modules guidelines. The overall score was 76.25% against 80% required by the guidelines To correct the problems, a one-year plan of action was developed . *(See Attachment no.3)*

- **Monitoring and Surveillance:** (1) A new monitoring system of immunization coverage has been implemented at all levels. Record keeping and reporting forms have been printed and distributed to each immunization site. (2) In addition, 1,2 mln individual immunization card was developed and complements the immunization records kept at the health facility. (3) A project aiming at improveming the diagnosis of viral acute hepatitis was initiated in 2002in collaboration with CDC Atlanta. (4) A national measles laboratory for laboratory confirmation of all measles suspected cases (rash and fever) was set up. A steering committee on developing surveillance system was established and works to develop the national surveillance manual. A Rapid Assessment of *Haemophilus influenzae* type b (Hib) disease burden in Moldova was implemented. WHO Hib rapid assessment tool

was used during the assessment. The assessment revealed an incidence of 11-16 cases per 100,000 children < 5 years of age. To further strengthen Hib surveillance the Assessment team developed a list of proposed recommendations. *(See attachment no.4).*

- **Social mobilization:** (1) A range of printed materials education materials were developed, printed and distributed to vaccination sites: posters on good immunization practices (4,000 copies) targeting immunization services providers; posters (4,000 c.) and leaflets (10,000 c.) on the benefits of immunization (2) National communication activities, associated with the Measles/Rubella Campaign included radio and TV spots in two languages, posters (20,000), leaflets (1mln), press releases (13), newspaper articles (52), information kits (8,500c). During the Campaign a hot line functioned at the National Campaign Center and a range of TV and radio broadcasting were organized It is planned that communication campaigns promoting benefits of vaccination will be conducted periodically the nearest to start during fourth quarter of 2003.

All mentioned activities benefited from support and technical assistance from WHO Euro, UNICEF, PATH, CDC, March of Dimes. WHO concentrated its efforts on development, supervision, training and post-campaign evaluation during Measles/Rubella Campaign and strengthening of the infectious disease surveillance system (creation of the national reference measles laboratory, Hib Assessment, development of the National Plan of Action, external training of staff, collaboration with PATH for the training on Management of the Information System). UNICEF provided support for logistics and monitoring purposes (donors reports, vaccine forecast, vaccine procurement and shipment), social mobilization activities (coordination of activities during the MR campaign, printing of training materials for healthcare providers, vaccination cards).

b.Future activities

The future activities to be funded from the GAVI/The Vaccine Fund have been identified and discussed at the ICC meetings and presuppose the follows:

- Strengthening of the electronic information system for monitoring of vaccination coverage and vaccine stocks;
- Reparation and improvement of the national vaccine storages
- Strengthening of the Hib surveillance system and laboratory support;
- Development of the National Policy and the Plan of Action on Injection Safety and application for GAVI support;
- Installation of the 15 autonomous power generators at regional level and cold chain maintenance activities;
- Preparation of the Plan of Introduction of Hib vaccine starting 2005 and application for GAVI support.
- Training activities to improve quality of routine immunization services.

1.2.3 Use of GAVI/The Vaccine Fund financial support (US$100,000) for the introduction of the new vaccine

Please report on the proportion of 100,000 US$ used, activities undertaken, and problems encountered such as delay in availability of funds for programme use.

The financial support (US$100,000) for the introduction of the new vaccine was received on 27 June 2002 at the Treasury account of the National Center of Preventive Medicine.

However, the use of GAVI money started only in September 2003 and included following activities approved by the MoH and ICC:

- Reparation of the national vaccine storage and installation of 2 backup autonomous power generators -$18,830,
- Installation of 13 backup autonomous power generators at regional vaccine storages -$13,000
- Procurement of computers for the monitoring of vaccination coverage information system -$50,000
- Refurbishment and equipment for the national Hib laboratory . -$18,170

Use of this amount of funds was postponed to second half of 2003 due to following reasons:

- Hepatits B vaccine was already in use for seven years and part of the NIP meaning that the shift to GAVI provided vaccine did not require specific training or surveillance adjustment activities.
- An important number. of activities to strengthen quality of services, including training on cold chain, injection safety, and monitoring system was implemented with support from UNICEF and PATH July 2001- June 2002 (see 1.2.2 a.
- In parallel, NIP personnel was fully involved in preparation, implementation and evaluation of the Measles/Rubella campaign and a range of consequent activities (surveillance, monitoring, training, cold chain, injection safety, AEFI surveillance activities, and social mobilization) were funded from resources provided by other partners (UNICEF, WHO, CDC, March of Dimes, Red Cross).
- At the moment, a couple of projects concerned with training, vaccine coverage monitoring and social mobilization are under way. The projects are co-funded by March of Dimes/UNICEF andWHO/PATH.
- Further plans and actions geared toward introduction of Hib vaccine will depend on the results of the pending Hib assessment report conducted in July 2003

1.3 Injection Safety- **NOT APPLICABLE**

1.3.1 Receipt of injection safety support- *NOT APPLICABLE*

Please report on receipt of injection safety support provided by GAVI/VF, including problems encountered

The initial country request to GAVI/ Vaccine Fund for support on injection safety was not approved due to …..

To work toward solving the issue, , the Ministry of Health and the National Center of Preventive Medicine undertook several steps geared toward creating pre-requisites for the development of a policy on injection safety and waste disposal.

- In May 2002 the Government issued a Regulation on medical waste disposalFour regional workshops on injection safety have been conducted during the first half of October 2002.
- Injection safety issues were reinforced during aWHO mission. A draft plan on injection safety was outlined but it went through additional inter-ministerial discussions. It is expected that the final document will be ready near the end of 2003.
- In order to monitor use of safety boxes at the health facility level an indicator has been developed, and included in the monthly vaccination reports. To compare: during 2002 the indicator value was 0.73 while during first 6 months of 2003 it reached the value of 0.9 which means that almost all immunization syringes are properly collected properly into safety boxes.
- During 2002 all syringes for routine immunizations are procured with funds provided by the Governmentwhile safety boxes were procured with funds from JICA. The Government plans to take over this procurement starting 2005
- The MoH explores possibilities of local manufacturing of safety boxes

There are several important challenges to implementation of safe standards of disposing al syringes:

1. Identification of practical and sustainable solutions of disposal of used syringes in urban areas, where construction of incinerators can create problems of compliance with environmental legislation. A WHO supported mission on medical waste disposal is expected during the 1st quarter of 2005 which will assess the needs and recommend feasible solutions
2. The economical situation in the country remains precarious and procurement of safety boxes is seen as an unaffordable commodity. However the injection safety issue is on the MoH agenda and feasible solutions are investigated.
3. Due to the fact that the country's immunization and curative services are integrated at the primary health care level injection safety policy must address both services in order to avoid use of different standards on syringe disposal. A formal guideline addressing injection safety is under development and is expected later this year

The application form for GAVI/VF support on injection safety is to be finalised during the 2nd quarter of 2004 upon analysing recommendations from the external assessment of waste management system.

1.3.2 Progress of transition plan for safe injections and safe management of sharps waste. - *NOT APPLICABLE*

Please report on the progress based on the indicators chosen by your country in the proposal for GAVI/VF support.

Indicators	Targets	Achievements	Constraints	Updated targets

1.3.3 Statement on use of GAVI/The Vaccine Fund injection safety support (if received in the form of a cash contribution) - *NOT APPLICABLE*

→ *The following major areas of activities have been funded (specify the amount) with the GAVI/The Vaccine Fund injection safety support in the past year:*

2. Financial sustainability

Inception Report :	Outline timetable and major steps taken towards improving financial sustainability and the development of a financial sustainability plan.
First Annual Report :	Report progress on steps taken and update timetable for improving financial sustainability Submit completed financial sustainability plan by given deadline and describe assistance that will be needed for financial sustainability planning.
Second Annual Progress Report :	Append financial sustainability action plan and describe any progress to date. Describe indicators selected for monitoring financial sustainability plans and include baseline and current values for each indicator.
Subsequent reports:	Summarize progress made against the FSP strategic plan. Describe successes, difficulties and how challenges encountered were addressed. Include future planned action steps, their timing and persons responsible. Report current values for indicators selected to monitor progress towards financial sustainability. Describe the reasons for the evolution of these indicators in relation to the baseline and previous year values. Update the estimates on program costs and financing with a focus on the last year, the current year and the next 3 years. For the last year and current year, update the estimates of expected funding provided in the FSP tables with actual funds received since. For the next 3 years, update any changes in the costing and financing projections. The updates should be reported using the same standardized tables and tools used for the development of the FSP (latest versions available on http://www.gaviftf.org under FSP guidelines and annexes). Highlight assistance needed from partners at local, regional and/or global level

Both the Ministry of Health and Government recognize the issue of financial sustainability of the Moldova NIP as a high priority. It is worth mentioning that before 1993 the Republic of Moldova was self sufficient in terms of NIP financing. The economic crisis and the civil war in the eastern region of the country (1993-1994) compromised governmental support to the NIP during the subsequent years.

During the last decade WHO, UNICEF, Government of Japan/JICA, USAID, CDC, SOROS Foundation, ECHO provided their financial and technical support to Moldova NIPIn 1999 the Government of Moldova, UNICEF Programme of Cooperation and the Government of Japan have signed a Multi-bi agreement for implementation of the the five year Project (1998-2003) on Assuring Sustainability of Immunization Programme of Moldova. According to the provisions of the agreement, the Government of Japan contributes a total of $1,474,963 for for vaccines, syringes and cold chain procurement; UNICEF contributes annually with $50, 000 for training, logistics and monitoring purposes; and the Government of Moldova contributes with $1,232,589. During first years of the project SOROS foundation provided support for the creation of a national electronic surveillance system . The agreement followed a phasing in procedure under which the Moldova Government was planned to undertake increasing responsibilities of financing of vaccine procurements while the Government of Japan gradually phased out.
The dynamics of Governmental financing was rather slow during the mentioned years as illustrated by the numbers below:

	Committed	Planned
1999	$54,700	
2000	$87,767	
2001	$78,628	
2002	$182,624	
2003-2004	$328,000, of them $106,000 already provided, the balance to be paid during the 4th quarter $400,000 (budgeted)	

According to GAVI timeframe Moldova Government shell present Financial Sustainability Plan in 2004. A National Working Group will be established to analyse the situation,in financing of the immunization program and prepare a Sustainability Plan. The Ministry of Health will seek technical assitance from WHO and UNICEF
Strengthening the surveillance of infectious disease including VPD is an issue of continuous support from WHO Euro through the country Mid Term Programme.
On 18 September at the Ministry of Health took place a special meeting regarding the status of financing of vaccine procurements for 2003 and perspective for the next years.
The ICC discuses the issue of financial sustainability on regular basis at its meetings and inform partners on progress and requested assistance

Recognizing the importance of ensuring financial sustainability of the National Immunization Programme and taking into consideration actual limited resources of the country, The Ministry of Health will appreciate partner's support toward developing the Financial Sustainability Plan for Moldova NIP during the first 6 months of 2004.

3. Request for new and under-used vaccines for year 2004 *(indicate forthcoming year)*

*Section 3 is related to the request for new and under used vaccines and injection safety for the **forthcoming year**.*

3.1. Up-dated immunization targets

→ Confirm/update basic data (= surviving infants, DTP3 targets, New vaccination targets) approved with country application: revised Table 4 of approved application form.

DTP3 reported figures are expected to be consistent with those reported in the WHO/UNICEF Joint Reporting Forms. Any changes and/or discrepancies **MUST** be justified in the space provided (page 10) . Targets for future years **MUST** be provided.

Table 2 : Baseline and annual targets

Number of	Baseline and targets							
	2000 #	2001 #	2002#	2003&	2004&	2005&	2006&	2007&
DENOMINATORS								
Births	43,700	40,986	40,336	41,143	41,966	42,805	43,661	44,534
Infants' deaths	780	685	613	738	749	760	771	783
Surviving infants	42,920	40,301	39,723	40,405	41,217	42,045	42,890	43,751
Infants vaccinated with DTP3 *								
Infants vaccinated with DTP3: administrative figure reported in the WHO/UNICEF Joint Reporting Form	39,868	39,784	37,936	39,597	40,392	41,204	42,032	42,876
NEW VACCINES								
Infants vaccinated with **HepB vaccine**	38,702	38,671	38,625	39,597	40,392	41,204	42,032	42,876
Wastage rate of **HepB vaccine**	Not available	12%	7%	4% 6 months	5%	5%	5%	5%
INJECTION SAFETY – NOT APPLICABLE								
Pregnant women vaccinated with TT								
Infants vaccinated with BCG								
Infants vaccinated with Measles								

* Indicate actual number of children vaccinated in past years and updated targets

** Indicate actual wastage rate obtained in past years

\# Real figures. During 2001 and 2002 birth rates continued to decrease following the trend of the last 10 years. The decrease was, however, less than previously. During the first 7 months of 2003 a small increase of birth rate is observed comparing to the same period of 2002. That is why denominator figures for 2003-2007 are updated and differ comparing to initial figures submitted in the application form.

& Updated estimates based on the latest available birth rates

→ *Please provide justification on changes to baseline, targets, wastage rate, vaccine presentation, etc. from the previously approved plan, and on reported figures which differ from those reported in the WHO/UNICEF Joint Reporting Form in the space provided below.*

Denominators are changed taking into consideration the latest figures and trends of the birth rate and IMR. During 2001 and 2002 birth rates continued to decrease following the trend of the last 10 years. The decrease was, however, much less than previously. During the first 7 months of 2003 a small increase of birth rate is observed comparing to the same period of 2002. That is why denominator figures for 2003-2007 are updated and differ comparing to initial figures submitted in the application form.
Vaccination coverage targets for 2003-2006 are changed in order to match updated birth rates

3.2 Confirmed/Revised request for new vaccine *(to be shared with UNICEF Supply Division)* **for the year 2004** *(indicate forthcoming year)*

→ *Please indicate that UNICEF Supply Division has assured the availability of the new quantity of supply according to new changes.*

UNICEF submitted a notice to the MoH that the amount of syringes and safety boxes initially requested in the application form for 2004 is reserved and will be supplied in December 2003, while the HepB vaccine is to be supplied in March 2004.

Table 3: Estimated number of doses of Hepatitis B vaccine – 2 dose vials :

		Formula	For year 2004
A	**Number of children to receive new vaccine**		40,392
B	**Percentage of vaccines requested from The Vaccine Fund taking into consideration the Financial Sustainability Plan**	*%*	100%
C	**Number of doses per child**		3
D	**Number of doses**	*A x B/100 x C*	121,176
E	**Estimated wastage factor**	*(see list in table 3)*	1.05
F	**Number of doses (incl. wastage)**	*A x C x E x B/100*	127,235
G	**Vaccines buffer stock**	*F x 0.25*	0
H	**Anticipated vaccines in stock at start of year ….**		50,000
I	**Total vaccine doses requested**	*F + G - H*	77,235
J	**Number of doses per vial**		2
K	**Number of AD syringes (+ 10% wastage)**	*(D + G – H) x 1.11*	79,005
L	**Reconstitution syringes (+ 10% wastage)**	*I / J x 1.11*	0
M	**Total of safety boxes (+ 10% of extra need)**	*(K + L) / 100 x 1.11*	877

Remarks

- **Phasing:** Please adjust estimates of target number of children to receive new vaccines, if a phased introduction is intended. If targets for hep B3 and Hib3 differ from DTP3, explanation of the difference should be provided
- **Wastage of vaccines:** The country would aim for a maximum wastage rate of 25% for the first year with a plan to gradually reduce it to 15% by the third year. No maximum limits have been set for yellow fever vaccine in multi-dose vials.
- **Buffer stock:** The buffer stock for vaccines and AD syringes is set at 25%. This is added to the first stock of doses required to introduce the vaccination in any given geographic area. Write zero under other years. In case of a phased introduction with the buffer stock spread over several years, the formula should read: [F – number of doses (incl. wastage) received in previous year] * 0.25.
- **Anticipated vaccines in stock at start of year… ….:** It is calculated by deducting the buffer stock received in previous years from the current balance of vaccines in stock.
- **AD syringes:** A wastage factor of 1.11 is applied to the total number of vaccine doses requested from the Fund, excluding the wastage of vaccines.
- **Reconstitution syringes:** it applies only for lyophilized vaccines. Write zero for other vaccines.
- **Safety boxes:** A multiplying factor of 1.11 is applied to safety boxes to cater for areas where one box will be used for less than 100 syringes

Table 3 : Wastage rates and factors

Vaccine wastage rate	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%
Equivalent wastage factor	1.05	1.11	1.18	1.25	1.33	1.43	1.54	1.67	1.82	2.00	2.22	2.50

**Please report the same figure as in table 1.*

3.3 Confirmed/revised request for injection safety support for the year …..… ***NOT APPLICABLE***

Table 4: Estimated supplies for safety of vaccination for the next two years with …… *(Use one table for each vaccine BCG, DTP, measles and TT, and number them from 4 to 8)*

		Formula	For year ……	For year ……
A	**Target of children for ……. vaccination (for TT : target of pregnant women)[1]**	#		
B	**Number of doses per child (for TT woman)**	#		
C	**Number of ……. doses**	A x B		
D	**AD syringes (+10% wastage)**	C x 1.11		
E	**AD syringes buffer stock [2]**	D x 0.25		
F	**Total AD syringes**	D + E		
G	**Number of doses per vial**	#		
H	**Vaccine wastage factor [4]**	*Either 2 or 1.6*		
I	**Number of reconstitution [3] syringes (+10% wastage)**	*C x H x 1.11 / G*		
J	**Number of safety boxes (+10% of extra need)**	*(F + I) x 1.11 / 100*		

Table 5: Summary of total supplies for safety of vaccinations with BCG, DTP, TT and measles for the next two years.

ITEM		For the year …	For the year …	**Justification of changes from originally approved supply:**
Total AD syringes	for BCG			
	for other vaccines			
Total of reconstitution syringes				
Total of safety boxes				

→ *If quantity of current request differs from the GAVI letter of approval, please present the justification for that difference.*

[1] GAVI will fund the procurement of AD syringes to deliver 2 doses of TT to pregnant women. If the immunization policy of the country includes all Women of Child Bearing Age (WCBA), GAVI/The Vaccine Fund will contribute to a maximum of 2 doses for Pregnant Women (estimated as total births).

[2] The buffer stock for vaccines and AD syringes is set at 25%. This is added to the first stock of doses required to introduce the vaccination in any given geographic area. Write zero for other years.

[3] Only for lyophilized vaccines. Write zero for other vaccines

4 Standard wastage factor will be used for calculation of re-constitution syringes. It will be 2 for BCG, 1.6 for measles and YF.

4. Please report on progress since submission of the last Progress Report based on the indicators selected by your country in the proposal for GAVI/VF support

Indicators	Targets	Achievements	Constraints	Updated targets
HepB3 coverage	98%	98.8%	Not applicable	Not applicable
HepB drop-out <12 mo.	<5%	1%	Not applicable	Not applicable
HepB wastage factor	<1.05	1.08	During first 8 months of 2002 were used 10-dose vials of vaccine from JICA assistance	Not applicable
Vaccine supply	No. stoc-outs of vaccine	In 2002 there was registered stock-out of Td vaccine for adults and BCG for booster dose	Delayed disbursement of funds by the Ministry of Health	Not applicable

5. Checklist

Checklist of completed form:

Form Requirement:	Completed	Comments
Date of submission	Yes	
Reporting Period (consistent with previous calendar year)	Yes	
Table 1 filled-in	No	Not applicable
DQA reported on	No	Not applicable
Reported on use of 100,000 US$	Yes	
Injection Safety Reported on	No	Not applicable
FSP Reported on (progress against country FSP indicators)	No	Not applicable
Table 2 filled-in	Yes	
New Vaccine Request completed	Yes	
Revised request for injection safety completed (where applicable)	No	Not applicable
ICC minutes attached to the report		
Government signatures		
ICC endorsed		

6. Comments

ICC comments:

7. Signatures

For the **Ministry of Health of the Republic of Moldova**

Signature: **Andrei Gherman**……

Title: **Minister of Health**

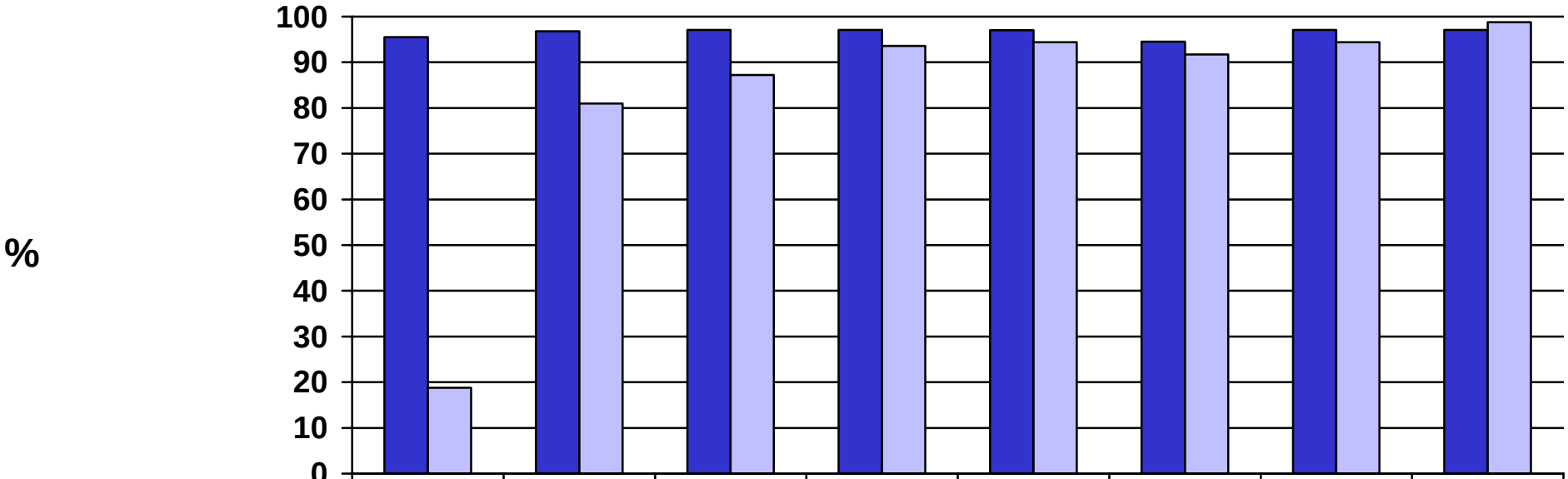
Date: ……..……..

We, the undersigned members of the Inter-Agency Co-ordinating Committee endorse this report. Signature of endorsement of this document does not imply any financial (or legal) commitment on the part of the partner agency or individual.

Financial accountability forms an integral part of GAVI/The Vaccine Fund monitoring of reporting of country performance. It is based on the regular government audit requirements as detailed in the Banking form. The ICC Members confirm that the funds received have been audited and accounted for according to standard government or partner requirements.

Agency/Organisation	Name/Title	Date Signature	Agency/Organisation	Name/Title	Date Signature
The Ministry of Health	BAHNAREL Ion viceminister		The Institute of scientific research in Health of Mother and Child	STRATULAT Petru Deputy Director	
The Parliament Commission on Social protection and Health	IAREMCIUC Vladimir Chairman		UNICEF Moldova	BARBERIS Giovanna Representative	
The Direction on social problems of the Governmental Chancellery	BARBA Oleg chief of the section		UNICEF Moldova	BERDAGA Viorica Assistant Project Officer,EC	
The Ministry of Health	TSARUSH Maria chief of Department		WHO Liaison Office in the Republic of Moldova	URSU Pavel	
The National Centre of Preventive Medicine	MAGDEI Mihai General director		European Comission Delegation to the Republc of Moldova	BORISAVLJEVICH Ivan Coordinator	
The National Centre of Preventive Medicine	SOHOTSKY Vasile vicedirector		The World Bank	VOLOVEI Victor Manager- coordinator in the Project of Health reform	
The National Centre of Preventive Medicine	MELNIC Anatol chief of the general epidemiology department		The Society of Red Cross in the Republic of Moldova	VASILITSA Tudor vicechairman	
The National Centre of Preventive Medicine	BENESH Oleg medic epidemiologist		The Ministry of Labour and Social Protection	MELNIC Ilie chief of the Department	
The National Centre of Preventive Medicine	BUKOVA Victoria Chief of the laboratory of the Specific prophylactics				

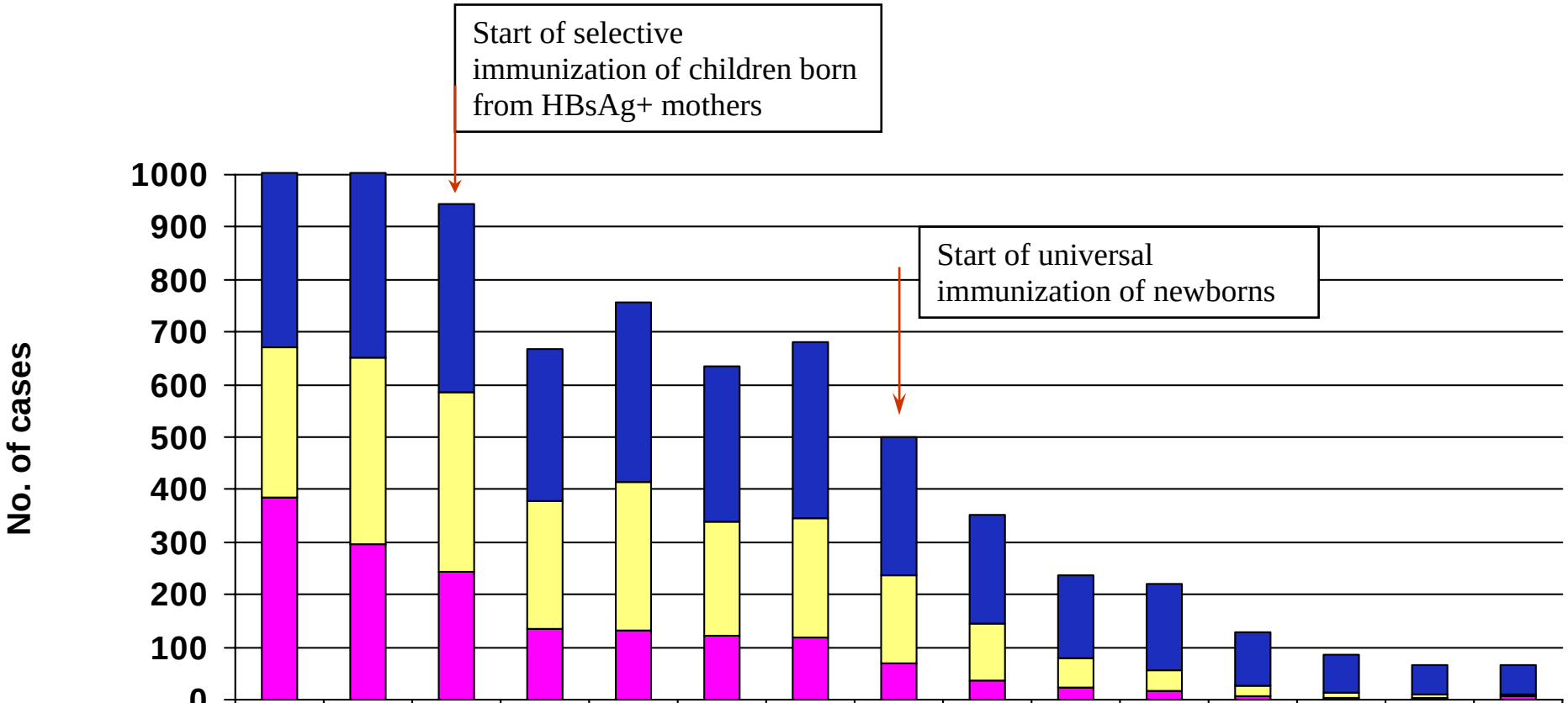
Reported Vaccination coverage of children (12-23 months of age) with DTP3 and HepB3, Republic of Moldova, 1995-2002



	1995	1996	1997	1998	1999	2000	2001	2002
DTP (3 doses)	95.5	96.8	97.1	97.1	97	94.5	97.1	97.1
HepB (3 doses)	18.8	81	87.2	93.6	94.4	91.7	94.4	98.8

Age specific incidence of clinical acute Hepatitis B cases in children

Republic of Moldova, 1988- 2002



	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
7-14 years	333	351	357	292	343	297	337	261	208	157	162	100	71	56	57
3-6 years	286	355	342	241	284	217	226	168	107	57	42	19	10	9	5
0-2 years	384	296	244	136	130	122	119	70	37	23	15	8	4	2	5

Appendix no.3

Plan of activities to reinforce Vaccine stock management system at the national level, Republic of Moldova

#	Activities	Timeline	Responsible units
1	Adoption of the model quality plan and integration of new elements into the national policy	First quarter 2004	MoH, NCPM
2	Revision of guidelines and development of written Standard Operating Procedures for the management of the national store that could be used for lower levels as well	First quarter 2004	MoH, NCPM
3	Introduction of the Vaccine Arrival Report for all vaccines receipts	End 2003	MoH, NCPM
4	In all tenders for vaccine purchase, request of the lot release of NRA of origin	Practice: from the next tender on Official requirement: 2004	MoH, NCPM
5	Installation of continuous temperature recording devices for all cold rooms and freezers as well as alarm systems	It will require mobilization of resources to be considered for the next budget allocation or to be discussed with ICC and donor agencies	MoH, NCPM UNICEF
6	Testing of temperature devices for accuracy at the institute of standardization	End 2003	MoH, NCPM
7	Development of a written contingency plan to address cold chain failures	End 2003	MoH, NCPM
8	The setting of the back up electric power generator, the construction of a dedicated space for icepack conditioning and a washing facility should be added to the planned renovation of the store,	2004	MoH, NCPM
9	Development of a long-term maintenance et replacement plan for cold chain equipment	End 2003	MoH, NCPM with assistance of partners
10	Computerization of the vaccine stock management	First semester 2004	MoH, NCPM
11	Adaptation of the stock recording forms (receipt and delivery) to incorporate the number of diluents and the status of temperature indicators	National Store: first quarter 2004 District level: second quarter 2004	MoH, NCPM
12	Revision of training manuals in incorporating the new elements included in the model quality plan	Second semester 2004	MoH, NCPM, medical University
14	Development and implementation of a training plan targeting managers from all levels	Second semester 2004	MoH, NCPM, medical University
13	Establishment of an additional post as store manager to be part of the 3 persons team at the institute of preventive medicine	To be considered for the next budget allocation, 2004or 2005	MoH, NCPM,

Haemophilus influenzae type b (Hib) disease burden in Moldova: WHO Hib rapid assessment tool, July 15-24, 2003

Conclusions

1. Hib meningitis has been culture-confirmed. The microbiology labs in these hospitals were found to be very good in their technique and knowledge and they have the capability to isolate Hib, although they were generally lacking the proper media and reagents to optimize Hib isolation.

2. The estimated incidence rate of Hib meningitis among children < 5 years of age in Moldova is 10-16 cases per 100,000 children. This translates into an annual burden of 20-33 cases of Hib meningitis with 1-1.6 meningitis deaths and 100-165 cases of Hib pneumonia with 5-8 pneumonia deaths.

3. The financial cost of medical treatment of severe Hib disease in Moldova is substantial and may be as high as $69,000.

4. Currently the cost of Hib vaccination of the annual Moldovan birth cohort would be about $360,000, so the costs per case and death prevented will be rather high. Therefore the introduction of Hib vaccination has to be considered in the light of the other major public health disease burden issues in Moldova.

Recommendations

Some potential changes that may improve the surveillance system are the following:

1.1.1.

1) Surveillance for culture-confirmed bacterial meningitis should be enhanced. Successful surveillance will require a combination of clinical, epidemiological and laboratory activities. Improved and expanded bacterial meningitis surveillance is valuable for several reasons. First, confirmation of Hib meningitis in Moldova will be very important in moving the Ministry of Health forward in deciding whether to request Hib vaccine through GAVI. Refinement of the estimations of Hib disease burden based on culture-confirmed Hib will provide necessary information in the decision making process. Secondly, by establishing the surveillance now, it will be possible to monitor the impact of Hib vaccine introduction, if and when that occurs. It will be possible to show the public that since the introduction of this vaccine, the most severe manifestation of Hib disease has rapidly declined and now fewer children are affected by the disease. Third, it provides important information on the serotypes/serogroups of *S. pneumoniae* and *N. meningitidis* that cause disease locally.

This information will be important for determining the potential utility of newer conjugate vaccines (e.g., pneumococcal/ meningococcal conjugate vaccines) in Moldova by describing the proportion of local meningitis infections caused by the types included in the vaccine formulation. Lastly, by testing the antimicrobial resistance patterns of the strains isolated from patients, physicians can improve their choice of antibiotics and assure better treatment for their patients.

WHO has several documents to help with this activity. These include a manual for laboratorians on the detection of agents of bacterial meningitis and a generic protocol for surveillance for Hib meningitis in young children:

Laboratory methods for the diagnosis of meningitis caused by *Neisseria meningitidis, Streptococcus pneumoniae,* and *Haemophilus influenzae*. (WHO/CDS/CSR/EDC/99.7). Geneva: World Health Organization. 1999. http://www.who.int/emc-documents/meningitis/whocdscsredc997c.html

Generic protocol for population-based surveillance of Haemophilus influenzae type B. (WHO/VRD/GEN/95.05). Geneva: World Health Organization. 1995. http://www.who.int/vaccines-documents/DocsPDF/www9723.pdf

2) Standardize laboratory protocols. (see WHO Assessment of the National Surveillance System for Infectious Diseases, 2001).
3) Culture all CSF, whether or not it is purulent. Between 10-20% of non-purulent-appearing CSF may be culture-positive.
4) Use chocolate agar made with animal, rather than human, blood, and enrich it with X and V factors to enable confirmation of *Haemophilus influenzae.* Human blood may contain inhibitors of bacterial growth, such as antibodies or antibiotics.
5) Increase the quality control of laboratory diagnosis by routinely testing chocolate agar with reference strains of Hib, meningococcus, and pneumococcus. Agar that does not support growth should be discarded.
6) Organize training and refresher courses for laboratorians and epidemiologists that will promote the improvement of surveillance and diagnosis of bacterial meningitis; raise funding for such courses either from Moldovan MOH or international bodies (UNICEF, WHO, etc.) The courses may be organized through Russian institutions, because this will reduce travel and accommodation expenses and the trainees will not encounter a language barrier.
7) Consider introducing rapid diagnostic tests, such as latex agglutination, which may be particularly useful when patients have received antibiotics prior to lumbar puncture; PCR may also be useful for surveillance, although its clinical usefulness may be limited.
8) Consider making laboratory-confirmed Hib and pneumococcal meningitis cases reportable to the MOH. This would a) emphasize to clinicians and laboratorians the importance of these diseases, and make them more diligent in diagnosing them; and b) provide the Ministry of Health with information on the burden of these diseases, which would be useful in making decisions about the allocation of resources and the potential use of new conjugate vaccines against these diseases;
9) Conduct a more in-depth investigation of the health and economic burdens of Hib disease. Additional efforts to estimate the costs of treating meningitis and pneumonia and their sequelae could help to refine estimates of the cost-effectiveness of vaccination. Hib meningitis and pneumonia are likely responsible for substantial costs to the medical system in Moldova, such as the long-term costs of

caring for a disabled meningitis survivor and the economic consequences to the family of a child who dies of meningitis or pneumonia. These costs may be substantial, but cannot be estimated without accurate local data. Dr. Ulla Griffiths, health economist, (Griffithsu@who.int)at WHO/HQ can provide generic protocols and assistance on these matters.

10) Organize a working group comprised to study the problem of Hib and other bacterial meningitis in Moldova. A national working group to focus on bacterial meningitis and Hib disease could include infectious disease physicians, pediatricians, microbiologists, and representatives from the MOH and non-governmental organizations working in the field. The group could promote adoption of the recommendations in this report, including improved lumbar puncture criteria and rates, bacterial meningitis diagnosis, and improved passive surveillance for bacterial meningitis. The group could interact with the ICC and the MOH in making decisions about the introduction of the Hib vaccine, and other vaccines against bacterial meningitis and pneumonia as these become available. A group coordinator, who arranges meetings and circulates updates, should be identified.

11) Consider applying to GAVI for Hib vaccine. This assessment provides useful data on the burden of Hib disease in Moldova which may contribute to the decision of the Ministry of Health and the Immunization Coordinating Committee (ICC) regarding introduction of Hib vaccine.

12) Preparation of a GAVI application for Hib vaccine. If the MOH and ICC decide to move forward with Hib vaccine they could consider several issues.

- Communicate the number of doses and formulation desired to UNICEF Supply division, GAVI, and Vaccine Fund as soon as a decision is taken. These organizations should be contacted at least 6 months, and preferably 12 months before desired introduction. This increases the likelihood of getting desired formulation at appropriate time.
- Begin preparations for vaccine introduction at least 6 months in advance. Vaccine introduction will require training of staff, changes to record keeping documents, and communication with parents and the public. WHO/HQ has developed generic materials to help with these steps. Dr. Pem Namgyal (namgyalp@who.ch) or Gill Mayers (mayersg@who.ch) at WHO can provide these documents.