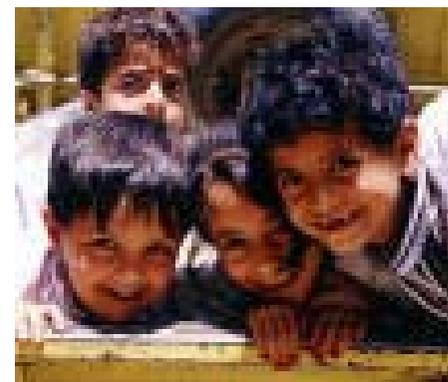




**REPORT ON THE
2003 DATA QUALITY AUDIT (DQA)
COVERING THE YEAR 2002**

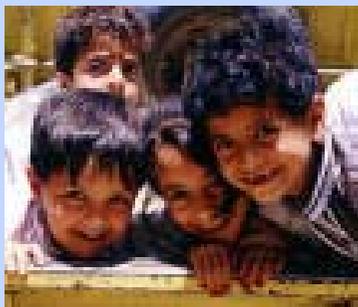
YEMEN





Index

Introduction.....	3
Summary of findings and conclusions	4
Acknowledgements	5
Background	6
Objectives of the DQA	6
Our approach	7
Summary of work done	7
Mobilisation.....	8
National – findings and recommendations.....	10
National context.....	10
Data quality issues at national level.....	10
Strong points.....	10
Areas for improvement	11
Information/data flow and organisation of EPI for the country	12
Verification Factor.....	13
Quality of the System Index	13
Other	17
Vaccine wastage rates.....	18
Reporting Adverse Effects Following Immunisation (AEFI).....	18
Availability and completeness of reports.....	18
District – findings and recommendations	19
District context	19
Quality of the System Index	19
Other	23



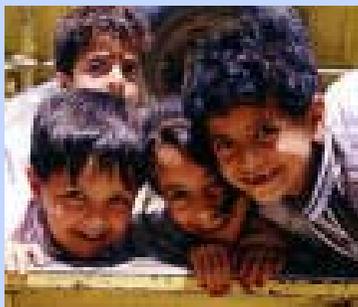
Availability and completeness of reports.....	24
Health Units – findings and recommendations	25
Health Unit context.....	25
Quality of the System Index	25
Drop-out rates	29
Availability and completeness of reports.....	30
Constraints – timing, logistics & other	31
Way forward and lessons learned	32
APPENDIX I. PERSONS MET DURING THE DQA.....	33
APPENDIX II. CORE INDICATORS	35



Introduction

- The DQA was performed by PwC in Yemen for the audit year 2002, from 15th –30th August 2003.
- The DQA was carried out by a PwC Team from our office in Cairo, Egypt, accompanied by 3 national auditors. The table in the Mobilisation section lists the persons who participated in the DQA.
- The EPI manager for Yemen is Mohamed Kholais, and the officer responsible for the DQA in Yemen was Dr. Gamal Habib.
- The following districts were sampled according to the DQA Methodology:
 1. Arhab;
 2. Jeblah;
 3. Bakeel Almeer;
 4. Tareem;
- Issues about sampling or representatively of the sample:
 1. 157 out of 286 districts were non-eligible, for a combination of security reasons and number of health units per district. This represents 55% of districts as being non-eligible, corresponding to 31% of DTP3 for the audit year.
 2. The district sample was done prior to arrival in country, on the basis of the DTP3 data for the audit year received from the country. However, upon arrival we discovered that one of the sampled districts, Bakeel Almeer, had only two HUs.
 3. A Health Unit (Bany Beis) as well as the reserve Health Unit Aial Abdallah in the Arhab District, were closed and we were unable to locate any staff to access the documents necessary for the DQA.
 4. Jeblah has only 6 HUs. Consequently all were selected, with no reserve available.

Summary of findings and conclusions



The DQA was carried out smoothly with full support from EPI management and staff. The result of the DQA is in our view representative of the overall quality of reporting, with a verification factor of 73.5%, below the 80% threshold set by GAVI for a system to be deemed reliable.

The Quality of the System Index (QSI) indicates that the quality of the system documentation requires improvement, as reflected in the QSI results measured at all administrative levels:

- QSI at the national level: 46%
- Average QSI for the 4 districts: 66%
- Average QSI for the 20 health centres: 58%

These scores are in our view consistent with the reliability and quality of system documentation.

We believe management should therefore consider the following observations:

(1) Lack of written back-up procedures for immunisation data; (2) Information related to the infant denominators used for the calculation of vaccination coverage is not known at the HU level or the District level; (3) There is inadequate monitoring of the drop-out rate from DTP1<1 to DTP3<1 at HU level; (4) We observed inefficient control over vaccine wastage rates at operational district and health centre levels (5) There was no control system in place for the recording of vaccines and AD syringe stock . A more detailed explanation is provided in the *findings and recommendations section* at each review level.



Acknowledgements

We would like to take this opportunity to express our appreciation for the co-operation and courtesy afforded to us during the DQA. We especially would like to thank all EPI staff worked with us in the DQA, as shown in the table in the “Mobilisation” paragraph further in this report.



Background

Yemen is one of the countries supported from the immunisation services sub-account of the fund established by the Global Alliance for Vaccines and Immunisation (GAVI). This fund has been established to assist eligible countries to strengthen routine childhood immunisation programmes. As funding levels are linked to the number of third dose diphtheria, tetanus and pertussis vaccinations delivered to children under the age of one year (DTP3<1), countries are encouraged to strengthen vaccination reporting systems. The data quality audit (DQA) tool has been developed by World Health Organisation (WHO) to assess the quality of vaccination systems and improve their reporting, evaluation and monitoring systems. Yemen is one of the countries selected in 2003 for DQA of the audit year 2002.

Objectives of the DQA

The overall goal of the DQA is to ensure that management of immunisation services and the allocation of GAVI funding are based on sound and accurate data. This goal is met by:

- Assessing the reliability and accuracy of administrative Immunisation Reporting Systems, but not immunisation service delivery.
- Auditing the reported DTP3<1 vaccinations for the audit year 2002 and estimating the national verification factor (ratio of recounted / reported vaccinations) for use in the allocation of GAVI Fund shares.

The above objectives are achieved by examining data and the information system in operation at all levels of administration – from collection of data at the point of vaccination to the periodic compilation of this data at district level and at national headquarters. This is done on the basis of randomly selected samples of administrative levels.

Furthermore, in practice the DQA is also a capacity-building exercise, and an opportunity for exchange of experience between the external auditors and the national counterparts.



Our approach

Our approach was to apply consistently the DQA methodology developed in 2000 by the WHO.

Yemen was the host of the 2003 group training session in the DQA methodology, and brought together, among others, the members of the PwC audit team covering Yemen, from our office in Cairo, Egypt, and the national counterparts.

Summary of work done

Two audit teams were formed, comprising one PwC auditor and one national auditor. The teams worked together at national level and then split up, each visiting two operational districts (OD) and twelve (Team 1) and 8 (Team 2) health units (HU) for a total of 20 HUs.

We carried out the tasks detailed in the DQA methodology, which included among others:

- Random selection of four operational districts and twenty health centres.
- Discussion of the immunisation system in place including system design (national level only), denominator issues (national and district levels only), recording, reporting and storage practices, monitoring and evaluation
- Recount of vaccines administered for DTP3<1 (at least) at health unit level, and comparison of recorded with reported figures at all administrative levels.
- Review of the cold chain at all administrative levels.
- Review of vaccine supply and stock procedures in place.
- Review of the procedure for reporting and investigating Adverse Effects Following Immunisation (AEFI) at all administrative levels.



Mobilisation

The team for the Yemen DQA was composed of:

Name	Title	Location
Dr. Hashem Ali	MOH Officer	Sanaa, Yemen
Gamal Habib	EPI Manager representative	Sanaa, Yemen
Abdel Kareem Altweety	EPI supervisor	Arhab and Bakeel Almeer
Alshamy Daod	EPI supervisor	Jeblah and Tareem
Aref Youssef	EPI supervisor	Jeblah and Tareem
Fathy Essam	Assitant Manager	National level, Arhab and Bakeel Almeer
Tarek Elgaby	Senior consultant	National level, Jeblah and Tareem
Yvan Serret	PwC QA manager	Mauritius
Aref	National vaccine store manager	Sanaa, Yemen
Moa'z Alhakimi	National data processing office manager	National level
Abel Wahed Noufel	Arhab Supervisor	Arhab
Ahmed Noaman Akeel	Jeblah Supervisor	Jeblah



Aly Mohamed	Bakeel Almeer Supervisor	Bakeel Almeer
Gaffar Rabie	Governorate Supervisor	Hadramoot
Abdullah AbdelRahman Alhamed	Tareem Supervisor	Tareem

The Logbook provides the details of individuals visited during the DQA.



National – findings and recommendations

National context

The information system for the immunization programme is not integrated with the Ministry's overall Health Information System (HIS), and reports are received at a centralised location within the Ministry of Health.

Data quality issues at national level

- There were many districts that had a coverage rate above 100%, according to reports from district officers due to denominator issues.
- The number of doses of DTP3<1 for the audit year reported on the JRF (414,564) was not consistent with the country's latest tabulation (422,428). An internal audit led to this change.
- District information found at the National level was not consistent with the information found in the district reports (i.e. number of health units per district).
- The Vaccine wastage rate reported in the JRF was not calculated based on a specific formula, but is rather an approximation.

Strong points

We noted that some steps have been taken in 2003 to enhance reporting practices as compared with 2002:

- From 2003 onwards, formal plans for supervisory visits are being prepared.

- Stock registers were distributed to the Health Units.

Areas for improvement

The following issues were noted during our audit:

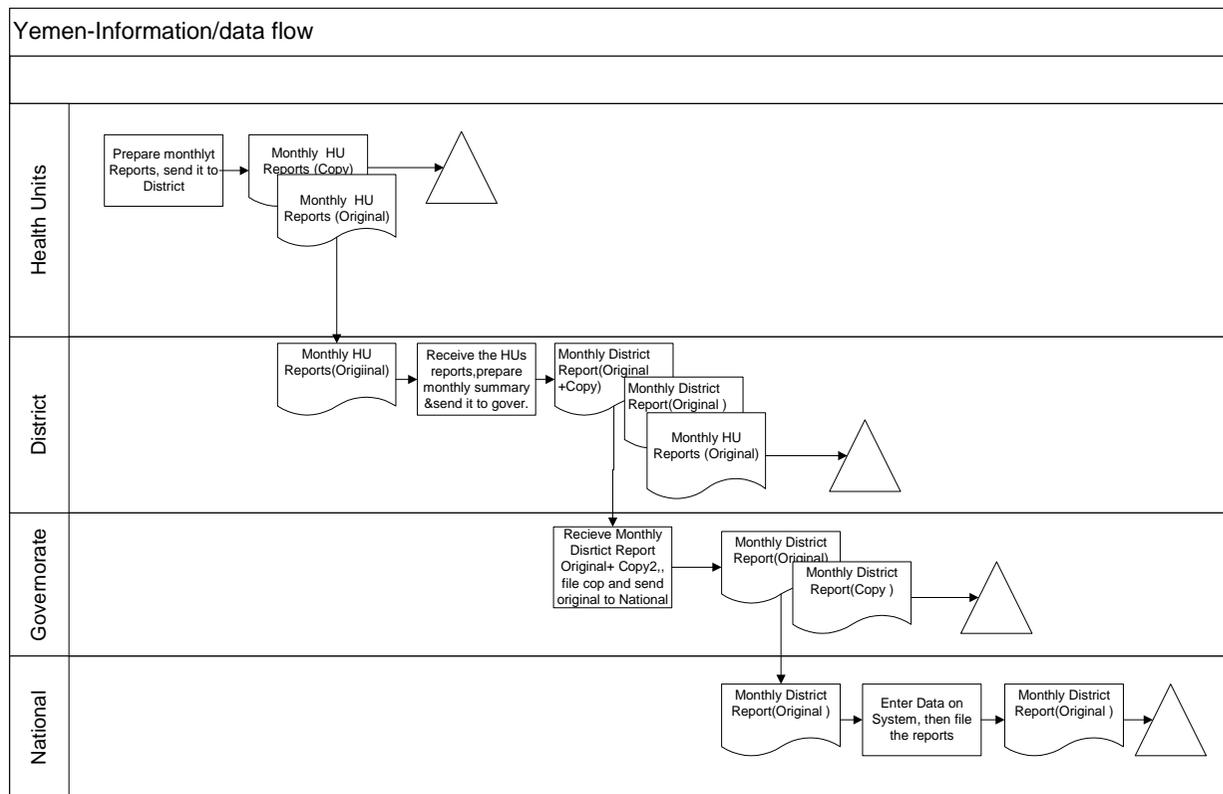
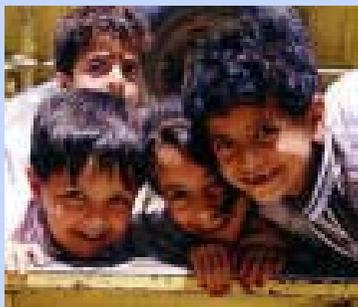
- The supply of books, forms, and other documentary resources is insufficient at all levels.
- Most of the districts and Health Units do not have appropriate storage space for their data collection and reporting files to protect against loss or damage.
- Monthly reporting forms from the district and HU levels do not provide for the reporting of vaccine wastage.
- Procedures for the reporting and follow-up of adverse effects are not formally described or communicated.
- There are no official regulations regarding the reporting of immunization (health data) from all Health Units.
- There are no written instructions for the reporting forms currently in use.
- There is no integrated health system where all health data are captured.
- Data back up is not performed promptly.
- There is a lack of written procedures for the transfer of data between computers.
- Stock registers in the vaccine stores are not updated at any level.
- Received reports from the districts are not date stamped.
- There is no written procedure for dealing with late reports from the district to the national level, or from the HU to the district level.
- Targets do not reflect the actual situation in the districts, as the national level targets are based on the central information, and are inconsistent with district information, which seems more accurate.
- District information found at the National level is not the same as the information at the district reports (i.e.



number of health units per district).

- The national level performs no regular supervision of the Districts or the Health units.
- Hence, there is a lack of formal routine written feedback to lower levels.

Information/data flow and organisation of EPI for the country



Verification Factor

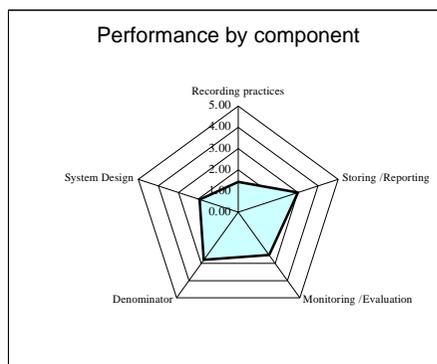
The verification factor is calculated based on data collected during the DQA (recounted / reported vaccinations) and is a measure to verify the reported performance at national level. It compares the number of vaccinated doses recounted from the health centre tally sheets or register to the vaccinations that were reported to the higher levels. The verification factor for Yemen for the audit year 2002 is **73%, i.e. below the 80% threshold**, with a 95% confidence interval between 35% and 112%.

Missing records were the main factor that negatively influenced the VF:

1. Unavailability of some registers in Jebelah Hospital (located in Jebelah District), due to an accident that occurred in March 2003 when three American doctors were killed. According to hospital employees we interviewed, some documents were lost in the subsequent transfer to different premises.
2. Two Health Units (Bany Beis and Aial Abdallah (reserve) both located in Arhab District) were closed and we were unable to locate any staff to access the documents for the DQA.
3. Missing documents in the Arhab hospital.



Quality of the System Index



Observations and recommendations to address weaknesses in the system are listed in the following tables:



System design

Issue observed	<p>1- Monthly reporting forms from the district and HU levels do not provide for the reporting of vaccine wastage at these levels.</p> <p>2- Procedures for the reporting and follow- up of adverse effects are not formally described or communicated.</p> <p>3- No official regulations regarding the reporting of immunization (health data) from all Health Units.</p> <p>4- No formal written instructions for reporting forms currently in use.</p> <p>5- No integrated health system where all health data are captured.</p>
Recommendation	<p>1-A space and instructions to be included in the monthly report for the vaccine wastage calculation</p> <p>2- Procedures for the reporting and follow up of adverse effects should be drafted and communicated to the governorates, districts, and health units</p> <p>3- Official regulations for the reporting of immunization data should be drafted, and distributed to the governorate, district and Health Units.</p> <p>4- Formal written instructions for reporting forms currently in use should be provided to all users.</p> <p>5- The health system should be organized to capture all health data.</p>
EPI management comments	



Recording/storing

Issue observed	<p>1-Late back up of data: the last update was done 3 months prior to the DQA.</p> <p>2-Lack of formal written procedures for the transfer of data between computers</p> <p>3-Stock register in the vaccine stores is not updated.</p> <p>4-Received reports from districts are not date stamped.</p> <p>5-Insufficient books, forms, and other documentary resources.</p>
Recommendation	<p>1-A back up should be created for all the vaccination data each week. This back up should be stored in a place other than the original place where the data are actually kept.</p> <p>2- Formal written procedures should be prepared for the transfer of data between computers.</p> <p>3- Store register should be updated on a daily basis, and include all the receipts and deliveries.</p> <p>4-All reports received from districts at the national level should be date stamped</p> <p>5- The national level should provide the district with sufficient books, forms and other documentary resources to enable the district to handle its work adequately.</p>
EPI management comments	

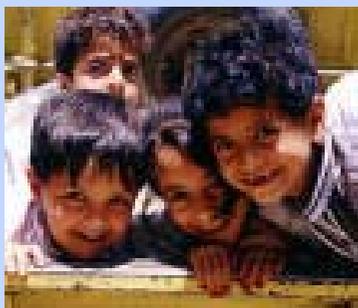


Reporting

Issue observed	<p>1-A lack of formal written procedures for dealing with late reports</p> <p>2-District information at the national level is not consistent with the information in the district reports.</p>
Recommendation	<p>1- Formal written procedures should be prepared regarding late reporting.</p> <p>2- The national level should review adequately the information included in the District reports for consistency with its own records.</p>
EPI management comments	

Denominators

Issue observed	<p>1- Targets do not reflect the actual situation in the districts, as the national level prepares targets based on the information at the central data office at the national level, rather than relying on the information coming from the district data office, which is more accurate.</p>
Recommendation	<p>1-Each district supervisor prepares the overall target for the district based on the information he has and his experience in the area, then sends it to the national level for inclusion in the reports.</p>
EPI management comments	

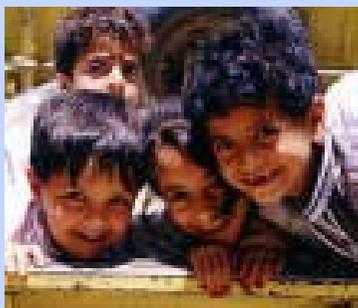


Monitoring and Evaluation

Issue observed	1- No supervision from the national level over the Districts or the Health units. 2-Lack of formal routine written feedback from the national level to lower levels (i.e districts and health units)
Recommendation	1-Regular supervision should be conducted by the national level at the district and Health Unit levels. 2-A formal routine written feedback form should be prepared and sent to lower levels.
EPI management comments	

Other

Issue observed	1- Most districts do not have adequate space to store their files, which results in loss of data.
Recommendation	1-The National level should provide the districts with enough storage facilities to enable them to conserve all data files.
EPI management comments	



Vaccine wastage rates

The National level does not have a system for calculating vaccine wastage. At the district level, some districts calculate the wastage according to the following formula, which does not take into consideration the unopened vials vaccine wastage.

$$\text{DTP wastage rate} = \frac{(\text{Doses of DTP opened} - \text{Doses of DTP given}) \times 100}{(\text{Doses of DTP opened})}$$

Reporting Adverse Effects Following Immunisation (AEFI)

There is no system for reporting and monitoring AEFI.

Availability and completeness of reports

We could not verify the completeness of the reports at the national level, as the data are filed by governorate not by district.

District – findings and recommendations

District context

Four operational districts, from four different governorates, were selected for the DQA. Three selected districts selected were outside of the capital, whilst Arhab district falls within the capital districts.

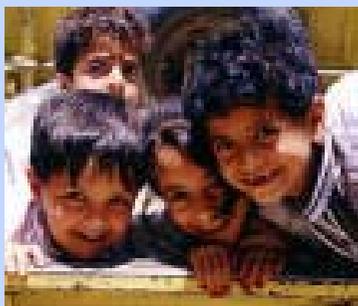
There was a problem of non-availability of some registers in Jebelah Hospital (located in Jebelah District), due to the incident described above and the ensuing transfer of documents, some of which were reported to have been lost during the move.

Quality of the System Index

Average QSI at district level:	66%
Average score recording:	2.9 / 5.0
Average score storing and reporting:	4.6 / 5.0
Average score monitoring and evaluation:	3.4 / 5.0
Average score denominators:	3.2 / 5.0

Findings and recommendations for the QSI by area:



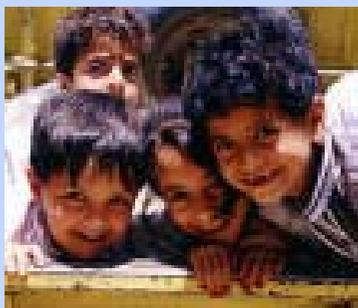


Reporting/storing

Issue observed	1. The district does not keep the Health units reports on file. The district supervisor sends these directly to the national level without keeping a copy.
N° of districts in which observed	Three districts
Recommendation	1. Health unit reports should be stored adequately in a safe place at district level.
EPI management comments	

Recording

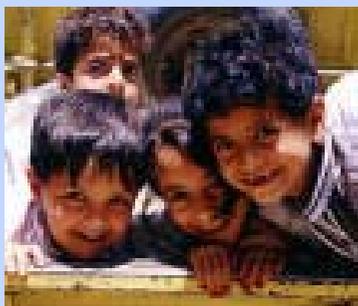
Issue observed	<ol style="list-style-type: none"> 1. Lack of Stock records for the vaccines doses/vials and injection materials. 2. Lack of some forms at the Health Units. The district supervisor is not supporting the HU with the adequate quantity of forms, registers, and tabulation records. 3. Received reports from districts are not date stamped.
N° of districts in which observed	Three districts



Recommendation	<ol style="list-style-type: none"> 1. Stock records should be adequately maintained at the Health Units, and updated continuously. 2. National level should provide the districts with the required documents, which should in turn keep the Health Units adequately supplied. 3. The date of receiving the Health Unit reports should be noted by the district officer on the report upon receipt.
EPI management comments	

Denominators

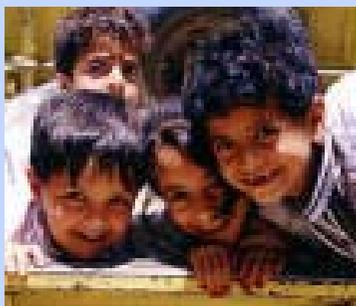
Issue observed	<ol style="list-style-type: none"> 1. Micro Plan in most of the districts visited was not available. 2. Lack of district-level targets for child and women vaccinations.
N° of districts in which observed	Three districts



Recommendation	<ol style="list-style-type: none"> 1. A micro plan should be prepared by each district. 2. Targets should be set for the districts, and agreed between national and district levels. A harmonisation effort is encouraged between national and district levels so that the statistical information used for calculating denominators accurately reflects the target populations.
EPI management comments	

Monitoring and Evaluation

Issue observed	<ol style="list-style-type: none"> 1. District supervisors were not aware of overall vaccine wastage during the year under audit. 2. No formal feedback is given to the Health Units in most of the districts visited. 3. There was no display of graphs or tables on coverage and immunisation performance during the current year and/or previous year. 4. Lack of maps in the Health units, at the district office, showing the catchment areas for the immunisation coverage. 5. District officers in some districts were not aware of the drop out rate and stock out rate.
N° of districts in which observed	Three districts



Recommendation	<ol style="list-style-type: none"> 1. District officers should monitor vaccine wastage per health unit during the calendar year 2. The District officer should provide effective and regular feedback to the health units. 3. Graphs and charts showing coverage progress should be displayed in a prominent place 4. A map should be available at each district, showing the catchment areas 5. The district officer should calculate and monitor both the drop out rate and vaccine stock outs.
EPI management comments	

Other

Issue observed	1. Supervision from the district level to the Health unit level was not active.
N° of districts in which observed	One district
Recommendation	1. Adequate supervision should be performed by the district officer over the health units
EPI management comments	



Availability and completeness of reports

Arhab	0%*
BakeelAlmeer	100%
Jebelah	97%
Tareem	100%

Note: The above mentioned figures were calculated based on the number of months in which the health unit was working.

*No reports were found in the district, as the officer stated that he sends these to the National level directly and does not maintain a copy.

Health Units – findings and recommendations



Health Unit context

We randomly selected six HUs in each selected district save one, Bakeel Almeer, which according to the sampling data received from the national level had more than 6 HUs, but in fact has only two. A number of the HUs in the sample are in fact hospitals. The programme faces specific challenges as a majority of immunisations are administered through outreach sessions.

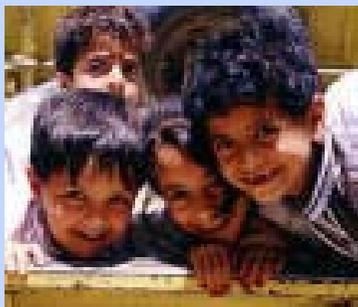
The following two Health Units were closed and no staff was available to access the documents needed for the DQA: Bany Beis and Aial Abdallah (reserve) Health Units, both located in Arhab District.

There are refrigerators in most of the Health units visited. In case a refrigerator was not available at the health centre level the HC supervisor travels to the district to get the vaccines. A cool box is used to keep vaccines for a short duration until they are used.

Quality of the System Index

Findings and recommendations for the QSI by area:

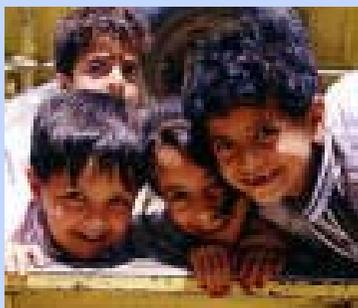
Reporting/storing



Issue observed	1. Filling of information should be improved, particularly for tally sheets, child registers, and past reports.
N° of health units in which observed	All the Health units in Arhab (6 HU)
Recommendation	1. Adequate filling system should be maintained at the health units, this system should enable the HU to easily retrieve such reports.
EPI management comments	

Recording

Issue observed	<ol style="list-style-type: none"> 1. No proper recording on the child register (missing the dates). 2. HU supervisors missing important information about the dates of the vaccination (as observed from the child health card exercise). 3. Lack of Stock records for the vaccines doses/vials and injection materials. 4. Lack of records for expired or broken vials/doses. Difference between the recounted DTP vaccines and the reported. 5. Outreach visits are not always recorded in the tally sheets. 6. The Health Units does not always use the daily tally sheets.
----------------	---

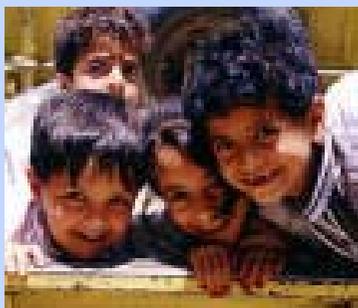


<p>N° of health units in which observed</p>	<ol style="list-style-type: none"> 1. Arhab Health units (6 HU) + Jeblah 6 HU 2. Arhab Health units (6 HU) + Tareem 1 HU + Jeblah 6 HU 3. Arhab Health units (6 HU) + Tareem 1 HU + Jeblah 6 HU 4. Arhab Health units (6 HU) + Jeblah 6 HU 5. 6HU Arhab + 6 HU Jrblah + 2 HU Bakeel Almeer + 1 HU Tareem 6. Arhab Health units (6 HU)
<p>Recommendation</p>	<ol style="list-style-type: none"> 1. All the information related to each child should be recorded in the register, and dates of vaccination should be clearly written. 2. Training should be provided to the health workers to enable them to perform their job effectively. 3. Stock register should be maintained for the vaccines. 4. Ledger for the wasted and broken vials should be maintained. 5. Adequate review should be made by the district officer on the monthly reports before submitting them to the district. 6. &7. All the vaccines given during the month should be recorded in the tally sheets.
<p>EPI management comments</p>	

Monitoring and Evaluation



Issue observed	<ol style="list-style-type: none"> 1. Lack of information regarding the targets, denominator, micro plans and other statistical data. 2. No display of an up-to-date chart or table showing the number of child vaccinations, number of pregnant women vaccinations against tetanus, by reporting period for the current year as well as past years. 3. The HU does not maintain a birth register. Therefore; HU would not be able to identify the new birth with in the targeted area
N° of health units in which observed	<ol style="list-style-type: none"> 1. Arhab (6 HU) + Bakeel Almeer (2HU) + Jeblah (6HU) 2. 14 HU 3. Arhab (6 HU) + Bakeel Almeer (2HU) + Tareem (6HU)
Recommendation	<ol style="list-style-type: none"> 1. The Health unit supervisor should be aware of the information about the targets and denominators in his area. 2. The health unit should maintain charts, tables, or other graphs display showing the number of child immunization. 3. The health unit should review the birth register in its area on a monthly basis to know the new births and be able to perform adequate follow up on them.
EPI management comments	



Other

Issue observed	<ol style="list-style-type: none"> 1. Inadequate facility to store documents (e.g. Cupboard) 2. Several HU do not have a refrigerator for storing the vaccines.
N° of health units in which observed	<ol style="list-style-type: none"> 1. Arhab (6 HU) + Jeblah (1 HU) 2. Arhab (1 HU) + Tareem (1 HU)
Recommendation	1. & 2. The Health units should be provided with enough facilities to enable them to conduct their work effectively and efficiently.
EPI management comments	

Drop-out rates

Drop-out rates DTP1 to DTP3 0-11 months

–Arhab – (-0.3%)

–Jeblah – (-4.8%)

–BakelAlmeer – (na)

–Tareem – (10.3%)



Availability and completeness of reports

Availability of the reports is presented in the following table:

Arhab		Jeblah	
1) Aomara Hospital	100%	1) Jeblah HC	100%
2) Alhiefa HU	83%	2) Jeblah Hospital	100%
3) Hozem HU	100%	3) Rehab HU	58.3%
4) Biet Elwarad HU	0%	4) Al Thawaby HU	83.3%
5) Bany Beis HU / Aial Abdallah HU	100%	5) Al Sharaay HU	75%
6) Altholos HU	100%	6) Ayad HU	100%
Bakeel Almeer		Tareem	
1) Azman	100%	1) Tareem center	100%
2) Faa's	100%	2) Al rodod HU	100%
		3) Al sweery HU	100%
		4) Theby HU	100%
		5) Meshta HU	100%
		6) Kasem HU	100%

Constraints – timing, logistics & other

We faced the following constraints during our audit:

Bakeel Almeer district: This area was not safe enough to conduct the audit, as stated by the district supervisor.

Jebelah District: Most of the health units in this district are in the mountains, and the road to the health units was not practicable by car. In addition, heavy rain caused serious damage to the roads, so it took the team a lot of time to move from a health unit to another.



Way forward and lessons learned

Points to be considered in the next DQA

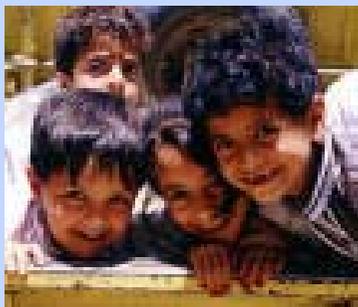
1. Time constraints (travel time from one district to another may take one full day, as can the travel time between the HUs).
2. Security. We noted that most of the areas outside the capital were not safe and, as mentioned by the national counterpart, that Bakeel Almeer is not safe.

On completion of the DQA, a debriefing was held on August 30, 2003 for the following:

- Representative from the Dutch Embassy
- Assistant to the Minister of Health
- Representative from the Ministry of Health
- EPI representative
- WHO representative
- One of the National Counterparts



APPENDIX I. PERSONS MET DURING THE DQA



Audit team

Fathy Essam	PricewaterhouseCoopers
Tarek Elgaby	PricewaterhouseCoopers
Abdel Kareem Altweety	National Counterpart
Aref Youssef	National Counterpart
Alshamy Daoud	National Counterpart

National level

Gamal Habib	EPI representative manager
Moa'z Alhakimi	Statistical and data controller

Arhab District

Abdel wahed Noufel	District officer
--------------------	------------------

Bakeel Almeer

Abdallah Nasar	Government supervisor
Aly Mohamed	District officer



Jeblah

Ahmed Noaman Akeel

Jeblah Supervisor

Tareem

Abdullah AbdelRahman Alhamed

Tareem Supervisor

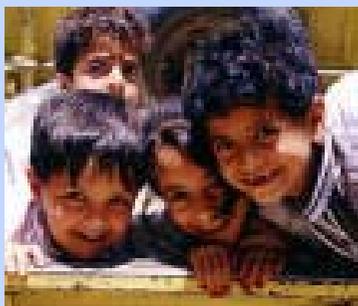
APPENDIX II. CORE INDICATORS

National level :

Number of districts in the country:	JRF:	Reported at the time of the audit:	Comments
-------------------------------------	-------------	---	-----------------



Core indicator	JRF	Reported at the time of the audit	
DISTRICTS WITH DTP3 COVERAGE >=80% N			
(ADMIN, DTP3<1)	78	48	
%			
DISTRICTS WITH MEASLES COVERAGE >=90% N	35	20	
(ADMIN MEASLES<1)			
%			



Core indicator	JRF	Reported at the time of the audit	comments
Introduction of Hepatitis B (yes /no when/ partially/ specify presentation)*		NA	
Introduction of Hib (yes /no when/ partially/ specify presentation)*		NA	
Country wastage rate of DTP		NA	
Country Wastage rate of Hep B vaccine		NA	
Country Wastage rate of Hib vaccine		NA	
COMMENTS			
Interruption in vaccine supply (any vaccine) during the audit year at national stock			
How many districts had an interruption in vaccine supply (any vaccine) during the audit year		NA	
COMMENTS			



% district disease surveillance reports received at national level compared to number of reports expected (routine reporting of VPD)		NA	
% of district coverage reports received at national level compared to number of reports expected		Not Applicable, as the reports in 2002 were received from the governorate not from the districts	This is not available
% of district coverage reports received on time at national level compared to number of reports expected		NA	Computer recording has been introduced
COMMENTS			
Number of districts which have been supervised at least once by higher level during the audit year		286	
Number of districts which have supervised all HUs during the audit year		NA	
COMMENTS			
Number of districts with microplans Including routine immunization		0	
COMMENTS			