AUDIT REPORT

Medical stores and equipment in UNMIS

In the absence of compensatory controls, the noncompliance with the guidelines issued by DPKO/DFS for managing drugs and medical equipment created serious health and environmental risks

7 October 2010
Assignment No. AP2010/632/01
TO: Mr. Haile Menkerios,  
A Special Representative of the Secretary-General  
United Nations Mission in Sudan

DATE: 7 October 2010

REFERENCE: IAD: 10-00851

FROM: Fatoumata Ndiaye, Director  
DE: Internal Audit Division, OIOS

SUBJECT: Assignment No. AP2010/632/01 – Audit of medical stores and equipment in UNMIS

OBJET: 1. I am pleased to present the report on the above-mentioned audit.

2. In order for us to close the recommendations, we request that you provide us with the additional information as discussed in the text of the report and also summarized in Annex 1.

CC: Ms. Heather Landon, Chief Administrative Services, UNMIS  
Mr. James Boyton, OIC Mission Support Division, UNMIS  
Mr. Eric Ball, OIC Integrated Support Services, UNMIS  
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INTERNAL AUDIT DIVISION

FUNCTION

“The Office shall, in accordance with the relevant provisions of the Financial Regulations and Rules of the United Nations examine, review and appraise the use of financial resources of the United Nations in order to guarantee the implementation of programmes and legislative mandates, ascertain compliance of programme managers with the financial and administrative regulations and rules, as well as with the approved recommendations of external oversight bodies, undertake management audits, reviews and surveys to improve the structure of the Organization and its responsiveness to the requirements of programmes and legislative mandates, and monitor the effectiveness of the systems of internal control of the Organization” (General Assembly Resolution 48/218 B).

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EXECUTIVE SUMMARY
Audit of medical stores and equipment in UNMIS

OIOS conducted an audit of medical stores and equipment in the United Nations Mission in Sudan (UNMIS). The overall objective of the audit was to assess the adequacy and effectiveness of internal controls over medical stores and equipment. The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

In the absence of compensatory controls, the noncompliance with the guidelines issued by DPKO/DFS for managing drugs and medical equipment created serious health and environmental risks. The major observations of the audit are as follows:

- Medical equipment was not properly calibrated and regularly maintained increasing the risk of essential equipment not being available when needed.

- There were inadequate storage facilities, and as a result drugs and medicines were stored in reefer boxes and placed in boxes on the floor making them susceptible to damage. This happened as the relocation to Juba was made before adequate space was available. Storage areas were not properly temperature controlled, controlled substances such as morphine were not secured and expired and current drugs were stored together.

- The Supply Section did not keep adequate records, and confirmation of receipt of drugs and cargo movement requests were not on file. Also, controls were not in place over the issuance of drugs, and no independent verifications were conducted. There was a lack of segregation of duties between the functions of picking, packing, recording in Galileo and authorization of issuance of drugs resulting in weak accountability over inventory and increasing the risk of misappropriation of drugs and medicines.

OIOS has made recommendations to address the issues identified during the audit and to further improve the conditions of storage of medical drugs and the functioning of equipment.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Paragraphs</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. INTRODUCTION</td>
<td>1-5</td>
</tr>
<tr>
<td>II. AUDIT OBJECTIVES</td>
<td>6</td>
</tr>
<tr>
<td>III. AUDIT SCOPE AND METHODOLOGY</td>
<td>7-9</td>
</tr>
<tr>
<td>IV. AUDIT FINDINGS AND RECOMMENDATIONS</td>
<td></td>
</tr>
<tr>
<td>A. Human resources</td>
<td>10-14</td>
</tr>
<tr>
<td>B. Operations</td>
<td>15-60</td>
</tr>
<tr>
<td>V. ACKNOWLEDGEMENT</td>
<td>61</td>
</tr>
</tbody>
</table>

ANNEX 1 – Status of Audit Recommendations
I. INTRODUCTION

1. The Office of Internal Oversight Services (OIOS) conducted an audit of medical stores and equipment in United Nations Mission in Sudan (UNMIS). The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

2. The Mission's main medical store is situated in Juba after being relocated from Khartoum in May 2010. This store supplies the Mission's nine clinics and pharmacies in Khartoum, El Obeid, Juba, Wau, Rumbek, Malakal, Abyei, Ed Damazin and Kadugli. These clinics have storage areas for medical drugs and equipment to be stored prior to use.

3. The Medical Section's budget for drugs, sundries and consumables for the year 2008/2009 was $878,850, and for nine months to 31 March 2010 $710,076. As at the end of financial year 2008/2009, the value of medical drugs and equipment in stock was $1.909 million.

4. The Department of Peacekeeping Operations (DPKO)/Department of Field Support (DFS) issued in August 2005 guidelines for managing drugs in peacekeeping missions (Guidelines) to provide instructions to field missions for establishing and maintaining a reliable management system for drugs and medical supplies. The Guidelines provide references to other internationally accepted best practices for managing drugs. In addition, DPKO/DFS issued in May 2003, Medical Equipment Guidelines (MEG) for peacekeeping operations to address the safe, effective use and management of medical equipment.

5. Comments made by UNMIS are shown in *italics*.

II. AUDIT OBJECTIVES

6. The main objective of the audit was to assess the adequacy and effectiveness of internal controls over medical stores and equipment; and more specifically to evaluate the inventory management system for drugs and medicines; and to determine the existence and functionality of medical equipment.

III. AUDIT SCOPE AND METHODOLOGY

7. The audit covered UNMIS-owned medical stores and equipment and reviewed the period from 1 July 2008 to 31 March 2010.

8. The audit reviewed transactions in the Medical Section relating to drugs and medical equipment requisitioned from the Supply Section and kept in storage, as well as drugs in pharmacies and medical equipment in use. The audit visited selected stores and pharmacies, examined records and documents pertaining to drugs and the management of medical equipment, and conducted discussions and interviews with management and key personnel in the Medical and Supply Sections.
9. The audit did not cover the procurement process of medical drugs and equipment. However, the requisitioning of drugs by pharmacies from the Supply Section was included.

IV. AUDIT FINDINGS AND RECOMMENDATIONS

A. Human Resources

10. Orientation and training on the safe and effective use of medical equipment is essential for staff operating the equipment.

11. Medical personnel in Malakal and Kadugli were not familiar with the operation of certain lifesaving medical equipment, including oxygen concentrators, protoscopes and patient monitors. The Juba clinic had a defibrillator valued at $5,000 and a new oxylog-ventilator (a life support machine) but no medical personnel had experience to operate them. Clinics in Juba, Kadugli, Malakal and Abyei clinics had manual defibrillators but the medical personnel did not have the required competence to operate them.

12. In Malakal, Abyei, and El-Obeid, equipment and drugs required to be on the resuscitation tray were kept under storage, rendering them not readily available in cases of emergency.

13. Regular refresher training on the use of medical equipment was not provided to medical personnel. This results in equipment not being useful in circumstances they are needed. Given that life saving equipment may not be used regularly, refresher training is essential so as to orient medical personnel on their operations.

14. The CMO informed OIOS that training on medical equipment had commenced in Juba and that all staff in the Mission clinics will be trained. In view of this development, OIOS makes no recommendation.

B. Operations

Equipment calibration

15. Section 30 of the MEG requires medical equipment to be calibrated to ensure that their parameters are within manufacturers’ specifications.

16. Medical equipment including patient monitors, oxylog-ventilators and sterilizers, patient weight scales, and audiometers were not calibrated. Also for defibrillators, semi-annual calibration is recommended and once completed; a Defibrillator Energy Output Certification should be affixed to the machine. This was not done.
17. A lack of calibration may result in misleading measurements of patients’ conditions, and this may be very serious in life threatening situations when lifesaving equipment such as defibrillators and patient monitors are required.

**Recommendation 1**

(1) The UNMIS Management should ensure that there is regular calibration of medical equipment in line with the manufacturers’ instructions and literature.

18. The UNMIS Administration accepted recommendation 1 and stated that the Medical Section will explore the feasibility of relying on the services of a Troop Contributing Country (TCC) Biomedical Engineer and/or UNAMID Medical Technician for conducting the periodic calibration and maintenance of its equipment. Recommendation 1 remains open pending confirmation that its medical equipment is being regularly calibrated.

**Equipment availability, maintenance and functionality**

19. The Appendix 2-2 of the Medical Support Manual for United Nations Peacekeeping Operations provides a list of essential equipment which should be available in all missions level one clinics.

20. Essential equipment including nebulizer, refrigerator, autoclave, portable standby generator, oxygen concentrator, field sterilization set (chemical), and an X-ray viewing box were not available in the clinics, as required.

21. Paragraph 31 of the MEG states that the Chief Medical Officer (CMO) should coordinate the establishment and renewal of annual maintenance service contracts. Paragraphs 42 to 46 require preventive maintenance to be carried out on medical equipment. A detailed maintenance plan should be established and safety tests conducted. All equipment not passing safety tests should be taken out of service. The MEG further states that records of medical equipment should be maintained to enable tracking of their history and use.

22. The maintenance of equipment was not carried out and there was no historical data kept on the maintenance of medical equipment. Essential medical equipment such as integrated patient monitor, ambulance, portable ventilator and oxygen concentrator were not functioning. Equipment such as pulse oxymeters and suction machines lacked spare parts or batteries. In the Malakal clinic, the microscope was due for replacement as it was no longer working effectively, the tube for the suction machine in the ambulance was broken, and oxygen cylinders were empty. None of the equipment in the ambulance in Juba was functional because they had not been electronically charged.

23. Moreover, there was no maintenance plan for equipment, and service and preventive maintenance was not carried out. The contract for the supply of medical equipment did not include maintenance, and the Mission did not have the resources or expertise to do this. For instance, there was no position for a Medical Bio technician to maintain the equipment. The Head Pharmacist took up
the matter with DFS in April 2010 and the Mission is still waiting for their feedback.

24. The lack of a regular maintenance programme increases the risk of essential equipment not being available when needed. There is also a risk of wastage of resources if equipment has to be replaced prematurely due to inadequate maintenance.

Recommendations 2 and 3

The UNMIS Management should:

(2) Ensure that all essential medical equipment is available and operational in all the Mission’s level one clinics; and

(3) Establish annual maintenance service contracts or recruit a Medical Bio technician to maintain the medical equipment.

25. The UNMIS Management accepted recommendation 2 and stated that the Medical Section had initiated a campaign for the verification of the functionality of all medical equipment last February/March 2010 and the Medical Section aims to ensure the functionality of its equipment at all times by replacing and/or repairing of non-functional items where feasible. Recommendation 2 remains open pending confirmation of the availability and functionality of essential medical equipment in all the Mission’s level one clinics.

26. The UNMIS Management accepted recommendation 3 and stated that the Medical Section will seek the services of a TCC Biomedical Engineer and/or UNAMID medical technician for the regular calibration and maintenance of its equipment and will proceed with the recruitment once a post is approved. Due to the lack of specialized/qualified technicians all attempts by the Medical Section have not been successful in outsourcing repair and calibration service providers within the Mission area. Also, once in effect, the Medical Section will rely on the provision of maintenance and calibration services offered in the proposed new DFS Systems Contract. Recommendation 3 remains open pending confirmation as to the availability of maintenance arrangements for medical equipment.

Sanitation

27. Section 7 of the DPKO/DFS Guidelines requires storage areas to be clean, and free from accumulated waste and vermin.

28. During the visit to the Khartoum Clinic storage facilities in April 2010, it was observed that the storage area had not been cleaned for a considerable time. It was subsequently cleaned following OIOS’ visit.

29. The Mission did not have a sanitation and pest control programme to ensure cleanliness and elimination of pests and vermin for drug storage areas as
required by the World Health Organization guide to good storage practices for pharmaceuticals.

30. Lack of sanitation and pest control procedures, particularly for areas where drugs and medicines are stored increases the risk of them being contaminated.

**Recommendation 4**

(4) The UNMIS Management should develop a sanitation and pest control programme and ensure that the medical supplies and equipment storage facilities in the Mission are sanitized to meet DPKO/DFS standards on cleanliness.

31. The UNMIS Management accepted recommendation 4 and stated that a sanitation and pest control programme is to be implemented by the Engineering Section in consultation with the Supply Section for unit stock. Recommendation 4 remains open pending availability and implementation of a sanitation and pest control programme.

**Racking and shelving**

32. The DPKO/DFS Guidelines on good storage practices for pharmaceuticals recommend that boxes containing drugs be put on pallets or racks and space left between pallets and walls of the storeroom. Boxes should be at least 10 cm above the floor and 30 cm from walls and other stacks. In addition, racks and stacking should not be more than 2.5 meters high. Refrigerators and freezers should have spaces between them and be about an arm’s length from the wall to allow for air circulation as they generate heat.

33. In Khartoum, El Obeid, Juba, Malakal, Abyei and Kadugli clinic storage areas, the audit found boxes containing drugs and equipment stacked on the floor and against walls. Boxes were stacked high up near the roof and there were no spaces between stackings. In the main medical store in Juba, drugs and equipment were stacked on the floor of reefers and in one of the three reefers, water was leaking from the air conditioning system onto the boxes of drugs placed on the floor. Refrigerators in all clinics visited were placed against walls, with two refrigerators in Khartoum being placed close to each other.

34. The Mission had inadequate storage space and insufficient supply of racks and pallets. The Supply Section relocated to Juba before adequate storage space was made available, necessitating drugs to be kept in reefers used for their transportation. Placing boxes of drugs on the floor may lead to moisture absorption which may damage them. Placing refrigerators close together and against walls does not allow for adequate air circulation. Heat may result in drugs losing their potency. The Chief Supply Officer informed OIOS that requisitions were made for shelves and pallets, but the Mission’s current priority was construction of accommodation and office space in Juba.
Recommendation 5

(5) The UNMIS Management should ensure that construction of the main storage area in Juba is given priority, and racks and pallets are installed as per DPKO/DFS guidelines for the storage of drugs.

35. The UNMIS Management accepted recommendation 5 and stated that the construction of new storage facilities in Juba commenced in mid-August 2010. Recommendation 5 remains open pending completion and commissioning of the main storage area in Juba.

Temperature control and cold chain storage

36. Section 7 of the DPKO/DFS Guidelines recommends that a refrigerator with suitable thermometers for correct temperature readings be provided for storage of blood and vaccines, and temperature readings of the blood and vaccines be taken daily and recorded.

37. Clinic storage facilities for medical supplies and equipment in Khartoum, El Obeid, Juba, Malakal, Kadugli, Abyei and Ed Damazin, and the main storage area in Juba had air-conditioning but their temperatures were not monitored and recorded. Temperature readings for blood and vaccines were not logged on a daily basis in clinics within the Sectors. Temperature readings recorded in logs in Khartoum clinic’s storage areas and on reefers in Juba were assumed, based on manufacturer’s specifications of the refrigerators and reefers, and no actual measurement and monitoring of temperatures was done.

38. Measurement and monitoring of temperatures was not done because the Mission did not have wall thermometers for taking room temperature measurements. Unregulated fluctuations in storage temperatures increase the risks of spoilage of drugs, vaccines and blood stored.

Recommendation 6

(6) The UNMIS Management should ensure that thermometers are procured and installed and logged temperature readings monitored.

39. The UNMIS Management accepted recommendation 6 and stated that new thermometers have been loaned from the Rations Unit and are already being used. A requisition to procure thermometers was submitted in July 2010. Recommendation 6 remains open pending confirmation that the thermometers have been installed in the storage area in Juba and the temperature is being properly monitored.

Storage of controlled substances

40. There is potential for diversion or abuse of controlled drugs where these are stored, administered or dispensed. Section 7 of the DPKO/DFS Guidelines
requires controlled drugs to be stored under lock and key, and access only allowed to authorized persons.

41. In El-Obeid, Juba, Kadugli and Abyei controlled drugs such as morphine and pethidine were kept with other drugs in treatment rooms where access was not limited, and they were not in lockable cabinets.

42. The Head Pharmacist informed OIOS that clinics had been provided with lockable safes and a circular would be sent to remind them to enforce the storage of controlled drugs in these safes.

43. Lack of adequate procedures to safeguard controlled drugs make them susceptible to abuse. There is also a danger of administering such drugs without the prerogative of experienced medical personnel.

**Recommendation 7**

(7) The UNMIS Management should ensure that access to controlled drugs is limited and that they are stored under lock and key.

44. The UNMIS Management accepted recommendation 7 and stated that the Medical Section will continue to conduct regular regional inspections / issue regular reminders to ensure restricted access to controlled substances and compliance with the applicable storage conditions. Recommendation 7 remains open pending verification that access controls have been strengthened.

**Expired drugs**

45. Sections 7, 8 and 10 of the DPKO/DFS Guidelines require records to be kept of all expired items. Such items should be clearly separated and specific areas provided for their storage. In addition, justification reports giving reasons for their expiration should be produced by the central warehouse and given to the CMO biannually.

46. Drugs that expired within the Sectors were not recalled by Mission Headquarters, and were stored together with usable items. OIOS could not ascertain the total value of expired drugs in the Mission due to non availability of data. A justification report giving reasons for expiry was not produced, although expiry reports were produced. In addition:

- Clinics in Juba, El Obeid Malakal, Kadugli and Ed Damazin had lists of expired drugs but no values;
- The clinic in Abyei had expired drugs, but a list of them was not maintained;
- In El-Obeid, expired drugs and unusable equipment worth $77,128 and $8,905 respectively were stored in two containers. These were transferred from Khartoum and comprised of drugs that had expired since the Mission’s inception;
• The Khartoum clinic had drugs valued at $52,481 which expired between 1 January and 31 March 2010;
• The Supply Section had drugs that expired while in storage but their value could not be ascertained; and
• In El-Obeid, Kadugli and Malakal, expired drugs were stored with usable items.

47. The major cause of mixed storage of expired and usable drugs in the clinics within the Sectors is the lack of adequate storage space. The Mission has never incinerated expired drugs since its inception, except for Kadugli which incinerates drugs using the Egyptian level three hospital, as there is not an incinerator large enough to cost effectively dispose of drugs.

48. Accumulation of expired items within the Sectors may result in their misuse, and is inefficient as it uses up valuable storage space.

49. The Chiefs of Medical and Supply Sections informed OIOS that they are taking steps to procure incineration services.

Recommendation 8

(8) The UNMIS Management should keep records of drugs expired in the Mission and all expired drugs should be recalled from clinics and centrally stored while awaiting disposal.

50. The UNMIS Management accepted recommendation 8 and stated that Supply and Medical Sections with coordination of (Property Management Unit and Property Disposal Unit will issue an Inter-Office Memorandum on write off procedures and accurate recording of expendable medical material submitted for write off. Recommendation 8 remains open pending confirmation that all expired drugs and medicines have been recalled and properly dealt with.

Documentation and records

51. The DPKO/DFS Guidelines require written instructions and records to be made available documenting all activities in the storage areas and comprehensive records be maintained showing all receipts and issues of materials and pharmaceutical products.

52. A review of the inventory issue systems in the Supply Section for the medical stores identified incomplete files. For example, files in Malakal, Juba, Wau, El Obeid and Rumbek clinics did not include systems issue vouchers for the period 1 July 2009 to 31 January 2010, an indication that inventory movements were not recorded. For 27 of 30 cases reviewed by the audit, confirmations of receipt of drugs and cargo movement requests were not on file. Discrepancies in deliveries of three cases were not properly documented nor were they followed up and investigated.
53. Physical controls were not in place over issuance of drugs. Independent verifications were not conducted to confirm that requisitions were picked, packed and sent. There was no segregation of duties between the functions of picking, packing, recording in Galileo and authorization of issuance of drugs. The Mission automated the requisition processes for inventory items for all the self-accounting units. However, requisitions for medical inventory were still processed manually, posing the risk of causing delays and errors in processing.

54. The Supply Section had no access to guidelines and procedures for the issuance of drugs and consumables to guide them on the documentation to be maintained, the segregation of duties and the supervision in the drug issue chain. As a result, there was weak accountability over inventory increasing the risk of misappropriation of goods. The Chief Supply Officer acknowledged the weaknesses identified and stated that the relocation of the Supply Section to Juba will benefit storage of medical drugs and equipment because of the presence of experienced staff in Juba.

**Recommendations 9 and 10**

The UNMIS Management should:

(9) Ensure that guidelines and internal controls are established and adhered to for proper inventory management and documentation; and

(10) Consider automating the requisitioning and issuing system for drugs.

55. The UNMIS Management accepted recommendation 9 and stated that the Mission is in the process of establishing its internal controls in line with property management guidelines. Recommendation 9 remains open pending receipt of a copy of the internal control guidelines for inventory management.

56. The UNMIS Management accepted recommendation 10 and stated that Umoja procurement and logistics module system is scheduled for implementation in the near future. In OIOS’ opinion, the implementation of the Umoja system will take some time, and therefore we reiterate the need to ensure there is an adequate system in place for requisitioning and issuing of drugs. Recommendation 10 remains open pending confirmation that an adequate system for requisitioning and issuing drugs is in place.

**Stock management**

57. Section 8 of the DPKO/DFS Guidelines requires the warehouse manager to conduct a physical count of inventory after every six months and thereafter prepare a summary of the results. A justification report giving reasons for discrepancies should be forwarded to the CMO.

58. As at the time of the audit, medical drugs, equipment and consumables were still in transportation reefers following relocation of the main store to Juba.
As mentioned above, this was attributed to the lack of storage space. Packing lists of items transferred were prepared, though they did not indicate quantities and values of inventory items. A sample count of items in the central storage area in Juba revealed discrepancies against system quantities (Table 1 below).

<table>
<thead>
<tr>
<th>SN</th>
<th>Description</th>
<th>Physical count</th>
<th>Galileo</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Amoxicillin</td>
<td>37,200</td>
<td>51,500</td>
<td>(14,300)</td>
</tr>
<tr>
<td>2</td>
<td>Defibrillators</td>
<td>4</td>
<td>19</td>
<td>(15)</td>
</tr>
<tr>
<td>3</td>
<td>Cotrimaxazole</td>
<td>27,000</td>
<td>27,000</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Ciprofloxacin</td>
<td>16,800</td>
<td>34,800</td>
<td>(18,000)</td>
</tr>
<tr>
<td>5</td>
<td>Sunscreen lotion</td>
<td>107</td>
<td>1,708</td>
<td>(1,601)</td>
</tr>
<tr>
<td>6</td>
<td>Gelatin polysuccinate</td>
<td>30</td>
<td>60</td>
<td>(30)</td>
</tr>
<tr>
<td>7</td>
<td>Promethazine injection</td>
<td>180</td>
<td>180</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>Metformin</td>
<td>10</td>
<td>29</td>
<td>(19)</td>
</tr>
<tr>
<td>9</td>
<td>Propranolol</td>
<td>800</td>
<td>800</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>Phytomeridiazone</td>
<td>127</td>
<td>157</td>
<td>(30)</td>
</tr>
<tr>
<td>11</td>
<td>Azithromycin</td>
<td>0</td>
<td>4,900</td>
<td>(4,900)</td>
</tr>
<tr>
<td>12</td>
<td>Betametasone cream</td>
<td>378</td>
<td>2,478</td>
<td>(2,100)</td>
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<tr>
<td>13</td>
<td>Paracetamol</td>
<td>76,000</td>
<td>5,000</td>
<td>71,000</td>
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<tr>
<td>14</td>
<td>Pasteur plaster pipettes</td>
<td>1,800</td>
<td>2,000</td>
<td>(200)</td>
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<tr>
<td>15</td>
<td>Chlorhexidine gluconate solution</td>
<td>16</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>16</td>
<td>Gloria sprayer</td>
<td>19</td>
<td>29</td>
<td>(10)</td>
</tr>
<tr>
<td>17</td>
<td>Portable pulse oximeter</td>
<td>4</td>
<td>11</td>
<td>(7)</td>
</tr>
</tbody>
</table>

Sample physical count by OIOS on 7 June 2010

59. These discrepancies were caused by lack of prompt update of the inventory management system following issuance of items. The lack of up-to-date records and regular tracking of movements in inventory items increases their risk of misappropriation.

Recommendation 11

(11) The UNMIS Management should ensure that stocks are verified frequently, updates are made in the inventory management system and all discrepancy reports are forwarded to the Chief Medical Officer for review and action, if necessary.

60. The UNMIS Management accepted recommendation 11 and stated that Integrated Support Service Office in joint coordination with concerned Supply Units will monitor and ensure that data is verified and updated on a regular basis in the Inventory Management System and discrepancy reports are forwarded to the CMO for review and further necessary action if necessary. Recommendation 11 remains open pending evidence of verification of stock data and submission of discrepancy reports.
V. ACKNOWLEDGEMENT

61. We wish to express our appreciation to the Management and staff of the Supply and Medical sections in UNMIS for the assistance and cooperation extended to the auditors during this assignment.
## STATUS OF AUDIT RECOMMENDATIONS

<table>
<thead>
<tr>
<th>Recom. no.</th>
<th>Recommendation</th>
<th>Risk category</th>
<th>Risk rating</th>
<th>C/O</th>
<th>Actions needed to close recommendation</th>
<th>Implementation date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The UNMIS Administration should ensure that there is regular calibration of medical equipment in line with the manufacturers’ instructions and literature.</td>
<td>Operations</td>
<td>Medium</td>
<td>O</td>
<td>Evidence of calibration of medical equipment.</td>
<td>December 2010</td>
</tr>
<tr>
<td>2</td>
<td>The UNMIS Administration should ensure that all essential medical equipment is available and operational in all the Mission’s level one clinics.</td>
<td>Operations</td>
<td>Medium</td>
<td>O</td>
<td>Availability and functionality of essential medical equipment in all the Mission’s level one clinics.</td>
<td>March 2010</td>
</tr>
<tr>
<td>3</td>
<td>The UNMIS Administration should establish annual maintenance service contracts or recruit a Medical Bio technician to maintain the medical equipment.</td>
<td>Operations</td>
<td>Medium</td>
<td>O</td>
<td>Availability of maintenance arrangements for medical equipment</td>
<td>December 2010</td>
</tr>
<tr>
<td>4</td>
<td>The UNMIS Administration should develop a sanitation and pest control programme and ensure that the medical supplies and equipment storage facilities in the Mission are sanitized to meet DPKO/DFS standards on cleanliness.</td>
<td>Operations</td>
<td>Medium</td>
<td>O</td>
<td>Availability and implementation of a sanitation and pest control programme.</td>
<td>November 2010</td>
</tr>
<tr>
<td>5</td>
<td>The UNMIS Administration should ensure that construction of the main storage area in Juba is given priority, and racks and pallets are installed as per DPKO/DFS guidelines for the storage of drugs.</td>
<td>Operations</td>
<td>Medium</td>
<td>O</td>
<td>Completion and commissioning of the main storage area in Juba; and installation of pallets.</td>
<td>October 2010</td>
</tr>
<tr>
<td>6</td>
<td>The UNMIS Administration should ensure that thermometers are procured and installed and logged temperature readings monitored.</td>
<td>Operations</td>
<td>Medium</td>
<td>O</td>
<td>Installation of thermometers in the storage area in Juba and monitoring of logged temperature readings.</td>
<td>October 2010</td>
</tr>
<tr>
<td>7</td>
<td>The UNMIS Administration should ensure that access to controlled drugs is restricted and that they are stored under lock and key.</td>
<td>Operations</td>
<td>Medium</td>
<td>O</td>
<td>Verification/Evidence of compliance.</td>
<td>December 2010</td>
</tr>
<tr>
<td>Recom. no.</td>
<td>Recommendation</td>
<td>Risk category</td>
<td>Risk rating</td>
<td>C/ O1</td>
<td>Actions needed to close recommendation</td>
<td>Implementation date2</td>
</tr>
<tr>
<td>-----------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>8</td>
<td>The UNMIS Administration should keep records of drugs expired in the Mission and all expired drugs should be recalled from clinics and centrally stored awaiting disposal.</td>
<td>Operations</td>
<td>Medium</td>
<td>O</td>
<td>Recalling and central storage of all expired drugs.</td>
<td>November 2010</td>
</tr>
<tr>
<td>9</td>
<td>The UNMIS Administration should ensure that guidelines and internal controls are established and adhered to for proper inventory management and documentation.</td>
<td>Operations</td>
<td>Medium</td>
<td>O</td>
<td>Establishment of internal control guidelines for inventory management.</td>
<td>October 2010</td>
</tr>
<tr>
<td>10</td>
<td>The UNMIS Administration should consider automating the requisitioning and issuing system for drugs.</td>
<td>Operations</td>
<td>Medium</td>
<td>O</td>
<td>Automation of the requisitioning and issue system for drugs.</td>
<td>Not indicated</td>
</tr>
<tr>
<td>11</td>
<td>The UNMIS Administration should ensure that stocks are verified frequently, updates are made in the inventory management system and all discrepancy reports are forwarded to the Chief Medical Officer for review and action, if necessary.</td>
<td>Operations</td>
<td>Medium</td>
<td>O</td>
<td>Evidence of verification of stock data and submission of discrepancy reports.</td>
<td>October 2010</td>
</tr>
</tbody>
</table>

1. C = closed, O = open
2. Date provided by UNMIS in response to recommendations.