World Health Organization
REGIONAL OFFICE FOR Europe

Assessment of paediatric hospital care in Tajikistan, 2-18 July 2012

MISSION REPORT

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ABSTRACT

In an effort to scale up and document best practices, the Russian Federation has provided funding to be administered by WHO to support improved quality of pediatric care project in four selected countries in central Asia and Africa. Within the framework of this Project, WHO in collaboration with Scientific Centre for Child Health of the Russian Academy of Medical Science and other technical experts will provide technical assistance to Angola, Ethiopia, Kyrgyzstan and Tajikistan to strengthen their national health systems' capacity to improve the quality of pediatric care in the first-level referral hospitals.

The main goal of the project is to reduce childhood mortality through strengthening national health systems capacity in improving the quality of pediatric care for common childhood illnesses in the first-level referral hospitals.

This is the report from the second mission that aimed at conducting Trainers meeting and preparation for the training course (02 July), training course on how to use the WHO Pocket book on Hospital Paediatric Care (03-06 July), training and preparation for Hospital Assessment (07 July), Planning of Hospital Assessment (9 July), Direct Assessment of the Quality of Paediatric Hospital Care in 10 district hospitals in Tajikistan (10-17 July), the National Debriefing Meeting with group of key national stakeholders on preliminary findings, recommendations and plan of actions (18 July, 2012).

KEY WORDS

Child, Hospitalized
Child advocacy
Child care
Delivery of health care
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LIST OF ACRONYMS

ARI	Acute Respiratory Infection
ALRI	Acute Lower Respiratory Infection
BFH	Baby Friendly Hospital
BW	Birth Weight
CEE	Central and eastern European countries
CIS	Commonwealth of Independent States
CME	Continue Medical Education
CT	Computer Tomography
DHS	Demographic Health Survey
EBM	Evidence-based Medicine
ERS	Erythrocytes Rate of Sedimentation
ICATT	Integrated Management of Childhood Illnesses Computerized Adaptation and Training Tool
ICU	Intensive Care Unit
IMCI	Integrated Management of Childhood Illness
KfW	Kreditanstalt für Wiederaufbau (National German Bank)
MCH	Maternal and Child Health
MR	Medical records
ORS	Oral Rehydration Solution
PB	Pocket Book
PHC	Primary Health Care
QoC	Quality of Care
Ps	Pulse
RAMS	Russian Academy of Medical Science
RC	Red Corpuscles, Erythrocytes
RF	Respiratory Failure
RR	Respiratory Rate
UNICEF	United Nations Children`s Fund.
USAID	United States Agency for International Development
WBC	White Blood Cells
WHO	World Health Organization

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EXECUTIVE SUMMARY

From 2nd to 8th of July, 2012, WHO Regional Office for Europe conducted a series of activities in Tajikistan within the framework of the "Improving the quality of paediatric care in first-level referral hospitals in selected countries of central Asia and Africa" project. The main goal of the project is to reduce childhood mortality through strengthening national health systems capacity in improving the quality of paediatric care for common childhood illnesses in first-level referral hospitals. Prior to the activities, health ministry of Tajikistan issued an order and selected 10 hospitals in Khatlon Region as assessment sites.

From 2nd to 6th of July, 2012, the mission conducted a capacity building training workshop on improving the quality of paediatric hospital care. Twenty national professionals, including representatives from national, regional and district levels, were trained on using the WHO pocket book (PB) on paediatric hospital care.

On 7th July, 2012, WHO Regional Office for Europe conducted a national capacity building workshop to prepare national assessors for the hospital assessment study. Thirteen national assessors, six representing the national level and seven representing Khatlon Region, were trained in using the WHO assessment tool for paediatric hospital care (revised version, October 2009). The hospital assessment planning meeting took place on 9th July, 2012. Twelve doctors, including six national and six international experts, participated in the meeting.

The paediatric hospital care quality assessment in 10 central district hospitals in Tajikistan and the national debriefing meeting on preliminary findings took place from 10th to 18th July, 2012. The two groups of assessors separately visited and assessed 10 hospitals of Khatlon Region. The assessment was based on the tool developed by WHO/ HQ/CAH in 2001, and revised and updated by WHO Regional Office for Europe in 2009. Prior to that, in June 2012, a questionnaire-based survey was carried out in 10 hospitals providing paediatric care to collect data about existing facilities, supplies and hospital workload. These hospitals had an average of 63 paediatric beds (range 20-160 beds), and an average number of 1238 admissions per year (range 280 to 2894).

The results of the assessment in 10 hospitals showed an average score of 1.22 (range 0.8 – 2.0). Seven hospitals had score >1.0< 2.0, and 2 hospitals < 1.0. Only 1 out of all assessed hospitals had a score of 2.0. The main conclusion of the assessment was that most hospitals of Khatlon Region need some improvement and others need substantial improvement in quality of care to reach international standards. The experts revealed cases of suboptimal care with significant health hazards, omission of evidence-based interventions, use of diagnostics and treatment methods that are considered ineffective according to international standards and also potentially harmful to children. Low scores were given to management of sick children with anaemia and malnutrition (0. 77), management of patients with chronic diseases (0. 83), fever conditions (0. 89) and ARI (0. 91). Many cases of polypharmacy and overuse of intravenous infusions were observed. On the item "Children friendly hospital" the hospitals had an average score of 0.94 (range 0.63 – 1.9) and "Follow up and monitoring" had the same average of 0.94 (range 0.24-2.0).

The assessment indicated a weak connection between hospitals of different levels and an absence of collaboration between primary health levels (outpatient services) and hospitals, with more than 85% of patients in the paediatric wards being self – referred. The hospitals either were not providing food for patients or providing very poor quality food. The sanitary and hygienic conditions for patients were inappropriate in 8 out of 10 visited hospitals. Lack of diagnostic equipment and supplies was observed in all hospitals. In addition, all facilities needed renovation.

1. BACKGROUND

Over the past several years, WHO Regional Office for Europe has been promoting Integrated Management of Childhood Illness (IMCI) and Making Pregnancy Safer (MPS) strategies to reduce child mortality and morbidity, to promote healthy growth and development. IMCI strategy has been introduced in an increasing number of countries in the WHO European Region since its launch in 1997. In Tajikistan, all IMCI training materials were adapted and ready after the first IMCI training course conducted in May 2002. Since 2004 Tajikistan has been scaling up the strategy implementation. In spite of the fact that IMCI implementation was expanded broadly and the national IMCI centre, 3 regional IMCI centres and 65 district IMCI centres were established, the rates of infant and under-5 mortality have remained high[7]. According to estimated data, the infant mortality rate in Tajikistan is estimated to be 65 per 1000 live births, while the mortality rate of children under 5 is about 79 per 1000 live births. [1.7] Acute respiratory infection, diarrhoea and malnutrition represent the main causes of infant mortality and constitute more than 50% of cases. According to recent data, child mortality in general decreased over the period 1993–2006, but the infant mortality rate and under-5 mortality rate are still very high – they are double the average rates for the central and east European countries (CEE) or the Commonwealth of Independent States (CIS) [7,11]. Numerous reports prepared by various donor organizations and agencies in Tajikistan showed that despite significant positive results in the implementation of maternal and child health programs, the national health system still faces some challenges [3.8,12] which may interfere with provision of quality care at PHC and hospital levels. QoC has recently been recognized as a neglected issue, and the existence of a quality gap is the most likely explanation for slow progress towards MDG 4.

The WHO Regional Office for Europe has been promoting a broad process for improving paediatric hospital care. Better quality of care in paediatric hospitals aims at delivering health services consistent with best evidences. [2.4,10]

In 2001, WHO CAH developed a manual “Management of the child with a serious infection or severe malnutrition”[5] and a pocket book on hospital care for children [6]. The PB was first published in 2005 to provide clinical guidance for the management of common childhood illnesses and improvement of the quality of care in the first-level referral hospitals in low-resource settings with limited equipment and staff capacity. It was part of a series of documents and tools that support the Integrated Management of Childhood Illness (IMCI) guidelines for outpatient management of sick children. In 2010, Recommendations for management of common childhood conditions [13]: evidence for technical update of pocket book recommendations in the following chapters were developed and published: newborn conditions, dysentery, pneumonia, oxygen use and delivery, common causes of fever, severe acute malnutrition and supportive care.

Along with guidelines on QoC, in 2001, WHO CAH/HQ has developed a tool on hospital assessment which was revised and updated by WHO Regional Office for Europe [9] in 2009.

In 2002, the Regional Office started and continued a regional process to support countries in improving quality of paediatric hospital care, triggered by the regional consultations that revealed existence of very little evidence on the quality of hospital care for children in the WHO European Region. The European Intercountry meeting on improving paediatric hospital care was held in Yerevan, Armenia, in October, 2010[4]. The experience gained was analysed and the plan of action on improving QoC in hospitals was discussed and recommended for implementation.

In an effort to scale-up and document best practices, the Russian Federation has provided funding to WHO to support improvement of paediatric hospital care in four selected countries in central Asia and Africa. The main goal of the project is to reduce childhood mortality through strengthening national health systems’ capacity in improving the quality of paediatric care for common childhood illnesses in first-level referral hospitals. Within the framework of this project, WHO, in collaboration with Scientific Centre for Child Health of the Russian Academy of Medical Science and other technical experts, initiated the technical assistance to Tajikistan to strengthen its national health system’s capacity to improve the quality of paediatric care in first-level referral hospitals.

The present report reflects the findings of the activities and assessment of the QoC in 10 hospitals of Khatlon Region of Tajikistan carried out from 2nd to 17th July, 2012.

2. SCOPE OF THE MISSION:

- To facilitate a 5-day training workshop with the project national steering group and national experts on use of the WHO tools for Quality Improvement (QI) (4-day workshop on use of the WHO PB and QI and 1-day training on paediatric hospital assessment)

- To plan the assessment with the core group to agree on detailed plan for the assessment in the project's hospitals

- To conduct an assessment in the project's hospitals to identify quality of care (QoC) problems and concrete actions for each hospital based on the assessment findings

- To share preliminary findings of the hospital assessment with key national stakeholders' group and agree on the list of indicators

Dates: 2nd – 18th July, 2012

Experts involved:

1. Professor Ecaterina Stasii, MD, PhD, WHO Regional Office for Europe Consultant
2. Dr Bayan Babaeva, WHO Regional Office for Europe Consultant
3. Dr Wilson Were, WHO headquarters
4. Professor Maia Bakradze, MD, PhD, Russian Academy of Medical Science
5. Dr Iliya Matushin, Russian Academy of Medical Science
6. Dr Vlad Chernikov, PhD, Russian Academy of Medical Science

3. ACTIVITIES

3.1. Capacity building training workshop: Improving the quality of paediatric care in hospitals (3-6th July, 2012)

The training course was held in Dushanbe, Republic of Tajikistan, from 3rd – 6th of July, 2012. Twenty paediatricians attended the course. The participants represented the Ministry of Health, National Clinical Centre for paediatrics and children surgery based in the Republican clinical hospital in Karabolo, paediatricians and managers from Khalton Region and district hospitals, such as Kulyab, Rumi, Djomi, Vose, Yavan, Vakhsh, Penjakent, Farkhor. (For training agenda and list of participants, see annex 2).
The objectives of the training course were:

- To introduce the WHO Pocket Book on paediatric hospital care, 2005;
- To train health workers on using the PB in everyday clinical practice;
- Introduce WHO recommendations for management of common childhood conditions: evidence for technical update of the pocket book recommendations: newborn conditions, dysentery, pneumonia, oxygen use and delivery, common causes of fever, severe acute malnutrition and supportive care 2010;
- To test the adapted training materials to make adjustments and consider changes;
- To build the capacity of national professionals;
- To discuss the obstacles in improving quality of hospital care for children and suggest ways to improve;

Preparations. Prior to the course, the Ministry of health issued an order on the date, place and the list of participants for the training. The WHO PB was adapted by the national experts and printed. The National Paediatrics Centre of Karabolo Hospital was chosen for training. Suitable classroom with all facilities, including LCD projector, was available. The Intensive Care and Paediatric wards were selected for practical sessions.

Training. Two WHO international consultants and three national trainers facilitated the course. The training course was conducted in Russian. The training followed the guideline for paediatric hospital care training and included various training methods such as problem-based cases, introducing the major PB chapters, clinical practice on use of the guideline in everyday paediatric care (work on the children's ward), video demonstrations, discussions on improving of the quality of care and problem solving. The updated Russian version of the WHO video worked well. Many participants were high-level managers and faculty of the Tajik Sate Medical University. A lot of technical questions raised by participants were discussed and answered.

Group work. At the end of the course, the group was divided in to 2 subgroups and was asked to define the existing problems and gaps in paediatric hospital care and determine possible solutions. The first group included health managers and the second one – paediatricians. The participants prepared and presented the results for discussions in the plenary session. Main results are presented in Table 1.

Table1. Existing problems in paediatric hospital care in Tajikistan.

Major problems and gaps	Possible solutions
Lack of qualified medical workers in hospitals	Improve the planning of paediatric manpower training and development
Lack of basic medical equipment and supplies	Implement the recommendation of the WHO pocket book on paediatric hospital care
Lack of essential drugs in hospitals	Rational use of medicines. To maintain the norms and standards endorsed by the Ministry of Health
Medical workers fail to comply with developed national standards and available clinical protocols	Develop a monitoring tool for supervision and evaluation of clinical protocol implementation
Aggressive advertisement of medicines by pharmaceutical companies	Revise the legislation on advertisements; increase the responsibility of the medical workers.
Lack of access to quality drinking-water	Comply with the National Program on improving the quality of drinking-water.
Lack of parental and population knowledge on child health and care	Strengthen activities on health education at community level.
Lack of follow up and control over health program implementation by managers at different levels.	Re-establish the supervisory practice at national, regional and district level.
Long distance from sick children residence to hospitals	Improve accessibility of hospitals
Lack or low quality of food in the hospitals	Revise the standards for feeding. Monitor feeding practices and foods in the hospitals
Electricity is available, but with interruption, especially in winter time	Restore the available or purchase a new electro generators for each hospital.
Lack of heating in cold season	Strengthen the collaboration with National administration and ask assistance and support
Lack of oxygen	Improve the availability of oxygen in the ICU and paediatric wards
Low quality of laboratory investigation	Revise the standards, implement monitoring of the laboratory activity in the hospitals
The training curricula in the Medical University and Colleges are outdated and do not contain the updated EBM recommendation	Revise the training curricula and promote implementation of EBM in the training programmes of CME
No monitoring indicators	Establish a working group to elaborate the indicators for monitoring
Low quality of records, accounts and medical documentation in hospitals	Analyse the situation and bring in order documentation in hospitals

Lack of collaboration between different levels of care provision, between PHC and hospital care.	Improve the quality of extracts at discharge in the hospitals. Organize joint meetings with medical workers at PHC and HC.
Lack of the service on autopsy (post-mortem examination)	Re-establish the pathological-anatomy service. Elaborate the order of the Ministry of Health.
Low efficiency of audit	Train medical workers on conducting the audit
Harmful national traditions, practices	Strengthen work with national administration and representatives from communities.
Lack of updated list of essential drugs	Revise and update the list in accordance with the adapted PB
Medical workers are not aware about the WHO PB on hospital care	Provide medical workers with hard copies. Develop training plan
The PB is not translated to Tajik	Translate the PB after adaptation and correction
Unsatisfactory activity of the admission wards in the hospitals	Plan and implement updated standards of emergency care of PB
Lack of food for admitted children	Explore and find the possibility to provide food in hospitals
Polypharmacy (polypragmazia)	Implement case management standards in hospitals
Over diagnosis of neurological pathologies. High number of contraindications to vaccination	Update the list of contraindications to vaccinations
Inappropriate management of children with asthma	Develop the national protocol and train medical workers on management of child with asthma
Lack of emergency care practical skills	Train and re-train medical workers on triage and emergency care

Preliminary list of indicators for measuring the QoC in the first-level referral hospitals:

1. The number of patients with diarrhoea who did not receive ORS at home
2. The number of sick children who unreasonably received antibiotics
3. Correct use of oxygen. The number of severe patients who did not receive oxygen
4. The number of patients with malnutrition who are monitoring regularly (weight, length)
5. The number of sick children with dehydration who are monitored on liquids (solutions) received in the ward
6. The number of patients assessed in accordance with protocols
7. Lethality (%)
8. The number of discharged patients with worsening of status
9. The number of patients with polypharmacy administrated to the hospital (poly- pharmacy)
10. The number of patients who unreasonably received IV infusions
11. Availability of the essential drugs (according to the list approved by the Ministry of Health)
12. Availability of the supplies and equipment needed for the first-level referral hospitals
13. The number of patients referred by PHC workers

Evaluation of the training course. After the plenary session all participants were asked to fill in an evaluation form (Table 2).

Table2: The results of the evaluation form after training on "Capacity building training workshop: Improving the quality of paediatric care in hospitals" 3-6th July 2012. Dushanbe (minimal mark-0. maximum-5)

Indicator	**Average mark**
The training objectives are clearly stated	4,6
The training objectives were achieved	**4,5**
This WHO Referral Care Manual is relevant to my work	**4,8**
The training program was easy to follow	**4,2**

The training course was interesting and enjoyable	4,6
I have acquired new skills and knowledge	**4,7**
I believe the skills I have learned will help to improve my performance	**4,6**
I felt comfortable during the training program	**4,8**
I think I can now use the WHO Guidelines in everyday clinical situations on the hospital wards	**4,6**
I believe I may be able to work as a trainer for the course in future	**4,6**

The results of the test showed that all participants were able to successfully respond to more than 90% of questions. All participants evaluated the course with highest marks – between 4 and 5. This confirms that the teaching approaches can be effectively used for further training of health professionals in Tajikistan.

The following comments and suggestions were collected from 20 completed questionnaires:

1. What did you like most in the course? Please provide details:
    - All facilitators performed as high level professionals
    - The new, evidence-based approaches; we have recognized our own mistakes/errors
    - Very good demonstration materials, very good communication skills of the trainers
    - New teaching skills acquired
    - The facilitators shared their experience
    - The training course is feasible and has interesting practical sessions
    - The training was interesting, the topics were explained in the connection with tnationla programs
2. What did not you like in the course? Please provide details.
    - Too short duration of the training course
3. Do you have any suggestions and thoughts to improve this course in future? Please provide details
    - To establish a Training centre on emergencies for practicing skills on manikins and for
    - trainings on PB
    - There is a need to establish such training for all medical workers (doctors, managers, nurses) responsible for child and neonatal health
    - It is recommended to organize such a training in better equipped hospital
    - Will be useful to have a copy of the PB in Tajik language
    - Need to have more hours for practical/clinical sessions, more cases to study
4. Please write other ideas about how the quality of care for sick children in your hospital can be improved.
    - To improve hospital equipment and hospital facilities
    - To achieve the 100% coverage in training on IMCI and WHO PB on hospital paediatric care
    - To improve monitoring of hospital activities and personnel knowledge
    - More frequently meet WHO experts for monitoring
    - To improve the work of admission ward of hospitals, improve the process of triage and provision of emergency care
    - To supply hospital with oxygen, food, drugs, lab tests and devices

Thus, the participants found the training objectives clearly stated and achieved, the training schedule was easy to follow. The participants related that the optimal duration of the training course for doctors from the first level should be longer, about 5-6 days. The course was found to be suitable for health workers from the hospitals of all three levels. All adaptations were accepted. The HIV chapter and malnutrition should be revised and adjusted to the recent national clinical protocols. Many participants expressed a wish to start introducing the guide in their practice. The participants mentioned that the course provided a good opportunity for participants to understand better the content of the course and, in particular, its requirements for organization and preparation.

At the end of the course, each participant received the hard copy of the adapted and printed WHO PB and a copy of the WHO CD on training resource for the management of common illness with limited resources.

3.2. National capacity building on preparing national assessors for hospital assessment study (7th July, 2012)

Training and preparation for hospital assessment was conducted on 7th July, 2012. Thirteen national assessors were prepared. The list of participants included 3 representatives of the health ministry, 1 assistant-professor from Medical University, 1 doctor from the Infectious diseases hospital # 2 of Dushanbe, 1 from National Paediatrics Centre of Karabolo Hospital and 7 doctors and managers of Khatlon Region of Tajikistan (see annex 3).

The objectives of the training were:

- To introduce the WHO Assessment tool for the quality of hospital paediatric care (revised version, October 2009);
- To teach health workers on application of the assessment tool;
- To build the capacity of national assessors;

The training was conducted in the National Paediatrics Centre of Karabolo Hospital in Dushanbe. The logistic needs were available, including laptops, LCD projector, hard copies of the assessment tool translated in Russian. The agenda of the training included the clinical session with the aim to test the tool in practice. Five facilitators conducted the training, including two WHO consultants and three international experts (see annex 3).

WHO consultants explained the scope and the plan of the day. Participants were introduced to the assessment tool and each participant received a hard copy of the tool. The participants had the opportunity to learn all parts of the tool. The proposed scoring system was carefully explained. Participants were divided in two groups for practical session. One group visited and assessed admission and paediatric wards and another –emergency care unit and the respiratory diseases ward. The results of the data obtained after the hospital visit were presented and discussed. The questions raised were answered and the methods were explained by facilitators. At the end of the day all parts of the WHO assessment tool were explained and each participants had completed 2-3 parts of the assessment tool.

3.3 Planning meeting on the hospital assessment (9th of July, 2012). Twelve participants, including six national and six international experts (see annex 6). WHO consultants explained the agenda, scope and propose of the meeting (annex 4). The scope of the meeting was to elaborate the concrete plan of actions needed for assessment of the quality of paediatric care in the hospitals, to establish the route, itinerary of the direct visits, to define the materials and logistics needed. The experts were divided in two analogical groups of three national and three international assessors (see annex 3). Prior to the meeting, the Ministry of Healthhad defined 10 hospitals of Khatlon Region as the Project sites. The list of the hospitals to be assessed included 9 district level- Vakhsh, Rumi, Djomi, Pyandj, Vose, Kulyab, Farkhor, Hamadoni, Yavan and one Regional level hospital in Kurgan- Tube.
The agreed dates of the direct assessment were 10th – 17th July, 2012.

Each group of assessors received the hard copies of the completed questionnaires from the selected hospitals. Each part of the WHO Assessment tool was explained and the peculiarities of the collected part of general information from 10 hospitals were discussed. It was agreed to clarify some of the data collected during the visits. At the end of the meeting the logistic and national arrangements were defined. Each group developed an action plan with definition of concrete dates of visits, wrote specific tasks regarding the materials and methods of the assessment. The plan of the group # 1 included visits in five hospitals: central districts hospitals of Rumi, Djomi, Pyandj, Vakhsh and the Regional hospital of Kurgan Tube. The route of the group # 2 included assessment of the central district hospitals of Hamadoni, Farkhor, Vose, Kulyab and Yavan. Two cars for each group were provided for the period of the assessment.

3.4. Assessment of the quality of paediatric hospital care in 10 district hospitals in Tajikistan (10th – 17th July, 2012).
The purposes of the assessment study were:

- To offer the opportunity to the national experts to practice application of the WHO Assessment tool for the quality of hospital care for children
- To highlight and identify problems related to the quality of hospital-based paediatric care
- Together with key national stakeholders and experts, to make suggestions for improving the quality of care based on recommendations from assessment study results

- To elaborate the preliminary plan for action to strengthen the quality of hospital care of sick children in the hospital of first referral level.

The assessment was carried out in two stages. First, in June 2012, questionnaires were distributed among 10 selected hospitals providing paediatric services. During the seconds stage, from 10th to 17th July, 2012, a direct assessment of the quality of paediatric hospital care was carried out by the experts team (see annex 6) in 10 hospitals. The hospitals were coded by the capital English letters and the results were described and analysed correspondingly.

The assessors were divided in two groups with six assessors in each. The first group included two WHO consultants, one international expert and three national assessors. The second group consisted of one WHO consultant, two international experts and three national assessors. Each group assessed five hospitals: first group evaluated the hospitals coded as A,B,C,D,E; the second group –F,G,H,I,K.

The assessment was based on the tool developed by WHO/ HQ/CAH in 2001 and revised and updated by WHO Regional Office for Europe in 2009. The Russian translation of the tool was used for the assessment in Tajikistan (separately enclosed, attachment 1). The tool included visits to all relevant wards (paediatric ward, intensive care unit, admission and surgery ward), interviews and discussions with hospital director, staff and mothers, direct observation of cases and review of the medical records. This assessment tool helps to evaluate the quality of care for children in hospitals, based on standards derived from the WHO PB and includes a series of forms to collect the following information:

1. Information system and medical records
2. Essential drugs, supplies and equipment
3. Laboratory support
4. Emergency care
5. Paediatric ward facilities
6. Case management of common diseases (ALRI, Diarrhoea, Anaemia and growth failure, Fever conditions, Chronic conditions, Essential paediatric surgery)
7. Nutrition and supportive care
8. Child friendly services
9. Monitoring and follow up
10. Guidelines and auditing
11. Access to hospital and feedback to primary health care
12. Mothers' and other care givers' interview on patients care
13. Health workers interview

To obtain comparable data, to identify the most critical areas for actions and to be able to formulate most appropriate recommendations, the scoring system recommended in the assessment tool was applied. This scoring system included 4 scores for evaluation: 3 = good quality of care according to international standards; 2 = need for some improvement to reach standard care (suboptimal care but no significant hazard to health); 1 = need for substantial improvement to reach standard care (suboptimal care with significant health hazards, e.g. omission of evidence-based interventions and use of diagnostic and treatment which are not effective according to international standards, and may also be potentially harmful to children); 0 = need for very substantial improvements (totally inadequate care and/or harmful practice with severe hazards to the health of children. All hospitals were evaluated in accordance with the above mentioned scoring system.

The questionnaires collected before the visits included the information regarding sections 1 to 4 of the assessment tool. Questionnaires covered structural aspects (beds and staffing), basic hospital statistics, including admissions, for each age and main diagnostic group, deliveries, availability of basic equipment, drug supplies and laboratory procedures. Complete data were obtained from all hospitals. The information received was analysed before visits, and whenever possible was checked during the visit.

Cases directly observed included the widest possible range of conditions, but focused on the main diagnostic categories and took into account babies and children of various age groups. The visit normally started with a briefing with the director of the hospital and paediatricians to present the aims of the visit and clarify the purpose of the hospital care assessment. Hospital statistics were reviewed and the main problems including structure, staffing, equipment, organization, relationship with primary care level and transfers to further level were discussed with the hospital directors. Visits to wards were carried out together with doctors in charge. An overview of all admitted cases was done and a few of them were thoroughly examined and discussed with the staff, including a review of the records. Attention was paid to all stages of care provision, from admission

procedures to initial assessment, lab investigations, monitoring, treatment and discharge of patients. The records of children who died in the hospitals or were discharged during this year were analysed. A short debriefing with presentation of the main findings was done at the end of the visit.

Altogether 10 WHO tools (one for each assessed facility) were completed in 2 versions (hard copies and electronic files), analysed and the score was calculated at the end of the assessment period. Eighty records of children who died in the hospitals or were discharged during this year were assessed and the expert evaluation was given. After assessing the planned hospitals, the groups completed the evaluation forms and worked out the plans of actions for each facility. Meetings were held with national authorities before and after the assessment as well as with international agencies working in the health sector.

The national debriefing meeting with the group of key national stakeholders on preliminary findings, recommendations and plan of actions took place on 18th July, 2012. The purpose and results of the assessment were presented and their relevance to the current proposals for health care reform in 10 selected hospitals was discussed.

4. FINDINGS

General information. From 2nd to18th July, 2012, WHO Regional Office for Europe conducted the assessment of the quality of paediatric hospital care in Tajikistan. The number of beds for the paediatric patients varied across the hospitals, ranging from 15 to 160 with an average of 63. The surgery ward, intensive care unit (ICU) and infection diseases ward of the district hospitals also had paediatric beds. The hospitals were staffed almost 100% with doctors as well as nurses. The number of doctors in paediatric wards varied from 1-3 in the district hospitals to 4 -10 in regional hospitals. The number of nurses varied from 2 to over 10.

None of the hospitals had a separate outpatient department. The district polyclinics were functioning independently. Each hospital had the admission rooms, responsible for triage and emergency assistance. There were no separate admission rooms for children and newborns. Patients with infection were admitted separately. According to the register of the admission room in the district hospitals, sick children usually are admitted in the paediatric ward, the ward for infectious diseases, general surgery and ICU. Respiratory infections, diarrhoea, infectious diseases, sepsis, perinatal conditions, encephalopathy, asphyxia, intrauterine infection, congenital malformations and trauma represent the most common reasons for admissions as well as the main causes of death.

4.1. Information system and medical records. According to the collected data, the average score of the 10 assessed hospitals on this item is 1.65 (Table 3). It means that the hospitals need some improvement to reach standard care. The relevant information is available. There is document-based information system on patient flow, on most indicators (case fatality, bed occupancy rate, admission rate). Computers are available in the statistics units of the hospitals, however not used. The checked medical records in about 90% of cases were clear and eligible.

Table 3. Assessment of the quality of hospital care for children
Summary evaluation score, Tajikistan, July, 2012

Items	A	B	C	D	E	F	G	H	I	K	Average
1. Information system and MR	2	1.5	1.5	1.5	1.8	1.65	1.25	2.0	2.07	1.3	1.65
2. Essential drugs, supplies and equipment	1	1.5	1.8	1.9	1.9	1.60	0.91	1.6	1.6	1.2	1.5
3. Laboratory support	1.5	2	2	1	2	1.50	1.5	2.0	1.5	0.5	1.55
4. Emergency care	1	1	1.5	1.1	1.9	1.90	1.3	2.4	1.5	1.8	1.54

5. Paediatric ward facilities	**1.5**	**1**	**1.4**	**1.4**	**1.9**	**1.70**	**0.92**	**2.5**	**1.5**	**0.95**	**1.48**
6. Case management of common diseases											
6.1 ALRI	**0.8**	**1.5**	**1**	**0.7**	**1**	**0.80**	**0.4**	**1.6**	**0.62**	**0.7**	**0.91**
6.2 Diarrhoea	**0.6**	**1**	**0.5**	**1.1**	**1.3**	**1.20**	**0.78**	**3.0**	**1.4**	**0.55**	**1.14**
6.3 Anaemia and growth failure	**1.3**	**1**	**1**	**1**	**0.8**	**0.66**	**0.27**	**1.2**	**0.3**	**0.11**	**0.77**
6.4 Fever Conditions	**1**	**1.5**	**1**	**1.2**	**1**	**0.75**	**0.33**	**1.4**	**0.4**	**0.27**	**0.89**
6.5 Chronic conditions	**-**	**-**	**0.5**	**1**	**0.8**	**1.30**	**0.4**	**1.7**	**0.66**	**0.33**	**0.83**
6.Essential paediatric surgery	**1.5**	**2.0**	**-**	**1.8**	**2.2**	**2.00**	**1.0**	**1.66**	**1.5**	**1.44**	**1.50**
7. Nutrition and supportive care	**0.5**	**0.5**	**0.5**	**1**	**1**	**0.76**	**0.86**	**2.45**	**0.62**	**0.8**	**0.89**
8. Child friendly services	**0.8**	**1**	**1**	**1**	**1**	**0.70**	**0.63**	**1.9**	**0.71**	**0.75**	**0.94**
9. Monitoring and follow up	**1**	**1**	**0.5**	**1.1**	**1.3**	**0.45**	**0.66**	**2.0**	**1.25**	**0.24**	**0.94**
10. Guidelines and auditing	**1**	**1**	**1**	**0.9**	**1.3**	**0.65**	**0.66**	**2.0**	**1.5**	**0.84**	**1.08**
11. Access to hospital and feedback to primary health care	**1**	**1**	**1**	**1.2**	**1.6**	**0.60**	**0.3**	**1.7**	**0.6**	**1.0**	**1.00**
12. Mothers' and other carers' view on patients care	**1.5**	**1.5**	**1.6**	**1.8**	**1.8**	**1.66**	**1.0**	**3.0**	**1.0**	**1.66**	**1.65**
13. Health workers interview	**2**	**1.3**	**1.1**	**1.3**	**1.8**	**1.10**	**1.3**	**2.3**	**1.5**	**1.5**	**1.62**
Summary evaluation score	**1.2**	**1.3**	**1.1**	**1.2**	**1.4**	**1.16**	**0.80**	**2.0**	**1.24**	**0.89**	**1.22**

4.2. Essential drugs, supplies and equipment. The average score of this item is 1.5 (range 0.9 -1.9) (see Table 3). The hospitals need considerable improvement in this area to reach standards. There are no free of charge drugs in the hospitals assessed. According to interviews with mothers, parents are paying for all medications and supplies, including those in the ICU. Only in one hospital (H) free of charge administration of the medications was observed. During visits a lack of diazepam and epinephrine was detected in 6 hospitals, and a lack of salbutamol in 8 hospitals. In spite of the fact that in some hospitals essential drugs were available, parents were asked to buy drugs in order for providers to be able to replace the used ones, including in the ICU. Approved list of essential drugs or anti-shock set were not available in any ward of the district hospitals (admission, ICU, paediatric, infection diseases). Most IV fluids were available; a mix of saline and glucose is frequently unreasonably used. There were no records on use of oral antibiotic in medical charts at the time of the visits, but intramuscular (IM) or intravenous (IV) administration were largely preferred to oral route. It needs to be mentioned that parents are paying for all medications. It is not clear which medications should be provided free of charge and which are to be bought by patients. This situation is resulting in late and ineffective treatment of patients. Only in the hospital H mothers were informed on free of charge drugs.

Uninterrupted electricity is available in 5 of the hospitals, but there are regular outages in the remaining 5 hospitals. All hospitals have back-up power supply. Running water is provided with interruptions, hot water is not available at all. Three hospitals have no running water at all.

The assessors established a lack of essential supplies, consumables and equipment needed for resuscitation, intensive and basic care. There is no oxygen in the paediatric wards. Oxygen cylinders or generators were noticed only in operating rooms. As a rule, oxygen concentrators in the hospitals are located in the maternity wards. Cylinders are available in the operating rooms of 6 hospitals. X-Ray equipment in most hospitals is outdated and needs replacement. A lack of aspirators, pulse oximeters, peripheral catheters, nasal prongs, nasogastric tubes for kids, urine catheters, paediatric intubation tubes, defibrillator, paediatric equipment for artificial pulmonary ventilation was observed. The systems for IV and syringes are bought by parents. The assessment team observed cases of disposable supplies (catheters, cannulas, intubation tubes) being reused after boiling. Available equipment need to be revised, metered and verified.

4.3. Laboratory support. Basic laboratory investigations are available in all hospitals; however the quality of their performance needs to be improved. In 2 hospitals, glucose test, ESR, biochemistry are not performed. None of the hospitals is providing acid base balance test, microelements, and only 2 hospitals are offering CSF microscopy. The laboratory premises need complete rehabilitation; the consumables need to be checked and supplied and the diagnostic devices need verification and reassessment. Basic clinical procedures are not performed in most district hospitals with the exception of insertion of IV catheters or butterflies done in all hospitals. Lumbar puncture is performed regularly only in 2 hospitals. The laboratory assistants and doctors should be re-certified and provided refresher training.

4.4. Emergency care. It was shown that the emergency service is functioning unsatisfactorily in all visited hospitals. Calculated average is 1.54 (range 1.0- 2.4). District hospitals do not have special emergency care departments. In fact, no emergency care for children is provided at the admission ward. There is no proper triage and team approach in provision of emergency care. In the hospital G, the ICU is located on the fourth floor with no elevator available, and paediatric ward is situated in a building at a distance of about 5 km from the ICU. The personnel of the admission units are not trained in provision of resuscitation and they are not ready to provide emergency care. Wall charts and clinical protocols on emergency care of children are not available in the admission room, paediatric wards and ICU. Anti-shock and emergency sets of drugs are not complete. Very severely sick children are brought directly to the ICU or paediatric ward without passing through the admission ward.

4.5. Paediatric ward facilities. The paediatric wards are separated from adult wards and are fully staffed with paediatricians and paediatric nurses. In most hospitals, conditions for patient stay are poor. Average score is 1.45 (range 0.92 -2.5). Only in one hospital the conditions corresponded to standards of care.

It needs to be mentioned that the paediatric wards are serving sick children from 0 to 15 years old. While visiting the hospitals, only in two hospitals 4 children older than 5 years were observed. There were no separate rooms for sick newborns. As a result, sick newborns are not cared for properly, taking into account the warm chain and other peculiarities of the neonatal period. The children observed were from 3 to 24 months old. Diarrhoea, fever conditions and ARI were the most common causes of hospitalization.

A lack of running water was observed in 4 hospitals and water outages in 6. Toilets are usually located outside of the wards and building. Only in 2 hospitals there are shower rooms for mothers. The wards are kept relatively clean with clean bed sheets. Access to hand washing is difficult in 7 hospitals. The most seriously ill children are cared for in the ICU or in the intensive care room in the paediatric ward.

4.6. Case management of common diseases. Information on case management was collected by observing treatment and care of children in the hospitals wards, by interviewing staff and caregivers. In addition, 80 records of children died in the hospitals or discharged during this year were assessed and the expert evaluation was given. Main characteristics and case management of 80 observed cases are presented in Table # 5 (see annex 1). It was established that 93% (75/80) of patients received ineffective and/or harmful drugs and 96% of sick children (77/780) had suboptimal or inappropriate care (annex 1). Low scores (<1.0) were given to the management of the sick child with anaemia and malnutrition (0.77), chronic diseases (0.83), fever conditions (0.89) and ARI (0.91) (see Table 3).

- **ARI and pneumonia.** There were no criteria for admission of children with cough and difficult breathing. Many children admitted with cough and difficult breathing had upper respiratory tract infections. Health workers were diagnosing and classifying pneumonia incorrectly. There were no nebulizers, spacers and oxygen in the wards. About a half of patients with ARI had syndrome of “toxicosis” meaning that the child had fever. Only in one hospital, optimal management of the child with ARI was observed. All children with ARI and fever, ARI and pneumonia, ARI and convulsive syndrome

received unnecessary and harmful IV infusions for 5-8 and more days. All antibiotics were purchased by parents. Oxygen was not available in the paediatric wards. Children with wheezing were not correctly diagnosed. No nebulizers, spacers, or lung testers were available in the district hospitals. No clinical protocols were available for management of pneumonia or asthma.

- **Diarrhoea.** We observed about 100 patients with diarrhoea in 10 hospitals and evaluated 12 patients`s records. (annex1). Only in 1 hospital (H) we found proper, in accordance with WHO protocol, clinical management of children with diarrhoea. With the exception of two, none of the charts reviewed indicated skin pinch, sunken eyes or other symptoms of dehydration. As a result of wrong classification, inappropriate and unfounded rehydration therapy was administrated. Amount of oral rehydration solution in the patients assessed was not calculated and administrated correctly or was not recommended. All patients received inappropriate IV infusions with no therapy monitoring. A lack of feeding recommendations was observed. The hospitals do not provide food for sick children. According to mothers' interviews, infants with diarrhoea received whole milk, brought from home.

- **Anaemia and growth failure.** Management of anaemia and growth failure was evaluated with lower mark, with an average 0.77 (range 0.11 – 1.3). No diagnostic approach is undertaken for anaemia. The quality of the general blood test is doubtful. The treatment of anaemia is not based on evidence. Diagnosis of growth failure needs to be improved considerably. According to the patients' records, not all children were checked for actual weight in the admission ward, and therefore no correct conclusions were made. Scales were available in all hospitals, however they were missing in some paediatric wards and ICUs. In none of the cases, appropriate feeding regimen for patients with hypotrophy was prescribed and no monitoring of feeding in the other paediatrics wards was done. It is known that malnutrition is a very significant and serious problem for infants and children of early age. However, neither clinical protocol nor food is available for management of children with malnutrition. Nutritional rickets seemed to be common for inpatients as well. None of the medical records had adequate recommendation for management of sick child with malnutrition or appropriate feeding consultation.

- **Fever.** Most of the children with fever referred to the hospitals were admitted after ineffective treatment by family doctors or self-treatment at home. Almost all of them were administered inappropriate or unnecessary IV infusion and antibiotics in the paediatric ward. Inappropriate or incomplete assessment was done for all children with fever. No differential diagnoses for possible and likely conditions were considered. Lumbar puncture is performed only in 2 hospitals. Unfounded over-diagnosis of sepsis was identified. Serious problems were found in diagnosis of meningitis and management of convulsions. Inappropriate anticonvulsant is administered to children with seizures. Diazepam is not available in most cases. Due to the lack of laboratory investigations, no appropriate assessment of the sick child with urinary tract infection is taking place.

- **Chronic conditions.** The management of patients with chronic conditions was evaluated with average of 0.83 (range 0.33 -1.5). Nine hospitals got <1.0. We observed proper management of patients with diabetes only in one hospital. The clinical protocol of management of diabetes was available in the hospital. Due to the lack of laboratory diagnostics in 2 hospitals, glucose level is not determined at all and no glucose level monitoring is done in patients suffering from diabetes.

- **HIV/AIDS.** The diagnosis and supervision of HIV infection is under the responsibility of the district HIV centres. According to national statistical data, HIV is not a problem in Tajikistan. Low level of vigilance on HIV detection was established. We did not see any HIV- infected patients in the hospitals visited.

- **General surgery.** Circumcision, appendicitis, hernia and trauma are the most common cases for admission to the surgery ward. The registrations of the specific notes on monitoring and necessary treatment are carefully recorded. Lack of specific equipment for paediatric anaesthesiology, lack of paediatric equipment for artificial lung ventilation and lack of oxygen are diminishing the opportunity for successful clinical management of the surgical patients.

4.7. Nutrition and supportive care. Feeding and food for children that were seen were very poor. Nine hospitals got ≤ 1.0 with average of 0.89. None of the hospitals provided food for sick children. Only 1 out of 10 hospitals had a room for food preparation. There is no monitoring of the quantity of food and caloric intake for sick children, including patients with severe malnutrition. No appropriate written feeding recommendations were seen. Breastfeeding is encouraged in all the hospitals.

4.8. Child friendly services. The results of the assessment showed that considerable improvement is needed to revise and implement the child friendly services in all hospitals. Information about child rights was not available in any of the hospitals. In 9 hospitals there are no conditions for taking shower and bathing sick children. There are no toys and designated play areas within the paediatric wards. Older children and adolescents have no possibilities to be examined and to communicate in a separate room, and no opportunities to be examined by a doctor of the same sex. No visual aids and education materials on child health are available for mothers. Some educational materials for mothers, such as charts and posters, most of them regarding breastfeeding, produced by UNICEF are available in some hospitals. A lack of food for patients in the hospitals of Tajikistan, long unnecessary admissions in ICUs, over used unfounded IV infusion, IM injections, lack of hygienic services could be considered as unfriendly services for children.

4.9. Monitoring and follow up. Five hospitals need substantial and another five some improvements to reach the standards in monitoring and follow up. Monitoring by nurses as well as by doctors appears incomplete and not always well-focused. The existing monitoring charts need revision and updating. Analysis of the clinical cases (records) showed that in cases of diarrhoea, appropriate regimen of liquid and feeding is not indicated, the signs of dehydration not checked and recorded. The quantity of the food consumed is not recorded. At discharge, mothers usually receive a short, vague extract without clear recommendations and missing important information.

4.10. Guidelines and auditing. The case-management does not follow national or international guidelines. Diagnostic criteria are based on different classifications which are provided by courses of continuing medical education (CME). However, the plan and number of investigations and treatment is based, in most cases, on the doctor's opinion. Most of the medical workers are not acquainted with national clinical protocols. No updated paediatric textbooks are available in the wards. We noted management of patients according to evidence-based clinical protocols only in two paediatric wards and in the surgery wards of most hospitals. No proper auditing is performed in the assessed hospitals.

4.11. Access to hospital and feedback to primary health care. A weak connection between hospitals of different levels and no collaboration between primary health levels (outpatient services) and hospitals were observed with more than 85% of patients in the paediatric wards being self-referred. Patients referred from PHC facilities are not correctly assessed and classified for the most common conditions requiring referral in accordance with IMCI standards. Only about 30% of referred patients were treated preliminarily at home by family doctors from 2 to 10 days. Transportation of sick child to hospital is usually the parent's responsibility and represents a barrier to referral. It was established that accessibility to hospitals is good, however limited number of medicines needed for treatment, limited methods of investigations offered free of charge, lack of hygiene services as well as lack of food provision make admission difficult and qualified hospital care inaccessible.

4.12. Mothers' view on patient care. Generally, mothers are satisfied with the hospital care and know the reason for admission. In most cases mothers' expectations regarding services are met**.** Interviews with mothers showed that official and "informal" payments are frequently requested (about 90-95%). Most of them (95%) purchased different drugs and food by themselves and also paid for some of the investigations. As a result of discussion with mothers and medical workers, it was revealed that about 85% of drugs procured by parents are officially available free of charge in the respective hospitals. The average of the score was 1.65 (range 1.0-3.0). The mark 3.0 was given to the hospital H. All mothers were fully satisfied with the clinical management and services provided in the hospital.

4.13. Health workers interview. In the interviews medical workers have noted poor working conditions and poor collaboration between different levels of medical care. Despite low salary levels, the medical workers are dedicated and enthusiastic about the profession. The doctors expressed the wish for continuing education. The CME curriculum needs revision and adjustment to the EBM standards and to the National strategies on child health. The average of this item was calculated as 1.62 (range 1.1 to 2.3), that confirmed the need for improvements, especially in the field of working conditions and accessibility to CME.

4.14. The National debriefing meeting with the group of key national stakeholders on preliminary findings, recommendations and plan of actions

On 18th of July, 2012, the writers took part in the National debriefing meeting with the group of key national stakeholders to present preliminary findings, recommendations and plan of actions. There were 36

participants, including representatives of the Ministry of Health, managers of Khatlon Region and assessed hospitals, representatives of Russian Academy of Medical Science, USAID, KfW, UNICEF, WHO (annex 5).

During the meeting, WHO consultants made a presentation on preliminary results of the assessment conducted. The purpose and the findings of the assessment were illustrated and its relevance to the current proposals for health care reform in Tajikistan was discussed.
After lunch, the meeting participants were divided into three working groups. The groups, based on the preliminary results of the assessment, developed an action plan for improving the quality of paediatric hospital care in Khatlon Region.

The participants concluded that district hospitals need substantial or some improvements in order to reach standard care (Table 3, Annex 6). Three main areas of activities were identified: 1) provision of training courses on ARI, diarrhoea, emergency care, malnutrition, fever conditions, intensive care; 2) procurement of the medical equipment, supplies, consumables such as oxygenators, equipment for artificial ventilation for children, supplies for oxygen therapy, aspirators, defibrillators, pulse oximeters, lung testers, laboratory supplies, manikins, others; 3) improvement of the monitoring and supervision (see Annex 6).

5. CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the training course: "Capacity building training workshop: Improving the quality of paediatric care in hospitals"

1. The course was successful and the objectives were achieved. Twenty national professionals, representatives from national, regional and district levels were trained on use of the WHO PB. The course content and training methods were considered feasible and appropriate for first-level health workers. In general, the adapted guidelines worked well. Only a few inconsistencies and some printing errors in the adapted guide were observed and need correction. The optimal duration of the course should be 6-7 days with strengthening of the clinical practice part.

2. The course provided a good opportunity for participants to understand better the content of the course and, in particular, its requirements for organization and preparation. The course also provided an opportunity to train participants and future facilitators in Tajikistan.

3. The training course gave participants the opportunity to identify the main constraints and gaps in improving the quality of paediatric care in the hospitals of Tajikistan, establish possible directions for solution and development of a preliminary list of indicators for the QoC.

4. Taking into account the positive feedback from participants and the successful completion of the first training course, the updated WHO PB should be implemented in the first-level referral hospitals of Tajikistan and other WHO training courses on use of the PB.

Based on the results of the Assessment of the quality of paediatric hospital care in 10 district hospitals in Tajikistan

1. The national capacity on application of the WHO tool on assessment of the quality of paediatric hospital care was built. Thirteen national assessors were trained. Six of them practiced the application of the WHO tool for assessment of 10 district hospitals of the Khatlon Region of Tajikistan.

2. The Khatlon Region of Tajikistan has a compact network of hospitals of different levels with necessary medical staff that could provide accessible care for population. However, complicated procedures of official referral, high rate (>85%) of self-referral of sick children and unnecessary admissions, limited number of free of charge drugs and laboratory investigations, and a lack of food in the hospitals make access to hospitals limited.

3. Most hospitals of Khatlon Region need some or substantial improvement to reach standard care. According to the scoring system proposed by WHO Assessment tool for the quality of hospital care for children, the average assessment score for the hospitals was 1.22 (range 0.8 – 2.0). Seven hospitals have score >1.0< 2.0, two hospitals < 1.0 and only one assessed hospital had score 2.0. The lowest score was given to the management of the sick child with anaemia and malnutrition (0.77), patients with

chronic diseases (0.83), with fever conditions (0.89) and with diarrhoea (0.91).

4. The assessment showed a lack of adequate supplies and equipment in most hospitals. It is essential to improve availability of oxygen delivery equipment such as oxygen flow-meters and concentrators in the hospital, revise functional X-ray equipment, supply with consumables, peripheral catheters, nasal prongs, nasogastric tubes for children, urine catheters, paediatric intubation tubes, defibrillator, paediatric equipment for artificial pulmonary ventilation, nebulizers, disposal syringes. It was established that emergency care provided to children is unsatisfactory. The concept of emergency care and triage needs revision and improving in all the hospitals.

5. The quality of paediatric hospital-based care in the district hospitals of Tajikistan needs improvement: a significant proportion of children (93%) in the hospitals did not get appropriate clinical management for their conditions, many patients receive unfounded treatment. There is a lack (96%) of evidence-based standard treatment guidelines for common conditions, particularly in the management of ALRI, fever, diarrhoea, brain oedema, sepsis, malnutrition, asthma, convulsions with over use of medicines, IV infusions and injections.

6. Effective implementation of the national protocols on clinical management of the sick child in hospitals is one of the components of an integrated approach to improve QoC. A small working group should be established to develop these guidelines under technical support of international consultant. It is very important to ensure that these protocols are consistent with the protocols used at PHC. Implementations of the adapted clinical protocols, included in the WHO PB, will improve the quality of care in the hospitals.

7. Based on the updated WHO PB on paediatric hospital care and revised clinical protocols on management of the childhood illness, the training courses on clinical management of the sick child for doctors and nurses should be conducted.

8. There is a need in revising policy and regulations regarding auditing and supervision of the quality of care in the hospitals: they should be standardized, based on evidence, and endorsed by the Ministry of Health. To guarantee some minimal standards in the hospitals, an accreditation/certification system, based on the standards, should also be devised.

9. It is crucial to update and endorse the list of services offered free of charge for children, and to revise feeding policy for patients in the hospitals. It is very important to strengthen awareness regarding the Charter of Children's Rights in hospitals.

10. Based on the results of the assessment of the paediatric hospital care quality and discussions at the National workshop on 18th July, 2012, the general action plan and individual plan for each of the 10 hospitals were developed and agreed. For successful implementation of the plans of action, an monitoring & evaluation team should be established.

11. Collaboration between Health Department of Khatlon Region, the Ministry of Healthof Tajikistan and partners such as WHO, Russian National Centre for Child Health, UNICEF, JICA, KfW, WB and others is essential to the success in implementing the standards of QoC in hospital paediatric care.

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ANNEXES
Annex 1

Table1. Management of the observed clinical cases (N=80)

A	B	Given diagnosis	D	E	Comments	G
1	7	Acute enterocolitis. Severe dehydration	Y	Y	Unfounded and over-treatment. Dangerous therapy with 10 types of drugs. No signs of dehydration were evaluated. No control of IV infusion, the eyes are puffy.	Lack of laboratory Lack of monitoring of the clinical signs
2	8	Sepsis. Acute enterocolitis, severe dehydration	Y	Y	Wrong, unfounded diagnosis. Signs of dehydration not checked The child had moderate malnutrition. Over-treatment with antibiotics, vitamins. 4 days in ICU. Unjustified therapy.	Lack of guidelines. Lack of laboratory Lack of monitoring of the clinical signs
3	10	Perinatal encephalopathy. Convulsive syndrome. Dysplasia of the hip joint	Y	Y	Wrong, unfounded diagnosis. No appropriate therapy. No monitoring of liquids received, as a result unjustified and harmful poly- pharmacy. Ineffective feeding and care.	Lack of guidelines. Lack of instrumental investigations
4	5	Perinatal encephalopathy. Convulsive syndrome.	Y	Y	The child was not assessed properly. No weight, no information regarding the reflexes and neurologic status. The child is blind, lack of pupillary reaction. Unfounded therapy.	Lack of guidelines. Lack of the instrumental investigations
5	24	Severe pneumonia.	N	Y	Unjustified diagnosis. The child status corresponding to satisfactory status. Unfounded long antibiotic therapy. No monitoring	Lack of guidelines. Lack of recording forms.
6	48	ARI. Neurotoxicosis. Convulsive syndrome. Cerebral oedema.	N	Y	The child was not assessed properly for emergency and priority signs. No emergency appropriate assistance was carried out. Inefficient therapy of the seizers.	Lack of guidelines Lack of knowledge Lack of oxygen.
7	24	Infantile cerebral paralysis. Convulsive syndrome. Anaemia.	Y	Y	The child was not assessed properly for emergency and priority signs. No appropriate emergency care was provided. Inefficient therapy of the seizers. No control of IV infusion.	Lack of guidelines. Lack of knowledge Lack of oxygen.
8	24	Acute enterocolitis, severe dehydration. Rickets. Hypotrophy. Severe anaemia.	Y	Y	The child was not assessed properly for emergency and priority signs. Wrong therapy, dangerous IV infusion. Unfounded diagnosis.	Lack of guidelines Lack of lab. Lack of oxygen.
9	3	Acute respiratory infection. Fever. Cerebral edema. Congenital heart disease.	Y	Y	The child was not assessed properly for emergency and priority signs. Wrong syndrome therapy.	Lack of guidelines. Lack of oxygen.
10	60	Severe pneumonia Convulsive	Y	Y	The child was not assessed properly for emergency and priority signs. Wrong diagnosis. Inappropriate, dangerous IV	Lack of diagnostic supplies Lack of oxygen

		syndrome.			infusion. No monitoring of liquids received.	
11	7 days	Perinatal encephalopathy. Acute respiratory infection. Neurotoxicosis. Pneumonia.	Y	Y	The child was not assessed properly for emergency and priority signs. Inappropriate, dangerous IV infusion therapy. Ineffective intensive care. No monitoring of liquids received.	Lack of guidelines. Lack of recording forms. Lack of Lab. Lack of oxygen
12	7	Acute respiratory infection. Neurotoxicosis.	Y	Y	The child was not assessed properly. No RR registration, no neurological status checked. Inappropriate, dangerous treatment with IV infusion and neuro stimulators.	Lack of guidelines Lack of oxygen Lack of diagnostic supplies
13	23 days	Pneumonia. Sepsis. Enterocolitis. DIC. Cranio-spinal trauma. Cerebral haemorrhages.	Y	Y	Unfounded diagnosis and inappropriate treatment. The child was not assessed properly. Too long treatment with antibiotics. Poly- pharmacy.	Lack of guidelines Lack of diagnostic supplies Lack of Lab.
14	30	Acute respiratory infection. Pneumonia. RI II-III grade. Congenital heart diseases.	Y	Y	The child was not assessed properly No RR, Ps registration. No monitoring of liquids received. Ineffective intensive care.	Lack of guidelines Lack of diagnostic supplies Lack of Lab Lack of oxygen
15	6 days	Prematurity. Congenital heart disease.	Y	Y	The child was not assessed properly Unfounded diagnosis. No medical assistance performed.	Lack of guidelines Lack of Lab Lack of oxygen
16	11	Severe pneumonia	Y	Y	The child was not assessed properly for emergency and priority signs. Unfounded diagnosis. Inappropriate intensive therapy.	Lack of guidelines Lack of diagnostic supplies Lack of oxygen
17	2	Acute respiratory infection. Convulsive syndrome. Neurotoxicosis.	Y	N	The child was not assessed properly. No RR registration, no neurological status checked. Inappropriate, dangerous treatment with IV infusion and neuro stimulator. No monitoring of liquids and medications received.	Lack of guidelines Lack of Lab Lack of oxygen
18	24	Acute respiratory infection. Convulsive syndrome. DIC. Intestinal paresis	Y	Y	The child was not assessed properly for emergency and priority signs. Unfounded diagnosis. Inappropriate emergency assistance	Lack of guidelines Lack of diagnostic equipment Lack of Lab Lack of oxygen
19	2	Gastroenteritis, severe dehydration. Infection toxic shock. DIC	Y	Y	Ineffective IV intensive therapy. Not checked on signs of dehydration. Lack of evaluation of the vital clinical indicators. No monitoring of the liquids and medications received.	Lack of guidelines Lack of diagnostic equipment Lack of Lab Lack of oxygen
20	2	Acute respiratory infection. Convulsive syndrome. Neurotoxicosis.	Y	Y	Wrong reanimation and inappropriate IV intensive therapy. No adequate monitoring of the vital indicators. Unjustified diagnosis.	Lack of guidelines Lack of lab Lack of oxygen laboratory
21	2 week	Acute respiratory infection. Pneumonia. Pneumopathy.	Y	Y	The child was not assessed properly Ineffective intensive therapy. Lack of monitoring of the clinical signs and efficiency of therapy. Unjustified diagnosis.	Lack of guidelines Lack of lab Lack of oxygen

	s					
22	2	Pneumonia. Hypotrophy, grade 2-3.	Y	Y	The child was not assessed properly for emergency and priority signs. Unfounded diagnosis. Inappropriate intensive therapy.	Lack of guidelines Lack of lab Lack of oxygen
23	4	Acute respiratory infection. Convulsive syndrome. Neurotoxicosis.	Y	Y	No adequate monitoring of the clinical signs and medications received. Unjustified diagnosis.	Lack of guidelines Lack of laboratory Lack of oxygen
24	4	Pneumonia	Y	Y	The child was not assessed properly. No RR registration, no danger signs detected. No adequate evaluation and no monitoring of the therapy. Ineffective resuscitation	Lack of guidelines Lack of laboratory Lack of oxygen
25	1	Acute respiratory infection. Toxicosis.	Y	Y	The child was not assessed properly. No RR registration, no danger signs detected. No adequate evaluation and no monitoring of the therapy. Ineffective resuscitation	Lack of guidelines Lack of diagnostic supplies Lack of laboratory Lack of oxygen
26	8	Gastroenterocolitis Disseminated intravascular coagulopathy (DIC)	Y	Y	Incomplete diagnosis. Lack of evaluation of the vital indicators. Lack of necessary investigations. No assessment for dehydration signs. Inadequate IV infusion. No monitoring of the liquids.	Lack of guidelines Lack of diagnostic suppl./equipment Lack of oxygen
27	3	Acute respiratory infection. Neurotoxicosis	Y	Y	Unfounded diagnosis. No proper assessment. No monitoring of the clinical signs. The child had signs of infection of the urinary tract. Polypharmacy.	Lack of guidelines Lack of diagnostic suppl./equipment
28	8	Acute respiratory infection. Pneumonia	N	Y	The child was not assessed properly. No RR registration. Unfounded diagnosis, omitted diagnosis of UTI. Lack of monitoring of the clinical signs and the lab test results.	Lack of guidelines Lack of diagnostic suppl./equipment
29	20	Acute respiratory infection. Pneumonia	N	Y	Unfounded diagnosis. No monitoring of the clinical signs (low haemoglobin, low calcemia). No adequate therapy. Polypharmacy. No feeding recommendations	Lack of guidelines Lack of lab
30	24	Acute respiratory infection. Convulsive syndrome. Pneumonia	N	N	The child was not assessed properly. No RR registration. No adequate evaluation of the vital signs and monitoring of the therapy. Ineffective intensive care. Ineffective resuscitation. No feeding recommendations	Lack of guidelines Lack of laboratory Lack of oxygen
31	18	Cerebral oedema. Pulmonary oedema. DIC	Y	Y	The child was not assessed properly. Unjustified diagnoses. No adequate evaluation of the vital signs, and no monitoring of the therapy. Ineffective intensive care. Ineffective resuscitation. No feeding recommendations	Lack of guidelines Lack of laboratory Lack of oxygen
32	6	Acute respiratory infection. Convulsive	Y	Y	Incomplete diagnosis. Lack of adequate investigations. Inappropriate treatment. Dangerous IV infusion of the solutions. Ineffective resuscitation. No feeding	Lack of guidelines Lack of diagnostic equipment Lack of oxygen

		syndrome			recommendations	
33	54	Pyelonephritis	Y	Y	Incomplete diagnoses. No monitoring of IV infusion. No evaluation and monitoring of clinical signs (Hb). No feeding recommendations	Lack of guidelines Lack of diagnostic equipment
34	48	Acute bronchitis. Respiratory failure, grade 1-2.	N	Y	Unfounded diagnosis. No monitoring of IV infusion. Polypharmacy. No feeding recommendations	Lack of guidelines
35	5	Pneumonia. Respiratory failure, grade 1-2.	Y	Y	NO proper assessment. Missed anaemia and malnutrition. Excessive treatment. No feeding recommendations	Lack of guidelines Lack of Lab.
36	21	Acute respiratory infection. Convulsive syndrome	Y	Y	Wrong diagnosis. Ineffective treatment. Lack of monitoring of the clinical signs.	Lack of guidelines Lack of diagnostic equipment
37	12	Acute gastroenteritis.	Y	Y	No dehydration assessment. Inappropriate rehydration therapy. Unfounded antibiotic therapy. No feeding recommendations	Lack of guidelines Lack of Lab
38	16	Sepsis Anaemia Diarrhoea	Y	Y	Incomplete diagnosis. No dehydration assessment. Dangerous, inappropriate IV therapy. No monitoring of the clinical signs and liquids received. No feeding recommendations	Lack of guidelines Lack of laboratory Lack of oxygen
39	13	Diarrhoea	Y	Y	Incomplete diagnosis. No dehydration assessment. Incorrect clinical management. Dangerous and over treatment No feeding recommendations	Lack of guidelines Lack of laboratory
40	9	Pneumonia. Respiratory failure, grade 1-2.	N	Y	Incomplete clinical assessment. Dangerous, unjustified IV infusion. No feeding recommendations. No monitoring of the symptoms. Ineffective resuscitation.	Lack of guidelines Lack of laboratory Lack of oxygen
41	5	Acute respiratory infection. Convulsive syndrome	Y	Y	Incomplete diagnosis. Unjustified therapy. Polypharmacy. No appropriate monitoring. Ineffective resuscitation.	Lack of guidelines Lack of laboratory Lack of oxygen
42	48	Skin burn. Shock.	Y	Y	Incomplete clinical assessment. Unjustified therapy. Unnecessary, dangerous pharmacy. No appropriate monitoring of the therapy. No feeding recommendations.Ineffective resuscitation.	Lack of guidelines Lack of diagnostic equipment Lack of laboratory Lack of oxygen
43	48	Anaemia Leucosis	Y	Y	Incomplete diagnosis. No assessment for emergency and priority signs. Inappropriate clinical management. Lack of adequate investigations. Ineffective resuscitation.	Lack of guidelines Lack of equipment Lack of laboratory Lack of oxygen
44	8	Pneumonia. Respiratory failure. Enterocolitis.	Y	Y	Incomplete diagnosis. No assessment for dehydration. Incorrect clinical management. Danger and over treatment No feeding recommendations. Ineffective resuscitation.	Lack of guidelines Lack of laboratory Lack of oxygen
45	3 days	Acute respiratory infection. Convulsive syndrome. Fever.	Y	Y	Incomplete diagnosis. Lack of adequate neurological investigations. Dangerous over treatment. No monitoring. Ineffective resuscitation.	Lack of guidelines Lack of laboratory Lack of oxygen
46	4 d	Asphyxia. Severe neonatal trauma.	Y	Y	Incomplete diagnosis. Lack of adequate neurological investigations. Dangerous	Lack of guidelines Lack of laboratory

	ays				over treatment. No monitoring. Ineffective resuscitation.	Lack of oxygen
47	7 days	Neonatal trauma, Respiratory failure, grade 1-2	Y	Y	Incomplete diagnosis. Lack of adequate neurological investigations. Ineffective intensive care. Ineffective resuscitation	Lack of guidelines Lack of diagnostic equipment Lack of oxygen
48	11	Acute respiratory infection. Fever. Neurotoxicosis. Cerebral edema. DIC. Anaemia	Y	Y	Incomplete diagnosis. Lack of adequate neurological investigations. Dangerous over treatment. No monitoring. Ineffective intensive care. No monitoring of clinical signs. Ineffective resuscitation	Lack of guidelines Lack of diagnostic equipment Lack of oxygen
49	2	Urinary tract infection	Y	Y	Unjustified treatment. Polypharmacy. Lack of monitoring of the clinical signs.	Lack of guidelines Lack of diagnostic equipment
50	16	Pneumonia. Hypotrophy	Y	Y	Incomplete diagnosis. Inadequate assessment of the clinical signs. No monitoring of IV infusion. Unnecessary medicines.	Lack of guidelines
51	2	Diarrhoea, plan B.	Y	Y	Incomplete diagnosis. Inadequate assessment of the clinical signs of dehydration. Inappropriate rehydration and clinical monitoring.	Lack of guidelines Lack of lab
52	5	Acute respiratory infection. Convulsive syndrome. Diarrhea	Y	Y	Incomplete diagnosis. Inadequate assessment of the clinical signs of dehydration. Inappropriate rehydration an clinical monitoring	Lack of guidelines Lack of diagnostic equipment
53	12 y. o.	Diabetic coma	Y	N	Managed properly	Lack of laboratory
54	14	Pneumonia.	N	Y	Incomplete diagnosis. Unnecessary treatment, poly- pharmacy. Wrong IV jet therapy.	Lack of guidelines Lack of laboratory
55	8	Diarrhea, plan B.	Y	Y	Incomplete diagnosis. Rational rehydration therapy. Completed monitoring form	
56	9 y. o	Acute enterocolitis	N	N	Incomplete diagnosis. Unnecessary IV infusion.	Lack of guidelines Lack of laboratory
57	12	Acute intestinal infection.	Y	Y	Late diagnosis. Transportation caused the death.	Lack of guidelines
58	5	Acute respiratory infection. Neurotoxicosis	Y	Y	Incomplete assessment and triage. Ineffective intensive care Ineffective resuscitation	Lack of diagnostic equipment Lack of oxygen
59	54	Acute respiratory infection. Neurotoxicosis	Y	Y	Incomplete assessment and triage. Dangerously overmedicated. Improper monitoring of the medicines received via IV. Ineffective intensive care. No feeding recommendation	Lack of guidelines Lack of laboratory
60	5	Sepsis. Exicosis, 3-d grade. Neurotoxicosis.	Y	Y	Incomplete assessment and triage. Dangerous overmedicated. Improper monitoring of the IV solutions received. Ineffective intensive care. No feeding recommendation	Lack of guidelines Lack of laboratory Lack of oxygen

61	6	Intestinal infection. Intestinal paresis	Y	Y	Incomplete assessment and triage. No dehydration signs were assessed. Incorrect IV infusion. Improper monitoring. No feeding recommendation	Lack of guidelines Lack of laboratory
62	14 days	Prematurity Severe malnutrition. Sepsis.	Y	Y	Unfounded, wrong diagnosis. Dangerous, unjustified therapy. Incorrect feeding, improper care.	Lack of guidelines Lack of laboratory
63	5	Intestinal infection. Sepsis	Y	Y	Unfounded diagnosis. Incomplete assessment. Incorrect rehydration. Lack of adequate necessary investigations. Incorrect feeding, improper care.	Lack of guidelines Lack of laboratory
64	13	Dysenteria	Y	N	Incomplete assessment and triage. No dehydration signs were assessed. Unjustified antibacterial therapy. Incorrect rehydration. Incorrect feeding.	Lack of guidelines Lack of laboratory
65	5	Hypotrophy, 3-d grade. Sepsis	Y	Y	Incomplete assessment. Unfounded diagnosis. Improper monitoring of the IV solutions received. Incorrect feeding, improper care.	Lack of guidelines Lack of laboratory
66	36	Pneumonia. Cardio respiratory syndrome. Toxic carditis.	N	Y	Unfounded diagnosis. Radiologic investigation- normal. Incomplete assessment. Unnecessary hospitalization. Wrong clinical management, over-medication, incorrect, dangerous IV infusion.	Lack of guidelines
67	9	Sepsis	Y	Y	Incomplete assessment. Unfounded diagnosis. Poly- pharmacy. Incorrect monitoring of clinical signs. Incorrect feeding, improper care.	Lack of guidelines Lack of laboratory
68	5	Pneumonia	Y	Y	Incomplete assessment, wrong diagnosis. Ineffective intensive care Ineffective resuscitation	Lack of guidelines Lack of oxygen
69	6	Acute intestinal infection.	Y	Y	Incomplete assessment, wrong diagnosis. Lack of monitoring of the fluids and medicines received IV. Ineffective intensive care. Ineffective resuscitation.	Lack of guidelines Lack of laboratory Lack of oxygen
70	18	Pneumonia. Fever convulsions.	N	Y	Incomplete assessment Unsubstantiated therapy. Ineffective resuscitation.	Lack of guidelines Lack of oxygen
71	2	Intra natal trauma	Y	Y	Incomplete assessment, wrong diagnosis wasn't checked on signs of dehydration. Unsubstantiated, danger i/v infusion. Incorrect feeding, improper care.	Lack of guidelines Lack of laboratory Lack of diagnostic equipment
72	12	Acute respiratory infection. Laryngotracheitis.	N	Y	Incomplete assessment and triage. Unsubstantiated therapy. No monitoring. Incorrect intensive care. No feeding recommendation. Ineffective resuscitation.	Lack of guidelines Lack of laboratory Lack of oxygen
73	10	Acute respiratory infection. Neurotoxicosis	Y	N	Incomplete assessment and triage. Ineffective resuscitation	Lack of guidelines Lack of laboratory Lack of oxygen

74	13	Pneumonia with complications of suppurative pneumothorax.	Y	Y	Incomplete assessment and triage. Lack of monitoring of IV fluids and medicines. Ineffective intensive care, over -medication. Ineffective resuscitation	Lack of guidelines Lack of diagnostic equipment Lack of oxygen
75	13	Acute respiratory infection. Neurotoxicosis	Y	Y	Incomplete assessment and triage. Dangerous IV infusion. No monitoring of symptoms. Ineffective resuscitation	Lack of guidelines Lack of laboratory Lack of oxygen
76	15 y. o.	Streptococcal pharyngittis..	N	N	Appropriate management	
77	7	Diarrhoea, severe dehydration.	Y	Y	Incomplete assessment. Incomplete diagnosis. The child has severe malnutrition, anaemia. Incorrect rehydration. No feeding recommendation. Incorrect feeding. Inappropriate care.	Lack of guidelines
78	30	Acute hepatitis A	N	N	Incomplete assessment. Incomplete diagnosis. No feeding recommendation. Incorrect feeding. Too long duration of stay.	
79	1.5	Acute respiratory infection. Neurotoxicosis Cerebral edema	Y	Y	Incomplete assessment and triage. Unsubstantiated therapy. No Ineffective resuscitation.	Lack of guidelines Lack of oxygen
80	1	Severe pneumonia. Respiratory failure grade 1-2.	Y	Y	Incomplete assessment. Incomplete diagnosis. Inappropriate intensive care. No feeding recommendation. Ineffective resuscitation	Lack of guidelines Lack of laboratory Lack of oxygen

Total number of patients-80. including: <1 month – 7; >1 month-1 year-43; >1 –2 years- 18; >2-5 years-9; >5 years-3;
Number of patients who did not need admission: 12of 80 (15%);
Ineffective and/or harmful drugs given: 75/80 (93%);
Suboptimal or inappropriate case management 77/80 (96%);
Lack of guidelines:77/780(96%);

LEGEND: A-number of cases; **B** –age (months); **C**- diagnostic; **D**- need for admission;

E-unnecessary and or potentially harmful drugs or procedures; **F**- comments

Annex 2.

IMPROVING THE QUALITY OF PAEDIATRIC HOSPITAL CARE IN TAJIKISTAN

Capacity building training workshop: Improving the quality of paediatric care in hospitals

Dushanbe, 03-06 July 2012

AGENDA

Day 1

Time	Activity	Presenter
09.00–09.30	Opening, Welcome Introduction to the aims and objectives of the workshop	health ministry WHO
09.30–10.00	Assessments of hospital care for children in the Tajikistan: Presentation of deficiencies & strength in the child health service	MoH
10.00–10.15	Coffee – break	
10.15–11.15	Introduction to the WHO guidelines: Pocketbook of Hospital Care for Children and Referral Care Manual	WHO Consultant
11.15–12.15	Cough and difficult breathing, clinical case	WHO Consultant
12.15–13.00	Respiratory case videos Wheeze video	WHO Consultant
13.00–14.00	Lunch	
14.00–15.30	Oxygen video	WHO Consultant
15.30–15.45	Coffee break	
15.45–16.45	Diarrhoea, clinical case	WHO Consultant
16.45–17.00	Recap, discussion and questions	WHO Consultant

Day 2

09.00–10.00	Videos of Emergency and Priority Signs	WHO Consultant
10.00-11.00	Fever, clinical case	WHO Consultant
11.00-11.15	Coffee break	
11.15-12.15	Young infants with infections, clinical case	WHO Consultant
12.15-13.00	Clinical signs of serious neonatal illnesses	WHO Consultant
13.00-14.00	Lunch	
14.00–15.45	Clinical practice using the WHO guidelines in Children's Wards (ICU)	WHO Consultant
15.45- 16.00	Coffee break	
16.00-16.45	The Low birth weight. Case study	WHO Consultant
16.30–17.00	Recap, discussion and questions	WHO Consultant

Day 3

09.00–10.00	Severe malnutrition, clinical case	WHO Consultant
10.00–10.45	Management of the child with skin burn. Clinical case	WHO Consultant

10.45-11.00	Coffee break	
11.00–13.00	Clinical practice using the WHO guidelines in Children's Wards	WHO Consultant
13.00–14.00	Lunch	
14.00–15.30	Group discussion of the clinical cases	Participants
15.30–15.45	Coffee break	
15.45–16.30	Group discussion of the clinical cases	Participants
16.30–17.00	Clinical practice using the WHO guidelines in Children's Wards. Discussions	WHO Consultant

Day 4

09.00-10.00	Management of the child with trauma. Clinical case	WHO Consultant
10.00–11.00	Working in groups 1-st group-Health managers; 2-nd group – doctors «The existing problems in improving of the Pediatric Hospital Care in Tajikistan. The gaps, the possible directions of solutions. Possible indicators of the Quality. How can I help my hospital to improve the care provided to children?"	WHO Consultants Participants
11.00–11.15	Coffee break	
11.15–12.30	Continue work in groups	Participants WHO Consultant
12.30–13.30	Lunch break	
13.30–14.30	Reporting from small group discussions	Participants
14.30–15.30	Discussions on the methods of teaching	WHO Consultant
15.30–15.45	Coffee break	WHO Consultant
15.45–17.00	Summary, questions and suggested ways forward Closing ceremony. Completion of evaluation forms	WHO Consultant

List of participants

	Name	Organization	Position
1	Rahmatullaeva S.	Ministry of Health	Chief Specialist
2	Ismoilov K.	Tajik State Medical University	Head of Paediatrics department
3	Rashidov A.	Vahdat Hospital	Chief specialist
4	Saidov I.	Kulyab Hospital	Regional Chief specialist
5	Kosimov A.	Farkhor Central Regional Hospital	Paediatrician
6	Raupov M.	Pendjakent IMCI Centre	Head of Centre
7	Gulomnosirov H.	Ministry of Health	Specialist
8	Davlatov H.	Infection Diseases Hospital of Dushanbe	Infectious diseases doctor
9	Nuralieva N.	Khatlon IMCI Centre	Head of Centre
10	Badalov I.	Dushanbe City Children Hospital #2	Deputy Head
11	Jaborov U.	Vahsh CDH	Head of Paediatrics Department
12	Karimov K.	Kulyab CDH	Head of Hospital
13	Yangiboeva B.	National Paediatrics Centre in Karabolo	Deputy Head
14	Saidmuradova G.	Tajik State Medical University	Assistant Professor
15	Saidova T.	Children Regional Hospital of Kulyab	Paediatrician
16	Shabonov R.	Dushanbe City Children's Hospital #2	Paediatrician
17	Saidaliev S.	Children Hospital name afted Vohidov (Khatlon)	Infectious diseases doctor
18	Rahmatullaev Sh.	Ministry of Health	Head of Department for provision of services to mothers and children and family planning
19	Hodjaeva A.	Ministry of Health	Chief specialist
20	Tursunov H.	Chief paediatrician, Khatlon Region	Chief specialist

List of facilitators:

Dr Bakradze M., Russian Academy of Medical Science

Dr Matiushin I., Russian Academy of Medical Science

Dr Chernikov V., Russian Academy of Medical Science

Dr Babayeva B., WHO Consultant;

Dr Stasii E., WHO Consultant

Dr Kasimova Z., WHO/CO in Tajikistan, assistant

Annex 3

IMPROVING THE QUALITY OF PAEDIATRIC HOSPITAL CARE IN TAJIKISTAN

Training and preparation the assessors for hospital assessment

Dushanbe, 7th July, 2012

AGENDA

Time	**Activity**	**Presenter**
08.30 -10.00	Presentation " The WHO Assessment Tool of the Quality of Hospital Pediatric Care"	WHO Consultants
10.00 -10.15	Break	
10.15 -13.00	Practice in the Hospital on how to apply the WHO Tool. Assessment Study.	WHO Consultants 2 groups of participants
13.00–14.00	Lunch break	
14.00 -16.00	Reports on the results of the assessment. Discussion	WHO Consultants
16.00 – 16.15	Break	
16.15 – 17.00	Summary, questions and suggested ways forward. Closing ceremony	WHO Consultants

The List of participants

1	Rahmatullaeva S.	Ministry of Health	Chief specialist
2	Raupov M.	Pendjakent IMCI Centre	Head of Centre
3	Gulomnosirov H.	Ministry of Health	Specialist
4	Nuralieva N.	Khatlon IMCI Centre	Head of Centre
5	Badalov I.	Dushanbe City Children' Hospital #2	Deputy Head
6	Jaborov U.	Vahsh CDH	Head of Pediatrics Department
7	Karimov K.	Kulyab CDH	Head of Hospital
8	Yangiboeva B.	National Pediatrics Centre in Karabolo	Deputy Head
9	Saidmuradova G.	TSMU	Assistant Professor
10	Saidova T.	Children Regional Hospital of Kulyab	Paediatric
11	Saidaliev S.	Children Hospital in name of Vohidov (Khatlon)	Infectious diseases doctor
12	Hodjaeva A.	Ministry of Health	Chief specialist
13	Tursunov H.	Khatlon Hospital	Chief specialist

List of facilitators:

Dr Bakradze M., Russian Academy of Medical Science

Dr Matiushin I., Russian Academy of Medical Science

Dr Chernikov V., Russian Academy of Medical Science

Dr Babayeva B., WHO Consultant;

Dr Stasii E., WHO Consultant

Dr Kasimova Z., WHO/CO in Tajikistan, assistant

Annex 4

IMPROVING THE QUALITY OF PAEDIATRIC HOSPITAL CARE IN TAJIKISTAN
Hospital assessment planning meeting
9th of July 2012. Dushanbe

AGENDA:

Time	Activity	Presenter
08.30 -10.00	Discuss general and specific objectives of the assessment Define dates of the assessment Create and agreed two assessment groups	WHO Consultants Assessors
10.00 -10.15	Coffee break	
10.15 -13.00	Define logistic and national arrangements, create a list of national contacts Clarify doubts on the assessment tool Review general data collected from the ten Project hospitals	WHO Consultants Assessors
13.00–14.00	Lunch	
14.00 -16.00	Specify times and methods of the expected outputs (reports, restitution meeting) Define an action plan with specific tasks, roles and deadlines Discuss materials and methods of the preliminary assessment Discuss material and methods of the on-site assessment Summary	WHO Consultants Assessors

Annex 5
The national debriefing meeting with the group of key national stakeholders on preliminary findings, recommendations and plan of actions
Dushanbe, 18th of July, 2012

AGENDA

Time	Activity	Presenter
09.30	Registration	
10.00 – 10.30	Opening, Welcome Introduction to the aims and objectives of the workshop	Ministry of HealthWHO RSMA
10.30 -11.45	The assessment of the quality of paediatric hospital care: the findings from 10 hospitals of Khatlon Region of Tajikistan.	WHO Consultant
11.45 – 12.00	Coffee break	
12.00 – 14.00	Group work. 3 groups to define the Action plan for improving the quality of hospital paediatric care at national and national levels	WHO Consultants Experts Participants
14.00 – 15.00	Lunch break	
15.00 – 16.00	Group presentations: The action plans and indicators of the QoC Discussions.	WHO Consultants Experts Participants
16.00	Closing ceremony	

Annex 6

IMPROVING THE QUALITY OF PAEDIATRIC HOSPITAL CARE IN TAJIKISTAN

The national debriefing meeting with the group of key national stakeholders on preliminary findings, recommendations and plan of actions 18th of July, 2012

SUMMARY OF HOSPITAL FINDINGS: PLAN OF ACTION

№	ITEM	Impact on mortality and morbidity		Feasibility		Actions needed	Priority		Timetable and responsible /person /institution
		high	low	high	low		high	low	
1	Cough 1. Correct assessment of sick child with cough 2 Antibiotic therapy 3. Oxygen therapy 4. X-Ray equipment	+ + +	 +	+ + +	 +	1.To organize follow up on IMCI protocol implementation 1.1.To organize refresh training courses on management of the sick child with cough 2.To monitor and control the effectiveness of antibiotic therapy in accordance with WHO recommendations 3. Oxygen Therapy 3.1 To supply all paediatric wards with oxygen generators(and supplies) 3.2. Training on oxygen therapy to sick child 4 X-Ray equipment 4.1. To provide with or renew X-Ray equipment to all hospitals 4.2. To follow up on the results of X-Ray investigations	+ + +	 +	1.1. August 2012 and ongoing 1.2. December 2012 Ministry of HealthChief specialists of the Ministry of Health -pulmonologist -allergist/immunologist -paediatrician IMCI Centre WHO/ International expert /consultant Head (manager) of the Hospital 2. August 2012 and ongoing Chief specialists of the Ministry of Health -pulmonologist Hospital Manager 3.-4. January-June 2013 International support on purchasing of oxygen and X-ray equipment with supplies Regional Coordinators WHO/International experts, Ministry of HealthHeads of the Paediatric/Intensive care wards
2	Diarrhea: 1. Assessment and classification the child with	+		+		1. To follow up IMCI protocol implementation 2. To organize the WHO/training, refreshing courses on management of the sick child with diarrhoea	+	+	1.1. August 2012 and ongoing 1.2. September-October 2012 Ministry of HealthChief specialists of the Ministry of Health

	diarrhea 2. Plan A,B,C on rehydration therapy 3. Antibiotic therapy of children with diarrhoea 4. Feeding /nutrition the child with diarrhoea					3.1. To monitor and control the effectiveness of antibiotic therapy in accordance with WHO recommendation 2.1-3.1.To organize qualitative self-monitoring implementation of the WHO recommendations on management of the child with diarrhoea To provide all hospitals with hard copies of standard clinical protocols on management of the child with diarrhoea (paediatric ward, intensive care, admission unit and infection diseases) 4. To organize and provide the sick children in the hospitals with good quality food.			-paediatric infection diseases –paediatrician IMCI Centre Regional Coordinators WHO/International experts/consultants Head (manager) of the Hospital 3.0; 4.0 August 2012 and ongoing Ministry of HealthChief specialists of the Ministry of Health -paediatric infection diseases Manager of the Hospital Tajik Medical University
3	Anaemia & malnutrition 1. Assessment and Clinical management the child with anaemia 2. Assessment and clinical management the child with malnutrition/severe malnutrition and stunting 3. Diet therapy the child with malnutrition		+	+		1.1. Improvement of the lab investigations (supply with devices and materials) 1.2. Training courses on: - Assessment of physical development - Counselling on feeding the child with malnutrition & anaemia 2. To provide with Fe+ medications 3. To provide seek children with severe malnutrition with formula To provide all hospitals and all wards (ICU, paediatric, admission unit, infection ward) the scales 3. To follow up on IMCI protocol implementation	+	+	1.1. August 2012 and ongoing 1.2. December 2012- August 2013 2.1. August 2012 and ongoing Ministry of Health, UNICEF, Chief specialists of the Ministry of Health -paediatrician - haematologist -neonatologist IMCI Centre Regional Coordinators WHO International experts/consultants Head (manager) of the Hospital
4	Chronic diseases: • HIV • Asthma • Diabete		+	+		1. To follow-up and monitor implementation of the national protocol on detecting and treatment HIV in children. 2.1 Training course on standards on	+	+	1.1. August 2012 and ongoing 2.1. November-December 2012 2.2. – November 2012-March 2013 2.3. November 2012-March 2013 3. August 2012 and ongoing

	s					clinical management of the child with wheezing and bronchial asthma in accordance with standard protocols (relief and control therapy) 2.2. To provide with nebulizers' /spacers for inhalation therapy 2.3. To develop the national protocol on managing the child with asthma 3.1 To monitor the implementation of the national protocol on management diabetes of children 3.2. Training on diabetes			3.2. February 2013 Ministry of Health, UNICEF Chief specialists of the Ministry of Health -paediatrician - endocrinologist -neonatologist -infections t/HIV -allergist/immunologist Regional Coordinators WHO International experts/consultants Head (manager) of the Hospital Tajik Medical University
6	Child friendly services	+		+		1. To teach all medical workers on counselling the parents/mothers 2.To provide the "day stay hospitalization practices" 3.To teach the medical workers practical skills on insertion of the peripheral catheters 4.To implement the policy regarding effectiveness of the oral drug therapy (according to national protocols) 5.To provide the special room for preparing food and for eating in the wards of the hospital 6. Communication with parents/mothers – to provide with video clips, mother`s cards, booklets on the following topics: vaccination, oral rehydration, feeding, breastfeeding, complementary feeding, general danger signs, hygiene, child care.	+ +		October 2012 and ongoing - Ministry of Health, Head of the paediatrics' wards -National Supervisors -Chief Paediatrician (Regional, National) -Manager of the Hospital Tajik Medical University -

7	Monitoring and follow up		-			1. To establish a Committee responsible for monitoring of the quality of hospital care 2. To teach the national supervisors and the doctors of IMCI Centres on WHO Pocketbook and national protocols/standards of care.	+		-Ministry of Health, -National Supervisors -Chief Paediatrician (Regional, National Tajik Medical University
8	Guidelines and auditing	+	-	+		1. To train all medical workers, responsible for child health on new, Ministry of Healthapproved, clinical protocols, standards. 2.To conduct regular meetings to analyse the deaths cases in the hospital with registration the results in medical documents. Analysis of infant/child mortality should be done taking into account the role of PHC level	+		September 2012 –March 2013 -Ministry of Health, -Chief Paediatrician, Ministry of Health Regional Chief specialist Hospital Manager Heads of Paediatric, ICU, infection`s wards WHO, International experts/consultants Tajik Medical University
9	Fever	+		+		1.To develop the national clinical protocol 2.To conduct a training course on management of the child with fever, clinical management the child with sepsis, with meningitis. 3.To improve the accessibility to quality antibiotics, diazepam 4.To improve lab diagnostic 5.To teach medical workers practical skill on the lumbar puncture	+		November 2012- May 2013 -Ministry of Health -Chief Paediatrician Ministry of Health Regional Chief specialist on Laboratory Hospital Manager Heads of Paediatric, ICU, infection's wards WHO, International experts/consultants
10	Access to hospital and feedback to primary health care	+		+		1.To improve the IMCI supervisory system at PHC 2. To hold joint meetings with PHC with hospital providers on different topics. 3. To reintroduce practice of feeding the child in the hospitals, organize the dining room in the wards or the equipped place for food preparation and eating. 4. To provide all sick children with	+		-Ministry of Health -Chief Paediatrician, Ministry of Health Regional Chief specialist on Laboratory Hospital Manager District's Managers Heads of Paediatric, ICU, infection's wards WHO, International experts/consultants Tajik Medical University

						necessary, according to the National policy, free of charge medication and services			
11	Emergency care	+		+		1. To develop the national regulations/recommendations on emergency care of the children. Based on the national statement, develop the national (for each hospital) plan of emergency care of the sick child (according to syndromes, timing). 2. Equipment – oxygenators, mechanical ventilation for children of early age and infants, supplies for oxygen therapy, manikins. 3.To develop national emergency care protocols 4.To train medical workers on emergency care 5. To revise and complete the emergency kit and anti -shock set in all wards responsible for child care.		+	Ministry of Health, -Chief Paediatrician Ministry of Health Regional Chief specialist on Laboratory Hospital Manager District's Managers Heads of Paediatric, ICU, infection's wards WHO, International experts/consultants Tajik Medical University International support, international organizations IX/2012- IX 2013