make medicines child size

Report of a Meeting

Implementation Team Country Work Review *Better Medicines for Children*

WHO Headquarters, Geneva, Switzerland
11-12 October 2010

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Executive summary

The Better Medicines for Children project aims to promote better use of medicines in children, promote access to medicines for children, filling knowledge gaps about priority medicines for children and promoting research and development of essential medicines for children. The project is funded by the Bill and Melinda Gates Foundation and is in its the second year.

Members of the implementation teams for the Better Medicines for Children project from Ghana, India and the United Republic of Tanzania, researchers from IPI and Dartmouth University, and staff from the Medicines, Access and Rational Use team at WHO Geneva met for a two day meeting. The purpose of the meeting was to assess the progress of the implementation of the project in countries thus far and to plan the next steps. The next steps will be included in the country work plans for 2011.

WHO has made progress on a number of areas such as peadiatric tuberculosis, with the finalization and publication of a number of studies on tuberculosis medicines and updated guidelines for the treatment of tuberculosis in children. In addition the WHO Model Formulary for Children has been published, workshops on Essential medicines Lists have been held and the Pediatric medicines Regulatory Network has been established.

In Ghana, remarkable progress has been made in completing a baseline survey, assessments of local manufacturing capacity, pricing and availability studies and an assessment of the quality of paediatric care. Work in the United Republic of Tanzania was delayed due to organizational changes in the Ministry of Health which affected the timing of funded activities, however a renewed commitment to the project will drive the progress forward. A study was completed on administration practices and preferred formulations in Tanzania which provides important data on practices and end user preferences. Much progress has also been noted in India with the commencement of the pricing and availability studies and the development of Essential Medicines Lists for children in two states.

Implementation teams outlined their next steps for the coming year. Work will focus on finalizing the assessments and sharing the results with stakeholders. Additional studies are planned which will increase the knowledge of the paediatric formulation markets. Advocacy and training will be carried out for the implementation of Standard Treatment Guidelines and Essential Medicines Lists. A communications and advocacy project will also be implemented in the countries to promote the manufacture, procurement and supply of essential paediatric medicines.

General discussion

The WHO Better Medicines for Children programme aims to improve access to safe, quality medicines for children. In June 2009 a meeting for Country Support and Interventions to Improve Use of Medicines in Children[1] was held to identify effective interventions to improve the use of medicines in children and to discuss the selection of countries for the project. Since that meeting, three countries, Ghana, India and the United Republic of Tanzania were selected to implement Objective 3 and 4 of the Better Medicines for Children project funded by the Bill and Melinda Gates Foundation.

Better Medicines for Children Objectives

1. Promote research and development of essential medicines for children by providing evidence, guidelines and specifications
2. Fill knowledge gaps for priority medicines for children
3. Promote access to medicines for children
4. Promote better use of medicines in children
5. Develop a model communications strategy aimed at suppliers and policy-makers to promote supply and uptake of paediatric formulations of essential medicines.

These objectives aim to promote better use of medicines in children. This includes not only issues related to prescribing and rational use but also the entire supply chain from policy and selection to infrastructure and implementation.

The objectives of the Implementation Team meeting were to assess the progress of the country implementation thus far and to plan the next steps. The meeting was attended by members of the implementation teams from Ghana, India and the United Republic of Tanzania, researchers from IPI and Dartmouth University, and staff from the Medicines, Access and Rational Use team at WHO Geneva.

This report outlines the highlights of the meeting and the discussion on the way forward. Presentations are available upon request.

[1] www.who.int/childmedicines/progress/Country_Meeting_June2009.pdf

Overall progress

The BMC project is now in its second year with 18 months remaining. Dr Sue Hill, (MAR) presented the progress that has been made on objectives 1 through 3, highlighting:

- Work on medicines for paediatric tuberculosis:
    - Review of clinical evidence and safety of tuberculosis medicines for children[1].
    - Pharmacokinetic simulations of a fixed-dose combination formulation for pediatric tuberculosis [2].
    - A review of fluoroquinine use in paediatrics: Focus on safety and place in therapy[3].
    - Feasibility study on fixed-dose combinations for tuberculosis treatment which showed that there are challenges in the production of an appropriate fixed dosage form for children.
    - Updated guidelines for the treatment of tuberculosis in children[4].

- Publication of the WHO Model Formulary for Children[5]
    - The new edition of the WHO Model Formulary has been prepared, based on the 2nd edition of the Essential Medicine List for children (EMLc), to provide information such as use, dosage, adverse effects, and contraindications for the medicines on the EMLc.

- Workshops on Essential Medicines Lists, held in English[6] and French[7].
    - Countries shared national Essential medicines Lists and related activities. Potential activities in relation to Essential Medicines Lists for children were reviewed.

[1] www.who.int/childmedicines
[2] www.who.int/selection_medicines/committees/expert/17/application/TB_Children.pdf
[3] www.who.int/childmedicines
[4] In press
[5] www.who.int/selection_medicines/list/WMFc_2010.pdf
[6] www.who.int/childmedicines/progress/Accra_final.pdf
[7] www.who.int/childmedicines/progress/Ghana_French.pdf

Work is still ongoing for:

- The Pediatric medicines Regulatory Network[1] (PmRN), established as a forum for discussion and to raise awareness on pediatric medicines regulatory issues. Work is ongoing to expand the network.
- A global consensus on optimal dosage forms of medicines for children, although recommendations were adopted by the Expert Committee on the Selection and Use of Essential Medicines for flexible, solid, oral formulations that can be administered at the point of care.
- The International Clinical Trials Registry Platform, which has not shown the progress that was expected.
- Developing guidelines for assessment of clinical trial dossiers (target is November 2010).

Notable next steps include:

- The Expert Committee on the Selection and Use of Essential Medicines which will be held in Ghana in March 2011. This is the first ever Expert Committee to be held outside of Geneva.
- A new objective for the Better Medicines for Children project which has been approved and funded by the Bill and Melinda Gates Foundation. This objective aims to develop and implement a communications strategy targeting manufacturers in India and key supply chain stakeholders in Ghana and Tanzania to promote the manufacture, procurement and supply of essential paediatric medicines.
- Development of a strategy for the distribution and implementation of the WHO Model Formulary for Children..
- An update of the Pocketbook of Hospital Care for Children targeted for June 2011. The last version2 of the clinical guidelines was produced in 2005.
- Progress on the regulatory guidance work which will require funding.

[1] www.who.int/childmedicines/paediatric_regulators/en/

[2] www.who.int/child_adolescent_health/documents/9241546700/en/index.html

Country updates

Ghana

The Better Medicines for Children project was launched in Ghana in April 2010. The implementing team has made remarkable progress in a short time period. Since the start of the project they have completed a baseline survey/literature review, an assessment of local manufacturing capacity and pricing and availability studies. They have held a Drug Therapeutic Committee (HTC) peer review workshop for the Southern Sector and carried out an assessment of the quality of paediatric care in hospital facilities.

Mrs Martha Gyansa-Lutterodt presented the key findings of the work thus far. The reports are currently being finalized with the aim of making them publicly available. Some of the key challenges that were brought up during the discussion included:

- The need to understand the reasons for problems in the supply chain.
- The need to understand the interface between policy and reality.
- The lack of availability of appropriate dosage forms for children.
- How to communicate successfully to effect change.

Opportunities:

The goal in Ghana is to have the project take root within the health systems so that when the project is finished, it will be sustainable. One of the opportunities that was discussed was the transposition of successful HIV protocols to other disease areas.

Next steps:

- Identify what to do with the results of the survey of local manufacturing capacity.
- Share results with stakeholders and policymakers. Reports will be available on the website (www.ghnpd.org/childmedicines).
- Get a better understanding of pharmaceutical market. Understand why there is not a big price difference between generics and branded products. Disaggregate pricing data between locally producing and imported products. Monitor pricing over time.
- Conduct a workshop on use of evidence in selection of medicines including pharmacoeconomics of medicines.

- Involve the health insurance scheme to ensure that reimbursement is aligned with national policy.
- Carry out an overall review of the baseline surveys carried out thus far and a qualitative review on pricing data.
- Train and carry out capacity building such as train the trainer programmes for Drug Therapeutic Committees.
- Carry out a market analysis such as a case study on the use of ORS to better understand the realities of supply and demand of medicines for children.
- Conduct a quality of care dissemination workshop at the health summit meeting (22-25 November at the Ghana Institute for Public Administration).

The United Republic of Tanzania

Although a work plan was approved in April 2010, the Better Medicines for Children project was delayed due to organizational changes in the Ministry of Health which affected the timing of all funded activities. A number of steps have already been taken however such as the establishment of a Better Medicines for Children technical working group, the development of Drug Therapeutic Committee guidelines and the drafting of Standard Treatment Guidelines for children based on the Pocketbook of Hospital Care for Children.

The challenges for BMC in the United Republic of Tanzania include the need to understand the supply chain. For example, if pediatric medicines are not available locally, then it is important to also understand why are they not procured internationally. In addition, the importance of timing training and advocacy to coincide with product availability was also discussed.

Opportunities:

- There is a renewed enthusiasm and commitment which will drive the accelerated progress needed to complete the project in the next 18 months.
- The paediatric association is a good entry point for the project.

Next steps:

- A catch up plan will be developed.
- WHO will supply supporting documentation and templates for pricing studies and materials for training of the trainers.
- Plans should be reviewed, once data is available.

- A stakeholders meeting will be held in January 2011 and results of the assessment to-date will be shared.

India

The Better Medicines for Children project in India aims to improve the availability of essential medicines for children by developing and implementing an Essential Medicines List for children in two states, Orissa and Chhattisgarh. Pricing and availability studies in the two states are planned pre- and post-intervention. Training for the data collection has already been completed. A commendable amount of work has been accomplished to get the studies up and running in both states. Essential Medicines Lists for children are being developed in the two states as well as by the Indian Academy of Paediatrics at a national level.

Challenges:

- Essential Medicines Lists end up on the shelves without being used for procurement.
- Children's formulations are expensive and of limited availability.
- The Better Medicines for Children project is seen as a WHO activity which reduces buy in.

Next steps:

- Continue with the pricing and availability studies.
- Plan training workshops to support procurement of medicines for children in Orissa and Chhattisgarh.
- Include volume data in addition to prices in the surveys.
- Include communications and advocacy in the workplan to improve stakeholder support.

The Pediatric medicines Regulatory Network

Hermann Garden (MAR) presented the Pediatric medicines Regulatory Network[1] (PmRN) which was established as a forum for discussion on pediatric medicines regulatory issues. The PmRN has a steering committee which leads and coordinates the activities of the network. There are currently 26 national medicines regulatory authority members. PmRN tools include information on the website, an online

[1] www.who.int/childmedicines/paediatric_regulators/en/

community and a newsletter. The newsletter is sent to members but interest was expressed from the meeting participants for broader circulation. The main challenge of this network, especially with regards to the online community is that it will only be useful if it is active. Opportunities to expand the network include the next ICDRA.

Next steps:

- Include WHO staff at HQ and Regional offices and pilot implementation countries on distribution list.
- Review draft of guidance of evaluation of clinical trial dossiers.

Idea capture

The inter-country discussion that followed the country presentations included:

- The need to find ways to implement Standard Treatment Guidelines and the Pocket Book of Hospital Care, considering that STG use differs from country to country. The challenge is to first understand how they are used and then to ensure that they are implemented.
- The need for countries to adapt and adopt the WHO Model Formulary for Children. The formulary exists in word, pdf, xml versions and thus can be easily modified. The need for training on how to best use and implement it was discussed. The need for resources was also noted, if printing and distribution were to be considered.
- The need for training and capacity building for:
    - Drug and Therapeutic Committees, including 'train the trainer' programmes.
    - Ethics committees with regards to clinical research and marketing authorizations.
    - The application of pharmacoeconomics for medicines for children to assist appropriate selection of medicines for children.
- How to use mobile phones to improve access to and use of better medicines for children. The use of cell phone technology will be explored for dissemination of standard treatment guidelines.

Study on administration practices and preferred formulations in Tanzania

Dr Lisa Adams (Dartmouth) presented the study that was carried out on practices and preferred formulations in Tanzania by the Institute for Pediatric Innovation. Six hundred health care workers, caregivers and children were surveyed. Preliminary key results of the study showed:

- Crushed pills mixed with water are the most common method of administration in newborn babies and children under 6. Breaking and swallowing fractions was also common. This raises issues of accuracy of dosing, palatability of the mixture and adherence.
- An overwhelming preference for sweet liquids or suspensions was expressed by children, parents and healthcare workers.

Issues discussed included:

- If medicines for children, especially new products are going to be accepted by users, support from parents (or caregivers) and healthcare workers is needed.
- Dispersible tablets are not well understood as they are still unfamiliar. For good acceptance, social and educational issues will need to be addressed.
- Parents are good candidates to advocate for better medicines for children.

Next steps:

- Stratify data to review differences between urban and rural areas and carry out an analysis of qualitative data.
- Present abstract at upcoming meetings, prepare manuscripts for submission to peer-reviewed journals.
- Carry out survey in Ghana.
    - Ensure children with chronic conditions, HIV or other specific conditions are included, e.g., survey at specialized clinics.
    - Explore whether scales are available and functioning as majority of healthcare workers report using scales to obtain weights for dosing.
- Consider the potential for carrying out the survey at sites in Orissa and Chhattisgarh, India.

Proposed work plans 2010-2011

The following work plans were discussed and will be finalized following the meeting.

Ghana

Activity	Timeframe
Project Review and Coordination meetings	Q4 2010-Q4 2011
Project Management	Q4 2010-Q4 2011
Mid Term Review Workshop	Q4 2010 and Q3 2011
Develop abstracts/papers for ICIUM on all components	Q4 2010
Component: Update and Adaptation of National Guidelines	Q4 2010
a) Technical Working Group Meetings for adaptation of Guidelines	Q4 2010
b) Consensus building meeting/Dissemination workshop	Q4 2010
C) Pilot study to determine use of the pocket book by use of mobile phones	Q1 2011
d) Qualitative study to link findings from quality of care data with price and availability data and supply chain information	Q3 2011
f) Determine price components for paediatric formulations	Q3 2011
Update of website	Q4 2010-Q4 2011
Drugs & Therapeutic Committees training (Include training on use of pocket book)	Q4 2010 and Q2-Q4 2011
Market Analysis for Paediatric Formulations	Q1 2011
Study on Barriers to use of clinical guidelines	Q3 2011
Training in Pharmacoeconomics Turkey and Ghana	Q1-Q2 2011
Improvement of quality of care	Q4 2010
Follow up, support and implementation	Q4 2010
Monitoring by regional focal points on quality Indicators	Q4 2010
Evaluation of quality data	Q4 2010
Advocacy and Communication Survey	Q4 2010
Engagement of Professional Associations on issues of BMC	Q3 2011

The United Republic of Tanzania

Activity	Inputs	Timeframe
Holding TWG quarterly meetings to monitor, evaluate and discuss implementation of the project		Jan -Dec 2011
Finalization of baseline assessments on: 1. Children's medicines availability and prices, and Drugs & Therapeutic Committees (DTC) survey 2. The capacity of local manufacturers to develop/produce paediatric formulations 3. Analysis of data on the quality of paediatric care in health facilities and a quick survey to assess barriers to implementing the guidelines (targeting practitioners)	Data collection, analysis and report writing for the 3 assessments	Nov-Dec 2010
	Stakeholders meeting to discuss results and findings	Jan 10-14, 2011
	Final printing of 3 assessment reports	April 2011
	Travel cost to present findings and communicate information to the scientific meetings eg PAT, MAT, PST, RMO, conference	Jan-Dec 2011
Finalization of EMLc and STGc		Nov-Dec 2010
Consultancy for the development of Advocacy strategy for the manufacturing of paediatric formulations	Facilitation of consultative meetings	Mid Nov – mid Dec 2010
STGc and DTC guidelines	Joint Stakeholders workshops to present the guidelines and sensitize use of the guidelines.	Jan 2011
	Printing of STGc	April 2011
	Printing of DTC Guidelines	April 2011
	Advocacy and Launching meeting to enforce use of the guidelines	May 2011
	Distribution of guidelines	April - May
DTC guidelines implementation to enhance RUM	Workshop for the preparation of training TOT manual	March 2011
	-TOT training workshop.	April 2011

India

Activity	Inputs	Timeframe (month & year of completion)
(1) Completion of the pricing and availability survey that has started in Chhattisgarh and Orissa and conduct the post-implementation survey		(1) Dec, 2010; Dec, 2011
(2) Collect procurement data from drug procurement units (Chhattisgarh and Orissa) to reflect the volumes of children's medicines that are procured at the moment in addition to prices.	(2) tender documents	(2) Dec, 2010
(3) Training workshop at health facility on monitoring / evaluation for pharmacists.	(3) workshop program	(3) June, 2011
(4) Monitoring / evaluation of 10/20 pediatric medicines in health facilities.	(4) procurement status reports	(4) Dec 2011
Advocacy for the Indian Academy of Pediatrics (IAP) EMLc.	(1) Meeting at Delhi with Secretary of Health and Drug Controller General of India.	(1) Jan 2011
	(2) Hyderabad meeting of the Indian Pharmacological Society.	(2) Dec 15, 2010
Advocacy on EMLc: implementation of EMLc in various (interested) states in India. Inclusion of 10/20 pediatric medicines. (1) Selection of interested states:		Jan, 2011
(2) Inclusion of 10/20 pediatric medicines into state EMLs:		Dec, 2011
(1) Drugs & Therapeutic Committees training: Sensitization workshops in Chhattisgarh and Orissa.	WHO training manual on DTCs	(1) Jan, 2011
(2) DTC follow-up workshop in Chhattisgarh and Orissa.	WHO training manual on DTCs	(2) Jun, 2011
(3) Evaluation of DTC.	WHO training manual on DTCs	(3) Oct, 2011
Administration practices and preferred formulations of children's medicines. (1) Adaptation of tools from the Dartmouth/IPI study	Lisa's study protocol to be modified for local needs	(1) Apr, 2011
(2) select state in South India		(2) Jan, 2011
(3) IRB approval India, WHO ERC approval		(3) Jul, 2011
(4) Conducting study & report		(4) Dec, 2011
Evaluation of quality of information available in the clinical trial registry of India - focus on paediatric trials.	WHO evaluation tool.	Jun, 2011
Communications strategy aimed at the Indian drug manufacturers to promote manufacture of essential children's medicines		2010-2011
Implementation of the children's formulary after necessary adaptation to local needs		March, 2011
Comparison of the model WHO EMLc with the IAP list		Feb, 2011
Weight estimation study		Dec, 2010 to March, 2011

Concluding remarks

The meeting closed with an emphasis on the need for a better understanding of the barriers to better medicines for children. They include difficulties for supply, procurement, prescribing and using. They also include hurdles for regulation, infrastructure, price, awareness, and social/cultural aspects. Through the understanding of these challenges we will be able to develop effective interventions to improve the use of medicines in children.

Agenda

Monday, 11 October 2010	
09:00	**Welcome & Introduction of Participants** Dr Clive Ondari
09:30	**The Better Medicines for Children project: update** Dr Sue Hill
10:30	**Ghana BMC Work Plan: paediatric medicines and health care system in Ghana, BMC country project** Dr Edith Andrews Mrs Martha Lutterodt
11:30	**Tanzania BMC Work Plan: paediatric medicines and health care system in Tanzania, BMC country project** Dr Rose Shija Mrs Anita Sillo Dr Jesse Kitundu
12:30 – 13:30	Lunch
13:30	**India BMC Work Plan: paediatric medicines and health care system in India, BMC country project** Dr Gitanjali Batmanabane
14:45	**Paediatric medicines Regulators' Network: background, status, activities** Dr Hermann Garden
15:00	**Inter-Country Discussion on paediatric medicines:** **Resources, similarities, differences, needs and opportunities** All
16:30	**Results from Inter-Country Discussion** Dr Sue Hill
17:00	**End first day**
Tuesday, 12 October 2010	
09:00	**IPI Study: background, results and conclusions** Dr Lisa Adams Dr Steven Spielberg
10:30	**Plans for Year 3 - Ghana, India, Tanzania:** **EML (selection), guidelines, regulatory support, quality of care, improving use, financing/pricing** All
12:30 – 13:30	Lunch
13:00	**cont. Plans for Year 3 - Ghana, India, Tanzania:** **EML (selection), guidelines, regulatory support, quality of care, improving use, financing/pricing** All
16:00	Wrap up, issues
16:30	End second day

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