THE STATUS OF CHILD SIZE MEDICINES IN UGANDA: CONTEXT, PROSPECTS AND LIMITATIONS

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Background and Introduction

- Under-five children world-wide who die every year die from conditions that could be treated with safe and effective medicines
- According to WHO, the lives of some 10.5 million children a year word-wide could be saved if they simply had access to necessary drugs in appropriate formulations.
- Children have difficulties taking oral medications
- Children need medicines tailored to their age, body weight and physiological condition.
- There are few formulations developed specifically for children. Hence tablets have to be broken or crushed to fit children's needs.

The problem

- Children also have a right to benefit from pharmaceutical products.
- WHO and UNICEF in 2007 launched a campaign called 'make medicines child size' (MMC) which stresses access to flexible solid oral dosage forms, dispersible tablets and fixed-dose combinations
- Member countries were advised to specifically include 'child size' medicines in their essential medicines lists and the standard treatment guidelines
- Since 2007 Uganda has revised its essential medicines lists and standard treatment guidelines and this raises a question as to whether Uganda has adopted the WHO child size concept

‘Child size’ medicines

Child size: dosage form, volume, strengths and taste

Aim

To review policy documents on medicines in Uganda and analyze to which extent they provided for ‘child size’ medicines

Materials and data

- Policy statements, strategic plans, guidelines/manuals, and essential medicines lists that were developed since 2007 when ‘make medicines child size’ campaign started.
- We also included the 2000 Integrated Management of Childhood Illnesses (IMCI guidelines since by the time of the study it was being used.

- Focused on the medicines for 5 tracer conditions with different implications and treatment:
  - the leading causes of under-five morbidity and mortality in Uganda: malaria, pneumonia and diarrhea
  - Mental illness of epilepsy
  - chronic conditions of asthma
  - the neglected tropical disease, schistomiasis(mass treatment through the school system- using height to determine the dose).

- Inclusion of oral (tablets and syrups) medicines, inhaled medicines, suppositories and capsules

Child size medicine assessment index

- Developed from the WHOs key points to consider which were enlarged and applied to the policy documents:
- Convenient reliable administration
  - scored tablets
  - dispersible
  - mini-tablets
  - flexible oral dosage forms tablets
- Strengths of the medicines (active ingredients)
- Minimum dosing frequency
- Height and weight
- Palatability and acceptability
  - Tablets : Good smell, taste, flavor, texture and easy to swallow
- End user needs: storage conditions, affordability, storage

Study setting

- Uganda was among the first countries to implement essential medicines lists
- In Uganda, access to medicines is mainly through>
  - public health facilities
  - , private not for profit facilities,
  - private for profit sector
  - donor funded vertical programs (focusing on malaria, HIV/AIDS and tuberculosis)
- The Ugandan health care system is highly decentralized with districts and health sub-districts playing a key role in the delivery of services

- Hierarchy of health facilities: the community Health Center one (HCI)-Health Center four (HCIV), the district hospitals, regional referral hospitals -the national referral hospitals

Data analysis

- Content analysis of the document texts about reference to ‘child size’ medicines

- Used key concepts used in the documents to differentiate medicines for children.

- Key words: pediatric formulations, ‘child size’, age, weight, syrups, effervescent tablets, oral formulations, liquid formulations, oral powder, tablets, capsules, chewable, suppositories/ rectal and dispersible tablets.

Results : Overview of revisions since 2007

- Uganda Clinical Guidelines was revised in 2010 and again in 2012

- The 2007 Essential Medicines List revised to read as the Essential Medicines and Health Supplies List of Uganda (EMHSLU) of 2012.

- IMCI started in 1995 and the latest visible guidelines are of 2000
- Integrated Community Case Management (ICCM) was launched in 2010

Provisions for ‘child size’ medicines

- No explicit policy focus on ‘child size’ medicines in the policy documents

- UCG and EMHLSU of 2012 implicitly provided for child size medicines

  ✓adjustment of medicines strengths for children

  ✓Inclusion of child friendly dosage forms: Suppositories, effervescent tablets and few syrups

Prospects of child size in the EMHSLU

Indication	Recommended medicine	Dosage form	Appropriate strengths	Child-friendy
Pneumonia	Cotrimoxazole	Tablet	Yes	No
	Amoxicillin	Tablet	Yes	No
Malaria	Rectal artesunate	Suppository	Yes	NA
	Artemether Lumefantrine	Tablet	Yes	No
	Quinine	Tablet	Yes	No
	HOMAPAK*	Tablet	Yes	No
Diarrhea	ORS	Powder	Yes	Yes
	Zinc sulphate	Effervescent tablet	Yes	Yes
Epilepsy	Phenytoin	Tablet	Yes	No
	Carbamazepine	Syrup	Yes	Yes
	Carbamazepine Sodium valproate	Chewable Tablet Syrup	Yes Yes	Yes Yes
Asthma	Prednisolone	Tablet	Yes	No
	Salbutamol nebulizer	Solution for inhalation	Yes	No
Bilharzia	*Praziquantel*	*Tablet*	*No*	*No*

Limitations of the child size policy in Uganda

- Lack of specific focus on child size medicines in the policy documents
- The EMHSLU Misses out flexible dosage forms, dispersible and scored tablets
- IMCI guidelines has been updated with evidence based medicine since 2000.
- No standard global criteria for assessing ‘child size’ medicines

Conclusions

- Uganda needs specific policy on ‘child size’ to address appropriate dosage forms for such as the recommended oral solid and flexible , dispersible tablets

- Need for further development of a standardized child size index for assessing child size medicines and testing it in other settings

- Need to update the 2000 IMCI guidelines

- More studies are needed in respect to stakeholder perspectives in Uganda and the availability of the medicines at health facilities

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