SEA-NUT-170
Distribution: General

Introducing the New WHO Child Growth Standards

Report of a Regional Workshop
Bangkok, Thailand, 5-7 June 2006

WHO Project: ICP NUT 002

World Health Organization
Regional Office for South-East Asia
New Delhi

December 2006

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1. Introduction

Growth monitoring, using growth references/standards universally practiced since 1960s, is used primarily for two purposes. First, it identifies and classifies malnourished children, those at risk for becoming malnourished, and those who need special intervention and referral for management of severe malnutrition. Second, it provides an opportunity to educate and motivate individuals, specifically mothers and caretakers, for improving their understanding about feeding and caring practices in order to enhance the child's health and nutritional status. The advantage of growth monitoring is that it has made the issue of child malnutrition visible, and has had a great impact on reducing and contributing to the virtual disappearance of severe malnutrition in many countries. Monitoring the growth of infants and young children becomes critical as malnutrition is often not recognized by the mother until it has become severe and then reversing the condition becomes expensive and often difficult.

In several countries, an important issue raised regarding the interpretation of the growth monitoring data was the growth references used. The issue was whether to use the local or the international growth references. Several reasons were cited to favour the use of the international references. Children all over the world grow very similarly for the first five years of life when physiologic needs are met and their environments support healthy development, and use of only one international standard, will allow inter-country comparability. Using the international growth references/standards could promote targeting the maximum growth potential of children.

The existing National Centre for Health Statistics (NCHS) growth standards provide a biased reference since these are based on a sample of American children, primarily of European descent, who were mostly formula-fed during infancy. The new WHO child growth standards are more representative since they are based upon growth of children from countries in different Regions. These children were also predominantly breastfed during the first six months of life.

The workshop clarified why the introduction of a new child growth standard is required; dispelled certain myths/misconceptions regarding

trajectory of growth; and showed how global standards are relevant for the Region.

Promotion of the new child growth standards will provide advocacy for exclusive breastfeeding upto six months and continued breastfeeding with appropriate complementary feeding upto two years. It is expected that this new tool will contribute significantly in monitoring progress at the national, regional and international levels, and towards meeting the UN Millennium Development Goals.

2. Inaugural session

The workshop was conducted in collaboration with the UNICEF East Asia and Pacific Regional Office (EAPRO) and the Institute of Nutrition, Mahidol University (INMU) and attended by participants from all the countries in the Region except DPR Korea. List of participants is at Annex 1 and the workshop programme is at Annex 2. Dr Emorn Wasantwisut, Director, INMU, welcomed the participants. She said that growth and nutritional status during early childhood is very important during the growing years, and for long-term health and functionality. While anthropometry is a common tool for measurement of growth and nutritional status of children from birth through the adolescent years, meaningful interpretation is related to the use of an appropriate growth reference. The WHO initiative on establishing a growth reference based on breastfed children is an important contribution.

Dr P.T. Jayawickramarajah, Ag. WR Thailand delivered the inaugural address of Dr. Samlee Plianbangchang, WHO Regional Director for South-East Asia. Dr Samlee said that malnutrition in children is an important public health issue. While under-nutrition is widely prevalent in the Region, obesity is causing increasing concern in several countries. He pointed out that monitoring the growth of the child is not only a clinical mechanism, but also has the potential to be a powerful advocacy tool. The limitations of the previously recommended reference of the National Centre for Health Statistics (NCHS) have been recognized. The new WHO child growth standards are based on a global sample of children, who were predominantly breastfed during the first six months of life and provide a normative growth model. Therefore, the new child growth standards will allow inter-country comparability of the breastfed infant.

Dr Samlee added that initial steps would be necessary, starting with advocacy, to create awareness among relevant stakeholders, from policy makers to implementers. The widespread use of the new growth standards will contribute significantly towards monitoring prevalence of underweight children below five years at the national, regional and global levels which is an indicator for monitoring the Millennium Development Goal number 1, namely, "Eradicate extreme poverty and hunger".

Dr Steve Atwood from UNICEF-EAPRO, remarked on what growth standards can, and cannot do. Using an inappropriate growth reference, estimating prevalence of both under- and over-nutrition can be erroneous. He said that it is evident that regardless of the genetic make-up, children in the developed as well as developing countries have the same growth potential. Nutrition, as well as other environmental factors is crucial for growth of children. The new growth standards can be used as an advocacy tool for breastfeeding, for environmental hygiene and against smoking. Nevertheless, there are some aspects that the growth standard cannot cover. The new standard by itself will not make a significant difference in preventing growth faltering. It will not make a significant impact on growth monitoring and promotion, if it focuses only on growth faltering. Lastly, it will not improve the ability of health or village workers in counselling mothers to improve child growth and development. It will make a difference only if nutrition is taken forward by linking it to various determinants of malnutrition.

Dr Rukhsana Haider from WHO/SEARO, briefly welcomed the participants and explained the objectives of the meeting.

Dr Minarto (Indonesia) was nominated Chairperson, and Ms Laila Ali (Maldives) and Dr Nita Bhandari (India) as Rapporteurs of the meeting.

3. Objectives

The general objective of the workshop was to orient Member States to the new WHO child growth standards whereas the specific objectives were to:

(1) Provide technical updates to SEAR countries about the new WHO child growth standards;

(2) Share experiences regarding current growth monitoring practices and identify challenges and opportunities in adapting the new child growth standards; and

(3) Formulate a draft framework for action plans for adapting the new child growth standards in individual SEAR countries.

4. Proceedings

Dr Rukhsana Haider informed the participants that a questionnaire similar to the one used in other Regions, had been sent to the SEAR Member States a few weeks ago. Her presentation was based on the data compiled from these questionnaires. Most countries reported that they have been using the NCHS references, while a few countries were using the Harvard or local standards. Malnutrition is classified mostly by using the Z-scores and percentiles. Weight-for-age is the most commonly used indicator, but most countries have adapted the NCHS reference by combining the data for both sexes into a single curve. Although height is perceived as important, there are limitations in measuring height, the constraints identified being lack of equipment, training, and time required for the growth monitoring session. Growth charts have been used in the community-based programmes in the majority of countries, and also for survey and surveillance. The problems encountered by health workers during usage included plotting, linking to action, and lack of understanding of the 'at risk' concept of both under- and over-nutrition. About half of the countries indicated that growth charts were kept by health workers, whereas some were kept by mothers and village workers. Gaps and challenges identified were: lack of uniform policy for growth standards, who should monitor growth monitoring, recording data and maintaining the chart, transferring data to higher administrative levels, and who will take what actions at different levels.

Dr Mercedes de Onis from WHO-HQ, discussed the rationale and background for developing the new growth standards, and the technical details of the WHO Multicentre Growth Reference Study (MGRS). She informed that the origin of the new standards dates back to the early 1990s when WHO initiated a comprehensive review of the uses and interpretation of anthropometric references and conducted an in-depth analysis of growth data from breastfed infants. This analysis showed that the growth pattern of healthy breastfed infants deviated to a significant extent

from the NCHS/WHO international reference. The review group concluded from these and other related findings that the NCHS/WHO reference did not adequately describe the physiological growth of children and that its use to monitor the health and nutrition of individual children or to derive estimates of child malnutrition in populations was flawed. The group recommended the development of new standards, adopting a novel approach that would describe how children should grow when free of disease and when their care follows healthy practices such as breastfeeding and non-smoking. This approach would permit the development of a standard as opposed to a reference merely describing how children grew in a particular place and time. Although standards and references both serve as a basis for comparison, each enables a different interpretation. Since a standard defines how children should grow, deviations from the pattern it describes are evidence of abnormal growth. A reference, on the other hand, does not provide as sound a basis for such value judgments, although in practice references often are mistakenly used as standards.

Following a World Health Assembly resolution endorsing these recommendations, the WHO Multicentre Growth Reference Study (MGRS) was launched in 1997 to collect primary growth data that would allow the development of new growth charts consistent with "best" health practices.

Dr de Onis described the problems with the NCHS reference and the innovative aspects of the new standards. She also commented on the differences with the newly released CDC 2000 growth charts for American children. Using the CDC reference, breastfed babies continue to show apparent growth faltering from 2 months of age onwards. Thus, the new CDC charts do not resolve the problem that was found using the NCHS. In addition, the CDC charts present highly skewed upper centiles, and make children look thinner, because the sample on which the reference is based is heavier. Thus, monitoring the growth of infants using a prescriptive approach was recommended. The innovative aspects of the new WHO child growth standards are:

(1) the prescriptive approach recognizing the need for standards;

(2) the breastfed infant as normative model;

(3) international sample of children;

(4) new standards such as those for skin folds for assessing childhood obesity;

(5) velocity standards, and

(6) link between physical growth and motor development.

Dr de Onis explained the criteria and methodology of the MGRS strategy. Several parameters were measured, including weight, length, head circumference, mid-upper arm circumference (MUAC), and skinfolds. Six universal motor development milestones were also assessed (i.e. sitting without support, hands-and-knees crawling, standing with assistance, walking with assistance, standing alone and walking alone). Rigorously standardized methods of data collection and procedures for data management across sites yielded exceptionally high-quality data, and the generation of the standards followed state-of-the-art statistical methodologies.

In summary, the new growth standards showed that there are important differences which vary by age group, sex, growth indicator, specific percentile or z-score curve, and the nutritional status of index populations. The differences are particularly important during infancy due to type of feeding and issues related to study design (e.g., measurement interval, placement of cut-offs etc.). Difference in shapes of the weight-based curves in early infancy makes interpretation of growth performance strikingly different depending on whether the WHO standard or the NCHS reference is used. Healthy breastfed infants track along the WHO weight-for-age mean z-score while appearing to falter in NCHS from 2 month onwards, which has important implications for child health with respect to the assessment of lactation performance and the adequacy of infant feeding.

The impact of the new growth curves on prevalence estimates was shown. Underweight rates will increase substantially during 0-6 months, and decrease thereafter when based on WHO standards. Stunting rates will increase for all age groups. Wasting and severe wasting are substantially higher during 0-6 months, thereafter severe wasting will continue to be 1.5-2.5 higher. Overweight rates will increase in all age groups (about 20-30%). The artifactual change in the prevalence at 24 months (due to the merging of different datasets at this age) that occurred with the NCHS reference is resolved.

Field testing of the new curves in four countries (Argentina, Italy, Maldives and Pakistan) found that the clinical assessments of paediatricians matched with WHO standards' classification on weight and height. The

overall concordance between clinical assessments and the WHO standards-based indicators attested to the clinical soundness of the standards.

Adoption of the WHO standards will harmonize assessment of child growth within, and among countries. The shift in growth charts would also provide a unique opportunity to underscore the importance and utility of monitoring child growth; to rethink and redesign surveillance systems so that they are more useful in decision-making and less burdensome in terms of data collection; and, most importantly, to promote infant and young child nutrition within the context of broader efforts that encompasses maternal and child health, full immunization, and adequate attention to physical, motor and cognitive development.

Dr Nita Bhandari shared the experience in India in the MGRS. The eligibility criteria for a country to be included was not totally met, e.g., there was no breastfeeding support system prior to the study, nor was there 80% delivery at hospitals. The eligibility criteria for individual infants were the same for other infants in the MGRS. Public awareness activities to inform about the study were conducted and ethical clearance was obtained. Lactation support personnel (post-graduates in nutrition with good communication skills and personality) were trained under the umbrella of the study, since it did not exist earlier. Study protocols for both the longitudinal and cross-sectional components, feeding recommendations, and quality control of data quality and analysis followed the MGRS requirements. The study included 8440 children, about 300 newborns per site (1743 total), followed up till 24 months from the longitudinal study; about 1400 children per site (6647 total) aged 18-71 months through the cross-sectional surveys.

The following challenges were encountered during the study**:**

- Complex study requiring careful planning and implementation
- Maintaining rapport with hospital authorities and physicians for screening
- Screening within 24 hours of birth in 73 facilities
- Lack of support from paediatricians and obstetricians for feeding recommendations
- Strong inputs required from lactation counselors for mothers
- Scheduling follow-up visits required persistence and flexibility

- Revisits, even after prior appointments
- Heavy equipment, long distances
- Contacting fathers and working mothers for measurements
- In some areas, locating homes difficult as numbering not sequential
- Motivating families for continued participation for a two-year period
- Scheduling standardization sessions.

Great team effort, with strong support from local institutions and the WHO Offices helped to overcome the challenges and resulted in successful completion of the study.

Dr Werner Schultink from UNICEF, India, presented some of the Growth Monitoring Promotion (GMP) experiences in the country. He said that nutrition is becoming important on the international scene as can be observed by several efforts by various agencies to bring nutrition forward. Nutrition is implicitly and explicitly in four of the Millennium Development Goals. In India, child mortality can be reduced by universal coverage of various interventions, including nutrition (breastfeeding, zinc and vitamin A supplementation). Malnutrition still exists in India even in food-secure households because pregnant and nursing women eat inadequately, do not rest enough, are too young, and have infections. Mothers have too little time to take of themselves and their children. Mothers of newborns discard colostrum and do not breastfeed exclusively during the first six months. The introduction of complementary food is too late. Children aged 6-24 months get too little complementary food and low quality (no micronutrient supplements). Incorrect care during fever and diarrhoea and poor hygiene are also common. Thus, children were born small (low birth weight) and stay small (stunting and wasting). He emphasized that growth measurements are important at various levels, and that there was no need for further debate on the usefulness of growth measurements.

Indian growth charts contain information for mothers, growth and development milestones, but the local references with sexes combined curve has been used. The Integrated Child and Development Services (ICDS) in West Bengal introduced the electronic data system which shows the prevalence and trends, by comparing over time. Prevalence of malnutrition was also used for assessing the performance of the anganwadi

(field workers). A successful programme was also observed in Madhya Pradesh where a massive weighing campaign linked with actions, e.g. follow-up activities, provision of services for mothers and children, vitamin A supplementation, and infant and young child feeding was carried out. Increased attention is now being paid to micronutrients at the global level. Linking growth measurements with action has helped in the successful reduction of malnutrition. The new reference is a major scientific improvement, and should be used along with the NCHS (i.e., reporting both results). Further work on establishing the link of the new standard with functional consequences will be important.

Poster session

Countries had been requested to prepare posters for which some general guidelines had been sent earlier. Most countries have growth charts developed based on either NCHS or local references. Growth monitoring and promotion has been used in community-based programmes and projects. Integrating growth measurements with other programmes, such as immunization, vitamin A supplementation and deworming has increased the opportunity for children to be weighed regularly. The posters were very informative and the sessions proved to be extremely interactive and interesting.

Group work

Participants chose to work in their own country teams for the two group work sessions.

Group Work I

The group work focused on identification of challenges and opportunities for advocating for the new WHO child growth standards at country level.

The issues for consideration included:

(1) Which programmes use growth standards?

(2) Is growth monitoring practiced in the country? What is the objective? (e.g., facility or community-based monitoring, nutrition surveillance and nutrition surveys).

(3) Do child care providers regularly use growth monitoring as a component for assessment of children?

(4) If the new WHO standards are adopted, with whom would advocacy be necessary?

(5) What other major steps will be necessary, for example, policy change, endorsement by national regulatory, and research bodies.

(6) How will the new standards be rolled out? (e.g., training, other activities like sensitization of care givers and families?

Participants reported that growth monitoring was practiced, and for various purposes: to identify growth faltering, educate the mother on health and nutrition, to measure the impact of the nutrition/feeding programme, and to identify trends. Growth monitoring was used in primary health care settings, national family health/nutrition surveys, facility and community-based programmes, and when instituted, supplementary feeding programmes. Growth monitoring was reported to be used for surveillance (Bangladesh, Indonesia). Paediatricians and paediatric units generally used the growth references for monitoring individual children. It was also used in EPI and nutrition programmes (Maldives), and as part of the child health package for midwives (Sri Lanka), in IMCI programmes (Indonesia) for emergency programmes and early warning (Thailand).

All the participants agreed that the new WHO child growth standards should be adopted. Advocacy for this would first require sensitization of the policy makers and stakeholders at different levels for the need to adopt the new standards. After obtaining national consensus, the new standards may need to be endorsed by a technical committee and their recommendations for individual country variations taken into account (eg: number of curves on the growth chart, colour etc.).

The challenges that countries were facing/ or were likely to face during the process of adoption of the new standards were:

- current low coverage (and usefulness) of growth monitoring programmes
- inclusion of height measurements for all children, which they felt would pose a logistic problem for grass-root workers, and suggested that this could be included for cross-sectional surveys and for an individual child's growth monitoring

- selection of appropriate and standardized instruments for weight and height measurements
- synchronization with existing materials
- training (trainers and field workers) for usage and interpretation of the new growth charts
- rolling out of the new growth charts – the time required would vary depending upon the country size and terrain
- combining the mother's charts with the child's growth charts (in few countries)
- simultaneous usage of old and new growth charts (if the new ones cannot be introduced nationally at the same time)
- absence/ usage of a standardized protocol for management of growth faltering – after identification (only available for management of severe malnutrition at health facilities)
- interpretation and counselling to the care givers at the community level
- change in malnutrition situation when changing from local/previous standards to the new international standard
- mechanisms for monitoring and evaluation
- additional funds for printing, training etc.

Group Work II

The second group work focused on a framework for development of action plans for introducing new WHO growth standards. Country groups were asked to discuss and propose action plans (activities, responsible persons and timeline) and roll-out activities (Annex 3).

All the country participants agreed to adopt the new WHO child growth standards.

At present, four countries have a plan to adopt the new growth standards (Indonesia, Bangladesh, Sri Lanka, and Maldives). Common activities identified included sensitization of stakeholders (policy makers, professional groups, and health workers), training on the use of new growth standards and development of growth charts based on the new growth standards.

5. Conclusion and recommendations

- There was consensus that the new WHO child growth standards are based on sound technical evidence and should be adopted by all the Member countries.
- In many countries, more than one growth reference/standard is used. The publication of the new WHO child growth standards is a good opportunity for countries to work towards one national standard.
- Even though senior representatives from governments have been made aware of the new WHO child growth standards through the World Health Assembly resolution and other communications, policy makers in line ministries and departments, as well as health professionals responsible for child health and nutrition need to be suitably oriented.
- It would be important to obtain national consensus for adopting the new WHO child growth standards by involving stakeholders including concerned national ministries/departments, professional bodies, national institutes (academic and training), researchers, international agencies and nongovernmental organizations.
- The introduction of the new WHO child growth standards provides an opportunity for reviving national action for overall improvement of infant and young child nutrition. It should be positioned in national child health and nutrition activities aimed at achieving the relevant Millennium Development Goals and Child Survival objectives, including addressing the emerging issue of childhood obesity in many countries in the Region.
- The standards are based on the breastfed infant as the normative growth model. As such, the new standards provide a strong advocacy tool to re-invigorate promotion and support of breastfeeding, in particular, early and exclusive breastfeeding and appropriate complementary feeding.
- Efforts should be made to forge effective linkages with existing programmes such as IMCI, infant and young child feeding promotion and support and EPI as the new WHO child growth standards are rolled out in country programmes. All programmes

should utilize the new WHO standards and classification guidelines.

- The introduction of the new WHO standards should be used to critically review ongoing growth monitoring promotion (GMP) programmes and to strengthen these with special attention to increased outreach, coverage of infants and young children, and counseling on infant feeding and care.
- The new standards should be used immediately in new surveys and assessments, especially those carried out in the framework of MDGs, but an early comparison with the old National Centre for Health Statistics (NCHS) values should be included (for comparison of national trends).
- Countries should further elaborate their action plans based on the framework developed at the regional workshop. At the very minimum, the action plan should include activities for:
  - Sensitization of policy makers
  - National consensus on the new growth standards involving relevant stake-holders including professional bodies, research and training institutes, NGOs and others
  - Formal endorsement of the new standards by national authorities
  - Harmonization of all existing standards in the country to have a single national standard applicable to all programmes/initiatives that undertake growth monitoring
  - Orientation of technical stakeholders
  - Utilizing the introduction of the new standards to strengthen promotion and support of optimal infant and young child feeding practices
  - Operations research to improve the efficiency and effectiveness of growth monitoring initiatives.
- WHO and UNICEF should provide technical and financial support to countries to the extent possible, for adoption of the new standards and improved growth promotion.

Annex 1

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The full group

Annex 2

Programme

Day 1, Monday, 5 June 2006

0830–0900	Registration of participants
0900–0930	**Inaugural session** – Welcome – Director, Institute of Nutrition, Mahidol University – Inaugural address of Regional Director, WHO-SEARO – Message from Regional Director, UNICEF-EAPRO – Workshop objectives – (*Dr Rukhsana Haider)* – Introduction of participants
0930–1000	Group photograph followed by Tea/Coffee
1000–1030	Current growth monitoring practices in the SEA Region *(Dr Rukhsana Haider)*
1030–1130	Background for the WHO Multi-Centre Growth Reference Study (MGRS) Concerns and misconceptions regarding the growth standards (*Dr Mercedes de Onis)*
1130–1200	Highlights from the Indian component of the MGRS *(Dr Nita Bhandari)*
1200–1230	Growth Monitoring Promotion: experiences from UNICEF, India *(Dr Werner Schultink)*
1230–1315	Lunch
1315–1415	Country presentations on usage of current growth references (Poster sessions) – 4 countries
1415–1515	Introduction to the new WHO child growth standards *(Dr Mercedes de Onis)*
1515–1530	Tea/Coffee
1530–1545	Guidelines for group work (a) *(Dr Sudhansh Malhotra)*
1545–1645	Group Work a) identification of challenges and opportunities for advocating for the new WHO child growth standards at country level
1645–1730	Country presentations on usage of current growth references (Poster sessions) – 3 countries

Day 2, Tuesday, 6 June, 2006

0800–0900	Presentation of Group Work (a) and Discussions
0900–0930	Country initiatives regarding the new growth standards
0930–1000	Introduction to Group Work (b) *(Dr Sudhansh Malhotra)*
1000–1230	Group Work (b) Develop a framework for development of action plans for introducing the new WHO growth standards
1230–1330	Lunch
1330–1500	Country presentations on usage of current growth references (Poster sessions) – 4 countries
1500–1530	Tea/Coffee
1600–2200	Reception

Day 3, Wednesday, 7 June, 2006

0900–1030	Presentation of Group Work (b) and Discussions
1030–1100	Tea/Coffee
1100–1230	Group work continues to incorporate suggestions….
1230–1330	Lunch
1330–1500	Plans for next steps and Recommendations
1500–1515	Tea/Coffee
1515–1600	Concluding session

Annex 3

Framework for action plan

Bangladesh

Activities	Stakeholders	Responsible Institutions	Timeframe
Briefing for new WHO-GS	MOHFW NNP, BPA, BDHS, NGOs	NNP (collaboration with relevant organization)	Aug '06
National consensus building workshop	Same as above	NNP	Nov '06
Dissemination WS of WHO-GS	Same as above	NNP/BBF/ICDDRB	Sep '06
Endorsement by professional bodies, relevant org	MOHFW NNP, BPA, BDHS, NGOs	NNP (collaboration with relevant organization)	Dec '06
Identification of focal point	GOB	NNP	Dec '06
Training	HW, CNP	NNP	June '07
Linkage	IMCI, MCH, NGOs, BDHS	NNP	June '07

WS = Workshop; WHO-GS = new WHO child growth standards

Bhutan

S. No	Activity	2006							2007						RES
		Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
1	Ministerial level meeting with key stakeholders like UNICEF/ WHO. To inform/sensitize the authorities on WHO Growth Standard (WHO/NGS).														NP
2	WHO to assist in the develop-ment of the new card														NP/WHO
3	Pretest the Mother & Child hand-book which includes the NGS.														NP/dists
4	Development of training manuals and guidelines on the WHO/NGS with technical assistance from WHO/UNICEF.														NP/WHO UNICEF
5	Review of the field-test out-comes and make neces-sary changes in the MCH handbook.														NP
6	Printing of the MCH hand-book, guide-line, training manuals & IEC materials.														MOH

S. No	Activity	2006							2007						RES
		Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
7	Mass information and communication awareness and campaign targeting both the health care providers and the beneficiaries.														NP/ICB
8	Training of trainers on the WHO/NGS with technical assistance from WHO/UNICEF.														NP/WHO UNICEF
9	Regional training of health workers														NP/TRA
10	National launch of the New MCH handbook.														NP/ICB

NGS = new growth standards

India

For Consensus Building

National level technical workshop

- Stakeholders: paediatricians, researchers, nutritionists, programme managers, trainers, national and international NGOs/organizations
- Issues: reaching consensus on use of new standards, preparation of growth charts, use of z-score grading, assessment of implications in terms of malnutrition rates, human and economic resources
- Identification of modalities for implementation.

Agencies: NIPCCD - ICMR (WHO-UNICEF)

For Sensitization of Policy Makers

- National workshop to sensitize policy makers and programme managers
  - Issues: explanation of need for change, time frame, consequences in terms of economic and manpower resources, training needs for Eleventh Plan.
- State-level workshop with similar objectives.

Training

- Training workshops at national, state, district levels
- Development and adaptation of manuals (local languages)

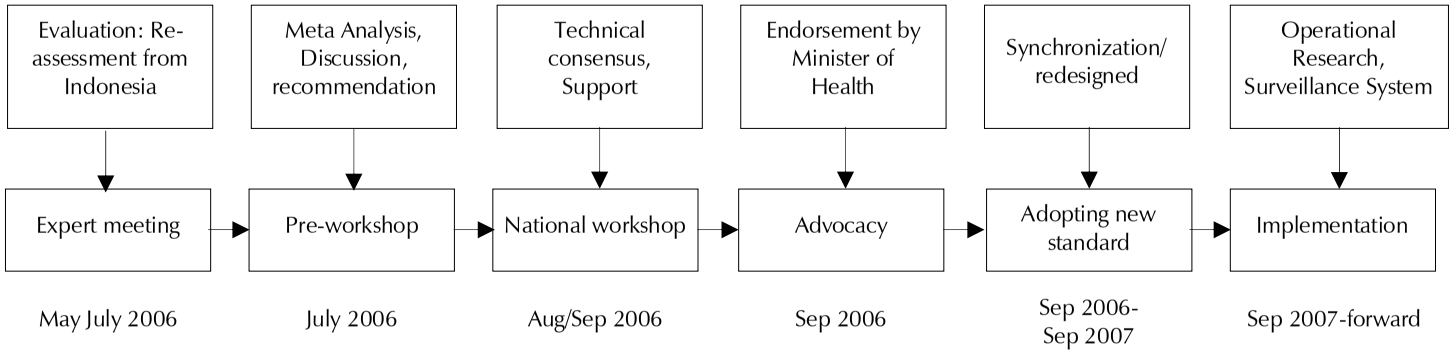
Implementation

- Implementation, monitoring, evaluation to identify bottlenecks

India timeframe

Activity	End 06	Mar 07	End 07	Start 08	Apr 08
National technical workshop					
National sensitizing workshop					
State workshop					
Development of materials					
Implementation					
Monitoring and Evaluation					

Indonesia



Objective	Review New Standard, Evaluate differences with previous standard, discuss technical issues and challenges	Discussion on technical and programme implications with regard to adoption of new standard	Reaching national consensus and support	Receiving endorsement from MoH	Plan of action for implementation	Reaching Nation-wide implementation
Activity	Discussion, Re-analysing	Discussion, Re-analysing	Presentation, Discussion, socialization	Presentation, agreement	Advocacy, socialization, training, preparing technical materials, guidance, operational research	Running the programmes using new standards, surveillance, monitoring and evaluation
People involved	Professional Organizations, Universities, Centre of Nutrition Research	Professional Organizations, Universities, Centre of Nutrition Research	Professional Organization, Universities, Center of Nutrition Research, Stakeholder	Experts , MOH	All users, stakeholders	All users, stakeholders

Maldives

Activity	Objective	Person Resp.	Timeframe
Sensitization meeting for all stakeholders	– To have all on board and brainstorm on the parameters required for the country – To form a working group for adaptation of the card – Develop TOR of the working group	DPH/WHO RO	July-Aug. 06
Working group adapts the card and gets an approval of policy makers	To adapt to country's need and requirements	DPH/ working group	Aug-Sept. 06
Translation, field testing and printing of the training module and card in Dhivehi	To facilitate understanding by all levels of healthcare providers	DPH	Nov.-Dec.06
Orientation of the stakeholders with the new adapted card	To orient all with the new adapted card	DPH	Dec.06
Training of trainers	Develop master trainers to train local trainers for training in atolls	WHO RO	
Sensitization of health professionals	To motivate all to adopt the new card	MOH	January 07
Prepare orientation package for doctors and nurses	To inform the doctors and nurses on the growth card and infant and young child feeding (IYCF)	Working group/MOH	February 07
Training of faculty of Health Sciences and healthcare providers of Regional Hospital	To develop local trainers for the atolls	Master trainers/DPH	January 07
Training of island-level healthcare providers	To enable them to use the growth card, interpret it and take action	Local master trainers/DPH	February-April 07
Training of island-level community healthcare providers on community mobilization and linking with other programmes like IMCI, IYCF and ECD	To enable them to have a holistic approach for counseling and community mobilization with the growth card in selected atolls and for linkages with the other programmes	DPH	Mar.-May 07
Review the use of the growth card	To make mid-course correction	DPH/WHO/ UNICEF	Dec. 07

Myanmar

Activities	Objectives	Person Responsible	Timeframe
Dissemination of NSTD at national level	To provide information to all health care personnel	DOH (NNC) – PHC – NGOs – DMS	2007
Orient professional groups	To convince them on using NSTD	Paediatric association	2007
Dissemination of NSTD at national level	To provide information to all health care personnel	DOH (NNC) – PHC – NGOs – DMS	2007
Orient professional groups	To convince them on using NSTD	Paediatric association	2007

NSTD = new growth standards

Nepal

Activities	Objectives	Responsible authority	Timeframe
Identify Focal Points	Coordinate with other agencies	MOHP	Aug/Sept 06
Orientate Focal points	Enable to advocate to different levels	MoHP	Aug - Dec 06
Introduce new Growth Standards (GS) to decision makers	Approval from decision makers	CHD/MoHP	Dec-06
Linkages with other programmes/age	Raise awareness on complete package	CHD/MoHP	Dec-06
Roll-out activities:			
Adaptation of manual, guidelines, charts	Dissemination of New GS	CHD, MoHP/MoLD	Jan - June 2007
Preparation of IEC materials for health professionals	Raise awareness on new GS	CHD/PHS	Jan - Dec 2008
Preparation of IEC materials for general public	Raise awareness on new GS	CHD/PHS	Jan - June 2007
Orientation on new GS to DHO/PHO/Nut	Facilitate familiarization with new GS	CHD/INGos/NGOS	Jan - Dec 2008
Orientations to professional groups	Facilitate familiarization with new GS	CHD/INGos/NGOS	Jan - Dec 2008
Training or MTOT	Create a core group for training	DHO/POH/NFT/RHTC	Jan - Jun 2008
Training for community-level workers	Develop skills/knowledge on new GS	MTOT	Jun 08 - Jun 09
Implementation of new GS	Identify nutritional status	CHD/RHD/NGO/INGOs	June 09 onwards
Monitoring/follow-up	Assess implementation process	CHD/RHD/NGO/INGOs	2010/2011

Sri Lanka

Activity	Outcome	Timeframe	Responsible organization
Identify and orient focal point	For the total process to be initiated and completed	Already identified and initiated	FHB of Ministry of Healthcare and Nutrition
To advocate to policy makers	Policy decision to adopt WHO growth standards to Sri Lanka taken	August 2006	-do-
To advocate to stakeholders and professional groups	Stakeholders and professional groups aware of new standards	September 2006	FHB of Ministry of Healthcare and Nutrition
Develop growth chart using new standards	New growth chart printed and disseminated	Nov. 2006 to Jan. 2007	-do-
Adapt and translate training manuals	Manuals ready	Sept. 2006 to Dec. 2006	FHB of Ministry of Healthcare and Nutrition
Initiation of training of trainers	Trainers trained on new standards and use of new charts	Aug. 2006	-do-
Initiate training of peripheral health personnel	Peripheral health workers trained on use of new growth chart	Jan. 2007 onwards	District MCH managers
Initiate training of tutors and trainers of training institutes	Use of growth chart incorporated into basic training of primary health workers (PHW).	Jan. to Feb 2007	FHB, Ministry of Healthcare and Nutrition
Develop a communication package on new growth chart	Dissemination of information on new growth chart to caregivers and general public achieved	Jan. 2007 onwards	FHB/HEB and district health authorities
Establish linkages with other programmes	Already existing		
Review the use of the new chart in field settings	Identification of gaps and challenges in using growth chart	Monthly from 2007 March Quarterly	Divisional health officer District level MO/MCH
Evaluate the use of the growth chart	Identification of gaps and challenges in using growth chart for further improvement	End of 2007	FHB

FHB= Family Health Bureau; HEB= Health Education Bureau

Thailand

Roll-out activities

Dissemination of new standards in national programme

- Review, evaluation and testing
- test secondary data of national survey

Network:

- academic institutes: medicine, nursing, public health schools, INMU
- society: paediatrics, endocrine
- association: nutrition, medical
- ministry: education, sport, interior, human resource

Technical meeting

New standards – discuss strengths, weakness, opportunity, threat

Consultation meeting for stakeholders

Draft proposal for MOPH – for making decision

Develop the manuals:

- for trainers
- for health workers
- print the MCH handbook, card,
- guideline
- training manual & IEC materials (Funding : UNICEF, WHO)

Meetings for users:

- Orient professional groups
- Training of healthcare providers
- Advocacy (IEC) for general public
- Linkage with other programmes e.g. breastfeeding, IMCI, others.

Timor-Leste

Activities	Time/Month							Responsible
	6	7	8	9	10	11	12	
1. Presentation to high level (MoH member)	×							East Timor representative
2. Relevant programme meeting (DSD,HP, relevant NGO`s, UNICEF,WHO)		×						IMCI & Nutrition National Officer
3. Orient/present to DPHO district		×	×					IMCI & Nutrition National Officer
4. Adaptation (other program IMCI,HP ex. by working group)				×	×			IMCI & Nutrition National Officer & working group
5. Implementation: – Socialization to district level – Orient Cuban doctors – Training (Govt. & private health staff) – Training to PHF (promoter health family)						×	×	MCH team, ICS, UN Agencies (UNICEF & WHO)
6. Monitoring & evaluation								Every trimester MCH team
7. Review								1 year after implementation MCH team