

Growth Monitoring and Universal Health Coverage

“Nutrition is crucial to both individual and national development... The post-2015 sustainable development agenda must put addressing all forms of malnutrition at the top of its goals.”[\[1\]](#)

Pregnant and lactating women and young children less than three years are most vulnerable to malnutrition. It is even worse for those mothers who experienced childhood malnutrition and remain stunted for the rest of their lives. Scientific evidence has shown that beyond the age of 2-3 years, the effects of chronic malnutrition are irreversible. This means that to break the intergenerational transmission of poverty and malnutrition, children at risk must be reached during their first two years of life.

Child malnutrition is the single biggest contributor to under-five mortality due to greater susceptibility to infections and slow recovery from illness and in terms of mortality, morbidity, mental capacity and economic productivity.

Malnutrition, with its two constituents of protein–energy malnutrition and micronutrient deficiencies, continues to be a major health burden in developing countries. It is globally the most important risk factor for illness and death, with hundreds of millions of pregnant women and young children particularly affected.[\[2\]](#) Association of malnutrition and mortality among children of mothers who are too young, too old, have too many children and too short inter-birth intervals are well documented in public health literature. The facts that adequacy of food intake relates to the quantity of food consumed; the quality of the overall diet with respect to various macronutrients and micronutrients and the energy density and palatability of the food consumed and how frequently the food is consumed.

Growth monitoring is an integral part of well-baby services in the United Kingdom (UK), and the weighing component was established many decades ago. Baby clinics, health visiting services with further referral to doctors, and weight checks were introduced in the early twentieth century as part of the Infant Welfare Movement and spread gradually, attaining universal coverage and finally being incorporated in the National Health Service.[\[3\]](#) Many other developed nations have similar programmes to address the basic preventive needs of women and children. The single most important reason for exceptionally low maternal and infant mortality in developed countries is attributed to the maternal and child health services.

Malnutrition is an important public health problem but its importance varies among settings. Therefore the impact of Growth Monitoring Program (GMP) is likely to vary considerably when implemented in different contexts. GMPs have been criticised for the current recommendation of monthly intervals is too frequent; that GMP is not always applied largely to the whole child population, but rather to some sub-groups of children who are not necessarily the most at risk of malnutrition and thus in need of this service; understanding reference curves; inaccurate plotting; and lack of trained personnel. [\[4\]](#) These are valid criticisms and are being addressed with the technology where programmes like WHO Anthro removes the human error element by electronically plotting the growth chart. It also provided electronic data to health workers eliminating the problem of lost card and in planning the recall and follow-up.

It is difficult to imagine a childcare program that does not include some form of regular anthropometric measurement. Although nutrition is an important component of Primary Health Care (PHC), it has not been prioritised sufficiently in the implementation of PHC.

This is evident from the nutritional status of under-fives in the developing countries. The 36 countries are home to 90 percent of the world's malnourished children. [\[5\]](#)

- Countries demonstrating the strongest commitment to combat child malnutrition
 - 1. Ethiopia; 2. Guatemala; 3. Malawi; 4. Peru; 5. Tanzania; 6. Burkina Faso; 7. Burundi; 8. Madagascar; 9. Nepal
- Countries with the weakest commitment to ending child malnutrition:
 - 1. Angola; 2. Cameroon; 3. Democratic Republic of Congo; 4. Cote d'Ivoire; 5. India; 6. Myanmar; 7. Philippines; 8. Sudan; 9. Yemen

Having made the case for the urgent need for GMPs it is important to go into some discussions for way forward.

Growth Monitoring Clinics

The Setting up GMP in a HC or hospital is fashionable. Baby friendly hospitals, special clinics in hospitals or health centres are trying to address the needs but not gaining much ground. Present system leaves the responsibility to the care taker to bring the baby to the centre/clinic for growth monitoring. There is no chance for the clinic to follow earlier cases identified as malnourished. Generally more educated, well-off and enthusiastic mothers avail this service, who anyway may have healthy children. Vulnerable women with many children and mountain of responsibility at domestic front do not have time or do not perceive the need for this service. Sick children are taken to doctors for diarrhoea or chest problems, where the underlying cause of malnourishment is rarely diagnosed; and mother receives a lot of medications at a cost but little advice to address malnutrition.

Population Coverage

The need for total under-fives population coverage in a community can never be addressed by hospital or baby clinics, which is the only way to improve nutritional status of a child population in a community. Growth monitoring (GM) is as important, if not more, than immunisation coverage, or trying to see that all pregnant women receive antenatal care and supervised childbirth. Unless GM becomes a part of MCH care in the primary health setting and monitors total child population in a community, the problem of undernourished and stunted children will continue to haunt us.

Community Participation

Growth monitoring is an essential component of child rearing and that is the duty of the mother or the caretaker. The present trends in GM and addressing malnutrition problems, removes this responsibility from the mother and retains it with the medical profession, reducing the chances of its success significantly. If GMPs have to be successful, either governments provides health visitors to monitor each child, as is done in the UK, or parents and communities must take the responsibility to see that they understand the problem and children are cared for. The health service providers provide the technical aspect of services but communities take the responsibility of administering the clinics in village or community settings to ensure full population coverage. Angan Wadies, literally meaning courtyard feeding centres, in India are an example. Although they are supposed to be a comprehensive

approach to addressing malnutrition and education of mothers, it has not shown any signs of success because of lack of community involvement and a comprehensive approach to mother and child needs.

Comprehensive Maternal and Child Health

Growth monitoring is a component of MCH and it should be delivered to all women and children in the same manner as immunisations, family planning, antenatal, natal and postnatal care. Health of the mother and the child is so intricately linked with each other that separating service components make no sense.

Growth Monitoring Program is an essential part of PHC activity. It should be transferred into the community by health service providers to help communities understand the problem of malnutrition and make it work as part of UHC.

With political clouds hanging over UHC, in particular the Affordable Care Act in USA and Seguro Popular in Mexico [6]; GMP, if combined with other maternal health services, becomes a major factor in the success of the SDGs.

[1] <https://www.thelancet.com/pb/assets/raw/Lancet/stories/series/nutrition-eng.pdf>

[2] [Olaf Müller](#) and [Michael Krawinkel](#). Malnutrition and health in developing countries. [CMAJ](#). 2005 Aug 2; 173(3): 279–286

[3] <https://www.nice.org.uk/guidance/ph11/resources/mcn-consultation-expert-paper-growth-monitoring>

[4] Roberfroid et al. Do growth monitoring and promotion programs answer the performance criteria of a screening program? *Tropical Medicine and International Health*
doi:10.1111/j.1365-3156.2005.01498.x

[5] <https://www.worldvision.org/hunger-news-stories/top-nine-countries-fighting-child-malnutrition>

[6] Frenk et al. A dark day for universal health coverage. *Lancet*, Vol. 393 January 26, 2019