

Height and Weight, Everybody's Business

Anyone can measure heights and weights and monitor it over long periods of time. It may be curiosity to marvel growth, pleasure to see children grow or a systematic monitoring of health in an individual or a defined population. In everyday life, as well as in public health, it is a valuable tool to monitor health in diverse situations.

Beauty of this indicator is that it does not require extraordinary technical skills and anyone can do it. Everyone wants to know their height and weight. So much so that public places have coin operated machines for these measurements and people do not mind sparing a coin to refresh this information for themselves. Most people know their own height and weight, even though they may not measure it often. Those who don't reach average height, lament if only they could be few inches taller and those who are too tall are self-conscious of it. Parents are keen to measure their children's growth and often record heights and weights by date in their attics or cellars. Young women are obsessed with their figure and watch their weight, even with reprisal. Athletes monitor their weights for different reasons. Weight gain is expected and encouraged during pregnancy and women struggle to shed it afterwards. Middle age men and women struggle with weight gain to remain slim and attractive. Doctors keep advising patients with chronic diseases to reduce weight to help control their condition; and watch eagerly in others to observe any weight gain as a sign of improvement. As losing extra weight is considered healthy, many middle aged men and women are struggling to keep acceptable weight. It seems, if not height, at least weight becomes everybody's business!

These indicators play an important role at individual level and affect our psyche in many ways. In preventive medicine and public health it serves as an important indicator for monitoring individual or population health.

Birthweight – Starting with birthweight, all parents want to know it and announce sex and weight of the newborn to the dear ones and close friends. However, its medical importance is that a newborn must weigh at least 2500 Gms to be considered normal; and low birthweight is a risk factor in the survival of the baby, requiring special attention. Too big babies are also to be monitored as big babies are common among diabetic mothers and carry some risks.

Childhood – Growth monitoring is an essential part of primary health care in children. Regular measurement of a child's weight and height in order to record growth is critical and it must be plotted on a growth chart. Monitoring growth this way provides an opportunity to detect early changes in a child's growth or the lack of it. Both growing too slowly or too fast may indicate a nutritional or other health problems, hence its importance in primary health care for children. Measuring a child's height and weight is of little value unless it is used for growth monitoring, at least at monthly intervals. The monitoring process should be conveniently combined with immunisations, mother's education for best nutritional advice to add greater benefits from the service. Standard measuring software, WHO Enthro, is available through internet, free of charge, for Under-fives growth monitoring for anyone to use. Further reading on the subject may be found under "Why Growth Monitoring in Under-fives" in one of my earlier articles – see under old items.

Adolescent - A woman who is healthy at the time of conception is more likely to have a successful pregnancy and a healthy child. Under-fives growth monitoring must ease into monitoring the health of school children and the adolescent under school health programme. WHO Enthro Plus provides a handy tool for the monitoring of health of 5-19 year olds and schools can easily use this software for school health monitoring. Further details in "Health Education in Schools" under blog and old items.

Pregnancy – Appropriate increase in weight during pregnancy is an essential aspect of antenatal care. Too little or too much weight gain brings the attention of service providers to look further into any problems in mother's health and the state of foetal growth.

Adults – Michael Leans and colleagues describe obesity as an unsolved crisis, generating long term distress and disabilities, reducing human capital, and increasing disease burdens and healthcare costs globally ([BMJ 2018; 361:k2538](#). doi: 10.1136/bmj.k2538). A growing body of research shows that obesity is associated with heart disease, diabetes, arthritis, certain cancers and many other chronic diseases; moreover, almost all these conditions improve with increase in physical activity and loss of excessive weight. Sedentary life leading to imbalance in calorific intake and energy expenditure is the main culprit. For these reasons and more, men and women of all ages require regular weight watch.

In-patient care – Weighing patients in hospitals is an important activity in preparation for treatment plan, monitoring and treatment effectiveness. Daily weight recording for calculation of drug dosage, fluid retention in body for various reasons, in particular heart and kidney problems are essential. In treating chronic diseases weight gain points to improvement in patient's condition, such as in TB treatment. Regular weight gain/loss charts help doctors assess the condition of the patient and treatment effectiveness. In short measuring weight during treatment of a patient in a hospital is a must.

Population studies – Large development projects, especially the dams, where sizable populations have to be relocated due to the impacts of the project, are best monitored by baseline studies and periodic surveys to ensure that project impacts are not negatively affecting the population. Systematic measure of heights and weights to calculate Body Mass Index (BMI) in baseline and follow-up surveys informs the project operators of any negative impacts affecting the impacted populations. Sudden weight losses in a population can point at nutritional deficiencies due to food shortages. Necessary mitigation measures to address nutritional needs due to inundation of agricultural lands may be required. Children and adults are likely to be affected equally. An example of monitoring BMI in relocated population in Nam Theun 2 project in Laos serves to demonstrate the effectiveness of this methodology in identifying the positive and negative impacts of a large project. (See under Blog > Collaboration with Government Health Services)

In disasters – floods, earthquakes and tsunamis, where large numbers of people are affected, relief agencies rely heavily on weighing people to assess the state of health in critical patients and decision making for further actions.

Importance of these basic anthropometric measures in everyday life for all ages is discussed. At individual level we must keep an eye on these measurements for our own health. (For further reading, please see "Office Worker's Dilemma" under Home > Old Items)

For service providers in health and development agencies, heights and weights can serve as a simple yet ideal measure to monitor the health of people they are responsible for.

You may also like to read a full article on the use of Heights and Weights in a large project.

[Heights and Weights as a Humble Tool in Monitoring](#)