

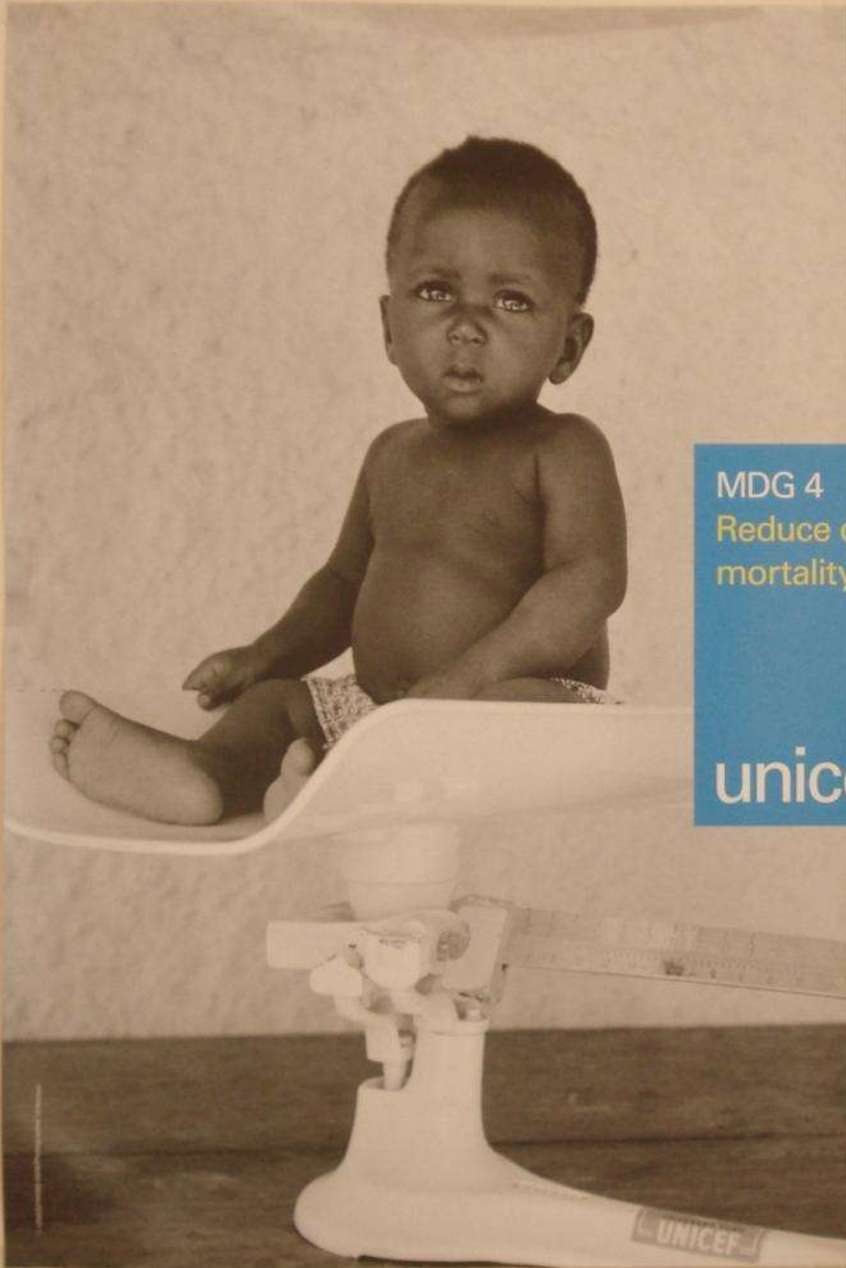
Anthropometry Tools and Use

Presentation to UNICEF Supply Meeting

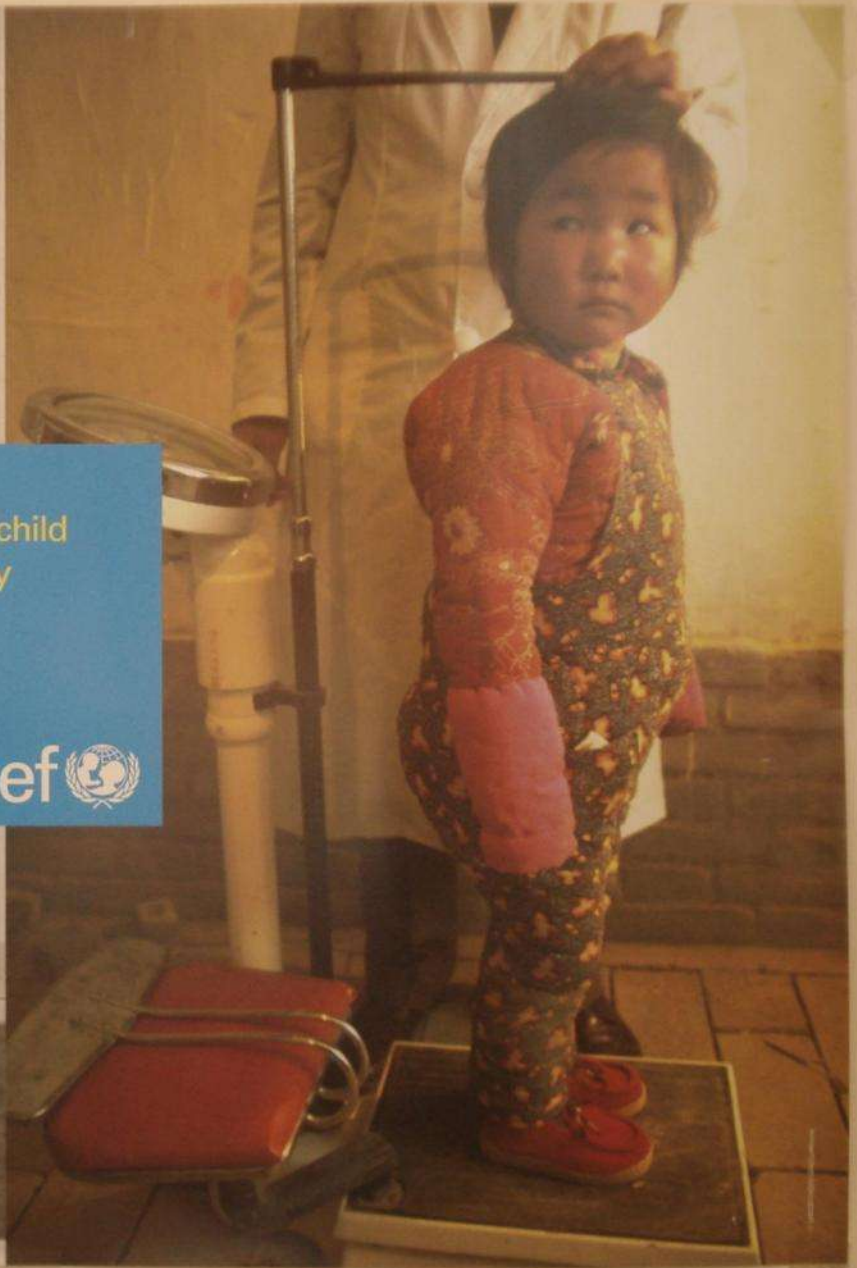
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MDG 4
Reduce child
mortality



Measuring children

MUAC

- MUAC tapes for children should always be to 1 mm precision
- Flexible but non-stretchable
- Interviewers often crease the strip in half to find the child's middle arm



Measuring children

WEIGHT

- In the field, community and clinic health workers like spring scales (Hanging and bathroom scales) but they are not accurate
- Recommendation to stop using hanging spring type scales suitable only for weighing children
- Digital scales are often high quality and rugged. Problem rests with batteries.
- With digital scales, the cardboard under scale used for protection could have an extra flange clearly stating “remove before use”

Measuring children

HEIGHT

- Common types of height boards – Wooden 2 piece, Wooden 3 piece, Plastic free standing,, locally produced boards
- Ensure quality easy to read tape
- Ensure headboard can fit against board in one correct direction

New type of Height Board?



Locally produced height board



Size

Tapes

Two piece

Measuring children

- Low birth weight
 - Need quality scales
 - Good practice to measure child in mother's arms
 - Any way to have a rugged scale more accurate than 100g?

Measuring children

- Head circumference
 - Need larger strip than MUAC
 - Tape should be at least 54 cm in length

Innovations

Need (space age camera) tool that measures

- height
- length of long bones
- muscle mass
- sub-cutaneous fat

Have data stored digitally in unit with time stamp and/or identification for download

Measuring women

MUAC there are no accepted cut-offs

<23.0 cm in pregnant women is considered to be a risk for poor birth outcomes

<21.0 cm is often used as a cut-off for emergency interventions for pregnant women

For non-pregnant women (WHO, 1995)

<22.4 – 21.5 cm is considered Moderate Acute Malnutrition (MAM)

<21.4 cm is considered Severe Acute Malnutrition (SAM)

Measuring women

- MUAC
 - Probably more responsive to changes in access, availability of food than child anthropometric measures
 - Missed an opportunity with the food, fuel and finance crisis to test this hypothesis

Measuring women

- **WEIGHT**
 - Need standing digital scales
- **HEIGHT**
 - Need height board at least 2m tall

Measuring women

- Appropriate Technology?



Training is still a challenge

Accuracy

Accuracy is how close a measured value is to the **actual (true) value**.

Precision

Precision is how close the measured values are **to each other**.



Low Accuracy
High Precision



High Accuracy
Low Precision



High Accuracy
High Precision