Height measurement

Innovation project on measuring board

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Who am I?

• Sebastian Borum Olsen

• Bachelor degree Design & Innovation from DTU

• This project part of my master studies

• Did my bachelor project at UNICEF
Introduction
Why do we measure height?

• UNICEF measures height and compare with age or weight

• Multiple Indicator Cluster Surveys and intervention

• Height measurement will always be needed
What is height used for?

- Weight for height
- Weight for age
How are children measured...?
... in reality?
End users

• The end users are field workers carrying out the measurements in the field

• Existing instruments work fine at health clinics

• Important to get feedback from the field
Start-up – Problems

- Heavy
- Disposed to defects
- Causes measurer fatigue
- Expensive
- Requires great manipulation of patient
- Not allowing speedy measurements
- Inaccurate

 Causes measurer fatigue

Inaccurate

Not allowing speedy measurements

Requires great manipulation of patient

Expensive

Heavy

Disposed to defects
Start-up — Organizing

- Unsteady instruments
- Alienating instruments and process
- Lack of training of personnel
- Time-consuming process
- Requirement for completely rigid patients
- Instruments not flexible for different body shapes
- Instruments dependant of their surroundings

Inaccurate measurements and false data
The purpose of this workshop is to share ideas and thoughts on different aspects of height measurement. Seven focus areas have been drawn up to make seven short brainstorming sessions.

Today, every idea has its place!

**Focus Areas**

- **How do we achieve steady measurements?**
- **How can we reduce the need of children and toddlers being rigid when measured?**
- **How can we make it a welcoming process that respects local culture and religion?**
- **How can we make the measurement tool intuitive and easy in use?**
- **How can we make the measurement independent of the surroundings?**
- **How can we make the process of measuring quick and effective?**
- **How can we make the measurement suitable for everyone despite age, body shape etc.?**
## Concept presentation summary

<table>
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<th>Focus areas</th>
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<td>Rigid children</td>
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Chosen concept: Sensor solution
Problems with the solutions

• Sensor through patients – can be frightening

• Deviations in measurements when patients are not leaning

• Not all sensor types work

• Hygienic problems when using the same sensor at heads and feet

• Patients still need to be rigid
Final Concept
Final Concept
Final Concept
Final Concept
Integrating scales
QUESTIONS AND ANSWERS