

Thesis Proposal

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Health Care in the Developing World

- Areas of Research
- Diseases
- Diagnostic Tools
- Treatments
- Treatment Issues

Areas of Research

- Countries
 - Malawi
- Organizations
 - Baobab Health Partnership
 - KCH
 - Kawale



Diseases

- HIV/AIDS
 - Wasting
 - WHO Staging
- Malnutrition
 - Acute
 - Chronic



Diagnostic Tools

- Anthropometrics
 - General Population
 - Height
 - Weight
 - BMI
 - MUAC
 - Temperature



Diagnostic Tools

- Anthropometrics
 - Mothers/Neonates
 - Gestational Length
 - Birth Weight
 - Head Circumference
 - Length
 - Mother's Weight Differences



Diagnostic Tools

- Statistics
 - Weight-Height
 - Weight-Age
 - Height-Age
 - LBW (Low Birth Weight)
 - SFG (Small for Gestational Age)
 - Pregnancy Balance



Treatments

- Antiretroviral Therapy (ART)
- Therapeutic Nutrition



Treatment Issues

- Measurement Error
- Lack of staff
- Difficult Record Keeping





Design Questions

- How can intra and inter operator error be reduced for anthropometric measurements?
- How can the system deployed at KCH better collect and transfer data without paper or unnecessary transcriptions?

Ideas for error reduction

- channel measurements directly into Baobab System
 - Scanner read measurement tape
 - Retrofit other measurement devices for scanners
 - modify/hack electronics like scales and thermometers



Domains

- Anthropology
 - Physical
 - Social
 - Applied



Domains

- Engineering
 - Instrument Design
 - Quality Assurance
 - Software
 - Biomechanical
 - Ergonomics



Domains

- Medicine
 - Epidemiology
 - Pediatrics
 - OB-GYN
 - HIV/AIDS Specialty
 - Tropical Medicine



Domains

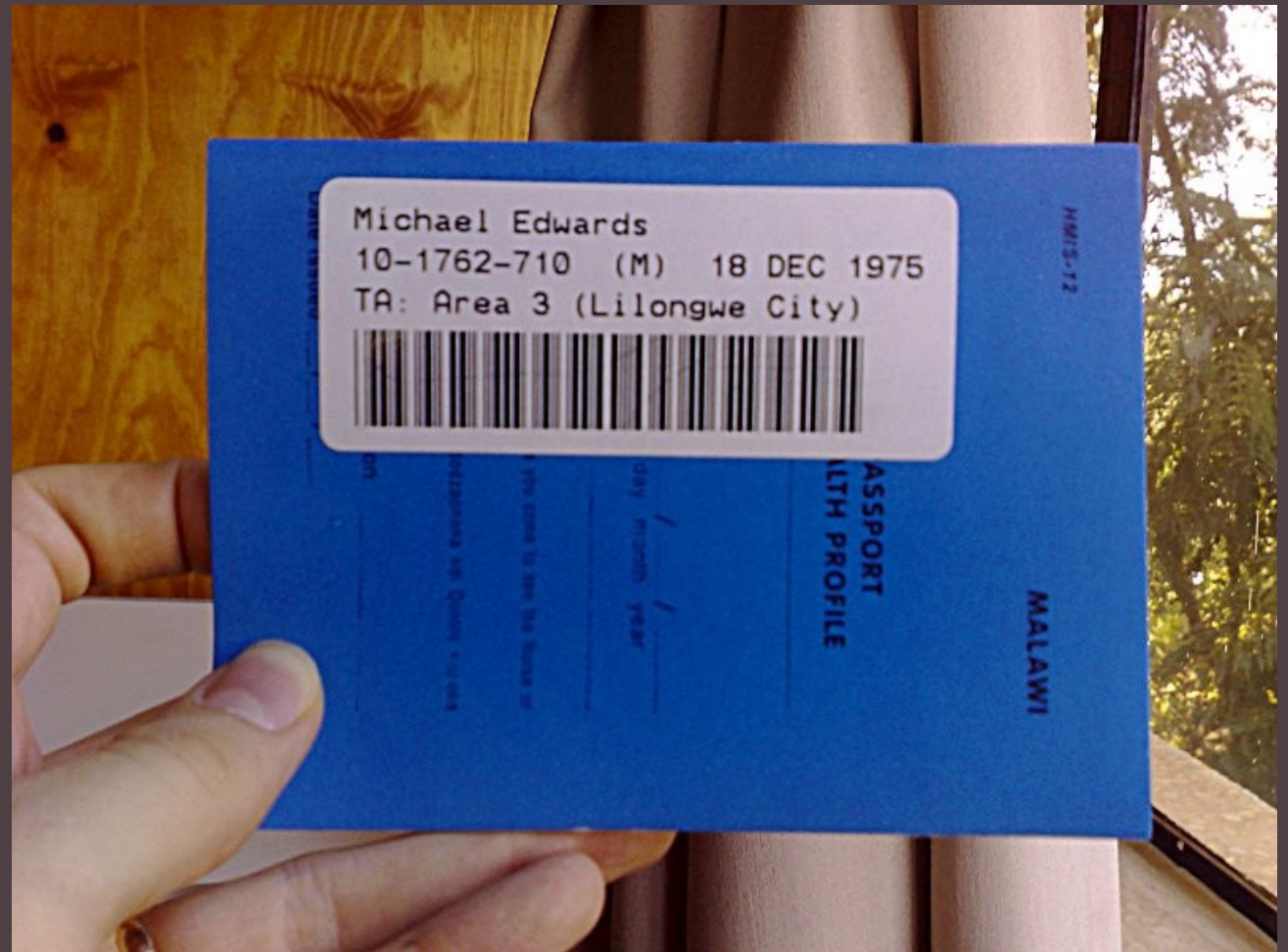
- Social Work
 - HIV/AIDS Counselling
 - Family Planning
 - Conflict Resolution



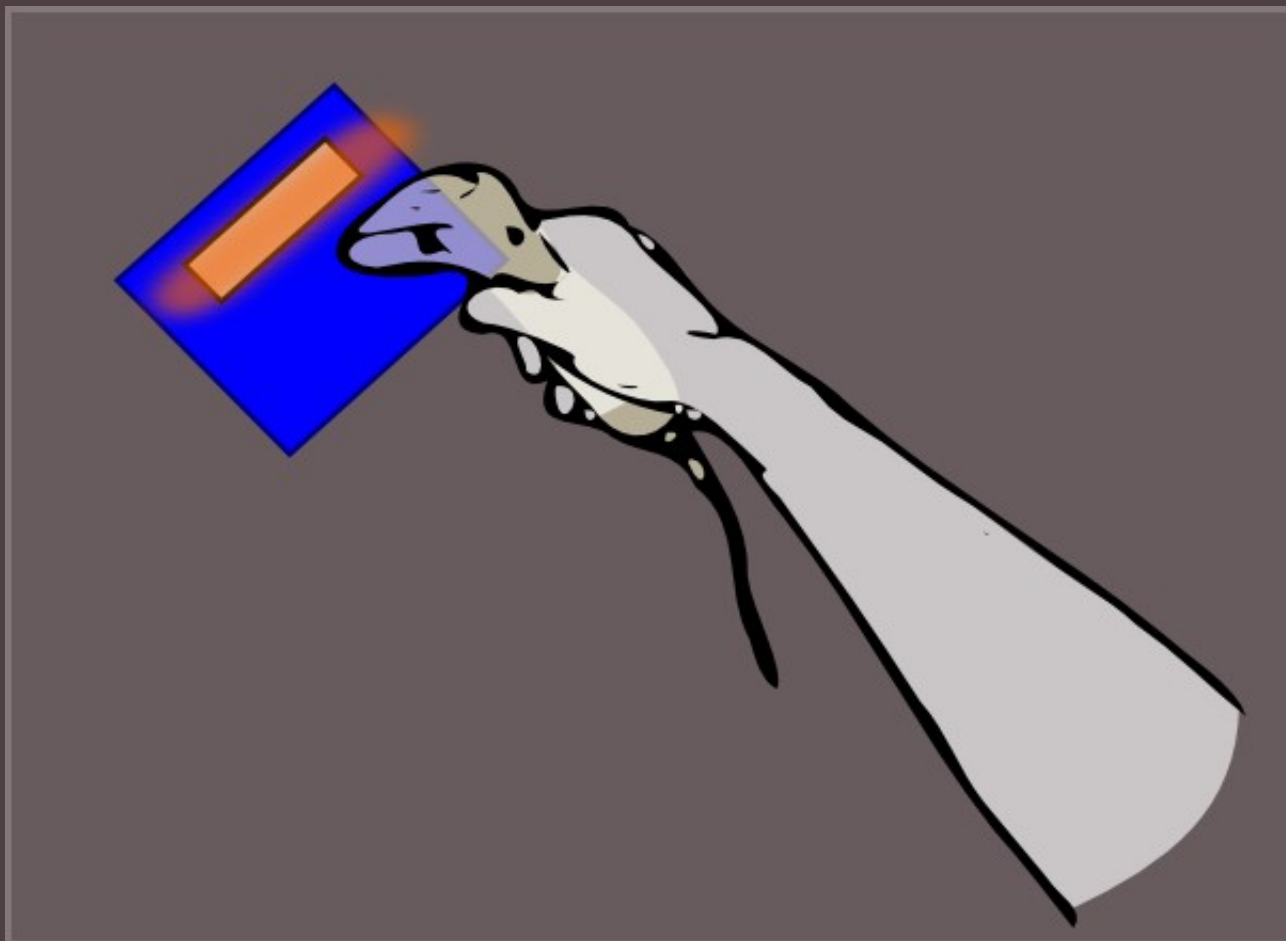
The Baobab Appliance



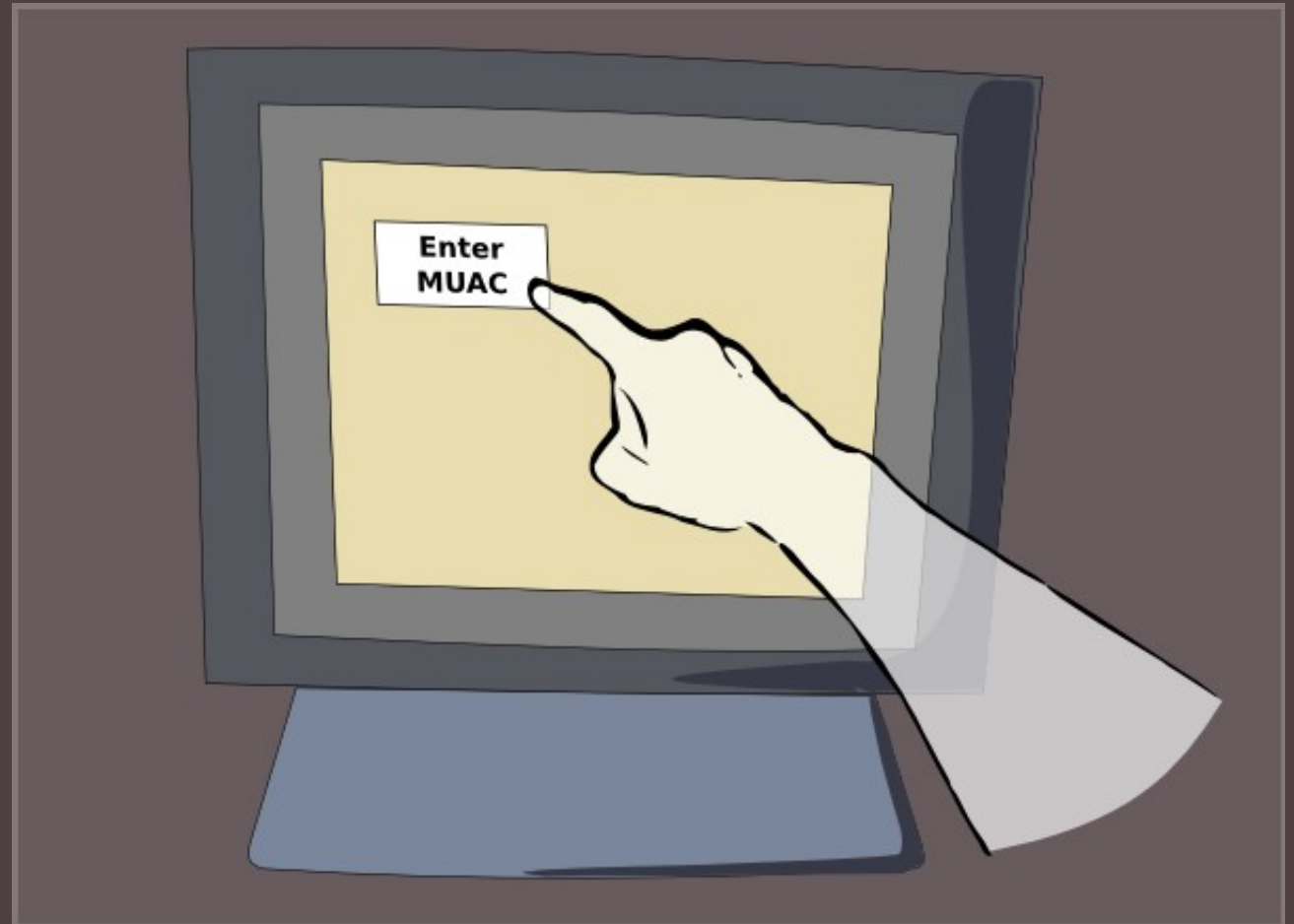
Health Passport



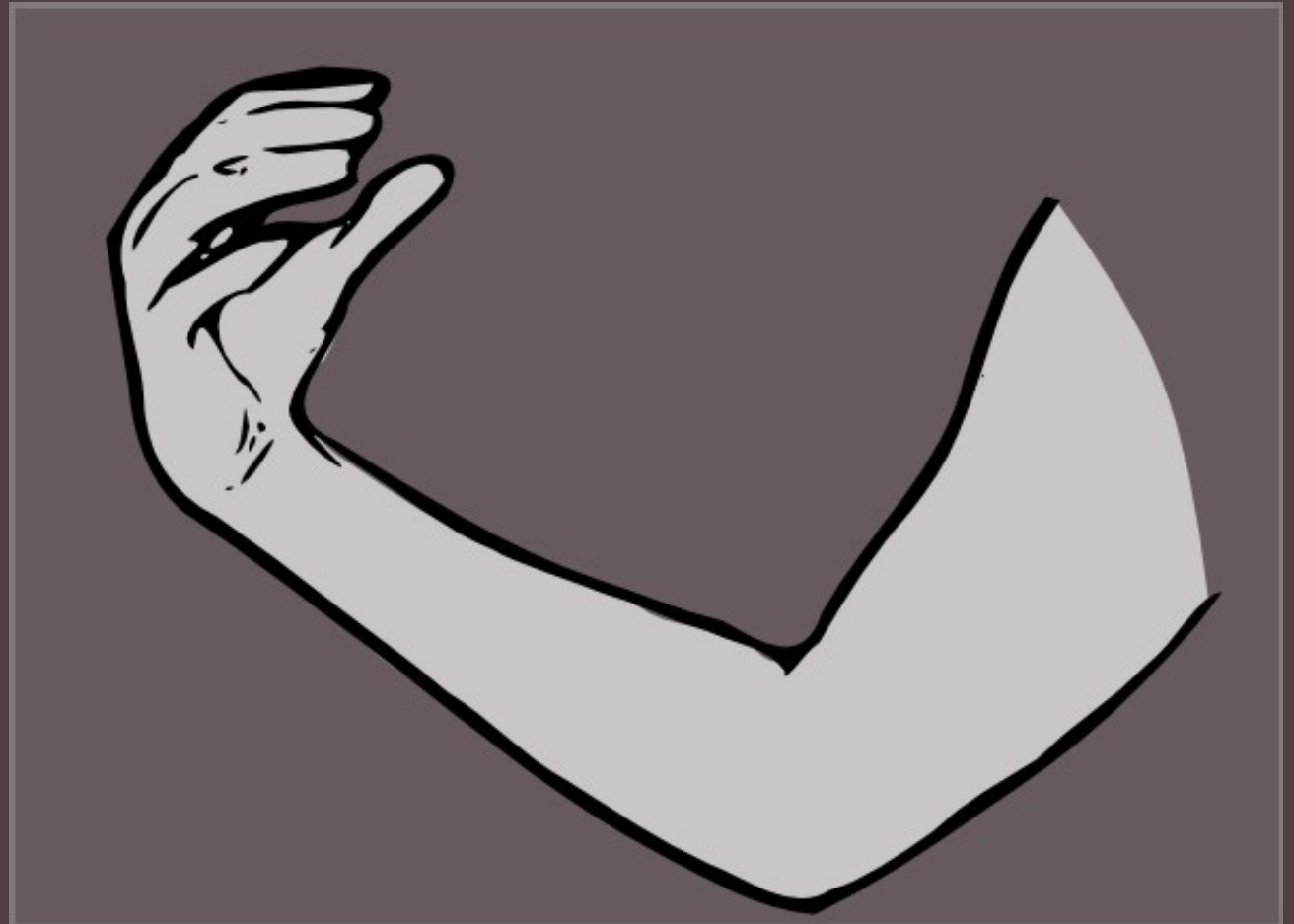
Passport Scanned



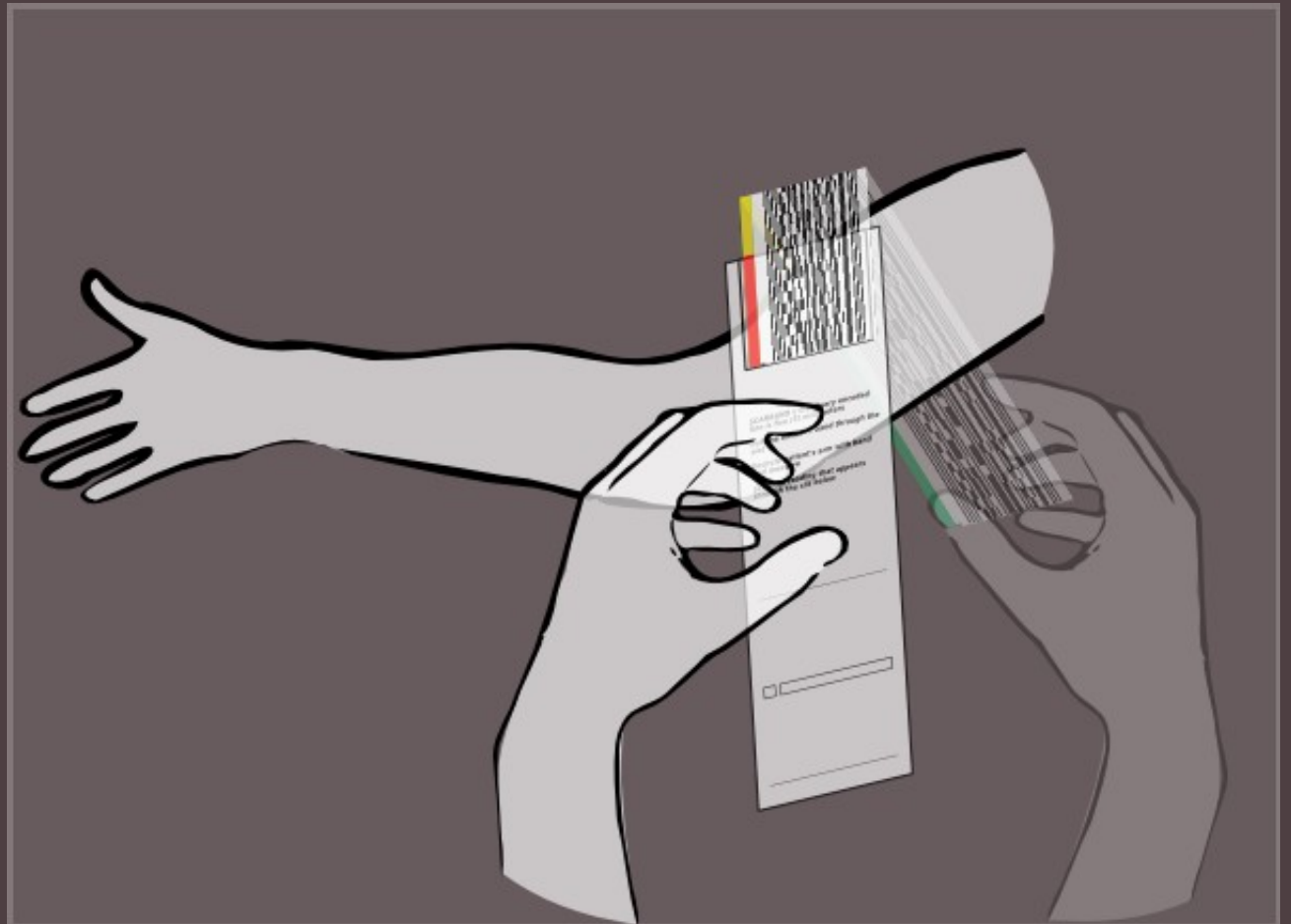
Begin Entry



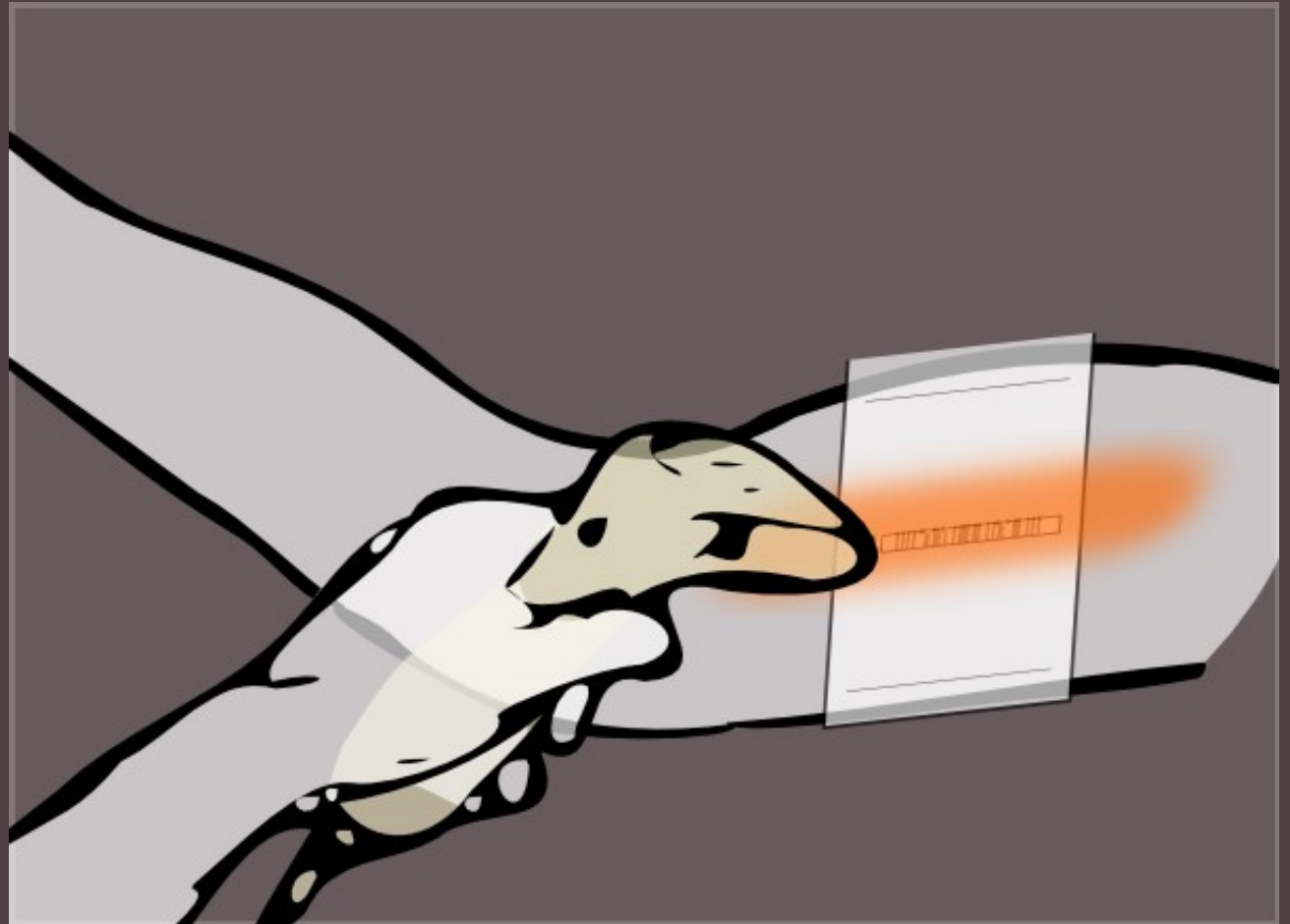
Patient Presents Arm



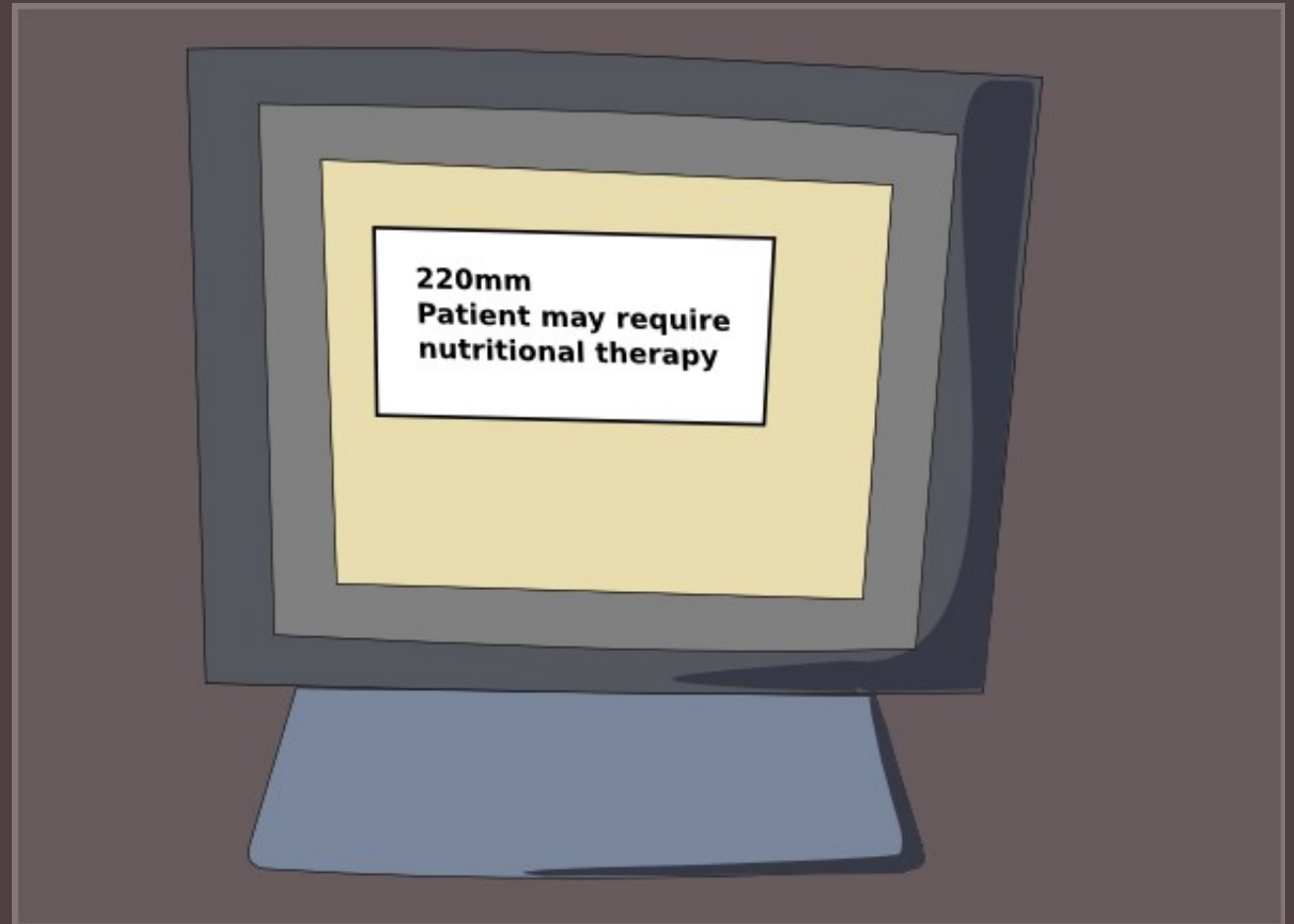
SCANBAND Fitted



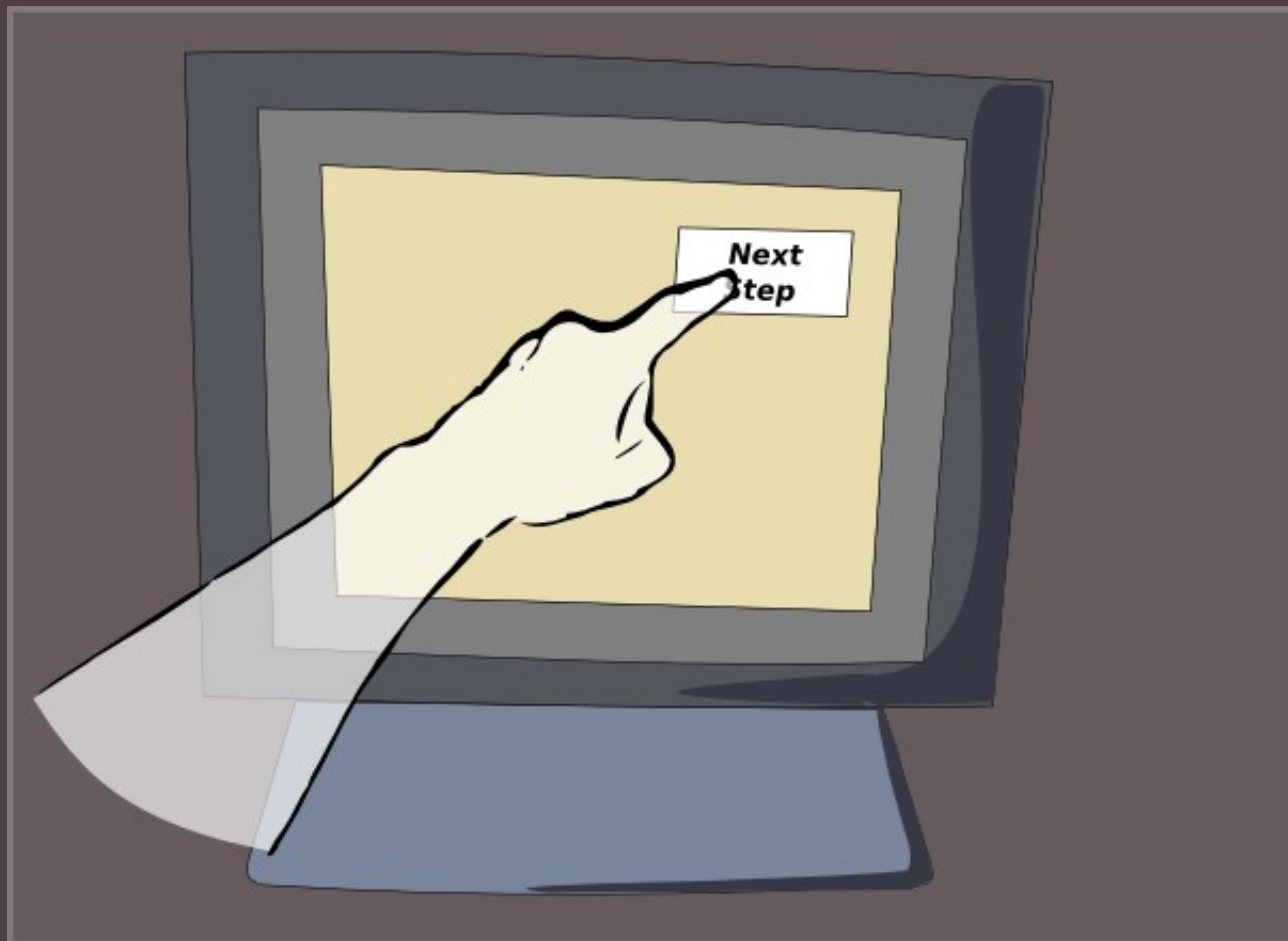
Barcode Scanned



Measurement Recorded



Operator Continues



Conclusion

