TECHNICAL SPECIFICATIONS FOR REHABILITATION DEVICES (TSRD) PROVIDED FOR LEPROSY AFFECTED PATIENTS BY THE LEPROSY MISSION TRUST INDIA – A REVIEW

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BACKGROUND

• Wide range of Splints, Adaptive devices, Orthosis & Prosthesis are
  – Prescribed, fabricated and provided to patients undergoing treatment for Neuritis, Reaction & Pre and post tendon transfer surgeries
  – To help improve the patients activities of daily living

• The devices (Splints, Adaptations, Orthosis & Prosthesis) are tailor made to meet the needs of the individuals at the 14 Leprosy Mission Trust India (TLMTI) hospitals
OBJECTIVES

• Review the technical specifications and the standards maintained in the fabrication of devices at all the TLMTI hospitals

• Critically analyze and capture innovative processes that were initiated

• Protocols and the user manual followed while providing the devices to the patients
METHODOLOGY

- A comprehensive questionnaire was formulated and circulated to all the TLMTI hospitals to provide all the details of the Technical Specifications of the Rehabilitative Devices (TSRD) maintained by the staff while fabricating the devices.

- The responses from the 14 TLMTI centers were categorized according to the functions and the effectiveness of the device on the patient.
Findings – Fabrication Materials

**Footwear**
- MCR & EVA 5 (36%)
- MCR 9 (64%)

**Splints**
- POP 10 (71%)
- Thermo plastics/Aluminum/…

**Adaptations**
- EVA/Aluminum 2 (14%)
- Locally available Materials 12 (86%)

**Artificial Limbs/Calipers**
- No Artificial Limbs 10 (72%)
- Jaipur/Readymade kits 2 (14%)
- Jaipur/Readymade kits/Resin 2 (14%)
Findings – Time Taken for Fabrication

**Footwear Fabrication**

- Hours vs. Centres
- Time taken ranges from 0 to 30 hours

**Artificial Limb/ Calipers**

- Days vs. Centres
- Time taken ranges from 0 to 10 days

**Adaptive Device/ Splints**

- Hours vs. Centres
- Time taken ranges from 0 to 30 hours

**Podiatry Appliances**

- Hours vs. Centres
- Time taken ranges from 0 to 30 hours
Findings – Categorization of Devices

FUNCTIONS

MATERIALS

EFFECTIVENESS

INNOVATION

USER/CLIENT
Fabrication – Institute & Field areas
Conclusion

• Low cost devices fabricated with the locally available materials could be used to fabricate devices for improving the patients activities of daily living

• The uniformity maintained in the fabrication process would help patients living in remote areas to procure devices of superior quality
Recommendations

- Regular updates are essential to make the newly fabricated devices comply to the existing statutory/ regulatory guidelines/ schemes
- Maintaining uniform standards in the fabrication process will help yield devices of with maximal efficiency without the quality being compromised
- Regular knowledge sharing and up gradation of the therapists
- To use engineering technology in the designing and testing process