

## Milestone 1

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### List of Criteria

- Non Invasive
- Removeable
- User-friendly
- Accurate
- Lightweight
- Compact
- Wearable
- Takes Measurements
- Comfortable
- Practical

### Need Statement

The goal is to design a wearable device targeted for stride rehabilitation patients to track the movement of the foot. The device will use a sensor to assess the conditions of the patient to promote an accelerated rehabilitation process and prevent further injury.

### Preliminary List of Ideas

**When I think of end user X, Y would be interesting to measure using a Z**

#### **Rehabilitation Patients**

- 1) When thinking of *rehabilitation patients*, it would be interesting to create a wearable foot device that uses an *orientation sensor* to measure the orientation of specific foot muscles
- 2) When thinking of *coma patients* eligible for rehab, it would be interesting to create a wearable device that uses an *EMG sensor* to measure muscle contraction

#### **Athletes**

- 3) When thinking of *athletes*, it would be interesting to create a wearable device that uses a *temperature sensor* to measure body temperature

- 4) When thinking of *athletes*, it would be interesting to create a wearable device that uses an *EMG muscle sensor* to measure muscle contractions
- 5) When thinking of *athletes*, it would be interesting to create a wearable device that uses an *orientation sensor* to measure stride