A rehabilitation tool to determine patient's stay in hospital after joint replacement

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Introduction: Reflexion Health, Inc. has developed a post-operative rehab tool allowing the surgeon and the entire healthcare staff to optimize care according to the patient's specific needs.
 It presents data based insights to quickly review the progress of the patients on predicted trajectories of recovery, and more easily identify and triage those few patients who might have to stay longer in hospital facility.
As part of an integrated clinical care pathway, post-operative scoring of likelihood of discharge is an attractive prospect, because it allows caregivers to focus on patients who require the most assistance with obtaining safe and appropriate postoperative care.

Purpose	To obtain an objective score which is patient-centered, data-driven, and value-based solution for post-operative rehabilitation.
Eligibilty criteria	Joint replacement surgery, age should be more than or equal to 18 years.
Study type	Prospective observational study
Sample size	40
Endpoints	Primary endpoint: Length of stay in hospital. Higher the score, shorter is the stay.

	Secondary endpoint: Reliability on software (VERA) to co-relate with clinical data on data points such as discharge location, gait aid use, Knee society score(KSS) and range of motion(ROM). Time intervals for recording Gait aid use, KSS and ROM are as - 1. Gait aid use at the time of discharge, 2 weeks follow up, 6 weeks follow up, 3 weeks follow up, 1 year follow up and 2 year follow up 2. Outcome score (KSS) at 3 weeks follow up, 1 year follow up and 2 year follow up 3. Range of motion at 2 weeks follow up, 6 weeks follow up, 3 months follow up, 1 year follow up and 2 year follow up
Activities to be performed on VERA during Pre-op visit only	1. 30 second Sit to Stand Test 2. Single Leg Balance Test 3. Step Test: (8" step) Time it takes to independently complete 10 reps
PROM used	KOOS JR, KSS and PROMIS
Personnel	IRB submission & data collection Dr. Derek F. Amanatullah, M.D., Ph.D.

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Schedule of data collection:

Variable	Pre-op	2 weeks	6 weeks	3 months	1 years	2 years
Gait aide	X	X	X	X	X	X
Range of motion	X	X	X	X	X	X
Knee society score	X			X	X	X
KOOS	X			X	X	X
PROMIS	X			X	X	X