A variety of measures are used to determine functional outcome following surgical and rehabilitation interventions used with patients undergoing anterior cruciate ligament reconstruction (ACLR).

### Background

1. Identify the outcomes currently used to evaluate patients post-ACLR.
2. Compare the use of these outcomes between surgical and rehabilitation intervention studies as well as across time.

### Purpose

- Fourteen areas of functional outcome measures were reviewed: range of motion (ROM), strength, balance, proprioception, pain, return to sport/function (RTS/F), patient reported outcomes (PRO), hopping, agility and speed, biomechanics, fitness, anaerobic, core strength, and muscle fatigue.
- The use of these measures were compared between surgical (S) and rehab (R) interventions, and trends across five year spans.

### Methods

- 2429 records identified through Medline, CINAHL, Embase, and Sport Discus.
- 1477 Duplicates removed.
- 952 records screened.
- 239 full text records assessed for eligibility.
- 114 full text articles excluded due to not meeting all of inclusion criteria.
- 125 articles included in qualitative synthesis.

- Included:
  - 110 PRO
  - 107 ROM
  - 51 RTS/F
  - 56 Strength
  - 31 Pain
  - 12 Balance
  - 4 Agility
  - 2 Fitness
  - 1 Muscle Fatigue
  - 0 Core

### Analysis

- Studies were analyzed for type of outcome measure used.
- Analysis of trends across time, S vs. R, and S vs. R across time were performed using proportions of outcomes to account for discrepancy in the number of R and S articles.

### Results

- The greatest percentage increase in outcomes in surgery studies is seen in PRO and RTS/F over the last decade.

- PRO (n=110, S=82, R=28)
- ROM (n=107, S=79, R=28)
- RTS/F (n=56, S=40, R=16)

- The greatest percentage increase in outcomes in rehab studies is seen in strength and B&P over the last decade.

- Strength (n=51, S=28, R=23)
- Hopping (n=46, S=25, R=21)

### Conclusions

- There is a strong preference towards using impairment based and subjective measures, rather than physical performance measures.
- Rehab focused studies examined more physical performance measures.
- Physical performance measures have been increasingly utilized over time.

### Clinical Relevance

Currently, the primary focus of functional outcome measures following ACLR targets subjective and impairment based measures. There is a need for future studies to include physical performance measures to fully elucidate the success of interventions for patient to improve their ability to successfully return to prior sport/function.

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