Journal Club: Top Four

JOA

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Themes from JOA this year

- Lots of stuff on bundled payments, value based care, risk stratification and cost
- Lots of Robots
- One Stage
- Cost and finance
- Physical Therapy
Primary Arthroplasty

Are Patients More Satisfied With a Balanced Total Knee Arthroplasty?

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- 318 Patients
- 11 Surgeons, multi center
- Variety of surgical techniques, same implant
- Excluded Angular coronal deformity > 20 degrees, >20 degree flexion contracture, arc of motion < 90

Fig. 2. Overview of patient enrollment and comparison between balanced and unbalanced population.
- Knees were balanced with the sensor according to prior published literature (relaxed extension, 45 degrees, 90 degrees with arthrotomy reapproximated with towel clamps)
Fig. 3. Overview of patient-reported outcome metrics collected pre-operatively and 6 weeks and 6 months post-operatively: Knee Society Expectations (A), Knee Society Satisfaction (B), and Forgotten Joint Score (C).
Conclusion

- Shows that objectively balanced knees have better early outcomes on certain scores
- Technology appear to help achieve that balance

Limitations:
- Early results
- Significant potential for bias:

Acknowledgements

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The Unintended Impact of the Removal of Total Knee Arthroplasty From the Center for Medicare and Medicaid Services Inpatient-Only List

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- 9 questions survey for active AAHKS members
- 26% response rate (n=730)
Have you been instructed by your hospital(s) to schedule fee for service Medicare patients needing a total knee as outpatients, and if they stay in the hospital for two nights they will change it to an inpatient admission?

Fig. 1. This graph reports on hospital policy for scheduling total knee arthroplasty.

Have you been instructed by your hospital that unless the same patient stays two nights, they will remain an outpatient, regardless of services rendered?

Fig. 2. This graph shows hospital policy with regard to patients who are admitted as inpatients but do not need to stay in the hospital for 2 nights.

Have you been instructed by your hospital that the same patient can be made an inpatient even if less than two nights in the hospital?

Fig. 3. This graph examines the ramifications of hospital policy toward the 2-midnight rule.

Has a local Medicare Advantage Plan changed its coverage policy to declare all/majority of total knee replacement cases are to be scheduled as an outpatient procedure?

Fig. 5. This graph reports how some Medicare Advantage Plans have interpreted this policy change.
Fig. 4. This graph highlights the lack of clarity regarding documentation requirements.

Fig. 6. This graph reports on how some commercial payers have interpreted the policy change.

Fig. 7. This graph examines the impact on increased costs for Medicare beneficiaries.
Qualitative Responses

“The determination of a patients need to have the appropriate health care environment, inpatient or outpatient, has been taken away from physicians. Instead of us making sound medical decisions based on evidence and doing the best for our patient, we are now forced to make medical decisions about length of stay based on CMS policy. Unfortunately, since CMS policy is based largely on CMS cost savings, these decisions do not correlate well with sound medical decision-making and it is leading to less safety in joint replacement surgery.”
Conclusions

- There are signs that CMS is failing to fulfill the promise of value based care
  - Added confusion and administrative burden
  - A change that seems to be focused only on cost savings
    - Including taking the most cost-effective patients out of BCPI

- “It is the position of the AAHKS that the CMS needs to defuse this situation with education and clear reassurance that all the age-eligible Medicare TKA patients be allowed hospital admission status, regardless of the length of stay unless they actually go home the same day of surgery.”
Self-Directed Home Exercises vs Outpatient Physical Therapy After Total Knee Arthroplasty: Value and Outcomes Following a Protocol Change

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- Single surgeon
- 520 consecutive primary TKA
  - 251 before protocol change, 269 after
- Initial protocol – all patients have OPPT from start
- After change – All patients given an HEP with 3 simple exercises
- FU at 2 weeks - If ROM < 90, patients requests, or surgeon deems necessary OPPT prescribed
65.8% (177/269) of patients in the HEP group did not require OPPT.

No significant difference in patients with ROM < 90 before or after protocol change at 2 weeks

No significant difference in MUA

On average, patients who received OPPT incurred an increase in average cost of $1340.87 (Medicare) and $1893.42 (Private)

No identifiable significant risk factors for failing HEP.
Conclusions

- Increasing evidence against the need for OPPT for TKA patients
  - This study begs the question of what would be the natural history of all patients without OPPT

- May be underpowered to detect rare events like MUA (no a-posteriori power analysis)

- In the current era of value based care PT is a clear target
392 patients enrolled, 4 surgeons, primary TKA

Excluded: dependence on a walker or wheelchair, (for discharge to a facility, case scheduled to start after noon, non English-speaking

1:1 block randomization per surgeon to PT on POD0 or POD1

For patient’s randomized to POD0 no specific attempt was made to mobilize the patient by nursing

Modern multi-modal pain regimen and regional anesthesia
Assessed for eligibility (n=729)

Enrollment

- Excluded (n=335)
  - Did not meet inclusion criteria (n=234)
  - Declined to participate (n=101)

Randomized (n=394)

Allocation

- Allocated to POD 0 PT (n=193)
  - Received allocated intervention (n=180)
  - Did not receive allocated intervention due to miscommunication between study staff and PT department resulting in failure to initiate PT on POD 0 (analyzed as crossovers in as-treated analysis, as noted below) (n=13)

- Allocated to POD 1 PT (n=201)
  - Received allocated intervention (n=190)
  - Did not receive allocated intervention due to miscommunication between study staff and PT department resulting in premature start of PT on POD 0 (analyzed as crossovers in as-treated analysis, as noted below) (n=11)

Follow-up

- Lost to follow-up and not analyzed (n=10)
  - Due to discharge to facility (n=9)
  - Due to withdrawal from study (n=1)

- Lost to follow-up and not analyzed (n=6)
  - Due to discharge to facility (n=6)

Intention-to-treat Analysis

- Analyzed as POD 0 PT in intention-to-treat analysis (n=183)
- Analyzed as POD 1 PT in intention-to-treat analysis (n=195)

As-treated Analysis

- Analyzed as POD 0 PT in as-treated analysis (n=185)
- Analyzed as POD 1 PT in as-treated analysis (n=193)

Fig. 1. Consolidated Standards of Reporting Trials (CONSORT) flow diagram for patient inclusion/exclusion, follow-up, and analysis. POD, postoperative day; PT, physical therapy.
No difference in LOS or satisfaction between groups
Study powered to detect a four hour difference
Conclusions

- Well done RCT with a simple intervention

- Calls into question the value of POD0 PT for rapid recovery

- May change practice for allocation of PT resources in inpatient settings
“It is what we know already that often prevents us from learning”

Claude Bernard