EVALUATION OF THE EFFECTIVENESS OF A NATIONAL DISCHARGE PLANNING PROGRAM (PRADO) FOR ORTHOPEDIC SURGERY IN FRENCH HOSPITALS

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CONTEXT

The French National Health Insurance (NHI) has created several hospital discharge planning programs (PRADO) with the objective of reducing hospital length of stay (LOS) and unplanned readmission to hospital, and improving the coordination of services following discharge from hospital. Initially focused on maternity discharge, the program was later extended to orthopedic surgery (2012).

OBJECTIVE

TO ASSESS THE EFFECTIVENESS OF THE ORTHOPEDIC SURGERY PROGRAM

METHODOLOGY

A CASE-CONTROL STUDY WAS PERFORMED.

Data source : PRADO database that is maintained by the NHI & French national reimbursement database

Population:

- Case = Patients eligible for the programs between 2015 and 2017.
- Controls = Patients in non-participating hospitals matched (1:1) on age, sex, social status, comorbidities (Charlson) and characteristics of their hospital stay (type of surgery, interventions undergone during the stay).

Endpoints:

- Rate of admission in physical rehabilitation care (rehab)
- LOS
- 30-day rehospitalization rate (all-cause) (Primary)
- Rate of outpatient consultation with a general practitioner (GP)
- Physical therapist or nurse within 15 days of discharge
- Rate of consultation with a surgeon within 60 days of discharge
- Healthcare cost related to surgery in the 6 months after discharge.

Statistical analysis: Student t-test and chi² test were used to compare patients and controls (significance level of 0.05).

RESULTS

THIS STUDY PROVIDES REAL-WORLD EVIDENCE THAT DISCHARGE PLANNING PROGRAM CAN IMPROVE THE QUALITY OF CARE AND REDUCE POST-DISCHARGE COST IN ORTHOPEDIC SURGERY

- The study included 160,302 subjects and patients and controls were comparable for all matching variables (Table 1).
- Results are presented in table 2. Compared to controls, patients had:
  - Significantly fewer admissions in rehab (3.4% versus 8.4%)
  - No significant differences were seen for LOS or readmission.
  - Significantly higher rates of consultations with GP (33% vs 29%), physical therapists (76% versus 64%), nurses (93% versus 83%) and surgeons (70% versus 64%).
- Patients were associated with lower healthcare cost in the 6 months after discharge (€2,268 versus €2,485) (Figure 1)

Table 1. Patients and controls characteristics

Characteristics	PRADO N = 71 761	Controls N = 71 761
Age (year, std. dev.)	63.09 (14.8)	62.97 (15.1)
Sex (Women) (%)	55.76	55.76
Low social status (CMU) (%)	3.82	3.82
Low healthcare consumption (%)	13.84	13.84
Intensive Care during Stay (%)	0.05	0.05
Comorbidities (Charlson's score) (average, std. dev.)	1.14 (1.68)	1.14 (1.68)
Nomber of diagnostics associated to surgery stay	2.35 (2.80)	2.43 (3.45)
Number of procedures performed during stay	5.44 (3.16)	5.45 (3.78)
Number of orthopedic procedures performed during stay	1.17 (0.40)	1.16 (0.39)

All p > 0.05 for comparison of characteristics between PRADO and Controls

Table 2. Results

Endpoints	PRADO N = 71 761	Controls N = 71 761	p-value
Rate of admission in physical rehabilitation care	3.4	8.4	<.0001
LOS (days) (avg, std. dev.)	5.32 (3.4)	5.35 (4.1)	0.22
LOS (days) (median, Q1-Q3)	5 (3-7)	5 (3-7)	
30-days Rehospitalization (%)	1.7	1.8	0.317
Rate of outpatient consultation within 15 days			
GP	32.7	28.9	<.0001
Physical therapist	75.9	63.6	<.0001
Nurse	92.8	82.8	<.0001
Rate of outpatient consultation within 60 days with a surgeon	69.6	64.1	<.0001

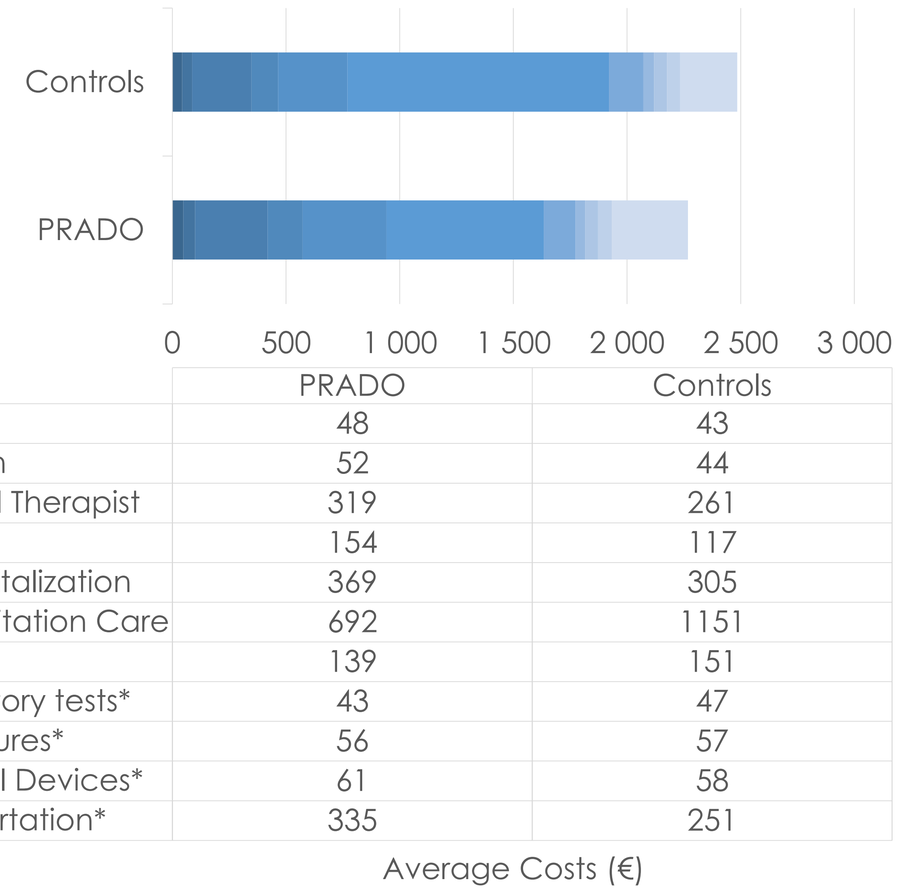

Figure 1. Average reimbursements in the 6 months following surgery

* Significative difference

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