

## CARDIAC REVASCULARIZATION : COMPARING COST AND RETURN TO WORK IN PCI AND CABG PATIENTS

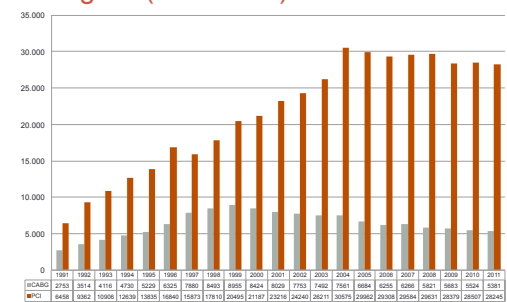
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There is no conflict of interest to report

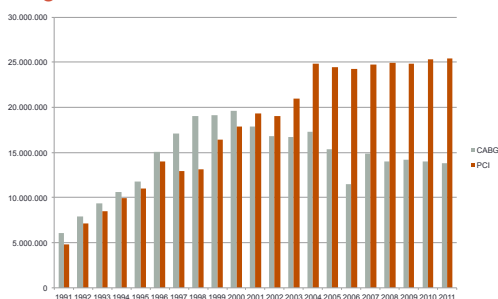
### Introduction

- 2009: 32.599 deaths related to cardiovascular disease in Belgium
  - 7.375: cerebrovascular incidents
  - 9.574: ischemic heart disease
  - 11.885: other cardiac events (estimated another 1/3 of this group was related to coronary artery disease)

### Interventions for cardiac revascularization in Belgium (1991-2011)



### Cost of PCI and CABG to the Social Security in Belgium in euro



### Aim of the study

- Analysis economical impact of cardiac revascularization
  - Cost of the intervention
  - Incapacity to work
- Intervention
  - PCI (Percutaneous coronary Intervention)
  - CABG (Coronary artery Bypass Grafting)

### Study

- Data warehouse of the Socialistic Mutuality
- All interventions between 2007-2011
- Exclusion: combined cardiac procedures

### Study Population

- Interventions: 40.759
- Patients: 33.359
- Male/female: 71%/29%
- Average age: 65 (63/68)
- Working population: 12.813 = 31%

### Conclusion 1

- 17% underwent more than one procedure
  - 5780 patients/7400 interventions
- Mostly PCI (up to 10 interventions)
- No double CABG

### Cost

- Hospital stay
  - Length of stay
    - PCI: mean 4.63, median 2
    - CABG: mean 15.63, median 12
- Cost of hospitalization
  - PCI: € 5.478
  - CABG: € 10.980

### Conclusion 2

- Hospital stay is significantly shorter in PCI than in CABG
- PCI is cheaper than CABG relating to hospital cost: 1/2
- Because of multiple interventions in PCI this conclusion has to be critically reviewed

### Regulation incapacity to work in Belgium

- Social system : Bismarck model
- Two types of employment regarding the social security
  - Employees
  - Independent status

### Incapacity to work

- Random test:
  - 2011
  - 2.373 records = 18.5%
  - 2.173 patients

### No declaration of sickness

- PCI: 922/1528 = 60%
- CABG: 145/320 = 45%

### Return to work

- Spontaneous return to work
  - PCI : 457 = 30%
  - CABG : 122 = 38%
- Obligated return to work = 1%
  - PCI : 20 patients
  - CABG : 1 patient

### Average duration incapacity to work

- PCI: 137 (4-679)
  - Employees
  - Independent
- CABG : 185 (25-97)
  - Employees
  - Independent

### Long-term incapacity > 12 months

- No definitive incapacity = 5%
  - PCI: 74
  - CABG: 20
- Definitive incapacity to work = 5%
  - PCI: 55
  - CABG: 31

### Disadvantage of the study

- No admittance to the complete medical file
- No data concerning cost for postoperative follow-up and treatment

### Conclusion 3

- The common opinion that PCI is cheaper and guarantees a faster return to work has to be reconsidered due to the repetitive interventions
- This results are confirmed in recent studies.

### Literature

- Hanan EL et al. Comparative outcomes for patients who do and do not undergo percutaneous coronary intervention for stable coronary artery disease in New York. **Circulation 125: 1870-1879, 2012.**
- Vieira RDO et al. Cost-effectiveness analysis for surgical, angioplasty or medical therapeutics for coronary artery disease: 5-year follow-up of medicine, angioplasty or surgery study (MASS)II trial. **Circulation 126:S1 45-S1 50, 2012.**
- Mohr FW et al. Coronary bypass graft surgery versus percutaneous coronary intervention in patients with three-vessel disease and left main coronary disease: 5-year flow-up of the randomized, clinical SYNTAX trial. **The Lancet 381: 629-638, 2013**
- Taggert DP et al. CABG or stents in coronary artery disease: end of the debate? **The Lancet 381: 605-607, 2013**

### Conclusion literature

- Clinical outcome
  - Medical therapy better than PCI in selected cases
  - CABG: more stable outcome
- Return to work
  - Initial PCI faster
  - CABG: more stable situation
- Cost
  - PCI initial cheaper
  - In long term more expensive due to medical treatment post intervention

THANK YOU FOR YOUR  
ATTENTION  
ANY QUESTIONS?