



# The effect of Dutch hospital mergers on quality of care

# Context

Since 2004  $\approx$  30 hospital merger assessments

- Majority unconditionally cleared, 1 remedy, 3 voluntary price cap, 1 prohibition

Claimed rationale

- Improving quality
- Volume standards



Questions?

- Is the claimed quality improvement achieved?
- What are the important drivers for the quality improvements?

Literature  $\rightarrow$  Mixed results +, =, -

# Research design

## Qualitative analyses

- 3 cases
- Interviews with board of directors, specialists, quality manager, insurer

## Quantitative analyses

- Which quality indicators to use?
  - Outcome measures, hospital vs treatment level
  - several years, measurement instrument constant in time
- Difference-in-differences approach
- 14 cases (merged in period 2007-2013)

# Results qualitative research

## Quality effects

### Scale effects

**24/7 sub specialization**

**Volume standards**

**Training status**

**Less agile organization**

### Shock effects

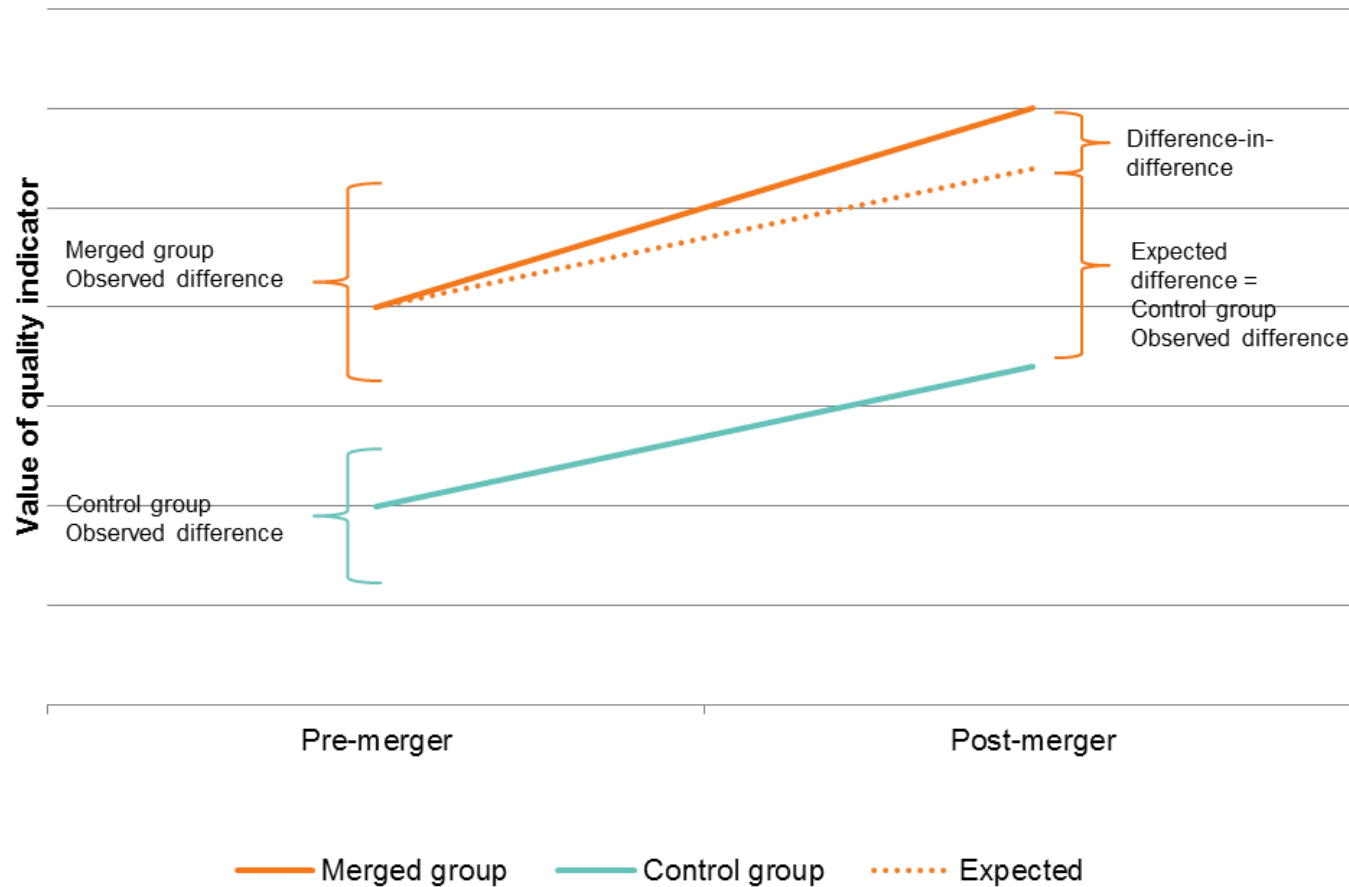
**Improvement of organization and processes:**

- Organizational structure
- ICT
- HRM policy
- Quality policy
- Healthcare pathways
- ...

**Uncertainty and distraction from the primary process**

# Quantitative research

## Difference-in-differences approach



# Quantitative research

## Indicators

- 97 indicators
- Outcome indicators
  - E.g. measurement of pain
- Customer quality indicators
- Waiting time
- Mortality rates

# Results quantitative research

Hospital level (n=12)

- Screening of malnutrition in adults → lower
- Pain measurement in nursing ward → lower
- Longer waiting times (diagnostics, outpatient clinic)
- Mortality rate (unweighted) increases

# Results quantitative research

## Treatment specific indicators

- Healthcare outcome indicators → no effect
- Patient experiences → no effect
- Waiting times treatments → no effect
- Waiting times outpatient clinic : 1 → shorter; 3 → longer
- Waiting times diagnostics : 1 → longer



# Results quantitative research

- Lower premerger score influences the results → trend towards industry average

	No trend	Trend
Pain measurement in nursing ward	positive	negative
Waiting time treatment	shorter	no effect

- No effect for a different control group
- Correction for multiple comparisons → only three significant effects

# Conclusion

- No indications for positive effects of hospital mergers on quality of care
- Results can be case specific
- Management focusses on intermediate results (sub specialization, volume) without a link to the measured quality indicators.
- A merger to catch-up?

# What next?

- Consequences for merger assessment
  - Critical on quality claims
  - Should be based on case-specific facts and evidence
  - Quality improvement must be merger specific
  - Effects should be timely
- Ex post study on price effects of hospital mergers

Thank you