

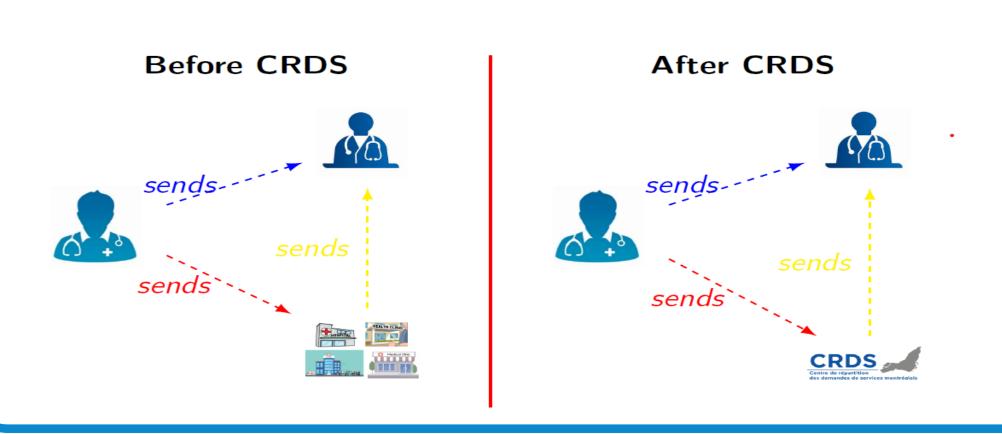
PHYSICIAN NETWORKS AND PATIENT REFERRALS IN QUEBEC

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BACKGROUNT

- Quebec: 73% of specialist services requests exceed the time limit (*Radio-Canada, april* 2021)
- Quebec ranked the last in 2015 (Robert Salois, 2015)
- Implementation of the CRDS in 2016



OBJECTIVES

- Impact of the implementation of CRDS in Quebec on:
 - the patient's referrals between specialist
 physician and general practitioners
 - the specialist physician services offerings
 - the distribution of income of specialists physician
- Infer the **physician's** networks

METHODOLOGY

- Data: **physicians'** billing records data from RAMQ
 - Treated group: Specialities targeted in 2016
 - Control group: non-participating specialities in 2016
- Reduced form analysis:
 - Events Study and Difference-in-Difference

$$Y_{i,t} = \beta_s \times \sum_{s \neq 2015} 1[s=t] \times D_i + \lambda_i + \gamma_t + \varepsilon_{i,t}$$

- Quantile Treatment Effects (Callaway and Li 2019)
- Structural model to infer the specialist's networks

GRAPHICAL RESULTS 1

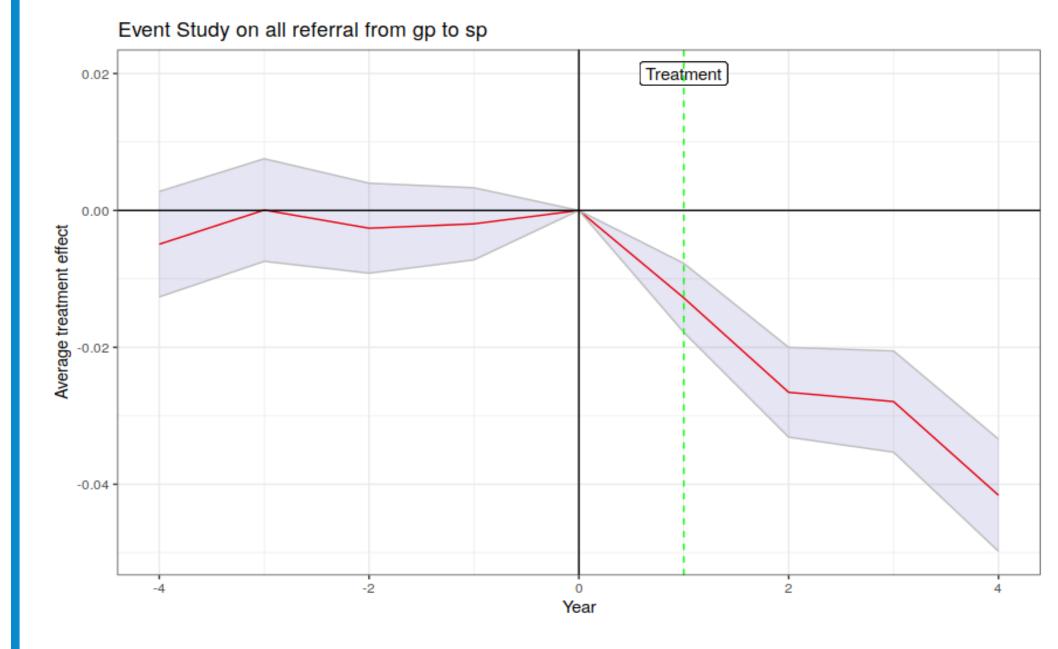






Figure 2: Effect on the total services given by SP

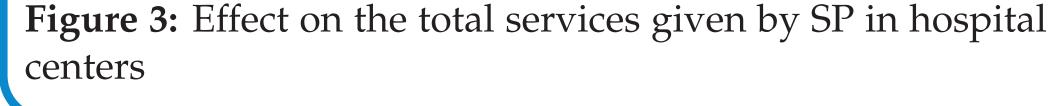
CONCLUSION

This paper analyzes the impact of the implementation of CRDS on the physician referral network and specialists' service offerings.

- 1. CRDS implementation reduces significantly the total number of referrals from GP to SP.
- 2. CRDS implementation does not have any significant effect on SPs' service offerings.
- 3. CRDS increases significantly the total services offered by SP in hospital centers.
- 4. CRDS implementation has a heterogeneous effect on SP total services and total income distribution.

GRAPHICAL RESULTS 2





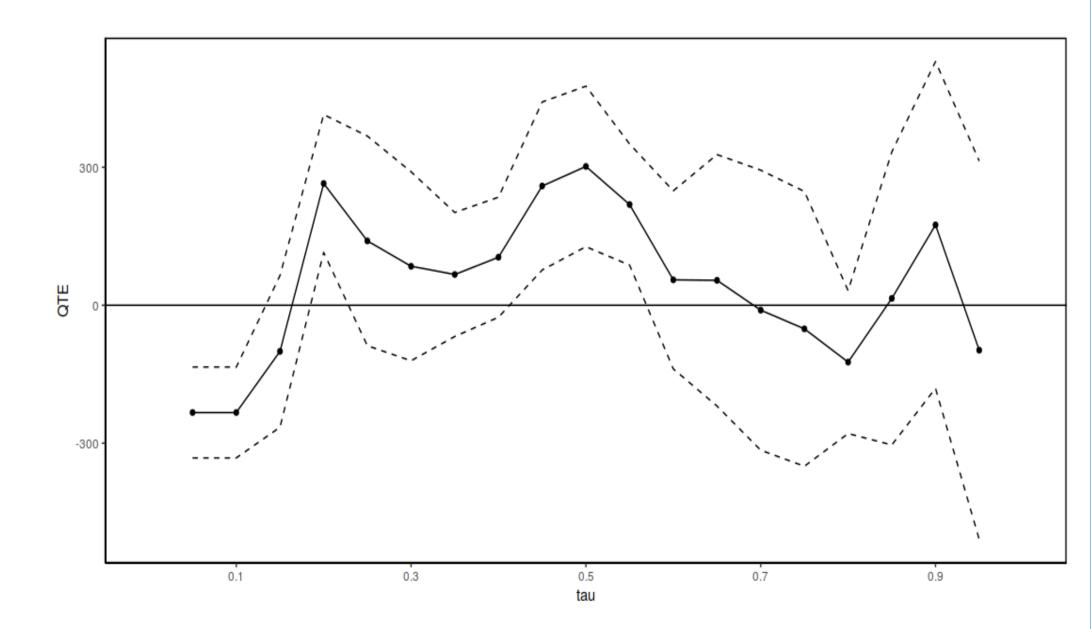


Figure 4: Quantile Treatment Effects of the average effect on the SP's services

ONGOING WORKS

The next step of this paper is the estimation of the physician's network based on structural modelization. Then we will use the results from this estimation to make:

- 1. Distributional analysis on the physician's referrals network based on their network size.
- 2. Counterfactual analysis on the referrals system in Quebec.

We will use textual analysis to assess changes in the types of acts given by specialists following the implementation of CRDS.

GRAPHICAL RESULTS 3

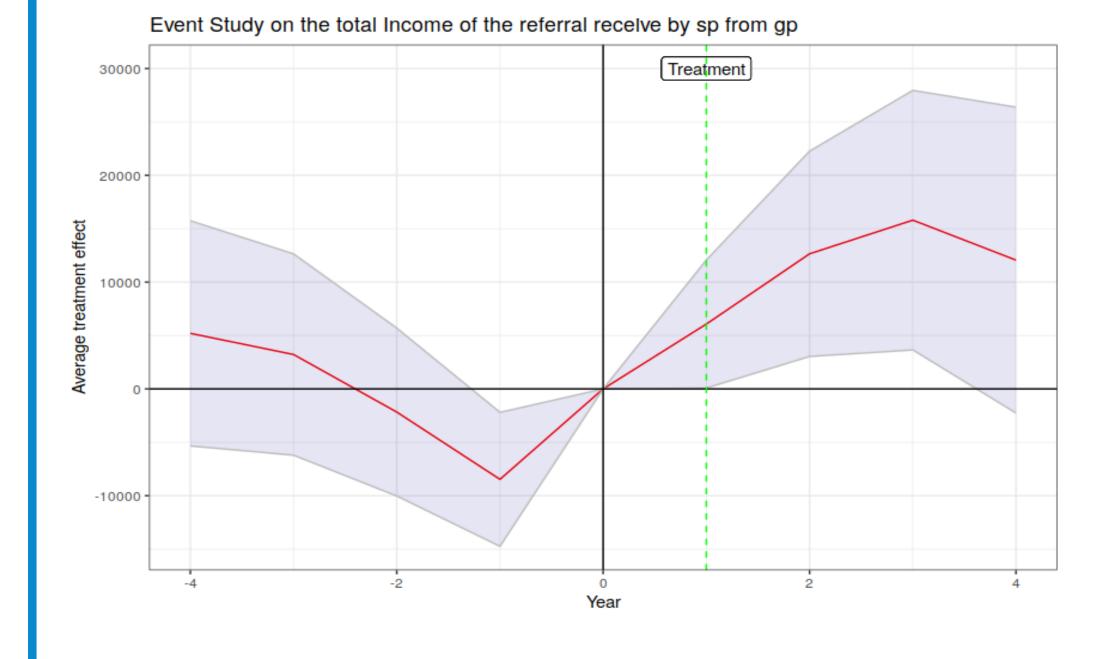


Figure 5: Effect on the total income of SP

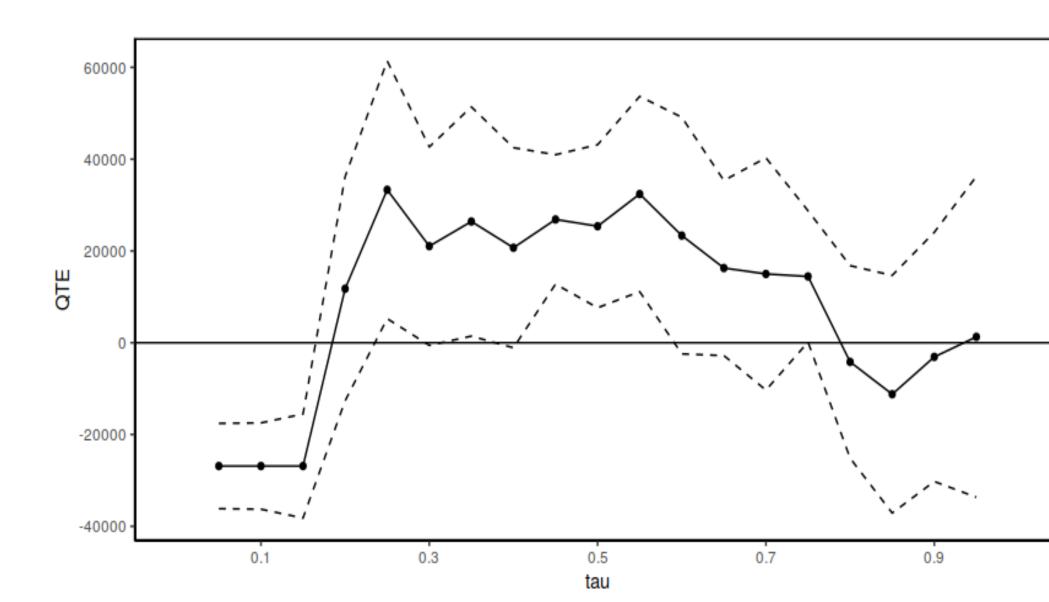


Figure 6: Quantile Treatment Effects of the average effect on the SP's income

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