Unemployment Insurance Generosity and Healthcare Use: Evidence from Sweden

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Motivation & Research Question

Unemployment is harmful to mental and physical health. *Why?*

1. **Income loss** due to job displacement
2. **Non-pecuniary channels:** stress, social stigma, loss of social identify

Health costs are intrinsically important since we care about welfare of the unemployed…

…but they can also create **fiscal externalities** if healthcare use increases

Limited evidence on how **unemployment insurance (UI)** affects healthcare use

- Policy relevance: Any UI-induced changes in healthcare use affect the public budget
- Healthcare is highly subsidized ⟶ Fiscal externalities could be sizable

This paper: *How does the generosity of UI affect healthcare use?*

Why Would the Level of UI Affect Healthcare Use?

Two potential channels through which more generous UI could affect healthcare use:
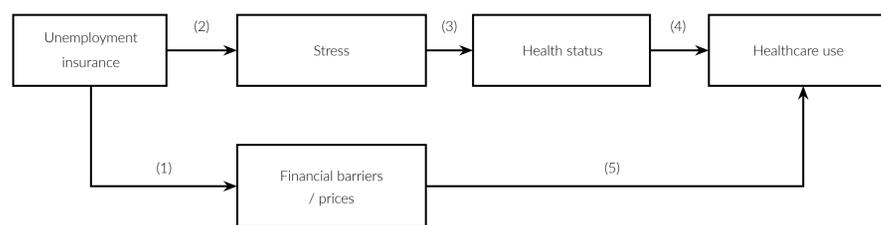
- **Direct:**
  - Reduces sensitivity to co-payments and other OOP costs (arrow (1));
  - Which can affect healthcare use (arrow (5))
- **Indirect:**
  - Reduces stress associated with unemployment (arrow (2));
  - Which improves physical and mental health (arrow (3));
  - Which can affect healthcare use (arrow (4))

Net effect of UI on healthcare use (sign and magnitude) is theoretically ambiguous *ex ante*.

Implications for Welfare Analysis of UI

Stylized model: Static model of job search & UI with **health + subsidized healthcare**

- Two states: employed ($s = E$), unemployed ($s = U$)
- Health production: $h_s = H_s(m_s; h_0)$, where m_s = healthcare use
- Total resource costs of healthcare: $\kappa(m_s, h_s)$, share $\theta \in [0, 1]$ publicly financed

Result: Optimal benefit level b^* satisfies

$$\frac{u_c(c_U, h_U)}{v_c(c_E, h_E)} = 1 + \left(1 + \theta\frac{\kappa(m_U, h_U)}{b}\right)\varepsilon_{1-e,b} + FE^{health}(b),$$

where $FE^{health}(b) = \theta\left[\frac{d\kappa(m_U,h_U)}{db} + \frac{e}{1-e}\frac{d\kappa(m_E,h_E)}{db}\right]$ is the **healthcare fiscal externality** and

$$\underbrace{\frac{d\kappa(m_s, h_s)}{db} = \kappa_m(m_s, h_s)\frac{dm_s}{db}}_{\text{(1) direct effect}} + \underbrace{\kappa_h(m_s, h_s)\frac{dh_s}{db}}_{\text{(2) indirect effect}}.$$

Key insight: Any effects of UI on healthcare costs matter for the welfare analysis of UI.
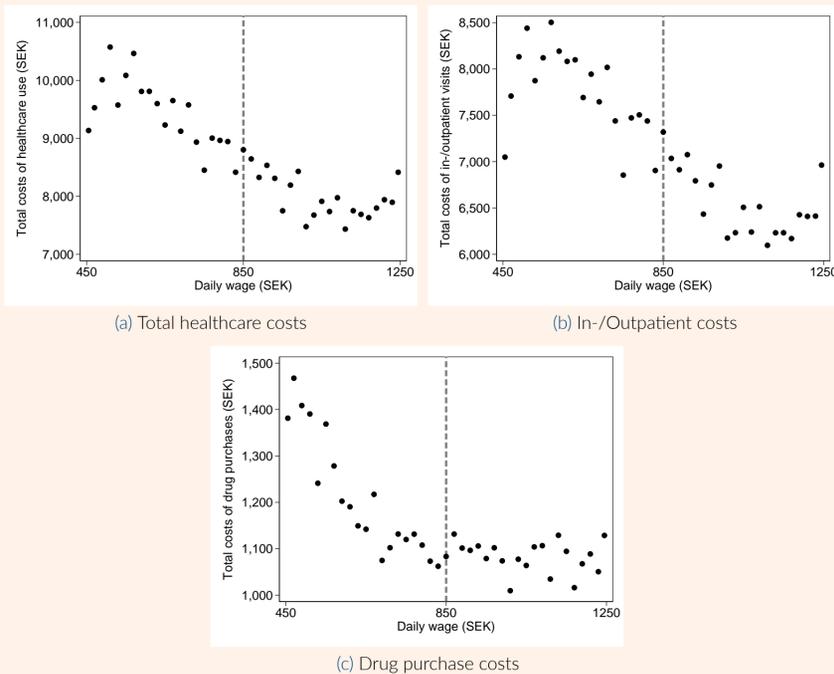
Context & Data

- **Context:** **Sweden**
  - Highly subsidized healthcare system: low patient fees, generous prescription drug insurance
  - Two types of UI: basic benefits; **earnings-related benefits** ← this paper
- **Register data:** Unemployment & UI spells, match to SES/demographics & healthcare use
  - Healthcare use: In-/outpatient visits + drug purchases (primary & dental care not observed)
- **Analysis sample:** Spells starting in 2007/03–2014/07, turned 20-64 yo. (N = 341k spells).
- **Outcomes:** **Total costs** of in-/outpatient visits + drugs over first 40 weeks since spell start
  - Measure outcomes over 40 weeks regardless of whether exit UI before week 40 or not

Research Design & Estimation

- **Regression kink design:** UI scheme replaces 80% of previous daily wage, **up to a cap**
- Benefit cap was fairly low ($\sim$ 53–65% of median monthly wage)
- Use a **fuzzy RKD**, local linear estimator, MSE-optimal BWs, bias-correction + robust CIs

(a) Kink point location

(b) First stage
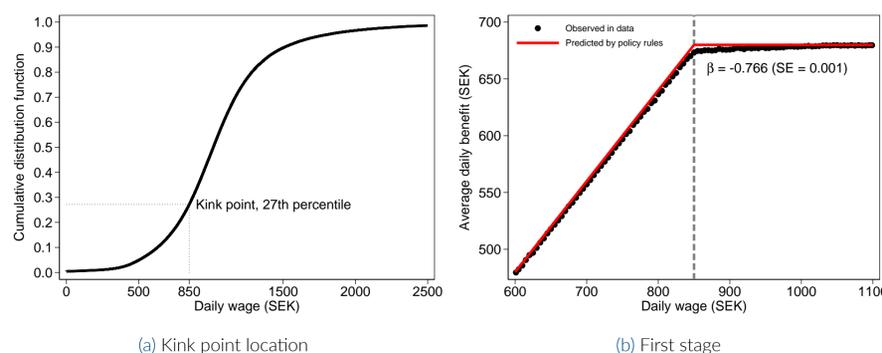
Marginal Changes in Level of UI Do Not Affect Healthcare Use

(a) Total healthcare costs

(b) In-/Outpatient costs



(c) Drug purchase costs

Magnitudes & Policy Implications

Estimates are Precise: Per 1 SEK increase in benefits, 95% CIs can rule out changes (↓ or ↑)

- $\geq$ 0.08 SEK in total healthcare costs
- $\geq$ 0.18 SEK in in-/outpatient costs
- $\geq$ 0.02 SEK in drug purchase costs.

Policy Implications: In the Swedish context…

- I can rule out healthcare fiscal externalities $FE^{health}(b) \geq 0.13$ SEK per 1 SEK ↑ in benefits.
- Bound for $FE^{health}(b)$ is much smaller than traditional fiscal externalities due to spell duration effects, since $\left(1 + \theta\frac{\kappa(m_U, h_U)}{b}\right)\varepsilon_{1-e,b} \in [0.84, 0.96]$ SEK in my setting.

Limited Effect Heterogeneity by SES or Type of Healthcare Use
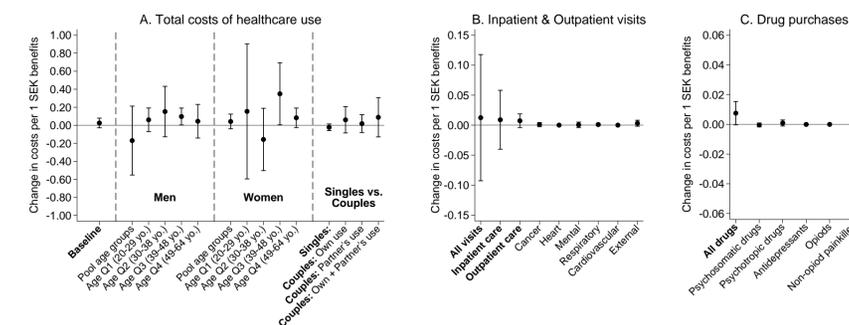
No Evidence on Potential Dynamics Over Time Since Spell Start
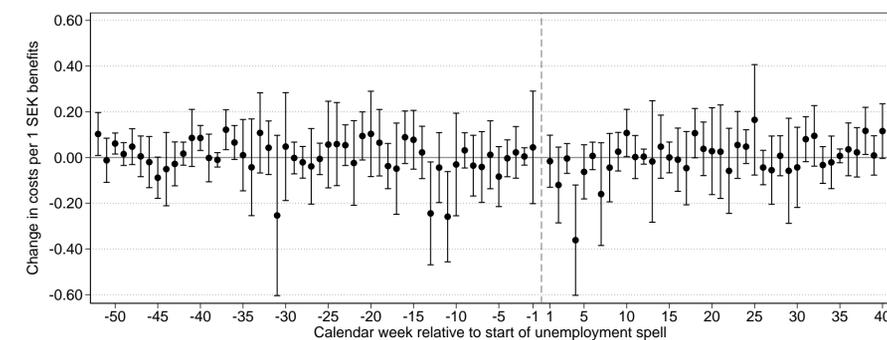
Summary & Takeaways

- I find little evidence that level of UI affects healthcare in Sweden
- True for men & women, young & old, across spending types, week-by-week over the spell
- Results contrast with previous evidence for UI (Kuka 2020; Ahammer and Packham 2023)
- Findings suggest that in a universal healthcare system…
  - …healthcare-related fiscal externalities are not a first-order issue for optimal design of UI
  - …non-pecuniary channels drive health costs of unemployment
- But healthcare-related fiscal externalities could matter when…
  - …consumption smoothing is costly or OOP healthcare costs are higher
  - …studying other social insurance programs