Health Shocks as Drivers of Persistent Change in Health Behaviors

Jannis Stöckel[*,†,‡], Bram Wouterse[§] and Pieter Bakx[†]

Friday 10th April, 2026

Abstract

We study behavioral change after a heart attack or stroke using linked Dutch administrative and survey data. In the six years after the event, patients reduce smoking and alcohol consumption, and uptake of preventive medication is near-universal. Changed health perceptions and locus of control do not explain behaviors, nor do we find heterogeneous responses by health risk or education. By contrast, changes in choices on GP care and health insurance deductibles are consistent with forward-looking behavior, reflecting anticipated permanent increases in health risk and future care needs. Thus, health shocks provide an opportunity for behavioral change across the socioeconomic distribution.

JEL Classification: D15, D83, D91, I12, I18

Acknowledgments: We gratefully acknowledge comments and suggestions provided by Alexander Hoagland, Daniel Kühnle, Hans van Kippersluis, Elin Molin, Torben Heien Nielsen, Henri Salokangas, Hendrik Schmitz, Judit Vall, Han Ye, and Nicolas Ziebarth, as well as participants at the EuHEA PhD and Early Career Researcher Workshop 2021, the 2021 ESE/ESHPM PhD Research Symposium, the 2022 meeting of the German Health Economics Association, the 2022 CEPRA/NBER Aging & Health Workshop, the 8th IRDES Workshop on Applied Health Economics and Policy Evaluation, ASHEcon 2022, the 2nd Health Economics Workshop in Copenhagen, the VIIth American European Health Economics Study Group, the 8th PhD Workshop in Empirical Economics at the University of Potsdam, the Essen Health Conference 2024, and seminar participants at the LSE Department of Health Policy, the HOPE Seminar at the University of Manchester, the EuHEA Online Seminar Series, the Hamburg Center for Health Economics, the London Health Economics Group, the CopHEN seminar at the University of Copenhagen, the Health Economics Seminar at the University of Oxford, and RWI Essen. Jannis Stöckel received funding from the Erasmus Initiative Smarter Choices for Better Health of the Erasmus University Rotterdam during the completion of his PhD studies; Pieter Bakx and Bram Wouterse are part of Convergence Health & Technology (grant number 2022030). We further acknowledge usage of the Public Health Monitor (2012, 2016, and 2020) of the Community Health Services, Statistics Netherlands, and the National Institute for Public Health and the Environment.

[*]Corresponding author: Jannis Stöckel (j.stockel@lse.ac.uk)
[†]London School of Economics, Department of Health Policy
[‡]Erasmus University Rotterdam, Erasmus School of Health Policy & Management
[§]Radboud University, Radboud Medical Center

I Introduction

Unhealthy lifestyles, poor diets, physical inactivity, smoking, and excessive alcohol consumption, are responsible for a substantial share of preventable chronic conditions (Cawley and Ruhm, 2011). Chronic diseases associated with unhealthy lifestyles are a key driver underlying the rising inequalities in life expectancy and work capacity in high income countries (Clark et al., 2025; Cutler et al., 2025; Danesh et al., 2024; Mahler and Yum, 2024), resulting in increasing budgets for health and social security. The decisions individuals make about health behaviors therefore have far-reaching consequences for themselves and society at large. Yet, unhealthy lifestyles remain remarkably persistent, despite these high stakes and broad policy efforts aimed at increasing health prevention through lifestyle choices: people engaging in risky health behaviors tend to be largely unresponsive, even to repeated information provision, warnings, and advice (Darden, 2017; Oster, 2018).

Experiencing the consequences of an unhealthy lifestyle, in the form of a severe health shock, may provide a unique window for behavioral change. Such events confront individuals with an immediate and salient experience of their lifestyle-related risk, potentially prompting them to update their beliefs about their health stock and adopt healthier behaviors. However, evidence on whether and how health (information) shocks affect prevention is mixed. Individuals perceptions of their health and risk are often ill-informed, itself a driver of unhealthy lifestyle choices (Arni et al., 2021; Carman and Kooreman, 2014; Sloan, 2024), and remain resistant even to substantial information shocks (Ciancio et al., 2024; Oster et al., 2013b). Changes in behavior also need not operate through beliefs about their health stock alone as health shocks can fundamentally alter the cost-benefit calculus of costly prevention efforts through direct effects on health, changes in preferences (Decker and Schmitz, 2016; Finkelstein et al., 2013), and shifts in time discounting (Ahammer et al., 2024; Ciancio et al., 2025; Oster et al., 2013a). They may also affect perceptions of the effectiveness of prevention itself and one's ability to influence health outcomes (Cobb-Clark et al., 2014), thereby undermining costly prevention efforts. Understanding which of these channels dominates is essential for designing policies that effectively leverage health information provision or rely on the window of opportunity after health shocks to reinforce prevention.

In this paper, we study the long term impact of acute, severe health shocks on (1) health prevention efforts, and subsequently study potential explanations for this impact, including (2) perceptions on health and corresponding forward-looking behavior and (3) individuals' beliefs in their ability to influence their outcomes through their own effort and choices (self-efficacy). We combine three waves of the Dutch Health Monitor survey with detailed longitudinal administrative data on healthcare use, socio-economic status, and death records. Our estimation strategy exploits the exogenous timing of heart attacks and strokes by comparing the behaviors of individuals who experience the same event, but at different points relative to the survey interview (N=9,665) to study health trajectories in a 12 year-window around the event.

We first document the effects on health-prevention efforts up to six years after the shock. The lifestyle behaviors we consider are smoking, alcohol consumption, exercising habits, and weight management, which all are significant modifiable risk factors for cardiovascular morbidity and mortality (Feigin et al., 2017; Roth et al., 2020) requiring costly investments either upfront, in case of smoking or alcohol addiction, or sustained over time. We also consider consumption of high-value preventive care, specifically prescription medications. The health benefits of these mediations hinge on long-term adherence (Choudhry et al., 2011; Naderi et al., 2012) and evidence on whether their use complements or crowds out lifestyle changes is mixed (Horn, 2024; Kaestner et al., 2014).

We find that heart attacks and strokes drive broad and sustained investments in health prevention, persisting for at least six years after the shock: smoking prevalence drops by 9.5 percentage points (40% of the baseline) and drinking by 1.7 drinks a week (19% of the baseline) and these effects do not abate over time. Physical activity and weight management remain unchanged. Preventive medication use is nearly universal and characterized by high adherence. Anti-thrombotic medication use increases by 73.7 percentage points (293% of baseline), anti-hypertensive medication use by 40.9 percentage points (90% of baseline), and statin use by 60.4 percentage points (186% of baseline). Use of at least one of these increases by 45.6 percentage points (84% of baseline).

To understand how and among whom health events lead to behavior change, we study the role of forward-looking behavior (i.e. changes in expectations), and changes in individual's health perceptions and self-efficacy. We first consider evidence that individuals make forward-looking decisions following the experience of a heart attack or stroke, consistent with permanent changes in their expectations of future healthcare needs. Following a health shock, individuals persistently increase their GP care consumption, which likely indicates increased health information seeking and monitoring. People also respond to their increased risk of out-of-pocket costs by lowering their health insurance deductible, thereby decreasing their exposure to future out-of-pocket costs resulting from healthcare use.

To analyze the role of health perceptions, we look at changes in self-assessed health after the shock and how these relate to objective indicators of health. Individuals substantially decrease the assessment of their own health after the shock and this downward adjustment seems permanent. The change in health perception precedes the onset of functional limitations and is larger than what we predict based on objective indicators of health. While heart attack and strokes have a direct effect on beliefs about their health stock, neither objective nor subjective health differences explain the changes in preventive behaviors.

Subsequently, we analyze the role of self-efficacy, which has been found to affect labour market outcomes and human capital investments (Heckman et al., 2006; Kuhnen and Melzer, 2018; Schurer, 2017), including health prevention (Caliendo et al., 2022,1; Cobb-Clark et al., 2014; Kesavayuth et al., 2020; McGee and McGee, 2016). We find that self-efficacy decreases immediately and permanently by 0.244 standard deviation after the health shock. This translates into a considerable 5.6 percentage point increase (53%) of the share of individuals classified as having low levels self-efficacy. Despite this substantial negative impact, we find no evidence that differences in self-efficacy explain differences in preventive behavior.

Last, we explore whether prevention efforts differ by levels of prior health risk and educational attainment. We find only a limited relationship between behavioral changes and either health risk or the ability to process health information, proxied using educational attainment levels. While smoking cessation effects indicate only a 33% drop among individuals with a pre-existing condition against 47% among those with such a condition, no differences are observed between respondents with different levels of educational attainment.

All results are robust to alternative specification choices, including the time-window used to condition on pre-event characteristics, accounting for income changes in relation to experiencing a health event, or the choice of the survival window we impose on our sample. In addition, we analyze observed survival dynamics to show that the magnitude and pattern of persistent behavioral effects we identify cannot be explained by survival selection of individuals with healthy lifestyles.

The main contribution of this paper is that we isolate the effect of a severe and well-defined health shock on a wide range of preventive behaviors and potential mechanisms. We can do this because of a unique combination of administrative and survey data containing a broad set of relevant outcomes for a sample of 10,000 respondents who experienced a health shock. This combination allows us to combine the precision and long-term follow-up of the administrative data (as e.g. used by Ahammer et al. 2024; Fadlon and Nielsen 2019; Hoagland 2025; van't Hoff et al. 2025) with the depth of outcomes from survey data (as used in e.g. Darden and Gilleskie 2016; Edenbrandt et al. 2025; Horn 2024; Hut and Oster 2022; Oster 2018; Verdun 2025). Thus, this is the first study to combine a broad perspective on the long-term behavioral consequences of health events with a thorough understanding of (1) potential mechanisms, (2) well-defined health event and careful investigation whether outcomes are driven by the shock itself rather than pre-existing health differences, as well as (3) heterogeneous post-event health trajectories.

Our findings on the heterogeneity by health risk and levels of education also contribute to the literature in economics studying health inequalities. We find that there are no differences in response to severe health shocks by education level in the Dutch context, which is characterized by low barriers to access and high levels of financial protection. We therefore provide micro-level evidence on the behavioral response to health changes that underscores that inequality in life expectancy in settings with generous healthcare systems is largely driven by differences in the prevalence of underlying chronic disease burden emerging over the life course. At the same time, heterogeneity in treatment success or health behaviors following health shocks may occur but plays a smaller role in explaining health inequalities.[1] These findings directly complement evidence based on aggregate population health metrics suggesting the emerging life expectancy gaps in Europe and the US are largely driven by early-life differences in chronic disease burden (Danesh et al. (2024) and Dahl et al. (2024)).

These findings inform the policy debate on the importance of health prevention and particularly of secondary and tertiary health prevention (i.e. treatment and follow-up after a health shock). Health prevention usually gets less attention and budget than clinical care but is key to an effective and equitable healthcare system. We show that severe cardiovascular events create windows of opportunity for behavioral change across the socioeconomic distribution when intensive healthcare engagement provides structure and support. Furthermore, the persistence of these effects, and their independence from education, prior health information, or belief changes, indicates that converting health shocks into sustained prevention might depend less on individual characteristics than on the quality of healthcare interactions that follow.

[1] People in lower socioeconomic groups may be less able to change their lifestyle (e.g. James (2024); Koç and van Kippersluis (2017)) and economic decisions (e.g. Handel et al. (2024)) following new information. Furthermore, descriptive studies in the medical literature suggest smaller and less persistent lifestyle adjustments following chronic condition onset (Hernandez et al., 2018; Margolis, 2013). Our results provide new insights into the persistence of changes in behavior and beliefs after a severe health shock as well as the extent to which effects on preventive behavior are driven by changes in beliefs; something that is sometimes implicitly assumed but seldom tested.

II Data

We use the Health Monitor survey (*Gezondheidsmonitor*), a large-scale and nationally representative cross-sectional health survey of the general adult population in the Netherlands (aged 18+). The Health Monitor is conducted every four years among non-institutionalized individuals. The survey is conducted during the last four months of the year. We use data from 2012, 2016, and 2020, extracting information on physical and mental health, lifestyle and subjective perceptions on health and self-efficacy. Pooled over the years, the Health Monitors provides information about more than one million unique respondents.

Health Monitor data is linked to detailed administrative data provided by Statistics Netherlands, covering the full population for the period 1995-2022. This allows us to build detailed longitudinal panels for 98% of the Health Monitor participants using administrative records, including Tax Office data on income, hospital discharge data, and health insurance claims data. Appendix C contains detailed information on the administrative datasets we use (C.I) the Health Monitor sampling method (C.II), and detailed variable definitions (C.III) which we summarize below.

Acute Health Events To select the study sample of Health Monitor respondents who experienced a health event, we identify all individuals admitted for the first time for an ischemic heart attack or stroke between 2010 and 2022 using discharge data on all inpatient hospital admissions to Dutch hospitals between 1995 and 2022. We ensure comparability of different event-time cohorts across time and correctly identify first-time exposure to an event by applying six exclusion criteria.

First, we exclude individuals whose first health event occurred between 1995-2010. Second, we exclude those experiencing a previous transient ischemic attack.[2] Third, we exclude those cohabiting with other individuals experiencing a heart attack or stroke at any earlier or later time-point to avoid incorrectly attributing differences in behavior caused by spillovers from observing earlier such events within families (see e.g. Fadlon and Nielsen (2019)). Fourth, we exclude individuals staying at a nursing home prior to their event, as medication consumption during the nursing home stay is unobserved, likewise we exclude individuals if their survey participation occurred at any time after a temporary nursing home stay in the time period since their health event. Fifth, we exclude individuals whose event occurred outside a 5-year age-band around the mean age-at-onset of heart attacks (mean: 65 years, ages included: 60-70 years) and strokes (mean: 70 years, ages included: 65-75 years). This accounts for the age-dependent survival dynamics and ensures that the age-at-onset of individuals across event-time cohorts is uniform. Finally, we exclude those who die within one year of their date of admission. Heart attack and stroke mortality is concentrated within the first year, and especially the first month following the admission.[3] This selection accounts for the most relevant immediate survival selection after the event. In robustness checks, we consider alternative survival windows and explore the impact of lifestyle-driven survival dynamics on our results (see Section D.III for the details).

[2]Transient ischemic attacks are a temporary blockages of cerebral blood vessels causing stroke-like symptoms and a warning sign for a likely major cardiovascular event in the near future, requiring medical treatment and the initiation of preventive medication use (Vinding et al., 2023).

[3]One-year mortality is 6.6% after a stroke; 3.0% after a heart attack. Figure D.3 provides a detailed breakdown of the 5-year survival dynamics across surveyed and not-surveyed patients.

Healthcare Use, Costs, Chronic Conditions and Insurance Choice: We measure hospital care use across 19 categories of the International Classification for Hospital Morbidity Tabulation (ISHMT) shortlist. Furthermore, we use data on outpatient medication use at the Anatomical Therapeutic Chemical (ATC) level 3 to capture prescription medication use for cardiovascular prevention and to infer the presence of 21 chronic conditions following (Danesh et al., 2024). Finally, we use health insurance claims data to observe health insurance deductible choices and to capture the types of care that are used and the costs associated with this care.

Lifestyle, Mental and Physical Health, Perceived Health, and Self-efficacy: We use Health Monitor survey data to capture individuals' lifestyle: current smoking status, alcohol consumption, physical activity levels, and weight management (body-mass-index). Further, we measure physical health using reported functional limitations across seven dimensions, and mental health using the Kessler 10-item depression and anxiety questionnaire (Kessler et al., 2002). Finally, we observe two types of subjective beliefs: (i) self-assessed health on a five-point Likert scale capturing individuals' perception of their own health, and (ii) self-efficacy (2016 and 2020 data only), which is the degree to which individuals believe outcomes in their life to be amenable by their own efforts, based on the Pearlin Mastery Scale (Pearlin and Schooler, 1978).[4]

Demographic and Socio-Economic Information: We take age, sex and date of death from the mandatory population registry data. Furthermore, we construct age-gender specific income rankings and measures of labor market participation based on annual tax records. Data on educational attainment is self-reported and comes from the Health Monitor surveys.

The final dataset underlying our analyses contains 9,665 unique Health Monitor participants experiencing a health event. Of these 5,475 (57%) experienced a heart attack and 4,190 (43%) experience a stroke. Table 1 provides the descriptive statistics for the study sample with respect to health and socio-economic status at the time of the health event.

[4] The empirical literature in psychology and economics has measured self-efficacy through related concepts. Locus of control (Rotter, 1966) or generalized sense of mastery (Pearlin and Schooler, 1978) are the most popular measures both relying on a set of questions eliciting whether individual see outcomes in their life to be mainly determined through their own actions and efforts (internal control) or due to outside circumstances and events (external control).

Table 1: Sample Characteristics at the Time of the Health Event

	All Events		Heart Attacks		Strokes	
Health Event Characteristics	Mean	(SD)	Mean	(SD)	Mean	(SD)
Days in Hospital	4.26	(4.52)	4.41	(4.47)	4.07	(4.57)
Heart Attack	0.57	(0.50)				
Stroke	0.43	(0.50)				
Demographic Information						
Age at Onset	67.52	(3.63)	65.64	(3.03)	69.99	(2.77)
Female	0.30	(0.46)	0.25	(0.43)	0.38	(0.48)
Co-habiting Partner	0.78	(0.41)	0.80	(0.40)	0.76	(0.43)
Socio-Economic Status *(in the year before the health event)*						
Employed	0.23	(0.42)	0.34	(0.47)	0.09	(0.28)
Social Benefits	0.03	(0.16)	0.04	(0.19)	0.01	(0.11)
Retired	0.68	(0.47)	0.53	(0.50)	0.88	(0.33)
Disability Benefits	0.04	(0.20)	0.06	(0.23)	0.02	(0.13)
Other Source of Income	0.02	(0.15)	0.03	(0.18)	0.01	(0.09)
Per-capita HH Income (€ 1000s)	2.94	(3.12)	3.20	(2.25)	2.61	(3.95)
1^{st} Income Quintile (lowest)	0.16	(0.37)	0.16	(0.36)	0.17	(0.38)
2^{nd} Income Quintile	0.21	(0.41)	0.21	(0.40)	0.22	(0.41)
3^{rd} Income Quintile	0.21	(0.41)	0.22	(0.41)	0.21	(0.41)
4^{th} Income Quintile	0.21	(0.41)	0.22	(0.41)	0.20	(0.40)
5^{th} Income Quintile (highest)	0.20	(0.40)	0.20	(0.40)	0.19	(0.40)
Health Status *(in the year before the health event)*						
Hospitalizations (CVD-related)	0.05	(0.41)	0.05	(0.42)	0.05	(0.39)
Inpatient Days (CVD-related)	0.12	(1.60)	0.12	(1.69)	0.12	(1.47)
Hospitalizations (Non-CVD)	0.15	(0.55)	0.13	(0.52)	0.16	(0.59)
Inpatient Days (Non-CVD)	0.25	(2.00)	0.22	(1.86)	0.29	(2.17)
Acid-related Disorder	0.29	(0.45)	0.27	(0.44)	0.32	(0.47)
Hypertension	0.48	(0.50)	0.45	(0.50)	0.52	(0.50)
Diabetes	0.13	(0.34)	0.12	(0.32)	0.16	(0.36)
Hyperlipidemia	0.33	(0.47)	0.31	(0.46)	0.35	(0.48)
Depression/Anxiety	0.08	(0.27)	0.07	(0.26)	0.10	(0.29)
Hospital Care Costs (€ 1000s)	2.26	(6.16)	2.16	(6.14)	2.39	(6.18)
Pharmacology Costs (€ 1000s)	0.54	(1.36)	0.51	(1.50)	0.58	(1.15)
GP-visit Costs (€ 1000s)	0.06	(0.07)	0.06	(0.07)	0.07	(0.07)
Observations	9,665		5,475		4,190	

Source: Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the mean and standard deviation across measures of health and socio-economic status and health event characteristics for our analysis sample of first-time heart attack and stroke patients between 2010 and 2022 participating in the Health Monitor.

III Research Design

III.A Treatment and Control Groups

To identify the effect of health events on preventive behaviors, we exploit the exogenous timing of heart attacks and strokes. We estimate the effect of a health event on health-related behaviors by comparing individuals interviewed in the years after their health event (the treatment group) to similar individuals interviewed in the years prior to experiencing the same health event (the control group) using administrative health records to equalize relative *ex-ante* risk at event-time. Our empirical strategy is similar to other studies such as Chandra and Staiger (2007), Doyle (2011) and Fadlon and Nielsen (2019) but combines cross-sectional survey data with longitudinal administrative health records to build cohorts of individuals exposed to the same sudden health event at different points in time.

We assign individuals to an event-time t_i based on the difference between the year of the survey and the year of the health event. For example, a 2012 survey participant with a heart attack in 2014 is assigned to event-time cohort t_{-2}, as they are interviewed two years before the year of their event. Following this approach, we build a dataset of heart attack and stroke patients who are interviewed at different relative time points to their respective health event, ranging from six years before (t_{-6}) to six years after the event (t_6). Individuals surveyed after their event ($t_{\geq 0}$) form the treatment group; those surveyed before ($t_{\leq -1}$) form the control group. A full breakdown of the sample experiencing a health shock (N=9,665) by event-time cohort, type of health event and survey year can be found in Table D.1.

III.B Empirical Estimation

We use a doubly-robust event study design (Callaway and Sant'Anna, 2021) comparing treated versus not-yet-treated: we regress individual-level outcomes Y_i on a set of event-time dummies encoding relative time of survey participation to the health event, $\mathbf{1}(t_i = e)$, alongside a set of control variables $X^r_{i,0}$ measured at event-time:

$$Y_i = \alpha + \sum_{e=-6, e\neq -1}^{6} \delta_e \mathbf{1}(t_i = e) + \beta X^r_{i,0} + \epsilon_i$$

When estimating the average treatment effect on the treated, we run identical regressions but exchange event-time dummies for a single indicator encoding membership in a post-treatment event-time cohort ($t_{\geq 0}$).

Not all individuals who have a heart attack or stroke in a particular year have the same *ex-ante* risk of experiencing such a health event. As we compare cohorts of people interviewed at the same time but experiencing a health event at different time points, we want to ensure that all event-time cohorts are similar in terms of the risk of experiencing such an event in the year of the actual event. To do so we weight observations using inverse probability weights based on estimated propensity scores. These scores represent the *ex-ante* probability, based on characteristics $X_{i,0}$ just prior to the event, that someone experiences a health event in the year that they actually experience such an event. $X_{i,0}$ covers pre-event demographics, socioeconomic status, pre-existing medical conditions, healthcare utilization, and healthcare costs incurred right before the time of the health event.

To estimate the propensity scores, we use data on all heart attack and stroke patients in the Netherlands between 2010 and 2022 satisfying our inclusion criteria (see Section II). The regression equation contains a vector of controls $X^r_{i,0}$ covering a restricted subset of all risk factors used in the propensity score estimation to account for remaining differences after the inverse probability weighting (Callaway and Sant'Anna, 2021): demographic information (single-year-of-age dummies, sex, living with a partner), socio-economic status the year before the health event (age-sex specific income quintile membership and labor market status) and health information in the year before the health event (chronic conditions, general and cardiovascular-specific hospital care use, and healthcare costs for hospital care, pharmacological care, and GP consultations). Furthermore, we include survey-year dummies, and the type of the health event experienced (heart attack or stroke) and the number of associated inpatient days to account for differences in intensity of the shock. Appendix D describes our research design in detail, from constructing our event-time cohorts (D.I), the detailed estimation procedure, identifying assumptions, and analysis dataset construction (D.II), and the potential influence of survival dynamics (D.III).

III.C Identifying Assumptions and Robustness Checks

Our design relies on six identifying assumptions (Callaway and Sant'Anna, 2021), which are all plausible. First, as we study the experience of a heart attack or stroke treatment status is not reversible. Second, the timing of the hospital admission is plausibly exogenous conditional on eventually experiencing such an event within the study period, as we exclude the never-treated population not experiencing any such an event. Third, we examine the plausibility of the parallel trends assumption conditional on pre-event characteristics using the pre-event event study coefficients. Fourth, common support, the comparability in terms of the distribution of propensity scores between treatment and control groups, event-time cohorts, and survey years, is ensured by excluding observations for which the propensity score falls outside the common support area. This results in only 0.79% of eligible survey participants, those for whom a propensity score can be estimated, being removed in the construction of our analysis sample. Our sample therefore remains representative for the full study population. Fifth, controls across event-time cohorts are highly balanced, which indicates no compositional changes between the 2010 and 2020 admission-year cohorts underlying our sample. Sixth, the stable unit treatment value assumption is plausible given that we observe limited changes in heart attack and stroke mortality during the observation period and stable treatment patterns for both conditions in that period (Cram et al., 2022), furthermore we control for the type of health event and a proxy for severity (associated inpatient days). In robustness checks we further condition on longer-term survival, ensuring homogeneity across event-time cohorts. Lastly, spillovers and crowding out of treatment status across individuals, another violation of the stable unit treatment value assumption, are ruled out given our selection of individuals with no prior exposure to severe health events either by themselves or due to within-household occurrences. For a more detailed discussion see Section D.II.

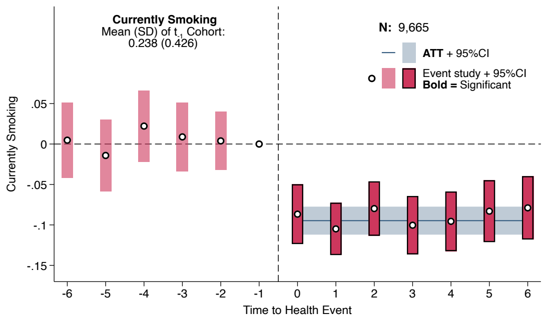
IV Results

IV.A Health Prevention: Lifestyle and Medication Use

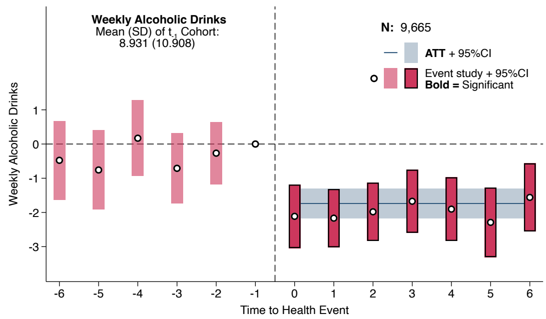
Figure 1 shows the impact of a health event on lifestyle: smoking **(a)**, alcohol consumption **(b)**, physical activity **(c)**, and weight management **(d)**. Experiencing a health event results in significant changes in lifestyle, decreasing engagement in the most important avoidable risk-dimensions, smoking and alcohol consumption. The smoking rate is 9.5 percentage points lower following an acute health event, representing a 40% drop given the smoking prevalence of 23.8% among patients interviewed directly before their health event. Alcohol consumption also decreases, by 1.7 weekly drinks compared to a baseline of 8.9 drinks a week, a 19%-difference. Both effects persist for at least six years after the event. We find no evidence for changes in physical exercise or weight management, however, the event study coefficients indicate that the number of days with physical activity of at least 30 minutes a week decreases by 0.19 (20% of the baseline) five and six years after experiencing a health event. Negative effects on exercise could be driven by individuals not being healthy enough to exercise after the event. We explore this mechanism in Section IV.B.

Figure 1: The Effect of Acute Health Events on Lifestyle

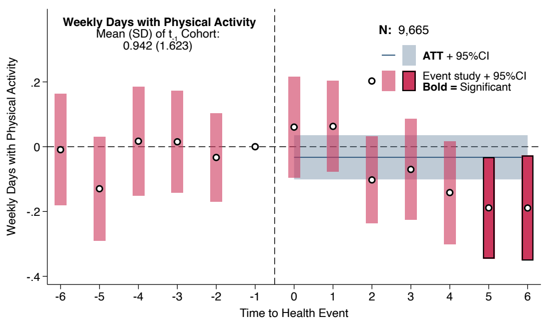
(a) Smoking: Currently Smoking



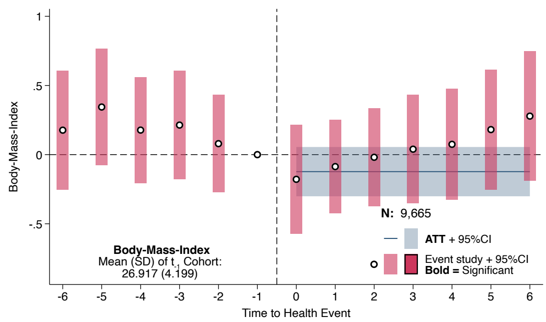
(b) Alcohol Consumption: Weekly Alcoholic Drinks



(c) Physical Activity: Weekly Days with Physical Activity



(d) Weight Management: Body-Mass-Index

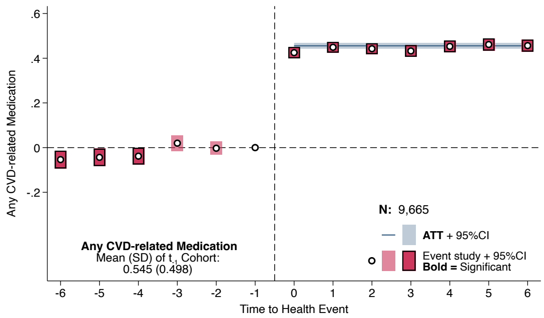


Source: Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the estimated average treatment effect on the treated (**ATT**, solid line) and event study coefficients (dots) alongside their respective 95% confidence intervals (shaded area/bars). All regressions are weighted using inverse probability weights and control for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Column (1) of Tables A.1 (smoking), A.2 (weekly drinks), A.3 (days physically active), and A.4 (body-mass-index) contain the underlying results.

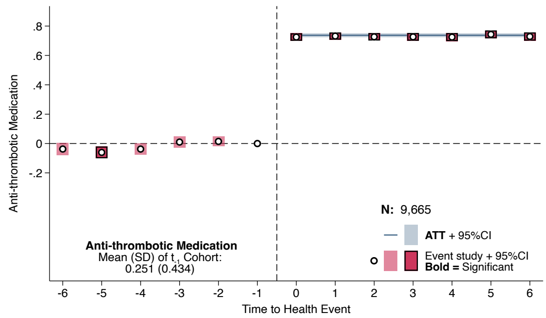
Figure 2 depicts the average and dynamic effects of a health event on preventive medication use. Individuals immediately take up high-value preventive medication, with very high levels of adherence. Average treatment effect estimates indicate an increase of 45.6 p.p. (84% of the baseline) of any cardiovascular medication consumption **(a)** with a 73.7 p.p. increase (293% of the baseline) for anti-thrombotic medications **(b)**, a 40.9 p.p. increase (90% of baseline) for anti-hypertensive medications **(c)**, and a 60.4 p.p. increase (186% of baseline) for statin use **(d)**. These effects are much larger than the impact on lifestyle. Preventive medication is a key component of risk-management following cardiovascular events with European guidelines recommending lifelong medication therapy due to their clinical benefit (Hobbs et al., 2016). Initial uptake is therefore to a certain degree mechanical, but the level of adherence and persistence over time is striking. Among those diagnosed, medication uptake has been shown to decrease in other settings (Naderi et al., 2012), even in absence of monetary barriers (Choudhry et al., 2011).

Figure 2: The Effect of Acute Health Events on Prescription Medication Use

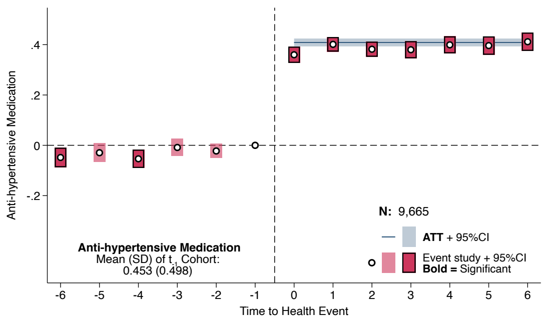
(a) Any Cardiovascular-related Medication



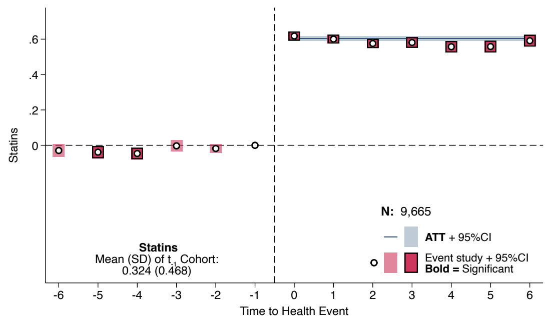
(b) Anti-thrombotic Medication



(c) Anti-hypertensive Medication



(d) Statins



Source: Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the estimated average treatment effect on the treated (**ATT**, solid line) and event study coefficients (dots) alongside their respective 95% confidence intervals (shaded area/bars). All regressions are weighted using inverse probability weights and control for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Column (1) of Tables A.8 (any cardiovascular medication), A.9 (anti-thrombotics), A.10 (anti-hypertensives), and A.11 (statins) contain the underlying results.

IV.B Mechanisms

We explore three major candidate mechanisms that explain the impact of health events on health-related behavior: forward-looking behavior, changes in health and individuals' own perceptions of their health, and self-efficacy. To this end, we estimate the impact of the health event on each of these sets of intermediate outcomes and subsequently include each of these intermediate in the event study regressions to test if the main coefficients change.

Forward-looking Behavior

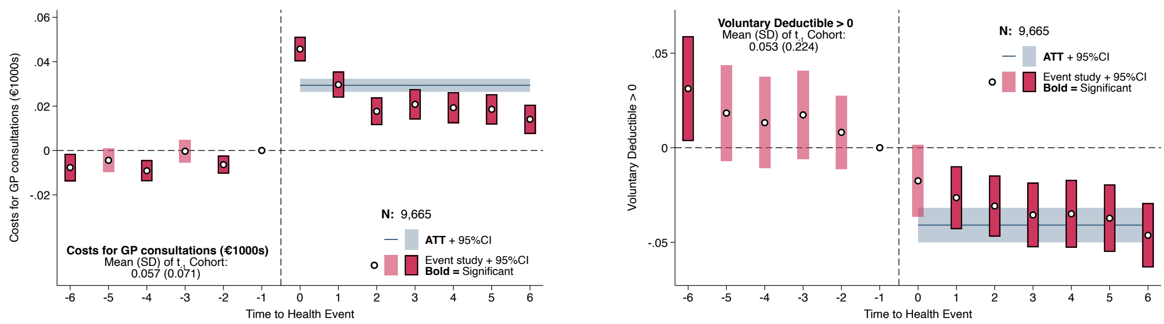
The main findings imply that individuals change their behavior after an acute health event. Most of these behavior changes affect health in the long run, suggesting that the individuals are forward-looking. To explore the hypothesis of forward-looking behavior further, we analyze the impact on health information seeking and monitoring, and health insurance coverage choices.

To analyze the impact on health information seeking and monitoring, we focus on the impact of the health shock on annual expenditures on general practitioner (GP) consultations (Figure 3 panel **(a)**). GPs are not involved in the acute treatment of the health shock, which happens in the hospital, but have a role in the follow-up care. Going to the GP is a ultimately the patient's decision. We find that GP consultation expenditures increase by €29 (51% of the baseline), which equals 3 regular consultations. The dynamic event study estimates show that this is largely due to a large increase in the year directly after the health event (€46 or 81% of the baseline) decreasing to €14 (25% of the baseline) by the sixth year after the event. This increase suggests individuals adhere to a regular check-up schedule or are seeking information and support after the acute health event.

Figure 3: The Effect of Acute Health Events on GP Visits/Insurance Choice

(a) Healthcare Use: Costs for GP consultations (€1000s)

(b) Insurance Choice: Voluntary Deductible > 0



Source: Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the estimated average treatment effect on the treated (**ATT**, solid line) and event study coefficients (dots) alongside their respective 95% confidence intervals (shaded area/bars). All regressions are weighted using inverse probability weights and control for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Column (1) of Tables A.12 (GP consultation costs) and A.13 (deductible choice) contain the underlying results.

Figure 3 panel **(b)** shows that the health shocks increases the level of health insurance coverage that individuals choose. In the Netherlands, purchasing health insurance is mandatory and individuals cannot be rejected by insurers. All insurance contracts need to cover government-mandated basic package of services. Furthermore, individuals can choose a voluntary deductible level between €0 and €500 in €100 increments on top of the mandatory deductible of about €385 and receive a discount on the insurance premium in return. As having a heart attack or stroke increases the risk of future costs, we expect forward-looking individuals to lower the voluntary deductible as the expected out-of-pocket costs under the higher deductible outweight the premium discount.[5] The average probability of choosing a

[5]Primary care is exempted from the deductible. Handel et al. (2024) provides a detailed discussion of the Dutch health insurance system and the health insurance deductible choices. We follow their example by focusing on whether any positive voluntary deductible is chosen as the simplified decision problem individuals face.

voluntary health insurance deductible > 0 drops by 4.1 p.p. (77% of the baseline rate of 5.3%) over the post-treatment period with event study estimates indicating a gradual decrease starting in the first year after the health event. Like the increased GP visits, this suggests that individuals make forward-looking adjustments in line with their increased health-related risks.

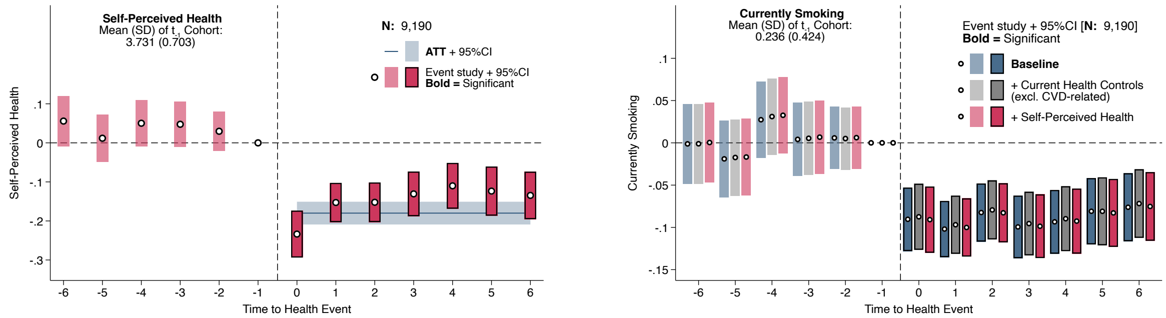
Differences in Health and Health Perceptions

We explore whether differences in health or health perceptions drive the results in two steps. First, we examine whether individuals update their subjective health assessments following a health shock and how persistent any such update is. We estimate event study models for self-assessed health, controlling for health at event-time and non-cardiovascular health dimensions at survey-time. Figure 4 panel **(a)** shows that health shocks induce a large and persistent reduction in self-assessed health, with an average drop of 0.180 points on a five-point scale (26% of the baseline standard deviation). Dynamic estimates reveal an immediate decline of 0.234 that attenuates to 0.135 six years post-event.[6]

Figure 4: Health and Perceived Health and its Role in Explaining Behavioral Effects

(a) Self-Perceived Health conditional on non-CVD Health

(b) Currently smoking, conditional on (Perceived) Health



Source: Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the estimated average treatment effect on the treated (**ATT**, solid line) and event study coefficients (dots) alongside their respective 95% confidence intervals (shaded area/bars). All regressions are weighted using inverse probability weights and control for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Regressions for self-assessed health **(a)** also control for health at survey time (functional limitation dummies, mental health, non-cardiovascular hospital care use and chronic conditions) with A.15 column (1) reporting the underlying results. Regressions for smoking **(b)** compare our baseline estimates using only the basic control variables (blue) against a specification controlling additionally for health at survey time (grey), and a specification controlling for the basic controls, health at survey time, and self-assessed health (red). The underlying results are reported in columns (2) to (4) of Table A.1.

To understand what drives this perception update, we additionally control for cardiovascular risk conditions (diabetes, hypertension, or hyperlipidemia) at survey-time. Because we measure chronic conditions through medication use, and medication uptake is near-universal following a cardiovascular event, this control effectively absorbs the transition into a diagnosed cardiovascular risk state. The average effect shrinks to -0.100 and becomes statistically insignificant within 1–2 years (Figure B.1). This pattern suggests that the lasting perception update operates primarily through acquiring a diagnosed condition: post-shock individuals adopt self-assessments consistent with how pre-shock individuals with similar conditions perceive their health.

[6]Ordered logit models, which account for the categorical nature of self-assessed health, yield qualitatively equivalent results: health shocks substantially increase the likelihood of reporting health in the middle or bottom two categories. Results are available upon request.

In the second step, we ask whether changes in health and health perceptions can explain the behavioral response. For this analysis, we use the specification excluding cardiovascular conditions at survey-time, capturing the full perception update individuals experience. Figure 4 panel **(b)** presents results for smoking, comparing baseline estimates controlling only for pre-event health (blue), a specification adding current non-cardiovascular health (grey), and a specification further adding self-assessed health (red). Results for other outcomes appear in Appendix C. Strikingly, controlling for health and health perceptions explains very little of the behavioral response, suggesting that health shocks affect behavior through channels beyond measured health consequences and subjective perceptions. Two exceptions stand out: physical activity increases by 0.071 days per week on average, driven by a short-term response in the first two years, and body mass index decreases by 0.370 points, similarly concentrated in the period immediately following the event.

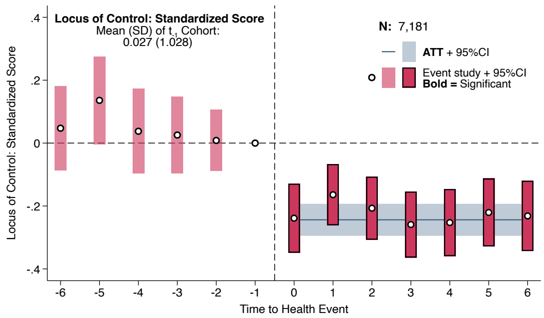
Self-efficacy

Another potential mechanism through which the experience of an acute health event could affect behavior is self-efficacy. Figure 5 panel **(a)** shows that self-efficacy is 0.244 standard deviations lower after the health shock.[7] The prevalence of low levels of self-efficacy (score < 19) increases substantially by 5.6 p.p., or 53% given the share of low self-efficacy among individuals interviewed before their health event (see Tables A.18 for the detailed results).

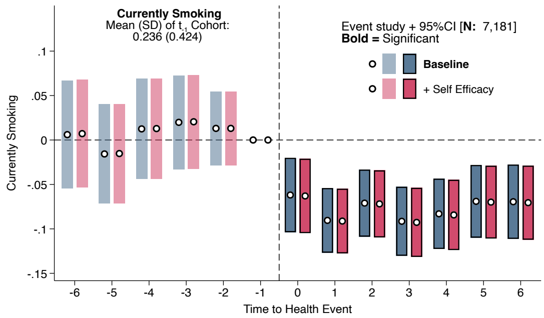
To test whether self-efficacy mediates the behavioral response, we condition on self-efficacy levels. Figure 5 panel **(b)** shows that the baseline estimates for smoking (blue) are indistinguishable a specification controlling for low self-efficacy (red). Results for other outcomes are in Appendix C.

Figure 5: Self-efficacy and and its Role in Explaining Behavioral Effects

(a) Self-efficacy (Standardized Locus of Control Score)



(b) Currently smoking, conditional on Self-efficacy



Source: Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the estimated average treatment effect on the treated (**ATT**, solid line) and event study coefficients (dots) alongside their respective 95% confidence intervals (shaded area/bars). All regressions are weighted using inverse probability weights and control for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Regressions for the standardized locus of control score **(a)** control for only the basic controls variables with column (1) of Table A.17 reporting the underlying results. Regressions for smoking **(b)** control for the basic controls (blue) and additionally a dummy for low levels of self-efficacy, a locus of control score < 19 (red). The underlying results are reported in columns (5) and (6) of Table A.1.

[7]This effect size is similar to effects rerported by Marsaudon (2022) who reports an average decline of 0.066 standard deviations following an undefined overnight hospitalization, and Nguyen et al. (2024) report a short-term decline of 0.090 in relation to the self-reported onset of a serious personal injury or illness, lasting for only a year.

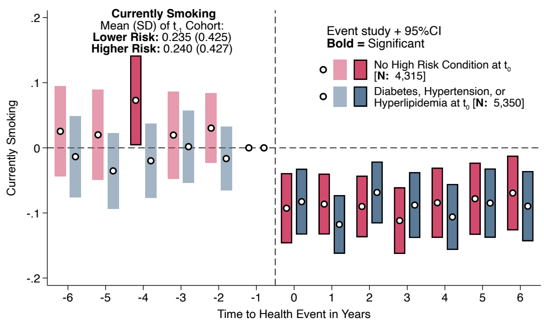
IV.C Heterogeneous effects

We study the role of pre-existing health risk by splitting the sample into two groups: a group who already had a chronic condition putting them at increased risk for cardiovascular events, hypertension, diabetes or hyperlipidemia (Roth et al., 2020), and those having none of these conditions. The former group may be better informed about their health conditions and the impact of behavioral change and learns less from the health shock: clinical recommendations for these conditions to decrease cardiovascular risk emphasize quitting smoking and drinking (next to medication therapy and the related monitoring). In line with this, the group with hypertension, diabetes or hyperlipidemia has nearly twice as high annual costs for GP consultations before the event (€71) than those without such a condition (€41), translating to roughly three additional visits a year. In addition, downward adjustments in perceived health vary substantially. Those without a pre-existing condition exhibit higher perceived health before the event and revise their self-assessments downward twice as much by 0.250 (39% of the baseline standard deviation) compared to only 0.126 (18%) among those with such a condition, while event study estimates suggest the impact of an event to be more short-lived among those with an existing high risk condition (see Figure B.2).

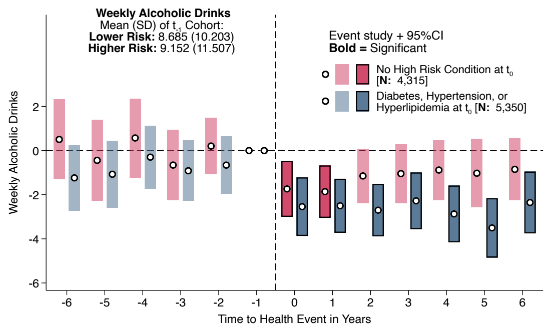
We find no clear evidence that behavioral changes diverge consistently along (known) pre-existing health risk levels (Figure 6 panels **(a-b)**). Smoking prevalence decreases more strongly among those without a high risk condition with a 11.1 p.p. decrease (47% of the baseline) compared to only 8.0 p.p. (33% of the baseline) among those with such a condition but this difference is only marginally significant (Wald test p-value < 0.1). The estimates for alcohol consumption are not statistically significant from each other. Furthermore, we find no clear heterogeneity in our effects by educational attainment (Figure 6 panels **(c-d)**: the differences in event study estimates are statistically insignificant between individuals with lower and higher educational attainment.

Figure 6: Lifestyle Effects by by Health Risk and Educational Attainment

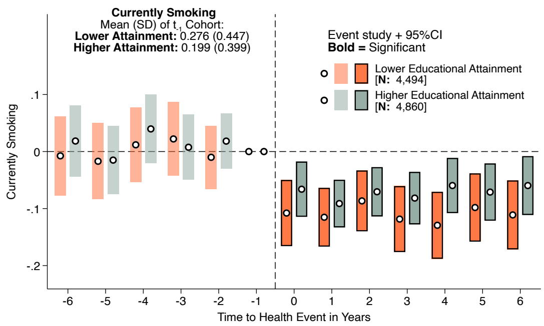
(a) Smoking, by Pre-existing Health Risk



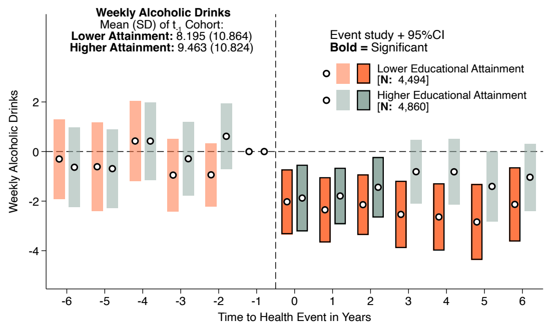
(b) Alcohol Consumption, by Pre-existing Health Risk



(c) Smoking, by Educational Attainment



(d) Alcohol Consumption, by Educational Attainment



Source: Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the estimated event study coefficients (dots) alongside their respective 95% confidence intervals (shaded area/bars). All regressions are weighted using inverse probability weights and control for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Results by health risk groups: individuals without a high-risk pre-existing condition such as diabetes, hyperilipidemia, or a cardiovascular condition at event-time (red) compared against those with such a condition (blue). Results by educational attainment: individuals with lower levels of educational attainment (orange) compared against those with higher educational attainment (teal). See Tables A.1 (smoking) and A.2 (weekly drinks) columns (10) and (11) for the underlying results by health risk, and columns (12) and (13) by educational attainment.

Robustness Checks

We consider two threats to our identification strategy: specification choices and selective survival. The results from these robustness checks are reported in the last eight columns of each outcome-specific table in Appendix A. First, we show that conditioning on observed characteristics at t_{-5} instead of t_{-1} has no relevant systematic impact on the results. Second, we address concerns about selective survival. Participants in the Health Monitor are healthier and have higher survival rates than the general patient population, which may limit the external validity of our estimates. More critically for internal validity, however, individuals observed at later event-times (e.g., t_6) have by construction survived longer since their event than those observed shortly after (e.g., t_0). If survival is correlated with health behaviors, either because healthier-behaving individuals were less likely to experience a severe event, or because behavioral change after the event affects survival, this differential survival could bias our estimates. We address this concern in two ways. First, we show that observed survival gaps by lifestyle would need to be unrealistically large to explain the magnitude of our effect estimates. Second, we demonstrate that results are unchanged when restricting the sample to individuals who survive at least 3 or 5 years instead of 1 year, which equalizes survival horizons across event-time cohorts and directly tests whether differential survival drives our findings. See Appendix D.III for details.

V Discussion and Conclusion

This paper identifies the long-lasting impact of severe health shocks on preventive behavior. Experiencing a heart attack or stroke leads to substantial reductions in smoking and alcohol consumption, alongside increased and sustained uptake of preventive medications. Choices regarding GP care and health insurance deductibles are consistent with forward-looking behavior, reflecting anticipated permanent increases in health risk and future care needs. Our findings on health perceptions support this interpretation: perceived health adjusts persistently downward following a severe health shock. Beyond beliefs about one's own health, we find that shocks fundamentally alter individuals' outlook more broadly, with substantial and permanent decreases in self-efficacy, the degree to which people perceive their life outcomes to be within their control. Such changes could plausibly explain variation in the behavioral response to health shocks. However, we find that neither differences in health outcomes, perceived health, nor self-efficacy explains meaningful variation in health behaviors following a health shock. Lastly, we observe only limited differences in the behavioral effects of health shocks by levels of pre-existing health risk and educational attainment.

Our results speak to theoretical models of cue-based decision-making (Bernheim and Rangel, 2004) applied to health behavior (Darden, 2017). The finding that behavioral change is largely unexplained by measured changes in health or health perceptions suggests that it is the salience of the shock experience itself, rather than the information it conveys, that drives prevention. This interpretation aligns with the broader literature documenting limited behavioral responses to the provision of health information (Bhalotra et al., 2020; Oster, 2018), and carries an important policy implication: if behavioral change is not primarily mediated by updated health perceptions, efforts to strengthen prevention through improved information provision alone may prove insufficient. Likewise, attempting to extend such approaches to individuals experiencing less severe health events may yield limited returns as salience is hard-to-engineer, or even be counter-productive if salient but ill-tailored warnings result in inefficient allocation of attention (Fadlon and Nielsen, 2019) or outright uptake of low-value care (Hoagland, 2025).

A notable feature of our findings is that the substantial decline in self-efficacy following a health shock does not appear to undermine preventive behavior. One interpretation is that this reflects the institutional context of the Dutch healthcare system, combining universal access with high-quality care (Danesh et al., 2024; OECD, 2025), allowing for efficient prevention strategies in the form of medication therapy and lifestyle adjustments. This stands in contrast to settings where health shocks reveal future risks without providing clear pathways to effective treatment, a context in which fatalism could indeed undermine health prevention efforts. Ciancio et al. (2025), for example, show that learning one's HIV-positive status in Malawi, before antiretroviral treatment became widely available, increased mortality by 23 percentage points, with fatalism and increased discounting of the future driving uptake of risky health behaviors. We find the opposite: cardiovascular events in a setting with accessible, effective treatment and structured follow-up care lead to sustained prevention and forward-looking behavior across multiple domains despite individuals making sustained downard adjustments to their belief in being able to positively influence future outcomes through their behavior. Active engagement with the healthcare system may compensate for belief changes that could otherwise undermine prevention efforts. This contrast suggests that treatment availability and healthcare system quality are not merely contextual details but potentially critical moderators of behavioral responses to health shocks. Our estimates may therefore represent an upper bound on behavioral adjustment, achieved under favorable conditions in which inertia and countervailing psychological responses can be overcome. Understanding which features of healthcare systems are most critical to achieving such outcomes is an important area for future research. Consistent with this interpretation, we find evidence that high-value preventive care and costly lifestyle adjustments function as complements rather than substitutes (Horn, 2024; Kaestner et al., 2014).

The absence of an education gradient in behavioral responses has implications for understanding the origins of health inequalities. When access barriers are removed and system support is universal, prevention responses to severe shocks do not vary by educational attainment or other easily observable characteristics (see also Bhalotra et al. 2020; Darden 2017; Oster 2018). Our results therefore provide causal, individual-level evidence consistent with recent work attributing widening life expectancy gaps by education, documented in both the United States and Europe—to differential accumulation of chronic disease burden over the life course, rather than to differential responses to health shocks or differential treatment effectiveness (Dahl et al., 2024; Danesh et al., 2024).

Taken together, these findings suggest that severe cardiovascular events create windows of opportunity for behavioral change across the socioeconomic distribution when intensive healthcare engagement provides structure and support. The persistence of these effects, and their independence from education, prior health information, or belief changes, indicates that converting health shocks into sustained prevention might depend less on individual characteristics than on the quality of healthcare interactions that follow.

A Tables

Table A.1: Event-Study Estimates for Smoking - Currently Smoking

		Mechanisms					**Subgroups**							**Robustness Checks**							
		Objective (Obj) & Self-Assessed Health (SAH)			Locus of Control (LoC)		Propensity Score Terciles			Pre-Existing High Risk Condition		Educational Attainment		Pre-Event Health Controls		Current Income (Inc)		3-Year Survival Window		5-Year Survival Window	
		w/o	+ Obj	+ SAH	w/o	+ LoC	Bottom	Middle	Top	None	> 1	Lower	Higher	t_{-1}	t_{-5}	w/o	+ Inc	All	Survivng	All	Surviving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Time to Health Event																					
t_{-6}	0.005	-0.001	-0.001	0.000	0.006	0.007	0.021	0.017	-0.022	0.025	-0.014	-0.008	0.018	0.013	0.006	0.003	-0.002	0.014	0.012	-0.001	0.004
	(0.024)	(0.024)	(0.024)	(0.024)	(0.031)	(0.031)	(0.040)	(0.041)	(0.041)	(0.035)	(0.032)	(0.035)	(0.032)	(0.026)	(0.026)	(0.024)	(0.024)	(0.030)	(0.031)	(0.034)	(0.035)
t_{-5}	-0.014	-0.019	-0.017	-0.017	-0.016	-0.015	0.024	-0.076^b	0.002	0.020	-0.035	-0.017	-0.015	-0.008	-0.013	-0.015	-0.019	-0.013	-0.018	-0.032	-0.038
	(0.023)	(0.023)	(0.023)	(0.023)	(0.029)	(0.029)	(0.039)	(0.037)	(0.040)	(0.035)	(0.030)	(0.034)	(0.030)	(0.025)	(0.025)	(0.023)	(0.023)	(0.023)	(0.023)	(0.033)	(0.034)
t_{-4}	0.022	0.027	0.031	0.033	0.012	0.013	0.029	0.116^c	-0.044	0.073^b	-0.020	0.012	0.040	0.030	0.029	0.023	0.022	0.023	0.015	0.020	0.011
	(0.022)	(0.023)	(0.023)	(0.023)	(0.029)	(0.029)	(0.040)	(0.043)	(0.035)	(0.035)	(0.029)	(0.033)	(0.031)	(0.025)	(0.025)	(0.022)	(0.023)	(0.022)	(0.023)	(0.031)	(0.031)
t_{-3}	0.009	0.004	0.005	0.007	0.020	0.020	0.044	0.015	-0.022	0.020	0.002	0.022	0.008	0.016	0.018	0.009	0.006	0.010	0.006	-0.007	-0.010
	(0.022)	(0.022)	(0.022)	(0.022)	(0.027)	(0.027)	(0.038)	(0.038)	(0.036)	(0.034)	(0.028)	(0.033)	(0.029)	(0.024)	(0.024)	(0.022)	(0.022)	(0.022)	(0.022)	(0.024)	(0.025)
t_{-2}	0.004	0.006	0.005	0.006	0.013	0.013	0.030	0.009	-0.027	0.030	-0.017	-0.010	0.018	0.010	0.009	0.004	0.004	0.007	0.009	-0.011	-0.007
	(0.018)	(0.019)	(0.019)	(0.019)	(0.021)	(0.021)	(0.032)	(0.033)	(0.031)	(0.027)	(0.025)	(0.028)	(0.025)	(0.020)	(0.020)	(0.018)	(0.018)	(0.020)	(0.021)	(0.024)	(0.025)
t_{-1}	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
t_0	-0.087^c	-0.090^c	-0.087^c	-0.091^c	-0.062^c	-0.063^c	-0.086^c	-0.087^c	-0.093^c	-0.093^c	-0.083^c	-0.108^c	-0.066^c	-0.062^c	-0.062^c	-0.087^c	-0.086^c	-0.086^c	-0.088^c	-0.117^c	-0.137^c
	(0.019)	(0.019)	(0.020)	(0.020)	(0.021)	(0.021)	(0.032)	(0.033)	(0.033)	(0.028)	(0.026)	(0.030)	(0.025)	(0.021)	(0.021)	(0.019)	(0.019)	(0.019)	(0.019)	(0.023)	(0.023)
t_1	-0.105^c	-0.102^c	-0.097^c	-0.100^c	-0.090^c	-0.091^c	-0.102^c	-0.100^c	-0.113^c	-0.086^c	-0.118^c	-0.115^c	-0.091^c	-0.092^c	-0.088^c	-0.105^c	-0.104^c	-0.104^c	-0.107^c	-0.126^c	-0.125^c
	(0.017)	(0.017)	(0.018)	(0.018)	(0.019)	(0.019)	(0.029)	(0.028)	(0.028)	(0.024)	(0.023)	(0.026)	(0.021)	(0.018)	(0.018)	(0.017)	(0.017)	(0.017)	(0.017)	(0.021)	(0.021)
t_2	-0.080^c	-0.082^c	-0.079^c	-0.083^c	-0.071^c	-0.072^c	-0.092^c	-0.082^c	-0.078^c	-0.090^c	-0.069^c	-0.087^c	-0.071^c	-0.076^c	-0.071^c	-0.080^c	-0.078^c	-0.079^c	-0.082^c	-0.101^c	-0.104^c
	(0.017)	(0.018)	(0.018)	(0.018)	(0.019)	(0.019)	(0.029)	(0.029)	(0.030)	(0.024)	(0.024)	(0.027)	(0.022)	(0.019)	(0.019)	(0.017)	(0.017)	(0.017)	(0.017)	(0.021)	(0.021)
t_3	-0.100^c	-0.099^c	-0.095^c	-0.099^c	-0.091^c	-0.093^c	-0.089^c	-0.112^c	-0.110^c	-0.112^c	-0.088^c	-0.118^c	-0.082^c	-0.098^c	-0.098^c	-0.101^c	-0.099^c	-0.100^c	-0.100^c	-0.123^c	-0.122^c
	(0.018)	(0.019)	(0.019)	(0.019)	(0.020)	(0.020)	(0.033)	(0.031)	(0.031)	(0.026)	(0.026)	(0.029)	(0.023)	(0.022)	(0.022)	(0.018)	(0.019)	(0.018)	(0.019)	(0.023)	(0.023)
t_4	-0.096^c	-0.093^c	-0.090^c	-0.093^c	-0.083^c	-0.084^c	-0.085^c	-0.129^c	-0.084^b	-0.084^c	-0.106^c	-0.129^c	-0.060^b	-0.046^a	-0.039	-0.096^c	-0.093^c	-0.095^c	-0.096^c	-0.119^c	-0.117^c
	(0.019)	(0.019)	(0.020)	(0.020)	(0.020)	(0.020)	(0.032)	(0.031)	(0.034)	(0.028)	(0.026)	(0.030)	(0.025)	(0.025)	(0.025)	(0.019)	(0.019)	(0.019)	(0.019)	(0.023)	(0.023)
t_5	-0.083^c	-0.081^c	-0.081^c	-0.083^c	-0.069^c	-0.070^c	-0.110^c	-0.066^a	-0.079^b	-0.078^c	-0.085^c	-0.098^c	-0.071^c	-0.066^c	-0.064^c	-0.083^c	-0.079^c	-0.083^c	-0.084^c	-0.107^c	-0.104^c
	(0.020)	(0.020)	(0.021)	(0.020)	(0.021)	(0.021)	(0.031)	(0.035)	(0.035)	(0.028)	(0.027)	(0.031)	(0.026)	(0.025)	(0.024)	(0.020)	(0.020)	(0.020)	(0.020)	(0.023)	(0.024)
t_6	-0.079^c	-0.076^c	-0.072^c	-0.075^c	-0.069^c	-0.071^c	-0.075^b	-0.079^b	-0.093^c	-0.069^b	-0.090^c	-0.111^c	-0.060^b	-0.064^c	-0.056^b	-0.079^c	-0.075^c	-0.079^c	-0.080^c	-0.103^c	-0.100^c
	(0.020)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)	(0.033)	(0.035)	(0.035)	(0.029)	(0.028)	(0.031)	(0.026)	(0.025)	(0.025)	(0.020)	(0.020)	(0.020)	(0.020)	(0.024)	(0.024)
ATT	-0.095^c	-0.094^c	-0.091^c	-0.095^c	-0.084^c	-0.085^c	-0.114^c	-0.104^c	-0.076^c	-0.111^c	-0.080^c	-0.107^c	-0.084^c	-0.084^c	-0.080^c	-0.095^c	-0.092^c	-0.096^c	-0.096^c	-0.110^c	-0.113^c
	(0.009)	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)	(0.016)	(0.015)	(0.015)	(0.013)	(0.012)	(0.014)	(0.012)	(0.011)	(0.011)	(0.009)	(0.010)	(0.009)	(0.010)	(0.012)	(0.012)
Mean (SD) of	0.238	0.234	0.234	0.234	0.217	0.217	0.226	0.247	0.239	0.235	0.240	0.276	0.199	0.215	0.215	0.238	0.238	0.238	0.237	0.272	0.268
t_{-1} Cohort	(0.426)	(0.423)	(0.423)	(0.423)	(0.413)	(0.413)	(0.419)	(0.432)	(0.427)	(0.425)	(0.427)	(0.447)	(0.399)	(0.411)	(0.411)	(0.426)	(0.426)	(0.426)	(0.426)	(0.445)	(0.443)
Wald F (ATT)	–	ref.	0.583	0.030	ref.	2.176	ref.	0.224	3.124^a	ref.	3.026^a	ref.	1.516	ref.	2.378	ref.	0.346	ref.	0.000	ref.	0.538
Wald F (t_0–t_6, joint)	–	ref.	0.748	0.361	ref.	0.286	ref.	0.632	0.283	ref.	0.791	ref.	0.629	ref.	0.822	ref.	0.254	ref.	1.062	ref.	1.404
Observations	9,665	9,190	9,190	9,190	7,181	7,181	3,232	3,295	3,138	4,315	5,350	4,494	4,860	7,698	7,698	9,656	9,656	9,160	8,935	7,975	7,526
Adj. R^2	0.070	0.072	0.080	0.081	0.064	0.064	0.084	0.102	0.069	0.094	0.065	0.073	0.074	0.074	0.069	0.070	0.072	0.074	0.073	0.078	0.075

Notes: a indicates $p < 0.1$, b indicates $p < 0.05$, and c indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the results of our regressions estimating dynamic (event study) and static (average treatment effect on the treated, **ATT**) effect of a health event. All regressions are weighted using inverse probability weights. Column (1) shows the baseline specification controlling for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Other columns vary from this baseline as indicated by column headers. Mechanism (columns 2-6) and robustness checks (columns 14-21) analyses re-estimate the baseline within each subsample for comparability. Subgroup analyses (columns 7-13) partition the baseline sample (sample differences reflect missing data). Compare columns within each results group.

Table A.2: Event-Study Estimates for Alcohol Consumption - Weekly Alcoholic Drinks

		Mechanisms					**Subgroups**							**Robustness Checks**							
		Objective (Obj) & Self-Assessed Health (SAH)			Locus of Control (LoC)		Propensity Score Terciles			Pre-Existing High Risk Condition		Educational Attainment		Pre-Event Health Controls		Current Income (Inc)		3-Year Survival Window		5-Year Survival Window	
		w/o	+ Obj	+ SAH	w/o	+ LoC	Bottom	Middle	Top	None	> 1	Lower	Higher	t_{-1}	t_{-5}	w/o	+ Inc	All	Survivng	All	Surviving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Time to Health Event																					
t_{-6}	-0.475	-0.511	-0.480	-0.478	-0.446	-0.507	-0.910	0.886	-1.078	0.505	-1.236	-0.301	-0.634	-0.606	-0.720	-0.500	-0.050	-0.688	-0.829	-0.679	-0.876
	(0.587)	(0.590)	(0.588)	(0.589)	(0.765)	(0.765)	(0.841)	(1.183)	(0.984)	(0.926)	(0.757)	(0.821)	(0.818)	(0.636)	(0.637)	(0.589)	(0.599)	(0.726)	(0.695)	(0.827)	(0.810)
t_{-5}	-0.759	-0.527	-0.573	-0.565	-0.846	-0.871	-0.362	-1.888^{b}	0.046	-0.442	-1.073	-0.613	-0.689	-0.903	-0.925	-0.790	-0.482	-0.753	-0.609	-0.640	-0.678
	(0.591)	(0.607)	(0.608)	(0.608)	(0.761)	(0.761)	(1.016)	(0.951)	(1.045)	(0.936)	(0.772)	(0.911)	(0.810)	(0.633)	(0.636)	(0.591)	(0.602)	(0.592)	(0.608)	(0.873)	(0.891)
t_{-4}	0.170	0.327	0.239	0.240	-0.143	-0.163	0.487	2.271^{a}	-1.000	0.571	-0.297	0.425	0.423	0.028	0.014	0.164	0.311	0.178	0.268	0.304	0.327
	(0.564)	(0.578)	(0.578)	(0.579)	(0.686)	(0.686)	(0.940)	(1.249)	(0.818)	(0.910)	(0.728)	(0.822)	(0.797)	(0.607)	(0.606)	(0.565)	(0.568)	(0.565)	(0.576)	(0.805)	(0.838)
t_{-3}	-0.710	-0.684	-0.691	-0.695	0.003	-0.031	-0.738	0.443	-1.394	-0.656	-0.914	-0.950	-0.291	-0.824	-0.863	-0.711	-0.567	-0.696	-0.586	-0.797	-0.569
	(0.525)	(0.532)	(0.534)	(0.534)	(0.691)	(0.692)	(0.834)	(0.977)	(0.881)	(0.813)	(0.699)	(0.745)	(0.759)	(0.580)	(0.579)	(0.525)	(0.527)	(0.527)	(0.539)	(0.584)	(0.611)
t_{-2}	-0.267	-0.161	-0.174	-0.167	-0.181	-0.181	-0.124	0.627	-0.973	0.206	-0.659	-0.939	0.616	-0.239	-0.293	-0.248	-0.194	-0.152	-0.081	0.005	0.102
	(0.466)	(0.475)	(0.476)	(0.477)	(0.556)	(0.555)	(0.802)	(0.911)	(0.722)	(0.649)	(0.661)	(0.650)	(0.675)	(0.503)	(0.505)	(0.467)	(0.467)	(0.520)	(0.530)	(0.596)	(0.619)
t_{-1}	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
t_{0}	-2.114^{c}	-2.035^{c}	-1.918^{c}	-1.848^{c}	-2.362^{c}	-2.305^{c}	-2.204^{c}	-1.515^{a}	-2.336^{c}	-1.737^{c}	-2.542^{c}	-2.026^{c}	-1.875^{c}	-2.323^{c}	-2.352^{c}	-2.114^{c}	-2.165^{c}	-2.118^{c}	-1.861^{c}	-2.229^{c}	-2.156^{c}
	(0.474)	(0.486)	(0.508)	(0.511)	(0.523)	(0.524)	(0.775)	(0.894)	(0.780)	(0.646)	(0.677)	(0.668)	(0.687)	(0.519)	(0.519)	(0.474)	(0.474)	(0.474)	(0.485)	(0.589)	(0.599)
t_{1}	-2.167^{c}	-2.190^{c}	-2.048^{c}	-2.029^{c}	-2.019^{c}	-1.978^{c}	-2.644^{c}	-1.040	-2.730^{c}	-1.861^{c}	-2.501^{c}	-2.351^{c}	-1.792^{c}	-2.017^{c}	-1.947^{c}	-2.167^{c}	-2.269^{c}	-2.182^{c}	-2.029^{c}	-2.431^{c}	-2.242^{c}
	(0.435)	(0.444)	(0.459)	(0.462)	(0.490)	(0.490)	(0.716)	(0.833)	(0.699)	(0.606)	(0.625)	(0.672)	(0.581)	(0.480)	(0.482)	(0.435)	(0.437)	(0.435)	(0.442)	(0.528)	(0.546)
t_{2}	-1.981^{c}	-1.871^{c}	-1.775^{c}	-1.756^{c}	-1.828^{c}	-1.780^{c}	-2.275^{c}	-0.789	-2.881^{c}	-1.150^{a}	-2.700^{c}	-2.143^{c}	-1.441^{b}	-1.876^{c}	-1.752^{c}	-1.975^{c}	-2.136^{c}	-1.978^{c}	-1.852^{c}	-2.248^{c}	-2.067^{c}
	(0.436)	(0.446)	(0.459)	(0.460)	(0.493)	(0.493)	(0.750)	(0.819)	(0.699)	(0.629)	(0.607)	(0.624)	(0.623)	(0.482)	(0.484)	(0.436)	(0.440)	(0.436)	(0.440)	(0.527)	(0.541)
t_{3}	-1.673^{c}	-1.727^{c}	-1.580^{c}	-1.575^{c}	-1.726^{c}	-1.660^{c}	-1.891^{b}	-0.887	-1.948^{b}	-1.044	-2.276^{c}	-2.536^{c}	-0.813	-1.000^{a}	-0.963	-1.673^{c}	-1.875^{c}	-1.672^{c}	-1.572^{c}	-2.029^{c}	-1.798^{c}
	(0.472)	(0.483)	(0.497)	(0.499)	(0.488)	(0.488)	(0.766)	(0.850)	(0.827)	(0.681)	(0.655)	(0.693)	(0.653)	(0.602)	(0.602)	(0.472)	(0.475)	(0.471)	(0.473)	(0.569)	(0.582)
t_{4}	-1.903^{c}	-1.687^{c}	-1.534^{c}	-1.531^{c}	-1.657^{c}	-1.588^{c}	-1.749^{b}	-0.577	-3.092^{c}	-0.882	-2.872^{c}	-2.638^{c}	-0.817	-1.477^{b}	-1.428^{b}	-1.903^{c}	-2.162^{c}	-1.918^{c}	-1.831^{c}	-2.263^{c}	-2.061^{c}
	(0.475)	(0.489)	(0.500)	(0.501)	(0.505)	(0.505)	(0.825)	(0.843)	(0.795)	(0.690)	(0.657)	(0.693)	(0.675)	(0.599)	(0.608)	(0.475)	(0.485)	(0.475)	(0.478)	(0.575)	(0.585)
t_{5}	-2.290^{c}	-2.210^{c}	-2.038^{c}	-2.008^{c}	-2.234^{c}	-2.184^{c}	-2.407^{c}	-1.246	-2.916^{c}	-1.026	-3.504^{c}	-2.840^{c}	-1.406^{a}	-1.561^{b}	-1.453^{b}	-2.290^{c}	-2.608^{c}	-2.299^{c}	-2.203^{c}	-2.664^{c}	-2.481^{c}
	(0.519)	(0.532)	(0.541)	(0.543)	(0.536)	(0.536)	(0.846)	(0.926)	(0.902)	(0.787)	(0.686)	(0.781)	(0.722)	(0.705)	(0.713)	(0.519)	(0.524)	(0.519)	(0.521)	(0.605)	(0.613)
t_{6}	-1.560^{c}	-1.472^{c}	-1.336^{b}	-1.332^{b}	-1.455^{c}	-1.396^{c}	-1.391	-1.471^{a}	-1.654^{a}	-0.851	-2.353^{c}	-2.132^{c}	-1.036	-1.440^{b}	-1.271^{b}	-1.560^{c}	-1.921^{c}	-1.563^{c}	-1.464^{c}	-1.936^{c}	-1.750^{c}
	(0.508)	(0.517)	(0.527)	(0.530)	(0.535)	(0.534)	(0.874)	(0.871)	(0.903)	(0.716)	(0.714)	(0.764)	(0.688)	(0.632)	(0.643)	(0.508)	(0.526)	(0.509)	(0.511)	(0.607)	(0.616)
ATT	-1.738^{c}	-1.746^{c}	-1.595^{c}	-1.575^{c}	-1.744^{c}	-1.678^{c}	-1.988^{c}	-1.389^{c}	-1.926^{c}	-1.384^{c}	-2.070^{c}	-1.897^{c}	-1.477^{c}	-1.616^{c}	-1.520^{c}	-1.736^{c}	-2.032^{c}	-1.784^{c}	-1.693^{c}	-2.050^{c}	-1.952^{c}
	(0.223)	(0.229)	(0.251)	(0.255)	(0.258)	(0.258)	(0.378)	(0.418)	(0.366)	(0.325)	(0.310)	(0.331)	(0.314)	(0.276)	(0.279)	(0.223)	(0.247)	(0.237)	(0.241)	(0.296)	(0.305)
Mean (SD) of	8.931	8.916	8.916	8.916	8.697	8.697	8.791	9.087	8.917	8.685	9.152	8.195	9.463	8.669	8.669	8.931	8.931	8.931	8.848	9.618	9.514
t_{-1} Cohort	(10.910)	(10.700)	(10.700)	(10.700)	(10.360)	(10.360)	(10.710)	(11.550)	(10.480)	(10.200)	(11.510)	(10.860)	(10.820)	(10.320)	(10.320)	(10.910)	(10.910)	(10.910)	(10.850)	(11.360)	(11.290)
Wald F (ATT)	–	ref.	2.201	2.464	ref.	10.130^{c}	ref.	1.131	0.014	ref.	2.330	ref.	0.850	ref.	2.069	ref.	9.000^{c}	ref.	4.030^{b}	ref.	1.031
Wald F (t_0–t_6, joint)	–	ref.	0.591	0.590	ref.	1.072	ref.	0.609	0.311	ref.	1.267	ref.	0.968	ref.	0.497	ref.	1.755^{a}	ref.	1.803^{a}	ref.	0.553
Observations	9,665	9,190	9,190	9,190	7,181	7,181	3,232	3,295	3,138	4,315	5,350	4,494	4,860	7,698	7,698	9,656	9,656	9,160	8,935	7,975	7,526
Adj. R^2	0.088	0.086	0.091	0.092	0.082	0.084	0.108	0.085	0.110	0.085	0.104	0.102	0.076	0.088	0.082	0.088	0.091	0.089	0.088	0.090	0.088

Notes: a indicates $p < 0.1$, b indicates $p < 0.05$, and c indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the results of our regressions estimating dynamic (event study) and static (average treatment effect on the treated, **ATT**) effect of a health event. All regressions are weighted using inverse probability weights. Column (1) shows the baseline specification controlling for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Other columns vary from this baseline as indicated by column headers. Mechanism (columns 2-6) and robustness checks (columns 14-21) analyses re-estimate the baseline within each subsample for comparability. Subgroup analyses (columns 7-13) partition the baseline sample (sample differences reflect missing data). Compare columns within each results group.

Table A.3: Event-Study Estimates for Physical Activity - Weekly Days with Physical Activity

		Mechanisms					Subgroups							Robustness Checks							
		Objective (Obj) & Self-Assessed Health (SAH)			Locus of Control (LoC)		Propensity Score Terciles			Pre-Existing High Risk Condition		Educational Attainment		Pre-Event Health Controls		Current Income (Inc)		3-Year Survival Window		5-Year Survival Window	
		w/o	+ Obj	+ SAH	w/o	+ LoC	Bottom	Middle	Top	None	> 1	Lower	Higher	t_{-1}	t_{-5}	w/o	+ Inc	All	Survivng	All	Surviving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Time to Health Event																					
t_{-6}	-0.009	-0.009	-0.019	-0.035	-0.064	-0.077	0.108	-0.034	-0.100	-0.056	0.036	0.089	-0.168	-0.035	-0.062	-0.005	0.044	0.041	0.047	0.051	0.035
	(0.088)	(0.087)	(0.087)	(0.087)	(0.115)	(0.115)	(0.150)	(0.151)	(0.151)	(0.134)	(0.116)	(0.123)	(0.127)	(0.096)	(0.097)	(0.088)	(0.091)	(0.109)	(0.112)	(0.124)	(0.131)
t_{-5}	-0.130	-0.092	-0.112	-0.118	-0.151	-0.157	-0.187	0.032	-0.224	-0.143	-0.120	-0.086	-0.180	-0.154^{a}	-0.160^{a}	-0.128	-0.087	-0.125	-0.102	-0.132	-0.085
	(0.082)	(0.084)	(0.084)	(0.084)	(0.097)	(0.097)	(0.135)	(0.145)	(0.142)	(0.130)	(0.105)	(0.111)	(0.124)	(0.089)	(0.090)	(0.082)	(0.083)	(0.082)	(0.085)	(0.125)	(0.134)
t_{-4}	0.017	0.048	0.029	0.011	0.116	0.112	0.240	-0.258^{a}	-0.004	-0.038	0.079	-0.002	0.011	-0.010	-0.020	0.018	0.040	0.025	0.022	-0.039	-0.027
	(0.086)	(0.088)	(0.087)	(0.087)	(0.115)	(0.115)	(0.156)	(0.137)	(0.140)	(0.131)	(0.112)	(0.107)	(0.137)	(0.094)	(0.095)	(0.086)	(0.086)	(0.086)	(0.087)	(0.114)	(0.120)
t_{-3}	0.015	0.042	0.030	0.018	-0.035	-0.043	0.085	0.134	-0.126	-0.110	0.102	-0.061	0.042	-0.020	-0.030	0.015	0.031	0.021	0.019	0.004	-0.004
	(0.080)	(0.082)	(0.082)	(0.082)	(0.099)	(0.098)	(0.143)	(0.145)	(0.131)	(0.128)	(0.102)	(0.101)	(0.125)	(0.088)	(0.088)	(0.080)	(0.080)	(0.080)	(0.082)	(0.088)	(0.092)
t_{-2}	-0.033	-0.034	-0.034	-0.049	-0.042	-0.042	-0.062	-0.082	-0.001	-0.045	-0.037	0.003	-0.097	-0.050	-0.052	-0.034	-0.025	-0.011	-0.017	-0.004	-0.022
	(0.070)	(0.071)	(0.071)	(0.070)	(0.082)	(0.082)	(0.116)	(0.119)	(0.121)	(0.109)	(0.090)	(0.093)	(0.105)	(0.076)	(0.076)	(0.070)	(0.070)	(0.077)	(0.078)	(0.086)	(0.091)
t_{-1}	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
t_{0}	0.060	0.074	0.118	0.165^{b}	0.049	0.062	0.175	0.091	-0.033	0.174	-0.021	-0.024	0.137	0.016	0.015	0.061	0.055	0.060	0.073	0.046	0.069
	(0.079)	(0.081)	(0.083)	(0.083)	(0.090)	(0.090)	(0.135)	(0.142)	(0.135)	(0.128)	(0.100)	(0.100)	(0.122)	(0.087)	(0.087)	(0.079)	(0.079)	(0.079)	(0.081)	(0.097)	(0.103)
t_{1}	0.063	0.071	0.108	0.147^{a}	0.093	0.102	0.023	0.185	-0.016	0.048	0.072	0.028	0.093	0.089	0.100	0.063	0.048	0.065	0.082	0.033	0.043
	(0.072)	(0.073)	(0.075)	(0.075)	(0.083)	(0.083)	(0.121)	(0.126)	(0.122)	(0.107)	(0.096)	(0.093)	(0.110)	(0.081)	(0.082)	(0.072)	(0.072)	(0.072)	(0.073)	(0.083)	(0.087)
t_{2}	-0.102	-0.083	-0.038	-0.001	-0.094	-0.084	-0.004	0.005	-0.264^{b}	-0.061	-0.137	-0.116	-0.066	-0.082	-0.060	-0.101	-0.121^{a}	-0.102	-0.102	-0.135^{a}	-0.138
	(0.069)	(0.071)	(0.072)	(0.072)	(0.079)	(0.079)	(0.128)	(0.118)	(0.112)	(0.106)	(0.089)	(0.086)	(0.107)	(0.078)	(0.078)	(0.069)	(0.069)	(0.069)	(0.069)	(0.081)	(0.085)
t_{3}	-0.070	-0.054	-0.008	0.026	-0.052	-0.037	-0.203	-0.034	0.023	-0.041	-0.093	-0.013	-0.076	-0.082	-0.062	-0.070	-0.098	-0.072	-0.067	-0.113	-0.102
	(0.080)	(0.082)	(0.082)	(0.082)	(0.085)	(0.085)	(0.135)	(0.136)	(0.142)	(0.124)	(0.103)	(0.102)	(0.123)	(0.102)	(0.103)	(0.080)	(0.081)	(0.080)	(0.080)	(0.093)	(0.096)
t_{4}	-0.142^{a}	-0.123	-0.067	-0.037	-0.169^{b}	-0.154^{a}	-0.208	0.052	-0.275^{b}	-0.093	-0.188^{a}	0.064	-0.312^{c}	-0.169	-0.142	-0.141^{a}	-0.178^{b}	-0.143^{a}	-0.137^{a}	-0.183^{a}	-0.189^{a}
	(0.081)	(0.083)	(0.085)	(0.085)	(0.085)	(0.085)	(0.139)	(0.148)	(0.132)	(0.126)	(0.105)	(0.111)	(0.121)	(0.105)	(0.106)	(0.081)	(0.083)	(0.081)	(0.082)	(0.094)	(0.096)
t_{5}	-0.189^{b}	-0.154^{a}	-0.097	-0.066	-0.196^{b}	-0.185^{b}	-0.157	-0.164	-0.252^{a}	-0.126	-0.242^{b}	-0.118	-0.223^{a}	-0.095	-0.073	-0.189^{b}	-0.230^{c}	-0.190^{b}	-0.185^{b}	-0.234^{b}	-0.238^{b}
	(0.080)	(0.083)	(0.084)	(0.084)	(0.086)	(0.086)	(0.141)	(0.137)	(0.140)	(0.119)	(0.107)	(0.106)	(0.123)	(0.107)	(0.108)	(0.080)	(0.082)	(0.080)	(0.080)	(0.093)	(0.095)
t_{6}	-0.189^{b}	-0.159^{a}	-0.112	-0.073	-0.184^{b}	-0.171^{a}	0.040	-0.081	-0.563^{c}	-0.093	-0.261^{b}	-0.211^{b}	-0.143	-0.169	-0.138	-0.189^{b}	-0.228^{c}	-0.192^{b}	-0.187^{b}	-0.235^{b}	-0.241^{b}
	(0.083)	(0.086)	(0.087)	(0.087)	(0.089)	(0.089)	(0.149)	(0.156)	(0.118)	(0.127)	(0.107)	(0.103)	(0.132)	(0.106)	(0.109)	(0.083)	(0.085)	(0.083)	(0.083)	(0.096)	(0.098)
ATT	-0.033	-0.025	0.024	0.071^{a}	-0.038	-0.023	-0.031	0.073	-0.113^{a}	0.036	-0.090^{b}	-0.037	0.010	0.010	0.030	-0.033	-0.057	-0.040	-0.034	-0.060	-0.052
	(0.035)	(0.036)	(0.039)	(0.039)	(0.040)	(0.040)	(0.062)	(0.060)	(0.059)	(0.054)	(0.045)	(0.046)	(0.054)	(0.044)	(0.044)	(0.035)	(0.039)	(0.037)	(0.038)	(0.044)	(0.046)
Mean (SD) of	0.942	0.939	0.939	0.939	0.949	0.949	0.938	0.976	0.913	1.033	0.861	0.677	1.197	0.940	0.940	0.942	0.942	0.942	0.944	0.952	0.965
t_{-1} Cohort	(1.623)	(1.604)	(1.604)	(1.604)	(1.613)	(1.613)	(1.592)	(1.683)	(1.597)	(1.704)	(1.543)	(1.419)	(1.764)	(1.608)	(1.608)	(1.623)	(1.623)	(1.623)	(1.619)	(1.621)	(1.630)
Wald F (ATT)	–	ref.	8.594^{c}	27.380^{c}	ref.	18.140^{c}	ref.	1.463	0.917	ref.	3.212^{a}	ref.	0.452	ref.	3.370^{a}	ref.	2.378	ref.	0.621	ref.	0.395
Wald F (t_0–t_6, joint)	–	ref.	2.524^{b}	3.797^{c}	ref.	1.500	ref.	0.776	2.882^{c}	ref.	0.428	ref.	1.729^{a}	ref.	0.496	ref.	1.101	ref.	0.951	ref.	1.653
Observations	9,665	9,190	9,190	9,190	7,181	7,181	3,232	3,295	3,138	4,315	5,350	4,494	4,860	7,698	7,698	9,656	9,656	9,160	8,935	7,975	7,526
Adj. R^2	0.053	0.053	0.062	0.068	0.061	0.064	0.065	0.053	0.070	0.062	0.050	0.036	0.046	0.054	0.047	0.053	0.055	0.053	0.052	0.055	0.055

Notes: a indicates $p < 0.1$, *b* indicates $p < 0.05$, and *c* indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the results of our regressions estimating dynamic (event study) and static (average treatment effect on the treated, **ATT**) effect of a health event. All regressions are weighted using inverse probability weights. Column (1) shows the baseline specification controlling for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Other columns vary from this baseline as indicated by column headers. Mechanism (columns 2-6) and robustness checks (columns 14-21) analyses re-estimate the baseline within each subsample for comparability. Subgroup analyses (columns 7-13) partition the baseline sample (sample differences reflect missing data). Compare columns within each results group.

Table A.4: Event-Study Estimates for Weight Management - Body-Mass-Index

		Mechanisms					Subgroups							Robustness Checks							
		Objective (Obj) & Self-Assessed Health (SAH)			Locus of Control (LoC)		Propensity Score Terciles			Pre-Existing High Risk Condition		Educational Attainment		Pre-Event Health Controls		Current Income (Inc)		3-Year Survival Window		5-Year Survival Window	
		w/o	+ Obj	+ SAH	w/o	+ LoC	Bottom	Middle	Top	None	> 1	Lower	Higher	t_{-1}	t_{-5}	w/o	+ Inc	All	Survivng	All	Surviving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Time to Health Event																					
t_{-6}	0.177	0.246	0.319	0.341	0.344	0.357	0.196	-0.262	0.548	-0.064	0.359	-0.073	0.538^{a}	0.177	0.219	0.188	0.238	0.030	0.125	0.136	0.269
	(0.219)	(0.219)	(0.219)	(0.219)	(0.296)	(0.297)	(0.380)	(0.345)	(0.395)	(0.295)	(0.314)	(0.333)	(0.281)	(0.242)	(0.244)	(0.219)	(0.227)	(0.281)	(0.283)	(0.298)	(0.308)
t_{-5}	0.344	0.427^{b}	0.471^{b}	0.481^{b}	0.554^{a}	0.559^{a}	0.697^{a}	0.068	0.294	0.104	0.553^{a}	0.526	0.376	0.351	0.440^{a}	0.351	0.403^{a}	0.339	0.391^{a}	0.218	0.274
	(0.215)	(0.217)	(0.217)	(0.216)	(0.293)	(0.293)	(0.381)	(0.372)	(0.361)	(0.320)	(0.290)	(0.329)	(0.275)	(0.238)	(0.242)	(0.215)	(0.219)	(0.216)	(0.221)	(0.290)	(0.298)
t_{-4}	0.177	0.205	0.215	0.236	0.218	0.222	0.460	-0.033	0.104	-0.225	0.497^{a}	0.088	0.377	0.203	0.224	0.180	0.206	0.175	0.212	0.320	0.268
	(0.195)	(0.199)	(0.199)	(0.199)	(0.258)	(0.258)	(0.377)	(0.352)	(0.306)	(0.277)	(0.270)	(0.303)	(0.253)	(0.220)	(0.223)	(0.195)	(0.197)	(0.196)	(0.200)	(0.251)	(0.265)
t_{-3}	0.214	0.304	0.312	0.321	0.141	0.149	0.421	-0.272	0.356	0.113	0.309	-0.164	0.653^{b}	0.225	0.317	0.213	0.233	0.213	0.231	0.328	0.361
	(0.200)	(0.204)	(0.203)	(0.203)	(0.255)	(0.255)	(0.367)	(0.331)	(0.335)	(0.286)	(0.275)	(0.297)	(0.274)	(0.222)	(0.226)	(0.200)	(0.201)	(0.201)	(0.204)	(0.216)	(0.220)
t_{-2}	0.079	0.124	0.114	0.138	0.056	0.056	0.019	0.050	0.106	-0.369	0.481^{a}	-0.212	0.319	0.048	0.095	0.077	0.081	0.049	0.060	0.132	0.135
	(0.180)	(0.183)	(0.183)	(0.183)	(0.217)	(0.217)	(0.307)	(0.281)	(0.316)	(0.239)	(0.262)	(0.289)	(0.222)	(0.199)	(0.202)	(0.180)	(0.180)	(0.190)	(0.193)	(0.208)	(0.214)
t_{-1}	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
t_{0}	-0.178	-0.171	-0.337^{a}	-0.395^{a}	-0.249	-0.261	-0.270	-0.360	0.004	-0.227	-0.091	-0.093	-0.206	-0.314	-0.362	-0.179	-0.190	-0.176	-0.147	-0.122	-0.018
	(0.201)	(0.197)	(0.203)	(0.204)	(0.233)	(0.232)	(0.347)	(0.328)	(0.358)	(0.272)	(0.284)	(0.319)	(0.250)	(0.231)	(0.234)	(0.201)	(0.201)	(0.201)	(0.204)	(0.228)	(0.233)
t_{1}	-0.087	-0.078	-0.239	-0.288	-0.194	-0.203	-0.066	-0.320	0.027	-0.357	0.113	-0.237	0.019	-0.240	-0.236	-0.087	-0.110	-0.084	-0.028	0.085	0.190
	(0.173)	(0.176)	(0.180)	(0.181)	(0.198)	(0.198)	(0.308)	(0.278)	(0.302)	(0.239)	(0.247)	(0.270)	(0.219)	(0.196)	(0.198)	(0.173)	(0.173)	(0.173)	(0.175)	(0.198)	(0.204)
t_{2}	-0.019	-0.013	-0.136	-0.176	0.008	-0.002	0.142	0.085	-0.328	-0.120	0.063	-0.246	0.152	0.002	0.046	-0.033	-0.062	-0.018	-0.003	0.159	0.255
	(0.181)	(0.184)	(0.185)	(0.185)	(0.212)	(0.212)	(0.341)	(0.279)	(0.314)	(0.259)	(0.252)	(0.284)	(0.225)	(0.209)	(0.210)	(0.180)	(0.182)	(0.181)	(0.181)	(0.202)	(0.206)
t_{3}	0.039	0.137	-0.018	-0.057	-0.069	-0.083	0.191	0.276	-0.342	-0.002	0.100	-0.058	0.052	-0.057	-0.129	0.040	0.007	0.054	0.076	0.261	0.317
	(0.200)	(0.205)	(0.207)	(0.208)	(0.211)	(0.211)	(0.365)	(0.320)	(0.349)	(0.284)	(0.279)	(0.316)	(0.255)	(0.271)	(0.272)	(0.200)	(0.202)	(0.201)	(0.201)	(0.227)	(0.229)
t_{4}	0.075	0.096	-0.095	-0.128	0.019	0.004	0.143	0.359	-0.383	-0.120	0.282	-0.104	0.133	-0.326	-0.457^{a}	0.076	0.034	0.088	0.108	0.284	0.299
	(0.205)	(0.207)	(0.204)	(0.205)	(0.216)	(0.216)	(0.369)	(0.328)	(0.361)	(0.273)	(0.300)	(0.312)	(0.269)	(0.256)	(0.258)	(0.205)	(0.209)	(0.205)	(0.206)	(0.234)	(0.236)
t_{5}	0.181	0.142	-0.034	-0.081	0.110	0.100	0.237	-0.061	0.254	0.247	0.113	0.281	-0.086	0.116	0.066	0.183	0.133	0.188	0.210	0.397	0.425^{a}
	(0.221)	(0.225)	(0.226)	(0.225)	(0.232)	(0.232)	(0.385)	(0.342)	(0.420)	(0.296)	(0.327)	(0.337)	(0.277)	(0.295)	(0.293)	(0.221)	(0.227)	(0.222)	(0.222)	(0.247)	(0.249)
t_{6}	0.278	0.336	0.121	0.072	0.176	0.163	0.969^{b}	-0.177	-0.068	0.295	0.267	0.129	0.462	0.385	0.337	0.281	0.228	0.292	0.315	0.503^{a}	0.531^{b}
	(0.239)	(0.245)	(0.245)	(0.245)	(0.251)	(0.251)	(0.447)	(0.343)	(0.433)	(0.318)	(0.348)	(0.368)	(0.315)	(0.346)	(0.350)	(0.239)	(0.242)	(0.239)	(0.240)	(0.259)	(0.260)
ATT	-0.123	-0.148	-0.313^{c}	-0.370^{c}	-0.176^{a}	-0.190^{a}	-0.092	-0.020	-0.275^{a}	0.000	-0.230^{a}	-0.081	-0.244^{b}	-0.224^{a}	-0.275^{b}	-0.127	-0.173^{a}	-0.110	-0.099	-0.029	0.043
	(0.091)	(0.093)	(0.101)	(0.103)	(0.106)	(0.105)	(0.163)	(0.148)	(0.158)	(0.124)	(0.130)	(0.141)	(0.118)	(0.116)	(0.117)	(0.091)	(0.099)	(0.096)	(0.097)	(0.112)	(0.114)
Mean (SD) of	26.920	26.840	26.840	26.840	26.960	26.960	26.910	26.840	27.000	26.200	27.560	27.450	26.380	27.020	27.020	26.920	26.920	26.920	26.890	26.710	26.670
t_{-1} Cohort	(4.199)	(4.125)	(4.125)	(4.125)	(4.240)	(4.240)	(4.338)	(3.944)	(4.309)	(4.048)	(4.231)	(4.409)	(3.825)	(4.310)	(4.310)	(4.199)	(4.199)	(4.199)	(4.163)	(4.089)	(3.974)
Wald F (ATT)	–	ref.	13.160^{c}	21.840^{c}	ref.	1.934	ref.	0.107	0.649	ref.	1.643	ref.	0.784	ref.	2.285	ref.	1.395	ref.	0.306	ref.	3.833^{a}
Wald F (t_0–t_6, joint)	–	ref.	2.68^{c}	3.611^{c}	ref.	0.270	ref.	0.952	1.079	ref.	0.534	ref.	0.665	ref.	1.388	ref.	0.296	ref.	0.535	ref.	1.727
Observations	9,665	9,190	9,190	9,190	7,181	7,181	3,232	3,295	3,138	4,315	5,350	4,494	4,860	7,698	7,698	9,656	9,656	9,160	8,935	7,975	7,526
Adj. R^2	0.103	0.102	0.119	0.122	0.102	0.102	0.107	0.114	0.131	0.042	0.096	0.098	0.114	0.113	0.095	0.103	0.103	0.104	0.102	0.099	0.098

Notes: *a* indicates $p < 0.1$, *b* indicates $p < 0.05$, and *c* indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the results of our regressions estimating dynamic (event study) and static (average treatment effect on the treated, **ATT**) effect of a health event. All regressions are weighted using inverse probability weights. Column (1) shows the baseline specification controlling for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Other columns vary from this baseline as indicated by column headers. Mechanism (columns 2-6) and robustness checks (columns 14-21) analyses re-estimate the baseline within each subsample for comparability. Subgroup analyses (columns 7-13) partition the baseline sample (sample differences reflect missing data). Compare columns within each results group.

Table A.5: Event-Study Estimates for Alcohol Consumption - Excessive Drinking (Weekly Drinks ≥ 14 (Male) or ≥ 7 (Female))

		Mechanisms					**Subgroups**							**Robustness Checks**							
		Objective (Obj) & Self-Assessed Health (SAH)			Locus of Control (LoC)		Propensity Score Terciles			Pre-Existing High Risk Condition		Educational Attainment		Pre-Event Health Controls		Current Income (Inc)		3-Year Survival Window		5-Year Survival Window	
		w/o	+ Obj	+ SAH	w/o	+ LoC	Bottom	Middle	Top	None	> 1	Lower	Higher	t_{-1}	t_{-5}	w/o	+ Inc	All	Survivng	All	Surviving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Time to Health Event																					
t_{-6}	-0.046^a	-0.048^a	-0.045^a	-0.045^a	-0.028	-0.030	-0.045	0.013	-0.089^a	-0.015	-0.068^b	-0.052	-0.038	-0.046	-0.048^a	-0.046^a	-0.031	-0.063^b	-0.064^b	-0.065^a	-0.064^a
	(0.026)	(0.026)	(0.026)	(0.026)	(0.034)	(0.034)	(0.043)	(0.043)	(0.046)	(0.038)	(0.034)	(0.035)	(0.038)	(0.028)	(0.028)	(0.026)	(0.026)	(0.032)	(0.033)	(0.035)	(0.037)
t_{-5}	-0.060^b	-0.054^b	-0.057^b	-0.057^b	-0.069^b	-0.070^b	-0.076^a	-0.080^b	-0.028	-0.044	-0.073^b	-0.064^a	-0.061^a	-0.061^b	-0.062^b	-0.061^b	-0.050^a	-0.060^b	-0.054^b	-0.052	-0.052
	(0.025)	(0.026)	(0.026)	(0.026)	(0.032)	(0.032)	(0.042)	(0.041)	(0.046)	(0.037)	(0.034)	(0.036)	(0.036)	(0.028)	(0.028)	(0.025)	(0.026)	(0.025)	(0.026)	(0.037)	(0.038)
t_{-4}	-0.014	-0.012	-0.016	-0.016	-0.014	-0.015	-0.005	0.048	-0.053	-0.001	-0.029	0.006	-0.024	-0.016	-0.017	-0.016	-0.011	-0.014	-0.012	-0.022	-0.020
	(0.025)	(0.025)	(0.025)	(0.025)	(0.032)	(0.032)	(0.044)	(0.044)	(0.040)	(0.038)	(0.033)	(0.036)	(0.036)	(0.027)	(0.027)	(0.025)	(0.025)	(0.025)	(0.025)	(0.033)	(0.034)
t_{-3}	-0.041^a	-0.040^a	-0.041^a	-0.041^a	0.006	0.005	-0.047	0.019	-0.078^a	-0.015	-0.066^b	-0.059^a	-0.022	-0.040	-0.041	-0.041^a	-0.036	-0.041^a	-0.036	-0.038	-0.028
	(0.024)	(0.024)	(0.024)	(0.024)	(0.030)	(0.030)	(0.041)	(0.041)	(0.040)	(0.037)	(0.031)	(0.033)	(0.034)	(0.026)	(0.026)	(0.024)	(0.024)	(0.024)	(0.024)	(0.026)	(0.027)
t_{-2}	-0.022	-0.020	-0.020	-0.021	-0.029	-0.029	-0.029	0.027	-0.050	0.026	-0.060^b	-0.029	-0.006	-0.019	-0.021	-0.021	-0.019	-0.017	-0.015	-0.006	0.000
	(0.020)	(0.021)	(0.021)	(0.021)	(0.023)	(0.023)	(0.035)	(0.035)	(0.033)	(0.030)	(0.027)	(0.029)	(0.028)	(0.022)	(0.022)	(0.020)	(0.020)	(0.022)	(0.023)	(0.025)	(0.026)
t_{-1}	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
t_0	-0.080^c	-0.080^c	-0.073^c	-0.072^c	-0.096^c	-0.093^c	-0.093^b	-0.031	-0.109^c	-0.050	-0.106^c	-0.062^b	-0.083^c	-0.091^c	-0.094^c	-0.080^c	-0.082^c	-0.081^c	-0.069^c	-0.071^c	-0.061^b
	(0.022)	(0.022)	(0.023)	(0.023)	(0.024)	(0.024)	(0.037)	(0.038)	(0.038)	(0.033)	(0.029)	(0.032)	(0.031)	(0.024)	(0.024)	(0.022)	(0.022)	(0.022)	(0.022)	(0.027)	(0.028)
t_1	-0.076^c	-0.081^c	-0.074^c	-0.074^c	-0.073^c	-0.072^c	-0.093^c	-0.036	-0.096^c	-0.057^b	-0.095^c	-0.086^c	-0.065^b	-0.071^c	-0.068^c	-0.076^c	-0.080^c	-0.077^c	-0.069^c	-0.077^c	-0.065^c
	(0.019)	(0.020)	(0.021)	(0.021)	(0.022)	(0.022)	(0.034)	(0.032)	(0.034)	(0.028)	(0.027)	(0.028)	(0.028)	(0.022)	(0.022)	(0.019)	(0.020)	(0.019)	(0.020)	(0.023)	(0.024)
t_2	-0.066^c	-0.063^c	-0.059^c	-0.058^c	-0.062^c	-0.060^c	-0.083^b	-0.011	-0.104^c	-0.008	-0.112^c	-0.076^c	-0.042	-0.068^c	-0.062^c	-0.066^c	-0.071^c	-0.066^c	-0.060^c	-0.066^c	-0.055^b
	(0.020)	(0.020)	(0.021)	(0.021)	(0.023)	(0.023)	(0.035)	(0.033)	(0.034)	(0.029)	(0.027)	(0.028)	(0.028)	(0.022)	(0.022)	(0.020)	(0.020)	(0.020)	(0.020)	(0.024)	(0.024)
t_3	-0.037^a	-0.040^a	-0.032	-0.032	-0.037	-0.035	-0.050	-0.015	-0.042	0.011	-0.079^c	-0.066^b	-0.012	-0.007	-0.005	-0.037^a	-0.044^a	-0.037^a	-0.031	-0.038	-0.024
	(0.022)	(0.023)	(0.024)	(0.024)	(0.024)	(0.024)	(0.039)	(0.037)	(0.040)	(0.034)	(0.030)	(0.033)	(0.031)	(0.029)	(0.029)	(0.022)	(0.023)	(0.022)	(0.023)	(0.026)	(0.027)
t_4	-0.075^c	-0.068^c	-0.061^c	-0.061^c	-0.066^c	-0.063^c	-0.069^a	-0.014	-0.128^c	-0.012	-0.134^c	-0.092^c	-0.044	-0.055^b	-0.055^a	-0.075^c	-0.084^c	-0.075^c	-0.070^c	-0.075^c	-0.061^b
	(0.022)	(0.023)	(0.023)	(0.023)	(0.024)	(0.024)	(0.039)	(0.037)	(0.038)	(0.033)	(0.029)	(0.032)	(0.032)	(0.028)	(0.028)	(0.022)	(0.022)	(0.022)	(0.022)	(0.026)	(0.027)
t_5	-0.088^c	-0.085^c	-0.076^c	-0.076^c	-0.080^c	-0.078^c	-0.088^b	-0.023	-0.139^c	-0.043	-0.130^c	-0.115^c	-0.046	-0.078^c	-0.076^c	-0.088^c	-0.099^c	-0.088^c	-0.082^c	-0.088^c	-0.075^c
	(0.022)	(0.023)	(0.023)	(0.023)	(0.024)	(0.024)	(0.039)	(0.038)	(0.038)	(0.032)	(0.031)	(0.031)	(0.033)	(0.028)	(0.028)	(0.022)	(0.023)	(0.022)	(0.022)	(0.026)	(0.027)
t_6	-0.041^a	-0.041^a	-0.035	-0.035	-0.040	-0.038	-0.054	-0.035	-0.036	-0.027	-0.060^a	-0.060^a	-0.023	-0.037	-0.030	-0.041^a	-0.052^b	-0.040^a	-0.035	-0.041	-0.028
	(0.024)	(0.025)	(0.025)	(0.025)	(0.026)	(0.026)	(0.041)	(0.040)	(0.045)	(0.035)	(0.034)	(0.035)	(0.034)	(0.030)	(0.031)	(0.024)	(0.025)	(0.024)	(0.024)	(0.028)	(0.028)
ATT	-0.046^c	-0.047^c	-0.040^c	-0.039^c	-0.049^c	-0.046^c	-0.053^c	-0.031^a	-0.057^c	-0.030^b	-0.060^c	-0.053^c	-0.034^b	-0.049^c	-0.045^c	-0.046^c	-0.057^c	-0.048^c	-0.043^c	-0.049^c	-0.042^c
	(0.010)	(0.010)	(0.012)	(0.012)	(0.012)	(0.012)	(0.018)	(0.017)	(0.017)	(0.015)	(0.014)	(0.015)	(0.015)	(0.012)	(0.012)	(0.010)	(0.011)	(0.011)	(0.011)	(0.013)	(0.014)
Mean (SD) of	0.317	0.317	0.317	0.317	0.303	0.303	0.338	0.282	0.330	0.292	0.339	0.293	0.338	0.303	0.303	0.317	0.317	0.317	0.313	0.345	0.336
t_{-1} Cohort	(0.465)	(0.465)	(0.465)	(0.465)	(0.460)	(0.460)	(0.474)	(0.451)	(0.471)	(0.455)	(0.474)	(0.456)	(0.473)	(0.460)	(0.460)	(0.465)	(0.465)	(0.465)	(0.464)	(0.476)	(0.473)
Wald F (ATT)	–	ref.	2.423	2.382	ref.	8.420^c	ref.	0.770	0.025	ref.	2.197	ref.	0.851	ref.	1.378	ref.	7.272^c	ref.	7.409^c	ref.	3.434
Wald F (t_0–t_6, joint)	–	ref.	0.736	0.757	ref.	0.925	ref.	0.481	0.446	ref.	1.826^a	ref.	0.761	ref.	0.705	ref.	1.015	ref.	1.812^a	ref.	0.741
Observations	9,665	9,190	9,190	9,190	7,181	7,181	3,232	3,295	3,138	4,315	5,350	4,494	4,860	7,698	7,698	9,656	9,656	9,160	8,935	7,975	7,526
Adj. R^2	0.043	0.042	0.049	0.049	0.041	0.043	0.050	0.051	0.066	0.044	0.058	0.038	0.058	0.045	0.041	0.043	0.046	0.044	0.043	0.047	0.045

Notes: a indicates $p < 0.1$, *b* indicates $p < 0.05$, and *c* indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the results of our regressions estimating dynamic (event study) and static (average treatment effect on the treated, **ATT**) effect of a health event. All regressions are weighted using inverse probability weights. Column (1) shows the baseline specification controlling for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Other columns vary from this baseline as indicated by column headers. Mechanism (columns 2-6) and robustness checks (columns 14-21) analyses re-estimate the baseline within each subsample for comparability. Subgroup analyses (columns 7-13) partition the baseline sample (sample differences reflect missing data). Compare columns within each results group.

Table A.6: Event-Study Estimates for Physical Activity - Weekly Days with Physical Activty <3

		Mechanisms					**Subgroups**							**Robustness Checks**							
		Objective (Obj) & Self-Assessed Health (SAH)			Locus of Control (LoC)		Propensity Score Terciles			Pre-Existing High Risk Condition		Educational Attainment		Pre-Event Health Controls		Current Income (Inc)		3-Year Survival Window		5-Year Survival Window	
		w/o	+ Obj	+ SAH	w/o	+ LoC	Bottom	Middle	Top	None	> 1	Lower	Higher	t_{-1}	t_{-5}	w/o	+ Inc	All	Survivng	All	Surviving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Time to Health Event																					
t_{-6}	-0.013	-0.015	-0.013	-0.010	-0.018	-0.015	-0.023	-0.009	-0.004	-0.019	-0.007	-0.005	-0.005	-0.010	-0.001	-0.013	-0.020	-0.010	-0.011	-0.013	-0.007
	(0.020)	(0.020)	(0.020)	(0.020)	(0.027)	(0.027)	(0.033)	(0.034)	(0.035)	(0.032)	(0.025)	(0.025)	(0.031)	(0.022)	(0.022)	(0.020)	(0.020)	(0.024)	(0.025)	(0.027)	(0.029)
t_{-5}	0.010	0.001	0.004	0.005	0.021	0.022	0.026	-0.013	0.014	0.003	0.017	0.023	0.003	0.012	0.016	0.010	0.005	0.010	0.004	0.002	-0.006
	(0.019)	(0.019)	(0.019)	(0.019)	(0.023)	(0.023)	(0.030)	(0.034)	(0.033)	(0.031)	(0.024)	(0.023)	(0.030)	(0.021)	(0.021)	(0.019)	(0.019)	(0.019)	(0.020)	(0.028)	(0.030)
t_{-4}	-0.016	-0.022	-0.019	-0.016	-0.043^a	-0.043	-0.059^a	0.052^a	-0.019	0.003	-0.032	-0.000	-0.026	-0.012	-0.009	-0.016	-0.018	-0.017	-0.020	0.002	0.001
	(0.019)	(0.019)	(0.019)	(0.019)	(0.026)	(0.026)	(0.035)	(0.030)	(0.031)	(0.030)	(0.025)	(0.024)	(0.031)	(0.021)	(0.021)	(0.019)	(0.019)	(0.019)	(0.019)	(0.025)	(0.027)
t_{-3}	0.003	-0.002	0.000	0.003	0.010	0.011	-0.042	-0.010	0.044	0.026	-0.011	0.027	-0.006	0.006	0.009	0.003	0.001	0.003	0.001	0.007	0.009
	(0.018)	(0.018)	(0.018)	(0.018)	(0.022)	(0.022)	(0.033)	(0.032)	(0.028)	(0.029)	(0.022)	(0.021)	(0.028)	(0.020)	(0.020)	(0.018)	(0.018)	(0.018)	(0.018)	(0.019)	(0.020)
t_{-2}	-0.002	-0.004	-0.003	-0.000	-0.005	-0.005	0.013	0.001	-0.010	-0.008	0.006	-0.006	0.008	-0.001	0.000	-0.002	-0.003	-0.005	-0.006	-0.005	-0.001
	(0.016)	(0.016)	(0.016)	(0.016)	(0.018)	(0.018)	(0.026)	(0.027)	(0.026)	(0.025)	(0.020)	(0.020)	(0.024)	(0.017)	(0.017)	(0.016)	(0.016)	(0.017)	(0.018)	(0.019)	(0.020)
t_{-1}	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
t_{0}	-0.009	-0.014	-0.024	-0.034^a	-0.016	-0.018	-0.024	-0.026	0.012	-0.033	0.007	0.024	-0.035	-0.008	-0.008	-0.009	-0.009	-0.009	-0.014	-0.005	-0.008
	(0.018)	(0.018)	(0.018)	(0.018)	(0.020)	(0.020)	(0.030)	(0.031)	(0.030)	(0.029)	(0.022)	(0.020)	(0.028)	(0.020)	(0.020)	(0.018)	(0.018)	(0.018)	(0.018)	(0.021)	(0.023)
t_{1}	-0.014	-0.017	-0.025	-0.034^b	-0.021	-0.023	-0.017	-0.030	0.003	-0.010	-0.014	-0.001	-0.024	-0.019	-0.022	-0.014	-0.012	-0.014	-0.018	-0.009	-0.011
	(0.016)	(0.016)	(0.017)	(0.017)	(0.018)	(0.018)	(0.027)	(0.027)	(0.027)	(0.024)	(0.021)	(0.020)	(0.025)	(0.018)	(0.018)	(0.016)	(0.016)	(0.016)	(0.016)	(0.018)	(0.019)
t_{2}	0.019	0.017	0.008	-0.000	0.013	0.011	0.010	0.007	0.038	0.014	0.024	0.026	0.009	0.014	0.008	0.019	0.021	0.019	0.016	0.024	0.024
	(0.015)	(0.016)	(0.016)	(0.016)	(0.018)	(0.018)	(0.027)	(0.026)	(0.026)	(0.024)	(0.020)	(0.019)	(0.024)	(0.017)	(0.017)	(0.015)	(0.015)	(0.015)	(0.015)	(0.018)	(0.019)
t_{3}	0.013	0.010	0.001	-0.007	0.007	0.004	0.040	0.010	-0.006	0.002	0.023	0.005	0.011	0.008	0.002	0.013	0.016	0.013	0.010	0.020	0.018
	(0.018)	(0.018)	(0.018)	(0.018)	(0.019)	(0.019)	(0.029)	(0.030)	(0.032)	(0.029)	(0.022)	(0.022)	(0.028)	(0.023)	(0.023)	(0.018)	(0.018)	(0.018)	(0.018)	(0.021)	(0.021)
t_{4}	0.025	0.019	0.009	0.002	0.026	0.023	0.040	-0.002	0.039	0.022	0.026	-0.009	0.050^a	0.015	0.006	0.025	0.029	0.024	0.021	0.031	0.032
	(0.018)	(0.018)	(0.018)	(0.018)	(0.019)	(0.019)	(0.030)	(0.031)	(0.030)	(0.027)	(0.023)	(0.023)	(0.027)	(0.023)	(0.023)	(0.018)	(0.018)	(0.018)	(0.018)	(0.021)	(0.021)
t_{5}	0.045^c	0.038^b	0.028	0.021	0.043^b	0.041^b	0.026	0.059^b	0.053^a	0.054^b	0.035	0.029	0.053^b	0.022	0.015	0.045^c	0.050^c	0.044^c	0.041^b	0.051^b	0.052^b
	(0.017)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.031)	(0.029)	(0.030)	(0.026)	(0.023)	(0.021)	(0.027)	(0.023)	(0.023)	(0.017)	(0.018)	(0.017)	(0.017)	(0.020)	(0.021)
t_{6}	0.041^b	0.034^a	0.025	0.017	0.040^b	0.037^a	-0.007	0.035	0.106^c	0.019	0.058^c	0.039^a	0.038	0.024	0.012	0.041^b	0.046^b	0.041^b	0.038^b	0.048^b	0.048^b
	(0.018)	(0.018)	(0.019)	(0.019)	(0.019)	(0.019)	(0.032)	(0.032)	(0.027)	(0.029)	(0.022)	(0.021)	(0.029)	(0.023)	(0.024)	(0.018)	(0.018)	(0.018)	(0.018)	(0.021)	(0.021)
ATT	0.013	0.011	0.002	-0.009	0.013	0.010	0.012	-0.003	0.026^b	0.006	0.018^a	0.011	0.006	0.001	-0.005	0.013	0.014	0.012	0.010	0.013	0.011
	(0.008)	(0.008)	(0.009)	(0.009)	(0.009)	(0.009)	(0.014)	(0.014)	(0.013)	(0.013)	(0.010)	(0.010)	(0.013)	(0.010)	(0.010)	(0.008)	(0.009)	(0.008)	(0.008)	(0.010)	(0.010)
Mean (SD) of	0.857	0.859	0.859	0.859	0.856	0.856	0.862	0.847	0.862	0.836	0.875	0.900	0.814	0.858	0.858	0.857	0.857	0.857	0.858	0.856	0.855
t_{-1} Cohort	(0.350)	(0.349)	(0.349)	(0.349)	(0.351)	(0.351)	(0.346)	(0.360)	(0.345)	(0.370)	(0.331)	(0.300)	(0.389)	(0.349)	(0.349)	(0.350)	(0.350)	(0.350)	(0.349)	(0.351)	(0.353)
Wald F (ATT)	–	ref.	6.926^c	24.470^c	ref.	16.620^c	ref.	0.586	0.532	ref.	0.594	ref.	0.097	ref.	7.676^c	ref.	0.081	ref.	0.913	ref.	0.632
Wald F (t_0–t_6, joint)	–	ref.	1.703	3.273^c	ref.	1.390	ref.	0.737	1.978^a	ref.	0.612	ref.	1.649	ref.	1.242	ref.	0.540	ref.	0.547	ref.	1.360
Observations	9,665	9,190	9,190	9,190	7,181	7,181	3,232	3,295	3,138	4,315	5,350	4,494	4,860	7,698	7,698	9,656	9,656	9,160	8,935	7,975	7,526
Adj. R^2	0.041	0.041	0.048	0.054	0.047	0.049	0.055	0.043	0.051	0.052	0.035	0.030	0.037	0.042	0.037	0.041	0.042	0.040	0.040	0.042	0.043

Notes: a indicates $p < 0.1$, *b* indicates $p < 0.05$, and *c* indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the results of our regressions estimating dynamic (event study) and static (average treatment effect on the treated, **ATT**) effect of a health event. All regressions are weighted using inverse probability weights. Column (1) shows the baseline specification controlling for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Other columns vary from this baseline as indicated by column headers. Mechanism (columns 2-6) and robustness checks (columns 14-21) analyses re-estimate the baseline within each subsample for comparability. Subgroup analyses (columns 7-13) partition the baseline sample (sample differences reflect missing data). Compare columns within each results group.

Table A.7: Event-Study Estimates for Weight Management - Overweight (Body-Mass-Index ≥ 25)

		Mechanisms					**Subgroups**							**Robustness Checks**							
		Objective (Obj) & Self-Assessed Health (SAH)			Locus of Control (LoC)		Propensity Score Terciles			Pre-Existing High Risk Condition		Educational Attainment		Pre-Event Health Controls		Current Income (Inc)		3-Year Survival Window		5-Year Survival Window	
		w/o	+ Obj	+ SAH	w/o	+ LoC	Bottom	Middle	Top	None	> 1	Lower	Higher	t_{-1}	t_{-5}	w/o	+ Inc	All	Survivng	All	Surviving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Time to Health Event																					
t_{-6}	0.009	0.006	0.001	0.001	0.015	0.012	0.034	0.055	-0.042	0.039	-0.019	0.014	0.014	0.008	0.008	0.011	0.010	-0.021	-0.024	-0.002	-0.006
	(0.028)	(0.029)	(0.029)	(0.029)	(0.038)	(0.038)	(0.048)	(0.048)	(0.050)	(0.042)	(0.038)	(0.040)	(0.040)	(0.031)	(0.031)	(0.028)	(0.029)	(0.035)	(0.036)	(0.039)	(0.041)
t_{-5}	0.012	0.003	-0.001	0.000	-0.019	-0.020	0.130^{c}	-0.063	-0.014	0.011	0.003	0.020	-0.003	0.010	0.010	0.013	0.013	0.008	0.000	0.034	0.026
	(0.027)	(0.028)	(0.028)	(0.028)	(0.036)	(0.036)	(0.046)	(0.046)	(0.047)	(0.042)	(0.037)	(0.041)	(0.038)	(0.030)	(0.030)	(0.027)	(0.028)	(0.028)	(0.028)	(0.039)	(0.041)
t_{-4}	0.041	0.034	0.029	0.031	0.019	0.018	0.047	0.018	0.045	0.045	0.034	0.047	0.020	0.040	0.038	0.042	0.041	0.035	0.036	0.046	0.042
	(0.026)	(0.027)	(0.027)	(0.027)	(0.035)	(0.035)	(0.046)	(0.047)	(0.043)	(0.040)	(0.035)	(0.038)	(0.038)	(0.029)	(0.029)	(0.026)	(0.027)	(0.026)	(0.027)	(0.035)	(0.036)
t_{-3}	-0.036	-0.035	-0.039	-0.039	-0.012	-0.014	-0.016	-0.020	-0.059	0.020	-0.075^{b}	-0.050	-0.031	-0.040	-0.042	-0.036	-0.035	-0.041	-0.041	-0.035	-0.029
	(0.025)	(0.026)	(0.026)	(0.026)	(0.032)	(0.032)	(0.044)	(0.044)	(0.044)	(0.040)	(0.033)	(0.037)	(0.036)	(0.028)	(0.028)	(0.025)	(0.026)	(0.026)	(0.026)	(0.028)	(0.029)
t_{-2}	0.006	0.006	0.007	0.009	0.003	0.003	0.026	0.040	-0.019	0.022	-0.010	0.000	0.005	0.002	0.002	0.006	0.006	-0.016	-0.017	-0.012	-0.011
	(0.022)	(0.023)	(0.023)	(0.022)	(0.026)	(0.026)	(0.038)	(0.038)	(0.037)	(0.032)	(0.030)	(0.032)	(0.031)	(0.024)	(0.024)	(0.022)	(0.022)	(0.024)	(0.025)	(0.027)	(0.028)
t_{-1}	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
t_{0}	-0.021	-0.023	-0.016	-0.012	-0.049^{a}	-0.046	-0.052	-0.030	0.016	0.009	-0.047	0.012	-0.050	-0.044	-0.040	-0.021	-0.021	-0.021	-0.029	-0.004	-0.004
	(0.025)	(0.025)	(0.026)	(0.026)	(0.028)	(0.028)	(0.042)	(0.042)	(0.043)	(0.038)	(0.033)	(0.037)	(0.034)	(0.028)	(0.028)	(0.025)	(0.025)	(0.025)	(0.025)	(0.030)	(0.031)
t_{1}	-0.003	-0.007	-0.000	0.000	-0.012	-0.010	0.021	-0.055	0.037	-0.002	-0.011	0.001	-0.014	-0.006	-0.003	-0.003	-0.003	-0.003	-0.006	0.002	-0.015
	(0.022)	(0.023)	(0.023)	(0.023)	(0.025)	(0.025)	(0.038)	(0.037)	(0.038)	(0.032)	(0.030)	(0.033)	(0.031)	(0.025)	(0.025)	(0.022)	(0.022)	(0.022)	(0.022)	(0.026)	(0.027)
t_{2}	0.011	0.006	0.014	0.016	-0.019	-0.017	0.051	0.038	-0.044	0.010	0.008	-0.002	0.008	-0.010	-0.005	0.012	0.012	0.011	0.011	0.016	0.010
	(0.022)	(0.023)	(0.023)	(0.023)	(0.025)	(0.025)	(0.039)	(0.037)	(0.039)	(0.033)	(0.030)	(0.033)	(0.031)	(0.025)	(0.025)	(0.022)	(0.022)	(0.022)	(0.022)	(0.026)	(0.027)
t_{3}	0.016	0.014	0.024	0.026	0.010	0.013	0.074^{a}	0.013	-0.027	0.036	-0.003	0.041	-0.014	-0.015	-0.011	0.016	0.016	0.019	0.016	0.023	0.009
	(0.025)	(0.026)	(0.027)	(0.027)	(0.027)	(0.027)	(0.044)	(0.042)	(0.045)	(0.038)	(0.034)	(0.038)	(0.035)	(0.033)	(0.033)	(0.025)	(0.026)	(0.025)	(0.025)	(0.029)	(0.030)
t_{4}	-0.003	-0.007	0.004	0.005	-0.020	-0.017	-0.016	-0.012	0.027	0.004	-0.012	0.025	-0.028	-0.001	0.005	-0.003	-0.003	-0.001	-0.003	0.004	-0.008
	(0.025)	(0.026)	(0.026)	(0.026)	(0.027)	(0.027)	(0.043)	(0.043)	(0.046)	(0.037)	(0.035)	(0.038)	(0.036)	(0.033)	(0.033)	(0.025)	(0.026)	(0.025)	(0.026)	(0.029)	(0.030)
t_{5}	-0.021	-0.025	-0.014	-0.014	-0.029	-0.026	0.012	-0.028	-0.035	0.005	-0.052	-0.008	-0.029	-0.021	-0.019	-0.021	-0.021	-0.018	-0.020	-0.013	-0.026
	(0.026)	(0.027)	(0.027)	(0.027)	(0.028)	(0.028)	(0.044)	(0.044)	(0.046)	(0.037)	(0.036)	(0.038)	(0.036)	(0.033)	(0.033)	(0.026)	(0.026)	(0.026)	(0.026)	(0.030)	(0.031)
t_{6}	0.010	0.008	0.019	0.019	-0.005	-0.003	0.049	0.011	-0.014	0.012	0.014	0.033	-0.024	0.001	0.004	0.010	0.011	0.013	0.011	0.018	0.005
	(0.027)	(0.028)	(0.028)	(0.028)	(0.029)	(0.029)	(0.045)	(0.046)	(0.050)	(0.039)	(0.037)	(0.040)	(0.038)	(0.035)	(0.035)	(0.027)	(0.028)	(0.027)	(0.027)	(0.031)	(0.032)
ATT	-0.005	-0.007	0.004	0.004	-0.018	-0.015	-0.008	-0.019	0.009	-0.010	-0.003	0.008	-0.019	-0.016	-0.012	-0.005	-0.005	0.004	0.002	0.013	0.002
	(0.011)	(0.012)	(0.013)	(0.013)	(0.013)	(0.013)	(0.020)	(0.019)	(0.020)	(0.017)	(0.015)	(0.017)	(0.016)	(0.014)	(0.014)	(0.011)	(0.012)	(0.012)	(0.012)	(0.015)	(0.015)
Mean (SD) of	0.465	0.469	0.469	0.469	0.476	0.476	0.441	0.479	0.473	0.442	0.485	0.454	0.479	0.468	0.468	0.465	0.465	0.465	0.469	0.461	0.475
t_{-1} Cohort	(0.499)	(0.499)	(0.499)	(0.499)	(0.500)	(0.500)	(0.497)	(0.500)	(0.500)	(0.497)	(0.500)	(0.498)	(0.500)	(0.499)	(0.499)	(0.499)	(0.499)	(0.499)	(0.499)	(0.499)	(0.500)
Wald F (ATT)	–	ref.	3.605^{a}	3.652^{a}	ref.	6.993^{c}	ref.	0.151	0.392	ref.	0.084	ref.	1.351	ref.	1.782	ref.	0.015	ref.	0.555	ref.	6.333^{b}
Wald F (t_0–t_6, joint)	–	ref.	1.416	1.219	ref.	0.802	ref.	0.670	1.921^{a}	ref.	0.439	ref.	0.614	ref.	0.405	ref.	0.300	ref.	0.691	ref.	1.517
Observations	9,665	9,190	9,190	9,190	7,181	7,181	3,232	3,295	3,138	4,315	5,350	4,494	4,860	7,698	7,698	9,656	9,656	9,160	8,935	7,975	7,526
Adj. R^2	0.026	0.027	0.032	0.034	0.024	0.025	0.041	0.041	0.038	0.028	0.036	0.038	0.031	0.026	0.027	0.026	0.026	0.027	0.027	0.028	0.026

Notes: a indicates $p < 0.1$, b indicates $p < 0.05$, and c indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the results of our regressions estimating dynamic (event study) and static (average treatment effect on the treated, **ATT**) effect of a health event. All regressions are weighted using inverse probability weights. Column (1) shows the baseline specification controlling for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Other columns vary from this baseline as indicated by column headers. Mechanism (columns 2-6) and robustness checks (columns 14-21) analyses re-estimate the baseline within each sub-sample for comparability. Subgroup analyses (columns 7-13) partition the baseline sample (sample differences reflect missing data). Compare columns within each results group.

Table A.8: Event-Study Estimates for Preventive Medication Use - Any CVD-related Medication

	Mechanisms					Subgroups							Robustness Checks								
		Objective (Obj) & Self-Assessed Health (SAH)			Locus of Control (LoC)		Propensity Score Terciles			Pre-Existing High Risk Condition		Educational Attainment		Pre-Event Health Controls		Current Income (Inc)		3-Year Survival Window		5-Year Survival Window	
		w/o	+ Obj	+ SAH	w/o	+ LoC	Bottom	Middle	Top	None	> 1	Lower	Higher	t_{-1}	t_{-5}	w/o	+ Inc	All	Survivng	All	Surviving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Time to Health Event																					
t_{-6}	-0.054^{c}	-0.052^{b}	-0.052^{b}	-0.048^{b}	-0.064^{b}	-0.065^{b}	-0.044	-0.038	-0.073^{b}	0.026	-0.147^{c}	-0.044	-0.073^{c}	-0.053^{b}	-0.056^{c}	-0.054^{c}	-0.053^{b}	-0.025	-0.027	-0.038	-0.052
	(0.020)	(0.021)	(0.020)	(0.020)	(0.029)	(0.029)	(0.033)	(0.035)	(0.036)	(0.022)	(0.021)	(0.030)	(0.028)	(0.021)	(0.021)	(0.020)	(0.021)	(0.026)	(0.026)	(0.030)	(0.031)
t_{-5}	-0.044^{b}	-0.040^{b}	-0.043^{b}	-0.041^{b}	-0.006	-0.006	-0.008	-0.040	-0.077^{b}	0.039^{a}	-0.143^{c}	-0.044	-0.035	-0.042^{b}	-0.041^{b}	-0.043^{b}	-0.042^{b}	-0.043^{b}	-0.042^{b}	-0.084^{c}	-0.090^{c}
	(0.020)	(0.020)	(0.020)	(0.020)	(0.027)	(0.027)	(0.035)	(0.035)	(0.033)	(0.022)	(0.021)	(0.030)	(0.027)	(0.021)	(0.021)	(0.020)	(0.020)	(0.020)	(0.021)	(0.030)	(0.032)
t_{-4}	-0.038^{b}	-0.037^{a}	-0.037^{a}	-0.033^{a}	-0.021	-0.021	-0.004	-0.005	-0.085^{c}	0.021	-0.127^{c}	-0.040	-0.049^{a}	-0.035^{a}	-0.028	-0.038^{a}	-0.037^{a}	-0.037^{a}	-0.034^{a}	-0.048^{a}	-0.059^{b}
	(0.019)	(0.020)	(0.019)	(0.019)	(0.027)	(0.027)	(0.033)	(0.034)	(0.031)	(0.020)	(0.019)	(0.028)	(0.027)	(0.020)	(0.021)	(0.019)	(0.019)	(0.020)	(0.020)	(0.027)	(0.029)
t_{-3}	0.020	0.025	0.023	0.026	0.022	0.022	0.040	0.021	-0.004	0.047^{b}	-0.093^{c}	-0.006	0.044^{a}	0.019	0.028	0.020	0.021	0.023	0.016	0.021	0.008
	(0.018)	(0.018)	(0.018)	(0.018)	(0.024)	(0.024)	(0.030)	(0.033)	(0.028)	(0.021)	(0.014)	(0.026)	(0.025)	(0.019)	(0.020)	(0.018)	(0.018)	(0.018)	(0.019)	(0.021)	(0.022)
t_{-2}	-0.003	0.001	0.001	0.004	0.003	0.003	-0.006	0.011	-0.015	-0.001	-0.034^{c}	0.008	-0.016	-0.000	0.001	-0.002	-0.002	-0.004	-0.012	-0.009	-0.021
	(0.015)	(0.015)	(0.015)	(0.015)	(0.019)	(0.019)	(0.026)	(0.026)	(0.025)	(0.015)	(0.008)	(0.022)	(0.021)	(0.016)	(0.018)	(0.015)	(0.015)	(0.017)	(0.017)	(0.020)	(0.021)
t_{-1}	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
t_{0}	0.425^{c}	0.431^{c}	0.405^{c}	0.397^{c}	0.440^{c}	0.441^{c}	0.449^{c}	0.486^{c}	0.363^{c}	0.943^{c}	0.006	0.394^{c}	0.452^{c}	0.430^{c}	0.432^{c}	0.425^{c}	0.425^{c}	0.426^{c}	0.431^{c}	0.420^{c}	0.430^{c}
	(0.013)	(0.014)	(0.014)	(0.014)	(0.015)	(0.015)	(0.022)	(0.023)	(0.023)	(0.011)	(0.005)	(0.019)	(0.018)	(0.015)	(0.016)	(0.013)	(0.013)	(0.013)	(0.013)	(0.016)	(0.017)
t_{1}	0.449^{c}	0.453^{c}	0.427^{c}	0.420^{c}	0.459^{c}	0.460^{c}	0.481^{c}	0.502^{c}	0.381^{c}	0.939^{c}	0.011^{b}	0.418^{c}	0.477^{c}	0.454^{c}	0.457^{c}	0.449^{c}	0.448^{c}	0.449^{c}	0.451^{c}	0.443^{c}	0.451^{c}
	(0.012)	(0.013)	(0.013)	(0.013)	(0.014)	(0.014)	(0.021)	(0.021)	(0.021)	(0.011)	(0.004)	(0.018)	(0.017)	(0.014)	(0.015)	(0.012)	(0.012)	(0.012)	(0.013)	(0.016)	(0.016)
t_{2}	0.443^{c}	0.450^{c}	0.430^{c}	0.423^{c}	0.446^{c}	0.447^{c}	0.488^{c}	0.491^{c}	0.373^{c}	0.941^{c}	0.008	0.410^{c}	0.474^{c}	0.441^{c}	0.458^{c}	0.442^{c}	0.442^{c}	0.443^{c}	0.444^{c}	0.438^{c}	0.445^{c}
	(0.012)	(0.013)	(0.013)	(0.013)	(0.015)	(0.015)	(0.022)	(0.021)	(0.021)	(0.011)	(0.005)	(0.018)	(0.017)	(0.014)	(0.015)	(0.012)	(0.013)	(0.013)	(0.013)	(0.016)	(0.017)
t_{3}	0.433^{c}	0.439^{c}	0.417^{c}	0.412^{c}	0.441^{c}	0.442^{c}	0.448^{c}	0.503^{c}	0.358^{c}	0.935^{c}	0.006	0.394^{c}	0.471^{c}	0.443^{c}	0.438^{c}	0.433^{c}	0.432^{c}	0.433^{c}	0.433^{c}	0.431^{c}	0.437^{c}
	(0.013)	(0.014)	(0.014)	(0.014)	(0.015)	(0.015)	(0.023)	(0.023)	(0.023)	(0.013)	(0.005)	(0.020)	(0.019)	(0.017)	(0.019)	(0.013)	(0.014)	(0.013)	(0.014)	(0.017)	(0.017)
t_{4}	0.453^{c}	0.458^{c}	0.439^{c}	0.434^{c}	0.460^{c}	0.461^{c}	0.501^{c}	0.494^{c}	0.380^{c}	0.936^{c}	0.007	0.432^{c}	0.475^{c}	0.459^{c}	0.460^{c}	0.453^{c}	0.452^{c}	0.452^{c}	0.452^{c}	0.448^{c}	0.452^{c}
	(0.014)	(0.014)	(0.014)	(0.014)	(0.015)	(0.015)	(0.023)	(0.023)	(0.023)	(0.012)	(0.005)	(0.020)	(0.019)	(0.017)	(0.018)	(0.014)	(0.014)	(0.014)	(0.014)	(0.017)	(0.017)
t_{5}	0.461^{c}	0.465^{c}	0.445^{c}	0.440^{c}	0.462^{c}	0.462^{c}	0.507^{c}	0.497^{c}	0.396^{c}	0.948^{c}	-0.000	0.452^{c}	0.472^{c}	0.473^{c}	0.473^{c}	0.461^{c}	0.460^{c}	0.460^{c}	0.460^{c}	0.456^{c}	0.460^{c}
	(0.014)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.024)	(0.023)	(0.025)	(0.011)	(0.008)	(0.020)	(0.020)	(0.018)	(0.019)	(0.014)	(0.014)	(0.014)	(0.014)	(0.017)	(0.018)
t_{6}	0.456^{c}	0.465^{c}	0.445^{c}	0.437^{c}	0.461^{c}	0.462^{c}	0.493^{c}	0.521^{c}	0.361^{c}	0.945^{c}	0.008	0.429^{c}	0.484^{c}	0.464^{c}	0.468^{c}	0.456^{c}	0.456^{c}	0.455^{c}	0.456^{c}	0.451^{c}	0.456^{c}
	(0.014)	(0.014)	(0.014)	(0.015)	(0.015)	(0.015)	(0.023)	(0.024)	(0.024)	(0.012)	(0.006)	(0.020)	(0.019)	(0.017)	(0.019)	(0.014)	(0.014)	(0.014)	(0.014)	(0.017)	(0.018)
ATT	0.456^{c}	0.459^{c}	0.437^{c}	0.428^{c}	0.456^{c}	0.457^{c}	0.481^{c}	0.500^{c}	0.402^{c}	0.927^{c}	0.072^{c}	0.426^{c}	0.485^{c}	0.454^{c}	0.458^{c}	0.455^{c}	0.450^{c}	0.452^{c}	0.456^{c}	0.446^{c}	0.462^{c}
	(0.007)	(0.007)	(0.007)	(0.007)	(0.008)	(0.008)	(0.012)	(0.012)	(0.011)	(0.006)	(0.005)	(0.010)	(0.010)	(0.008)	(0.009)	(0.007)	(0.007)	(0.007)	(0.007)	(0.009)	(0.009)
Mean (SD) of	0.545	0.536	0.536	0.536	0.535	0.535	0.541	0.491	0.600	0.047	0.991	0.575	0.519	0.539	0.539	0.545	0.545	0.545	0.543	0.555	0.548
t_{-1} Cohort	(0.498)	(0.499)	(0.499)	(0.499)	(0.499)	(0.499)	(0.499)	(0.501)	(0.491)	(0.212)	(0.095)	(0.495)	(0.500)	(0.499)	(0.499)	(0.498)	(0.498)	(0.498)	(0.498)	(0.497)	(0.498)
Wald F (ATT)	–	ref.	56.050^{c}	89.540^{c}	ref.	2.245	ref.	1.340	23.800^{c}	ref.	1000.000^{c}	ref.	18.560^{c}	ref.	0.733	ref.	3.432^{a}	ref.	8.135^{c}	ref.	37.770^{c}
Wald F (t_0–t_6, joint)	–	ref.	9.231^{c}	12.550^{c}	ref.	0.321	ref.	1.514	2.839^{c}	ref.	1028.000^{c}	ref.	1.915^{a}	ref.	1.230	ref.	0.467	ref.	2.133^{b}	ref.	1.691
Observations	9,665	9,190	9,190	9,190	7,181	7,181	3,232	3,295	3,138	4,315	5,350	4,494	4,860	7,698	7,698	9,656	9,656	9,160	8,935	7,975	7,526
Adj. R^2	0.519	0.523	0.529	0.534	0.513	0.513	0.530	0.547	0.514	0.866	0.150	0.497	0.550	0.538	0.520	0.519	0.519	0.508	0.510	0.493	0.500

Notes: a indicates $p < 0.1$, b indicates $p < 0.05$, and c indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the results of our regressions estimating dynamic (event study) and static (average treatment effect on the treated, **ATT**) effect of a health event. All regressions are weighted using inverse probability weights. Column (1) shows the baseline specification controlling for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Other columns vary from this baseline as indicated by column headers. Mechanism (columns 2-6) and robustness checks (columns 14-21) analyses re-estimate the baseline within each subsample for comparability. Subgroup analyses (columns 7-13) partition the baseline sample (sample differences reflect missing data). Compare columns within each results group.

Table A.9: Event-Study Estimates for Preventive Medication Use - Anti-Thrombotic Medication

		Mechanisms					**Subgroups**							**Robustness Checks**							
		Objective (Obj) & Self-Assessed Health (SAH)			Locus of Control (LoC)		Propensity Score Terciles			Pre-Existing High Risk Condition		Educational Attainment		Pre-Event Health Controls		Current Income (Inc)		3-Year Survival Window		5-Year Survival Window	
		w/o	+ Obj	+ SAH	w/o	+ LoC	Bottom	Middle	Top	None	> 1	Lower	Higher	t_{-1}	t_{-5}	w/o	+ Inc	All	Survivng	All	Surviving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Time to Health Event																					
t_{-6}	-0.037^{a}	-0.036^{a}	-0.033	-0.030	-0.058^{b}	-0.059^{b}	-0.002	-0.012	-0.084^{b}	0.019	-0.092^{c}	-0.043	-0.044	-0.024	-0.026	-0.039^{a}	-0.042^{b}	-0.007	-0.002	-0.022	-0.016
	(0.021)	(0.021)	(0.021)	(0.021)	(0.026)	(0.026)	(0.036)	(0.034)	(0.038)	(0.015)	(0.034)	(0.032)	(0.028)	(0.023)	(0.022)	(0.021)	(0.021)	(0.028)	(0.029)	(0.032)	(0.034)
t_{-5}	-0.060^{c}	-0.056^{c}	-0.059^{c}	-0.058^{c}	-0.002	-0.003	-0.039	-0.010	-0.118^{c}	0.019	-0.135^{c}	-0.060^{a}	-0.047^{a}	-0.046^{b}	-0.044^{b}	-0.060^{c}	-0.062^{c}	-0.059^{c}	-0.055^{c}	-0.121^{c}	-0.114^{c}
	(0.021)	(0.021)	(0.021)	(0.021)	(0.028)	(0.029)	(0.034)	(0.034)	(0.036)	(0.014)	(0.033)	(0.032)	(0.028)	(0.022)	(0.022)	(0.021)	(0.021)	(0.021)	(0.021)	(0.028)	(0.029)
t_{-4}	-0.038^{a}	-0.038^{a}	-0.036^{a}	-0.033^{a}	-0.006	-0.007	-0.041	0.027	-0.081^{b}	0.004	-0.081^{b}	-0.033	-0.056^{b}	-0.022	-0.016	-0.037^{a}	-0.038^{a}	-0.036^{a}	-0.034^{a}	-0.070^{c}	-0.092^{c}
	(0.020)	(0.020)	(0.020)	(0.020)	(0.026)	(0.026)	(0.034)	(0.035)	(0.033)	(0.012)	(0.032)	(0.029)	(0.027)	(0.022)	(0.022)	(0.020)	(0.020)	(0.020)	(0.020)	(0.027)	(0.027)
t_{-3}	0.010	0.012	0.010	0.012	0.028	0.028	0.051	0.001	-0.027	0.025^{a}	-0.039	0.022	-0.004	0.024	0.025	0.010	0.009	0.012	0.016	-0.007	-0.007
	(0.020)	(0.020)	(0.020)	(0.020)	(0.025)	(0.025)	(0.034)	(0.033)	(0.034)	(0.014)	(0.030)	(0.030)	(0.027)	(0.021)	(0.021)	(0.020)	(0.020)	(0.020)	(0.020)	(0.022)	(0.023)
t_{-2}	0.014	0.017	0.015	0.017	0.025	0.025	0.028	0.009	0.002	0.015	0.002	0.020	0.003	0.031^{a}	0.033^{a}	0.014	0.014	0.015	0.012	-0.002	-0.010
	(0.017)	(0.017)	(0.017)	(0.017)	(0.020)	(0.020)	(0.028)	(0.028)	(0.029)	(0.010)	(0.027)	(0.025)	(0.023)	(0.018)	(0.019)	(0.017)	(0.017)	(0.019)	(0.019)	(0.022)	(0.022)
t_{-1}	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
t_{0}	0.725^{c}	0.729^{c}	0.689^{c}	0.681^{c}	0.749^{c}	0.750^{c}	0.748^{c}	0.782^{c}	0.666^{c}	0.974^{c}	0.526^{c}	0.703^{c}	0.747^{c}	0.747^{c}	0.744^{c}	0.725^{c}	0.725^{c}	0.726^{c}	0.738^{c}	0.703^{c}	0.718^{c}
	(0.013)	(0.013)	(0.014)	(0.014)	(0.015)	(0.015)	(0.022)	(0.022)	(0.023)	(0.008)	(0.021)	(0.020)	(0.018)	(0.015)	(0.015)	(0.013)	(0.013)	(0.013)	(0.013)	(0.017)	(0.017)
t_{1}	0.732^{c}	0.737^{c}	0.697^{c}	0.690^{c}	0.753^{c}	0.754^{c}	0.751^{c}	0.785^{c}	0.668^{c}	0.955^{c}	0.539^{c}	0.711^{c}	0.753^{c}	0.754^{c}	0.757^{c}	0.732^{c}	0.732^{c}	0.732^{c}	0.739^{c}	0.709^{c}	0.721^{c}
	(0.013)	(0.013)	(0.013)	(0.013)	(0.014)	(0.014)	(0.022)	(0.020)	(0.023)	(0.009)	(0.020)	(0.019)	(0.017)	(0.014)	(0.014)	(0.013)	(0.013)	(0.013)	(0.013)	(0.016)	(0.017)
t_{2}	0.727^{c}	0.731^{c}	0.701^{c}	0.695^{c}	0.740^{c}	0.741^{c}	0.760^{c}	0.780^{c}	0.658^{c}	0.969^{c}	0.523^{c}	0.701^{c}	0.756^{c}	0.743^{c}	0.753^{c}	0.727^{c}	0.728^{c}	0.727^{c}	0.732^{c}	0.704^{c}	0.715^{c}
	(0.013)	(0.013)	(0.014)	(0.014)	(0.015)	(0.015)	(0.022)	(0.021)	(0.023)	(0.008)	(0.021)	(0.020)	(0.017)	(0.015)	(0.015)	(0.013)	(0.013)	(0.013)	(0.013)	(0.017)	(0.017)
t_{3}	0.727^{c}	0.732^{c}	0.698^{c}	0.692^{c}	0.745^{c}	0.745^{c}	0.739^{c}	0.777^{c}	0.669^{c}	0.959^{c}	0.533^{c}	0.705^{c}	0.753^{c}	0.749^{c}	0.743^{c}	0.727^{c}	0.727^{c}	0.726^{c}	0.731^{c}	0.704^{c}	0.714^{c}
	(0.014)	(0.014)	(0.014)	(0.014)	(0.015)	(0.015)	(0.023)	(0.022)	(0.025)	(0.011)	(0.022)	(0.021)	(0.018)	(0.017)	(0.017)	(0.014)	(0.014)	(0.014)	(0.014)	(0.017)	(0.018)
t_{4}	0.725^{c}	0.727^{c}	0.697^{c}	0.691^{c}	0.739^{c}	0.740^{c}	0.761^{c}	0.764^{c}	0.660^{c}	0.944^{c}	0.531^{c}	0.707^{c}	0.750^{c}	0.748^{c}	0.745^{c}	0.725^{c}	0.726^{c}	0.724^{c}	0.729^{c}	0.701^{c}	0.710^{c}
	(0.014)	(0.014)	(0.015)	(0.015)	(0.015)	(0.015)	(0.024)	(0.023)	(0.025)	(0.012)	(0.022)	(0.022)	(0.019)	(0.017)	(0.018)	(0.014)	(0.014)	(0.014)	(0.014)	(0.017)	(0.018)
t_{5}	0.744^{c}	0.746^{c}	0.713^{c}	0.708^{c}	0.756^{c}	0.757^{c}	0.775^{c}	0.786^{c}	0.682^{c}	0.970^{c}	0.537^{c}	0.743^{c}	0.748^{c}	0.769^{c}	0.764^{c}	0.744^{c}	0.745^{c}	0.743^{c}	0.747^{c}	0.720^{c}	0.730^{c}
	(0.014)	(0.014)	(0.015)	(0.015)	(0.015)	(0.015)	(0.023)	(0.022)	(0.026)	(0.009)	(0.023)	(0.020)	(0.020)	(0.016)	(0.017)	(0.014)	(0.014)	(0.014)	(0.014)	(0.017)	(0.018)
t_{6}	0.729^{c}	0.732^{c}	0.700^{c}	0.694^{c}	0.740^{c}	0.741^{c}	0.743^{c}	0.791^{c}	0.655^{c}	0.947^{c}	0.535^{c}	0.719^{c}	0.747^{c}	0.755^{c}	0.758^{c}	0.729^{c}	0.731^{c}	0.728^{c}	0.731^{c}	0.705^{c}	0.714^{c}
	(0.014)	(0.015)	(0.015)	(0.015)	(0.016)	(0.016)	(0.026)	(0.022)	(0.026)	(0.013)	(0.023)	(0.021)	(0.020)	(0.017)	(0.018)	(0.014)	(0.015)	(0.014)	(0.015)	(0.018)	(0.018)
ATT	0.737^{c}	0.740^{c}	0.705^{c}	0.697^{c}	0.741^{c}	0.741^{c}	0.748^{c}	0.778^{c}	0.696^{c}	0.950^{c}	0.567^{c}	0.715^{c}	0.765^{c}	0.744^{c}	0.745^{c}	0.738^{c}	0.735^{c}	0.736^{c}	0.742^{c}	0.722^{c}	0.737^{c}
	(0.007)	(0.007)	(0.008)	(0.008)	(0.008)	(0.008)	(0.011)	(0.011)	(0.012)	(0.005)	(0.011)	(0.010)	(0.009)	(0.008)	(0.009)	(0.007)	(0.007)	(0.007)	(0.007)	(0.009)	(0.009)
Mean (SD) of	0.251	0.246	0.246	0.246	0.234	0.234	0.241	0.203	0.307	0.014	0.463	0.272	0.232	0.233	0.233	0.251	0.251	0.251	0.245	0.275	0.266
t_{-1} Cohort	(0.434)	(0.431)	(0.431)	(0.431)	(0.424)	(0.424)	(0.428)	(0.403)	(0.462)	(0.119)	(0.499)	(0.445)	(0.422)	(0.423)	(0.423)	(0.434)	(0.434)	(0.434)	(0.430)	(0.447)	(0.442)
Wald F (ATT)	–	ref.	122.700^{c}	163.500^{c}	ref.	1.563	ref.	3.632^{a}	9.854^{c}	ref.	1021.000^{c}	ref.	13.500^{c}	ref.	0.034	ref.	0.792	ref.	13.650^{c}	ref.	23.080^{c}
Wald F (t_0–t_6, joint)	–	ref.	18.730^{c}	22.980^{c}	ref.	0.235	ref.	0.890	1.723^{a}	ref.	60.910^{c}	ref.	1.527	ref.	1.472	ref.	0.374	ref.	3.569^{b}	ref.	1.702
Observations	9,665	9,190	9,190	9,190	7,181	7,181	3,232	3,295	3,138	4,315	5,350	4,494	4,860	7,698	7,698	9,656	9,656	9,160	8,935	7,975	7,526
Adj. R^2	0.641	0.642	0.650	0.653	0.662	0.662	0.649	0.691	0.615	0.901	0.459	0.613	0.680	0.631	0.633	0.641	0.642	0.642	0.650	0.641	0.656

Notes: a indicates $p < 0.1$, b indicates $p < 0.05$, and c indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the results of our regressions estimating dynamic (event study) and static (average treatment effect on the treated, **ATT**) effect of a health event. All regressions are weighted using inverse probability weights. Column (1) shows the baseline specification controlling for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Other columns vary from this baseline as indicated by column headers. Mechanism (columns 2-6) and robustness checks (columns 14-21) analyses re-estimate the baseline within each subsample for comparability. Subgroup analyses (columns 7-13) partition the baseline sample (sample differences reflect missing data). Compare columns within each results group.

Table A.10: Event-Study Estimates for Preventive Medication Use - Anti-Hypertensive Medication

		Mechanisms					**Subgroups**							**Robustness Checks**							
		Objective (Obj) & Self-Assessed Health (SAH)			Locus of Control (LoC)		Propensity Score Terciles			Pre-Existing High Risk Condition		Educational Attainment		Pre-Event Health Controls		Current Income (Inc)		3-Year Survival Window		5-Year Survival Window	
		w/o	+ Obj	+ SAH	w/o	+ LoC	Bottom	Middle	Top	None	> 1	Lower	Higher	t_{-1}	t_{-5}	w/o	+ Inc	All	Survivng	All	Surviving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Time to Health Event																					
t_{-6}	-0.048^{b}	-0.045^{b}	-0.043^{b}	-0.040^{b}	-0.064^{b}	-0.065^{b}	-0.036	-0.011	-0.083^{b}	0.012	-0.113^{c}	-0.029	-0.077^{c}	-0.049^{b}	-0.047^{b}	-0.047^{b}	-0.039^{a}	-0.033	-0.039	-0.026	-0.042
	(0.020)	(0.020)	(0.020)	(0.020)	(0.028)	(0.028)	(0.032)	(0.034)	(0.036)	(0.020)	(0.029)	(0.030)	(0.027)	(0.021)	(0.020)	(0.020)	(0.020)	(0.026)	(0.026)	(0.029)	(0.030)
t_{-5}	-0.029	-0.029	-0.030	-0.028	-0.013	-0.014	-0.025	-0.018	-0.037	0.037^{a}	-0.096^{c}	-0.055^{a}	-0.004	-0.030	-0.025	-0.029	-0.022	-0.029	-0.030	-0.048^{a}	-0.060^{b}
	(0.019)	(0.019)	(0.019)	(0.019)	(0.026)	(0.026)	(0.032)	(0.033)	(0.032)	(0.020)	(0.026)	(0.028)	(0.026)	(0.020)	(0.020)	(0.019)	(0.019)	(0.019)	(0.020)	(0.028)	(0.030)
t_{-4}	-0.054^{c}	-0.049^{c}	-0.049^{c}	-0.045^{b}	-0.031	-0.031	-0.051	-0.028	-0.067^{b}	0.025	-0.128^{c}	-0.043	-0.058^{b}	-0.054^{c}	-0.040^{b}	-0.053^{c}	-0.049^{c}	-0.053^{c}	-0.054^{c}	-0.069^{c}	-0.087^{c}
	(0.019)	(0.019)	(0.019)	(0.019)	(0.025)	(0.025)	(0.032)	(0.033)	(0.030)	(0.020)	(0.026)	(0.027)	(0.026)	(0.020)	(0.021)	(0.019)	(0.019)	(0.019)	(0.019)	(0.026)	(0.027)
t_{-3}	-0.009	-0.004	-0.007	-0.004	-0.017	-0.018	-0.035	-0.024	0.010	0.002	-0.077^{c}	-0.012	-0.005	-0.010	0.001	-0.009	-0.005	-0.007	-0.013	-0.006	-0.018
	(0.018)	(0.018)	(0.018)	(0.018)	(0.023)	(0.023)	(0.029)	(0.031)	(0.029)	(0.020)	(0.023)	(0.026)	(0.024)	(0.018)	(0.020)	(0.018)	(0.018)	(0.018)	(0.018)	(0.020)	(0.021)
t_{-2}	-0.022	-0.017	-0.018	-0.015	-0.012	-0.012	-0.025	-0.024	-0.021	-0.009	-0.048^{b}	-0.011	-0.034^{a}	-0.021	-0.019	-0.022	-0.021	-0.022	-0.029^{a}	-0.022	-0.030
	(0.014)	(0.015)	(0.015)	(0.015)	(0.018)	(0.018)	(0.023)	(0.026)	(0.024)	(0.014)	(0.020)	(0.021)	(0.020)	(0.015)	(0.017)	(0.014)	(0.014)	(0.016)	(0.016)	(0.019)	(0.020)
t_{-1}	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
t_{0}	0.360^{c}	0.366^{c}	0.322^{c}	0.313^{c}	0.367^{c}	0.368^{c}	0.373^{c}	0.432^{c}	0.301^{c}	0.688^{c}	0.100^{c}	0.370^{c}	0.353^{c}	0.358^{c}	0.361^{c}	0.360^{c}	0.359^{c}	0.360^{c}	0.363^{c}	0.354^{c}	0.362^{c}
	(0.017)	(0.017)	(0.018)	(0.018)	(0.019)	(0.019)	(0.029)	(0.028)	(0.029)	(0.025)	(0.018)	(0.024)	(0.024)	(0.019)	(0.020)	(0.017)	(0.017)	(0.017)	(0.017)	(0.020)	(0.021)
t_{1}	0.401^{c}	0.406^{c}	0.367^{c}	0.359^{c}	0.422^{c}	0.422^{c}	0.401^{c}	0.446^{c}	0.372^{c}	0.726^{c}	0.125^{c}	0.383^{c}	0.420^{c}	0.418^{c}	0.415^{c}	0.401^{c}	0.398^{c}	0.400^{c}	0.404^{c}	0.398^{c}	0.406^{c}
	(0.015)	(0.015)	(0.016)	(0.016)	(0.017)	(0.017)	(0.025)	(0.025)	(0.026)	(0.020)	(0.017)	(0.022)	(0.021)	(0.016)	(0.018)	(0.015)	(0.015)	(0.015)	(0.015)	(0.018)	(0.018)
t_{2}	0.382^{c}	0.387^{c}	0.357^{c}	0.350^{c}	0.377^{c}	0.377^{c}	0.429^{c}	0.414^{c}	0.332^{c}	0.729^{c}	0.090^{c}	0.387^{c}	0.388^{c}	0.380^{c}	0.394^{c}	0.382^{c}	0.378^{c}	0.381^{c}	0.382^{c}	0.379^{c}	0.388^{c}
	(0.015)	(0.016)	(0.016)	(0.016)	(0.018)	(0.018)	(0.027)	(0.026)	(0.027)	(0.021)	(0.018)	(0.023)	(0.021)	(0.017)	(0.019)	(0.015)	(0.016)	(0.015)	(0.016)	(0.018)	(0.019)
t_{3}	0.380^{c}	0.383^{c}	0.350^{c}	0.344^{c}	0.384^{c}	0.385^{c}	0.369^{c}	0.463^{c}	0.315^{c}	0.715^{c}	0.104^{c}	0.358^{c}	0.404^{c}	0.389^{c}	0.379^{c}	0.380^{c}	0.374^{c}	0.379^{c}	0.378^{c}	0.378^{c}	0.386^{c}
	(0.017)	(0.018)	(0.018)	(0.018)	(0.019)	(0.019)	(0.029)	(0.029)	(0.032)	(0.027)	(0.019)	(0.026)	(0.024)	(0.023)	(0.024)	(0.017)	(0.018)	(0.017)	(0.018)	(0.020)	(0.021)
t_{4}	0.399^{c}	0.406^{c}	0.375^{c}	0.370^{c}	0.406^{c}	0.407^{c}	0.430^{c}	0.425^{c}	0.364^{c}	0.703^{c}	0.126^{c}	0.392^{c}	0.406^{c}	0.405^{c}	0.401^{c}	0.399^{c}	0.392^{c}	0.397^{c}	0.397^{c}	0.395^{c}	0.401^{c}
	(0.017)	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)	(0.030)	(0.030)	(0.030)	(0.026)	(0.019)	(0.026)	(0.025)	(0.023)	(0.025)	(0.017)	(0.018)	(0.017)	(0.017)	(0.020)	(0.021)
t_{5}	0.396^{c}	0.404^{c}	0.372^{c}	0.366^{c}	0.395^{c}	0.396^{c}	0.430^{c}	0.442^{c}	0.342^{c}	0.706^{c}	0.111^{c}	0.410^{c}	0.398^{c}	0.414^{c}	0.407^{c}	0.396^{c}	0.388^{c}	0.394^{c}	0.394^{c}	0.391^{c}	0.396^{c}
	(0.019)	(0.019)	(0.019)	(0.019)	(0.020)	(0.020)	(0.031)	(0.031)	(0.034)	(0.026)	(0.022)	(0.027)	(0.027)	(0.024)	(0.025)	(0.019)	(0.019)	(0.019)	(0.019)	(0.021)	(0.022)
t_{6}	0.412^{c}	0.423^{c}	0.388^{c}	0.381^{c}	0.410^{c}	0.410^{c}	0.451^{c}	0.476^{c}	0.318^{c}	0.743^{c}	0.112^{c}	0.413^{c}	0.416^{c}	0.434^{c}	0.434^{c}	0.412^{c}	0.404^{c}	0.409^{c}	0.409^{c}	0.407^{c}	0.413^{c}
	(0.019)	(0.019)	(0.019)	(0.019)	(0.020)	(0.020)	(0.030)	(0.031)	(0.035)	(0.025)	(0.021)	(0.027)	(0.027)	(0.023)	(0.025)	(0.019)	(0.019)	(0.019)	(0.019)	(0.022)	(0.022)
ATT	0.409^{c}	0.412^{c}	0.377^{c}	0.368^{c}	0.409^{c}	0.410^{c}	0.431^{c}	0.453^{c}	0.361^{c}	0.712^{c}	0.167^{c}	0.403^{c}	0.420^{c}	0.411^{c}	0.410^{c}	0.408^{c}	0.398^{c}	0.404^{c}	0.409^{c}	0.401^{c}	0.417^{c}
	(0.008)	(0.008)	(0.009)	(0.009)	(0.009)	(0.009)	(0.014)	(0.014)	(0.014)	(0.011)	(0.010)	(0.012)	(0.011)	(0.010)	(0.010)	(0.008)	(0.009)	(0.008)	(0.009)	(0.010)	(0.011)
Mean (SD) of	0.453	0.444	0.444	0.444	0.441	0.441	0.447	0.409	0.501	0.037	0.826	0.465	0.442	0.445	0.445	0.453	0.453	0.453	0.452	0.462	0.453
t_{-1} Cohort	(0.498)	(0.497)	(0.497)	(0.497)	(0.497)	(0.497)	(0.498)	(0.492)	(0.501)	(0.188)	(0.379)	(0.499)	(0.497)	(0.497)	(0.497)	(0.498)	(0.498)	(0.498)	(0.498)	(0.499)	(0.498)
Wald F (ATT)	–	ref.	70.640^{c}	99.860^{c}	ref.	1.361	ref.	1.336	13.090^{c}	ref.	1384.000^{c}	ref.	1.182	ref.	0.081	ref.	8.304^{c}	ref.	8.286^{c}	ref.	28.490^{c}
Wald F (t_0–t_6, joint)	–	ref.	11.220^{c}	14.250^{c}	ref.	0.200	ref.	1.477	1.850^{a}	ref.	134.600^{c}	ref.	0.736	ref.	0.964	ref.	1.119	ref.	0.811	ref.	0.694
Observations	9,665	9,190	9,190	9,190	7,181	7,181	3,232	3,295	3,138	4,315	5,350	4,494	4,860	7,698	7,698	9,656	9,656	9,160	8,935	7,975	7,526
Adj. R^2	0.455	0.460	0.469	0.472	0.430	0.430	0.465	0.466	0.465	0.576	0.244	0.455	0.472	0.487	0.461	0.455	0.456	0.441	0.441	0.415	0.418

Notes: a indicates $p < 0.1$, b indicates $p < 0.05$, and c indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the results of our regressions estimating dynamic (event study) and static (average treatment effect on the treated, **ATT**) effect of a health event. All regressions are weighted using inverse probability weights. Column (1) shows the baseline specification controlling for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Other columns vary from this baseline as indicated by column headers. Mechanism (columns 2-6) and robustness checks (columns 14-21) analyses re-estimate the baseline within each subsample for comparability. Subgroup analyses (columns 7-13) partition the baseline sample (sample differences reflect missing data). Compare columns within each results group.

Table A.11: Event-Study Estimates for Preventive Medication Use - Statins

		Mechanisms					**Subgroups**							**Robustness Checks**							
		Objective (Obj) & Self-Assessed Health (SAH)			Locus of Control (LoC)		Propensity Score Terciles			Pre-Existing High Risk Condition		Educational Attainment		Pre-Event Health Controls		Current Income (Inc)		3-Year Survival Window		5-Year Survival Window	
		w/o	+ Obj	+ SAH	w/o	+ LoC	Bottom	Middle	Top	None	> 1	Lower	Higher	t_{-1}	t_{-5}	w/o	+ Inc	All	Survivng	All	Surviving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Time to Health Event																					
t_{-6}	-0.029	-0.031^{a}	-0.030^{a}	-0.028	-0.020	-0.021	-0.048	-0.022	-0.016	0.031^{b}	-0.092^{c}	-0.032	-0.034	-0.029	-0.048^{b}	-0.030	-0.023	-0.022	-0.018	-0.034	-0.029
	(0.018)	(0.018)	(0.018)	(0.018)	(0.024)	(0.024)	(0.030)	(0.032)	(0.032)	(0.013)	(0.028)	(0.027)	(0.024)	(0.019)	(0.019)	(0.018)	(0.019)	(0.025)	(0.026)	(0.028)	(0.030)
t_{-5}	-0.039^{b}	-0.032^{a}	-0.035^{a}	-0.034^{a}	-0.038	-0.038	-0.010	-0.042	-0.054	0.021^{a}	-0.100^{c}	-0.028	-0.040^{a}	-0.038^{b}	-0.042^{b}	-0.038^{b}	-0.032^{a}	-0.037^{b}	-0.040^{b}	-0.030	-0.036
	(0.018)	(0.018)	(0.018)	(0.018)	(0.025)	(0.025)	(0.030)	(0.028)	(0.033)	(0.011)	(0.027)	(0.028)	(0.023)	(0.019)	(0.018)	(0.018)	(0.018)	(0.018)	(0.019)	(0.026)	(0.027)
t_{-4}	-0.046^{c}	-0.042^{b}	-0.043^{c}	-0.040^{b}	-0.042^{a}	-0.043^{a}	-0.033	-0.007	-0.083^{c}	0.023^{a}	-0.118^{c}	-0.036	-0.063^{c}	-0.044^{b}	-0.046^{b}	-0.046^{c}	-0.042^{b}	-0.046^{c}	-0.045^{b}	-0.048^{b}	-0.057^{b}
	(0.017)	(0.017)	(0.017)	(0.017)	(0.023)	(0.023)	(0.029)	(0.031)	(0.027)	(0.012)	(0.025)	(0.025)	(0.023)	(0.018)	(0.019)	(0.017)	(0.017)	(0.017)	(0.017)	(0.024)	(0.025)
t_{-3}	-0.003	-0.002	-0.003	-0.001	0.009	0.008	0.007	-0.024	0.000	0.017^{a}	-0.068^{c}	-0.013	0.005	-0.004	0.005	-0.003	-0.001	-0.000	-0.006	0.009	-0.004
	(0.017)	(0.017)	(0.017)	(0.017)	(0.022)	(0.022)	(0.029)	(0.027)	(0.028)	(0.011)	(0.023)	(0.025)	(0.023)	(0.017)	(0.019)	(0.017)	(0.017)	(0.017)	(0.017)	(0.019)	(0.020)
t_{-2}	-0.018	-0.015	-0.016	-0.014	-0.018	-0.018	0.008	-0.004	-0.043^{b}	0.009^{a}	-0.056^{c}	-0.016	-0.020	-0.016	-0.018	-0.018	-0.017	-0.014	-0.011	-0.008	-0.008
	(0.013)	(0.013)	(0.013)	(0.013)	(0.016)	(0.016)	(0.022)	(0.023)	(0.021)	(0.005)	(0.019)	(0.019)	(0.018)	(0.013)	(0.016)	(0.013)	(0.013)	(0.015)	(0.015)	(0.017)	(0.018)
t_{-1}	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
t_{0}	0.618^{c}	0.625^{c}	0.590^{c}	0.582^{c}	0.627^{c}	0.629^{c}	0.601^{c}	0.673^{c}	0.596^{c}	0.951^{c}	0.352^{c}	0.579^{c}	0.653^{c}	0.617^{c}	0.613^{c}	0.618^{c}	0.617^{c}	0.619^{c}	0.626^{c}	0.620^{c}	0.628^{c}
	(0.013)	(0.014)	(0.014)	(0.014)	(0.015)	(0.015)	(0.023)	(0.023)	(0.023)	(0.013)	(0.018)	(0.020)	(0.018)	(0.015)	(0.018)	(0.013)	(0.013)	(0.013)	(0.013)	(0.016)	(0.017)
t_{1}	0.600^{c}	0.609^{c}	0.578^{c}	0.572^{c}	0.598^{c}	0.599^{c}	0.594^{c}	0.648^{c}	0.569^{c}	0.908^{c}	0.333^{c}	0.589^{c}	0.609^{c}	0.595^{c}	0.605^{c}	0.600^{c}	0.597^{c}	0.600^{c}	0.605^{c}	0.605^{c}	0.611^{c}
	(0.013)	(0.013)	(0.014)	(0.014)	(0.015)	(0.015)	(0.021)	(0.022)	(0.023)	(0.013)	(0.018)	(0.019)	(0.018)	(0.015)	(0.017)	(0.013)	(0.013)	(0.013)	(0.013)	(0.016)	(0.016)
t_{2}	0.576^{c}	0.579^{c}	0.555^{c}	0.549^{c}	0.565^{c}	0.566^{c}	0.563^{c}	0.635^{c}	0.542^{c}	0.881^{c}	0.313^{c}	0.528^{c}	0.618^{c}	0.572^{c}	0.595^{c}	0.575^{c}	0.572^{c}	0.575^{c}	0.578^{c}	0.581^{c}	0.587^{c}
	(0.013)	(0.014)	(0.014)	(0.014)	(0.016)	(0.016)	(0.024)	(0.022)	(0.024)	(0.015)	(0.018)	(0.020)	(0.018)	(0.015)	(0.018)	(0.013)	(0.014)	(0.014)	(0.014)	(0.016)	(0.017)
t_{3}	0.581^{c}	0.587^{c}	0.563^{c}	0.557^{c}	0.580^{c}	0.582^{c}	0.554^{c}	0.649^{c}	0.549^{c}	0.914^{c}	0.304^{c}	0.545^{c}	0.617^{c}	0.590^{c}	0.588^{c}	0.581^{c}	0.576^{c}	0.581^{c}	0.582^{c}	0.589^{c}	0.596^{c}
	(0.015)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)	(0.025)	(0.025)	(0.028)	(0.017)	(0.021)	(0.023)	(0.021)	(0.020)	(0.022)	(0.015)	(0.016)	(0.016)	(0.016)	(0.018)	(0.019)
t_{4}	0.557^{c}	0.561^{c}	0.539^{c}	0.534^{c}	0.556^{c}	0.558^{c}	0.565^{c}	0.592^{c}	0.526^{c}	0.859^{c}	0.289^{c}	0.536^{c}	0.582^{c}	0.566^{c}	0.570^{c}	0.557^{c}	0.551^{c}	0.556^{c}	0.557^{c}	0.561^{c}	0.566^{c}
	(0.017)	(0.017)	(0.017)	(0.017)	(0.018)	(0.018)	(0.028)	(0.028)	(0.030)	(0.020)	(0.022)	(0.025)	(0.023)	(0.022)	(0.024)	(0.017)	(0.017)	(0.017)	(0.017)	(0.019)	(0.020)
t_{5}	0.558^{c}	0.570^{c}	0.547^{c}	0.542^{c}	0.553^{c}	0.554^{c}	0.525^{c}	0.596^{c}	0.562^{c}	0.867^{c}	0.273^{c}	0.546^{c}	0.568^{c}	0.562^{c}	0.567^{c}	0.558^{c}	0.551^{c}	0.557^{c}	0.558^{c}	0.564^{c}	0.567^{c}
	(0.017)	(0.017)	(0.018)	(0.018)	(0.018)	(0.018)	(0.031)	(0.028)	(0.030)	(0.019)	(0.024)	(0.025)	(0.024)	(0.022)	(0.024)	(0.017)	(0.018)	(0.017)	(0.017)	(0.020)	(0.020)
t_{6}	0.591^{c}	0.599^{c}	0.573^{c}	0.566^{c}	0.588^{c}	0.589^{c}	0.584^{c}	0.637^{c}	0.557^{c}	0.904^{c}	0.310^{c}	0.551^{c}	0.624^{c}	0.579^{c}	0.577^{c}	0.591^{c}	0.584^{c}	0.590^{c}	0.590^{c}	0.595^{c}	0.598^{c}
	(0.017)	(0.017)	(0.018)	(0.018)	(0.018)	(0.018)	(0.027)	(0.029)	(0.033)	(0.018)	(0.024)	(0.026)	(0.023)	(0.023)	(0.025)	(0.017)	(0.018)	(0.017)	(0.017)	(0.019)	(0.020)
ATT	0.604^{c}	0.609^{c}	0.581^{c}	0.573^{c}	0.595^{c}	0.597^{c}	0.580^{c}	0.649^{c}	0.589^{c}	0.887^{c}	0.375^{c}	0.573^{c}	0.632^{c}	0.602^{c}	0.612^{c}	0.604^{c}	0.598^{c}	0.601^{c}	0.605^{c}	0.601^{c}	0.611^{c}
	(0.007)	(0.007)	(0.008)	(0.009)	(0.009)	(0.009)	(0.012)	(0.012)	(0.013)	(0.007)	(0.011)	(0.011)	(0.010)	(0.009)	(0.009)	(0.007)	(0.008)	(0.008)	(0.008)	(0.009)	(0.010)
Mean (SD) of	0.324	0.315	0.315	0.315	0.320	0.320	0.356	0.279	0.335	0.000	0.614	0.363	0.289	0.323	0.323	0.324	0.324	0.324	0.322	0.328	0.324
t_{-1} Cohort	(0.468)	(0.465)	(0.465)	(0.465)	(0.467)	(0.467)	(0.479)	(0.449)	(0.473)	(0.000)	(0.487)	(0.481)	(0.454)	(0.468)	(0.468)	(0.468)	(0.468)	(0.468)	(0.467)	(0.470)	(0.469)
Wald F (ATT)	–	ref.	50.280^{c}	75.930^{c}	ref.	3.642^{a}	ref.	16.180^{c}	0.245	ref.	1592.000^{c}	ref.	15.670^{c}	ref.	3.919^{b}	ref.	3.090^{a}	ref.	5.121^{b}	ref.	9.821^{c}
Wald F (t_0–t_6, joint)	–	ref.	8.624^{c}	11.570^{c}	ref.	0.463	ref.	1.502	0.496	ref.	205.500^{c}	ref.	2.504^{b}	ref.	1.668	ref.	0.775	ref.	1.663	ref.	0.875
Observations	9,665	9,190	9,190	9,190	7,181	7,181	3,232	3,295	3,138	4,315	5,350	4,494	4,860	7,698	7,698	9,656	9,656	9,160	8,935	7,975	7,526
Adj. R^2	0.560	0.566	0.574	0.576	0.535	0.535	0.555	0.588	0.562	0.782	0.433	0.540	0.590	0.585	0.576	0.560	0.561	0.546	0.547	0.519	0.520

Notes: *a* indicates $p < 0.1$, *b* indicates $p < 0.05$, and *c* indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the results of our regressions estimating dynamic (event study) and static (average treatment effect on the treated, **ATT**) effect of a health event. All regressions are weighted using inverse probability weights. Column (1) shows the baseline specification controlling for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Other columns vary from this baseline as indicated by column headers. Mechanism (columns 2-6) and robustness checks (columns 14-21) analyses re-estimate the baseline within each subsample for comparability. Subgroup analyses (columns 7-13) partition the baseline sample (sample differences reflect missing data). Compare columns within each results group.

Table A.12: Event-Study Estimates for GP Visits - Costs for GP consultations (€ 1000s)

		Mechanisms					Subgroups							Robustness Checks							
		Objective (Obj) & Self-Assessed Health (SAH)			Locus of Control (LoC)		Propensity Score Terciles			Pre-Existing High Risk Condition		Educational Attainment		Pre-Event Health Controls		Current Income (Inc)		3-Year Survival Window		5-Year Survival Window	
		w/o	+ Obj	+ SAH	w/o	+ LoC	Bottom	Middle	Top	None	> 1	Lower	Higher	t_{-1}	t_{-5}	w/o	+ Inc	All	Survivng	All	Surviving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Time to Health Event																					
t_{-6}	-0.008^{b}	-0.007^{b}	-0.005^{a}	-0.005	-0.011^{c}	-0.010^{b}	-0.001	-0.003	-0.017^{b}	-0.008^{a}	-0.008^{a}	-0.005	-0.006	-0.010^{c}	-0.004	-0.008^{b}	-0.008^{b}	-0.004	-0.004	-0.004	-0.003
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.007)	(0.004)	(0.005)	(0.005)	(0.004)	(0.003)	(0.004)	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.004)
t_{-5}	-0.004	-0.005^{a}	-0.002	-0.002	-0.005	-0.005	0.005	-0.005	-0.012^{b}	-0.006	-0.004	-0.005	-0.003	-0.007^{b}	-0.001	-0.004	-0.005^{a}	-0.004	-0.003	-0.004	-0.002
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)
t_{-4}	-0.009^{c}	-0.009^{c}	-0.006^{b}	-0.006^{b}	-0.008^{b}	-0.008^{b}	-0.001	-0.008^{b}	-0.016^{c}	-0.005	-0.013^{c}	-0.007^{b}	-0.008^{b}	-0.012^{c}	-0.006	-0.009^{c}	-0.009^{c}	-0.009^{c}	-0.008^{c}	-0.011^{c}	-0.011^{c}
	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)
t_{-3}	-0.000	0.000	0.001	0.002	-0.003	-0.002	0.012^{c}	-0.004	-0.010^{b}	-0.003	-0.001	-0.004	0.006	-0.003	0.002	-0.000	-0.001	0.000	0.001	-0.002	-0.001
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
t_{-2}	-0.006^{c}	-0.006^{c}	-0.006^{c}	-0.006^{c}	-0.006^{b}	-0.006^{b}	-0.002	-0.004	-0.013^{c}	-0.004	-0.009^{c}	-0.005	-0.005^{a}	-0.007^{c}	-0.005^{a}	-0.007^{c}	-0.007^{c}	-0.004^{a}	-0.004^{a}	-0.005^{b}	-0.005^{b}
	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
t_{-1}	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
t_{0}	0.046^{c}	0.046^{c}	0.038^{c}	0.036^{c}	0.047^{c}	0.045^{c}	0.052^{c}	0.048^{c}	0.037^{c}	0.048^{c}	0.044^{c}	0.050^{c}	0.043^{c}	0.046^{c}	0.045^{c}	0.046^{c}	0.046^{c}	0.046^{c}	0.046^{c}	0.044^{c}	0.043^{c}
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.005)	(0.005)	(0.005)	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
t_{1}	0.030^{c}	0.030^{c}	0.023^{c}	0.021^{c}	0.029^{c}	0.028^{c}	0.030^{c}	0.027^{c}	0.031^{c}	0.033^{c}	0.026^{c}	0.031^{c}	0.029^{c}	0.030^{c}	0.027^{c}	0.030^{c}	0.030^{c}	0.030^{c}	0.028^{c}	0.027^{c}	0.025^{c}
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.006)	(0.004)	(0.004)	(0.005)	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
t_{2}	0.018^{c}	0.016^{c}	0.009^{c}	0.007^{b}	0.021^{c}	0.020^{c}	0.018^{c}	0.016^{c}	0.018^{c}	0.020^{c}	0.016^{c}	0.018^{c}	0.017^{c}	0.021^{c}	0.014^{c}	0.018^{c}	0.018^{c}	0.017^{c}	0.017^{c}	0.015^{c}	0.014^{c}
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.005)	(0.006)	(0.003)	(0.005)	(0.004)	(0.004)	(0.004)	(0.005)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
t_{3}	0.021^{c}	0.022^{c}	0.012^{c}	0.011^{c}	0.022^{c}	0.021^{c}	0.021^{c}	0.017^{c}	0.024^{c}	0.030^{c}	0.013^{c}	0.021^{c}	0.024^{c}	0.022^{c}	0.018^{c}	0.021^{c}	0.021^{c}	0.020^{c}	0.022^{c}	0.017^{c}	0.018^{c}
	(0.004)	(0.004)	(0.003)	(0.003)	(0.004)	(0.003)	(0.005)	(0.006)	(0.007)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.004)	(0.004)	(0.003)	(0.003)	(0.004)	(0.004)
t_{4}	0.019^{c}	0.018^{c}	0.010^{c}	0.009^{b}	0.021^{c}	0.020^{c}	0.021^{c}	0.026^{c}	0.011^{a}	0.024^{c}	0.016^{c}	0.020^{c}	0.018^{c}	0.022^{c}	0.011^{a}	0.019^{c}	0.020^{c}	0.019^{c}	0.020^{c}	0.016^{c}	0.016^{c}
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.006)	(0.006)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
t_{5}	0.019^{c}	0.018^{c}	0.008^{b}	0.007^{a}	0.021^{c}	0.020^{c}	0.021^{c}	0.019^{c}	0.014^{b}	0.024^{c}	0.014^{c}	0.016^{c}	0.022^{c}	0.019^{c}	0.011^{b}	0.019^{c}	0.019^{c}	0.018^{c}	0.020^{c}	0.015^{c}	0.016^{c}
	(0.004)	(0.004)	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.005)	(0.007)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.004)	(0.004)	(0.004)	(0.003)	(0.004)	(0.004)
t_{6}	0.014^{c}	0.014^{c}	0.007^{b}	0.006^{a}	0.015^{c}	0.014^{c}	0.024^{c}	0.007	0.012^{a}	0.020^{c}	0.009^{a}	0.015^{c}	0.016^{c}	0.019^{c}	-0.003	0.014^{c}	0.014^{c}	0.013^{c}	0.015^{c}	0.010^{c}	0.012^{c}
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.005)	(0.005)	(0.007)	(0.004)	(0.005)	(0.005)	(0.004)	(0.005)	(0.005)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)
ATT	0.029^{c}	0.029^{c}	0.020^{c}	0.018^{c}	0.030^{c}	0.029^{c}	0.027^{c}	0.027^{c}	0.033^{c}	0.032^{c}	0.028^{c}	0.030^{c}	0.028^{c}	0.033^{c}	0.026^{c}	0.029^{c}	0.031^{c}	0.028^{c}	0.028^{c}	0.027^{c}	0.026^{c}
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Mean (SD) of	0.057	0.055	0.055	0.055	0.057	0.057	0.046	0.049	0.075	0.040	0.072	0.062	0.049	0.059	0.059	0.057	0.057	0.057	0.056	0.056	0.055
t_{-1} Cohort	(0.071)	(0.067)	(0.067)	(0.067)	(0.069)	(0.069)	(0.053)	(0.051)	(0.094)	(0.058)	(0.077)	(0.065)	(0.058)	(0.075)	(0.075)	(0.071)	(0.071)	(0.071)	(0.065)	(0.064)	(0.058)
Wald F (ATT)	–	ref.	100.900^{c}	132.400^{c}	ref.	22.330^{c}	ref.	0.058	2.771^{a}	ref.	2.407	ref.	0.768	ref.	38.550^{c}	ref.	3.93^{b}	ref.	1.031	ref.	5.991^{b}
Wald F (t_0–t_6, joint)	–	ref.	11.570^{c}	14.280^{c}	ref.	1.728	ref.	0.848	1.180	ref.	1.326	ref.	0.401	ref.	9.405^{c}	ref.	0.451	ref.	1.401	ref.	1.303
Observations	9,665	9,190	9,190	9,190	7,181	7,181	3,232	3,295	3,138	4,315	5,350	4,494	4,860	7,698	7,698	9,656	9,656	9,160	8,935	7,975	7,526
Adj. R^2	0.293	0.286	0.352	0.359	0.279	0.290	0.286	0.239	0.348	0.268	0.288	0.316	0.256	0.296	0.229	0.294	0.294	0.295	0.286	0.266	0.263

Notes: *a* indicates $p < 0.1$, *b* indicates $p < 0.05$, and *c* indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the results of our regressions estimating dynamic (event study) and static (average treatment effect on the treated, **ATT**) effect of a health event. All regressions are weighted using inverse probability weights. Column (1) shows the baseline specification controlling for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Other columns vary from this baseline as indicated by column headers. Mechanism (columns 2-6) and robustness checks (columns 14-21) analyses re-estimate the baseline within each subsample for comparability. Subgroup analyses (columns 7-13) partition the baseline sample (sample differences reflect missing data). Compare columns within each results group.

Table A.13: Event-Study Estimates for Insurance Choice - Voluntary Deductible > 0

		Mechanisms					Subgroups							Robustness Checks							
		Objective (Obj) & Self-Assessed Health (SAH)			Locus of Control (LoC)		Propensity Score Terciles			Pre-Existing High Risk Condition		Educational Attainment		Pre-Event Health Controls		Current Income (Inc)		3-Year Survival Window		5-Year Survival Window	
		w/o	+ Obj	+ SAH	w/o	+ LoC	Bottom	Middle	Top	None	> 1	Lower	Higher	t_{-1}	t_{-5}	w/o	+ Inc	All	Survivng	All	Surviving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Time to Health Event																					
t_{-6}	0.031^{b}	0.031^{b}	0.030^{b}	0.027^{a}	0.014	0.014	0.047^{a}	0.020	0.025	0.029	0.036^{b}	0.034^{b}	0.028	0.036^{b}	0.035^{b}	0.030^{b}	0.027^{a}	0.052^{c}	0.049^{b}	0.056^{c}	0.057^{c}
	(0.014)	(0.015)	(0.015)	(0.015)	(0.019)	(0.019)	(0.026)	(0.023)	(0.024)	(0.026)	(0.015)	(0.017)	(0.023)	(0.015)	(0.015)	(0.014)	(0.014)	(0.019)	(0.019)	(0.021)	(0.022)
t_{-5}	0.018	0.011	0.010	0.009	0.005	0.005	-0.001	0.024	0.026	0.033	0.009	0.009	0.029	0.024^{a}	0.022	0.019	0.015	0.017	0.015	0.038^{a}	0.041^{a}
	(0.013)	(0.013)	(0.013)	(0.013)	(0.016)	(0.016)	(0.021)	(0.022)	(0.022)	(0.026)	(0.011)	(0.014)	(0.022)	(0.014)	(0.014)	(0.013)	(0.013)	(0.013)	(0.013)	(0.019)	(0.021)
t_{-4}	0.013	0.010	0.010	0.008	-0.001	-0.001	0.007	0.011	0.016	0.010	0.020	0.021	0.008	0.016	0.015	0.013	0.010	0.013	0.013	0.037^{b}	0.042^{b}
	(0.012)	(0.013)	(0.013)	(0.013)	(0.015)	(0.015)	(0.023)	(0.022)	(0.020)	(0.023)	(0.012)	(0.016)	(0.020)	(0.013)	(0.013)	(0.012)	(0.012)	(0.012)	(0.013)	(0.018)	(0.019)
t_{-3}	0.017	0.017	0.017	0.015	0.032^{a}	0.032^{a}	0.018	0.031	0.002	0.017	0.023^{a}	0.029^{a}	0.004	0.021	0.020	0.017	0.016	0.017	0.018	0.020	0.022
	(0.012)	(0.012)	(0.012)	(0.012)	(0.016)	(0.016)	(0.022)	(0.022)	(0.019)	(0.023)	(0.012)	(0.016)	(0.018)	(0.013)	(0.013)	(0.012)	(0.012)	(0.012)	(0.012)	(0.013)	(0.014)
t_{-2}	0.008	0.007	0.008	0.006	0.013	0.013	0.003	0.013	0.009	-0.014	0.027^{c}	0.017	-0.004	0.011	0.011	0.008	0.008	-0.000	0.003	0.002	0.008
	(0.010)	(0.010)	(0.010)	(0.010)	(0.012)	(0.012)	(0.018)	(0.017)	(0.016)	(0.018)	(0.010)	(0.012)	(0.016)	(0.011)	(0.011)	(0.010)	(0.010)	(0.011)	(0.011)	(0.012)	(0.013)
t_{-1}	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
t_{0}	-0.018^{a}	-0.020^{b}	-0.013	-0.008	-0.017	-0.017	-0.012	-0.022	-0.017	-0.039^{b}	0.001	-0.011	-0.026	-0.016	-0.015	-0.018^{a}	-0.017^{a}	-0.018^{a}	-0.017^{a}	-0.020^{a}	-0.022^{a}
	(0.010)	(0.010)	(0.010)	(0.010)	(0.011)	(0.011)	(0.019)	(0.016)	(0.016)	(0.019)	(0.009)	(0.010)	(0.016)	(0.011)	(0.011)	(0.010)	(0.010)	(0.010)	(0.010)	(0.011)	(0.012)
t_{1}	-0.026^{c}	-0.028^{c}	-0.021^{b}	-0.016^{a}	-0.025^{b}	-0.025^{b}	-0.039^{b}	-0.022	-0.017	-0.055^{c}	-0.003	-0.014	-0.036^{b}	-0.022^{b}	-0.021^{b}	-0.026^{c}	-0.024^{c}	-0.026^{c}	-0.026^{c}	-0.022^{b}	-0.023^{b}
	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)	(0.010)	(0.015)	(0.014)	(0.014)	(0.016)	(0.008)	(0.009)	(0.014)	(0.010)	(0.010)	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)	(0.011)
t_{2}	-0.031^{c}	-0.034^{c}	-0.028^{c}	-0.024^{c}	-0.029^{c}	-0.029^{c}	-0.034^{b}	-0.020	-0.038^{c}	-0.062^{c}	-0.006	-0.020^{b}	-0.041^{c}	-0.028^{c}	-0.026^{c}	-0.031^{c}	-0.028^{c}	-0.031^{c}	-0.030^{c}	-0.026^{c}	-0.025^{b}
	(0.008)	(0.009)	(0.009)	(0.009)	(0.010)	(0.010)	(0.016)	(0.014)	(0.012)	(0.015)	(0.008)	(0.008)	(0.014)	(0.009)	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)	(0.010)	(0.010)
t_{3}	-0.036^{c}	-0.037^{c}	-0.031^{c}	-0.027^{c}	-0.036^{c}	-0.036^{c}	-0.046^{c}	-0.024	-0.039^{c}	-0.063^{c}	-0.012	-0.019^{b}	-0.054^{c}	-0.049^{c}	-0.045^{c}	-0.036^{c}	-0.032^{c}	-0.035^{c}	-0.034^{c}	-0.031^{c}	-0.030^{c}
	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)	(0.010)	(0.016)	(0.017)	(0.013)	(0.017)	(0.008)	(0.009)	(0.014)	(0.010)	(0.010)	(0.009)	(0.009)	(0.009)	(0.009)	(0.011)	(0.011)
t_{4}	-0.035^{c}	-0.038^{c}	-0.032^{c}	-0.029^{c}	-0.035^{c}	-0.035^{c}	-0.039^{b}	-0.027	-0.041^{c}	-0.063^{c}	-0.008	-0.015	-0.050^{c}	-0.048^{c}	-0.044^{c}	-0.035^{c}	-0.031^{c}	-0.034^{c}	-0.033^{c}	-0.030^{c}	-0.029^{c}
	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.018)	(0.017)	(0.013)	(0.017)	(0.009)	(0.011)	(0.015)	(0.010)	(0.010)	(0.009)	(0.009)	(0.009)	(0.009)	(0.011)	(0.011)
t_{5}	-0.037^{c}	-0.038^{c}	-0.032^{c}	-0.028^{c}	-0.037^{c}	-0.036^{c}	-0.041^{b}	-0.028^{a}	-0.043^{c}	-0.068^{c}	-0.009	-0.018^{a}	-0.052^{c}	-0.047^{c}	-0.044^{c}	-0.037^{c}	-0.033^{c}	-0.037^{c}	-0.035^{c}	-0.032^{c}	-0.031^{c}
	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.018)	(0.016)	(0.013)	(0.016)	(0.009)	(0.010)	(0.015)	(0.011)	(0.011)	(0.009)	(0.009)	(0.009)	(0.009)	(0.011)	(0.011)
t_{6}	-0.046^{c}	-0.049^{c}	-0.043^{c}	-0.038^{c}	-0.046^{c}	-0.046^{c}	-0.062^{c}	-0.036^{b}	-0.043^{c}	-0.079^{c}	-0.019^{b}	-0.023^{b}	-0.067^{c}	-0.051^{c}	-0.046^{c}	-0.046^{c}	-0.042^{c}	-0.045^{c}	-0.044^{c}	-0.041^{c}	-0.040^{c}
	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)	(0.010)	(0.015)	(0.016)	(0.014)	(0.016)	(0.008)	(0.010)	(0.014)	(0.011)	(0.011)	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)	(0.011)
ATT	-0.041^{c}	-0.042^{c}	-0.035^{c}	-0.029^{c}	-0.040^{c}	-0.040^{c}	-0.044^{c}	-0.037^{c}	-0.040^{c}	-0.064^{c}	-0.023^{c}	-0.032^{c}	-0.049^{c}	-0.040^{c}	-0.037^{c}	-0.041^{c}	-0.035^{c}	-0.038^{c}	-0.038^{c}	-0.039^{c}	-0.042^{c}
	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.009)	(0.008)	(0.007)	(0.008)	(0.005)	(0.006)	(0.008)	(0.006)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)
Mean (SD) of	0.053	0.056	0.056	0.056	0.054	0.054	0.062	0.050	0.048	0.090	0.020	0.025	0.078	0.051	0.051	0.053	0.053	0.053	0.053	0.051	0.052
t_{-1} Cohort	(0.224)	(0.231)	(0.231)	(0.231)	(0.226)	(0.226)	(0.241)	(0.218)	(0.214)	(0.286)	(0.141)	(0.158)	(0.268)	(0.220)	(0.220)	(0.224)	(0.224)	(0.224)	(0.224)	(0.220)	(0.222)
Wald F (ATT)	–	ref.	11.250^{c}	28.460^{c}	ref.	0.049	ref.	0.361	0.135	ref.	17.620^{c}	ref.	3.213^{a}	ref.	4.593^{b}	ref.	7.403^{c}	ref.	0.051	ref.	3.981^{b}
Wald F (t_0–t_6, joint)	–	ref.	1.958^{a}	3.890^{c}	ref.	0.003	ref.	0.500	0.739	ref.	2.121^{b}	ref.	1.203	ref.	1.025	ref.	0.880	ref.	0.548	ref.	0.756
Observations	9,665	9,190	9,190	9,190	7,181	7,181	3,232	3,295	3,138	4,315	5,350	4,494	4,860	7,698	7,698	9,656	9,656	9,160	8,935	7,975	7,526
Adj. R^2	0.036	0.037	0.040	0.047	0.035	0.035	0.046	0.046	0.044	0.047	0.027	0.033	0.042	0.040	0.040	0.036	0.039	0.037	0.036	0.038	0.038

Notes: *a* indicates $p < 0.1$, *b* indicates $p < 0.05$, and *c* indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the results of our regressions estimating dynamic (event study) and static (average treatment effect on the treated, **ATT**) effect of a health event. All regressions are weighted using inverse probability weights. Column (1) shows the baseline specification controlling for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Other columns vary from this baseline as indicated by column headers. Mechanism (columns 2-6) and robustness checks (columns 14-21) analyses re-estimate the baseline within each subsample for comparability. Subgroup analyses (columns 7-13) partition the baseline sample (sample differences reflect missing data). Compare columns within each results group.

Table A.14: Event-Study Estimates for No Functional Limitation being Reported

		Subgroups							Robustness Checks							
		Propensity Score Terciles			Pre-Existing High Risk Condition		Educational Attainment		Pre-Event Health Controls		Current Income (Inc)		3-Year Survival Window		5-Year Survival Window	
		Bottom	Middle	Top	None	> 1	Lower	Higher	t_{-1}	t_{-5}	w/o	+ Inc	All	Survivng	All	Surviving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Time to Health Event																
t_{-6}	0.030	-0.000	0.112^{c}	-0.012	0.063^{b}	0.002	0.018	0.047^{a}	0.046^{a}	0.041^{a}	0.028	0.044^{a}	0.016	0.005	-0.001	-0.029
	(0.022)	(0.036)	(0.036)	(0.042)	(0.030)	(0.032)	(0.036)	(0.027)	(0.024)	(0.024)	(0.022)	(0.023)	(0.030)	(0.030)	(0.033)	(0.034)
t_{-5}	0.045^{b}	0.009	0.065^{a}	0.043	0.068^{b}	0.024	0.024	0.051^{b}	0.062^{c}	0.055^{b}	0.045^{b}	0.052^{b}	0.044^{b}	0.033	0.009	-0.009
	(0.021)	(0.034)	(0.035)	(0.036)	(0.026)	(0.030)	(0.034)	(0.024)	(0.023)	(0.023)	(0.021)	(0.021)	(0.021)	(0.021)	(0.029)	(0.030)
t_{-4}	0.037^{a}	0.044	0.088^{b}	-0.004	0.066^{b}	0.009	0.046	0.037	0.054^{b}	0.044^{a}	0.037^{a}	0.041^{b}	0.037^{a}	0.027	0.004	-0.030
	(0.021)	(0.034)	(0.035)	(0.035)	(0.028)	(0.030)	(0.033)	(0.026)	(0.023)	(0.023)	(0.021)	(0.021)	(0.021)	(0.021)	(0.028)	(0.030)
t_{-3}	0.030	0.015	0.060^{a}	0.021	0.037	0.023	0.050	0.017	0.046^{b}	0.029	0.030	0.034^{a}	0.030	0.021	0.033	0.009
	(0.020)	(0.033)	(0.036)	(0.035)	(0.027)	(0.028)	(0.032)	(0.025)	(0.023)	(0.023)	(0.020)	(0.020)	(0.020)	(0.020)	(0.022)	(0.022)
t_{-2}	0.016	0.038	0.036	-0.015	0.036	-0.001	0.033	0.011	0.030	0.023	0.016	0.018	0.014	0.011	0.017	0.008
	(0.017)	(0.028)	(0.030)	(0.029)	(0.023)	(0.025)	(0.027)	(0.021)	(0.019)	(0.019)	(0.017)	(0.017)	(0.019)	(0.019)	(0.021)	(0.022)
t_{-1}	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
t_{0}	-0.037^{a}	-0.022	-0.040	-0.045	-0.015	-0.059^{b}	-0.063^{a}	-0.004	-0.036	-0.035	-0.037^{a}	-0.038^{a}	-0.037^{a}	-0.038^{a}	-0.025	-0.035
	(0.020)	(0.032)	(0.034)	(0.035)	(0.027)	(0.028)	(0.033)	(0.024)	(0.023)	(0.022)	(0.020)	(0.020)	(0.020)	(0.020)	(0.024)	(0.024)
t_{1}	-0.053^{c}	-0.074^{b}	-0.003	-0.079^{b}	-0.020	-0.084^{c}	-0.054^{a}	-0.035	-0.042^{b}	-0.045^{b}	-0.053^{c}	-0.055^{c}	-0.052^{c}	-0.054^{c}	-0.049^{b}	-0.067^{c}
	(0.018)	(0.030)	(0.028)	(0.032)	(0.023)	(0.025)	(0.028)	(0.022)	(0.020)	(0.020)	(0.018)	(0.018)	(0.018)	(0.018)	(0.021)	(0.021)
t_{2}	-0.060^{c}	-0.032	-0.029	-0.108^{c}	-0.023	-0.090^{c}	-0.079^{c}	-0.021	-0.049^{b}	-0.046^{b}	-0.059^{c}	-0.063^{c}	-0.059^{c}	-0.063^{c}	-0.056^{c}	-0.064^{c}
	(0.018)	(0.030)	(0.029)	(0.032)	(0.024)	(0.026)	(0.029)	(0.022)	(0.020)	(0.020)	(0.018)	(0.018)	(0.018)	(0.018)	(0.021)	(0.021)
t_{3}	-0.077^{c}	-0.045	-0.050	-0.131^{c}	-0.036	-0.111^{c}	-0.073^{b}	-0.066^{c}	-0.071^{c}	-0.067^{b}	-0.077^{c}	-0.083^{c}	-0.076^{c}	-0.083^{c}	-0.071^{c}	-0.089^{c}
	(0.021)	(0.033)	(0.034)	(0.038)	(0.028)	(0.029)	(0.033)	(0.026)	(0.027)	(0.027)	(0.021)	(0.021)	(0.021)	(0.021)	(0.024)	(0.024)
t_{4}	-0.095^{c}	-0.160^{c}	-0.052	-0.071^{a}	-0.071^{b}	-0.123^{c}	-0.112^{c}	-0.062^{b}	-0.070^{c}	-0.062^{b}	-0.095^{c}	-0.102^{c}	-0.094^{c}	-0.100^{c}	-0.088^{c}	-0.106^{c}
	(0.021)	(0.035)	(0.034)	(0.036)	(0.028)	(0.030)	(0.033)	(0.026)	(0.026)	(0.027)	(0.021)	(0.021)	(0.021)	(0.021)	(0.024)	(0.024)
t_{5}	-0.077^{c}	-0.077^{b}	-0.070^{a}	-0.086^{b}	-0.057^{b}	-0.095^{c}	-0.104^{c}	-0.035	-0.097^{c}	-0.084^{c}	-0.077^{c}	-0.086^{c}	-0.075^{c}	-0.082^{c}	-0.070^{c}	-0.092^{c}
	(0.021)	(0.035)	(0.035)	(0.039)	(0.029)	(0.030)	(0.034)	(0.027)	(0.028)	(0.028)	(0.021)	(0.022)	(0.021)	(0.021)	(0.024)	(0.025)
t_{6}	-0.081^{c}	-0.066^{b}	-0.051	-0.134^{c}	-0.047	-0.111^{c}	-0.043	-0.083^{c}	-0.076^{c}	-0.062^{b}	-0.081^{c}	-0.092^{c}	-0.079^{c}	-0.085^{c}	-0.075^{c}	-0.097^{c}
	(0.022)	(0.034)	(0.037)	(0.043)	(0.030)	(0.032)	(0.034)	(0.028)	(0.029)	(0.029)	(0.022)	(0.023)	(0.022)	(0.022)	(0.025)	(0.025)
ATT	-0.082^{c}	-0.080^{c}	-0.078^{c}	-0.089^{c}	-0.066^{c}	-0.097^{c}	-0.098^{c}	-0.055^{c}	-0.078^{c}	-0.070^{c}	-0.082^{c}	-0.086^{c}	-0.080^{c}	-0.079^{c}	-0.068^{c}	-0.069^{c}
	(0.009)	(0.015)	(0.016)	(0.016)	(0.012)	(0.013)	(0.015)	(0.012)	(0.011)	(0.011)	(0.009)	(0.010)	(0.010)	(0.010)	(0.012)	(0.012)
Mean (SD) of	0.783	0.794	0.774	0.780	0.822	0.747	0.713	0.846	0.778	0.778	0.783	0.783	0.783	0.792	0.771	0.798
t_{-1} Cohort	(0.413)	(0.405)	(0.419)	(0.415)	(0.383)	(0.435)	(0.453)	(0.361)	(0.416)	(0.416)	(0.413)	(0.413)	(0.413)	(0.406)	(0.420)	(0.402)
Wald F (ATT)	–	ref.	0.011	0.170	ref.	2.941^{a}	ref.	5.179^{b}	ref.	4.678^{b}	ref.	0.810	ref.	0.289	ref.	0.072
Wald F (t_0–t_6, joint)	–	ref.	1.570	2.148	ref.	0.833	ref.	1.379	ref.	0.802	ref.	1.447	ref.	1.226	ref.	3.414^{c}
Observations	9,665	3,232	3,295	3,138	4,315	5,350	4,494	4,860	7,698	7,698	9,656	9,656	9,160	8,935	7,975	7,526
Adj. R^2	0.143	0.164	0.153	0.157	0.112	0.153	0.131	0.139	0.136	0.142	0.143	0.148	0.143	0.143	0.148	0.144

Notes: a indicates $p < 0.1$, b indicates $p < 0.05$, and c indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the results of our regressions estimating dynamic (event study) and static (average treatment effect on the treated, **ATT**) effect of a health event. All regressions are weighted using inverse probability weights. Column (1) shows the baseline specification controlling for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Other columns vary from this baseline as indicated by column headers. Subgroup analyses (columns 2-8) partition the baseline sample (sample differences reflect missing data). Robustness checks (columns 9-16) analyses re-estimate the baseline within each subsample for comparability. Compare columns within each results group.

Table A.15: Event-Study Estimates for Self-Perceived Health

		Subgroups							**Robustness Checks**							
		Propensity Score Terciles			Pre-Existing High Risk Condition		Educational Attainment		Pre-Event Health Controls		Current Income (Inc)		3-Year Survival Window		5-Year Survival Window	
		Bottom	Middle	Top	None	> 1	Lower	Higher	t_{-1}	t_{-5}	w/o	+ Inc	All	Survivng	All	Surviving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Time to Health Event																
t_{-6}	0.056^a	0.008	0.033	0.120^b	0.032	0.085^a	0.046	0.068	0.066^a	0.059	0.055^a	0.066^b	0.029	0.016	0.028	0.036
	(0.033)	(0.053)	(0.054)	(0.061)	(0.047)	(0.045)	(0.047)	(0.046)	(0.036)	(0.036)	(0.033)	(0.033)	(0.040)	(0.040)	(0.043)	(0.044)
t_{-5}	0.012	-0.092^a	0.034	0.080	0.042	-0.007	0.005	0.048	0.027	0.015	0.013	0.019	0.013	0.014	-0.008	-0.009
	(0.031)	(0.053)	(0.051)	(0.054)	(0.045)	(0.042)	(0.046)	(0.042)	(0.034)	(0.034)	(0.031)	(0.031)	(0.031)	(0.031)	(0.045)	(0.046)
t_{-4}	0.050^a	-0.013	0.013	0.131^c	0.090^b	0.032	0.004	0.099^b	0.059^a	0.045	0.051^a	0.052^a	0.053^a	0.052^a	0.039	0.047
	(0.030)	(0.052)	(0.056)	(0.049)	(0.045)	(0.040)	(0.044)	(0.043)	(0.033)	(0.034)	(0.030)	(0.030)	(0.030)	(0.030)	(0.040)	(0.042)
t_{-3}	0.048	-0.010	0.045	0.107^b	0.083^a	0.043	-0.017	0.091^b	0.063^a	0.044	0.048	0.052^a	0.050^a	0.044	0.029	0.018
	(0.029)	(0.050)	(0.047)	(0.052)	(0.044)	(0.039)	(0.044)	(0.040)	(0.032)	(0.033)	(0.029)	(0.030)	(0.029)	(0.030)	(0.032)	(0.032)
t_{-2}	0.030	-0.026	0.014	0.091^b	0.051	0.011	-0.004	0.052	0.045	0.037	0.029	0.029	0.039	0.044	0.017	0.019
	(0.026)	(0.044)	(0.043)	(0.043)	(0.037)	(0.035)	(0.038)	(0.035)	(0.028)	(0.028)	(0.026)	(0.026)	(0.028)	(0.028)	(0.031)	(0.032)
t_{-1}	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
t_0	-0.234^c	-0.275^c	-0.301^c	-0.143^c	-0.255^c	-0.213^c	-0.279^c	-0.209^c	-0.214^c	-0.230^c	-0.234^c	-0.236^c	-0.236^c	-0.239^c	-0.255^c	-0.256^c
	(0.031)	(0.051)	(0.051)	(0.055)	(0.044)	(0.042)	(0.046)	(0.042)	(0.035)	(0.035)	(0.031)	(0.031)	(0.031)	(0.031)	(0.036)	(0.037)
t_1	-0.153^c	-0.272^c	-0.195^c	-0.021	-0.218^c	-0.099^c	-0.127^c	-0.188^c	-0.119^c	-0.125^c	-0.153^c	-0.156^c	-0.154^c	-0.161^c	-0.186^c	-0.192^c
	(0.026)	(0.045)	(0.042)	(0.045)	(0.036)	(0.036)	(0.037)	(0.037)	(0.029)	(0.029)	(0.026)	(0.026)	(0.026)	(0.026)	(0.030)	(0.030)
t_2	-0.152^c	-0.201^c	-0.162^c	-0.105^b	-0.222^c	-0.093^b	-0.152^c	-0.165^c	-0.139^c	-0.141^c	-0.151^c	-0.155^c	-0.153^c	-0.163^c	-0.185^c	-0.197^c
	(0.026)	(0.046)	(0.041)	(0.047)	(0.036)	(0.037)	(0.039)	(0.036)	(0.029)	(0.029)	(0.026)	(0.026)	(0.026)	(0.026)	(0.030)	(0.030)
t_3	-0.131^c	-0.168^c	-0.201^c	-0.063	-0.225^c	-0.057	-0.123^c	-0.162^c	-0.123^c	-0.117^c	-0.132^c	-0.135^c	-0.132^c	-0.142^c	-0.170^c	-0.180^c
	(0.029)	(0.048)	(0.050)	(0.052)	(0.044)	(0.039)	(0.045)	(0.038)	(0.039)	(0.039)	(0.029)	(0.030)	(0.029)	(0.029)	(0.033)	(0.034)
t_4	-0.110^c	-0.176^c	-0.121^b	-0.069	-0.154^c	-0.063	-0.140^c	-0.098^b	-0.083^b	-0.070^a	-0.111^c	-0.115^c	-0.112^c	-0.123^c	-0.149^c	-0.163^c
	(0.030)	(0.051)	(0.049)	(0.054)	(0.043)	(0.041)	(0.043)	(0.042)	(0.038)	(0.038)	(0.030)	(0.030)	(0.030)	(0.030)	(0.034)	(0.034)
t_5	-0.124^c	-0.193^c	-0.148^c	-0.047	-0.165^c	-0.082^a	-0.103^b	-0.135^c	-0.082^a	-0.072^a	-0.124^c	-0.131^c	-0.126^c	-0.136^c	-0.163^c	-0.177^c
	(0.032)	(0.054)	(0.052)	(0.059)	(0.044)	(0.046)	(0.047)	(0.044)	(0.043)	(0.043)	(0.032)	(0.033)	(0.032)	(0.032)	(0.036)	(0.036)
t_6	-0.135^c	-0.208^c	-0.181^c	-0.051	-0.192^c	-0.088^a	-0.137^c	-0.146^c	-0.111^c	-0.092^b	-0.136^c	-0.145^c	-0.136^c	-0.147^c	-0.175^c	-0.192^c
	(0.031)	(0.051)	(0.049)	(0.062)	(0.043)	(0.045)	(0.048)	(0.041)	(0.040)	(0.039)	(0.031)	(0.032)	(0.031)	(0.031)	(0.035)	(0.035)
ATT	-0.180^c	-0.204^c	-0.206^c	-0.146^c	-0.250^c	-0.126^c	-0.157^c	-0.211^c	-0.169^c	-0.166^c	-0.180^c	-0.187^c	-0.182^c	-0.189^c	-0.208^c	-0.215^c
	(0.015)	(0.025)	(0.024)	(0.027)	(0.021)	(0.020)	(0.022)	(0.021)	(0.019)	(0.019)	(0.015)	(0.016)	(0.016)	(0.016)	(0.018)	(0.018)
Mean (SD) of	3.731	3.817	3.752	3.625	3.917	3.556	3.651	3.805	3.733	3.733	3.731	3.731	3.731	3.744	3.705	3.742
t_{-1} Cohort	(0.703)	(0.706)	(0.665)	(0.725)	(0.645)	(0.711)	(0.726)	(0.678)	(0.705)	(0.705)	(0.703)	(0.703)	(0.703)	(0.694)	(0.701)	(0.668)
Wald F (ATT)	–	ref.	0.003	2.558	ref.	17.580^c	ref.	3.241^a	ref.	0.299	ref.	1.656	ref.	4.698^b	ref.	1.438
Wald F (t_0–t_6, joint)	–	ref.	0.623	2.357^b	ref.	1.671	ref.	0.981	ref.	1.939^a	ref.	0.804	ref.	1.185	ref.	1.435
Observations	9,190	3,079	3,139	2,972	4,132	5,058	4,233	4,708	7,352	7,352	9,181	9,181	8,697	8,486	7,565	7,152
Adj. R^2	0.419	0.423	0.414	0.444	0.377	0.413	0.438	0.407	0.419	0.418	0.419	0.420	0.420	0.414	0.422	0.406

Notes: a indicates $p < 0.1$, b indicates $p < 0.05$, and c indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the results of our regressions estimating dynamic (event study) and static (average treatment effect on the treated, **ATT**) effect of a health event. All regressions are weighted using inverse probability weights. Column (1) shows the baseline specification controlling for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Other columns vary from this baseline as indicated by column headers. Subgroup analyses (columns 2-8) partition the baseline sample (sample differences reflect missing data). Robustness checks (columns 9-16) analyses re-estimate the baseline within each subsample for comparability. Compare columns within each results group.

Table A.16: Event-Study Estimates for Self-Perceived Health by Health Controls in Regression

	Regression Specifications					
	Weighting, Demographics and Health Event Characteristics	+ Health at Event-Time (t_{-1})	+ Physical and Mental Health	+ Chronic conditions (excl. CVD related)	+ Hospitalizations (excl. CVD related)	+ Diabetes, Hypertension, or Hyperlipidemia
	(1)	(2)	(3)	(4)	(5)	(6)
Time to Health Event						
t_{-6}	0.054	0.081^b	0.064^a	0.058^a	0.056^a	0.044
	(0.041)	(0.038)	(0.033)	(0.033)	(0.033)	(0.033)
t_{-5}	0.010	0.044	0.018	0.010	0.012	0.002
	(0.039)	(0.034)	(0.031)	(0.031)	(0.031)	(0.031)
t_{-4}	0.077^b	0.080^b	0.061^b	0.051^a	0.050^a	0.042
	(0.038)	(0.034)	(0.030)	(0.030)	(0.030)	(0.030)
t_{-3}	0.060	0.076^b	0.048	0.047	0.048	0.045
	(0.037)	(0.032)	(0.030)	(0.029)	(0.029)	(0.029)
t_{-2}	0.005	0.028	0.027	0.030	0.030	0.028
	(0.032)	(0.028)	(0.026)	(0.026)	(0.026)	(0.025)
t_{-1}	–	–	–	–	–	–
t_0	-0.383^c	-0.342^c	-0.292^c	-0.224^c	-0.234^c	-0.180^c
	(0.036)	(0.032)	(0.030)	(0.031)	(0.031)	(0.033)
t_1	-0.266^c	-0.260^c	-0.214^c	-0.154^c	-0.153^c	-0.058^b
	(0.030)	(0.028)	(0.025)	(0.026)	(0.026)	(0.029)
t_2	-0.261^c	-0.251^c	-0.205^c	-0.153^c	-0.152^c	-0.058^b
	(0.031)	(0.028)	(0.026)	(0.026)	(0.026)	(0.029)
t_3	-0.268^c	-0.256^c	-0.191^c	-0.132^c	-0.131^c	-0.037
	(0.035)	(0.033)	(0.029)	(0.029)	(0.029)	(0.032)
t_4	-0.243^c	-0.247^c	-0.161^c	-0.112^c	-0.110^c	-0.014
	(0.036)	(0.033)	(0.030)	(0.030)	(0.030)	(0.033)
t_5	-0.269^c	-0.259^c	-0.187^c	-0.124^c	-0.124^c	-0.026
	(0.039)	(0.036)	(0.032)	(0.032)	(0.032)	(0.035)
t_6	-0.249^c	-0.251^c	-0.189^c	-0.134^c	-0.135^c	-0.034
	(0.038)	(0.035)	(0.031)	(0.031)	(0.031)	(0.034)
ATT	-0.305^c	-0.308^c	-0.241^c	-0.179^c	-0.180^c	-0.099^c
	(0.017)	(0.015)	(0.014)	(0.015)	(0.015)	(0.019)
Mean (SD) of	3.731	3.731	3.731	3.731	3.731	3.731
t_{-1} Cohort	(0.703)	(0.703)	(0.703)	(0.703)	(0.703)	(0.703)
Observations	9,190	9,190	9,190	9,190	9,190	9,190
Adj. R^2	0.111	0.260	0.402	0.416	0.419	0.423

Notes: a indicates $p < 0.1$, b indicates $p < 0.05$, and c indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the results of our regressions estimating dynamic (event study) and static (average treatment effect on the treated, **ATT**) effect of a health event. All regressions are weighted using inverse probability weights. Columns headers indicate the controls included in the regression specification. Demographic controls contain information on age at health event onset (single-year-of-age), sex, and marital status at event-time. Health characteristics at event-time contain information on hospital care use, chronic conditions, and healthcare costs. Physical and mental health at survey time is measured using dummies encoding at least great difficulty in conducting seven functional limitations, and a dummy encoding elevated risk of depression or anxiety based on the Kessler 10-item questionnaire. Chronic conditions at survey time are measured based on prescription medication, excluding dummies encoding conditions associated with high cardiovascular risk; diabetes, hypertension, or hyperlipidemia. Hospital care use is encoded using disease-group specific dummies encoding any admission in the survey year for a given disease group, excluding cardiovascular admissions, and the total number of inpatient days in that year.

Table A.17: Event-Study Estimates for Locus of Control: Standardized Score

		Subgroups								**Robustness Checks**							
		Propensity Score Terciles			Pre-Existing High Risk Condition		Educational Attainment		Pre-Event Health Controls		Current Income (Inc)		3-Year Survival Window		5-Year Survival Window	
		Bottom	Middle	Top	None	> 1	Lower	Higher	t_{-1}	t_{-5}	w/o	+ Inc	All	Survivng	All	Surviving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Time to Health Event																
t_{-6}	0.047	0.104	-0.074	0.073	0.020	0.081	0.035	0.029	0.046	0.049	0.047	0.102	0.020	-0.000		
	(0.068)	(0.105)	(0.111)	(0.128)	(0.099)	(0.093)	(0.102)	(0.091)	(0.069)	(0.067)	(0.069)	(0.069)	(0.179)	(0.183)		
t_{-5}	0.136^{a}	0.151	0.007	0.237^{a}	0.075	0.156	0.124	0.173^{a}	0.134^{a}	0.123^{a}	0.136^{a}	0.162^{b}	0.141^{b}	0.128^{a}		
	(0.071)	(0.117)	(0.126)	(0.123)	(0.105)	(0.096)	(0.108)	(0.098)	(0.072)	(0.072)	(0.071)	(0.072)	(0.071)	(0.073)		
t_{-4}	0.038	0.022	0.043	0.073	0.052	0.014	0.005	0.055	0.024	-0.002	0.034	0.043	0.046	0.039	-0.038	-0.130
	(0.069)	(0.130)	(0.113)	(0.111)	(0.103)	(0.092)	(0.104)	(0.094)	(0.069)	(0.069)	(0.069)	(0.069)	(0.069)	(0.070)	(0.188)	(0.200)
t_{-3}	0.026	-0.030	0.094	0.015	0.169^{a}	-0.080	-0.121	0.157^{a}	0.025	-0.017	0.026	0.043	0.032	0.025	0.043	0.017
	(0.062)	(0.106)	(0.101)	(0.110)	(0.091)	(0.085)	(0.094)	(0.084)	(0.063)	(0.062)	(0.062)	(0.062)	(0.063)	(0.064)	(0.069)	(0.072)
t_{-2}	0.008	-0.022	-0.034	0.059	0.063	-0.039	-0.067	0.099	0.011	-0.011	0.012	0.018	0.047	0.049	0.060	0.054
	(0.050)	(0.087)	(0.086)	(0.083)	(0.073)	(0.068)	(0.078)	(0.065)	(0.050)	(0.050)	(0.050)	(0.050)	(0.058)	(0.059)	(0.067)	(0.070)
t_{-1}	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
t_{0}	-0.239^{c}	-0.234^{b}	-0.238^{c}	-0.229^{b}	-0.181^{b}	-0.299^{c}	-0.407^{c}	-0.075	-0.247^{c}	-0.239^{c}	-0.239^{c}	-0.246^{c}	-0.238^{c}	-0.239^{c}	-0.236^{c}	-0.250^{c}
	(0.056)	(0.096)	(0.092)	(0.097)	(0.086)	(0.074)	(0.084)	(0.074)	(0.056)	(0.056)	(0.056)	(0.056)	(0.056)	(0.057)	(0.072)	(0.076)
t_{1}	-0.164^{c}	-0.125	-0.119	-0.211^{b}	-0.091	-0.229^{c}	-0.215^{c}	-0.074	-0.163^{c}	-0.163^{c}	-0.164^{c}	-0.174^{c}	-0.164^{c}	-0.170^{c}	-0.164^{c}	-0.185^{c}
	(0.050)	(0.087)	(0.080)	(0.088)	(0.070)	(0.070)	(0.076)	(0.066)	(0.050)	(0.050)	(0.050)	(0.050)	(0.050)	(0.050)	(0.062)	(0.063)
t_{2}	-0.207^{c}	-0.203^{b}	-0.204^{b}	-0.213^{b}	-0.031	-0.347^{c}	-0.247^{c}	-0.140^{b}	-0.203^{c}	-0.180^{c}	-0.207^{c}	-0.223^{c}	-0.206^{c}	-0.208^{c}	-0.204^{c}	-0.193^{c}
	(0.051)	(0.089)	(0.082)	(0.091)	(0.072)	(0.072)	(0.079)	(0.067)	(0.051)	(0.052)	(0.051)	(0.052)	(0.051)	(0.052)	(0.063)	(0.064)
t_{3}	-0.259^{c}	-0.257^{c}	-0.140	-0.360^{c}	-0.149^{a}	-0.353^{c}	-0.348^{c}	-0.163^{b}	-0.268^{c}	-0.248^{c}	-0.259^{c}	-0.279^{c}	-0.260^{c}	-0.272^{c}	-0.259^{c}	-0.280^{c}
	(0.054)	(0.092)	(0.086)	(0.098)	(0.076)	(0.075)	(0.082)	(0.072)	(0.066)	(0.066)	(0.054)	(0.054)	(0.054)	(0.054)	(0.065)	(0.066)
t_{4}	-0.253^{c}	-0.299^{c}	-0.246^{c}	-0.193^{a}	-0.146^{a}	-0.359^{c}	-0.275^{c}	-0.189^{b}	-0.234^{c}	-0.199^{c}	-0.253^{c}	-0.278^{c}	-0.256^{c}	-0.266^{c}	-0.259^{c}	-0.282^{c}
	(0.054)	(0.091)	(0.088)	(0.099)	(0.078)	(0.076)	(0.082)	(0.075)	(0.067)	(0.068)	(0.054)	(0.056)	(0.055)	(0.055)	(0.066)	(0.067)
t_{5}	-0.221^{c}	-0.279^{c}	-0.190^{b}	-0.174^{a}	-0.115	-0.327^{c}	-0.244^{c}	-0.164^{b}	-0.201^{c}	-0.153^{b}	-0.221^{c}	-0.254^{c}	-0.222^{c}	-0.232^{c}	-0.222^{c}	-0.246^{c}
	(0.055)	(0.098)	(0.092)	(0.096)	(0.077)	(0.078)	(0.086)	(0.073)	(0.069)	(0.069)	(0.055)	(0.057)	(0.055)	(0.055)	(0.067)	(0.067)
t_{6}	-0.232^{c}	-0.232^{b}	-0.258^{c}	-0.184^{a}	-0.180^{b}	-0.278^{c}	-0.275^{c}	-0.138^{a}	-0.222^{c}	-0.164^{b}	-0.232^{c}	-0.270^{c}	-0.233^{c}	-0.245^{c}	-0.235^{c}	-0.261^{c}
	(0.057)	(0.095)	(0.096)	(0.103)	(0.079)	(0.082)	(0.086)	(0.077)	(0.070)	(0.071)	(0.057)	(0.059)	(0.057)	(0.057)	(0.068)	(0.069)
ATT	-0.244^{c}	-0.238^{c}	-0.192^{c}	-0.274^{c}	-0.166^{c}	-0.310^{c}	-0.261^{c}	-0.199^{c}	-0.228^{c}	-0.198^{c}	-0.245^{c}	-0.265^{c}	-0.254^{c}	-0.258^{c}	-0.249^{c}	-0.252^{c}
	(0.026)	(0.045)	(0.044)	(0.044)	(0.037)	(0.036)	(0.040)	(0.035)	(0.029)	(0.029)	(0.026)	(0.028)	(0.028)	(0.029)	(0.036)	(0.038)
Mean (SD) of	0.027	0.043	0.117	-0.067	0.068	-0.011	-0.121	0.139	0.029	0.029	0.027	0.027	0.027	0.040	0.013	0.057
t_{-1} Cohort	(1.028)	(1.042)	(0.927)	(1.094)	(1.009)	(1.046)	(1.047)	(0.986)	(1.030)	(1.030)	(1.028)	(1.028)	(1.028)	(1.025)	(1.044)	(1.024)
Wald F (ATT)	–	ref.	0.539	0.324	ref.	7.709^{c}	ref.	1.397	ref.	10.320^{c}	ref.	3.379^{a}	ref.	0.512	ref.	0.055
Wald F (t_0–t_6, joint)	–	ref.	0.287	0.624	ref.	1.650	ref.	1.411	ref.	1.504	ref.	1.445	ref.	1.152	ref.	1.504
Observations	7,181	2,399	2,446	2,336	3,249	3,932	3,182	3,790	6,087	6,087	7,175	7,175	6,692	6,548	5,559	5,300
Adj. R^2	0.153	0.171	0.156	0.174	0.114	0.177	0.133	0.147	0.151	0.149	0.152	0.160	0.155	0.155	0.160	0.159

Table A.18: Event-Study Estimates for Locus of Control: Low Self-Efficacy (Score < 19)

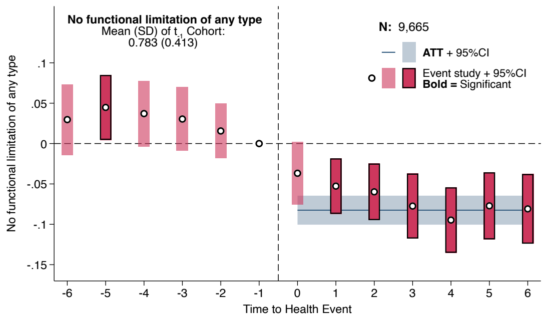
		Subgroups							**Robustness Checks**							
		Propensity Score Terciles			Pre-Existing High Risk Condition		Educational Attainment		Pre-Event Health Controls		Current Income (Inc)		3-Year Survival Window		5-Year Survival Window	
		Bottom	Middle	Top	None	> 1	Lower	Higher	t_{-1}	t_{-5}	w/o	+ Inc	All	Survivng	All	Surviving
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Time to Health Event																
t_{-6}	-0.051^{b}	-0.060^{b}	-0.020	-0.064^{a}	-0.048^{a}	-0.057^{b}	-0.069^{b}	-0.021	-0.054^{c}	-0.049^{c}	-0.052^{c}	-0.066^{c}	-0.048	-0.037		
	(0.020)	(0.029)	(0.037)	(0.036)	(0.028)	(0.029)	(0.030)	(0.027)	(0.020)	(0.019)	(0.020)	(0.020)	(0.059)	(0.060)		
t_{-5}	-0.021	-0.053^{a}	-0.016	0.002	-0.048^{a}	-0.000	-0.017	-0.022	-0.026	-0.018	-0.021	-0.026	-0.022	-0.022		
	(0.021)	(0.032)	(0.034)	(0.039)	(0.026)	(0.030)	(0.036)	(0.024)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)		
t_{-4}	-0.017	0.004	-0.018	-0.029	-0.018	-0.015	-0.011	-0.012	-0.019	-0.013	-0.016	-0.018	-0.019	-0.018	-0.003	0.010
	(0.020)	(0.039)	(0.032)	(0.032)	(0.030)	(0.027)	(0.034)	(0.025)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.057)	(0.062)
t_{-3}	-0.028	-0.039	-0.034	-0.011	-0.065^{c}	0.000	0.007	-0.040^{a}	-0.031	-0.020	-0.028	-0.032^{a}	-0.029	-0.028	-0.028	-0.018
	(0.019)	(0.031)	(0.028)	(0.034)	(0.022)	(0.027)	(0.033)	(0.021)	(0.019)	(0.018)	(0.019)	(0.019)	(0.019)	(0.019)	(0.021)	(0.021)
t_{-2}	-0.000	-0.003	0.022	-0.016	-0.012	0.008	0.030	-0.032^{a}	0.001	0.007	-0.001	-0.002	-0.004	-0.003	-0.001	0.002
	(0.015)	(0.026)	(0.028)	(0.025)	(0.021)	(0.022)	(0.026)	(0.018)	(0.015)	(0.015)	(0.015)	(0.015)	(0.018)	(0.018)	(0.021)	(0.022)
t_{-1}	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
t_{0}	0.047^{b}	0.027	0.052^{a}	0.057^{a}	0.035	0.062^{b}	0.095^{c}	0.004	0.050^{c}	0.048^{c}	0.048^{b}	0.050^{c}	0.047^{b}	0.048^{c}	0.049^{b}	0.044^{a}
	(0.019)	(0.030)	(0.030)	(0.033)	(0.027)	(0.025)	(0.032)	(0.021)	(0.019)	(0.018)	(0.019)	(0.018)	(0.019)	(0.019)	(0.024)	(0.025)
t_{1}	0.034^{b}	0.010	0.030	0.051^{a}	0.013	0.048^{b}	0.049^{a}	0.016	0.034^{b}	0.036^{b}	0.034^{b}	0.037^{b}	0.035^{b}	0.035^{b}	0.039^{a}	0.039^{a}
	(0.016)	(0.027)	(0.025)	(0.029)	(0.022)	(0.023)	(0.026)	(0.020)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)	(0.020)	(0.020)
t_{2}	0.039^{b}	0.026	0.046^{a}	0.044	-0.007	0.075^{c}	0.050^{a}	0.021	0.038^{b}	0.034^{b}	0.040^{b}	0.044^{c}	0.039^{b}	0.039^{b}	0.042^{b}	0.034^{a}
	(0.016)	(0.028)	(0.025)	(0.029)	(0.021)	(0.024)	(0.026)	(0.020)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)	(0.020)	(0.020)
t_{3}	0.056^{c}	0.025	0.038	0.089^{c}	0.028	0.075^{c}	0.091^{c}	0.022	0.071^{c}	0.064^{c}	0.055^{c}	0.061^{c}	0.055^{c}	0.057^{c}	0.059^{c}	0.061^{c}
	(0.018)	(0.030)	(0.028)	(0.034)	(0.024)	(0.025)	(0.030)	(0.022)	(0.023)	(0.023)	(0.018)	(0.018)	(0.018)	(0.018)	(0.022)	(0.022)
t_{4}	0.058^{c}	0.067^{b}	0.070^{b}	0.028	0.044^{a}	0.071^{c}	0.070^{b}	0.045^{b}	0.082^{c}	0.072^{c}	0.058^{c}	0.064^{c}	0.059^{c}	0.061^{c}	0.064^{c}	0.068^{c}
	(0.018)	(0.031)	(0.028)	(0.031)	(0.024)	(0.026)	(0.029)	(0.022)	(0.023)	(0.023)	(0.018)	(0.018)	(0.018)	(0.018)	(0.021)	(0.021)
t_{5}	0.042^{b}	0.060^{a}	0.053^{a}	0.013	0.019	0.062^{b}	0.070^{b}	0.010	0.050^{b}	0.036	0.041^{b}	0.050^{c}	0.042^{b}	0.044^{b}	0.045^{b}	0.049^{b}
	(0.018)	(0.032)	(0.029)	(0.032)	(0.024)	(0.026)	(0.030)	(0.021)	(0.022)	(0.023)	(0.018)	(0.018)	(0.018)	(0.018)	(0.022)	(0.022)
t_{6}	0.049^{c}	0.033	0.083^{c}	0.031	0.010	0.082^{c}	0.051^{a}	0.042^{a}	0.043^{a}	0.028	0.049^{c}	0.059^{c}	0.049^{c}	0.052^{c}	0.054^{b}	0.058^{b}
	(0.019)	(0.029)	(0.031)	(0.035)	(0.023)	(0.028)	(0.030)	(0.024)	(0.022)	(0.022)	(0.019)	(0.019)	(0.019)	(0.019)	(0.022)	(0.023)
ATT	0.056^{c}	0.048^{c}	0.053^{c}	0.059^{c}	0.038^{c}	0.070^{c}	0.065^{c}	0.040^{c}	0.055^{c}	0.047^{c}	0.056^{c}	0.061^{c}	0.056^{c}	0.056^{c}	0.057^{c}	0.053^{c}
	(0.008)	(0.014)	(0.014)	(0.014)	(0.011)	(0.012)	(0.014)	(0.010)	(0.009)	(0.009)	(0.008)	(0.009)	(0.009)	(0.009)	(0.012)	(0.012)
Mean (SD) of	0.105	0.111	0.081	0.123	0.095	0.115	0.130	0.085	0.105	0.105	0.105	0.105	0.105	0.103	0.110	0.104
t_{-1} Cohort	(0.307)	(0.314)	(0.273)	(0.329)	(0.294)	(0.319)	(0.337)	(0.279)	(0.307)	(0.307)	(0.307)	(0.307)	(0.307)	(0.305)	(0.314)	(0.306)
Wald F (ATT)	–	ref.	0.061	0.331	ref.	3.620^{a}	ref.	2.064	ref.	7.664^{c}	ref.	1.764	ref.	0.066	ref.	1.505
Wald F (t_0–t_6, joint)	–	ref.	0.310	1.226	ref.	1.201	ref.	1.244	ref.	1.381	ref.	0.994	ref.	0.550	ref.	1.258
Observations	7,181	2,399	2,446	2,336	3,249	3,932	3,182	3,790	6,087	6,087	7,175	7,175	6,692	6,548	5,559	5,300
Adj. R^2	0.097	0.131	0.105	0.119	0.071	0.111	0.100	0.096	0.098	0.101	0.097	0.103	0.101	0.100	0.101	0.100

Notes: *a* indicates $p < 0.1$, *b* indicates $p < 0.05$, and *c* indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the results of our regressions estimating dynamic (event study) and static (average treatment effect on the treated, **ATT**) effect of a health event. All regressions are weighted using inverse probability weights. Column (1) shows the baseline specification controlling for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Other columns vary from this baseline as indicated by column headers. Subgroup analyses (columns 2-8) partition the baseline sample (sample differences reflect missing data). Robustness checks (columns 9-16) analyses re-estimate the baseline within each subsample for comparability. Compare columns within each results group.

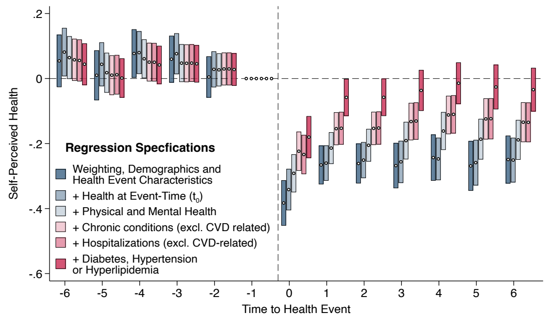
B Supplementary Figures

Figure B.1: The Effect of on the Absence of any Functional Limitation and Self-Perceived Health

(a) Effects on the Absence of any Functional Limitation



(b) Effects on Self-Perceived Health by Health Information

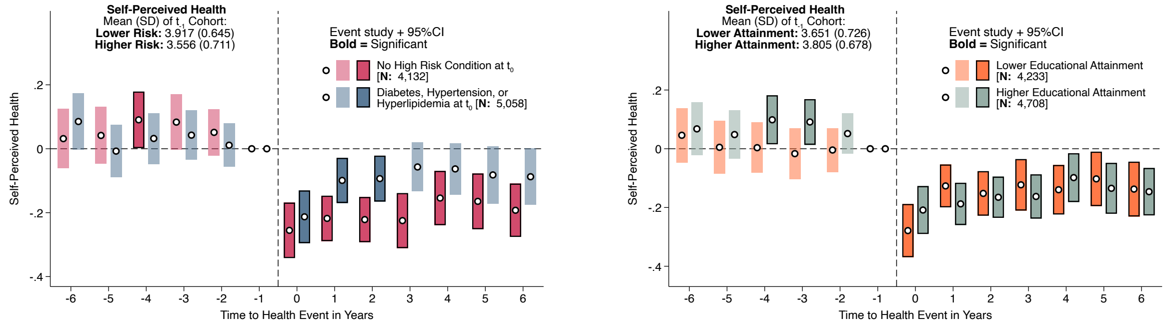


Source: Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the event study coefficients (dots) and their 95% confidence intervals (bars). All regressions are weighted using inverse probability weights. Regression for the absence of a functional limitation **(a)** control for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. See column (1) of Table A.14 for the underlying results. The regressions for self-perceived health **(b)** successively add health related control variables, comparing a weighted regression containing only survey-year dummies, pre-event demographic (age, sex, and marital status) and socio-economic characteristics (labor market participation, income, and income rank), and information on the health event experienced (health event type and inpatient days) against specifications controlling for health characteristics at event-time (chronic conditions, hospital care use, and healthcare costs), physical and mental health at survey-time (functional limitations and depression/anxiety risk), chronic conditions and hospitalisations at survey-time excluding those related to cardiovascular health, and lastly whether at survey-time an individual uses medications for diabetes, hypertension, or hyperlipidemia. See Table A.16 for the underlying results.

Figure B.2: The Effect of Acute Health Events on Self-Perceived Health by Health Risk and Education

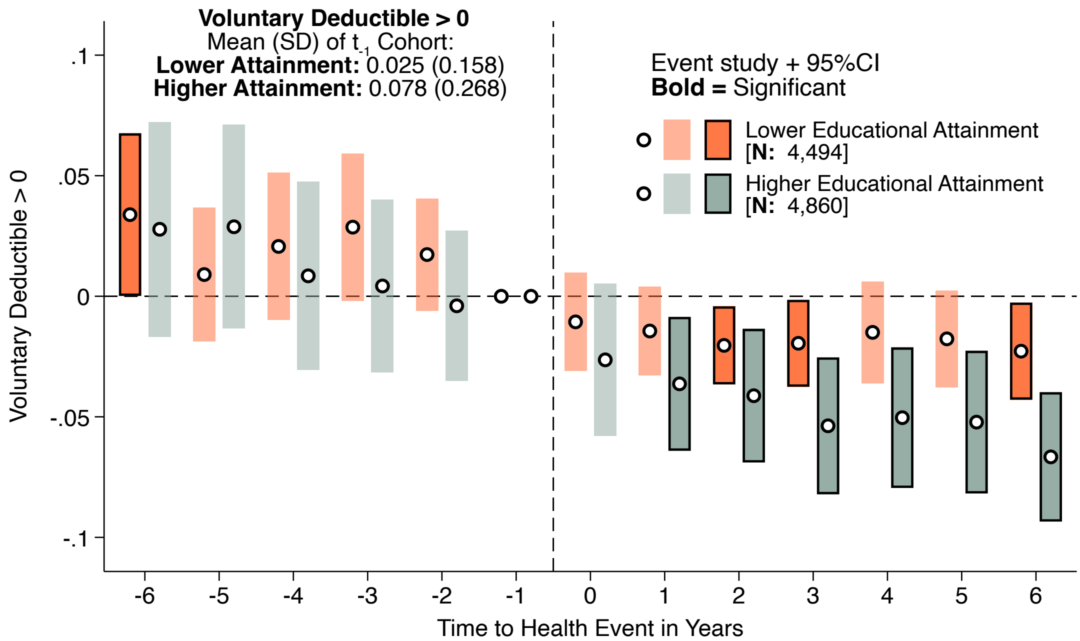
(a) Effects on Self-Perceived Health by Health Risk

(b) Effects Self-Perceived Health by Education



Source: Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the estimated event study coefficients (dots) alongside their respective 95% confidence intervals (bars/shaded area). All regressions are weighted using inverse probability weights and control for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Results by health risk groups: individuals without a high-risk pre-existing condition such as diabetes, hyperilipidemia, or a cardiovascular condition at event-time (red) compared against those with such a condition (blue). Results by educational attainment: individuals with lower levels of educational attainment (orange) compared against those with higher educational attainment (teal). See Table A.15 columns (5) and (6) for the underlying results by health risk, and columns (7) and (8) by educational attainment.

Figure B.3: Event-Study Estimates for Insurance Choice by Education



Source: Own calculations based on data from Statistics Netherlands. *Note:* Depicted are the estimated event study coefficients (dots) alongside their respective 95% confidence intervals (bars/shaded area). All regressions are weighted using inverse probability weights and control for pre-event demographic (age, sex, and marital status), health (chronic conditions, hospital care use, and healthcare costs), and socio-economic characteristics (labor market participation, income, and income rank), information on the health event experienced (health event type and inpatient days) and survey-year dummies. Results by health risk groups: individuals without a high-risk pre-existing condition such as diabetes, hyperilipidemia, or a cardiovascular condition at event-time (red) compared against those with such a condition (blue). Results by educational attainment: individuals with lower levels of educational attainment (orange) compared against those with higher educational attainment (teal). See Table A.13 columns (10) and (11) for the underlying results by health risk, and columns (13) and (14) by educational attainment.

C Dataset Details

C.I Data Sources

We use data provided by Statistics Netherlands (CBS, *Centraal Bureau voor de Statistiek*) covering a range of individual- and household-level information. The data can be accessed via a remote desktop connection and is stored in individual, topic-specific datasets. Within these datasets individuals are identified based on a persistent unique pseudonymized identification number allowing for the linkage of records across datasets and time. Table C.1 outlines all datasets used.

Table C.1: Dataset Contents, Coverage, and Source

	Data from the CBS Microdata Catalogue (CBS dataset name in *italics*)	
Demographic Information		**Years**
Population Registry	The population registry (*gbapersoonktab*) contains all individuals legally registered within the Netherlands since 1995 and their date of birth and official sex. It is updated on an annual basis and forms the basis of all administrative records. Registration within municipalities is legally required.	1995–2024
Death Registry	The death registry (*gbaoverlijdentab*) contains all individuals deceased within the Netherlands since 1995 and we use it to identify the official date of death. It is updated on an annual basis and covers deaths that occurred between January 1^{st} 1995 and February 14^{th} 2025 (2025 release file).	1995–2025
Household Registry	The household registry (*gbahuishoudensbus*) contains all households registered in the Netherlands since 1995, their individual members and relationship to each other.	1995–2024
Socio-Economic Status		
Household Income	Annual household income (*ihi* and *inhatab*) based on declared incomes for tax-households.	2006–2024
Individual Income	Annual individual income (*ipi* and *inpatab*) based on declared income to the Tax Office and the main source of this income. These records can be linked to household-level records via the core household member.	2006–2024
Health and Healthcare Use		
Health Monitor	The Health Monitors (*gemon*) are conducted every four years since 2012, covering a wide-range of self-reported information on health status and health-related behaviors among other repeated survey modules.	2012, 2016, 2020
Hospital Care Use	Annual data on all admissions to hospitals in the Netherlands (*lmrbasistab* and *lbzbasistab*) covering the date of admission, main diagnosis, main treatment received, and date and destination of discharge.	1995–2022
Medication Use	Annual data on individual-level prescription medication use by 4-digit Anatomical Therapeutic Chemical code (*medicijntab*). From 2020 onward covering also annual dosages dispensed.	2006-2022
Nursing Care Use	Annual data on usage of inpatient nursing home care (*zorgmvtab* and *gebwlztab*) covering all admission spells to a nursing home and their duration.	2006–2022
Healthcare Costs	Annual data on healthcare costs incurred by cost-categories (*zvwzorgkostentab*) based on health insurance records.	2009–2022
	Data from other Sources	
Health Insurance Choice		
Health Insurance Deductibles	Annual data on the voluntary deductible (*eigen risico*) level chosen. Data was provided by the Ministry of Health, Welfare and Sport.	2011–2021

C.II Health Monitor Survey Methodology and Linkage to Administrative Records

The Health Monitors provides a representative sample of the adult Dutch population with individuals approached for participation selected by CBS. Excluded from participating are only those in an institutionalized setting, such as permanent nursing home residents, and those aged below 18 on January 1^{st} of the survey year. Every four years since starting in 2012 municipalities collect responses in the four-month period of September 1^{st} to December 31^{st}. Individuals receive a paper-based survey and instructions for online participation. The majority of submitted responses are paper-based (58.3% in 2012, falling to 41.2% in 2020) or online (41.5% in 2012, rising to 58.4% 2020) with in-person or phone-based interviews making up only 0.2% (2012/2020) to 0.8% (2016) of responses. The 2012 Health Monitor reached out to approximately 700,000 individuals with 387,195 respondents (ca. 55%), rising to 1.15 million in 2016 with 457,153 respondents (ca. 40%) followed by 1.39 million in 2020 yielding 539,902 respondents (ca. 39%).

The 2012, 2016 and 2020 Health Monitors have a combined 1,384,250 observations across 1,291,014 unique respondents. We only include an individuals first-time participation and further exclude 23,182 individuals participating in a version of the Health Monitor fielded by CBS directly and for which the collection window is unknown. After applying these exclusion criteria the sample of Health Monitor participants identifiable within the population registry data and linkable to other administrative records contains 1,267,832 individuals, or 98% of the original sample of unique individuals across the three Health Monitors, before conditioning on the availability of any information from the survey itself or administrative records.

C.III Definitions

Acute Health Event Definition

We identify patients experiencing an ischemic heart attack or stroke based on three-digit diagnosis codes of the International Classification of Diseases 9^{th} (ICD-9) and 10^{th} (ICD-10) revisions, using the main diagnosis assigned to hospital admissions. For the years 1995 to 2012 we use ICD-9 codes 410 (heart attacks) and 434/436 (strokes). From 2012 onwards we use ICD-10 codes I21/22 (heart attacks) and I63/I64 strokes. This follows the established economics literature like Chandra and Staiger (2007) and Fadlon and Nielsen (2019) and CBS's own approach when calculating aggregate longitudinal trends in case rates and outcomes for ischemic heart attack and stroke patients ensuring consistency across years.

To identify the first time such an event occurs at the individual level we use the earliest admission date observed between 1995 and 2022. We do not condition on patients only experiencing a single heart attack or stroke nor only experiencing either type of event if subsequent events occur. For a small number of admission-episodes we do not observe codes recorded by the hospital provider but an imputation of diagnostic codes based on the patient characteristics and physician specialty. Following CBS recommendations we do not use imputed episodes for longitudinal analyses and remove all individuals who ever experienced any hospital admission with an imputed diagnosis code. This affects 6.71% of all unique first-time heart attack and stroke patients admitted in 2010 to 2022, the focus of our analysis.

Variables Created based on Administrative and Survey Data

Below we describe all variables that we create based on the longitudinally available administrative data to supplement the Health Monitors and any variables created based on Health Monitor data if changes were implemented, such as the recoding of variables or categories.

Hospital Care Use: We create dummies encoding any admission in a given year within 17 of the 19 main chapters of the International Classification for Hospital Morbidity Tabulation (ISHMT) shortlist, an international classification system of hospital care use (see for example Wong et al. (2011) for detail on their applicability in the Dutch context). We exclude pregnancy-related and perinatal care given the age of our sample of heart attack and stroke patients (age-at-onset ranges from 60 to 75). In addition we create measures on the total number of hospital visits in a given year and the total length of stay (all inpatient days) across these visits split into cardiovascular health related (ISHMT grouping 9: *Diseases of the Circulatory System*) and all other admissions.

Healthcare Costs: We use detailed healthcare cost data by spending category to create three measures of domain-specific healthcare costs in a given year. These are costs associated with pharmacological care, hospital care costs, and costs from general practitioner consultations. All are adjusted for inflation using official annual consumer price indices published by CBS.

Medication Use: Based on data on prescription medication use by Anatomical Therapeutic Chemical (ATC) codes we identify usage of medications for cardiovascular health prevention, namely anti-thrombotic agents (ATC: B01A), anti-hypertensive agents (ATC: C01/C02, C07-CO9, and CO4A), statins (ATC: C10), and an indicator whether at least one of these was used in a given year.

Chronic Conditions: We follow Danesh et al. (2024) in inferring the presence of 21 distinct chronic conditions based on patterns in prescription medication use. Their mapping of ACT codes onto chronic conditions is a refined version of the mapping proposed by Huber et al. (2013), adapted for the Dutch context. The conditions we identify are acid-related disorders, bone-related diseases (e.g., osteoporosis), cancer, cardiovascular diseases (including hypertension), dementia, diabetes, epilepsy, glaucoma, gout, HIV, hyperlipidemia, intestinal (inflammatory) diseases, anemia, migraines, pain-related disorders, Parkinson's disease, psychological disorders (depression and anxiety), psychoses, respiratory illnesses, rheumatological conditions, and thyroid disorders.

Deductible Choice: All insured individuals in the Dutch health insurance system have to chose each year their voluntary deductible level which decreases their health insurance premium but increases their copayment to healthcare costs if care is consumed. The voluntary deductible is added onto the universal copayment component which ranged from € 160 (2010) to € 385 (2022). The voluntary deducible can be chosen in € 100 increments from € 0 to € 500. Following Handel et al. (2024) we focus on whether individuals chose any non-zero deductible as a measure of voluntary exposure to healthcare costs and create a dummy for having a voluntary deductible > 0 in a given year.

Income, Income Rank and Labour Market Status: Based on tax-records and observed household compositions we calculate the pre-tax per-capita income within households and translate these into 5-year age-sex specific income quintiles based on the entire income distribution for a given age-sex group in a given year. Measures of monthly individual income are calculated using annual pre-tax income levels adjusted for inflation using official annual consumer price indices as published by CBS. Using the main source of individual income as listed in the tax records we create dummies for labor market participation differentiating employment, social benefit receipt (such as unemployment benefits), pensions, disability benefits, or any other source of income (for example dividends and capital gains) as the main income source.

Highest Education Level: Health Monitor participants indicate their highest level of education as either low (*lichamelijke opvoeding*), lower-medium (*middelbaar algemeen voortgezet onderwijs* and *lager beroepsonderwijs*), upper medium (*hoger algemeen voortgezet onderwijs*, *voorbereidend wetenschappelijk onderwijs*, and *middelbaar beroepsonderwijs*), or high (*hoger beroepsonderwijs* and *wetenschappelijk onderwijs*). We collapse these into two categories of lower educational attainment (combining low and lower medium) and higher educational attainment (combining upper medium and high).

Functional Limitations: Health Monitor participants indicate whether their health impacts their ability to perform each of seven day-to-day activities: i) *"being able to follow a conversation of three or more persons"*; ii) *"being able to have a conversation with one person"*; iii) *"being able to read the small print in newspapers"*; iv) *"being able to recognize someone's face at a distance of four meters or more"*: v) *"being able to carry 5kg for 10 meters"*; vi) *"being able to reach the ground"*; and vii) *"being able to walk 400 meters without stopping"*. For each activity respondents indicate whether they are able to do these activities *"without difficulty"*, *"with some difficulty"*, *"with great difficulty"*, or *"not at all"*. We create a dummy for each activity encoding whether a given respondent has at least great difficulty conducting it.

Mental Health: We translate the 10-item responses to the Kessler mental health questionnaire (Kessler et al., 2002) into a binary measure indicating an elevated risk of depression or anxiety requiring further screening. Questionnaire items ask individuals to indicate their feelings in the past month, covering feelings of depression, anxiety, restlessness, tiredness, nervousness, and lack of energy. Individuals indicate the frequency of these feelings from *"None of the time"*, assigned a score of 1, to *"All of the time"*, assigned a score of 5. We create the total score ranging from 10 (all responses are *"None of the time"*) to 50 (all responses are *"All of the time"*) and translate it into a binary indicator for those individuals scoring 16 or above, indicating an elevated risk of depression or anxiety and requiring further medical examination by a mental health practitioner.

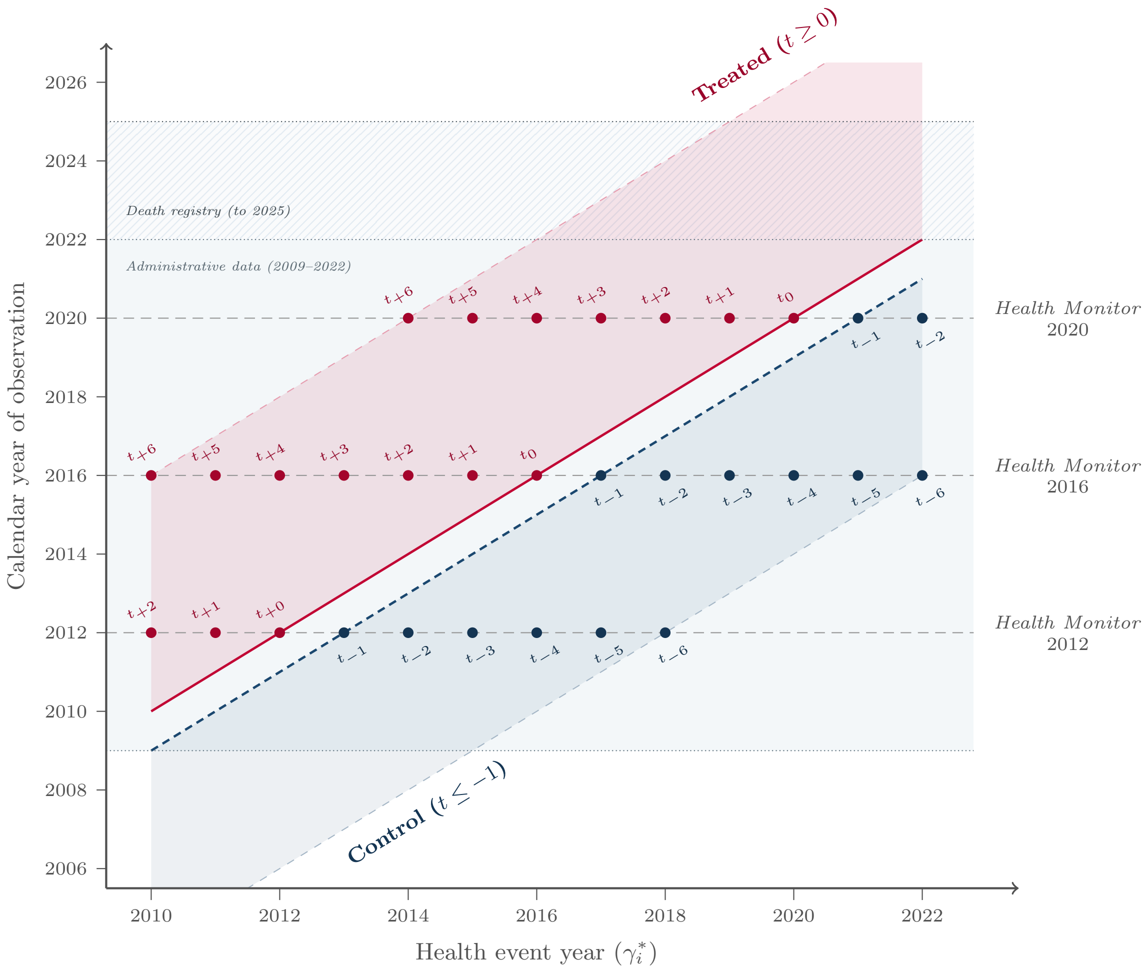
Self Efficacy: We translate a 7-item questionnaire version of the Pearlin Mastery Scale (Pearlin and Schooler, 1978) into continuous and binary measures of self-efficacy. The seven items in the questionnaire are split into five questions on external control, i) *"I have little control over the things that happen to me"*; ii) *"Some of my problems I cannot possibly solve"*; iii) *"There is little I can do to change important things in my life"*; iv) *"I often feel helpless when dealing with life's problems"*; v) *"Sometimes I feel that I am a plaything of life"*; and two questions on internal control, vi) *"What happens to me in the future depends for the most part on myself"*; and vii) *"I can do almost anything if I set my mind to it"*. Each are answered on a 5-point scale ranging from *"Completely Agree"* to *"Completely Disagree"*. Items vi) and vii) are reverse coded before calculating a total score ranging from 7 to 35 with higher scores indicating high levels of self-efficacy and internal control (an individual has strong beliefs in their own ability to influence outcomes in their life) and lower scores indicating low levels of self-efficacy. We created a standardized score and a dummy for scores below 19, indicating low levels of self-efficacy.

D Methodological Details

D.I Time Structure

Our analysis sample divides individuals into treatment and control groups based on when they are surveyed relative to their health event. Event-time cohorts are determined by the calendar year in which individuals experience their first-time heart attack or stroke, γ_i^*, and the year of Health Monitor participation s_i (2012, 2016 or 2020). We define event-time as $t_i = s_i - \gamma_i^*$. Figure D.1 illustrates this. Individuals surveyed after their event ($t_{\geq 0}$) form the treatment group; those surveyed before ($t_{\leq -1}$) form the control group. An individual whose health event is in 2014 ($\gamma_i^* = 2014$) participating in the 2012 Health Monitor ($s_i = 2012$) enters our control group as a member of event-time cohort t_{-2} (as survey year, 2012, and admission year, 2014, are two years apart), with participation of the same individual in the 2016 or 2020 Health Monitors resulting in membership of the treatment group and event-time cohorts t_2 and t_6 respectively.

Figure D.1: Time Structure – Event-Time Cohorts by Survey and Event Years



Source: Own illustration. *Note:* Each dot represents an event-time cohort of first-time heart attack or stroke patients participating in one of three Health Monitor surveys (2012, 2016, or 2020), with event-time $t_i = s_i - \gamma_i^*$. Dots above the solid line ($t = 0$) are treated (interviewed after the event); dots below the dashed line ($t = -1$) are controls (interviewed before). The shaded regions mark the analysis window ($t \in [-6, +6]$). The light blue background indicates coverage of longitudinal administrative data (2009–2022); the hatched region indicates additional mortality follow-up from the death registry (to 2025).

While we can observe the date of the first admission we cannot observe the date of survey-response. To ensure that our event-time cohorts nonetheless are correctly divided into those interviewed before their respective health event and those thereafter we exclude individuals if their first-time health event occurred within the four month Health Monitor data collection window covering September 1^{st} and December 31^{st} of 2012, 2016, and 2020. We therefore remove individuals for whom the relative time to the health event and membership in the treatment ($t_{\geq 0}$) or control ($t_{\leq -1}$) group would be ambiguous.

We can construct event-time cohorts covering the full range determined by observable health events (1995–2022) and the survey years (2012, 2016 and 2022). However, we restrict our analysis sample to event-time cohorts t_{-6} to t_6, considering first-time admissions between 2010 and 2022 for multiple reasons. First, this allows us to observe longitudinal health information for multiple years before each event, ensuring we identify first-time (rather than recurrent) events. Secondly, our methodological approach conditions on differences in health at the time of the event. As our healthcare cost data starts in 2009 the 2010 cohort of patients is the first for which we can observe healthcare costs in the year before the event. Thirdly, given the survey years of 2012, 2016, and 2020, and the 2010 to 2022 admission year range the 2016 survey contributes the most observations in our sample with a possible event-time cohort range of t_{-6} (survey participation in 2016, admission in 2022) to t_6 (survey participation in 2016, admission in 2010). We could observe event-time cohorts outside this range from t_{-10} (survey participation in 2012, event in 2022) to t_{10} (survey participation in 2020, event in 2010) but we impose this common event-time range so that each cohort in our sample is sourced from at least two adjacent Health Monitors.

D.II Methodological Details

We compare the behaviors of heart attack and stroke patients providing survey responses at different relative time-points to their respective acute health event. Setups such as this, with time-varying treatment adoption (health event occurrence) are prone to provide biased dynamic treatment effect estimates when using standard event study designs (Goodman-Bacon, 2021) not accounting for selection into treatment timing groups. To address this we rely on a "doubly-robust" design (Callaway and Sant'Anna, 2021) to estimate weighted event study regressions. The "doubly robust" event study design extends the estimator by Sant'Anna and Zhao (2020) combining outcomes regression (Heckman et al., 1997) and inverse-probability weighting based approaches to Difference-in-Differences designs (Abadie, 2005) to the case of time-varying treatment adoption and longitudinal or repeated cross-sectional data. The estimation procedure by Callaway and Sant'Anna (2021) consists of two steps. First, the estimation of generalized propensity score models capturing the likelihood of membership to a specific treatment time group, in our context the relative timing of health events. Second, an outcomes regression model extrapolating the counterfactual outcome evolution based on pre-treatment characteristics. It is labeled as "doubly-robust" as it requires either the propensity score model or the outcomes regression, but not both, to be correctly specified.

In our design, which compares patients interviewed at different relative time points to their respective acute health event, both steps have an intuitive interpretation. While we exploit the exogeneity in the timing of heart attacks and strokes (see similar designs such as Chandra and Staiger (2007), Doyle (2011) or Fadlon and Nielsen (2019)) not all individuals are equally as likely to experience an acute health event at the time they experience it. Or in other words, we want to avoid comparing individuals who had a high level of relative risk for a health event to occur due to pre-existing risk factors to those with very low risk for such an event when it occurred. The generalized propensity score model in our context therefore aims to capture these *differences in relative ex-ante (health) risk* based on observable characteristics at event-time. As we compare individuals interviewed at the same time but experiencing a health event at different time points we want to ensure that we observe a similar distribution of relative risk across the different treatment times (admission years) and between the treatment (interviewed after the event) and control groups (interviewed before the event).

We estimate the generalised propensity score models based on data on the entire population of first-time heart attack or stroke patients between 2010 and 2022 (N : 96,021) that underlie our subsample of patients that respond to the Health Monitor. We therefore include only individuals whose health event occurs at a certain age (60 to 70 for heart attacks and 65 to 75 for strokes), who survive for at least one year after the health event, and who do not experience a previous transient ischemic attack nor lived together with an individual experiencing a heart attack or stroke or had any nursing home admission prior to the event. We use the entire population of patients satisfying these criteria, as opposed to only the subgroup of Health Monitor participants to ensure that our propensity score model is calibrated based on the actual relationship between observable characteristics and health event timing as observed in the true underlying patient population.

In practical terms we estimate the individual-level likelihood to experience a heart attack or stroke in some base year γ^b, conditional on a set of observable characteristics X_i at this point in time and not yet having experienced the health event but eventually doing so:

$$Pr(\gamma_i^* = \gamma^b) = \Lambda(\beta X_{i,\gamma^b})$$

where Λ is a logit-function and X_i contains a set of health and demographic characteristics. The underlying sample is always those individuals who by the time of the base year γ^b have not yet experienced their health event. To account for potential differences in the patient population and health risk profiles over time we use three different base years, one for each of the three Health Monitor samples, thereby creating three distinct prediction models. For each Health Monitor we chose the base year corresponding to event-time cohort t_2, the latest event-time cohort observable in all three surveys, corresponding to $\gamma^b = 2010$ for the 2012, $\gamma^b = 2014$ for the 2016, and $\gamma^b = 2018$ for the 2020 Health Monitor.

The set of predictors X_i covers demographic, socio-economic and health characteristics. Demographic characteristics include single-year-of-age dummies, being female, and cohabiting with a partner. Socio-economic status is measured using one-year-lagged income-quintile membership based on per-capita household income and dummies for the individual labor force participation categories. Health characteristics cover one- and two-year-lagged dummies for 21 distinct chronic conditions, the usage of diseases specific hospital care across 17 categories, the total number of hospital visits and total length of stay across these visits, and one-year-lagged healthcare costs for hospital-care, pharmacology, and GP consultations. See the Data Appendix C.III for detailed definitions of all predictors.

Our prediction models yield three sets of estimated base-year specific coefficients $\hat{\beta}^{\gamma^b}$. We use these coefficients to estimate propensity scores at the time of an individual's health event for our Health Monitor sample based on their observed characteristics at event-time $X_{i,0}$, yielding an individual-specific estimated propensity score:

$$\hat{w}_i = \Lambda(\hat{\beta}^{\gamma^b} X_{i,0})$$

Propensity scores $\hat{w}_i$ thereby capture the likelihood of having experienced a health event (being treated) at the actual event-time as opposed to at a later time, thereby belonging to the *not-yet-treated* control group. Therefore these scores present a measure of *relative risk* of belonging to an earlier health event cohort not *absolute risk* of having any event among the entire population, nor of survival conditional on having an event, although unsurprisingly there are overlapping predicting factors.[8] The specific set of coefficients applied to a given Health Monitor participant is chosen based on the respective base year chosen for their survey cohort. To check whether our results are robust to the choice of the base years we have run all analyses using a fixed base year independent from the survey year cohort or survey-year specific alternative base years with no meaningful impact on our results.[9]

In the second step following Callaway and Sant'Anna (2021) we use the estimated propensity scores $\hat{w}_i$

[8]Five-year survival among the bottom decile of propensity scores in our Health Monitor sample is 80.10% against 85.64% among the top decile without any survival conditioning, and 87.92% (bottom decile) versus 90.36% (top decile) when conditioning on one-year survival, indicating that propensity scores capture survival chances to some degree.

[9]Results are available upon request.

as inverse probability weights in event study regressions of the following form:

$$Y_i = \alpha + \sum_{e=-6, e\neq -1}^{6} \delta_e \mathbf{1}(t_i = e) + \beta X^r_{i,0} + \epsilon_i$$

These event study regressions contain covariates covering differences in demographic, socio-economic and health characteristics at event-time ($X^r_{i,0}$). These covariates are a subset of all predictors used in the estimation of propensity scores (X_i) covering demographic information (single-year-of-age dummies, sex, living with a partner), information on socio-economic status the year before the health event (age-sex specific income quintile membership and labor market status) and health information in the year before the health event (chronic conditions, general and cardiovascular-specific hospital care use, and healthcare costs for hospital care, pharmacological care, and GP consultations). As our sample of Health Monitor participants is substantially smaller than the sample of all underlying heart attack and stroke patients used in the estimation of the generalized propensity score models we opt for a more parsimonious set of health-related predictors. We exchange dummies encoding diseases specific hospital care use with a single dummy for any cardiovascular related hospital stays, the total number of hospital admissions and inpatient days, and a single lag for all chronic conditions. Next to these all regressions include survey-year dummies, the number of inpatient days associated with the individual's acute health event, and a dummy encoding whether the health event was a heart attack or stroke.

Identifying Assumptions

The "doubly-robust" estimation approach by Callaway and Sant'Anna (2021) applied to repeated cross-sectional data requires six assumptions to hold. For each of these we outline below their specific implications in our context and their plausibility.

Irreversibility of Treatment: A treated unit remains treated until the end of the observation period. In the context of this study, once an individual has experienced a health event this experience is not forgotten. This assumption is very likely to be satisfied given the salience of the health events we consider, both of which are life-threatening medical emergencies which for our entire sample was associated with being treated in a hospital.

Limited Anticipation of Treatment: A treated unit cannot anticipate the exact onset of treatment. Our entire analysis sample only contains individuals that all eventually experience similar health events in the form of ischemic heart attacks and strokes. The exact timing of these events is inherently unpredictable and it is this exogeneity in the timing of events not whether or not an individual experienced the event at all, that we exploit. In addition we include only those individuals who have not been previously exposed to such an event or similar health shocks directly or by proxy due to an occurrence within their family.

Conditional Parallel Trends: Treated and control units (in our case not-yet-treated) would have followed the same outcomes trajectory in absence of treatment once conditioned on the pre-treatment characteristics. In our context this assumption implies that individuals in the different observed event-time groups would have followed a similar trajectory with respect to their health-related behaviors if the health event had not occurred. While this assumption is inherently untestable as it would require the observation of the true counterfactual its plausibility can be examined as one can directly compare the existence of pre-trends among the treated and control groups.

Overlap and Common Support: For any combination of observed covariates there is a non-zero probability of being treated or untreated. In addition there is a large overlap in the distribution of estimated propensity scores between treated and untreated units. In the context of our study this means we need an overlap between characteristics before the health event and the estimated propensity scores across the different event-time cohorts which define our treatment and control groups. As outlined in detail below we observe a highly comparable set of pre-event characteristics (see Table D.2) and propensity score distributions (see Figure D.2) across all event-time cohorts and between the treatment and control groups. Furthermore we only exclude 0.79% of our sample for whom propensity scores can be estimated due to a score being outside the area of common support.

Stable Unit Treatment Value Assumption: All units receive the same treatment dose and treatments cannot spill over, meaning that the treatment of one individual determines the treatment of another individual. Spillovers are ruled out in our context as we only consider households in which only one individual experiences a health event. Further, the considered health events can occur independently from each other thereby not allowing for the possibility of the treatment status of one individual crowding out others.

Concerns around the stability of the treatment dose, the intensity of heart attack or strokes across different admission-years, are theoretically warranted. For example if changes in medical technology or follow-up guidelines for physicians alter the impact of a health events over time due to more efficient management of post-event health trajectories. In this case individuals exposed to a health event at different years might also be impacted differently. While theoretically possible we think these concerns are unwarranted in this context. Both heart attacks and strokes have seen significant decreases in mortality and the number of inpatient days between 1995 and 2022, but decreases during the period of 2010 to 2022 that we focus on are considerably smaller. Mortality decreased from 8.18% (2010) to 6.58% (2022) for all heart attack and stroke patients (heart attack mortality decreased from 6.28% to 3.52%, stroke mortality from 11.47% to 9.70%). Also the associated inpatient days decreased only to a small degree from 5.68 days to 4.07 days (for heart attacks the change was from 5.13 to 3.91 and for strokes from 6.61 to 4.24). All our regressions account for differences in inpatient days, thereby already controlling for some of these dynamics while we also have by construction a high overlap in event-time cohorts and admission years across the Health Monitors (see Table D.1). In addition we directly explored how differential survival dynamics across treatment and control groups would potentially impact our results, finding that differences would have to be unrealistically large given the magnitude of the effects we identify (see Section D.III).

Absence of Compositional Changes: This assumption applies when cross-sectional data is used and ensures the comparability of samples of treated units over time. In our context it implies that admission/event-time cohorts depict no significant drift in their pre-event characteristics such that observed effect estimates could be explained by compositional changes. We make this assumption plausible by constraining our sample to a group of comparable individuals as we condition on a baseline survival corridor of one year (which is expanded in the robustness checks) and a 5-year age-band with respect to the age-at-onset of the health event around the observed mean ages within that period. Conditional on age and minimum survival post-event we observe no strong differences in key characteristics before the onset of the health event that could explain our results (see Table D.2).

Analysis Sample Construction – Common Support and Balance

The total number of patients satisfying the general inclusion criteria (no previous exposure and age-at-onset within the 5-year bands around the patient population mean) whose health event occurs within 2010 and 2022 that are observable in the Health Monitor surveys are 14,998 (7,882 heart attack and 7,116 stroke patients). After imposing the event-time range of t_{-6} to t_6 this drops to 12,900 (6,733 heart attack and 6,167 stroke patients). For a further 690 individuals no propensity score can be estimated due to missing information on any of the considered predictors. This decreases the potential sample size before conditioning on being in the common support area, survival, and the availability of all outcomes to 12,210, or 94.65% (6,701 heart attack and 5,509 stroke patients).

A core assumption necessary for the approach by Callaway and Sant'Anna (2021) is the presence of common support and covariate overlap. In our context this means that across the different event-time cohorts we want to observe similar distributions of both the propensity scores and the pre-health-event characteristics. This ensures that for each individual in our treatment group ($t_{\geq 0}$) we can identify a similar individual in the control group ($t_{\leq -1}$) sharing a similar propensity score and covariate combination. To make this assumption more credible we follow common practice in the application of matching estimators by imposing a minimum-maximum restriction (see for example Caliendo and Kopeinig (2008) or Stuart et al. (2013)). This means we exclude individuals in the treatment group if their estimated propensity score is larger than the observed maximum in the control group and those in the control group if their estimated propensity score is smaller than the minimum observed in the treatment group. Doing so results in 97 individuals, or 0.79% of the 12,210 for whom the propensity score can be estimated, being excluded from the analysis sample.

We further exclude 361 individuals that die within one year of their admission and 396 individuals whose health event falls within the Health Monitor surveying period and thereby we cannot ascertain whether individuals were interviewed before or after their health event. Lastly, 1,691 individuals are dropped as not all outcomes are observable. The resulting baseline sample contains 9,665 unique individuals of which 5,475 experienced a heart attack and 4,190 experienced a stroke. Table D.1 provides a breakdown of the sample by event-time cohort and Health Monitor years.

Table D.1: Event-Time Cohorts by Health Monitor and Types of Health Events

Panel A: All Health Events

	Time to Health Event in Years													
	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	**All**
Survey Year														
2012	247	250	283	286	295	226	146	234	210					2,177
2016	245	276	308	370	431	421	317	457	414	292	294	269	227	4,321
2020					330	388	228	392	402	382	359	358	328	3,167
Pooled	492	526	591	656	1,056	1,035	691	1,083	1,026	674	653	627	555	9,665

Panel B: Heart Attacks

	Time to Health Event in Years													
	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	**All**
Survey Year														
2012	111	98	145	160	153	127	100	134	139					1,167
2016	118	126	131	173	183	219	168	287	258	197	211	181	168	2,420
2020					165	202	111	233	221	246	226	248	236	1,888
Pooled	229	224	276	333	501	548	379	654	618	443	437	429	404	5,475

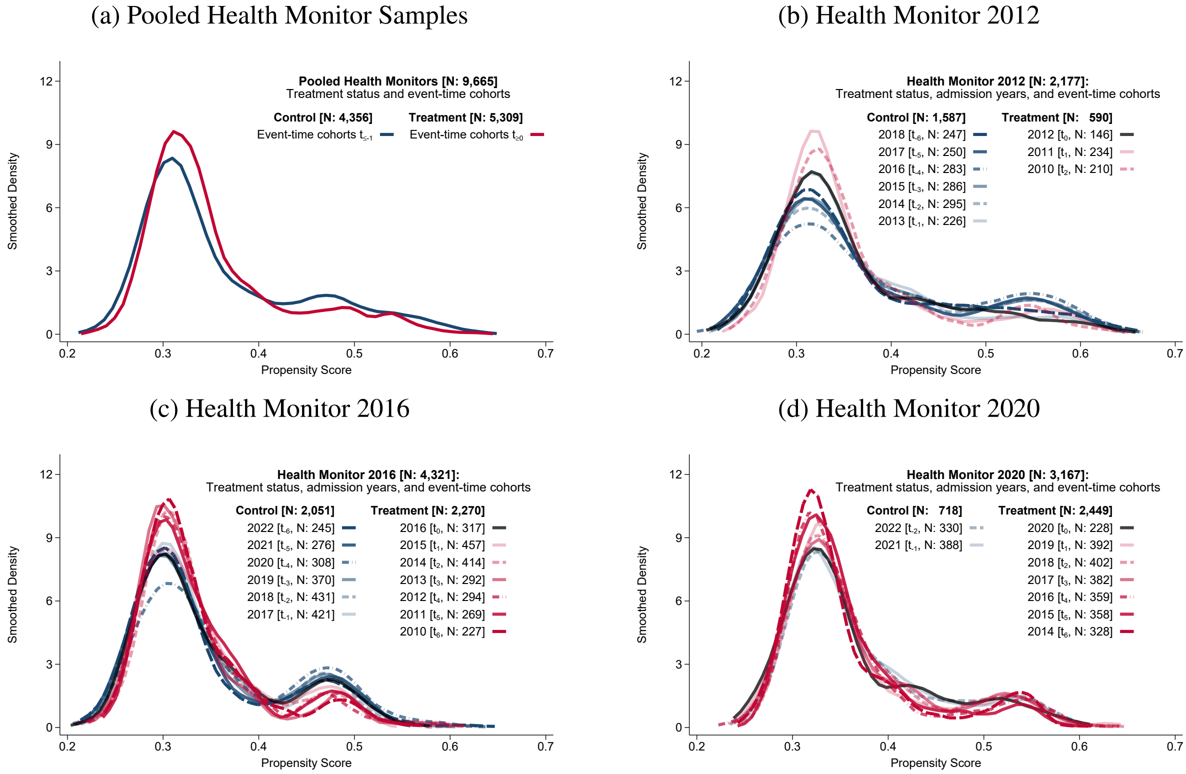
Panel C: Strokes

	Time to Health Event in Years													
	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	**All**
Survey Year														
2012	136	152	138	126	142	99	46	100	71					1,010
2016	127	150	177	197	248	202	149	170	156	95	83	88	59	1,901
2020					165	186	117	159	181	136	133	110	92	1,279
Pooled	263	302	315	323	555	487	312	429	408	231	216	198	151	4,190

Source: Own Calculations based on Data from Statistics Netherlands. *Note:* Depicted are the number of unique individuals in our analysis sample of first-time heart attack and stroke patients between 2010 and 2022 participating in the Health Monitor for which propensity scores can be estimated, whose event does not occur during the survey collection period, that survive for at least one year after the event, and who provide information on all outcomes considered.

Figure D.2 depicts the propensity score distributions across the pooled Health Monitor samples split into treatment and control group **(a)** and for each Health Monitor and event-time cohorts separately panels **(b)** to **(d)**. The propensity score distributions are highly comparable both when comparing treatment and control groups in general but also when splitting the sample by survey year and event-time cohort.

Figure D.2: Propensity Score Distributions



Source: Own Illustration based on data from Statistics Netherlands. *Note:* Depicted are the propensity score distributions based on estimated propensity scores using observed demographic, socio-economic and health characteristics at event-time for our analysis sample of first-time heart attack and stroke patients between 2010 and 2022 participating in the Health Monitor. Panel **(a)** depicts the pooled sample ($N = 9,665$) split into control (blue) and treatment (red) groups. The individual Health Monitor survey years split by event-time cohorts are depicted in panel **(b)**, 2012 Health Monitor ($N = 2,177$), panel **(c)**, 2016 Health Monitor ($N = 4,321$), and panel **(d)**, 2020 Health Monitor ($N = 3,167$), with blue-shaded lines depicting control group cohorts ($t_{\leq -1}$) and grey/red-shaded lines depicting treatment group cohorts ($t_{\geq 0}$).

Table 1 in the main body provides an overview on the pre-health event characteristics that we condition on and the sample characteristics at the time of the health event for our analysis sample across all health events and by type of health event. Table D.2 reports the unweighted sample means across the same pre-event characteristics but split by event-time groups. Following recommendation by Stuart et al. (2013) we compute a measure of standardized differences between event-time cohorts. This is done by comparing event-time cohort t_{-1} (the reference cohort in all event study regressions) against all other cohorts and using the weighted means and standard deviations based on the estimated propensity scores. Bold-print and a $*$ indicate whether for a given covariate the absolute standardized difference exceeds the recommended 0.25 threshold. We observe very little imbalance entirely limited to the age-at-onset for event-time cohorts t_3 to t_6.

Table D.2: Unweighted Pre-Event Characteristics by Event-Time Cohort

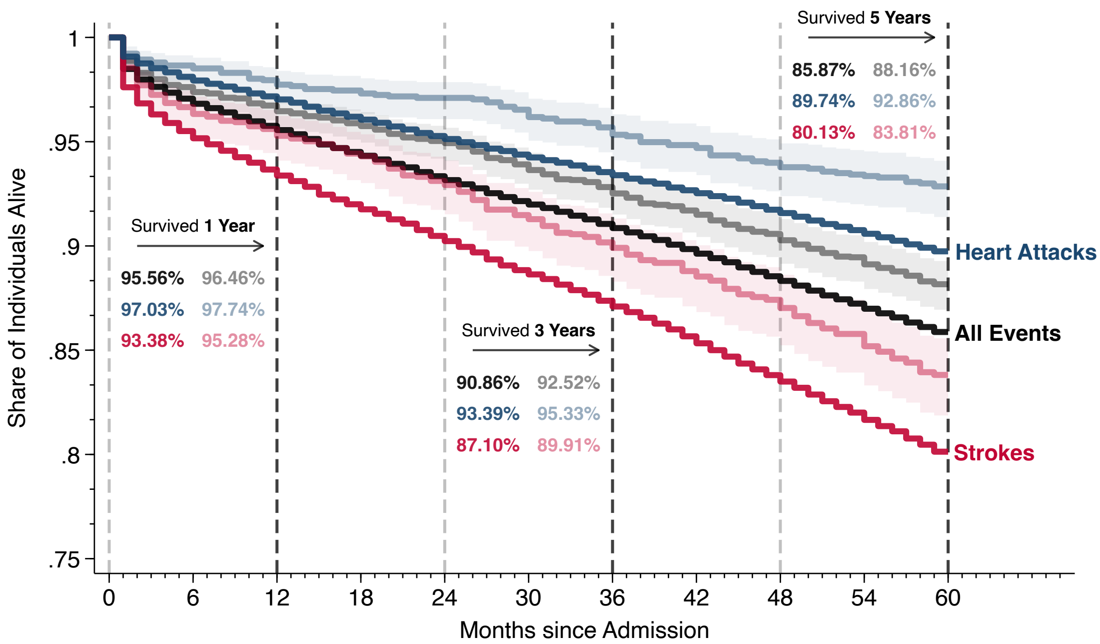
	Time to Health Event in Years												
	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6
Health Event Characteristics													
Days in Hospital	3.76	4.07	3.84	4.12	4.15	4.25	4.04	4.51	4.55	4.41	4.20	4.43	4.74
Demographic Information													
Age at Onset	68.37	68.67	68.59	68.31	68.24	67.88	67.61	67.24	67.26	**66.75***	**66.50***	**66.26***	**66.11***
Female	0.34	0.35	0.29	0.33	0.33	0.32	0.29	0.29	0.31	0.27	0.25	0.28	0.27
Co-habiting Partner	0.77	0.77	0.79	0.77	0.78	0.75	0.79	0.79	0.79	0.80	0.79	0.81	0.79
Socio-Economic Status *(in the year before the health event)*													
Employed	0.26	0.21	0.20	0.19	0.19	0.22	0.23	0.24	0.21	0.26	0.27	0.25	0.27
Social Benefits	0.04	0.02	0.02	0.03	0.02	0.02	0.03	0.02	0.02	0.03	0.04	0.04	0.03
Retired	0.66	0.72	0.72	0.73	0.73	0.70	0.69	0.67	0.70	0.63	0.62	0.62	0.63
Disability Benefits	0.03	0.03	0.04	0.04	0.04	0.04	0.03	0.05	0.04	0.05	0.04	0.04	0.05
Other Source of Income	0.01	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.04	0.03
Per-capita HH Income (€ 1000s)	3.02	3.10	2.92	2.80	2.96	2.98	2.89	3.00	2.93	2.70	2.93	3.01	3.01
1^{st} Income Quintile (lowest)	0.16	0.15	0.17	0.18	0.16	0.16	0.18	0.16	0.17	0.18	0.16	0.16	0.14
2^{nd} Income Quintile	0.23	0.19	0.24	0.21	0.22	0.21	0.20	0.21	0.20	0.21	0.21	0.21	0.22
3^{rd} Income Quintile	0.21	0.22	0.23	0.23	0.20	0.22	0.22	0.21	0.20	0.20	0.22	0.24	0.21
4^{th} Income Quintile	0.21	0.22	0.18	0.20	0.22	0.22	0.20	0.22	0.22	0.21	0.22	0.19	0.23
5^{th} Income Quintile (highest)	0.19	0.22	0.20	0.18	0.20	0.19	0.20	0.20	0.21	0.21	0.19	0.21	0.20
Health Status *(in the year before the health event)*													
Hospitalizations (CVD-related)	0.09	0.04	0.05	0.04	0.05	0.03	0.08	0.04	0.04	0.05	0.06	0.04	0.06
Inpatient Days (CVD-related)	0.29	0.09	0.11	0.08	0.10	0.08	0.21	0.15	0.08	0.12	0.14	0.09	0.14
Hospitalizations (Non-CVD)	0.15	0.13	0.14	0.15	0.16	0.12	0.17	0.14	0.17	0.12	0.14	0.15	0.17
Inpatient Days (Non-CVD)	0.29	0.10	0.35	0.22	0.24	0.19	0.28	0.31	0.26	0.18	0.29	0.18	0.35
Acid-related Disorder	0.33	0.33	0.29	0.26	0.32	0.29	0.30	0.30	0.27	0.27	0.30	0.28	0.25
Hypertension	0.51	0.51	0.51	0.54	0.49	0.46	0.51	0.46	0.47	0.50	0.45	0.43	0.46
Diabetes	0.16	0.16	0.13	0.15	0.13	0.13	0.17	0.11	0.13	0.13	0.11	0.14	0.09
Hyperlipidemia	0.32	0.33	0.32	0.40	0.33	0.32	0.36	0.31	0.32	0.34	0.30	0.30	0.28
Depression/Anxiety	0.11	0.09	0.08	0.07	0.10	0.07	0.10	0.08	0.08	0.09	0.07	0.07	0.08
Hospital Care Costs (€ 1000s)	2.60	2.11	2.63	2.10	2.51	2.22	2.75	2.41	2.15	1.78	1.89	1.95	2.19
Pharmacology Costs (€ 1000s)	0.52	0.57	0.66	0.54	0.59	0.49	0.60	0.48	0.52	0.48	0.54	0.58	0.56
GP-visit Costs (€ 1000s)	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.06	0.06
Observations	492	526	591	656	1,056	1,035	691	1,083	1,026	674	653	627	555

Source: Own Calculations based on Data from Statistics Netherlands. *Note:* Depicted are the unweighted means rounded to the second decimal for variables included in all event-study regressions for our analysis sample of first-time heart attack and stroke patients between 2010 and 2022 participating in the Health Monitor. **Bold-printed** with a * indicate a standardized difference > 0.25, therefore exceeding the recommended threshold and indicating covariate imbalance (Stuart et al., 2013). Standardized differences are computed by comparing a given event-time cohort against the reference cohort t_{-1}. They are calculated using the formula $\frac{\bar{X}_{t_{-1}} - \bar{X}_{t_e}}{\sqrt{(s^2_{t_{-1}} + s^2_{t_e})/2}}$ where $\bar{X}$ is the sample mean and s the sample standard deviation when weighting observations using the inverse-probability weights derived from estimated propensity scores.

D.III Survival Dynamics & Sensitivity of Results to Selective Survival

As we construct our analysis dataset from a pool of participants in the Health Monitor the sample of heart attack and stroke patients among these might not be representative for the underlying population of patients. To explore whether this is the case we plot in Figure D.3 Kaplan-Meier survival curves for the non-surveyed and surveyed population of heart attack and stroke patients. The underlying population for these curves are first-time admissions between January 1^{st} 2010 and February 13^{th} 2020 for whom a five-year survival is observable, without prior or subsequent exposure to cardiovascular events due to cohabitation, did not reside in a nursing home before their event, and were aged between 60 and 70 (heart attacks) or 65 and 75 (strokes) at the time of admission. Individuals not participating in any Health Monitor (N : 68,097) are depicted in full color intensity with all events coloured in black, heart attacks (N : 40,681) in blue and strokes in red (N : 27,416). Survival curves for patients participating in the Health Monitor before their event (All events N : 2,940; heart attacks N : 1,414; strokes N : 1,526) are depicted in the same color but at lower intensity with their respective 95% confidence bands.

Figure D.3: Kaplan-Meier Survival Curves by Health Event Type and Survey Participation



Source: Own calculations based on data from Statistics Netherlands. *Note:* Displayed are estimated survival probabilities based on a Kaplan-Meier survival function. The underlying population are all first-time heart attack and stroke patients between January 1^{st} 2010 and February 13^{th} 2020. We exclude patients who previously experienced a transient ischemic attack, those cohabiting with another individual previously or subsequently experiencing a severe cardiovascular event, those living in a nursing home before their admission, and those not aged between 60 and 70 (heart attacks) or 65 and 75 (strokes) at the time of their event. Survival curves are calculated separately for individuals not participating in the Health Monitor (all events (black), heart attacks (blue), and strokes (red)), and participants in the Health Monitor (lower intensity color), with shaded areas indicating the 95% confidence interval.

There are significant differences in survival between patients not participating in the Health Monitor and those that do before their event. Within the first year 95.56% of non-surveyed patients survive, compared to 96.46% among pre-event survey participants, translating into a 25.42% higher mortality rate among the non-surveyed population compared to those surveyed. The relative gap closes with time, narrowing to 22.19% after three years and 19.34% after five years. For heart attacks the relative mortality gaps are 31.42% (one-year), 41.54% (three-year), and 43.70% (five-year), and for strokes 40.25% (one-year), 27.85% (three-year), and 22.73% (five-year). Overall therefore our sample of patients in the Health Monitor is likely to be generally selected from the more healthy part of the underlying patient population of heart attack and stroke patients. This positive selection of Health Monitor participants relative to the general patient population has implications for the external validity of our estimates: our findings may not fully generalize to the broader population of heart attack and stroke patients, who are on average less healthy. However, this selection does not directly threaten the internal validity of our estimates, which relies on comparability across event-time cohorts *within* our analysis sample.

Survival Selection due to Lifestyle

A more direct concern for internal validity is differential survival across event-time cohorts. By construction, individuals observed at later event-times have survived longer since their health event: someone in cohort t_6 must have survived at least six years post-event, while someone in cohort t_0 need only survive through the baseline one-year window. If survival is correlated with health behaviors, this could bias our estimates through two channels. First, survival may be endogenous with respect to *pre-event lifestyles*. If smokers have lower survival prospects following a heart attack or stroke than non-smokers, independent from health differences which we account for, the number of pre-event smokers among those interviewed after the event would decrease mechanically. An observed decrease in smoking prevalence would then not reflect cessation but rather differential survival. Second, *post-event lifestyle (change)* may affect survival chances. If continuing or reverting to smoking decreases survival, the size and persistence of behavioral effects would be overestimated: with increasing time since the event, non-changers would attrit from the sample, mechanically decreasing observed smoking prevalence. We address these concerns by quantifying potential bias from lifestyle-related survival selection and by showing that our results are robust to conditioning on longer survival windows, which equalizes survival horizons across event-time cohorts.

To explore whether these mechanisms could explain our results we first use survival difference across lifestyles to i) quantify the potential survival composition effects and ii) calculate survival differences necessary to overturn our results as a benchmark. Besides smoking status our lifestyle outcomes are measured using continuous variables. We therefore translate alcohol consumption, physical activity and weight management into binary versions to calculate differences between low and high risk lifestyles. These are excessive drinking (weekly drinks ≥ 14 (male) or ≥ 7 (female)), physical inactivity (< 3 days a week with 30 minutes of moderate/intense physical activity), and overweight (BMI ≥ 25). Tables A.5 to A.7 report all results for these outcomes, replicating our finding that behavioral effects are limited persistent decreases in smoking and alcohol consumption. We benchmark the estimated effects against the potential contribution from survival-related compositional changes. To do this we use participants in pre-event cohorts t_{-6} to t_{-1} (N : 3,029), and post-event cohort t_0 (N : 504), for which five-year survival can be ascertained and before any survival conditioning. After calculating five-year survival shares by lifestyle we translate these into the implied share of observed individuals engaging in a certain lifestyle observable, assuming observed survival differences are entirely causal.[10] To determine the minimum survival differences necessary to overturn an estimated effect we instead take our estimated average treatment effect (ATT) as the target that the compositional shift needs to explain and calculate the corresponding survival difference.[11]

Table D.3 summarizes the results of this exercise for all health behaviors with panel **A** depicting results based *pre-event lifestyle* and panel **B** depicting the equivalent based on the *post-event lifestyle*. Column (1) contains the baseline ATT estimate for a given lifestyle, while columns (2) to (4) depict the survival composition effects, adjusted ATT estimates, and relative difference between both. To illustrate, in the pre-event sample we observe a smoking rate of 26.94% with five-year survival rates of 87.30% among non-smokers and 82.23% among smokers. If entirely driven by smoking status before the event this difference would mechanically decrease smoking prevalence to 25.78%, or -1.16 p.p. lower, due to positive

[10]Following Bayes Theorem for conditional probabilities the counterfactual post-event prevalence under pure survival selection is $P_1^* = \frac{S_1 \times P_1}{S_1 \times P_1 + S_0 \times (1 - P_1)}$ where P_1 is pre-event prevalence and S_1 and S_0 are observed survival rates for those engaging and not engaging in a given behavior before the event.

[11]The counterfactual survival rate $\tilde{S}_1$ needed to explain observed post-event prevalence P_1^{obs} through selection alone is $\tilde{S}_1 = \frac{P_1^{obs} \times S_0 \times (1 - P_1)}{P_1 \times (1 - P_1^{obs})}$ where P_1 is pre-event prevalence and S_0 is observed survival without the behavior.

selection. Adjusted for this (hypothetical) mechanical shift our ATT estimate of -9.45 p.p. decreases to -8.31 p.p. (-12.26%). Columns (5) and (6) contain the observed survival ratios and the ratio necessary to entirely explain the estimated ATT. To determine this we take the effect as the implied compositional shift and calculate the required survival difference necessary to achieve this shift. To explain the 9.45 p.p. lower smoking prevalence our ATT estimate implies the survival-ratio between smokers and non-smokers would need to be 0.574 against the actually observed ratio of 0.942, or an unrealistically 32.13 p.p. lower survival rate for smokers stemming from pre-event smoking status alone.

Table D.3: Impact of Survival Selection on Estimated Lifestyle Effects

Panel A: Survival Composition Effects by Pre-Event Lifestyle (N : 3,029) - Baseline Estimates

		Effect Adjustment for Observed Survival Differences			Survival Counterfactual	
Lifestyle Choice	**Estimated ATT**	**Adjustment from Survival Selection**	**Adjusted ATT**	**% Change vs Baseline ATT**	**Observed Survival Ratio**	**Survival Ratio for ATT = 0**
	(1)	(2)	(3)	(4)	(5)	(6)
Currently Smoking	-0.095[c]	+0.012	-0.083	-12.26%	0.942	0.574
Excessive Drinking	-0.046[c]	+0.008	-0.038	-17.84%	0.963	0.806
Physically Inactive	0.013	+0.005	0.018	+38.97%	0.960	1.116
Overweight	-0.005	-0.015	-0.020	+316.14%	1.064	0.981

Panel B: Survival Composition Effects by Post-Event Lifestyle (N : 504) - Baseline Estimates

		Effect Adjustment for Observed Survival Differences			Survival Counterfactual	
Lifestyle Choice	**Estimated ATT**	**Adjustment from Survival Selection**	**Adjusted ATT**	**% Change vs Baseline ATT**	**Observed Survival Ratio**	**Survival Ratio for ATT = 0**
	(1)	(2)	(3)	(4)	(5)	(6)
Currently Smoking	-0.095[c]	+0.035	-0.060	-37.11%	0.830	0.574
Excessive Drinking	-0.046[c]	-0.002	-0.047	+3.75%	0.992	0.806
Physically Inactive	0.013	+0.007	0.019	+51.57%	0.960	1.054
Overweight	-0.005	-0.014	-0.019	+292.96%	0.945	0.981

Notes: a indicates $p < 0.1$, b indicates $p < 0.05$, and c indicates $p < 0.01$. *Source:* Own calculations based on data from Statistics Netherlands. See column (1) of Tables A.1 (smoking), A.5 (excessive drinking), A.6 (physical inactivity) and A.7 (overweight) for the results underlying the reported Average Treatment Effect on the Treated (ATT) estimates.

The results depicted in Table D.3 columns (5) and (6) illustrate that survival differences would need to be unrealistically large to explain the large decrease in smoking and alcohol consumption we observe. For physical inactivity and overweight smaller differences could explain observed differences but this is due to their small magnitude and insignificance. While these computations provide some evidence on the limited impact of selective survival they rely on raw survival differences without adjusting for latent differences in health, thereby making strong assumptions on the contribution of lifestyle to mortality conditional on health. We therefore also consider how imposing different survival windows impact our regression results, which do account for latent differences in pre-event health. To do so we estimate all regressions conditioning on three- and five-year survival, comparing the results from regressions using the sample of all individuals for which the survival horizon is observable and comparing one-year baseline survival conditioning, against three-/five-year survival. This ensures that differences in our results are attributable to survival-related attrition, not differences in the sample with respect to admission-year and thereby birth cohorts.

If we would expect either *pre-event* or *post-event lifestyle (change)* driven mortality to be a key driver in our results we would expect a distinct pattern of pre-event lifestyle prevalence and dynamic event-study estimates to emerge after imposing our survival conditions. Conditioning on longer-term survival would decrease prevalence among those interviewed before the event while effect estimates would gradually increase, indicating positive selection for individuals engaging in low-risk lifestyles. We here only discuss the case of smoking, but the pattern is shared across lifestyle outcomes. As can be seen in Table A.1 columns (18) to (21) the share of smokers among the t_{-1} event-time cohort is indistinguishable for both the 3-year and 5-year survival samples when only imposing the 1-year or the full survival. Likewise treatment effect estimates are virtually indistinguishable. ATT and dynamic treatment effect estimates are numerically close, depict a similar stable pattern over time, and Wald equivalence tests do not indicate the small numerical differences to be significant.

References

Abadie, A. (2005). Semiparametric difference-in-differences estimators. *The Review of Economic Studies*, 72(1):1–19.

Ahammer, A., Pruckner, G. J., and Stiftinger, F. (2024). The labor and health economics of breast cancer. Technical report, Working Paper.

Arni, P., Dragone, D., Goette, L., and Ziebarth, N. R. (2021). Biased health perceptions and risky health behaviors—theory and evidence. *Journal of Health Economics*, 76:102425.

Bernheim, B. D. and Rangel, A. (2004). Addiction and cue-triggered decision processes. *American Economic Review*, 94(5):1558–1590.

Bhalotra, S. R., Delavande, A., Fisher, P., and James, J. G. (2020). The impact of a personalised blood pressure warning on health outcomes and behaviours. ISER Working Paper Series 2020-02.

Caliendo, M., Cobb-Clark, D. A., Obst, C., Seitz, H., and Uhlendorff, A. (2022). Locus of control and investment in training. *Journal of Human Resources*, 57(4):1311–1349.

Caliendo, M., Cobb-Clark, D. A., and Uhlendorff, A. (2015). Locus of control and job search strategies. *Review of Economics and Statistics*, 97(1):88–103.

Caliendo, M. and Kopeinig, S. (2008). Some practical guidance for the implementation of propensity score matching. *Journal of Economic Surveys*, 22(1):31–72.

Callaway, B. and Sant'Anna, P. H. (2021). Difference-in-differences with multiple time periods. *Journal of Econometrics*, 225(2):200–230.

Carman, K. G. and Kooreman, P. (2014). Probability perceptions and preventive health care. *Journal of Risk and Uncertainty*, 49:43–71.

Cawley, J. and Ruhm, C. J. (2011). The economics of risky health behaviors. In *Handbook of Health Economics*, volume 2, pages 95–199. Elsevier.

Chandra, A. and Staiger, D. O. (2007). Productivity spillovers in health care: evidence from the treatment of heart attacks. *Journal of Political Economy*, 115(1):103–140.

Choudhry, N. K., Avorn, J., Glynn, R. J., Antman, E. M., Schneeweiss, S., Toscano, M., Reisman, L., Fernandes, J., Spettell, C., Lee, J. L., et al. (2011). Full coverage for preventive medications after myocardial infarction. *New England Journal of Medicine*, 365(22):2088–2097.

Ciancio, A., Delavande, A., Kohler, H.-P., and Kohler, I. V. (2024). Mortality risk information, survival expectations and sexual behaviours. *The Economic Journal*, 134(660):1431–1464.

Ciancio, A., Kämpfen, F., Kohler, H.-P., and Thornton, R. (2025). Surviving bad news: health information without treatment options. *American Economic Review: Insights*, 7(1):1–18.

Clark, H., Ravesteijn, B., Mullen, K. J., and Maestas, N. (2025). The prevalence of functional limitations in the us workforce. *Proceedings of the National Academy of Sciences*, 122(23):e2413663122.

Cobb-Clark, D. A., Kassenboehmer, S. C., and Schurer, S. (2014). Healthy habits: The connection between diet, exercise, and locus of control. *Journal of Economic Behavior & Organization*, 98:1–28.

Cram, P., Hatfield, L. A., Bakx, P., Banerjee, A., Fu, C., Gordon, M., Heine, R., Huang, N., Ko, D., Lix, L. M., et al. (2022). Variation in revascularisation use and outcomes of patients in hospital with acute myocardial infarction across six high income countries: cross sectional cohort study. *bmj*, 377.

Cutler, D. M., Meara, E., and Stewart, S. (2025). Trends in work capacity in the us population: Are recent cohorts in worse health? Working Paper 33733, National Bureau of Economic Research.

Dahl, G. B., Kreiner, C. T., Nielsen, T. H., and Serena, B. L. (2024). Understanding the rise in life expectancy inequality. *Review of Economics and Statistics*, 106(2):566–575.

Danesh, K., Kolstad, J. T., Spinnewijn, J., and Parker, W. D. (2024). The chronic disease index: Analyzing health inequalities over the lifecycle. Technical report, National Bureau of Economic Research.

Darden, M. (2017). Smoking, expectations, and health: a dynamic stochastic model of lifetime smoking behavior. *Journal of Political Economy*, 125(5):1465–1522.

Darden, M. and Gilleskie, D. (2016). The effects of parental health shocks on adult offspring smoking behavior and self-assessed health. *Health Economics*, 25(8):939–954.

Decker, S. and Schmitz, H. (2016). Health shocks and risk aversion. *Journal of Health Economics*, 50:156–170.

Doyle, J. J. (2011). Returns to local-area health care spending: evidence from health shocks to patients far from home. *American Economic Journal: Applied Economics*, 3(3):221–243.

Edenbrandt, A. K., Skak-Hansen, K. W., and Smed, S. (2025). Health shock effects on diet: More severe shock—stronger response? *Health Economics*.

Fadlon, I. and Nielsen, T. H. (2019). Family health behaviors. *American Economic Review*, 109(9):3162–3191.

Feigin, V. L., Norrving, B., and Mensah, G. A. (2017). Global burden of stroke. *Circulation research*, 120(3):439–448.

Finkelstein, A., Luttmer, E. F., and Notowidigdo, M. J. (2013). What good is wealth without health? the effect of health on the marginal utility of consumption. *Journal of the European Economic Association*, 11(suppl_1):221–258.

Goodman-Bacon, A. (2021). Difference-in-differences with variation in treatment timing. *Journal of Econometrics*, 225(2):254–277.

Handel, B., Kolstad, J., Minten, T., and Spinnewijn, J. (2024). The socioeconomic distribution of choice quality: Evidence from health insurance in the netherlands. *American Economic Review: Insights*, 6(3):395–412.

Heckman, J. J., Ichimura, H., and Todd, P. E. (1997). Matching as an econometric evaluation estimator: Evidence from evaluating a job training programme. *The Review of Economic Studies*, 64(4):605–654.

Heckman, J. J., Stixrud, J., and Urzua, S. (2006). The effects of cognitive and noncognitive abilities on labor market outcomes and social behavior. *Journal of Labor economics*, 24(3):411–482.

Hernandez, E. M., Margolis, R., and Hummer, R. A. (2018). Educational and gender differences in health behavior changes after a gateway diagnosis. *Journal of Aging and Health*, 30(3):342–364.

Hoagland, A. (2025). An ounce of prevention or a pound of cure? the value of health risk information. *Review of Economics and Statistics*, pages 1–45.

Hobbs, F., Piepoli, M., Hoes, A., Agewall, S., Albus, C., Brotons, C., Catapano, A., Cooney, M., Corra, U., Cosyns, B., et al. (2016). 2016 european guidelines on cardiovascular disease prevention in clinical practice. *European Heart Journal*, 37(29).

Horn, D. (2024). From prevention to treatment: Prescription medication, information, and health behaviors. *Health Economics*, 33(11):2618–2644.

Huber, C. A., Szucs, T. D., Rapold, R., and Reich, O. (2013). Identifying patients with chronic conditions using pharmacy data in switzerland: an updated mapping approach to the classification of medications. *BMC Public Health*, 13:1–10.

Hut, S. and Oster, E. (2022). Changes in household diet: Determinants and predictability. *Journal of Public Economics*, 208:104620.

James, J. (2024). Smoking, information, and education: The royal college of physicians and the new public health movement. *Journal of Policy Analysis and Management*, 43(2):446–471.

Kaestner, R., Darden, M., and Lakdawalla, D. (2014). Are investments in disease prevention complements? the case of statins and health behaviors. *Journal of Health Economics*, 36:151–163.

Kesavayuth, D., Poyago-Theotoky, J., Zikos, V., et al. (2020). Locus of control, health and healthcare utilization. *Economic Modelling*, 86:227–238.

Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S.-L., Walters, E. E., and Zaslavsky, A. M. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine*, 32(6):959–976.

Koç, H. and van Kippersluis, H. (2017). Thought for food: Nutritional information and educational disparities in diet. *Journal of Human Capital*, 11(4):508–552.

Kuhnen, C. M. and Melzer, B. T. (2018). Noncognitive abilities and financial delinquency: The role of self-efficacy in avoiding financial distress. *The Journal of Finance*, 73(6):2837–2869.

Mahler, L. and Yum, M. (2024). Lifestyle behaviors and wealth-health gaps in germany. *Econometrica*,

92(5):1697–1733.
Margolis, R. (2013). Educational differences in healthy behavior changes and adherence among middle-aged americans. *Journal of Health and Social Behavior*, 54(3):353–368.
Marsaudon, A. (2022). Do hospital stays modify locus of control? *De Economist*, 170(2):257–277.
McGee, A. and McGee, P. (2016). Search, effort, and locus of control. *Journal of Economic Behavior & Organization*, 126:89–101.
Naderi, S. H., Bestwick, J. P., and Wald, D. S. (2012). Adherence to drugs that prevent cardiovascular disease: meta-analysis on 376,162 patients. *The American Journal of Medicine*, 125(9):882–887.
Nguyen, H. T., Schurer, S., and Mitrou, F. (2024). The (in) stability of locus of control: New insights from distributional effects of major life events. Technical report, GLO Discussion Paper.
OECD (2025). *Health at a Glance 2025: OECD Indicators*. OECD Publishing, Paris.
Oster, E. (2018). Diabetes and diet: Purchasing behavior change in response to health information. *American Economic Journal: Applied Economics*, 10(4):308–48.
Oster, E., Shoulson, I., and Dorsey, E. R. (2013a). Limited life expectancy, human capital and health investments. *American Economic Review*, 103(5):1977–2002.
Oster, E., Shoulson, I., and Dorsey, E. R. (2013b). Optimal expectations and limited medical testing: Evidence from huntington disease. *American Economic Review*, 103(2):804–830.
Pearlin, L. I. and Schooler, C. (1978). The structure of coping. *Journal of health and social behavior*, pages 2–21.
Roth, G. A., Mensah, G. A., Johnson, C. O., Addolorato, G., Ammirati, E., Baddour, L. M., Barengo, N. C., Beaton, A. Z., Benjamin, E. J., Benziger, C. P., et al. (2020). Global burden of cardiovascular diseases and risk factors, 1990–2019: update from the gbd 2019 study. *Journal of the American College of Cardiology*, 76(25):2982–3021.
Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological monographs: General and applied*, 80(1):1.
Sant'Anna, P. H. and Zhao, J. (2020). Doubly robust difference-in-differences estimators. *Journal of Eonometrics*, 219(1):101–122.
Schurer, S. (2017). Bouncing back from health shocks: Locus of control and labor supply. *Journal of Economic Behavior & Organization*, 133:1–20.
Sloan, F. A. (2024). Subjective beliefs, health, and health behaviors. *Journal of Risk and Uncertainty*, 69(2):105–144.
Stuart, E. A., Lee, B. K., and Leacy, F. P. (2013). Prognostic score–based balance measures can be a useful diagnostic for propensity score methods in comparative effectiveness research. *Journal of Clinical Epidemiology*, 66(8):S84–S90.
van't Hoff, N., Mellace, G., and Menon, S. (2025). Gender differences in healthcare utilisation–evidence from unexpected adverse health shocks. *arXiv e-prints*, pages arXiv–2509.
Verdun, Z. (2025). Health risk realization versus warning: Impact on lifestyle behaviours. *PloS one*, 20(12):e0338311.
Vinding, N. E., Butt, J. H., Lauridsen, M. D., Kristensen, S. L., Johnsen, S. P., Krøll, J., Graversen, P. L., Kruuse, C., Torp-Pedersen, C., Køber, L., et al. (2023). Long-term incidence of ischemic stroke after transient ischemic attack: a nationwide study from 2014 to 2020. *Circulation*, 148(13):1000–1010.
Wong, A., Boshuizen, H. C., Schellevis, F. G., Kommer, G. J., and Polder, J. J. (2011). Longitudinal administrative data can be used to examine multimorbidity, provided false discoveries are controlled for. *Journal of Clinical Epidemiology*, 64(10):1109–1117.