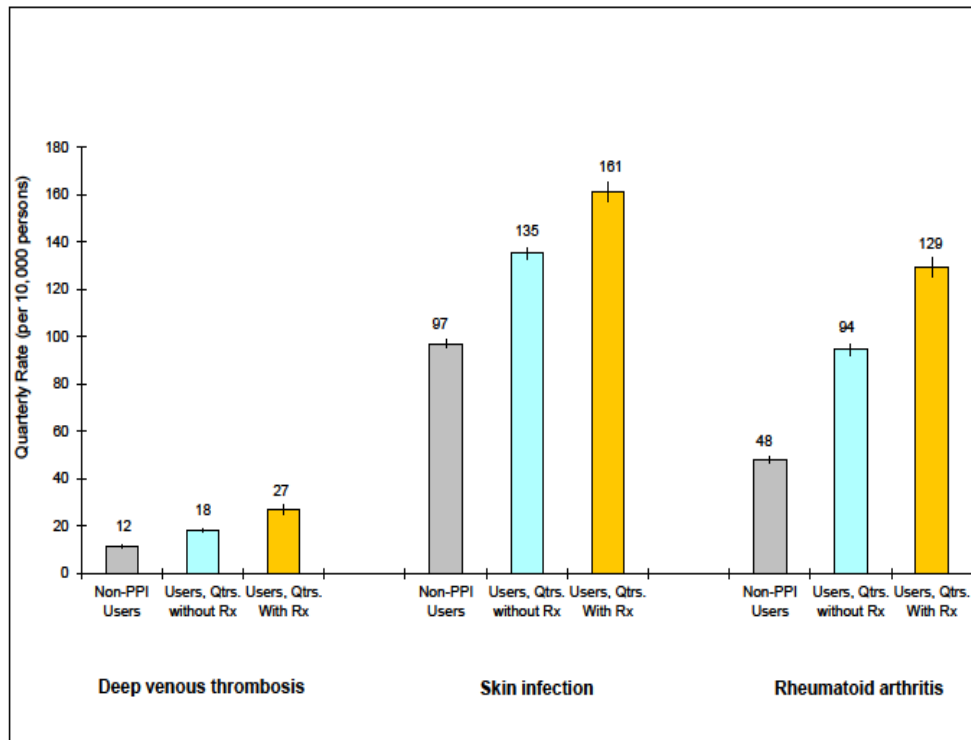


**Supplementary Table 1** – Patient factors associated with quarterly rates of community acquired pneumonia, chest pain, urinary tract infection, and osteoarthritis in multivariate analysis

Patient factors	Absolute change in quarterly rate of disease (per 10,000 persons)			
	Pneumonia	Chest Pain	Urinary Tract Infection	Osteoarthritis
Increase in age by 1 year	-5.60 (4.38)	-5.37 (8.71)	6.94 (6.65)	-9.14 (13.30)
Married (yes)	1.32 (4.46)	12.87 (8.92)	-4.05 (6.34)	6.43 (13.08)
Increase in mean zip code income by \$1,000	2.49 (1.84)	2.58 (4.04)	-1.35 (2.81)	-.92 (5.30)
Asthma or COPD (yes)	161.0** (16.7)	60.3** (20.6)	-11.7 (12.0)	-28.5 (23.5)
Cancer (yes)	24.1** (4.06)	56.1** (7.71)	56.7** (5.91)	10.5 (10.21)
Chronic Renal Insufficiency (yes)	54.2** (7.85)	104.0** (14.03)	74.0** (9.84)	34.5* (16.85)
Congestive Heart Failure (yes)	134.85** (8.39)	108.76** (13.93)	24.55** (8.74)	-37.92* (17.86)
Coronary Artery Disease (yes)	19.3** (4.21)	404.0** (9.87)	32.1** (5.80)	-3.2 (11.63)
Diabetes (yes)	7.13 (4.41)	-5.82 (9.48)	19.92** (6.72)	14.55 (13.53)
End Stage Renal Disease (yes)	91.45* (39.5)	101.21 (63.7)	4.18 (39.1)	65.78 (62.0)
Hyperlipidemia (yes)	-3.425 (3.69)	0.302 (8.38)	-1.105 (5.95)	51.049** (12.25)
Hypertension (yes)	4.20 (2.79)	49.38** (6.08)	18.20** (4.42)	64.98** (8.97)
Stroke (yes)	32.1** (6.28)	56.0** (12.32)	24.0** (8.70)	-15.6 (17.04)
PPI Use (yes)	30.4** (3.10)	241.0** (6.91)	29.6** (4.17)	36.0** (7.57)

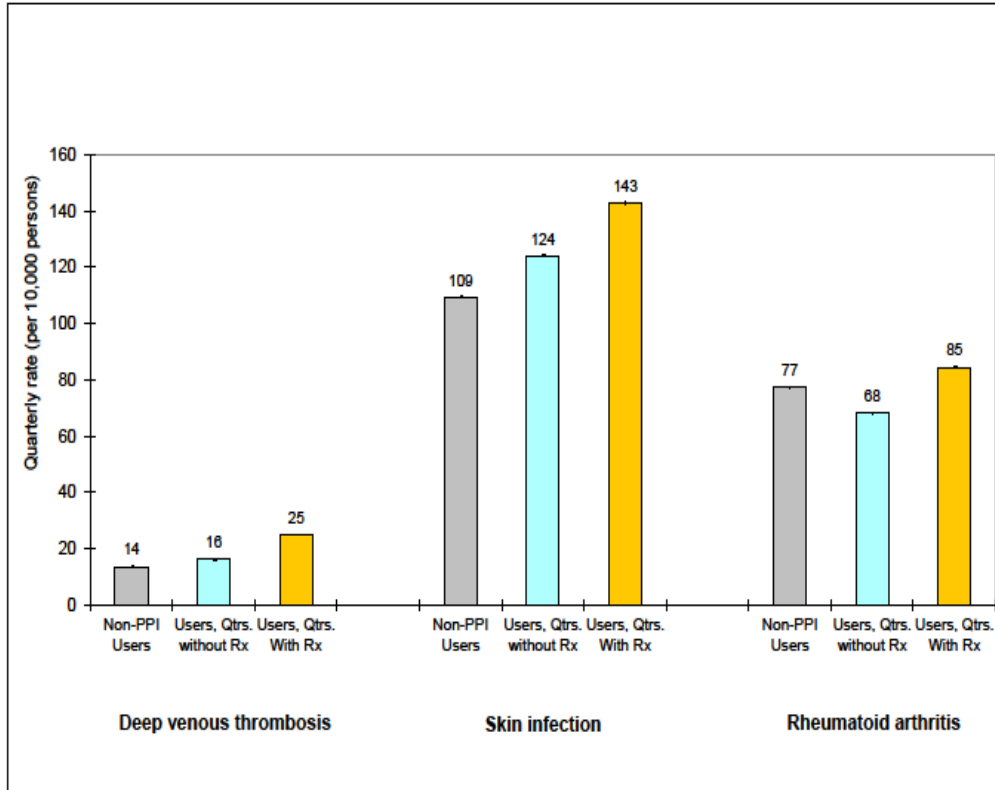
**Notes:** Results are from a multivariate linear probability model estimating the association of the patient factors listed above with rates of pneumonia, chest pain, urinary tract infection, and osteoarthritis. The values represent the change in the quarterly rate of the outcome (per 10,000 persons) associated with either an increase in age by one year, presence of a co-morbidity, or in the case of income, an increase per \$1 in income. The model included indicator variables for urban residence and geographic residence; these variables were not statistically significant at  $p < 0.05$  and were not included in the table. Standard errors are in parentheses. \*= $p < 0.05$ ; \*\*= $p < 0.01$ .

**Supplementary Figure 1** – Unadjusted quarterly rates of deep venous thrombosis, skin infection, and rheumatoid arthritis medical claims among users and non-users of proton pump inhibitors



**Notes:** Unadjusted quarterly rates of each condition were calculated for those never filling a prescription for a PPI (termed non-users of PPIs), users (defined as persons who filled at least one prescription for a PPI) during quarters in which a prescription was not filled, and users during quarters in which a prescription was filled. Rates were determined from ICD-9 codes in administrative data and are displayed at the quarterly level per 10,000 persons. 95% confidence intervals reported in graph.

**Supplementary Figure 2** – Adjusted quarterly rates of deep venous thrombosis, skin infection, and rheumatoid arthritis medical claims among users and non-users of proton pump inhibitors



**Notes:** Adjusted quarterly rates of each condition were calculated for those never filling a prescription for a PPI (termed non-users of PPIs), users (defined as persons who filled at least one prescription for a PPI) during quarters in which a prescription was not filled, and users during quarters in which a prescription was filled. Estimates are from a multivariate linear probability model with individual fixed effects, quarterly indicators for various co-morbidities, and demographic characteristics such as age, marital status, income, and geographic location. Rates are displayed at the quarterly level and are per 10,000 persons. 95% confidence intervals reported in graph.