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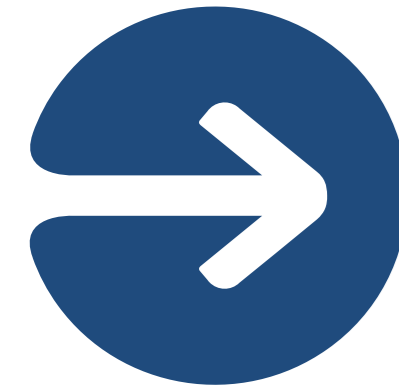
Preventive Care Among Older People with Multiple Sclerosis

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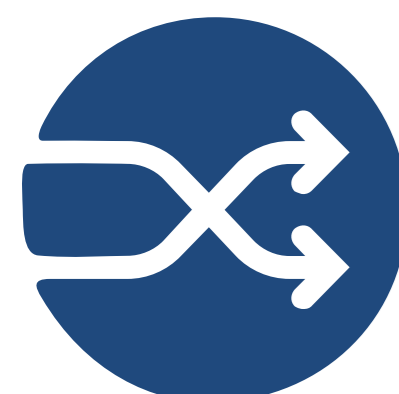
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INTRODUCTION

- Preventive care, such as vaccination, is important to maintain health and avoid disease, particularly in older people and in those with chronic conditions, such as MS^{1,2}
 - For example, the CDC recommends annual seasonal influenza (flu) vaccination for all people aged ≥ 6 months who do not have contraindications¹
- Preventive vaccination is especially important in people receiving treatment for MS,^{2,3} particularly older people, who may be in a state of immunosenescence and thus more vulnerable to infectious diseases⁴
- We hypothesize that a holistic approach to preventive care that includes PCPs is optimal for managing the treatment of MS in older people



OBJECTIVE

To analyze rates of flu vaccination and visits to PCPs in people aged ≥ 50 years with or without MS





METHODS

Study population

- Administrative US claims data from the IBM-Truven MarketScan[®] Commercial and Medicare Databases (2011–2017) were analyzed
- The MS \geq 50 group comprised people aged \geq 50 years who:
 - had 3 diagnoses of MS (identified by the ICD-9-CM/ICD-10-CM code 340/G35) or 1 diagnosis of MS and 1 DMT within 1 year of diagnosis in 2012
 - were continuously enrolled from 1-year pre-index to \geq 3 years after 2012 diagnosis
- The no-MS \geq 50 group comprised people from the general population aged \geq 50 years in 2012 who were continuously enrolled from 2011 to 2015 (5 years), did not have an MS diagnosis, and were matched 1:1 with the those in the MS \geq 50 group using propensity score matching

Analysis

- Rates of flu vaccinations and PCP visits were evaluated and compared between the MS \geq 50 and no-MS \geq 50 groups and between those in the MS \geq 50 who received DMTs and those who did not



RESULTS

Patient baseline characteristics

- The analysis included 10,746 participants in each of the matched MS \geq 50 and no-MS \geq 50 groups (**Table 1**)

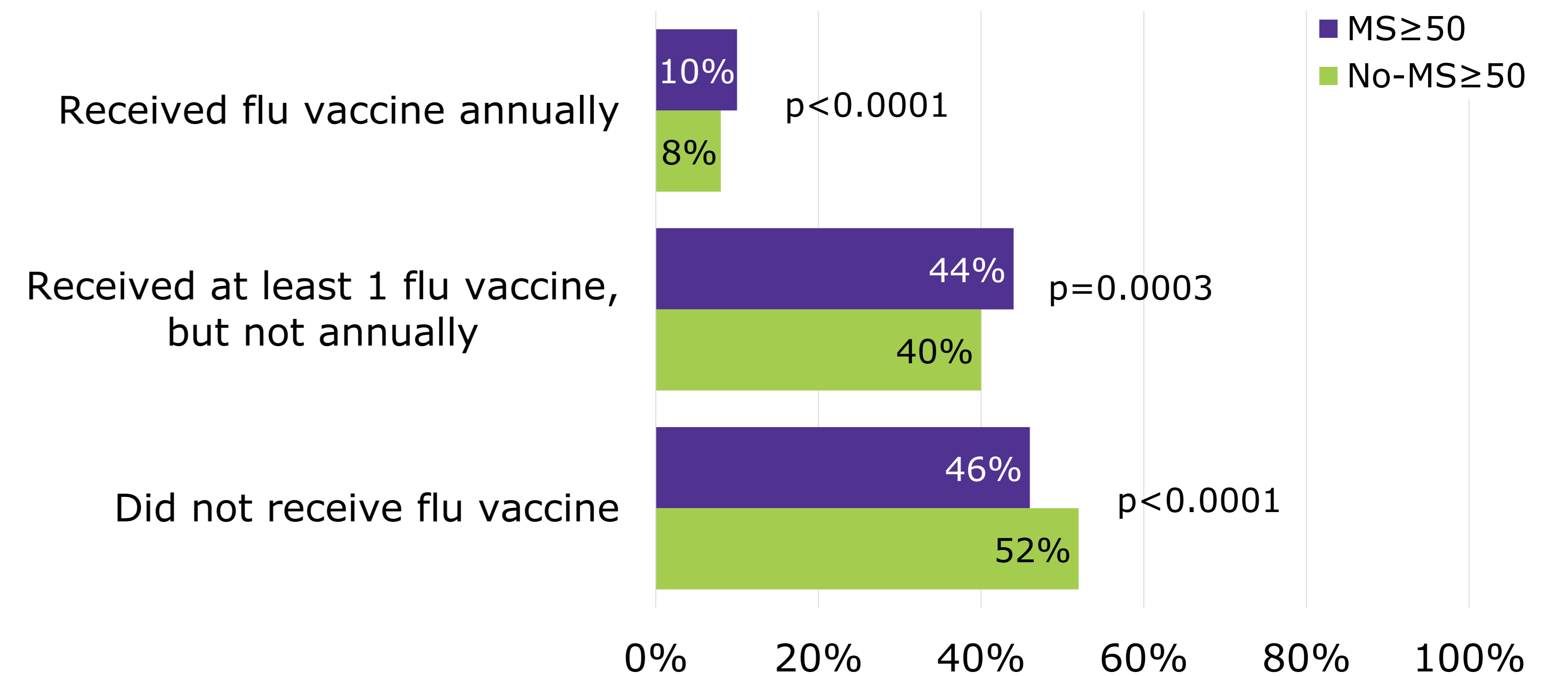
Table 1. Baseline characteristics

Baseline	MS \geq 50 (n=10,746)	no-MS \geq 50 (n=10,746)
Age, mean (95% CI)	58.4 (58.3–58.5)	58.6 (58.5–58.7)
Female, %	8829 (77%)	8829 (77%)
Region, n (%)		
Northeast	2890 (27%)	3002 (28%)
North Central	3161 (29%)	3159 (29%)
South	3329 (31%)	3266 (30%)
West	1359 (13%)	1314 (12%)
Unknown	7 (<1%)	5 (<1%)
CCI score, mean (95% CI)	0.49 (0.47–0.51)	0.48 (0.46–0.5)

Flu vaccination

- During the study period, greater percentages of the MS \geq 50 group either received the flu vaccine annually (10% vs. 8%, $p<0.0001$) or received \geq 1 flu vaccine, but not annually (44% vs. 40%, $p=0.0003$) compared with the no-MS \geq 50 group (**Figure 1**)

Figure 1. Flu vaccination among people \geq 50 years of age with or without a diagnosis of MS

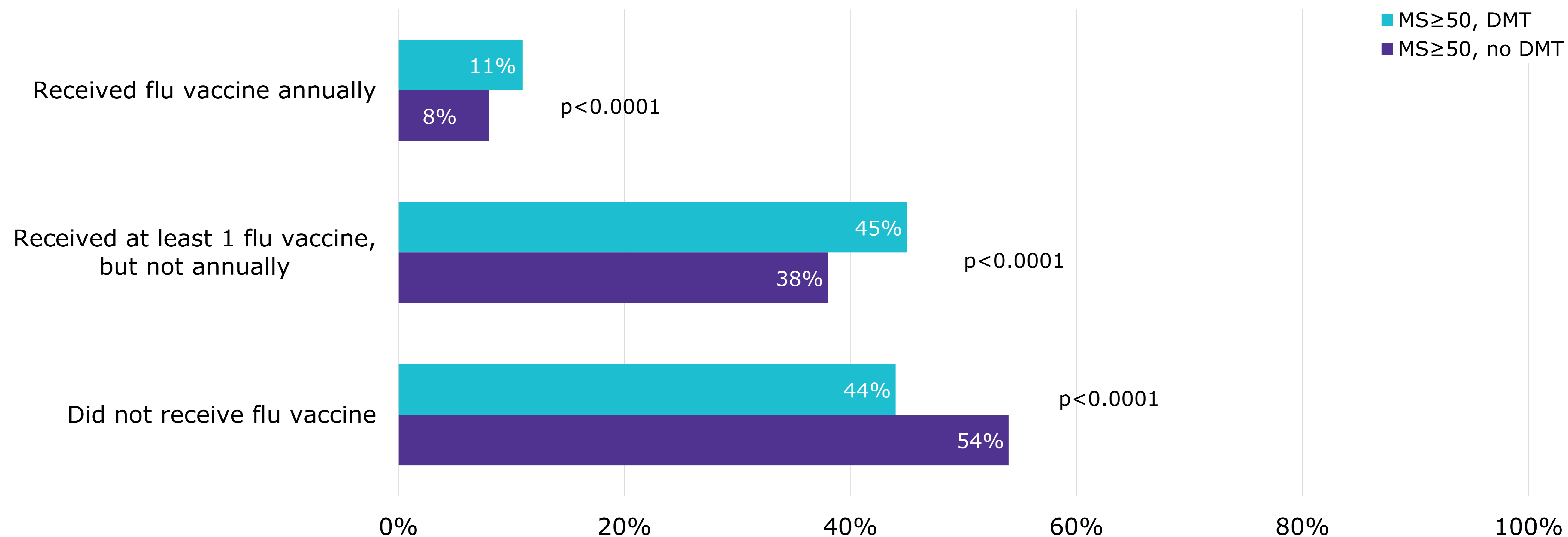




RESULTS

- A total of 77% (n=8234) of the MS \geq 50 group were treated with a DMT
- In the MS \geq 50 group, more people treated with a DMT received \geq 1 flu vaccine (received flu vaccine annually or received \geq 1 flu vaccine, but not annually) compared with those not treated with a DMT (56% vs. 46%, $p<0.0001$; **Figure 2**)

Figure 2. Flu vaccination among people \geq 50 years of age with a diagnosis of MS with or without DMT treatment

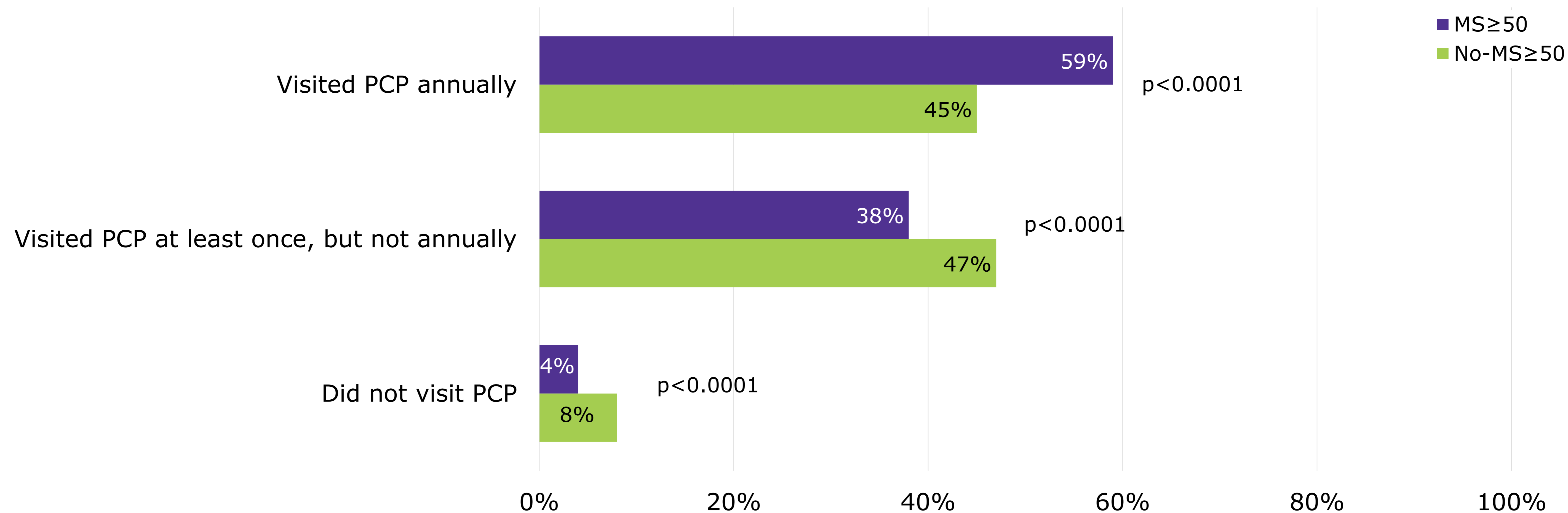




RESULTS

- Across both groups, >90% of people had at least one PCP visit during the study period (MS \geq 50, 96%; no-MS \geq 50, 92%)
- The MS \geq 50 group was more likely than the no-MS \geq 50 group to have had a PCP visit annually (59% vs. 45%, $p < 0.0001$) during the study period (**Figure 3**)

Figure 3. PCP visits among people \geq 50 years of age with or without a diagnosis of MS

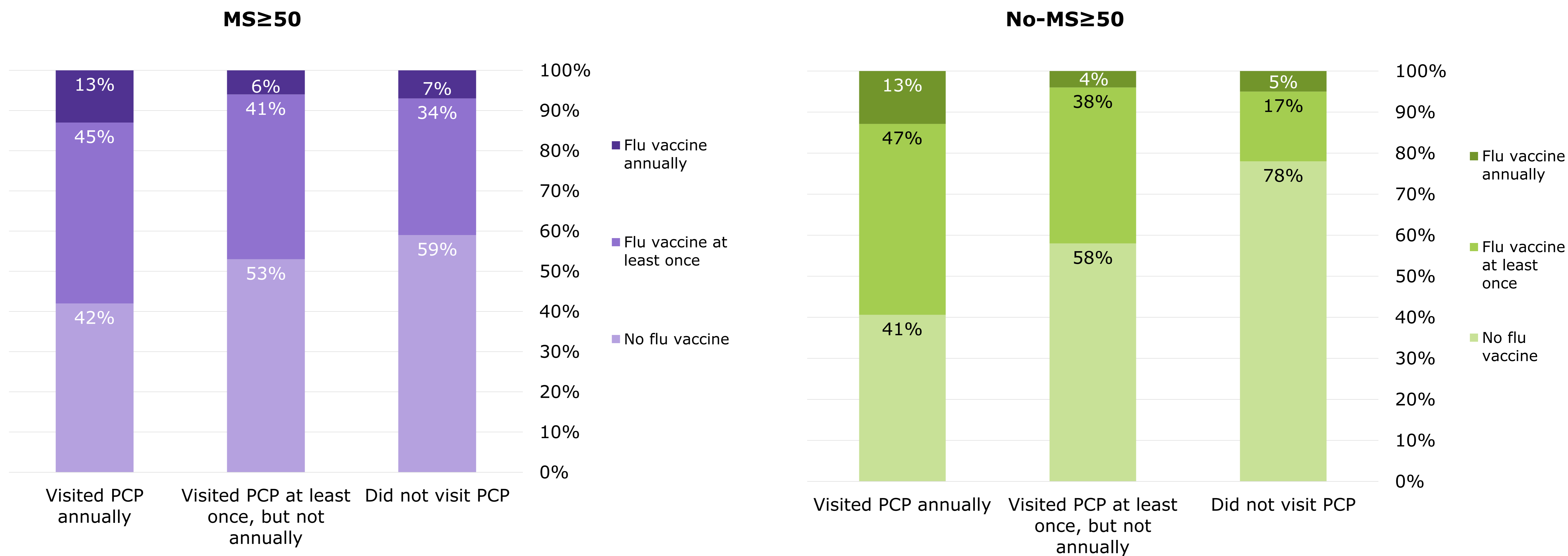




RESULTS

- Flu vaccination was more frequent in patients who visited their PCP more regularly in both subgroups ($p < 0.0001$) (**Figure 4**)

Figure 4. Frequency of PCP visits in the (a) MS \geq 50 group and (b) no-MS \geq 50 group





LIMITATIONS

- Employer-provided vaccination may not be reflected in the claims
- The insured population included in this analysis may not be representative of the general population



CONCLUSIONS



Despite CDC recommendations for annual flu vaccinations, 46% of older people with MS did not receive a flu vaccination at any point during the 4–6-year study period, highlighting a need for action in this patient population



Patients who regularly visited their PCP were more likely to receive their flu vaccination, emphasizing the value of primary healthcare in maintaining preventive care in older people with MS