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Poster EE427

Impact of Remibrutinib Treatment on Workplace Productivity Due to Chronic Spontaneous Urticaria (CSU): A Canadian Private Payor Perspective

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KEY FINDINGS & CONCLUSIONS

- Canadian employees with symptomatic CSU despite H_1-AH treatment are estimated to account for 880,268 workdays lost and ~4.7 million impaired workdays due to reduced productivity (presenteeism) annually, equivalent to ~24 lost workdays and ~130 impaired workdays per worker
- Providing coverage for remibrutinib to treat people with symptomatic CSU despite H_1-AHs may reduce the burden on both employers and employees, improving work productivity outcomes by up to 69%
- On average, treatment with remibrutinib could avoid ~16 of 24 lost workdays and ~90 of 130 impaired workdays per worker per year
- Ensuring coverage for effective CSU treatments such as remibrutinib represents a meaningful opportunity for employers and private payors to improve productivity and support employee well-being

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INTRODUCTION

- CSU is an inflammatory skin condition characterized by the occurrence of hives and/or angioedema recurring for more than 6 weeks without a known trigger, which can result in recurrent itch and physical discomfort[1]
- A multinational online survey reported that 82% of included patients with CSU in Canada were female[2]; among affected individuals, CSU predominantly occurs during prime working years (20–40 years of age)[3,4]
- People with CSU may have lower employment rates compared with the general population and experience short-term disability or work absence due to their symptoms[4–6]
  - Work impairment of up to 73.1% and presenteeism (impairment while at work) affecting 67.2% of work hours have been reported[7]
- Based on the phase 3 REMIX-1/-2 studies of remibrutinib in CSU, work productivity is substantially impaired among patients who remain symptomatic despite H_1-AH treatment[8]
- The primary objectives of this study were to quantify annual productivity burden (workdays lost or impaired) among employed people with CSU in Canada who remain symptomatic despite H_1-AH treatment and to estimate the annual reduction in productivity burden that could be achieved via remibrutinib coverage in a health economic model

METHODS

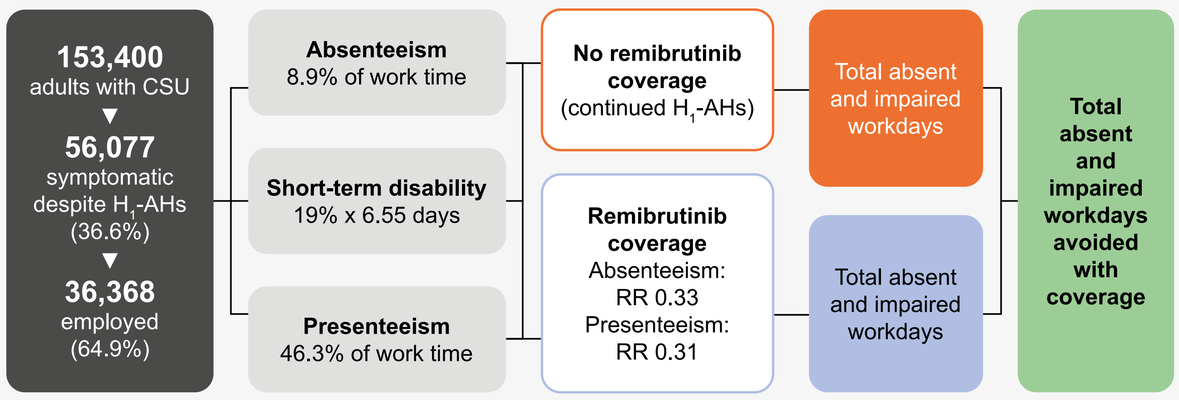
- A static, prevalence-based health economic model was developed and used to estimate the annual productivity burden of CSU among employed people in Canada who remain symptomatic despite H_1-AH treatment, using a fiscal modeling framework based on 2025 data[9,10]
  - The number of employed people with CSU was obtained from the multiplication of age- and sex-specific prevalence by the age- and sex-specific labor force participation and employment rates from the Canadian population[11]
- Productivity burden was captured as: a) absenteeism (work absence ≤5 days); b) short-term disability (work absence >5 days); and c) presenteeism
  - Absenteeism and short-term disability were converted into annual workday losses and presenteeism was converted into impaired workdays to estimate the burden associated with symptomatic CSU despite H_1-AH treatment
- Scenarios with and without remibrutinib coverage were analyzed and compared to assess the productivity gains associated with improved disease control
  - The effectiveness of remibrutinib on productivity was applied according to changes in absenteeism and presenteeism rates observed from baseline until week 52 in REMIX-1/-2 and extrapolated to all employed people with CSU treated with remibrutinib in the Canadian working population
- All analyses were conducted from the perspectives of employers/private payors; the key model inputs and assumptions are outlined in **Table 1** and the model calculation flow is outlined in **Figure 1**

Table 1. Model Inputs

Parameter	Base case	Source
Population	Canadians aged 18–75 years (2025)	Statistics Canada[11]
% Female	82%	Weller 2025[2]
CSU prevalence	0.5%[a]	Maurer 2011[3]; Balp 2015[6]
Symptomatic despite H_1-AHs	36.6%	Maurer 2011[3]; Bernstein 2025[12]
Employment	Age- and sex-specific rates (64.9% overall)	Statistics Canada[11]
Baseline absenteeism	8.9% of work time	Savic 2025 (REMIX-1/-2)[8]
Baseline short-term disability	19% of employees x 6.55 workdays per episode[b]	Lognormal distribution, based on Baudy 2024[4]
Baseline presenteeism	46.3% of work time	Savic 2025 (REMIX-1/-2)[8]
Reduction in absenteeism, week 52	67%	Savic 2025 (REMIX-1/-2)[8]
Reduction in short-term disability (absence >5 days)	67%	Assumed similar to absenteeism
Reduction in presenteeism, week 52	69%	Savic 2025 (REMIX-1/-2)[8]

[a]Conservative estimate from literature; [b]Workdays exceeding 5 consecutive days).
CSU, chronic spontaneous urticaria; H_1-AH, H_1-antihistamine.

Figure 1. Model Calculation Flow



CSU, chronic spontaneous urticaria; H_1-AH, H_1-antihistamine; RR, risk ratio.

RESULTS

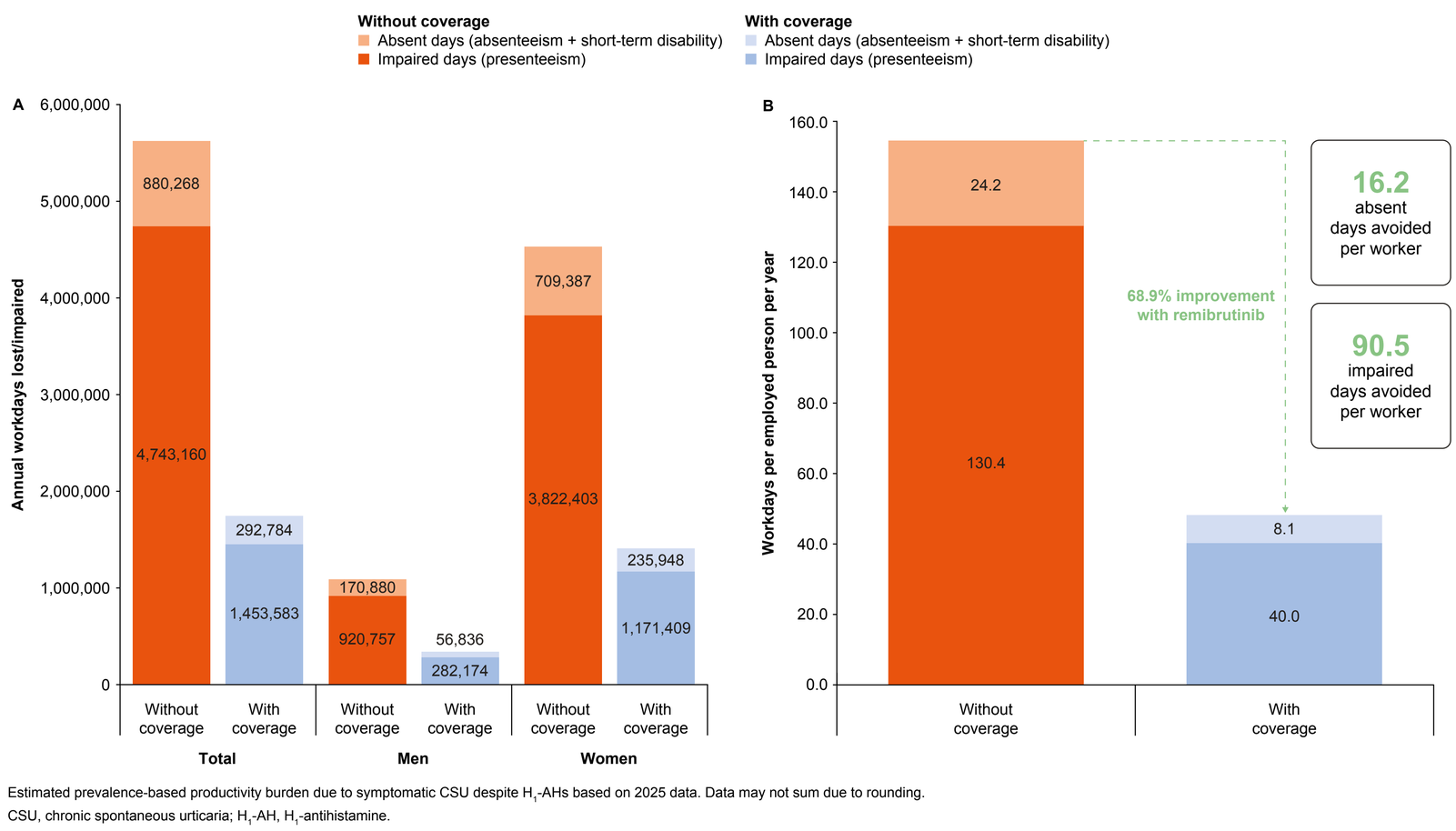
Canadian Workers Living With Symptomatic CSU

- The prevalence-based model estimated that 153,400 people who were 18–75 years of age were living with CSU in Canada in 2025 (**Figure 1**)
- Of these, 56,077 (36.6%) were expected to remain symptomatic despite H_1-AH treatment
- A total of 36,368 people (64.9%; 36,368/56,077) were currently employed, of whom 80.6% (29,308/36,368) were women

Productivity Loss in Canada Associated With CSU and Impact of Remibrutinib

- The productivity burden of symptomatic CSU despite H_1-AH treatment in 2025 was estimated at 880,268 lost workdays (absenteeism plus short-term disability) and ~4.7 million impaired workdays (presenteeism) (**Figure 2A**, **Table 2**)
  - The impact disproportionately affected women, with ~3.8 million impaired workdays among women vs ~0.9 million among men without remibrutinib coverage
- Introducing remibrutinib coverage was projected to prevent 587,483 lost workdays and ~3.3 million impaired workdays annually
  - On a per-treated-worker basis, this equated to avoiding an estimated 16 of 24 fully lost workdays and 90 of 130 impaired workdays each year (**Figure 2B, Table 2**)
- Overall, remibrutinib coverage was estimated to reduce total lost/impaired workdays by 68.9% (**Figure 2B**, **Table 2**)

Figure 2. Estimated Productivity Burden by A) Total Annual Workdays and B) Annual Workdays Lost/Impaired per Worker



Estimated prevalence-based productivity burden due to symptomatic CSU despite H_1-AHs based on 2025 data. Data may not sum due to rounding.
CSU, chronic spontaneous urticaria; H_1-AH, H_1-antihistamine.

Table 2. Estimated Annual Lost/Impaired Workdays Avoided With Remibrutinib Coverage

Parameter	Lost/impaired workdays without coverage	Lost/impaired workdays avoided with coverage[a]	Percentage improvement (%)[b]	Lost/impaired workdays avoided per person[c]
Absenteeism (≤5 days)	835,524	557,621	66.7	15.3
Short-term disability (>5 days)	44,744	29,862	66.7	0.8
Subtotal: absent workdays	**880,268**	**587,483**	**66.7**	**16.2**
Presenteeism (impaired workdays)	4,743,160	3,289,577	69.4	90.5
Total lost or impaired workdays	**5,623,428**	**3,877,061**	**68.9**	**106.6**

Data may not sum due to rounding.
[a]Workdays avoided = workdays lost without coverage − workdays lost with coverage. [b]Percentage improvement = (workdays avoided with coverage/workdays lost without coverage) × 100.
[c]Workdays avoided per person = workdays avoided with coverage/total employed (n = 36,368)

LIMITATIONS

- The effect of remibrutinib on productivity was estimated using data from patients at baseline in the REMIX-1/-2 trials and from patients who continued remibrutinib treatment through week 52. Treatment discontinuation was not considered in the analysis
- The REMIX-1/-2 trials did not explicitly quantify the incremental impact of common CSU comorbidities (eg, migraine, anxiety, sleep disturbance, depression, and fatigue) on absenteeism and presenteeism; therefore, the current model excludes these effects to avoid any double counting. As these comorbidities are expected to impair work capacity substantially,[6,13] assessing their additional impact would be a valuable area for further research
- The analysis adopts a 1-year, prevalence-based framework, which does not reflect long-term gains in productive life years associated with sustained disease control. A longitudinal, cohort-based approach could better quantify lifetime work productivity,[14] particularly for people with CSU in their prime working years

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Abbreviations

CSU, chronic spontaneous urticaria; H_1-AH, H_1-antihistamine; RR, risk ratio.

Disclosures

MM, **KR**, and **KS** are full-time employees of Novartis and may own stock or stock options. **ATP** and **MPC** are employees of Global Market Access Solutions and received funding from Novartis in relation to the research reported here.

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