HEALTHCARE RESOURCE UTILIZATION IN US CLINICAL PRACTICE AMONG PATIENTS WITH VON WILLEBRAND DISEASE

Ping Du,[1] Elyse Swallow,[2] Jess R. Marden,[2] Emma Billmyer,[2] Erica Yim,[2] Shawn X. Sun[1]

[1]Takeda Development Center Americas, Inc., Cambridge, MA, USA; [2]Analysis Group, Inc., Boston, MA, USA

INTRODUCTION

- von Willebrand disease (VWD) is the most common bleeding disorder, affecting up to 1% of the US general population[1]
  - Symptomatic VWD that requires treatment is less common, with a prevalence of 1 in 10,000[2]
- International guidelines conditionally recommend long-term prophylaxis for patients with VWD and severe or frequent bleeding[3]
- In the US, this treatment option has recently become available with the approval of recombinant von Willebrand factor (rVWF) for routine prophylaxis, to reduce the frequency of bleeding episodes in patients with severe VWD type 3 receiving on-demand therapy[4]

STUDY OBJECTIVE

- To identify potential gaps in the current management of VWD in the US and to better inform the use of VWF prophylaxis

CONCLUSIONS

- Patients with VWD experienced a substantial healthcare resource utilization (HCRU) burden overall
- Prophylaxis-eligible patients with VWD had higher HCRU than the overall VWD population
- This retrospective US cohort study suggests a potential benefit of long-term prophylaxis for managing HCRU and improving quality of life in patients with VWD and severe/frequent bleeds, by reducing hospitalizations and emergency department visits

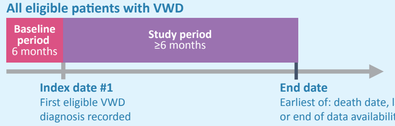
STUDY DESIGN

This retrospective cohort study used de-identified data from a rural integrated US healthcare system containing both electronic medical record data and linked claims data

MAIN PATIENT ELIGIBILITY CRITERIA

- ≥2 confirmed VWD diagnoses* on separate days between Jan 2004 – Dec 2020
- No diagnosis of acquired coagulation factor deficiency or hemophilia
- ≥6 months of data before and after a VWD diagnosis

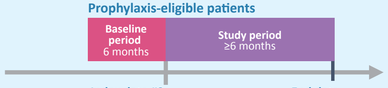
All eligible patients with VWD



Index date #1
First eligible VWD diagnosis recorded

End date
Earliest of: death date, last HS interaction or end of data availability (Dec 31, 2020)

Prophylaxis-eligible patients



Index date #2
Earliest date of recorded prophylaxis eligibility defined as first time a patient met any of the following:
- History of ≥3 joint bleeds*
- ≥2 gastrointestinal bleeds
- ≥5 bleeds in the previous 12 months
- Having a major bleeding event†

End date
Earliest of: death date, last HS interaction or end of data availability (Dec 31, 2020)

STUDY OUTCOMES

Healthcare resource utilization

Hospitalizations
Emergency department visits
Outpatient visits

HCRU was assessed for 6 months after the index date in patients with linked claims data

VWD-related HCRU was defined as any visit with an ICD-9 or ICD-10-CM code for VWD or a bleed

DATA ANALYSIS

Statistical analyses were descriptive and explorative in nature and were conducted using R version 3.6.3 and SAS Enterprise Guide 7.1

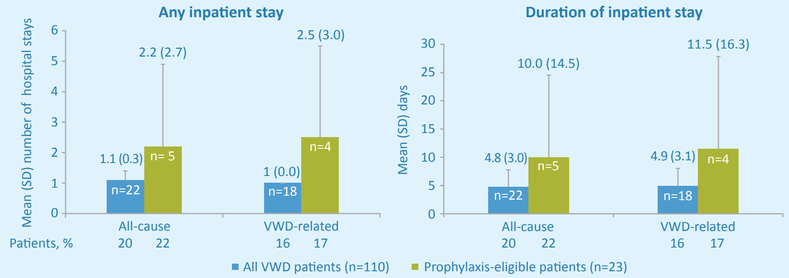
Linked data were available from 110 patients overall, of whom 23 patients were eligible for prophylaxis therapy (none received long-term prophylaxis)

*Identified using ICD-9 or ICD10-CM
†Defined as a medical claim associated with a diagnosis code for intracranial, gastrointestinal, or eye bleed in a hospital or outpatient setting, or a medical claim for menorrhagia, epistaxis, or joint bleed that required a transfusion with blood products either during hospitalization or on or within 7 days after the date of diagnosis in the outpatient setting
HS, Healthcare system; ICD-9, International Classification of Diseases 9th revision; ICD-10-CM, International Classification of Diseases 10th revision, clinical modification; VWD, von Willebrand disease

RESULTS

HOSPITALIZATIONS

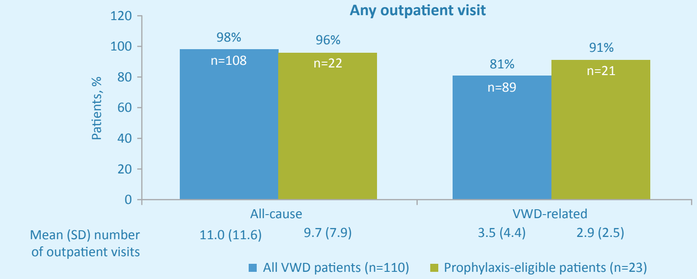
The number and duration of hospital stays were higher in prophylaxis-eligible patients than in the overall population, although the proportion of patients with hospitalizations was similar in both cohorts



Error bars show SD
SD, standard deviation; VWD, von Willebrand disease

OUTPATIENT VISITS

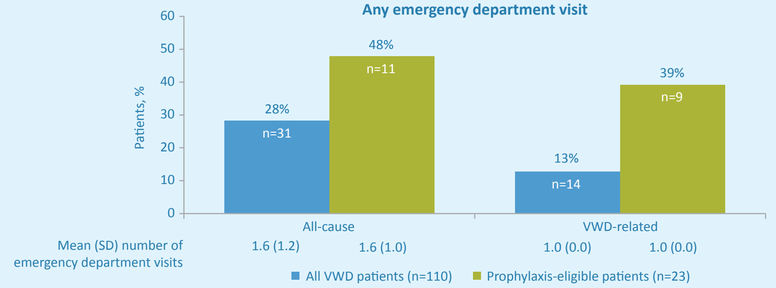
Almost all patients had ≥1 outpatient visit



SD, standard deviation; VWD, von Willebrand disease

EMERGENCY DEPARTMENT VISITS

Higher proportions of prophylaxis-eligible patients required emergency department visits compared with the overall population



SD, standard deviation; VWD, von Willebrand disease

LIMITATIONS

- Medical visits that occurred outside of the claims database were not captured
- The claims data were only available for a subset of patients included in the electronic medical record, and the small sample with claims data may not be representative of the overall sample

REFERENCES

1. Centers for Disease Control and Prevention. Von Willebrand Disease (VWD). https://www.cdc.gov/ncbddd/vwd/facts.html. Accessed April 11, 2022.
2. Orphanet. von Willebrand disease. Available at: https://www.orpha.net/consor/cgi-bin/OC_Exp.php?Lng=EN&Expert=903. Accessed April 10, 2022.
3. Connell NT, et al. *Blood Adv* 2021;5:301-5.
4. Vonvendi. Prescribing information. 2022. https://www.shirecontent.com/PI/PDFs/VONVENDI_USA_ENG.pdf. Accessed March 28, 2022.

Scan code to receive a poster pdf or visit www.takedacongressposters.com/969910 or send an SMS: Text 969910 to 43704 (USA only) or to +44 7860 033 046 (rest of world)

FUNDING

This study was funded by Baxalta US Inc., a Takeda company, Lexington, MA, USA

ACKNOWLEDGMENTS

Medical writing support for this poster was provided by Nasser Malik, PhD, employee of Excel Medical Affairs (Fairfield, CT, USA), and was funded by Takeda Development Center Americas, Inc., a Takeda company, Lexington, MA, USA

DISCLOSURES

PD, SXS: employees of Takeda Development Center Americas, Inc., and Takeda stock owners. ES, JRM, EB, EY: employees of Analysis Group, Inc. Analysis Group, Inc. received funding for the conduct of this research from Takeda Pharmaceuticals Company Limited

This poster is intended for healthcare providers

Presented at the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) Congress; May 15–18, 2022