

Labour-Market Affiliation Among Danish Migraine Patients Discontinuing Triptan Treatment – a Register-Based Study

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BACKGROUND

- At population level, migraine is among the world's most disabling disorders in terms of years lost to disability.¹
- In Europe, triptans are recommended as second-line treatment for migraine when non-steroidal anti-inflammatory drugs and other simple analgesics are insufficient but, for some, triptans are also inadequate.²
- The knowledge about occupational implications experienced by people with migraine is limited and the effect on the labour-market affiliation in patients who are non-responsive or intolerant to triptans remains underexplored in the existing literature.

OBJECTIVE

- The objective of this register-based study was to analyse labour-market affiliation of triptan discontinuers (TDs) compared to triptan responders (TRs) via receipt of disability pension, long-term sick leave, and unemployment.

METHODS

STUDY DESIGN AND DATA SOURCES

- We utilized nationwide individual-level healthcare and labour market registers. Due to the unique and personal identification ID it is possible to merge all national health and socioeconomic registers in Denmark on individual level.
- From the Danish National Prescription Register we defined TDs as patients (≥18 years) who between 1998 and 2019 had redeemed prescriptions for at least three distinct triptans, but fewer than ten of the last prescribed triptan before discontinuation (i.e., no further redemptions for at least a two-year period and until the end of follow-up ultimo 2021).
- Each TD was matched, when possible, by year of birth, declared gender, region of residence and year of first triptan prescription redemption, in a 1:3 ratio with TRs defined as patients who had redeemed at least ten prescriptions of a distinct triptan and were continuing to do so.

STATISTICAL ANALYSIS

- Labour market affiliation, with comparison between TDs and TRs, was assessed by estimating the risk of receipt of disability pension and being on long-term sick leave (>4 weeks) or unemployed. Only those aged up to 65 years (the retirement age in Denmark) were included in the analyses.

RESULTS

- We identified 5,227 TDs with a median age of 43 years at discontinuation. The majority of TDs were women (86%) (Table 1).
- In total, the majority of TDs only redeemed three or four distinct triptans before discontinuation.

Table 1. Characteristics of the TDs and TRs

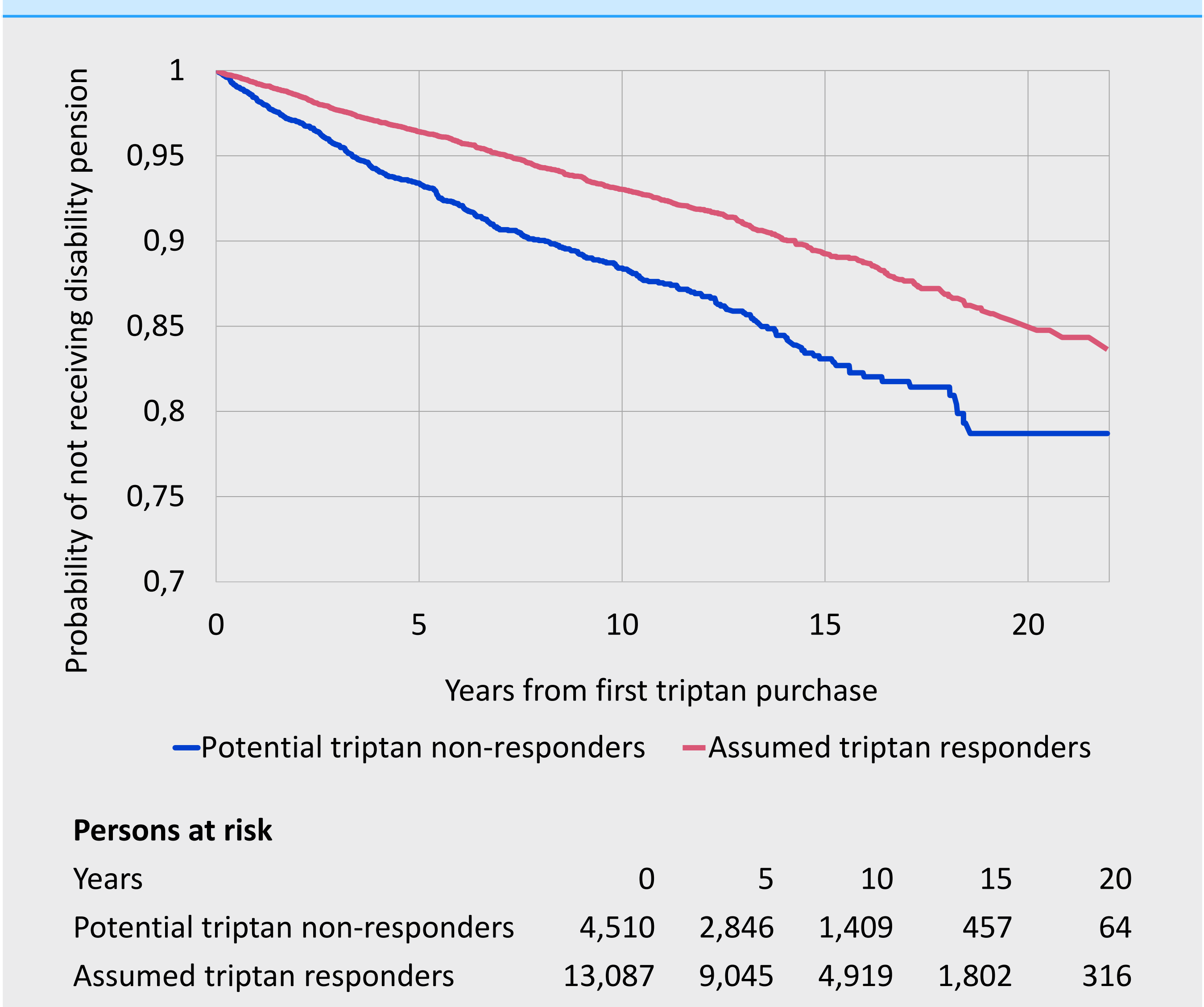
	TDs	TRs
N	5,227	14,838
Age at index, median (IQR)	43 (35, 51)	43 (35, 51)
Gender		
Women	4,491 (86%)	13,163 (89%)
Men	736 (14%)	1,675 (11%)

Abbreviation: IQR: interquartile range; TDs: triptan discontinuers; TRs: triptan responders

RISK OF RECEIVING DISABILITY PENSION

- TDs faced a significantly higher risk of disability pension than TRs (hazard ratio [95% CI] = 1.72 [1.54–1.96]) (Figure 1).

Figure 1. The probability of not receiving disability pension after first triptan purchase for potential triptan non-responders and assumed triptan responders



LONG TERM SICK LEAVE AND UNEMPLOYMENT

- During the first three years after triptan discontinuation, significantly more TDs were on long-term sick leave compared to TRs ($p < 0.001$). The proportion of TDs on long term sick leave in this period ranged from 19% to 22% whereas, the proportion of TRs on long term sick leave were approximately 17% in all three years.
- Throughout the study period, significantly more TDs were unemployed compared to TRs ($p < 0.001$), with ≥25% of TDs being unemployed at some point during each of the first five years after triptan discontinuation. Overall, the unemployment rate ranged from 23% to 26% for TDs.
- For TRs, the unemployment rate was relatively constant between 17% and 19% in the entire study period.

STRENGTHS AND LIMITATIONS

- The Danish national registers have been recognized for providing real-world data that are considered to be among the most extensive and comprehensive of their kind.³
- The use of national register data collected prospectively mitigates biases related to selection and information and eliminate recall errors.
- Short term sick leave is not recorded in the Danish registers and along with uncertainty about reasons for triptan discontinuation this remains the principal limitation of the study. Also, the registers do not capture the reasons behind treatment discontinuation, short-term sick leave, or reduced productivity at work, all of which are more likely outcomes of migraine than long-term sick leave.

CONCLUSIONS

- Triptan discontinuation was assumed to be due to inadequate response, which is supported by the findings.
- TDs had significantly higher risks of exclusion from the labour market than their matched TRs.
- Our findings highlight the impact of inadequately treated migraine on both society and affected individuals and indicate an important and unmet need for further treatment options to recover these losses.

REFERENCES

1: IHME GBD 2019. 2: Eigenbrodt et al. Nat Rev Neurol 2021;17:501–14. 3: Schmidt et al. Clin Epidemiol 2015;1:449.

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CONFLICTS OF INTEREST

MA reports receiving personal fees from AbbVie, Amgen, Astra Zeneca, Eli Lilly, GlaxoSmithKline, Lundbeck, Novartis, Pfizer and Teva Pharmaceuticals and reports serving as associate editor of Cephalalgia, associate editor of The Journal of Headache and Pain, and associate editor of Brain. JMH reports receiving personal fees from Pfizer. TFH reports no conflicts. DSH and USL are current employees of Pfizer Denmark and may own shares in Pfizer Inc. TJS is co editor of the Journal of Headache and Pain, a director and trustee of Lifting The Burden, and reports receiving personal fees from Eli Lilly and Pfizer.