



Rare disease patients may be falling through the cracks

USE YOUR EHR SYSTEM TO HELP TRIAGE SUSPECT PATIENTS

Rare diseases may pose unique challenges in the recognition of affected patients. As a result, critical diagnoses can be delayed or missed.¹² deciphEHR™ provides educational resources to help health systems, hospitals, and specialty practices leverage their electronic health record (EHR) systems to help triage suspect patients for further clinician evaluation and employ diagnostic best practices.



UNDERSTANDING THE PATIENT BURDEN



Rare diseases may not be as rare as they sound³

It is estimated that there are more than **7000 rare diseases** affecting about **30 million people**.* Currently, approved treatments are available for ~5% of rare diseases³

NORD=National Organization for Rare Disorders.

*In the United States, a rare disease is defined as a condition that affects fewer than 200,000 people.⁵

†According to an online survey conducted between August 2012 and August 2013. Data was evaluated for 367 healthcare providers from 13 countries.²



Individuals with rare diseases have higher medical needs, often miss work, retire early, and require the assistance of a caregiver.4

Specialists generally consider their knowledge of rare diseases to be relatively high compared with primary care physicians, who consider their knowledge level to be lower.^{2,†}



According to NORD, individuals with a rare disease may experience feelings of isolation and of having been abandoned or "orphaned" by our healthcare system.6

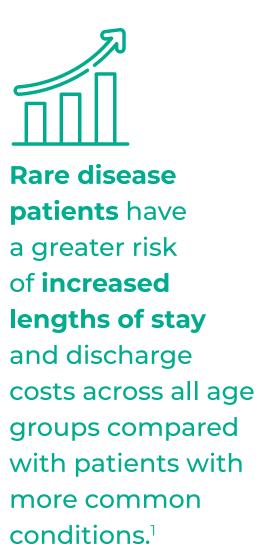
The diagnostic journey in rare diseases is often inefficient^{1,2}

Patients with a rare disease have reported that it takes them, on average, **4.8 years** and more than **7 physicians** to get an **accurate diagnosis**, potentially resulting in²:

- · Delayed treatment
- Negative impact on condition

Misdiagnoses and delayed diagnoses of rare diseases can lead to **inappropriate** or **ineffective management** and an **unnecessary burden** on the healthcare system.^{1,2,7}

01



08

02 03 04 05 06 07

It is difficult for many clinicians to stay up to date with rare diseases.⁷ This fuels the demand for tools that integrate new information into decision-making.^{8,*}

Rare diseases and their diagnostic pathways may not be universally understood by HCPs.⁹ Missed diagnoses contribute to increases in **readmissions**, **morbidity**, and **healthcare utilization**.^{1,7}

*Based upon the findings of a 2021 report that resulted from a workshop that brought together leaders from across the healthcare spectrum, including patient advocacy, clinical research, personalized medicine, venture capitalism, and payer organizations. The workshop elicited the opinions of participants; it was not a scientific study.⁸



Rare diseases pose unique challenges to clinicians



01 02 03 04 05 06 07 08

Leveraging **EHR systems** may improve care and mitigate inefficiencies 10-13



A healthcare organization's use of EHR systems may help HCPs¹⁰⁻¹³:

- Efficiently triage patients
- · Enable resource prioritization
- · Provide more coordinated care

Leveraging EHR systems, including best practice alerts and suspect patient lists, may contribute to improved patient care and outcomes, as well as increased efficiency.¹⁴

05 06 07 08



Further reading: rare disease websites

Genetic and Rare Diseases Information Center (GARD),

National Institutes of Health (NIH)

https://rarediseases.info.nih.gov

National Organization for Rare Disorders (NORD)

https://rarediseases.org

Orphanet: The Portal for Rare Diseases and Orphan Drugs

https://www.orpha.net/consor/cgi-bin/index.php

Rare Diseases International

https://www.rarediseasesinternational.org

Global Genes: Allies in Rare Disease

https://globalgenes.org

Children's National Rare Disease Institute (CNRDI)

https://childrensnational.org/departments/rare-disease-institute

Rare Diseases Europe (EURORDIS)

https://www.eurordis.org

01 02 03 04 05 06 07 08

References

1. Navarrete-Opazo AA, Singh M, Tisdale A, Cutillo CM, Garrison SR. Can you hear us now? The impact of health-care utilization by rare disease patients in the United States. Genet Med. 2021;23(11):2194-2201. doi:10.1038/s41436-021-01241-7 2. Engel PA, Bagal S, Broback M, Boice N. Physician and patient perceptions regarding physician training in rare diseases: the need for stronger educational initiatives for physicians. Orphanet J Rare Dis. 2013;1(2):1-15. Accessed February 16, 2022. https://drive.google.com/ file/d/ltOcOm2BpMjNv1Zp7leg4j6wg_kuSqpZc/view 3. Orphan Drugs in the United States: An Examination of Patents and Orphan Drug Exclusivity. National Organization for Rare Disorders (NORD). Accessed February 12, 2022. https://rarediseases.org/wp-content/ uploads/2021/03/NORD-Avalere-Report-2021_FNL-1.pdf 4. The National Economic Burden of Rare Disease Study. EveryLife Foundation for Rare Diseases; 2021. Accessed February 16, 2022. https://everylifefoundation.org/wp-content/uploads/2021/02/The_National_ Economic_Burden_of_Rare_Disease_Study_Summary_Report_February_2021.pdf 5. Orphan Drug Act-Relevant Excerpts. United States Food and Drug Administration. Updated March 9, 2013. Accessed February 16, 2022. https://www.fda.gov/industry/designatingorphan-product-drugs-and-biological-products/orphan-drug-act-relevant-excerpts. 6. Rare Disease Day: Frequently Asked Questions. Rare Disease Day. Accessed February 16, 2022. https://rarediseases.org/wp-content/uploads/2019/01/RDD-FAQ-2019.pdf 7. Vandeborne L, van Overbeeke E, Dooms M, De Belevr B, Huys I. Information needs of physicians regarding the diagnosis of rare diseases: a questionnaire-based study in Belgium. Orphanet J Rare Dis. 2019;14(1):99. doi:10.1186/s13023-019-1075-8 8. The Diagnostic Journey for Rare Disease Patients: Scaling Sustainable Solutions. Avalere Health; 2021. Accessed February 16, 2022. https://avalere.com/wpcontent/uploads/2021/07/Diagnostic_Journey_for_RD_Patients-June-2021.pdf 9. Pogue RE, Cavalcanti DP, Shanker S, et al. Rare genetic diseases: update on diagnosis, treatment and online resources. Drug Discov Today. 2018;23(1):187-195. doi:10.1016/j.drudis.2017.11.002 10. What are the advantages of electronic health records? HealthIT. Updated May 16, 2019. Accessed February 16, 2022. https://www. healthit.gov/faq/what-are-advantages-electronic-health-records 11. Ben-Assuli O, Sagi D, Leshno M, Ironi A, Ziv A. Improving diagnostic accuracy using EHR in emergency departments: a simulation-based study. J Biomed Inform. 2015;55:31-40. doi:10.1016/j.jbi.2015.03.004 12. Improve care coordination. HealthIT. Updated September 15, 2017. Accessed February 16, 2022. https://www.healthit.gov/topic/ health-it-and-health-information-exchange-basics/improve-care-coordination 13. Menachemi N, Collum TH. Benefits and drawbacks of electronic health record systems. Risk Manag Health Policy. 2011;4:47-55. doi:10.2147/RMHP.S12985 14. FDASIA Health IT Report: Proposed Strategy and Recommendations for a Risk-Based Framework. United States Food and Drug Administration; 2014. Accessed February 16, 2022. http://www.fda.gov/media/87886/download

01 02 03 04 05 06 07 08

VISIT deciphEHRrare.com FOR ACCESS

How can Alexion help?

Alexion provides educational resources to help you leverage your EHR system to help triage patients suspected of having a rare disease for further clinician evaluation through the use of relevant patient history data, best practice alerts, and suspect patient lists.

EHR diagnostic toolkits will be available for selected rare diseases.



