World Journal of Nephrology

Quarterly Volume 13 Number 1 March 25, 2024





Contents

Quarterly Volume 13 Number 1 March 25, 2024

EDITORIAL

Raikou VD. Renoprotective strategies. World J Nephrol 2024; 13(1): 89637 [DOI: 10.5527/wjn.v13.i1.89637]

Sabath E. Point of care ultrasonography as the new "Laennec Sthetoscope". World J Nephrol 2024; 13(1): 90542 [DOI: 10.5527/wjn.v13.i1.90542]

OPINION REVIEW

Peticca B, Prudencio TM, Robinson SG, Karhadkar SS. Challenges with non-descriptive compliance labeling of end-stage renal disease patients in accessibility for renal transplantation. World J Nephrol 2024; 13(1): 88967 [DOI: 10.5527/wjn.v13.i1.88967]

ORIGINAL ARTICLE

Retrospective Study

Jafry NH, Manan S, Rashid R, Mubarak M. Clinicopathological features and medium-term outcomes of histologic variants of primary focal segmental glomerulosclerosis in adults: A retrospective study. World J Nephrol 2024; 13(1): 88028 [DOI: 10.5527/wjn.v13.i1.88028]

Juarez-Villa JD, Zepeda-Quiroz I, Toledo-Ramírez S, Gomez-Johnson VH, Pérez-Allende F, Garibay-Vega BR, Rodríguez Castellanos FE, Moguel-González B, Garcia-Cruz E, Lopez-Gil S. Exploring kidney biopsy findings in congenital heart diseases: Insights beyond cyanotic nephropathy. World J Nephrol 2024; 13(1): 88972 [DOI: 10.5527/ wjn.v13.i1.88972]

SYSTEMATIC REVIEWS

Ndongo M, Nehemie LM, Coundoul B, Diouara AAM, Seck SM. Prevalence and outcomes of polycystic kidney disease in African populations: A systematic review. World J Nephrol 2024; 13(1): 90402 [DOI: 10.5527/wjn.v13.i1. 90402

Contents

Quarterly Volume 13 Number 1 March 25, 2024

ABOUT COVER

Peer Reviewer of World Journal of Nephrology, Amgad E El-Agroudy, MBBCh, MD, FACP, FASN, FAST, Internal Medicine and Nephrology, College of Medicine and Medical Sciences, Arabian Gulf University, Manama, Bahrain. amgadelagroudy@hotmail.com

AIMS AND SCOPE

The primary aim of World Journal of Nephrology (WJN, World J Nephrol) is to provide scholars and readers from various fields of nephrology with a platform to publish high-quality basic and clinical research articles and communicate their research findings online.

WIN mainly publishes articles reporting research results obtained in the field of nephrology and covering a wide range of topics including acute kidney injury, acute or chronic interstitial nephritis, AIDS-associated nephropathy, anuria, chronic kidney disease and related complications, CKD-MBD, diabetes insipidus, diabetic nephropathies, Fanconi syndrome, glomerular diseases, inborn or acquired errors renal tubular transport, renal hypertension, kidney cortex necrosis, renal artery obstruction, renal nutcracker syndrome, renal tuberculosis, renal tubular acidosis, thrombotic microangiopathy, uremia, and Zellweger syndrome, etc.

INDEXING/ABSTRACTING

The WJN is now abstracted and indexed in PubMed, PubMed Central, Reference Citation Analysis, China Science and Technology Journal Database, and Superstar Journals Database.

RESPONSIBLE EDITORS FOR THIS ISSUE

Production Editor: Yu-Qing Zhao; Production Department Director: Xu Guo; Editorial Office Director: Ji-Hong Liu.

NAME OF JOURNAL

World Journal of Nephrology

ISSN 2220-6124 (online)

LAUNCH DATE

February 6, 2012

FREQUENCY

Quarterly

EDITORS-IN-CHIEF

Li Zuo, Ying-Yong Zhao

EDITORIAL BOARD MEMBERS

https://www.wjgnet.com/2220-6124/editorialboard.htm

PUBLICATION DATE

March 25, 2024

COPYRIGHT

© 2024 Baishideng Publishing Group Inc

INSTRUCTIONS TO AUTHORS

https://www.wjgnet.com/bpg/gerinfo/204

GUIDELINES FOR ETHICS DOCUMENTS

https://www.wjgnet.com/bpg/GerInfo/287

GUIDELINES FOR NON-NATIVE SPEAKERS OF ENGLISH

https://www.wjgnet.com/bpg/gerinfo/240

PUBLICATION ETHICS

https://www.wjgnet.com/bpg/GerInfo/288

PUBLICATION MISCONDUCT

https://www.wjgnet.com/bpg/gerinfo/208

ARTICLE PROCESSING CHARGE

https://www.wignet.com/bpg/gerinfo/242

STEPS FOR SUBMITTING MANUSCRIPTS

https://www.wjgnet.com/bpg/GerInfo/239

ONLINE SUBMISSION

https://www.f6publishing.com

© 2024 Baishideng Publishing Group Inc. All rights reserved. 7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA E-mail: office@baishideng.com https://www.wjgnet.com

Submit a Manuscript: https://www.f6publishing.com

World J Nephrol 2024 March 25; 13(1): 88967

DOI: 10.5527/wjn.v13.i1.88967

ISSN 2220-6124 (online)

OPINION REVIEW

Challenges with non-descriptive compliance labeling of end-stage renal disease patients in accessibility for renal transplantation

Benjamin Peticca, Tomas M Prudencio, Samuel G Robinson, Sunil S Karhadkar

Specialty type: Medicine, general and internal

Provenance and peer review:

Invited article; Externally peer reviewed.

Peer-review model: Single blind

Peer-review report's scientific quality classification

Grade A (Excellent): 0 Grade B (Very good): B Grade C (Good): C Grade D (Fair): 0 Grade E (Poor): 0

P-Reviewer: Salvadori M, Italy

Received: October 16, 2023
Peer-review started: October 16, 2023

First decision: November 14, 2023 Revised: November 22, 2023 Accepted: December 22, 2023 Article in press: December 22, 2023 Published online: March 25, 2024



Benjamin Peticca, Tomas M Prudencio, Samuel G Robinson, Sunil S Karhadkar, Department of Surgery, Lewis Katz School of Medicine at Temple University Hospital, Philadelphia, PA 19140, United States

Corresponding author: Sunil S Karhadkar, FACS, MD, Associate Professor, Surgeon, Department of Surgery, Lewis Katz School of Medicine at Temple University Hospital, 3401 N Broad St, Philadelphia, PA 19140, United States. sunil.karhadkar@tuhs.temple.edu

Abstract

Non-descriptive and convenient labels are uninformative and unfairly project blame onto patients. The language clinicians use in the Electronic Medical Record, research, and clinical settings shapes biases and subsequent behaviors of all providers involved in the enterprise of transplantation. Terminology such as noncompliant and nonadherent serve as a reason for waitlist inactivation and limit access to life-saving transplantation. These labels fail to capture all the circumstances surrounding a patient's inability to follow their care regimen, trivialize social determinants of health variables, and bring unsubstantiated subjectivity into decisions regarding organ allocation. Furthermore, insufficient Medicare coverage has forced patients to ration or stop taking medication, leading to allograft failure and their subsequent diagnosis of noncompliant. We argue that perpetuating non-descriptive language adds little substantive information, increases subjectivity to the organ allocation process, and plays a major role in reduced access to transplantation. For patients with existing barriers to care, such as racial/ethnic minorities, these effects may be even more drastic. Transplant committees must ensure thorough documentation to correctly encapsulate the entirety of a patient's position and give voice to an already vulnerable population.

Key Words: End-stage renal disease; Compliance; Labeling; Social determinants

©The Author(s) 2024. Published by Baishideng Publishing Group Inc. All rights reserved.

Core Tip: For a very long time, patients with renal failure have had challenges to transplantation. Inequities in access to transplantation are widely apparent across diverse geographic zones. Increasing these disparities are non-descriptive labels that perpetuate stereotypes and further disadvantage minority populations. In this manuscript, we crystallize the roles of such labeling and seek to implore the Nephrology community to improve equity in organ transplantation.

Citation: Peticca B, Prudencio TM, Robinson SG, Karhadkar SS. Challenges with non-descriptive compliance labeling of end-stage renal disease patients in accessibility for renal transplantation. *World J Nephrol* 2024; 13(1): 88967

URL: https://www.wjgnet.com/2220-6124/full/v13/i1/88967.htm

DOI: https://dx.doi.org/10.5527/wjn.v13.i1.88967

INTRODUCTION

Over the past decade, a renaissance of patient-centered language has emerged, transforming terms such as "drug addict" and "diabetic" to "person who uses drugs" and "person with diabetes." Such language helps recast how healthcare teams, the public, and patients view their circumstances. Placing a person's humanity before their condition or diagnosis lends some much-needed context and empathy. Modern medicine is continuing to adapt, fixing past shortcomings, and shaping the future of clinical care. The enterprise of End-Stage Renal Disease (ESRD) care and kidney transplantation is no different. Here, we argue that patient-centered language is critical in transplantation as conscious and unconscious biases have more significant consequences when brought into decisions regarding organ allocation. Transplantation poses a distinct challenge, requiring a difficult balance between patient equity and utility when deciding how to ration a limited number of organs to an ever-growing list of candidates. When making these decisions, it is vital to understand each patient's circumstance completely rather than rely on the convenient labels that have been perpetuated through decades of an evolving care system. The United Network for Organ Sharing (UNOS) database reports over 11.7 million instances where a patient was temporarily inactivated from the waitlist due to the use of non-informative language such as "work-up incomplete" and "medical noncompliance." These reasons account for over 70% of all inactivations between 2006-2020. Such labels create bias in a field that requires a holistic evaluation of an ESRD patient's viability for life-saving transplantation.

HOW DID WE GET HERE?

The term *compliance* was initially used to describe patients' obedience to physician advice. By the 1970s, *medical noncompliance* was used more narrowly to characterize patients unwilling or unable to take their prescribed medication. The newer term *nonadherence* offers a slightly less patronizing perspective, yet both terms contribute to a power imbalance between patient and physician[1]. While these terms are known to be potentially harmful, more neutral labels have surfaced in the field of nephrology and renal transplantation, such as *work-up incomplete*. We argue that the use of non-descriptive language fails to capture a patient's real-world experience.

Non-descriptive terminology, in this context, is defined as a single word or phrase that does not correctly describe the totality of a patient's circumstance. All labels are fundamentally flawed in their ability to describe situations in detail. However, reliance on non-specific labels denies due process to the patient and overlooks potential mitigating factors in the patient's situation. Importantly, replacing terms such as *nonadherence* or *noncompliance* with another label would be futile, further perpetuating the same inequities left by their use. Historically, as reviewed in Laederach-Hoffman and Bunzel, in 1997, The Royal Pharmaceutical Society of Great Britain recommended using the term "nonconcordance" to replace *noncompliance* without alluding to the systemic hierarchy in medicine[2]. Although the term was never adopted, it demonstrates a pattern of inappropriate change.

LIMITATIONS WITHIN KIDNEY TRANSPLANTATION

In reviewing the UNOS database, *work-up incomplete* accounted for 178578 patients being inactivated from the waitlist between 2006-2020. Although *work-up incomplete* is not stigmatizing, the term provides no added information besides the lack of data or patient-derived follow-up. We argue that labels, such as work-up incomplete, generalize patient situations. The more valuable Electronic Medical Record (EMR) information answers "what is incomplete" and, equally important, "why is it incomplete." In situations where work-up incomplete is a label accurately used to describe missing patient information, such as a colonoscopy, the EMR should explicitly describe what is incomplete. A comprehensive EMR note may read, "work-up incomplete due to missing updated colonoscopy, as the patient is unable to afford transportation to the center." Thorough descriptions impart much-needed context and empathy with the hope of changing the treatment approach or plan. A culture change in patient documentation could expand the involvement of other care team members in addressing the needs of each patient.

THE PROBLEM

Terminology that attempts to describe a patient's inability to follow the care regimen does not account for social determinants of health such as medication cost, lack of family support, insufficient information, overwhelming numbers of medications, and others[2]. Not only are these nonspecific labels unable to encompass socioeconomic factors, but they also lend to dangerous provider assumptions that once a patient is labeled *noncompliant*, they will remain *noncompliant*. Understanding why patients receive these labels is essential to providing patient-centered healthcare that improves access and gives patients the care they deserve. Still, *noncompliance* remains a diagnosis in the EMR. While newer iterations of the International Classification of Diseases (ICD-10) coding system provide some ability to report additional descriptors, as seen in Table 1, these stigmatizing labels continue to inadequately portray patients' circumstances. Additionally, labeling has different consequences in different contexts. While the convenience of nonspecific terminology may offer some practicality in acute settings, convenience offers less value in deliberative processes such as organ allocation in ESRD.

These labels are also frequently used in the academic literature across various transplantation journals when characterizing the well-understood association between inconsistencies in taking medication and poor graft survival. Since 2000, 193 papers on PubMed have titles that reference *noncompliance* terminology within transplantation. These studies have found that patients who struggle to follow their immunosuppression regimen have an elevated risk of late allograft failure[2,3]. As a result, institutional transplant committees use patient *noncompliance* as a criterion for waitlist delisting. According to the UNOS Database, 7852 patients have been temporarily inactivated from the waitlist due to *medical noncompliance* between 2006 and 2020. Although it is not policy to preclude a patient from transplantation indefinitely once inactivated for these reasons, the added barrier to transplantation places an unfair toll on patients and their caregivers. When making decisions regarding waitlist modifications, patient records should reflect, in granular detail, the reasons for their inability to adhere to their care plan. Furthermore, patients should have the ability to contest these labels.

INSUFFICIENT INSURANCE COVERAGE

Insufficient Medicare coverage of immunosuppressive medication highlights an extenuating circumstance where nonspecific labels such as *noncompliant* do not accurately encapsulate a patient's behavior. In 2020, 59% of all adult kidney transplant recipients in the United States relied on Medicare as their primary insurance provider[4]. Unfortunately, since 1993, Medicare has only covered immunosuppressive drugs for the first 36 months following a kidney transplant in patients under 65 years old without work-related disabilities[5]. This abrupt cutoff of coverage forces a financial burden onto many patients, leading to the rationing or discontinuation of their medications and eventual allograft failure. In addition, patients who remained consistent with their immunosuppressive regimen until the expiration of their prescription coverage are mischaracterized as *noncompliant*. As a result of persistent advocacy, the Comprehensive Immunosuppressive Drug Coverage for Kidney Transplant Patients Act of 2020 has made lifelong Medicare coverage of immunosuppression a reality in 2023[6]. Regardless, for patients who have already stopped or rationed their medications due to inadequate coverage, the damage is done.

Arguments for using non-descriptive labels, such as *noncompliance* or *nonadherence* stipulate that their use adequately reflects situations where patients are actively unwilling to follow the care regimen. While clinicians and researchers may believe that the selective use of these labels is justified, this opens the door for subjective and unfair labeling across the entire organ transplant recipient population. Non-descriptive language trivializes the reasons for *noncompliance* with no regard to medical and social factors that led to such behavior. The indiscriminate use of these labels without adequate explanation of the inability or unwillingness to follow the care regimen adds nothing but unsubstantiated subjectivity to decisions regarding life and death.

STIGMATIZING LANGUAGE AND RACIAL BIAS

Recent literature reports that EMR notes regarding Black patients are more likely to include stigmatizing language when compared to notes regarding White patients[7]. This supports the findings of many studies, which indicate that healthcare providers hold conscious or unconscious biases toward people of color[8]. Transplant clinicians are no exception, as racial discrimination has manifested throughout multiple areas of the renal transplant process. Compared to White patients, Black patients are less likely to be referred, evaluated, and approved for transplant, more likely to be excluded from the waitlist, and ultimately experience decreased rates of transplantation and retransplantation[9,10]. We argue that the increased use of stigmatizing language in minority populations plays a role in their diagnosis as *noncompliant*, reducing their access to transplantation.

CONCLUSION

Non-descriptive labels in transplantation are unfortunately common and unfairly project blame onto ESRD patients. Labels such as *noncompliance*, *nonadherence*, and *work-up incomplete* fail to accurately portray ESRD patients awaiting transplantation. The grave nature of the situation is compounded by their prevalence in literature and patient care over

Table 1 ICD-10-CM codes characterizing noncompliance diagnoses	
Z91.1	Patient's noncompliance with medical treatment and regimen
Z91.11	Patient's noncompliance with dietary regimen
Z91.12	Patient's intentional underdosing of medication regimen
Z91.120	Due to financial hardship
Z91.128	Due to other reason
Z91.13	Patient's unintentional underdosing of medication regimen
Z91.130	Due to age-related debility
Z91.138	Due to other reason
Z91.14	Patient's other noncompliance with medication regimen
Z91.15	Patient's noncompliance with renal dialysis
Z91.19	Patient's noncompliance with other medical treatment and regimen

The Z91 category refers to "personal risk factors, not elsewhere classified" in the ICD-10-CM system (ICD-10-CM International Classification of Diseases-10th Revision-Clinical Modification).

the last two decades. Furthermore, implementing the ICD-10 coding system has streamlined portions of an overburdened EMR, yet it incompletely describes ESRD patients with barriers to care. Minority populations and those who rely on Medicare already experience existing challenges and deserve comprehensive language the most. National organ sharing networks should incorporate strict delisting criteria for prospective transplant recipients, eliminate non-descriptive terminology such as noncompliance, and work to limit bias and subjectivity throughout the allocation process. We urge providers, regardless of specialty, to report patient information in granular detail to ensure the entirety of the patient's circumstance is captured. We recognize the burden these actions place on clinicians. However, the convenience of using non-descriptive labeling grossly mischaracterizes patients' behavior, limiting their access to life-saving transplantation.

FOOTNOTES

Co-first authors: Benjamin Peticca and Tomas M Prudencio.

Author contributions: Peticca B and Prudencio TM contributed equally to this work; Peticca B, Prudencio TM, and Karhadkar SS designed the research study; Peticca B, Prudencio TM, Robinson SG, and Karhadkar SS participated in drafting the manuscript and critical manuscript revision. Peticca B and Prudencio TM performed data collection and statistical analysis; All authors have read and approved the final manuscript. Benjamin Peticca and Prudencio Tomas M contributed equally to this manuscript.

Conflict-of-interest statement: None of the authors have any conflict of interest to disclose.

Open-Access: This article is an open-access article that was selected by an in-house editor and fully peer-reviewed by external reviewers. It is distributed in accordance with the Creative Commons Attribution NonCommercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: https://creativecommons.org/Licenses/by-nc/4.0/

Country/Territory of origin: United States

ORCID number: Sunil S Karhadkar 0000-0001-7943-0203.

S-Editor: Liu JH L-Editor: A P-Editor: Zhao S

REFERENCES

- 1 Fawcett J. Thoughts About Meanings of Compliance, Adherence, and Concordance. Nurs Sci Q 2020; 33: 358-360 [PMID: 32940158 DOI: 10.1177/0894318420943136
- Laederach-Hofmann K, Bunzel B. Noncompliance in organ transplant recipients: a literature review. Gen Hosp Psychiatry 2000; 22: 412-424 [PMID: 11072057 DOI: 10.1016/S0163-8343(00)00098-0]
- Vlaminck H, Maes B, Evers G, Verbeke G, Lerut E, Van Damme B, Vanrenterghem Y. Prospective study on late consequences of subclinical



- non-compliance with immunosuppressive therapy in renal transplant patients. *Am J Transplant* 2004; **4**: 1509-1513 [PMID: 15307839 DOI: 10.1111/J.1600-6143.2004.00537.X]
- 4 Lentine KL, Smith JM, Hart A, Miller J, Skeans MA, Larkin L, Robinson A, Gauntt K, Israni AK, Hirose R, Snyder JJ. OPTN/SRTR 2020 Annual Data Report: Kidney. Am J Transplant 2022; 22 Suppl 2: 21-136 [PMID: 35266618 DOI: 10.1111/ajt.16982]
- Kadatz M, Gill JS, Gill J, Formica RN, Klarenbach S. Economic Evaluation of Extending Medicare Immunosuppressive Drug Coverage for Kidney Transplant Recipients in the Current Era. J Am Soc Nephrol 2020; 31: 218-228 [PMID: 31704739 DOI: 10.1681/ASN.2019070646]
- 6 Levan ML, Reich DJ, Segev DLL. After 20 Years of Advocacy, Comprehensive Immunosuppressive Drug Coverage for Kidney Transplant Patients Finally Become Law. *Transplantation* 2022; **106**: 9-11 [PMID: 34342961 DOI: 10.1097/TP.00000000000003899]
- 7 Himmelstein G, Bates D, Zhou L. Examination of Stigmatizing Language in the Electronic Health Record. JAMA Netw Open 2022; 5: e2144967 [PMID: 35084481 DOI: 10.1001/jamanetworkopen.2021.44967]
- FitzGerald C, Hurst S. Implicit bias in healthcare professionals: a systematic review. BMC Med Ethics 2017; 18: 19 [PMID: 28249596 DOI: 10.1186/s12910-017-0179-8]
- Patzer RE, Perryman JP, Schrager JD, Pastan S, Amaral S, Gazmararian JA, Klein M, Kutner N, McClellan WM. The role of race and poverty on steps to kidney transplantation in the Southeastern United States. Am J Transplant 2012; 12: 358-368 [PMID: 22233181 DOI: 10.1111/j.1600-6143.2011.03927.x]
- Epstein AM, Ayanian JZ, Keogh JH, Noonan SJ, Armistead N, Cleary PD, Weissman JS, David-Kasdan JA, Carlson D, Fuller J, Marsh D, Conti RM. Racial disparities in access to renal transplantation--clinically appropriate or due to underuse or overuse? N Engl J Med 2000; 343: 1537-1544, 2 p preceding 1537 [PMID: 11087884 DOI: 10.1056/NEJM200011233432106]



Published by Baishideng Publishing Group Inc

7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA

Telephone: +1-925-3991568

E-mail: office@baishideng.com

Help Desk: https://www.f6publishing.com/helpdesk

https://www.wjgnet.com

