

Authors: Ms Suhanee Mitragotri, Dr Allison Goff

Type: Perspective

Keywords: Infection, Disease, Blood, Emoji, Social media, Communication

Edited By: Shuhan He, MD

Received: 2024-10-29

Published: 2025-02-24

Advocating for a White Blood Cell Emoji: A Novel Approach to Enhancing Public Health Communication.

Abstract

During the pandemic, there was a significant increase in the discussion of topics related to infectious disease on online platforms. Given this, we believe it is crucial to create an emoji that represents the topic of infectious diseases and can be used in online conversations. Hence, we encourage the infectious disease community to come together and advocate for the inclusion of the white blood cell (WBC) emoji into Unicode, the corporation that is responsible for the standardization of emojis across all devices.

Manuscript

Our immune system plays a crucial role in maintaining our health and wellbeing by defending against pathogens. White blood cells, discovered in 1843, are integral to the immune system [1]. Produced in the bone marrow, they are used throughout the body to fight infection. There are several types of white blood cells, including granulocytes like neutrophils (the most common white blood cell), basophils, and eosinophils. Other types of white blood cells include lymphocytes (commonly known as T-cells and B-cells) and monocytes. Each type serves a different purpose and protects the human body from different types of infections, and while each appears slightly differently, the standard representation of white blood cells applies to them all.

Infectious disease has always been a topic of public importance, ranging from historic outbreaks of tuberculosis and polio to the persistent challenges of influenza and the COVID-19 pandemic. However, during the pandemic in particular, the widespread use of the Internet and social media platforms for health updates highlighted their prominence as spaces for discussion on topics related to infectious disease. Given the growing importance of these conversations online, it would be fitting to introduce an emoji that encapsulates the topic of infectious disease. Emojis describing pathogens, such as the virus and bacteria emojis, and emojis related to the topic of blood, such as the blood drop and syringe emojis, already exist, but they fail to distinguish and highlight the role WBCs have in infectious disease and blood [2]. For this reason, we propose the introduction of the White Blood Cell (WBC).

Emojis are universal symbols that can convey emotion and thoughts to supplement written text. Currently, there are over three thousand emojis that people use every day, ranging from private messaging with friends and family to public announcements on social media sites [2]. Due to their versatility and widespread use in digital communication, emojis are easily recognized and comprehensible to all, regardless of language or cultural background. Furthermore, these images create an additional layer of context that allows for individuals to communicate without in-person body language, facial cues, or tone [3]. Emojis have also been proposed as vital tools in health education, aiding in the explanation of important health-related topics [4]. In fact, previous research has indicated that introduction of a CPR related emoji would help in teaching the general public about CPR [5]. Furthermore, research has also shown that hand and soap emojis can be used to promote handwashing, as visual stimuli can improve comprehension of written text describing hand hygiene protocols [6]. Similarly, a WBC emoji could play a similar role in teaching people about infectious diseases.

Unicode is a Silicon Valley-based organization that is responsible for the standardization of emojis across all devices, and every year, they accept proposals for new emojis. The development and proposal of a new emoji to Unicode requires rigorous qualifications and selection factors. We want to submit a WBC emoji from the viewpoint of a microscope, where the WBC appears to be circular with soft, rippled edges, with 45 comma-shaped organelles spread throughout the cell [Figure 1]. This emoji can be adapted across different platforms and is designed to represent the white blood cell specifically, while also maintaining a general aesthetic to symbolize all subtypes of white blood cells.

Our hope is to create a united consensus within the infectious disease community and advocate to Unicode to consider the WBC emoji in their next submission cycle. This will require infectious disease physicians and scientists to actively advocate for the creation of this emoji, which should include writing letters to Unicode in support of the emoji. Furthermore, we need infectious disease associations, such as the National Foundation for Infectious Diseases (NFID) and the International Society for Infectious Diseases (ISID), to partner with us for advocacy. Lastly, we need patient advocacy, which includes patients sending requests to Unicode and infectious disease organizations, explaining how this emoji can improve communication surrounding infectious

diseases among the general public. Unicode accepts emoji proposals based on their novelty, ability to fit in with existing emojis, and versatility, and we believe that the WBC emoji satisfies all three of these categories. Therefore, we encourage the infectious disease community to come together and advocate for the acceptance of this emoji into Unicode. If this emoji is accepted into Unicode, we plan to research its usage once released to the public, understanding how its use impacts public perception of infectious disease or engagement in online discussions about the topic.



Figure 1: White Blood Cell (WBC) Proposed Emoji

References

[1] Hajdu SI. A Note from History: The Discovery of Blood Cells. *Annals of Clinical & Laboratory Science* 2003; 33;2.

[2] FAQ. Emojipedia. <https://emojipedia.org/faq> [accessed 29 August 2024]

[3] Hancock PM, Hilverman C, Cook SW, Halvorson KM. Emoji as gesture in digital communication: Emoji improve comprehension of indirect speech. *Psychon Bull Rev.* 2024;31(3):1335-1347. doi:10.3758/s13423-023-02411-1

[4] Marzouk S, He S, Lee J. Emoji Education: How Students Can Help Increase Health Awareness by Making Emojis. *JMIR Med Educ.* 2022;8(4):e39059. Published 2022 Nov 11.

[5] Adami F, Cecchini M. May emoji improve CPR knowledge? Resuscitation 2019; 145:32-33.
<https://doi.org/10.1016/j.resuscitation.2019.10.001>

[6] Lotfinejad N, Assadi R, Aelami MH, Pittet D. Emojis in public health and how they might be used for hand hygiene and infection prevention and control. Antimicrob Resist Infect Control. 2020;9(1):27. Published 2020 Feb 10. doi:10.1186/s13756-020-0692-2

ARTICLE IN PRESS
CONDUCT SCIENCE