A Eulogy for the Match

Eric J. Warm, MD Danielle Weber, MD, MEd Benjamin Kinnear, MD, MEd

September 27, 2028.

he Match died today. The cause of death was indifference.

The Match was born in 1951 to Francis Joseph Mullin and John Marshall Stalnaker. Early on, it had several congenital disorders corrected by future pediatric surgeon W. Hardy Hendren III, leading to the National Resident Matching Program (NRMP) that we know today. In 1998, The Match received care from Drs. Alvin E. Roth and Elliott Peranson, allowing it to accommodate couples, myriad specialties, and DO applicants. For his work, Dr. Roth won the 2012 Nobel Prize in Economics.

During its heyday, the Match served nearly 50 000 registrants, boasting decades-long streaks of year-over-year increases in applications and positions. Success came with controversy. In 2003, residents sued the NRMP in a monopoly lawsuit. However, Congress gave the Match antitrust protection akin to that of Major League Baseball. Afterwards, the Match consolidated its power, showing swagger with its 2012 all-in policy that required programs to fill every first-year position either exclusively through or outside of it. The Match justified its actions by asserting it was protecting residents and that participation was voluntary.

Then, the Match developed health problems, starting with a severe case of application fever.^{3,8} As the number of applicants increased, students, institutions, and programs found themselves trapped in a series of prisoner's dilemmas where strategies such as overapplication, obfuscation of performance data, and use of flawed and discriminatory screening heuristics seemed logical.⁹ Sickness spread as participants suffered from perverse incentives, excessive and progressive costs, inequities, time pressures, waste, and mistrust.¹⁰

Forces outside the Match began taking shape, including competency-based time-variable education, ¹¹ situational judgement testing, ¹² pass/fail grading, ¹³ resident unions, ¹⁴ affinity matching, ¹⁵ virtual

interviews, ¹⁶ and implicit bias training, ¹⁷ all driven by the desire for high-quality skill development, veracity, fairness, and autonomy. Unfortunately, the Match came to be seen in direct opposition to these important principles and turned ill.

Physicians suggested many remedies. Signal preferencing initially showed promise, but students realized that it helped programs more than them, ¹⁸ and they lobbied for increasing choices until signaling became meaningless. Supplemental applications initially provided more signal than noise, 19 but students quickly used AI chatbots to create the perfect essay for each program. 20,21 Application caps were thought to be a cure,²² but students rebelled when their choices became limited. Prominent specialists recommended application phases,²³ but this increased everyone's workload past capacity, and the idea was abandoned. Ultimately, participants in the Match rejected all remedies despite endless calls for more.²⁴ Unfortunately, treatment for the fever did not cure the infection.9

The beginning of the end began outside of organized medicine when Ivy League law schools pulled out of the *US News & World Report* rankings. Once the first school acted, the rest followed. On the surface, law school Deans stated they quit the rankings because of flawed methodology. However, they also calculated that forces beyond their control could lead to unfavorable ranking changes, and they asserted their power to declare themselves elite, etching this judgement in history, impossible to broach. End of the surface of the second of the surface of the surface of the second of the surface of the s

Important academic physicians also called for the end of formal rankings, ²⁶ and just like law schools, medical schools followed. ²⁷ These events led residencies to realize they could take back their own power by removing themselves from the Match. Several community programs had been "all out" of the Match for years, shortening interview seasons and offering applicants positions on the spot, thereby gaining advantage over their competitors. Once the first Ivy League residency opted out, others had to follow. Students, frustrated by the inflexibility, inequity, restrictions, and workload of the Match, began opting out to join these programs. Remaining programs saw fewer and fewer candidates, and one

by one opted out to compete. Yesterday there were no applications in the Electronic Residency Application Service system, and the Match officially died.

The Match, like paper charts, celluloid x-ray film, and analog stethoscopes, will be fondly remembered for being important and effective in its time.

It is survived by chaos and remorse.

References

- 1. Mullin FJ, Stalnaker JM. The matching plan for internship appointment. J Med Educ. 1951;26(5):341-346.
- 2. Nakayama DK, Hendren WH 3rd. The 1951 Harvard student uprising against the intern match. Surgery. 2017;161(6):1728-1734. doi:10.1016/j.surg.2016.12. 009
- 3. Williamson E, Soane C, Carmody JB. The US residency match at 70: what was, what is, and what could be. J Grad Med Educ. 2022;14(5):519-521. doi:10.4300/ JGME-D-22-00248.1
- 4. Roth AE. The origins, history, and design of the resident match. JAMA. 2003;289(7):909-912. doi:10.1001/ jama.289.7.909
- 5. The Royal Swedish Academy of Sciences. The Prize in Economic Sciences 2012. Accessed December 11, 2022. https://www.nobelprize.org/uploads/2018/06/press_02.
- 6. Carmody B. The Match part 5: the lawsuit. *The Sherrif* of Sodium. Accessed December 11, 2022. https:// thesheriffofsodium.com/2021/03/03/the-match-part-5the-lawsuit/
- 7. Saultz J, Wright N. The National Resident Matching Program all-in policy: potential consequences and ethical questions. Virtual Mentor. 2012;14(12):1008-1010. doi:10.1001/virtualmentor.2012.14.12.pfor1-1212
- 8. Carmody JB, Rosman IS, Carlson JC. Application fever: reviewing the causes, costs, and cures for residency application inflation. Cureus. 2021;13(3):e13804. doi:10.7759/cureus.13804
- 9. Warm EJ, Kinnear B, Pereira A, Hirsh DA. The residency match: escaping the prisoner's dilemma. J Grad Med Educ. 2021;13(5):616-625. doi:10.4300/ JGME-D-21-00477.1
- 10. Coalition for Physician Accountability. The Coalition for Physician Accountability's Undergraduate Medical Education-Graduate Medical Education Review Committee (UGRC): recommendations for comprehensive improvement of the UME-GME transition. Accessed March 29, 2023. https:// physicianaccountability.org/wp-content/uploads/2021/ 08/UGRC-Coalition-Report-FINAL.pdf
- 11. Lucey CR, Thibault GE, ten Cate O. Competencybased, time-variable education in the health professions: crossroads. Acad Med. 2018;93(suppl 3 Competency-Based, Time-Variable Education in the

- Health Professions):1-5. doi:10.1097/ACM. 0000000000002080
- 12. Takacs EB, Tracy CR. Evaluating the whole applicant: use of situational judgment testing and personality testing to address disparities in resident selection. Curr Urol Rep. 2022;23(11):309-318. doi:10.1007/s11934-022-01115-8
- 13. Patel H, Yakkanti R, Bellam K, Agyeman K, Aiyer A. Innovation in resident selection: life without Step 1. J Med Educ Curric Dev. 2022;9:23821205221084936. doi:10.1177/23821205221084936
- 14. Lin GL, Ge TJ, Pal R. Resident and fellow unions: collective activism to promote well-being for physicians in training. JAMA. 2022;328(7):619-620. doi:10.1001/ jama.2022.12838
- 15. Neveu A. What is affinity matching? HRjobs. Accessed December 11, 2022. https://www.hrjob.ca/what-isaffinity-matching/
- 16. Keister DM, Wu V, Brohm V, et al. The impact of virtual interviews on recruitment and implicit bias. Fam Med. 2022;54(10):769-775. doi:10.22454/FamMed. 2022.358658
- 17. Khan S, Kirubarajan A, Shamsheri T, Clayton A, Mehta G. Gender bias in reference letters for residency and academic medicine: a systematic review [Published online ahead of print June 2, 2021]. Postgrad Med J. doi:10.1136/postgradmedj-2021-140045
- 18. Dirr MA, Brownstone N, Zakria D, Rigel D. Dermatology match preference signaling tokens: impact and implications. Dermatol Surg. 2022;48(12):1367-1368. doi:10.1097/DSS. 0000000000003645
- 19. Rozenshtein A, Griffith BD, Paladin A. More signal, less noise: the electronic residency application program supplemental application in radiology match [Published online ahead of print June 7, 2022]. J Am Coll Radiol. doi:10.1016/j.jacr.2022.05.016
- 20. Metz C. The new chatbots could change the world. Can you trust them? New York Times. Accessed December 11, 2022. https://www.nytimes.com/2022/12/10/ technology/ai-chat-bot-chatgpt.html
- 21. Adams T. What's the point of personal statements when ChatGPT can say it so much better? The Guardian. Accessed February 26, 2023. https://www.theguardian. com/commentisfree/2023/jan/14/whats-the-point-ofpersonal-statements-when-chatgpt-can-say-it-so-muchbetter
- 22. Secrest AM, Coman GC, Swink JM, Duffy KL. Limiting residency applications to dermatology benefits nearly everyone. J Clin Aesthet Dermatol. 2021;14(7):30-32.
- 23. Mattson CD, Farina EM. Use application phases instead of interview caps: help applicants match into programs in which they are genuinely interested. Acad Med. 2021;96(10):1372. doi:10.1097/ACM. 0000000000004234

- 24. Dacre M, Branzetti J, Hopson LR, Regan L, Gisondi MA. Rejecting reforms, yet calling for change: a qualitative analysis of proposed reforms to the residency application process. *Acad Med*. 2023;98(2):219-227. doi:10.1097/ACM. 00000000000005100
- 25. Lat D. Why six top-ranked law schools left U.S. News in the dust this week. *Slate*. Accessed December 18, 2022. https://slate.com/human-interest/2022/11/yale-law-school-harvard-law-berkeley-georgetown-us-news-rankings.html#:~:text=Yale%20has%20been%20 No.,4
- Humphrey HJ, Levinson D, Carter K. Medical school rankings-bad for the health of the profession and the public [Published online ahead of print March 23, 2023]. *JAMA*. doi:10.1001/jama.2023.2815

27. Kayser A. 13 medical schools boycott US News rankings: who, why and what's next. *Becker's Hospital Review*. Accessed February 26, 2023. https://www.beckershospitalreview.com/hospital-management-administration/11-medical-schools-boycott-us-news-rankings-who-why-and-whats-next.html



All authors are with the University of Cincinnati College of Medicine. Eric J. Warm, MD, is Professor of Medicine and Program Director, Department of Internal Medicine; Danielle Weber, MD, MEd, is Assistant Professor of Medicine and Pediatrics and Associate Program Director, Department of Pediatrics; and Benjamin Kinnear MD, MEd, is Associate Professor of Medicine and Pediatrics and Associate Program Director, Department of Pediatrics.

Corresponding author: Eric J. Warm, MD, University of Cincinnati College of Medicine, warmej@ucmail.uc.edu, Twitter @CincyIM