The 1951 Harvard student uprising against the intern match

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In the fall of 1951, a group of Harvard medical students led by W. Hardy Hendren, III organized a national movement against the newly instituted match that would assign graduating seniors to hospital internship programs. Before then, hospitals with intern positions to fill rushed to secure commitments from students, who in turn accepted the first decent offer that came their way. Knowing that students could not risk waiting for a better offer, hospitals pushed them into making early commitments. When some students began getting offers in their junior and sophomore years, medical schools, professional groups, and hospitals organized the National Inter-association Committee on Internships to deal with the issue. The intern match was thus organized and scheduled to take place in 1952. When the plan was announced in mid-October 1951, Hendren recognized that the proposed algorithm placed students at a disadvantage if they did not get their first choice of hospitals. Facing resistance at every step from the National Inter-association Committee on Internships and putting his standing at Harvard Medical School at risk, Hendren led a nationwide movement of medical students to change the procedure to one that favored students' choices. Their success <1 month later established in the inaugural match the fundamental ethic of today's National Resident Matching Program to favor students' preferences at every step of the process. (Surgery 2016;■:■-■.)

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In the fall of 1951, senior medical students at the Harvard Medical School organized an action by students in medical schools across the country to scrap the new program to assign medical students to intern positions and replace it with one of their own design. Leading figures in the academic medical establishment had resisted any 11th-hour changes as being unnecessarily disruptive. But the students held firm. Their proposal was accepted in time to take effect for the inaugural intern match that year. The template they created evolved into today's National Resident Matching Program (NRMP).

The changes occurred because a Harvard medical student in his senior year, W. Hardy Hendren, III, recognized that the original algorithm favored the preferences of hospitals over those of the students. Opposed by his dean and with his class standing at risk, he organized the movement to change the selection process to one that protected students' interests, an ethic that became a hallmark of the resident match.

Scramble for internships. Alvin E. Roth, the Harvard and Stanford economist who won the 2012 Nobel Prize in part for his work on market design and its application to the resident match, summarized how hospitals filled training positions prior to the match.[1] With more trainee positions than medical student applicants, each year hospitals rushed to secure commitments from students. The "best" medical students were recommended by an informal network of schools and trusted colleagues and alumni. Facilities with outstanding reputations had no problem attracting the best students from top medical schools.

Competition, however, was intense among the lesser known, less competitive hospitals. They tempted promising students to accept early offers, offering a "sure thing" rather than risk not being selected by a more competitive hospital. This set up a scenario in which participants were compelled to make agreements earlier and earlier in the timeline, a classic "prisoner's dilemma" situation familiar to game theorists.[2]

In a 1939 survey of New England hospitals, Reginald Fitz, then at Boston University and son of the famous pathologist at the Massachusetts General Hospital (MGH), found evidence that

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programs outside of Massachusetts were in fact poaching Boston medical students. New England medical schools outside of Boston were "in the habit of drawing away from Massachusetts fourth year student material of [the] highest caliber."[3] With Boston hospitals holding to a traditional January 1 date for intern applicant examinations, Fitz found that several teaching hospitals outside the state made their appointments in December and November. Some hospitals not associated with medical schools were even more aggressive by making commitments still earlier in the fall; one even offered appointment in July.[3] Exacerbated by workforce shortages created by the war, the situation had worsened to the point that, in 1945, some hospitals made offers to medical students in their sophomore year.[4]

Fitz argued for a uniform date of appointment to be administered by the Association of American Medical Colleges (AAMC).[3] In 1945, Joseph Turner of the Mt. Sinai hospital in New York City proposed to restrict offers only to senior medical students. All schools would release student information at the close of the third year on the same date, which he called the "School Date." In turn, hospitals would observe a common "Acceptance Date" later in the year for acceptance of any employment offers. Students were not to be pressured to make an earlier decision.[4]

Turner's proposal, called the "Cooperative Plan" because it required all medical schools to cooperate,[4] only served, however, to compress in the first few months of the senior year of medical school into a free-for-all situation of offers and acceptances. Despite the best intentions of the "Acceptance Date," facilities and students still were pressured to make and accept on-the-spot Hobson's choices.[5] A student with modest credentials could not risk seeking a "reach" appointment at a more competitive hospital. Rejection meant a delay that limited opportunities from other hospitals.[4,5] Another fundamental flaw in the Cooperative Plan was that it allowed students and hospitals to reach an agreement before the appointed dates,[4] thereby circumventing the system altogether.

The first match. To deal with the internship issue, the National Inter-association Committee on Internships (NICI) was formed in 1950 as an amalgamation of the AAMC, the American Medical Association, the major hospital associations in the United States, and Federal hospitals involved in resident and intern training. F. Joseph Mullin, then Dean of Students at the University of Chicago School of Medicine and chair of the NICI, proposed a clearinghouse to make internship assignments as "a mechanical facilitation in the final step in the final process of intern selection."[5] It was clear that for any plan to work, total cooperation among students and hospitals was necessary. As Mullin explained, "If it is adopted, there would be a moral commitment on the part of the hospitals and students to abide by the matching process and not engage in individual negotiations of arrangements for an offer of a place before the selection under the plan."[5]

Mullin allowed that students and hospitals would "still be completely free in making contacts and getting information about each other and in expressing their choice in selection of placement and applicants."[5] So, despite the "moral commitment… not to engage in individual negotiations," a party could still game the match by signaling to the other where it was on its preference list, a "wink-and-a-nod" prematch communication now viewed as anathema in today's NRMP.

After a successful dry run in 1950, in which about 86% of students would have been assigned to their first or second choice and 91% of hospitals interns in their "most desirable" and "desirable" preference groups,[6] the members of the NICI decided to implement the match for the 1952–1953 internship class.[7] For comparison, in the 2016 NRMP match, 53% got their first choice, and 79% got 1 of their top 3.[8] The high rates of students and hospitals getting their lead and first alternative choices in the 1950 test run and the subsequent live match of 1951–1952 was evidence of prior collusion taking place between the parties. At the time, it was taken as evidence that the system was working.

In 1951, Mullin and John M. Stalnaker, Director of Studies of the AAMC, outlined the details of the matching plan.[7] Students would submit their preferences in rank order. Similarly, hospitals would submit lists of their preferred students in groups: "1" for the most preferred group equal in number to the total number of internships offered that year, and "2" for those next in line equal to twice the number of internships. A group "3" of unlimited size included acceptable candidates, and group "4" students were offered a place only if there were vacancies after the group 3 pool was exhausted. The match would then start successive rounds of matching the preferences of hospitals and students. The first would be easy: hospitals' number 1 group with the students' number 1 choices, 1–1 rankings (from here the pair of numbers will refer to the hospital choice as the first number and that of the student as the second number).