



Letter to the Editor

Women in internal medicine academic positions in France



Created in 1958, university hospital centers are French public health institutions linked to a university. They have a triple mission of care, teaching and research. At the same time, the position of hospital-university doctors (defined as medical and scientific personnel exercising full-time university and hospital functions and corresponding to a full or Associate Professor position) was created. The appeal of such hospital-university positions is based on the diversity of work activities (care, teaching and research), the interest in teamwork (hospital, university, and multidisciplinary teams), the possibility of a managerial position (head of department or research team), and a higher remuneration than regular public hospital practice. We sought to determine whether the representation of women among hospital-university positions, particularly in Internal Medicine, reflects their representation in the medical workforce in France in 2018.

1. Methods

We determined the gender of newly appointed full and Associate Professors in 2017 and 2018 in France [1]. We obtained the total number and gender-specific number of French Internal Medicine physicians aged 35–50 years (which is the representative age of full and Associate Professor candidates) [2]. We examined whether the proportion of women among Professors and Associate Professors was significantly different than 0.50 using Fisher's exact test, with statistical significance set at 0.05.

2. Results

In 2015–2016, the Health and Education and Research Ministries reported a total of 5666 hospital-university positions in France, of which 4020 were Professors and 1646 Associate Professors. No information about gender distribution could be retrieved from the queried public sources. In 2017–2018, among newly appointed full ($n = 366$) and Associate ($n = 298$) Professors, women were underrepresented, with 104 women who reached a full Professor position (28%, $p < .0001$), and 113 women who reached an Associate Professor position (38%, $p = .0038$) (Table 1). In Internal Medicine (including geriatrics), 16 men obtained a Professor position in 2017–2018 compared with 0 women, and 9 men obtained an Associate Professor position compared with 0 women. This gender distribution was significantly different from the expected ratio, as the Internal Medicine physician population aged 35–50 years in 2016 in

France comprised 355 men and 415 women. Moreover, among the Internal Medicine Teachers Association members (which includes all French full and associate Professors of Internal Medicine), we found 17 women from a total of 101 full Professor members (17%, $p < .0001$), and 5 women among 19 Associate Professor members (27%, $p = .18$).

3. Discussion

Women with academic positions are dramatically underrepresented in Internal Medicine in France, and the gender analysis among newly appointed full and Associate Professors in 2017–2018 does not indicate any improvement of this tendency. The gender gap appears unlikely to narrow in the near future if no action is made, as illustrated by the numbers of newly appointees. The reasons for this gender disparity in Internal Medicine are not well understood: working hours, male-dominated culture, and lack of female mentorship are the main significant barriers. Several medical or surgical specialties have made recent efforts to analyze the effect of gender on academic careers. Intensive Care Medicine has just published a recent survey suggesting that women are underrepresented in training programs, specialist positions, academic faculty positions, and leadership roles in Intensive Care [3]. A study in Radiology found that across the university academic ranks of Assistant and Associate Professor, research productivity metrics were similar between genders, but interestingly, female representation decreased with increasing academic rank [4]. In France, a study from a Parisian university hospital showed that women represent 49% of the medical staff but only 15% of full Professors [5]. This underrepresentation of women was more pronounced among Intensivists/Anesthesiologists than among technique-based specialists (Radiologists or Biologists). Our results show that in 2018, women remain underrepresented among French academics, particularly in Internal Medicine. There is an urgent need to better analyze the complex reasons for women's difficulties in accessing academic medical careers and to take action promoting gender equality in academic careers, in France and beyond.

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Table 1
Distribution of new appointees to university positions in 2017 and 2018 in France according to medical specialty and gender.

	Appointed Professors	Appointed Professors	Appointed Associate	Appointed Associate Professors
	2017–2018 Men	2017–2018 Women	Professors 2017–2018 Men	2017–2018 Women
Anatomy	2	1	3	4
Anesthesiology	13	2	7	1
Bacteriology	8	6	8	8
Biochemistry	3	2	8	3
Biostatistics	2	3	4	1
Cardiology	9	2	2	1
Cellular biology	1	5	0	0
Child psychiatry	3	3	1	0
Dermatology	2	4	1	3
Digestive surgery	3	1	4	0
Emergency medicine	3	0	1	0
Endocrinology	2	1	5	3
Epidemiology	6	3	2	4
Forensic medicine	2	1	1	2
Gastroenterology and hepatology	10	0	7	1
General surgery	4	1	3	3
Genetics	5	2	3	1
Gynecology and obstetrics	11	0	7	3
Hematology	3	4	8	5
Histology	0	1	3	1
Immunology	4	2	3	3
Infectious diseases	7	4	6	2
Internal Medicine	16	0	9	0
Intensive care medicine	8	0	6	2
Maxillofacial surgery	0	0	2	4
Medical gynecology	2	3	3	1
Occupational medicine	1	1	1	0
Neurology	9	3	1	4
Neurosurgery	2	0	3	1
Nuclear Medicine	5	1	5	2
Radiology	12	8	4	2
Physiology	4	5	7	5
Plastic surgery	6	1	3	0
Nephrology	3	2	2	3
Nutrition	0	0	1	1
Oncology	9	3	1	3
Ophthalmology	3	1	3	2
Orthopedic surgery	5	0	4	1
Otorhinolaryngology	3	1	3	0
Parasitology	2	1	0	1
Pathology	1	4	3	7
Pediatrics	10	10	5	8
Pediatric surgery	4	1	2	2
Pharmacology	4	0	3	1
Pharmacology [2]	1	2	1	2
Physical medicine and rehabilitation	4	0	2	3
Pneumology	4	3	5	3
Psychiatry	6	1	6	0
Rheumatology	7	1	3	1
Therapeutics	3	0	3	1
Thoracic surgery	8	1	1	0
Urology	7	0	1	2
Vascular surgery	8	1	2	1
Others	2	2	3	1
Total	262	104	185	113

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Author contributions

Dr. Cohen Aubart had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

Concept and design: F.C.-A., A.R., N.C.-C., T.P., J.-C.P.
 Acquisition, analysis, and interpretation of data: F.C.-A., A.R., N.C.-C., T.P., J.-C.P.
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 Critical revision of the manuscript for important intellectual content: All authors.

Conflict of interest disclosures

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