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the future of medical and nursing professions in italy.

2025.
executive summary.

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introduction.

The Italian healthcare sector, while representing excellence in many areas, faces a number of complex challenges that threaten its long-term sustainability and effectiveness. This report analyzes these critical issues in depth, while offering a series of strategic recommendations aimed at orienting the future of the national health care system toward a model that is more efficient, equitable and capable of responding to the needs of a changing population.

chapter 1 profile of the health sector in italy and europe today.

The first chapter of the report provides a detailed picture of the Italian health sector, placing it in the broader European context. It first highlights the significant weight that the health sector has in the country's economy, both in terms of employment and public spending. Next, the characteristics of the workforce are analyzed, with a particular focus on some key professional figures.

1.1 the healthcare workforce in italy.

Analysis of the workforce reveals a number of significant trends. First, a marked prevalence of women is observed, with women accounting for 66.8 percent of those employed in the sector. Secondly, the distribution by age group shows a concentration in the intermediate age groups (the 45-54 age group is the largest group with 26.7 percent of the employed), with a low presence of young people (only 2.5 percent of the employed are between 15 and 24 years old) and a significant number of older workers (4.9 percent of the employed are over 65 years old), which raises questions about generational turnover and postponement of the retirement age.Finally, there are inhomogeneities in the geographical distribution, with a greater concentration of professionals in northern regions (more than 51 percent of healthcare workers are in the northern regions of the country) and smaller values in the South and Islands (18.5 percent and 9.3 percent, respectively).

1.2 regional efficiency frontier, accessibility and effectiveness of health services.

The report offers a comparative analysis of the health care performance of Italian and European regions. Key indicators such as the percentage of the population living within a 15-minute drive of a hospital (to assess accessibility), the number of available beds per 100,000 population (to assess inpatient capacity), and the number of physicians per 100,000 population (to assess staff availability) are used. The analysis shows significant differences at the territorial level, both in Italy and Europe, and the need for action to improve the efficiency and equity of the system. For example, it is noted that Lombardy stands out for having the highest hospital accessibility (95.86 percent of the population lives within 15 minutes of a hospital), while regions such as Basilicata, Valle d'Aosta and Sardinia show more critical values (with percentages below 60 percent).

1.3 attractiveness and working conditions.

A central theme of the report is the analysis of factors influencing the attractiveness of health professions. It examines aspects such as working hours (characterized by shifts and on-call availability), workloads (which often lead to "burnout syndrome," which affects 49.6 percent of Italian healthcare workers), work organization (often inadequate and a source of stress), income supplement possibilities (varying according to specialization), career prospects (especially for nurses), and professional recognition and remuneration (Italian doctors' salaries are among the lowest in Europe).

1.4 investment, pnrr.

The chapter concludes with an overview of the main investments planned for the health sector, with a focus on the National Recovery and Resilience Plan (PNRR). The different missions and components of the PNRR that affect the health sector (Mission 6 "Health" with funding of 15.62 billion euros) are analyzed, highlighting the opportunities for deve-

lopment and innovation, but also the need for careful implementation to ensure that the planned goals are achieved.

chapter 2 megatrends shaping the future of the health professions.

The second chapter of the report focuses on analyzing the major megatrends that are shaping the future of the health care industry and will have a significant impact on the health professions.

2.1 technological innovation and digitalization.

Technological innovation and digitization are one of the driving forces of change in the healthcare sector. The report explores the potential of technologies such as telemedicine (already widely used and with strong growth potential), artificial intelligence (AI) (with applications in diagnosis, treatment, resource management, and research), robotics (in surgery and care), and medical apps in improving the efficiency, effectiveness, and accessibility of the health care system. However, the risks and open issues related to digitization are also highlighted, such as the digital divide (which excludes older segments of the population), the need to protect the doctor-patient relationship (which could be depersonalized by technology), and the ethical implications of using new technologies (in terms of equity and possible bias).

2.2 demographic and socio-cultural changes.

Demographic changes, particularly the aging of the population (with the over-65 population expected to reach nearly 30 percent of the total by 2050) and the increasing prevalence of chronic conditions (which increase the demand for long-term care), pose a major challenge to the health care system. The report analyzes the implications of these changes on the demand for health services, the organization of care, and the skills required of professionals (e.g., the need for geriatricians). Socio-cultural changes, such as the increa-

sing demand for personalized care (requiring greater attention to communication and empathy) and the importance of gender medicine (to avoid bias in diagnosis and treatment) are also considered. The importance of addressing mental health, especially after the impact of the pandemic, and considering the implications of society's growing multiculturalism is also emphasized.

2.3 sustainability, global crises and health resilience.

The recent pandemic has highlighted the vulnerability of health systems and the need to strengthen their resilience. The report reflects on the need to develop more flexible and adaptable organizational models (such as the "One Health" model that integrates human, animal and environmental health), to invest in prevention (to reduce the burden of disease) and preparedness for health emergencies, and to promote the environmental sustainability of the sector (reducing waste and polluting impact). Also highlighted is the problem of long waiting lists, which drive many citizens away from care (2.7 million citizens in 2023) and staff shortages, especially in some specialties (such as emergency medicine, with an estimated shortage of 4,500 physicians and 10,000 nurses).

chapter 3 professionals and skills.

The third chapter of the report focuses on the analysis of current and future skills of healthcare professionals, with a special focus on university education and the identification of emerging skills required by the labor market.

3.1 training.

The undergraduate education of physicians, nurses and pharmacists is a crucial element in ensuring the quality and effectiveness of the health care system. The report examines the characteristics, critical issues and changes in the educational pathways for these professionals, emphasizing the need for constant updating and greater integration between theory and practice. For example, for physicians it shows a decline in graduates after 2020 (from 10,673 in 2020 to 9,403 in

2023) and an employment rate one year after graduation of 85.9 percent. For nurses, there is a decline in three-year graduates from 2018 to 2022 (from 11,595 to 9,947) and an employment rate one year after graduation of 89 percent. For pharmacists, there is a steady decline in graduates from 2018 (5,080) to 2023 (4,030) and an employment rate one year after graduation of 84.3%.

3.2 identification of emerging skills.

The report identifies key competencies for health care professionals of the future in response to the challenges posed by technological innovation, demographic changes, and new models of care. Emerging skills include digital skills (to use new technologies), management skills (to optimize work organization), communication skills (to interact with patients and colleagues), the ability to work in teams (in multidisciplinary settings), and adaptability (to a rapidly changing health care system).

3.3 new professional profiles.

The evolution of the health sector will lead to the emergence of new professional profiles, capable of integrating medical and technological skills and responding to the needs of an increasingly complex and digitized system. The report explores some of these new professionals, such as the nurse specialist (in ethics, family and community, pain management, etc.), the telemedicine physician, the cardiac surgeon specializing in AI, and the artificial intelligence developer for medicine.

chapter 4 perspectives and strategic recommendations for the future of the italian health care system.

The fourth and final chapter of the report draws conclusions from previous analyses and makes a series of strategic recommendations for the future of the Italian health care system.

The recommendations provided are divided into several areas of intervention. First, it stresses the importance of strengthening territorial medicine and primary care (including through Community Homes and telemedicine), to decongest emergency rooms (where improper accesses, i.e., white and green codes, account for 68 percent of total accesses) and provide more appropriate responses to the population's health needs. Second, it highlights the need to invest in prevention and the promotion of healthy lifestyles to improve the health of the population and reduce the pressure on the health care system. Third, emphasis is placed on the crucial role of new technologies, particularly telemedicine (for remote care) and artificial intelligence (for supporting diagnosis and treatment), in transforming the healthcare system and improving patient care. Finally, the importance of enhancing human capital, through continuing education, professional development and the creation of an attractive work environment for healthcare professionals (to counter the brain drain, estimated at about 1,000 physicians per year), is emphasized.