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LUISA D'AGOSTINO

INNOVATION AND WORKFORCE AGEING IN THE ITALIAN HEATLH SYSTEM THE RESULTS OF A QUALITATIVE RESEARCH DURING THE COVID EMERGENGY

13th INTERNATIONAL SOCIAL INNOVATION RESEARCH CONFERENCE

"Enabling the change! Social innovation and enterprises for a better future"

Stream 13: Social Innovation for health and wellbeing

Milan, 8 -10 September 2021

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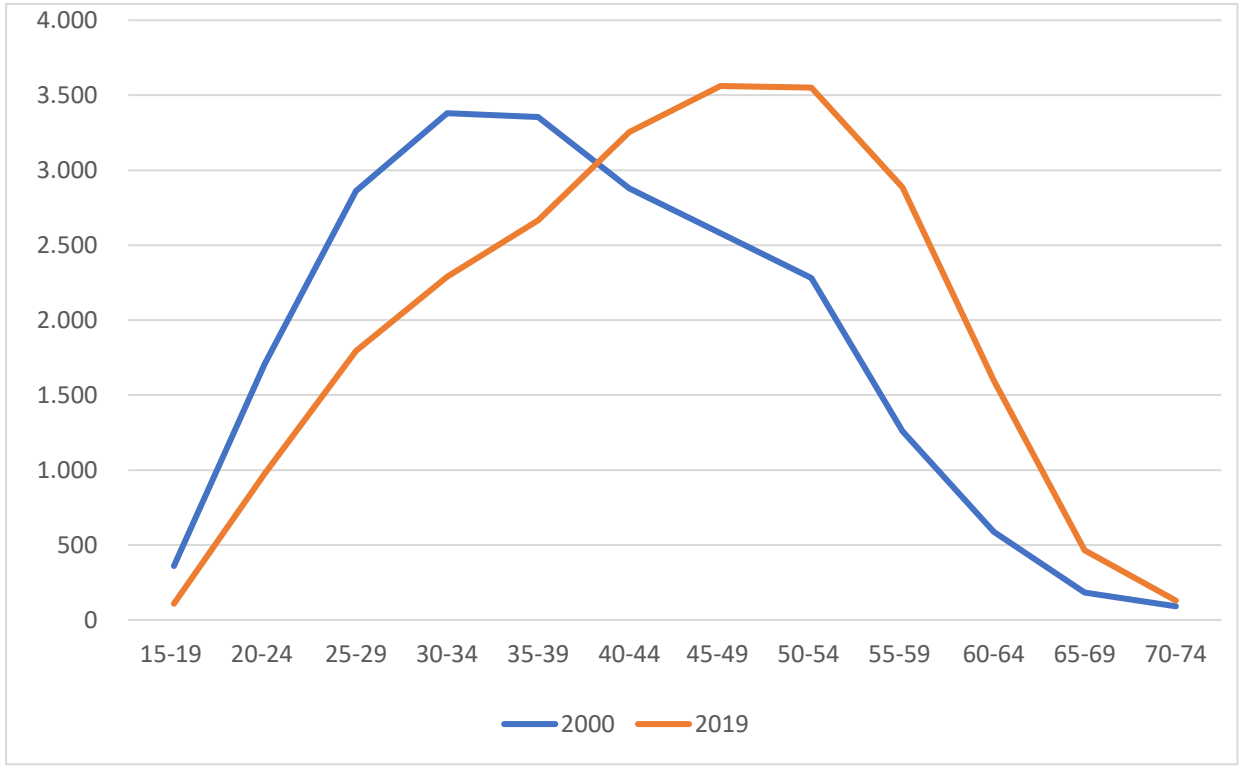
MAIN DEMOGRAPHIC INDICATORS

	2005	2020	2045	2065
Average age	42.5	45.7	49.7	50.2
Population aged 65+ (%)	19.5	23.02	33.7	33.1
Population aged 85+ (%)	-	3,7	6,1	9,3
Population 15-64 (%)	66,3	63.9	54,4	54,8
Life expectancy at 65 - men	17,4	19,4	21,5	22,7
Life expectancy at 65 - women	21.1	22,8	24,9	26,4
Old-age dependency ratio	29.4	36.02	62	61
Old-age index	138,1	178.4	279	280
Fertility index	1,29	1,24	1,53	1,59

EMPLOYMENT BY AGE GROUP



AGING AND NEW TECHNOLOGIES: NEW PRIORITIES FOR POLICIES

- Barriers to the young people entry into the labour market
- Workers increasing in the higher age groups
- Progressive baby boomer retirement
- Labour and skill shortage risk
- More and more sophisticated and pervasive technologies
- Speed of transformations
- Remote working
- Different management of working spaces and times

→

- Guarantee the resilience of the social security system
- Support extension of working life
- Manage several generations at work
- Face the digital divide
- Enhance the work experience

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INAPP – National Institute for Public Policies Analisys (Ministry of Labour)
Research Group «Demographic dynamics and the workforce ageing», Labour Market Unit
P. Checcucci (Coordinator), M.L. Aversa, L. D'Agostino, R. Fefé, V. Iadevaia, G. Scarpetti, A. Romito

2018-2022 studies

- 2018: Pilot Study for sectorial in-depth researches
- 2019: qualitative study about the manifacturing sector
- **2020: qualitative study on the services sector (in-depth Health)**
- 2021-2022: sample survey on SMEs and development of the study on the social and health sector (considering also Recovery Plan perspectives)

Objectives

- Analyze changes in labour organizations and their implications for older workers
- Study employers' attitudes towards older employees and age management strategies
- Offer to policy makers and stakeholders information useful for understanding the connections between these phenomena (sustainable and inclusive development)

Methodology

Mixed Methodology:

- official statistical data processing and analysis for the context definition and the identification of the sectors to analyze in-depth
- Qualitative sector studies (focus groups and in-depth interviews)
- sample quantitative surveys for large-scale implementation (in progress)

Overview

Turnover block + spending review + pension system reform (retirement age increased) + possibility for executive doctors to extend their working life up to 70 years =

- significant workforce ageing in Italian health sector
- number of workers has shrunk by over 6% between 2010 and 2018.

In 2018:

- average age is 50.7
- 57% of healthcare personnel is aged 50+ more than 16% is aged 60+
- Workers aged 55+ are placed in management roles (60.4% men; 36% women)
- Italy has the highest incidence of physicians aged 55+ in Europe (57% - 41% EU average)

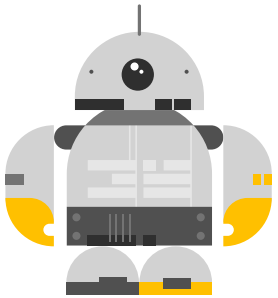
It is estimated that in the next ten years the Italian health system will lose two doctors a day (risk of losing skills and difficulties of intergenerational transfer and mentoring)

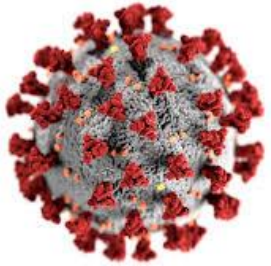
During the first phase of the pandemic emergency it was necessary to call retired physicians back to work and to recruit young graduates and postgraduates

In spite of this haemorrhage of personnel, the demand for care and assistance services will continue because of the increase in longevity

New technologies are believed to only partially make up for the lack of human resources, but they can contribute to making the Italian social and health system more efficient

It is believed that in healthcare there is no real risk of human-machine replacement because the human factor is essential.
Technologies can restore centrality to the relationship with the patient





In addition, they favor the widespread diffusion of services throughout the territory and ensure their continuity even in situations of serious crisis, as demonstrated during the pandemic emergency

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MAIN APPLICATIONS OF DIGITAL TECHNOLOGIES IN HEALTHCARE

Computerization of administrative and management procedures

- They facilitate access to services and reduce waiting times
- They facilitate and speed up the sharing of information and documentation relating to patients
- they are already quite widespread throughout Italy, but have been further implemented during the pandemic

Telemedicine

- telexamination, teleconsultation, telemonitoring
- more efficient territory medicine
- better care and assistance of chronic or multi-pathological patients and home care
- They need excellent infrastructure and a national telemedicine system
- They have had a strong impulse from Covid to maintain contact with patients in compliance with the rules on distancing and isolation

Artificial Intelligence and Big Data applications

- Still little developed only for reading more detail of diagnostic imaging
- Huge potential in the field of prevention and early intervention
- proactive (or predictive) medicine
- Augmented medicine
- Optimization of the health system governance (sizing and services localization)
- It requires an enormous amount of data and to standardize languages and codes

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The debate on the development potential of agile work in healthcare

Benefits for patients

- Save time and costs
- Travel is avoided, which is very complicated and tiring for very old, disabled and non self-sufficient people
- Fewer occasions of contagion and spread of diseases

Benefits for workers and services

- Facilitated prescriptions and consultations (> general practitioners)
- Visit patients without going to the clinic
- More efficient monitoring of chronic and plutipathological patients
- Facilitation of consultations between GPs and specialists, doctors and other health professionals, doctors and care givers
- Reduced attendance at the Emergency Room
- Radiological exams reporting and documents exchange with colleagues and patients
- Facilitation of complex cases treatment (consultation between several specialists)
- Work-related stress reduction

Limits and Needs

- Do not reset the relationship between healthcare personnel and patients. The human factor remains fundamental.
- A common opinion is that the first visit must be done in person
- Adequate infrastructures guaranteed throughout the national territory in order not to accentuate inequalities in the use of services
- excellent quality of connections, clear images even in colors
- Data protection and security
- Digital skills development for both operators and citizens

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In Italy health services digitization proceeds slowly and encounters many obstacles also linked to the personnel age

Resistance to change	• especially among older workers • among physicians, especially general practitioners
Ageing of the ruling class	• disinterested executives: they do not know the technologies and should delegate • interested executives: they start experimental projects, but when it comes to setting up the system they have to retire
Risk of work increase connected to new technologies	• burden resulting from inadequate design • organizational burden
Speed of technological innovation	• Not matching the time required for regulatory adjustments • Way faster than timing of medical trials
Inadequate training paths	• degree courses in health disciplines and medical specialization schools (digital divide risk also in future generations) • Continuing Medical Education (CME)

MAIN INTERVENTION AREAS PROPOSED TO SUPPORT DIGITAL INNOVATION IN HEALTH

Support to change

- Inform all staff about goals and benefits when introducing new technology
- To train all staff in the use of new technology, paying particular attention to older workers
- Identify a reference figure in the Area / Department for coaching
- Create mixed work groups/shifts of young/old workers

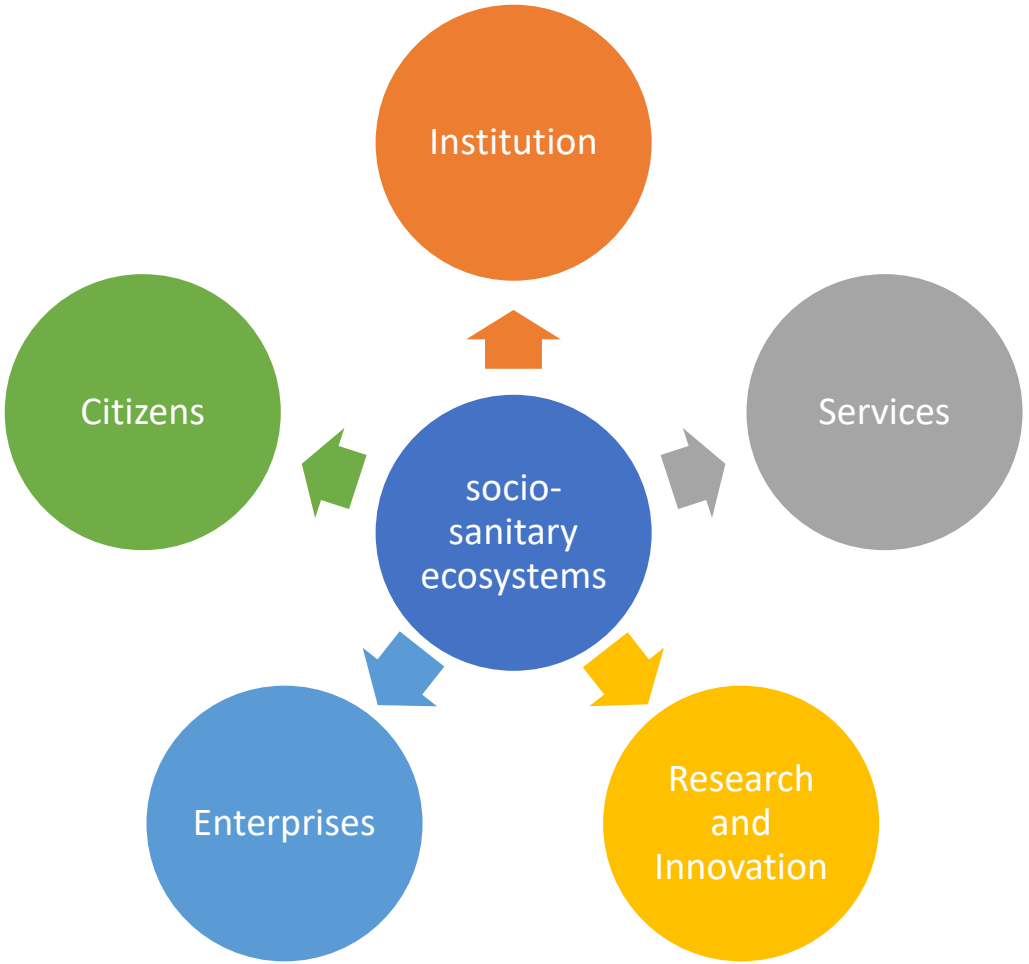
Education and training

- Reform university courses for the health professions
- Reform graduate schools in medicine
- Bind part of the CME credits to digital training
- Digital training for executives
- Define training courses and contractual framework for emerging professional figures

Design and infrastructure

- Designing technicians and healthcare personnel together to meet their needs
- Involve also older workers in the trials
- Sensitize technicians to design friendly solutions
- Designing modular solutions that are more flexible and suitable for rapid changes
- Integrate platforms (standardize language and data coding)
- Improve the quality of infrastructures and ensure the entire national territory coverage

PERSONAL SERVICES → LIFE COURSE APPROACH



MAIN RESULTS OF INAPP RESEARCH

Recovery Plan - Mission 6 Health

15,63 billion

7 billion in Proximity Networks, Structures and Telemedicine:

- territorial services
- home care
- services integration

8.63 billion in innovation, research and digitalization of the NHS:

- Technological modernization
- EHR implementation
- Development of professional, digital, technical and managerial skills

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