

## Social-Health Operators as Mediators in E-Health System

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### Abstract

The E-health scenario within health systems has been modifying the relationship between curing and caring, and affecting the professional health landscape. This study has investigated changes in the e-health professional sector by focusing on the lowest healthcare occupation in Italy, that of social-health operators. The relationship between social-health operators and older adults has been analysed through a micro-sociological approach. The hypothesis leading the research have been the following: 1) the lowest occupation would assume a key role in dealing with the process of guaranteeing digital literacy in the e-health system, becoming digital mediators within the e-health system; 2) social-health operators would play a new role in their relationship with patients. Findings have confirmed both hypotheses, suggesting further development in the e-health professional sector and outlining a possible path for social-health operators towards an upgrading process as pre-professionals, fully legitimised by their hybrid status as both social and health care professionals.

### Keywords

Health care professions, e-health, older adults, digital mediators, pre-professions, semi-professions.

The EU digital strategy states that technology improves the daily lives of citizens by promoting digital competences for all Europeans. Its policy aims are to expand Europe's super-computing capacity to develop innovative solutions for medicine; create a European health data space to foster targeted research, diagnosis and treatment (European Commission, 2020); and support "e-health" (Black et al., 2011; Oh, Rizo, Enkin, & Jadad, 2005).

The increasing role that digital technology is acquiring in health systems raises potential issues of inequities. Those without access to the Internet or digital skills increasingly face potential barriers within an e-health care system. The proportion of individuals between the ages of 65 and 74 who have never used the Internet is falling rapidly across the EU: in 2010 it stood at 71% in the EU (EU 28) and in 2019 36% (Eurostat, 2020). Nevertheless, comparing data on all the population (98% of all Europeans used the Internet in the last 3 months), the digital gap among older adults is still critical. In the updated e-health scenario, lack of access to digital health, as well as poor engagement with digital health and barriers to digital health literacy, will affect health outcomes (Crawford & Serhal, 2020). Digital health equity is going to play a key role in public policy agenda (Crawford & Serhal, 2020).

The introduction and increasing use of ICT is strongly influencing the health professional landscape (Brante, 2013), both in terms of the health professional-patient relationship and the identity of health professionals. The impact of ICT on the health professional-patient relationship has been analysed according to two different interpretative approaches. The first one is techno-optimistic, which sees ICT as reducing the professional-patient cognitive asymmetry and increasing patient participation and mutual collaboration (Eysenbach, 2008; Timmermans & Berg, 2003; Topol, 2015). The second is techno-pessimistic, which sees ICT as preserving asymmetric power dynamics (Lupton, 2014). The relationship between patients and medical professions has been challenged by consumerism, the increasing attention for complementary medicine and Internet access to information (Bury, 2004). Nonetheless, research findings highlighted that Internet informed patients do not lead toward de-professionalization (as does the demystification of medical expertise), and a decrease in trust (Trachtenberg, Dugan & Hall 2005), but call for a strategic response by medical professions, through a medical profession enlisting process which considers Internet as an inevitable part of the medical practices (Broom, 2005). In an e-health system, the relationship between health professions and patients is changing as is the space of their interaction, as they no longer need to be physically close to each other. E-health is affecting "all the gestures by which, in a given society, a disease is circumscribed, medically invested, isolated, divided up into closed, privileged regions, or distributed throughout cure centres, arranged in the most favorable way" (Foucault, 2003 p.16).

So far, studies on the consequences of ICT on healthcare work have focused on the higher-level occupations, mainly physicians and nurses (Bagot, Cadilhac, Vu, Moss, & Bladin, 2015; Hallqvist, 2019; Nickelsen, 2019; Vicarelli & Bronzin 2018; Viitanen et al., 2011), while lower-

level occupations have received less attention. There is a lack of study on the role of lower occupations in the transition towards an e-health system. This study intends to overcome this gap by focusing on the role of the lowest health care occupation in the transitions towards the e-health system.

Professions are considered as occupational groups characterised by autonomy and discretion (Abbott, 1988; Freidson, 2001). This autonomy is legitimated by strong formal knowledge and higher education (Freidson, 1986). Other features have been added to these main elements, such as codes of ethics, altruism, rationality, and educational credentials (Wilensky, 1964), outlining a taxonomic approach (Saks, 2012). In addition, professions have been characterised by three further minor principles: the referral (if necessary, professionals should refer clients to a colleague with different specialty), “sloughing off” (less rewarding parts of professional jobs are delegated to lesser paid assistants), and impersonal service delivery (clients are treated equally) (Wilensky, 1964). This theoretical framework raises the first research question leading this study: in the e-health system, could the social-health operators, as the lowest health system occupation, be considered as badly paid assistants doing the less rewarding parts of the professional jobs guaranteeing the patients technological access to e-health?

The professional minor principle of referral, “sloughing off”, and impersonal service delivery (Wilensky, 1964) have been questioned from the perspective of human relationships (Harrits, 2016). The structural asymmetric position in the relationship between professionals and clients is a key point in studies of professions (Freidson 2001; Parsons, 1954). This position is based on specialised formal knowledge and the expertise of professionals in dealing with the problems of clients. Within this theoretical context, knowledge has to be balanced by “service ethics” and “professional morality” (Abbott, 1983; Evans, 2014), as well as adapted to the specific life experiences, current circumstances, and needs of each client (Lipsky, 2010). Nevertheless, such an “asymmetric power relationship is structurally and institutionally linked to the specific formal-scientific knowledge of the professional, and it is thus only legitimate as long as it is confined to this specific knowledge” (p.2).

Curing and caring professionals are mostly characterised by frequent and long periods of interaction with clients, thereby creating more articulated relationships (Hargreaves, 1998; Manning-Morton, 2006; O’Connor, 2008). Harrits (2016) investigated what close relations with clients mean for professionalism, arguing, from the perspective of a sociology of the professions, that elements of personal, relational, and emotion-based logic have not been discussed in depth. He suggested “[conceptualising] professionalism broadly as based not only on formal and practical knowledge (in the broadest possible meaning of this concept) but also on personal qualities such as the ability to engage in personal and emotion-based relations to citizen clients” (Harrits, 2016, p.13). He therefore outlines a concept of professionalism built “not only on science and professional experiences but also on shared (institutionalized) societal values” (Harrits, 2016, p. 13) with the challenges that this might

imply for the professional–client relationship and for the professionalism model from theoretical, empirical, and normative points of view, in terms of fair and equal treatment. This theoretical background raises the second research question. In an e-health scenario, social-health operators being alongside the bed of patient, more than other health care professions, are engaged in a relationship with patients based on personal, relational, and emotion-based logic, through his/her personal qualities, more than other health care professions doing their impersonal job who are not necessarily physically close to the patients. How is this process affecting the relationship between social health operators and patients?

Moreover, as argued by Trappenburg & Noordegraaf (2018) “diminishing the impact of referral, sloughing off and objective, impersonal care is necessary to address the medical needs of an elderly population and the needs of vulnerable people living in a difficult modern world” (Trappenburg & Noordegraaf, 2018, p. 11). Therefore, the issue is getting even more crucial in the care relationship between social-health operators and older patients, as older adults face higher barriers in accessing e-health.

This study investigates the social-health operator role in the e-health scenario through a micro sociological research approach, focused on the relationship between social-health operators and older adults. These qualitative data were collected in 2018 within a broader EU funded project, in an Italian case study. Within this project the lowest level occupation, the socio-health operators, have been given the chance to teach older people how to access computers and use Internet technology. Digital literacy which enables access to computer and internet technology, has to be considered a preliminary skill in order to access the e-health system. This is a crucial aspect in the e-health scenario, as digital skills are one of the key aspects to counter health inequity in an e-health context. Economic resources as well centre-periphery and Internet access are other crucial aspects. Nevertheless, in this study we focus on the role of social health operators as digital skills teachers.

The main research hypotheses are: 1) the lowest occupation would assume a key role in dealing with the process of guaranteeing digital literacy in the e-health system, becoming digital mediators in the e-health system. 2) social-health operators would play a new role in their relationship with patients. Based on data concerning the point of view of socio-health operators and patients, in an Italian case study, this research intends to contribute to the debate on changes in health professions in the e-health system.

## **Professions, semi-professions, and pre-professions in the Italian healthcare arena: The research background**

All professions are constantly changing (Abbott, 1988); the introduction of ICT represents a potential revolution for healthcare professions within the managerial reforms to healthcare systems in the neoliberal era (Gabe, Cardano & Genova, 2021). Taking into account Saks' statement on the complexity of defining professions (Saks, 2012), in this study we consider the comprehensive approach suggested by Brante (2013), who stresses the importance of going beyond the analysis of a single occupation: "The history of individual professions is dominated by [a] broader ecological history of the system of professions. We should be writing histories of arenas or zones in that ecology, not of individual professions and occupations. The latter are not where causality lives" (Abbott, 2010, p. 176). Therefore, social-health operators have to be considered as part of a broader professional arena. In order to describe this arena, we rely on Brante's (2013) typology: classic professions, semi-professions and pre-professions. Classic professions have their organisational origins in the 19th century; they result from occupations based on long university training and are characterised by high status, such as physicians. Semi-professions (Etzioni, 1969) are related to the development of welfare systems after the Second World War and are characterised by higher educational paths, integrated into universities, nurses being the typical example. Pre-professions represent a third generation of occupational groups emerging in the last decades and are still in the process of obtaining professional status; in "many cases there is no ambition to construct more abstract systems of knowledge ... the term pre-professions refer to the heterogeneous spectrum of novel occupations and expert groups presently expanding into a neo-liberal market" (Brante, 2013, p. 7). Professions are involved in a struggle for symbolic and material assets in the professional arena, where some occupations are subordinated to other occupations.

In Italy, as in other countries in the final decades of the last century, traditional relationships between the healthcare occupations, established during the "golden age" of the medical profession, were increasingly called into question. Medical dominance was challenged by a number of changes in the health system, including the spread of managerialism, the growth of consumerism, and the striving for autonomy of many subordinate health occupations (Tousijn, 2002). Nurses benefitted from a number of reforms aimed at upgrading, at least in the juridical arena, a profession which for a long time had been very much subordinate to the medical profession. Nevertheless, in the workplace (Abbott, 1988) medical dominance has proved to be more difficult to overcome. Thus, nursing professionalisation is still a work in progress, and nurses' autonomy continues to be constrained by medical dominance (Sena, 2017). The third layer of healthcare hierarchy has for a long time been a number of variously trained workers grouped under the generic label of "auxiliary personnel" and since 2001 "social-health operator".

The data on the main health care professions and semi-professions in Italy are presented in table 1.

**Table 1. Health care professional in Italy (last available data).**

	National Health Service Personnel (1)	Personal in residential health care service, 2018 (2)	Total health care and residential health care service personnel
Doctors and dentists	101,876	9,881	111,757
Nursing staff	255,819	38,966	294,785
Social-health operators	51,684	165,329	217,013

(1) Source: Ministero della Salute. (2018). *Personale delle ASL e degli Istituti di ricovero pubblici ed equiparati. Anno 2018. A cura di Ministero della Salute: Direzione generale della digitalizzazione, del Sistema informativo sanitario e delle statistica: Ufficio di Statistica. [Health Ministry, Staff of the ASLs and public and equivalent hospitalization institutes. Year 2018].* By the Ministry of Health: Directorate General for Digitalization, Health Information System and Statistics - Statistics Office). Retrieved from [https://www.salute.gov.it/portale/documentazione/p6\\_2\\_2\\_1.jsp?lingua=italiano&id=3012](https://www.salute.gov.it/portale/documentazione/p6_2_2_1.jsp?lingua=italiano&id=3012)

(2) Source: Istat. (2020). *Addetti all'assistenza alla persona, 2017 (variable: 7126) [Health for all database, Personal in residential health care].* Retrieved from <https://www.istat.it/it/archivio/14562>

## The role of social health operators in the Italian regulative background

In 2001 the Italian regulative system instituted the *Operatore Socio-Sanitario* (Social-Health Operator) qualification based on a professional training involving social and health care knowledge and competences (Gazzetta Ufficiale, 2002; Moretti, Spina & Ciaschini, 2012). The main aims of social-health operator activities are: a) to satisfy the primary needs of the individual, within their areas of competence, in both a social and health context; b) to promote the wellbeing and autonomy of the user. In terms of education, the medical and nursing professions are based on national academic educational programmes, whereas social-health operator training is managed at a regional level through a one-year course of not fewer than 1,000 hours for the basic qualification. Specialisations can be achieved through supplementary training courses of no more than 300 hours (of which 150 for training/work experience) for specific caring needs or the organisation of care for older

patients, psychiatric patients, hospital, and residential care. Social-health operator activities are centred on the individual and their living environment. Responsibilities include: a) direct assistance and domestic care help; b) sanitation and social intervention; c) management, organisational and training support. With respect to social activities, the social and health worker “recognises and uses appropriate communication languages and communication systems in relation to operating conditions; implements relationships-communications of help with the user and the family, for social integration and the maintenance and recovery of personal identity” (Gazzetta Ufficiale (2003) - Attachment A). Therefore, in the ICT health reform process, social-health operators also acquire a potentially important role as communication mediators between patients and other health care professions.

Furthermore, social-health operators are responsible for “performing simple diagnostic and therapeutic support activities”. Therefore, they might be considered as having a key role in telemedicine and e-health practices, for example, in the collection of health data and their analysis by professionals not physically close to the patient. Through additional training (Gazzetta Ufficiale, 2003), social-health operators can acquire responsibility for the following further activities: administration of prescribed therapy, in accordance with or under the supervision of the nursing manager; intramuscular and subcutaneous therapy on specific nursing planning, under the direction or supervision of the nursing care manager; detection and annotation of vital parameters (heart rate, respiratory rate and temperature) of the patient; the collection of excretions and secretions for diagnostic purposes; simple dressings and bandages; artificial respiration, and external cardiac massage. The list of social-health operator responsibilities illustrates a complex profile of knowledge and competences operating between social and healthcare professionalism.

## **Research design**

The research design presents and discusses the following aspects: the study research context, the case study, the main topics investigated, the data collection procedure and the data analysis process.

### ***The study research context***

Teaching activities on PC use for older patients were among social-health operators’ tasks in the European funded Ages 2.0. project. Social-health operators were engaged in teaching PC and Internet access to older people for a period of four months. Social-health operators responsible for the teaching activities, had previously taken part in a training course organised within the Ages 2.0 project which concerned the teaching processes.

The 16-week training course for older people included multiple face-to-face sessions, telephone, and e-mail support. Moreover, a user-friendly guideline was developed to supplement training to ensure participants have access to tangible materials which they can use as reminders. Social-health operators met the older people for two hours twice in the first four weeks, then the training time was reduced to one hour twice a week for the

following four weeks. In the last four weeks the face-to-face interaction was reduced to one hour a week, while email and telephone support was supplied.

### ***Ethical procedures***

The study protocol concerning all the ethical aspects was approved by the ethical committee of the University, as for example the sensitive aspects concerning the access for older people to the web and social media (Mordini et al., 2009), as well as the consent to collect data on their participation in the project. Regarding the data presented in this study, the purpose of the study was explained at the beginning of the data collection process and interview, and researchers declared that responses to questions were regarded as informed consent. Moreover, all the participants in the research project, signed an informed consent and the data privacy protection declaration in order to be part of the research.

### ***The case study***

The research focused on an Italian case study. The Italian context merits special attention because of the low numbers of older adults using the Internet in a universal healthcare system. In 2010, those aged between the ages of 65 and 74 who had never used the Internet in Italy numbered 83% and in 2019 they were 49% (Eurostat, 2020). Also considering people over 74, this percentage increases. Moreover, Italy has a universal healthcare system fostering health equity by reducing inequality in providing access to health services based on age (Pavolini & Vicarelli, 2013; Vicarelli & Pavolini 2015). Therefore, considering the low percentage of people using Internet and the universal health care framework, Italy could be considered a privileged case study in investigating changes in health professions in the e-health context.

### ***The research perspectives***

In the e-health scenario, this study investigated the role of social-health operators and their relationship with patients. To investigate the role of social-health operators in the transition towards e-health system, this study focused on the analysis of the Italian regulative framework (macro level) and on investigating the relationship between social-health operators and older patients in the teaching / learning task (micro level). To capture the objective reality in investigating the relationship aspects is outside our sociological analysis. We therefore assume that we can only know this relationship through its representation (Denzin, 2012) and hence the participants' discourses (Fairclough, 2013). The relational aspect has been investigated through two complementary points of view: 1) the patients' perception of the relationship with social-health operators. 2) the social-health operators' perception of the relationship with patients.

### ***The data collection design and procedure***

This research applied multiple methods to collect data on the role and the relationship between patients and social-health operators in the teaching /learning PC and Internet



access. The use of multi-methods is called convergent validation or triangulation (Jick, 1979; Webb, Campbell, Schwartz, & Sechrest, 1966). This methodological perspective adopts the complementary of different methods and is the so-called mixed methods approach, aiming at an in-depth understanding of the phenomenon in question (Denzin, 2012; Olsen, 2004 ). The starting point of the mixed-methods approach is the idea that different research methodologies have specific weaknesses but also specific strengths that should be overcome combining the two approaches. Mixed methods research has raised several criticisms concerning the different paradigm assumptions, the philosophical and epistemological debate, as well as the subordination of qualitative to quantitative methods (Howe,1988; Maxcy, 2003). Nonetheless, the use of multiple methods, and therefore collection and analysis of different empirical data, adds rigor, breadth complexity, richness, and depth to any inquiry (Flick, 2007). Therefore, this study collected qualitative data and quantitative data, combining an interpretative approach with basic statistical analysis (Erzberger & Prein, 1997). Moreover, in this research the mixed methods approach does not only apply to the complementary of quantitative and qualitative data, but also refers to the complementary role of different qualitative data collection techniques.

Data on social-health operators' perceptions on the relationships with older people in teaching them computer and Internet access in residential care and in home care services, were collected through:

1. Telephone interviews with eight social-health operators at the end of the training process. Eight is the total number of socio-health operators involved in the teaching process. Social-health operators were all women, between 29 and 48 years old, and all of them were already known by the patients. The interviews followed a semi-structured list of questions.
2. Teaching diary: documentation compiled by social-health operators during the implementation of the project, called "training logs", collecting all the data on the training process in terms of objectives for each training meeting, criticalities, and potentialities during the meeting, together with notes on the interests and mood of participants. "Training logs" represented a crucial element of analysis regarding the implementation of the training process for older people by social-health operators, highlighting all the criticalities, challenges and successes reached by each social-health operator in their teaching activities. "Training logs" shed light on behaviours, practices as well as comments that would be not accessible to researchers, even during participant observation. Training logs are a sort of diary and therefore have all the potentialities, as well as limits, of this methodological research tool, both as record of and reflection on the experience (Alaszewski, 2006; Corti,1993; Cucu-Oancea 2013; Elliot, 1997).

Data on older patients' perceptions on their relationships with social-health operator teaching them PC and Internet access were collected through:

1. Face to face structured interviews with the 60 older people who had taken part in the training process to access computer and internet. Half of the older people were in domestic settings (the older people's own homes), while the rest were in residential care homes. The structured interview mainly consisted of closed questions. Most of them used Likert-type scale for collect responses. The interviews were conducted just a few days after the end of the PC and Internet training process.
2. Facebook posts written by older patients during PC and Internet access training were also analysed. Facebook has become a wide source of data in sociological research (Giglietto et al 2012; Hookway, 2008) with all the ethical issues concerning social media research (Moreno et al., 2013). The Facebook posts written by older people involved in the computer and Internet learning process have been examined during the time of the learning process and in the three weeks after the training was concluded.

### ***The data analysis process***

The analysis was carried out on different sources of data considering the point of view of socio-health operators as well as the point of view of older people involved in the computer and Internet technology learning process. Quantitative data from the structured interview to older patients were analysed through basic statistical approach. Nevertheless, most of the data collected were qualitative data and they were processed through Content Analysis (Patton, 2002; Ritchie, 1994) to describe and interpret the perceptions of older patients and of social-health operators regarding their relationship in the teaching / learning process. Open ended questions avoiding restricting the respondents' choice of answers, allowed the collection of rich data in the social-health operators interviews (Gubrium & Holstein 2002). The main steps of the qualitative research process were followed in data processing:

- 1) Familiarization with the verbal transcription of all the interviews and of all the Facebook posts by older patients and all the social-health operators' training logs. In this phase we obtained an overview of the collected data and started to make the first notes on recurring themes
- 2) According to the research questions, the thematic framework was set out.
- 3) In the indexing phase, the thematic framework was developed according to the focus of the analysis.
- 4) All the data were analysed in depth and each specific piece of the data was charted according to the research themes.

- 5) The charted data were examined by their main aspects and in relation to the thematic framework of the study. They were mapped and interpreted (Ritchie & Spencer, 1994).

The epistemological framework to analysing qualitative data, from interviews as well from training logs and Facebook posts, has been critical discourse analysis (Fairclough, 2013). This focuses on language through a critical sociological analysis to highlight power relationships, ideologies, institutions, and social identities perspective. Therefore, critical discourse analysis has been applied in its explanatory capacity because it does not simply describe existing realities but seeks to explain them showing the power dynamic as well as the mechanism and forces in the context of health professions arena.

Research questions	Point of view	Data sources
Are social health operators going to assume the role of digital mediators in the e-health system?	Perceptions of social-health operators	8 Interviews (each interview counts about 6 written pages of interview transcriptions)
How is the role of digital mediators going to change the relationship with older patients?		60 Social health operators' teaching log (each diary count about 10 pages of notes)
	Perceptions of older patients	60 Structured interviews with closed questions
		87 Facebook posts by the participants in the project

**Table 2.** Research questions, point of view and data sources

## Results: The relationship between social-health operators and patients in the teaching / learning task

### *Social-health operators' perception of the relationship with patients*

Teaching PC and Internet use means dedicating time to allow older people to become familiar with the technology. Time given over to teaching and learning is a crucial new aspect in the relationship between social-health operators and patients, turning caring time into teaching time. As noted in a teaching diary: "The lady has difficulties writing with a keyboard. Therefore, we spend time doing writing exercises" (TL\_63). As another social and health worker wrote in the training log: "The lady has never used a computer in her life. So, I had to teach her to write with the keyboard and to know the use of the keys on it. The lady was very much engaged during the computer course. Her initial difficulties related to never

having used a computer and not being able to write with the keyboard or touch screen, were overcome. The lady was always very motivated in using the computer and made good progress. It wasn't always possible to meet the lesson targets because some topics required a longer time to understand and test than those indicated by the technician's manual" that was developed for the Ages 2.0 project (TL\_17). In another training log we read: "There are still difficulties writing with the keyboard. The gentleman worked hard to complete the training. His initial difficulties related to never having used a computer and not knowing how to write with a keyboard, physical or touch screen, were overcome as well. It was almost never possible to keep the pace of the lessons, since all the topics covered required a longer time to comprehend and test than those indicated by the technician's manual" (TL\_46). The need for time to consolidate the concepts learned and to cope with limitations of memory is stressed in this training log: "She asked several times to look back on previous lessons, fearing she would not remember all the steps involved in the applications. Hence we often "summarized" the content and took notes to add to the manual" (TL\_13). As noted in another training log: "It has often been necessary to repeat some of the topics the lady had the most difficulty learning, especially Facebook and Skype" (TL\_22).

PC training generally had a very positive impact on patients. As claimed by one social and health worker: "as reported in the literature as well, most of the patients in residential care are completely unmotivated: a few weeks after they get in the residential care programme, they lose their interests, and it seems like they are simply there awaiting death. For us, we saw it in this way: PC training for most of them was a great opportunity to be revived, to gain a new approach to life" (OSS\_8).

As described by one social-health operator: "The participant tended to depreciate and devalue her capabilities even though she has actually been able to achieve a good level of competence in the use of computers." The social-health worker reported that "she also discovered personal skills she didn't think she had" (OSS\_4). Social-health operators highlighted that "At the end of the training process they were very happy because they achieved an unexpected result" (OSS\_3). Moreover, PC training has increased and improved communications between older patients and social-health operators: "Getting familiar with a new tool that was considered too far ... greatly improved their self-esteem, ... some of them communicate with their family every day and with the residential staff" (OSS\_6). For most of them, the relationship with the social-health operators was crucial, and Facebook was used to keep in touch with the social-health operator carers even when they were not working, as well as to share with them web links, photos, experiences and feelings: "Internet use made it possible for the elderly to keep in contact with relatives and friends, increasing their wellbeing; they have been happier and calmer, and they often share with us their feelings" (OSS\_2).

*Patients' perception of the relationship with social-health operators*

Data from the closed questions structured interviews to patients show that 52 out of 60 patients stated that interaction with the social-health operators involved in the teaching activities was very positive, while for 5 it was positive, and for 3 neutral. 42 patients involved in the project said that they had developed a new and strong relationship with the social-health operators during the training programme, while for 18 this was not the case. Moreover, 49 stated that during the training programme, the social-health operators involved in the teaching activities came to understand the older people / patient better as a person (while for 10 it was neutral). Nonetheless, 41 perceived the relationship with social-health operators to be as a single team working together rather than separate individuals.

Facebook posts confirm the positive effect of social-health operators as digital mediators: "I am very happy to have participated in this initiative; I discovered that at my age you can still learn. I didn't think it would have been so easy and interesting". (MS\_79F). "I started this programme with some scepticism; today I completed it and feel extremely satisfied because it gave me confidence in myself. Being of a certain age, I thought I couldn't do it and instead I re-discovered in myself a lot of capabilities—Thank you". (ET\_85F). "I am very happy I had the opportunity to take part in such a project; at my age you can still learn. It was so easy and interesting." (MP\_75F).

Older people involved in PC and Internet training not only become familiar with social media, but also with discussion forums about politics and news. As posted on Facebook: "The computer class of the Ages project is going well. I like using Google Maps to search for places (I looked for a place in G. where I worked and other things). I like reading the newspaper online, especially the news. I did some research on Google, looking for astronomy websites. I listened to music on YouTube". (MM\_82M). From another post on a participant's Ages Facebook page: "I am super happy I learned how to use the computer. It gives me a lot of company: I read newspapers, play solitaire, etc." (LG\_81F). Other participants added: "I like to find places on google maps, places where I worked, and reading newspapers, listening to music" (AD\_73M). "The PC helps me a lot; I love to play cards, when I cannot sleep at night" (PC\_78M). "Thanks to YouTube I watched my grand-son playing with his group. It was great!" (MA\_81F).

Older people positively considered the social-health operator teaching role as digital teacher: "I am very happy that there are these courses. They make us feel less old than we are, and we learn communication techniques that we never thought we had given our advanced age. And if the teacher is like V. everything becomes almost fun. Many heartfelt thanks to all!!!!!!". (AG\_78 M). "To say I'm an enthusiast about the computer is an understatement of the truth; much of the credit must go to Mrs. V., who has been able to unravel usually inaccessible technical mysteries even to a partially senile old man who I have the undeniable impression of being. As irrefutable proof I must tell you that I'm ninety-two years old". (GM\_92M).

As emphasised by a Facebook post of one participant: “Shut between four walls, a new horizon opens up which lets my mind breathe and I feel more engaged and thus more joyful”. (GG\_83M). This Facebook post by a participant in the training sums up most of the qualitative feedback collected during the course and serves as an overall observation on the Ages project: “I must thank the Ages project team and everyone who collaborated. I participated in this computer study “not without concern”, because the less than tender age of 80 certainly does not help, what with memory being depleted and the ailments of time. I wanted to try it out and I must say I am satisfied because now I feel less lonely. When I think of a poem, a piece of history and I do not remember who wrote it, I can just write a sentence and the die is cast. Likewise, I can also communicate with family and friends, read the news in the papers, see city maps, etc. On ... the course I took has come to an end, and I can say straightaway that I’ll miss it because I did learn something, but so much is still left and unfortunately time is running out. Let’s make do! A heartfelt thank you to all of you and especially to my precious teacher. Sincerely,” (NV\_79F).

## Discussion

The E-health scenario within health systems is modifying the relationship of curing and caring, affecting the professional health landscape which had been relatively stable for many decades. This study has investigated the role of the lower health care occupation—social-health operators—in the transition towards an e-health system. The study main hypotheses were: 1) the lowest occupation would assume a key role in dealing with the process of guaranteeing digital literacy in the e-health system, becoming digital mediators in an e-health system; 2) social-health operators would play a new role in their relationship with patients, being alongside the bed of the patients.

The transition to e-health systems is affecting the health care professions landscape (Brante, 2013), and there are signs that the Covid-19 pandemic is accelerating it. Yet, this transition has been under-investigated. While doctors and nurses have more easily been switched to at distance care, the lowest health carers were not (Bashshur et al., 2020). In the lack of studies on the role of lower occupations in the transition to an e-health system, data from this study, run before the pandemic about the role of social- health operators in teaching digital skills to older people, shed light on this.

Concerning the role of the lowest health system occupation, findings confirm:

1. the lowest occupation might assume a key role teaching PC and internet access as a key aspect in guaranteeing digital literacy in the e-health system-
2. social-health operators caring about the communication between patients and other health care professions would be a task coherent with the Italian case study national regulative framework.

The first hypothesis of the study—digital mediators as e-health mediators—has been therefore confirmed.

Regarding the relationship between social-health operators and patients, the study might suggest that social-health operators would play a new role in their relationship with patients, being alongside the bed of the patients (second hypothesis). Findings show that e-health mediators have been positively considered for both the older patients and social-health operators. Regarding the new role of social-health operator as e-health mediator, micro sociological analysis findings show new characteristics in the relationship between social-health operator and patients: moving the caring relationship to become one of teaching. If professionalism can be conceptualised “broadly as based not only on formal and practical knowledge (in the broadest possible meaning of this concept) but also on personal qualities such as the ability to engage in personal and emotion-based relations to citizen clients” (Harrits, 2016, p. 13), then social-health operators correspond well to this definition.

Findings suggest further development in the e-health professional arena concerning social-health operators. Within the highly hierarchical division of labour in the health systems, in the e-health scenario, part of the medical consolidated profession as well as the semi-profession of nurses are partially going to be at distance, while the social-health operators are going to keep their position alongside the bed of the patient. Moreover, there are signs that where nursing tasks are upgraded, the human relationship with the patients might increasingly be left in the hands of social-health operators. In the Italian regulative framework, the social-health operators’ tasks already include administration of prescribed therapy, intramuscular and subcutaneous therapy on specific nursing planning, detection, and annotation of vital parameters (heart rate, respiratory rate, and temperature) of the patient, the collection of excretions and secretions for diagnostic purposes, simple dressings and bandages, artificial respiration, and external cardiac massage. All of these tasks are supposed to be played under the direction or supervision of the nursing care manager. Therefore, being alongside the bed of the patient, social-health operators are potentially going to be not only digital mediators, but also the leading character in a special personal relationship with patients in an e-health system and technological society (Ihde, 2002). The new role of e-health mediators for social-health operators seems to outline a possible path for social-health operators towards an upgrading process as pre-professionals. The interesting point is that they derive it more from their relational than from technical skills. Studies on the professionalisation process have so far focused on the growth of knowledge and of technical skills. This study suggests that in the new e-health system, social-health operators might assume the pre-professional role of mediators between patients on the one hand, and nurses and doctors on the other, fully legitimised by their hybrid status between social and health care professionals.

This study contributes to the debate on changes in the healthcare professions in the e-health system by investigating the lowest level of healthcare professionals, social-health

operators in Italy. Nevertheless, its main limitation is that it is a single national case study. Further analysis on the lowest potential pre-professionals in e-healthcare would be necessary to confirm these preliminary results concerning social health operators as digital as well as potential caring and curing mediators between the patient body and the technological tools connecting patients to other health care professions (doctors) and semi-professions (nurses)<sup>i</sup>.

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## References

- Abbott, A. (1983). Professional Ethics. *American Journal of Sociology*, 88(5), 855-885.  
<http://dx.doi.org/10.1086/227762>
- Abbott, A. (1988). *The system of professions*. Chicago: University of Chicago Press
- Abbott, A. (2010). Varieties of ignorance. *The American Sociologist*, 41, 174-189.  
<http://dx.doi.org/10.1007/s12108-010-9094-x>
- Alaszewski, A. (2006). *Using diaries for social research*. London, UK: Sage.  
<https://doi.org/10.4135/9780857020215>
- Bagot K.L., Cadilhac D.A., Vu M., Moss K., Bladin C.F. (2015). Telemedicine in the acute health setting: A disruptive innovation for specialists (an example from stroke). *Journal of Telemedicine and Telecare*, 21(8), 443–448.  
<https://doi.org/10.1177/1357633X15610722>
- Bashshur, R., Doarn, C. R., Frenk, J. M., Kvedar, J. C., & Woolliscroft, J. O. (2020). Telemedicine and the COVID-19 pandemic, lessons for the future. *Telemedicine and e-Health*, 26(5).  
<https://doi.org/10.1089/tmj.2020.29040.rb>
- Black, A. D., Car, J., Pagliari, C., Anandan, C., Cresswell, K., Bokun, T., & Sheikh, A. (2011). The impact of eHealth on the quality and safety of health care: A systematic overview. *PLoS medicine*, 8(1), e1000387.  
<https://doi.org/10.1371/journal.pmed.1000387>
- Brante, T. (2013). The professional landscape: The historical development of professions in Sweden. *Professions and professionalism*, 3(2), 119-142.  
<https://doi.org/10.7577/pp.558>
- Broom, A. (2005), Medical specialists accounts of the impact of the Internet on the doctor/patient relationship. *Health*, 9(3), 319-338.  
<https://doi.org/10.1177/1363459305052903>
- Bury, M. (2004). Researching patient-professional interactions. *Journal of Health Service Research and Policy*, 9(1), 48-54.  
<https://doi.org/10.1258/135581904322724130>



- Corti, L. (1993). Using diaries in social research. *Social research update*, 1993(2).  
<http://repository.essex.ac.uk/24606/1/Social%20Research%20Update%2020%20Using%20diaries%20in%20social%20research.pdf>
- Crawford, A., & Serhal Serhal, E. (2020). Digital health equity and COVID-19: the innovation curve cannot reinforce the social gradient of health. *Journal of medical Internet research*, 22(6), e19361. <https://doi.org/10.2196/19361>
- Cucu-Oancea, O. (2013). Using diaries—a real challenge for the social scientist. *Procedia-Social and Behavioral Sciences*, 92(10), 231-238.  
<https://doi.org/10.1016/j.sbspro.2013.08.665>
- Denzin, N. K. (2012). Triangulation 2.0. *Journal of mixed methods research*, 6(2), 80-88.  
<https://doi.org/10.1177/1558689812437186>
- Elliott, H. (1997). The use of diaries in sociological research on health experience. *Sociological Research Online*, 2(2), 38-48. <https://doi.org/10.5153/sro.38>
- Erzberger, C., & Prein, G. (1997). Triangulation: Validity and empirically-based hypothesis construction. *Quality and quantity*, 31(2), 141-154.  
<https://doi.org/10.1023/A:1004249313062>
- Etzioni, A. (Ed.). (1969). *The semi-professions and their organization: Teachers, nurses, social workers*. New York: The Free Press.
- European Commission (2020). *Shaping Europe's digital future: Factsheet*. Available from:  
[https://ec.europa.eu/commission/presscorner/detail/en/fs\\_20\\_278](https://ec.europa.eu/commission/presscorner/detail/en/fs_20_278)
- Eurostat (2020). *Digital inclusion: Individuals*. Available from:  
<https://ec.europa.eu/eurostat/web/digital-economy-and-society/data/database>
- Evans, T. (2014). The moral economy of street-level policy work. *Croatian and Comparative Public Administration*, 14(2), 381-399.
- Eysenbach, G. (2008). Medicine 2.0: Social networking, collaboration, participation, apomediation, and openness. *Journal of Medical Internet Research*, 10(3), 1-9. <https://doi.org/10.2196/jmir.1030>
- Fairclough, N. (2013). *Critical discourse analysis: The critical study of language*. London: Routledge. <https://doi.org/10.4324/9781315834368>
- Flick, U. (2007). *Designing qualitative research*. London: Sage. <https://doi.org/10.4135/9781849208826>
- Foucault, M. (2003). *The birth of the clinic (3rd ed.)*. London: Routledge.
- Freidson, E. (1986). *Professional powers: A study of the institutionalization of formal knowledge*. Chicago: Chicago University Press.

- Freidson, E. (2001). *Professionalism: The third logic*. Cambridge: Polity Press.
- Gabe J., Cardano M., Genova A. (Eds.). (2021). *Health and illness in the neoliberal era in Europe*. Bingley: Emerald. <https://doi.org/10.1108/9781839091193>
- Gazzetta Ufficiale (2002). Legge 8 gennaio 2002 n. 1: Conversione in legge, con modificazioni, del decreto legge 12 novembre 2001, n. 402, recante disposizioni urgenti in materia di personale sanitario [Law 8 January 2002 n. 1: Conversion into law, with modifications, of the decree law 12 November 2001, n. 402, containing urgent provisions on health personnel]
- Gazzetta Ufficiale (2003). Accordo tra il Ministero della Salute, il Ministero del lavoro e delle politiche sociali, le Regioni e le province autonome di Trento e di Bolzano per la disciplina della formazione complementare in assistenza sanitaria della figura professionale dell'operatore socio-sanitario di cui all'articolo 1, comma 8, del DI 12 novembre 2001, n. 402, convertito, con modificazioni, dalla legge 8 gennaio 2001, n1. [Agreement between the Ministry of Health, the Ministry of Labour and Social Policies, the Regions and the Autonomous Provinces of Trento and Bolzano for the discipline of complementary training in health care of the professional figure of the socio-health operator referred to in article 1, paragraph 8, of the DI 12 November 2001, n. 402, converted, with modifications, by law 8 January 2001, n1]
- Giglietto, F., Rossi, L., & Bennato, D. (2012). The open laboratory: Limits and possibilities of using Facebook, Twitter, and YouTube as a research data source. *Journal of technology in human services*, 30(3-4), 145-159. <https://doi.org/10.1080/15228835.2012.743797>
- Gubrium, J. F. & Holstein, J. A. (2002). From the individual interview to the interview society, in J. F. Gubrium & J. A. Holstein (Eds.), *Handbook of Interview Research*, Thousand Oaks, CA: Sage Publications. <https://doi.org/10.4135/9781412973588>
- Hallqvist, J. (2019). Digital health and the embodying of professionalism: Avatars as health professionals in Sweden. *Professions and Professionalism*, 9(2), e2847. <https://doi.org/10.7577/pp.2847>
- Hargreaves, A. (1998). The emotional politics of teaching and teacher development: With implications for educational leadership. *International journal of leadership in education*, 1(4), 315-336. <https://doi.org/10.1080/1360312980010401>
- Harrits, G. S. (2016). Being professional and being human. Professional's sensemaking in the context of close and frequent interactions with citizens. *Professions and Professionalism*, 6(2), e1522. <https://doi.org/10.7577/pp.1522>
- Hookway, N. (2008). "Entering the blogosphere": Some strategies for using blogs in social research. *Qualitative research*, 8(1), 91-113. <https://doi.org/10.1177/1468794107085298>

- Howe, K. R. (1988). Against the quantitative-qualitative incompatibility thesis or dogmas die hard. *Educational Researcher*, 17(8), 10-16. <https://doi.org/10.3102/0013189X017008010>
- Ihde, D. (2002). *Bodies in technology (Vol. 5)*. Minneapolis, MN: University of Minnesota Press.
- Istat (2020), Health For All database. Retrieved from <https://www.istat.it/it/archivio/14562>
- Jick, T. D. (1979). Mixing qualitative and quantitative methods: Triangulation in action. *Administrative science quarterly*, 24(4), 602-611. <https://doi.org/10.2307/2392366>
- Lipsky, M. (2010). *Street-level bureaucracy: Dilemmas of the individual in public services (2nd ed.)*. New York: Publications of Russell Sage Foundation.
- Lupton, D. (2014). Critical perspectives on digital health technologies. *Sociology Compass*, 8(12), 1344-1359. <https://doi.org/10.1111/soc4.12226>
- Manning-Morton, J. (2006). The personal is professional: Professionalism and the birth to threes practitioner. *Contemporary Issues in Early Childhood*, 7(1), 42-52. <https://doi.org/10.2304/ciec.2006.7.1.42>
- Maxcy, S. J. (2003). Pragmatic threads in mixed methods research in the social science: The search for multiple models of inquiry and the end of the philosophy of formalism. In A. Tashakkori & C. Teddlie Denzin (Eds.), *Handbook of mixed methods in social & behavioral research* (p. 51-90). Thousand Oaks, CA: SAGE.
- Mordini, E., Wright, D., Wadhwa, K., De Hert, P., Mantovani, E., Thestrup, J., ... & Vater, I. (2009). Senior citizens and the ethics of e-inclusion. *Ethics and Information Technology*, 11(3), 203-220. <https://doi.org/10.1007/s10676-009-9189-7>
- Moreno, M. A., Goniou, N., Moreno, P. S., & Diekema, D. (2013). Ethics of social media research: common concerns and practical considerations. *Cyberpsychology, behavior, and social networking*, 16(9), 708-713. <https://doi.org/10.1089/cyber.2012.0334>
- Moretti, C., Spina E., Ciaschini, U. (2012). Formazione e operatività nel sociale: l'assistente sociale, l'educatore e l'operatore socio-sanitario. [Social training and operations: The social worker, the educator and the socio-health worker]. *Rivista di Scienza dell'Amministrazione*, 3,53-72. <https://doi.org/10.3280/SA2012-003004>
- Nickelsen, N. C. M. (2019). The infrastructure of telecare: Implications for nursing tasks and the nurse-doctor relationship. *Sociology of health & illness*, 41(1), 67-80. <https://doi.org/10.1111/1467-9566.12781>
- O'Connor, K. E. (2008). "You choose to care": Teachers, emotions, and professional identity. *Teaching and Teacher Education*, 24(1), 117-126. <http://dx.doi.org/10.1016/j.tate.2006.11.008>

- Oh, H., Rizo, C., Enkin, M., & Jadad, A. (2005). What is eHealth? A systematic review of published definitions. *World Hospitals and Health Services*, 41(1), 32-40. <https://doi.org/10.2196/jmir.7.1.e1>
- Olsen, W. (2004). Triangulation in Social Research: Qualitative and quantitative methods can really be mixed. In: M. Holborn, Ed., *Development in Sociology*, Ormskirk UK: Causeway Press (p. 1-30).
- Parsons, T. (1954). A sociologist looks at the legal profession. In T. Parsons (Ed.), *Essays in sociological theory* (p. 310-385). Glencoe, Illinois: The Free Press.
- Patton, M. Q. (2002). *Qualitative research & evaluation methods (3rd ed)*. Thousand Oaks, CA: Sage Publications.
- Pavolini, E., & Vicarelli, G. (2013). Italy: A strange NHS with its paradoxes. In Emmanuele Pavolini, Ana M. Guillén (Eds), *Health Care Systems in Europe under Austerity* (p. 81-101). London: Palgrave Macmillan. [https://doi.org/10.1057/9780230369627\\_5](https://doi.org/10.1057/9780230369627_5)
- Ritchie, J. & Spencer, L. (1994). Qualitative data analysis for applied policy research. In A. Bryman and R. G. Burgess (Eds.), *Analyzing qualitative data*, (p.173-194). London: Routledge [https://doi.org/10.4324/9780203413081\\_chapter\\_9](https://doi.org/10.4324/9780203413081_chapter_9)
- Saks, M. (2012). Defining a profession: The role of knowledge and expertise. *Professions and Professionalism*, 2(1), 1-10. <https://doi.org/10.7577/pp.v2i1.151>
- Sena, B. (2017). Professionalization without autonomy: The Italian case of building the nursing profession. *Professions and Professionalism*, 7(3), e1900. <https://doi.org/10.7577/pp.1900>
- Timmermans, S., & Berg, M. (2003). The practice of medical technology. *Sociology of Health & Illness*, 25(3), 97-114. <https://doi.org/10.1111/1467-9566.00342>
- Topol, E. (2015). *The patient will see you now*. New York: Basic Books.
- Tousijn, W. (2002). Medical dominance in Italy: A partial decline. *Social Science & Medicine*, 55(5), 733-741. [https://doi.org/10.1016/S0277-9536\(01\)00199-X](https://doi.org/10.1016/S0277-9536(01)00199-X)
- Trachtenberg, F., Dugan, E., & Hall, M. A. (2005). How patients' trust relates to their involvement in medical care. *Journal of Family Practice*, 54(4), 344-354.
- Trappenburg, M., & Noordegraaf, M. (2018). Fighting the enemy within? Challenging minor principles of professionalism in care and welfare. *Professions and Professionalism*, 8(2), e2265. <https://doi.org/10.7577/pp.2265>
- Vicarelli, G., & Bronzini, M. (2018). La sanità digitale: dimensioni di analisi e prospettive di ricerca. [Digital health: Dimensions of analysis and research perspectives]. *Social Policies*, 2, 147-162.
- Vicarelli, G., & Pavolini, E. (2015). Health workforce governance in Italy. *Health Policy*, 119(12), 1606-1612. <https://doi.org/10.1016/j.healthpol.2015.09.004>

- Viitanen, J., Hyppönen, H., Lääveri, T., Vänskä, J., Reponen, J., & Winblad, I. (2011). National questionnaire study on clinical ICT systems proofs: Physicians suffer from poor usability. *International journal of medical informatics*, 80(10), 708-725. <https://doi.org/10.1016/j.ijmedinf.2011.06.010>
- Webb, E. J., Campbell, D. T., Schwartz, R. D., & Sechrest, L. (1966). *Unobtrusive measures: Nonreactive research in the social sciences*. Chicago: Rand McNally.
- Wilensky, H. (1964). The professionalization of everyone? *American Journal of Sociology*, 70(3), 137-58. <https://doi.org/10.1086/223790>

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