Publishing Series in PROJECT | Essays and Researches
On Sustainable Built Environment
between Connections and Greenery
vol. 07 | 2022 | paper 15 | pp. 270-287

ISSN (print): 2704-6087
ISSN (online): 2704-615X
ISBN (print): 978-88-5509-445-0
ISBN (online): 978-88-5509-446-7

COMMUNICATION DESIGN FOR HEALTH
Territorial and digital networks

Daniela Anna Calabi, Alice Maturo, Marco Quaggiotto

section
DESIGN

typology
RESEARCH & EXPERIMENTATION

DOI
doi.org/10.19229/978-88-5509-446-7/7152022

ABSTRACT
In the wake of the Covid-19 pandemic emergency, there has been renewed interest in issues related to health, prevention and community well-being. Health communication and the promotion of disease prevention now require a theoretical and design approach that first and foremost requires the identification of appropriate tools to enhance 'intersectorality', 'collaboration' and 'outreach' among the different areas of expertise of the well-being and healthcare actors involved in the territory. The aim is to strengthen the process of community 'empowerment'. This study investigates the communicative strategies suitable for enhancing the physical, virtual and digital relationships among the active presences in the territory, choosing those capable of mediating needs, promoting well-being and building a dialogue between citizens and health facilities, thus finally creating a 'territorial health network'.

KEYWORDS
territorial network, health and wellness, mediation, communication design, community empowerment

Daniela Anna Calabi is an Associate Professor at the Department of Design of the Politecnico di Milano (Italy). Her research is mainly in the field of communication, with particular reference to the design of perception, atmosphere and identity of territories. Mob. +39 347/42.15.182 | E-mail: daniela.calabi@polimi.it

Alice Maturo is a PhD Candidate in Communication Design, at the School of Design of the Politecnico di Milano (Italy). She conducts research on the issues of accessibility and territorial identity, for the strengthening of community well-being. +39 340/45.78.394 | E-mail: alice.maturo@polimi.it

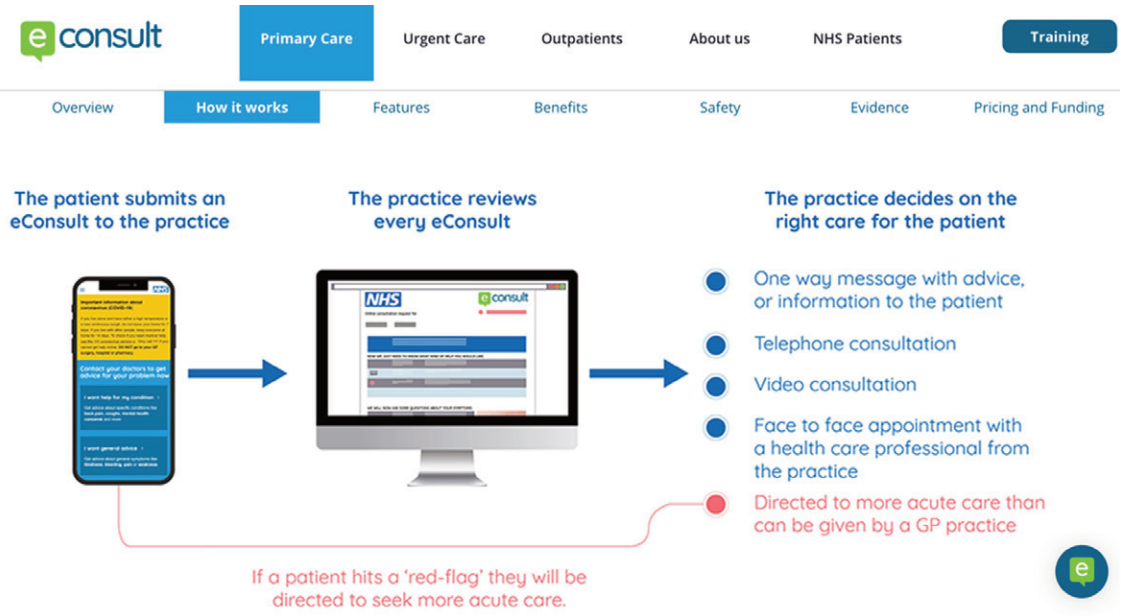
Marco Quaggiotto is a Researcher at the Department of Design of the Politecnico di Milano (Italy). His research activity is in the field of Communication Design, with a particular focus on digital cartography and the design of digital interfaces for the exploration of complex territories and systems. Mob. +39 347/92.66.407 | E-mail: marco.quaggiotto@polimi.it

Health, disease prevention and community well-being are the core principles of the Polisocial Award 2020 initiative of the Politecnico di Milano: 'Vulnerabilità e Innovazione nell'era post Covid19' (Vulnerability and Innovation in the Post-Covid19 Era), which among the winning projects saw 'Coltivare_Salute.com – Città e Case della Salute per Comunità Resilienti – Le Case della Salute quali costruttori di urbanità e socialità diffusa nell'era post Covid-19 – Nuove centralità periferiche in città salubri e integrate' (lit. Cities and Health Homes for Resilient Communities – Health Homes as builders of urbanity and widespread sociality in the post Covid-19 era – New peripheral centralities in healthy and integrated cities).

This project involved an interdisciplinary research group, composed of four Departments of the Politecnico (DASTU – Department of Architecture and Urban Studies, proponent; DABC – Department of Architecture, Built Environment and Construction Engineering; DIG – Department of Management, Economics and Industrial Engineering; Department of Design), in collaboration with external partners from the health districts of the city of Piacenza (Local Health Authority USL, Municipality, Associations, Emilia-Romagna Region, Territorial Committees). The main objective, which the working group focused on within the project, was the study of an operational methodology which could be replicated on national territory. Project guidelines were defined in order to enhance the impact of the Case della Salute[1] (CdS) on the territory of the Italian Emilia-Romagna Region, useful for restoring the role of health centres to the CdS, also in view of the recent pandemic situation. The desired transformation envisages the transition of the CdS from multi-purpose facilities, of a purely health-related nature, to places of health efficiency, but also points of reference for social regeneration, architectural redevelopment and urban structure.

The World Health Organisation (WHO, 2021) defines the concept of health as «A state of complete physical, social and mental well-being, and not merely the absence of disease or infirmity». This definition has paved the way for multidisciplinary approaches and the expansion of research areas, including Communication Design. Peter H. Jones (2013, p. viii), while on the subject of Design for Care, reflects on the convergences of approach between Design and Medicine: «These two fields are similar in many ways. Both are conducted as skilled practice informed by experts who learn by doing. Both are informed by observation and feedback, by evidence of their beneficial effects. Both disciplines are motivated by a deep desire to help people manage and improve their lives, individually and culturally». In particular, it is assumed that Communication Design, by its very vocation, acts as a bridge that fosters relationships between different subjects, mediating and implementing communications.

The research that follows is located within the Polisocial project and refers specifically to the results related to Communication Design applications. The communication project defines a greater involvement of the community of citizens starting from the understanding of the definitions of 'well-being' and 'health' as 'relational' concepts, as they depend on the continuous exchange between individuals and are determined



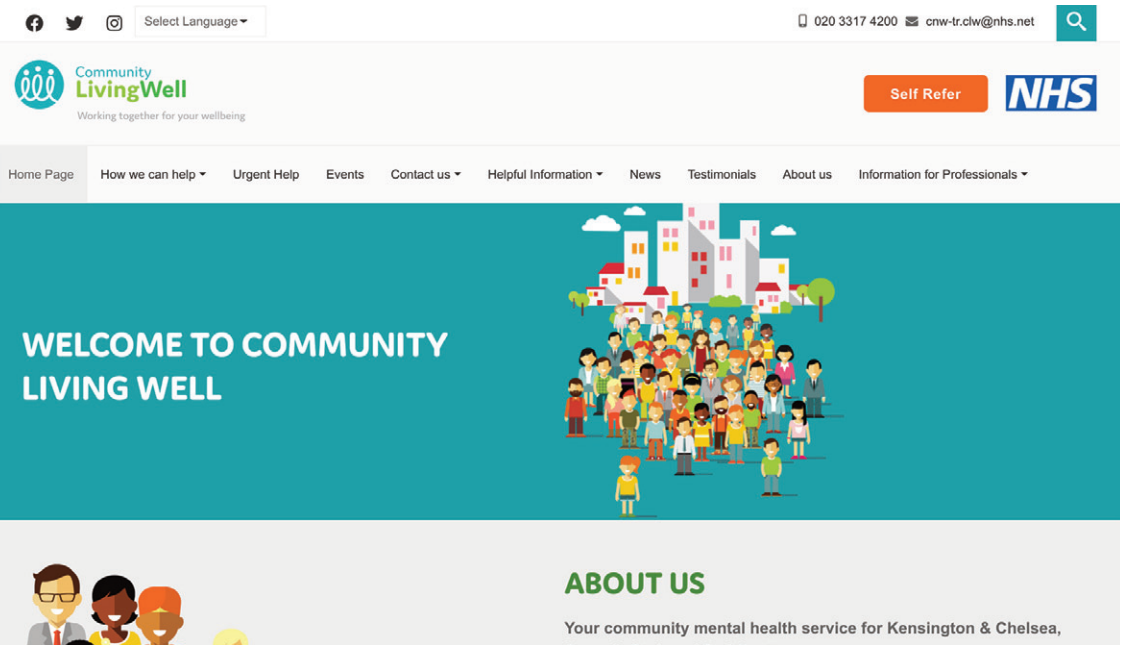


Fig. 1 | eConsult (2016), by National Health System Self-Help, UK (source: econsult.net).

Fig. 2 | Community Living Well, West London Clinical Commissioning Group, designed by C27 Media, UK (source: communitylivingwell.co.uk).

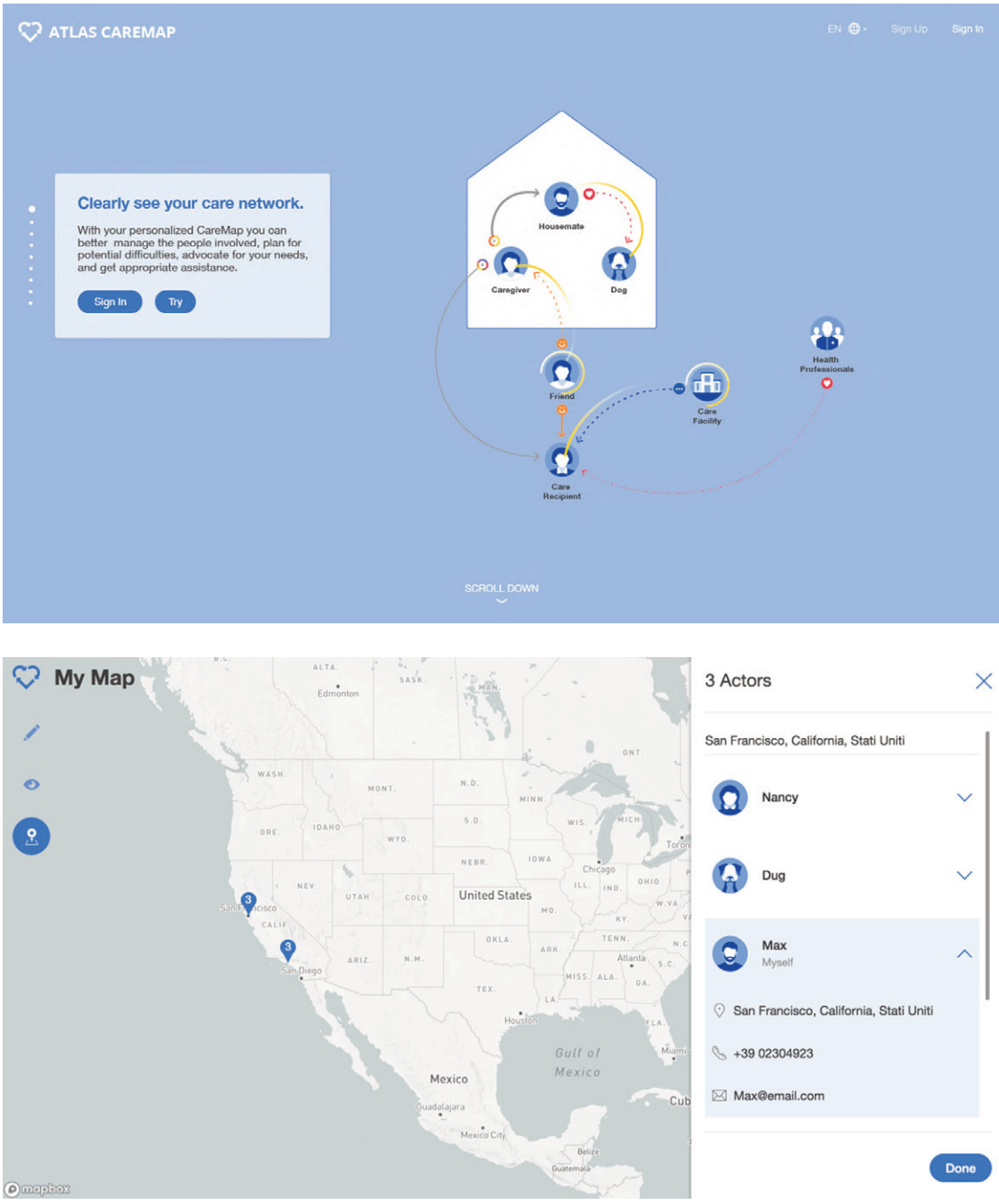
Fig. 3 | Parma Salute, Comune di Parma, Italy (source: comune.parma.it).

Fig. 4 | Mappa della Salute #bastapoco (2017), Regione Emilia-Romagna, Italy (source: mappadellasalute.it).

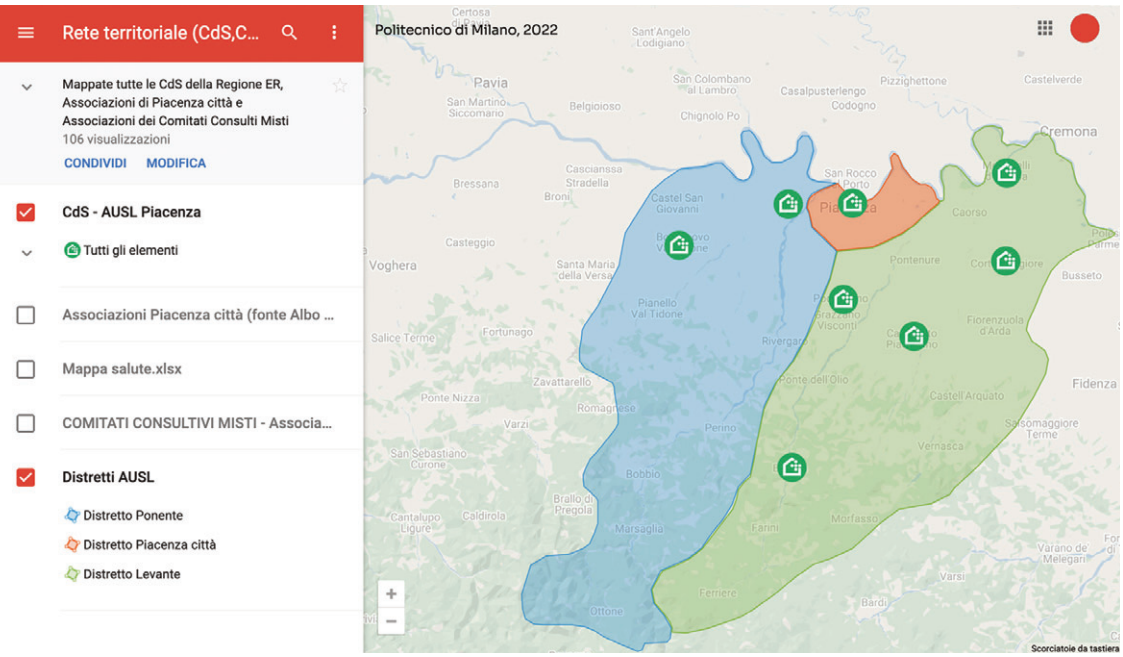
Fig. 5 | Mappe della Salute – I Luoghi per Guadagnare Salute, ARS Agenzia Regionale di Sanità, Regione Toscana, Italy (source: ars.toscana.it/mappe/mappa.php).

by the social, cultural and territorial context. For this purpose, guidelines were considered for project actions aimed at overcoming the critical issues that emerged with Covid-19, considering the aftermath of the emergency as a 'space of possibilities', a moment of reflection on the relationship between man, urbanity and identity in relation to space and territory (Piscitelli, 2019). The development of a widespread localised communication capable of influencing the lifestyles of the community was hypothesised by differentiating prevention activities into 'promotional' and 'wellness education', referring to the concepts of Urban Health and Health in All Policies[2]. This hypothesis featured the CdS as a fundamental subject and crucial actor in the prevention network. Central insofar as it attracts, gathers and synthesises the health services in the area; widespread insofar as it weaves a hybrid network (both digital and physical) that spreads out to reach other realities, including the various health centres, third sector associations and health promotion projects. The issue regarding the absence of a territorially-based comprehensive view emerged both as a communication problem and a research question.

Methodology | The first objective of the research was to define the essential tools to address the need to refer citizens to the categories of health referrers who are active in



Figg. 6, 7 | Atlas of Caregiving's CareMaps (2018), AARP and Santa Barbara Foundation, designed by Studio Accurat (credits: Studio Accurat; source: atlascaremap.org/map).



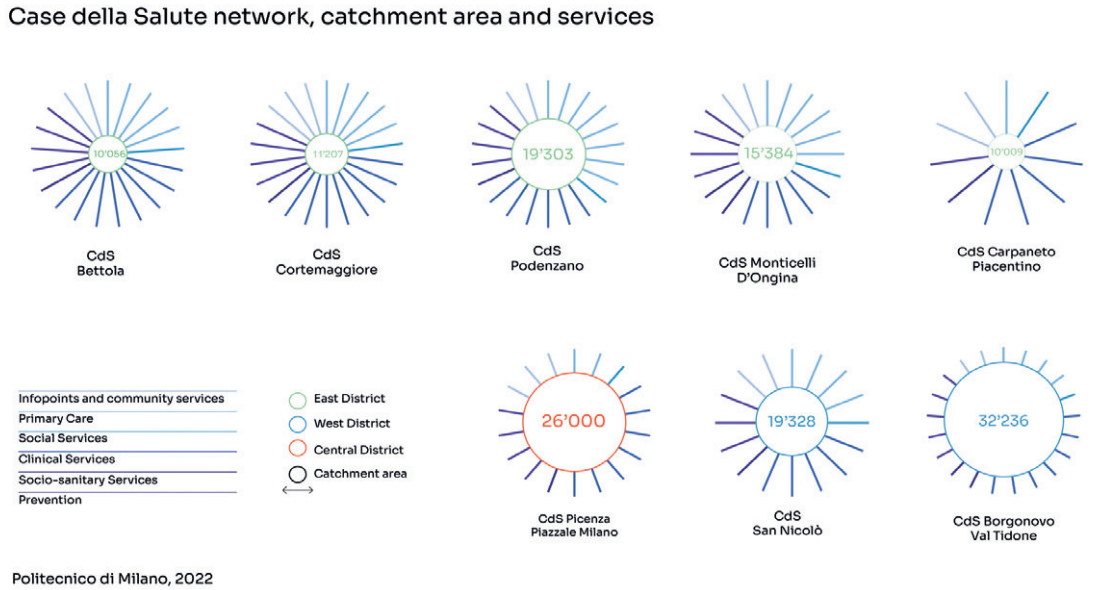


Fig. 8 | ProgettoColtivare_Salute.com (2022), designed by the Department of Design, Politecnico di Milano, Italy (source: google.com/maps/d/u/0/edit?hl=it&mid=1iFKMobDK4hS2eAwqHR8qgNNbb4lUnLuI&ll= 43.08225791752247%2C11.908045099999967&z=7).

Fig. 9 | ProgettoColtivare_Salute.com (2022), designed by the Department of Design, Politecnico di Milano, Italy.

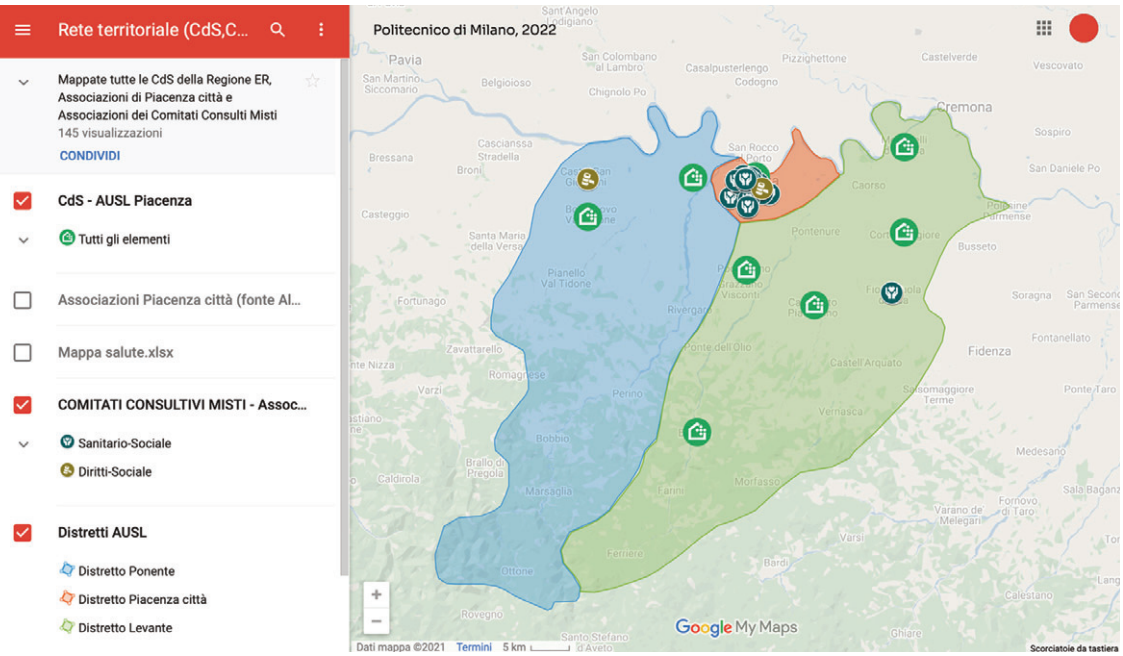
disease prevention. The use of cartographic devices – such as digital maps – for the geolocalisation of prevention-oriented health realities revealed a very high number (divided into subsystems) of categories of bodies, which are often disconnected from each other; it was therefore deemed necessary to reinterpret the roles between localized health structures. The definition of communication guidelines was developed with the project hypothesis of offering greater transparency regarding the prevention programmes within the territorial network. The network of relations used as a case study was that of the Emilia-Romagna and Piacenza CdS, already the subject of study of the Polisocial project and characterised by a widespread activity of support to citizens in their health journey. It was possible to observe the participation of numerous associations with a fundamental and diversified role.

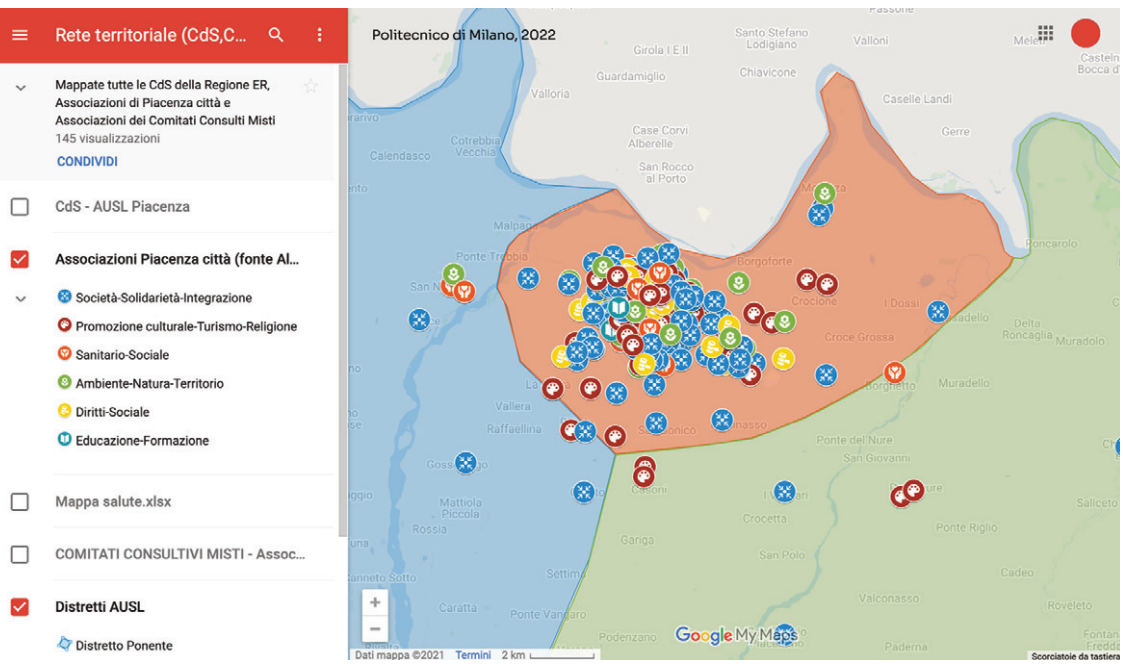
The analysis was developed in two prevalent activities. Firstly, shared values for effective prevention, wellness and health communication were identified based on the study of the Prevention Plans and health promotion systems in Italy and abroad. Case studies were then collected for a 'multi-criteria' analysis of communication tools. Secondly, a punctual exploration of the territorial fabric of Piacenza was conducted to identify the operational relationships among the actors in the health, social and cultural network acting in synergy with the CdS. Current systems and processes for community engagement were assessed and information recipients were analysed.

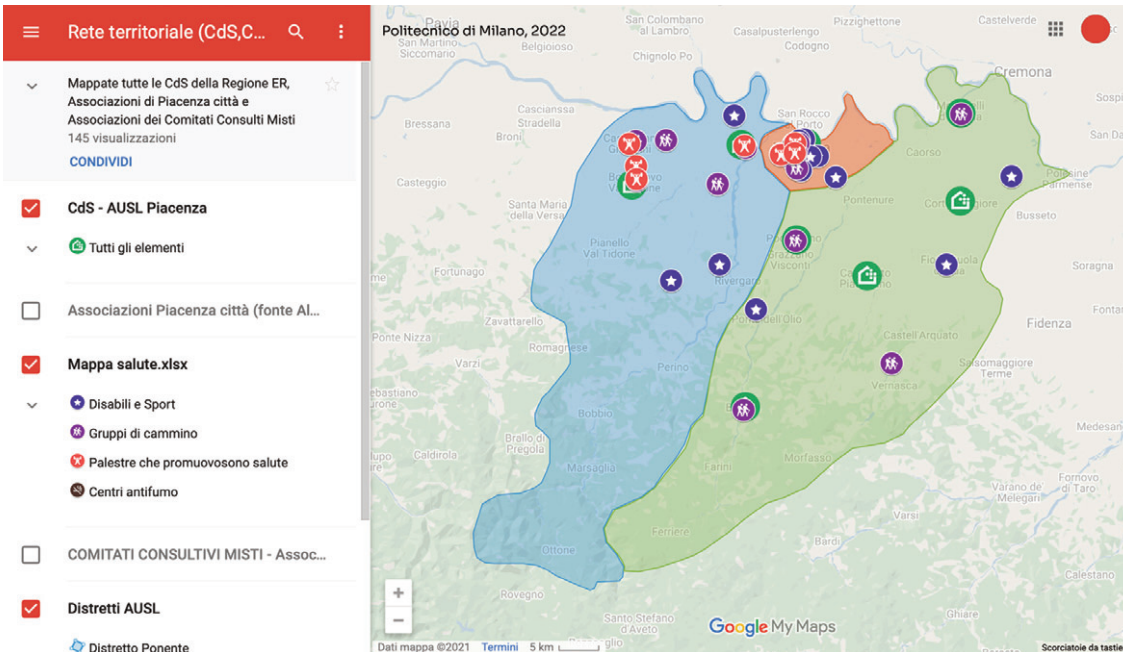
The first apparent shortcoming is the absence of a useful system to clearly understand the relationship between physical places, territory and services. Therefore, guidelines were drawn up to communicate presences, roles, activities, and relationships on a cartographic basis. This information represents the first step in strengthening the process of 'empowerment' of the community and social actors, with the aim of establishing an explicit synergy, previously absent during the Global pandemic. A weakness has been also revealed through the absence of guidance and indications for citizens relating to active services and their physical presence.

Following the configuration of the role of Communication Design, intended as 'facilitator of access to opportunities for knowledge of prevention activities and connector of the network of relations', criteria were outlined for the representation of territorial hybrid relations[3] (Quaggiotto, 2017), i.e., both physical and digital. Therefore, a scheme was defined that reconstructs the relationships that support the relationship between the community and the CdS, proposing devices and languages. Hence, a framework was defined to reconstruct and support relationships between the community and CdS, proposing devices and languages. Rethinking a communicative model for health, so that it does not remain confined to identity redesign and wayfinding, means defining flexible digital publishing formats since every territory is different. It is essential to investigate the activities of territorial realities to identify relationships with the public health system and specific prevention goals.

Following the analytical reconstruction phase, the hypothesis of an 'explicit health network' was put forward: a transparent and detailed reconstruction of the essential re-


Rete territoriale (CdS,C...
Mappate tutte le CdS della Regione ER, Associazioni di Piacenza città e Associazioni dei Comitati Consulti Misti
145 visualizzazioni
CONDIVIDI
CdS - AUSL Piacenza
Tutti gli elementi
Associazioni Piacenza città (fonte Al...
Mappa salute.xlsx
COMITATI CONSULTIVI MISTI - Assoc...
Sanitario-Sociale
Diritti-Sociale
Distretti AUSL
Distretto Ponente
Distretto Piacenza città
Distretto Levante
Politecnico di Milano, 2022
Google My Maps
Dati mappa ©2021 Termini 5 km
Scorciatoie da tastiera


Rete territoriale (CdS,C...
Mappate tutte le CdS della Regione ER, Associazioni di Piacenza città e Associazioni dei Comitati Consulti Misti
145 visualizzazioni
CONDIVIDI
CdS - AUSL Piacenza
Associazioni Piacenza città (fonte Al...
Società-Solidarietà-Integrazione
Promozione culturale-Turismo-Religione
Sanitario-Sociale
Ambiente-Natura-Territorio
Diritti-Sociale
Educazione-Formazione
Mappa salute.xlsx
COMITATI CONSULTIVI MISTI - Assoc...
Distretti AUSL
Distretto Ponente
Politecnico di Milano, 2022
Google My Maps
Dati mappa ©2021 Termini 2 km
Scorciatoie da tastiera



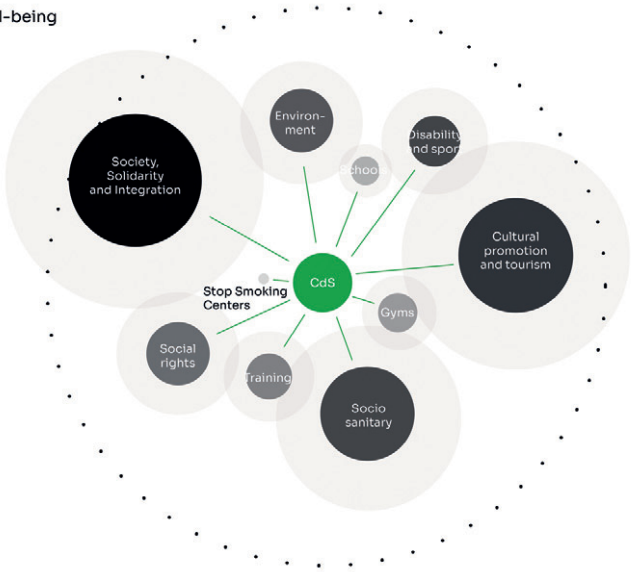
Figg. 10-12 | ProgettoColtivare_Salute.com (2022) designed by the Department of Design, Politecnico di Milano, Italy (source: google.com/maps/d/u/0/edit?hl=it&mid=1iFKMobDK4hS2eAwqHR8qgNNbb4lUnLuI&ll=43.08225791752247%2C11.9080450999999967&z=7).

lationships for health, identified in the social space. Therefore, the guidelines point, for the surveyed territory, to the creation of communication formats that integrate analogue artefacts, physical places and digital spaces to provide citizens with 'geo-referenced information'. To strengthen the pivotal role of the CdS in the territory it is necessary to clearly highlight its role in relation to the territory and the other health places. In other words, in order to understand the role of the CdS, it is essential to consider the socio-demographic features of the 'landscape' in which it is placed, highlighting the contextual relations.

The research project aims to restore the extensiveness of relationships in order to enhance the interconnected and interdependent potentials and opportunities for health, to define a communicative system that activates confrontation between institutions and promotes 'apomediation' among territorial actors[4] (Eysenbach, 2008). Eysenbach is among the first to affirm the importance of the role of apomedation for 'conscious' health, also by employing the evolution to Medicine 2.0. Apomedation structures direct communications, embedded in the territorial web. It is conceptualized as an active tool, a bridge between citizens and health actors, thus no longer exclusive and unidirectional (as simple mediation would be), but rather as a mediation of relationships on

Casa della Salute as a central hub of a capillary network

Data syntesis of CdS' sociosanitary,social, cultural well-being network in Piacenza districts.

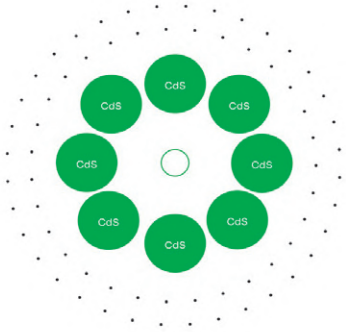


Type	n° of actors
Society, Solidarity and Integration	184
Cultural promotion and tourism	126
Sociosanitary	94
Environment	48
Social rights	45
Disability and sport	26
Training	22
Gyms	13
Schools	9
Stop Smoking Centers	1

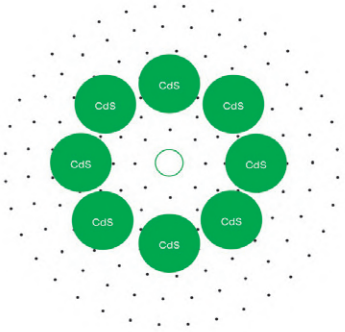
Politecnico di Milano, 2022

Central role of the community

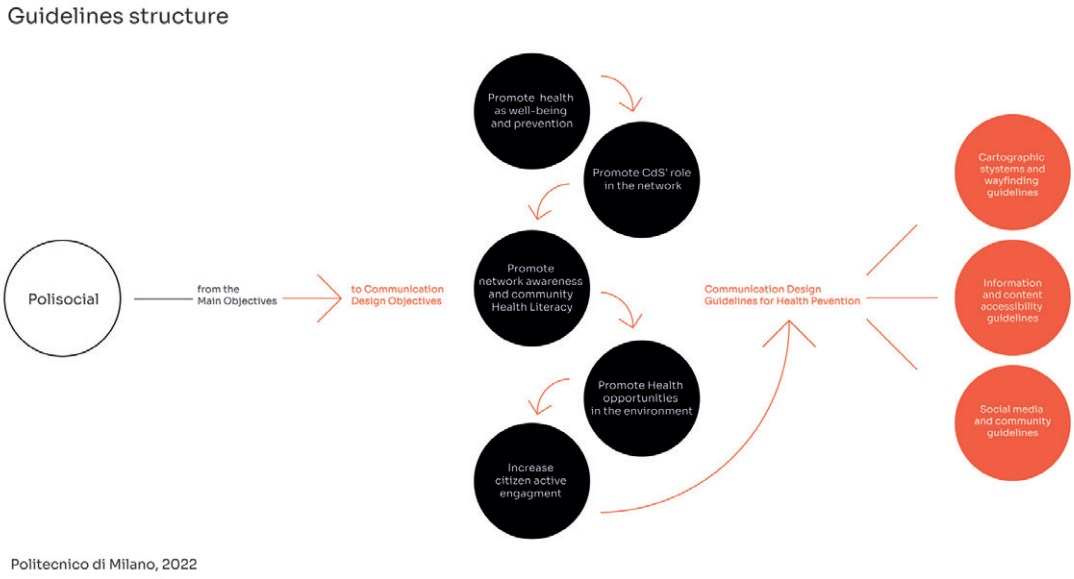
from
CdS as a center in the territory: a reference point for citizens' well-being and health



to
Citizen as a center in the comunication system: communication is designed for people's needs (user centered)



Politecnico di Milano, 2022



Figg. 13-15 | ProgettoColtivare_Salute.com (2022), designed by the Department of Design, Politecnico di Milano, Italy.

the territory. From a project perspective, it entails studying communicative artefacts and channels that activate an 'apomediated' exchange in a communicative apparatus, effective in translating territorial complexities and relationships between healthcare systems. In other words, at the base network of information and relationships, the design considers both physical and virtual contact and access channels (tools, languages and devices), interpreting the needs of the different actors involved and orienting them towards knowledge in the sense of Health Literacy and prevention.

Communication for Health | Communication in the healthcare field refers to two types of activities that are distinct from each other. 'Healthcare communication' focuses primarily on services and performance in all levels of care: diagnosis, treatment and rehabilitation. Health Communication[5] focuses on prevention, to create more favourable conditions for health through information, communication and healthy lifestyle initiatives. Prevention involves several key players: Bodies, Institutions, Third Sector Associations and citizens, leading them to be active and aware stakeholders in the participation journey towards the 'social construction of health'. Communication for health, therefore, aims to inform, influence and motivate individuals, institutions, and society

as a whole on socially relevant health issues. The choice determines the realization of a multi-level communication, strongly anchored in the environmental, territorial and social context of reference, taking into account the demographic fabric, the care of the environment and the configuration of the territory. Kreps and Thornton (1992, p. 2), define Health Communication as «[...] the way we seek, process, and share health messages».

The long-term goals of the research project include initiating a process of analysis that addresses how individuals 'seek', 'process', and ultimately 'share' health-related messages. This process identifies citizens who are no longer passive receivers, but subjects directly involved in seeking information and conveying health experiences. It also involves health professionals, who must become more aware of the impact of these messages, especially when they include critical issues to be acknowledged. Also of fundamental importance for citizen engagement is the process through which the user perceives information. Here again, it is possible to distinguish two different approaches. According to Roxanne Parrott (2009, p. 21), healthcare communication uses a statistical approach (data and numbers), while health communication uses a narrative approach (stories and narratives).

The second, called Social Constructionist Models of Communication, considers relational and empathic communication built through shared experience: storytelling, dialogue and emotional sharing influence the health status of individuals. In accordance with Parrott, human beings should be considered essentially «[…] homo narrans, storytelling beings». This narrow definition of the concept of Health Communication allowed the identification of the project objectives and determined the collection of Italian and international case studies that reflected the analysed concept.

The Prevention System and Case Studies | Prevention is recognised as a cornerstone of contemporary health policies; a 'programme', so defined as early as the Ottawa Conference in 1986, which, within the National and Regional Prevention Plans, is indispensable today following the pandemic phenomenon. These documents were analysed to identify points of convergence with Communication Design. The analysis revealed pivotal values useful in designing for health and well-being:
– participation as a generative tool of 'empowerment'[6]; health promotion that involves all the resources of the territory, to foster the process of strengthening the conscious role of the citizen and, by reflection, of the community;
– communication as an access tool for services and the network of relationships; it ensures that all individuals are guaranteed the same opportunities for access, fruition, quality and prevention; an 'accessibility' which is not only medical, linked to a disability, but intended in a broader, social[7] (Greco, 2016), and above all communicative sense; it is necessary to facilitate the creation of 'inter-institutional' networks and collaboration between organizations and citizens, in order to map healthcare opportunities in the territory;

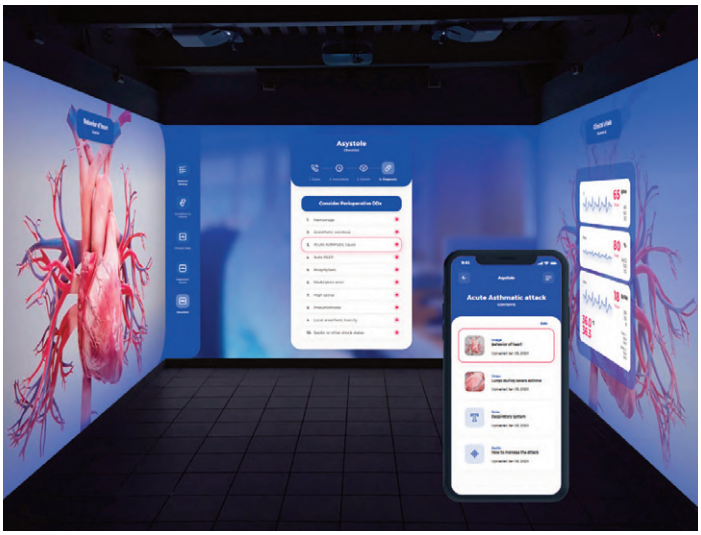


Fig. 16 | SurLive, the medical app for the simulation of emergencies in virtual environments (2020) by Chiara Venica, Department of Design, Politecnico di Milano, Italy (credit: C. Venica).

– the central role of the individual and of the communities: communication needs to be designed not only as a tool for information but also for 'transformation', so that citizens can acquire Health Literacy skills and become active and participating subjects «[...] Building trust and engaging with affected populations» (WHO, 2017, p. 10);
– communication as an effective promotion of participatory well-being; communication as a means of sharing within the community with the aim of orienting and motivating people, promoting pro-health attitudes.

For the design investigation related to Health Communication content, a sample of about 30 case studies, classified into project types, was collected. eConsult (Fig. 1), an English remote medical counselling platform, and Community Living Well (Fig. 2), a psychological support platform that according to the e-community model focuses on sharing experiences and stories related to health, were both among the various examples of telemedicine and health promotion through experience sharing, aimed at active patient involvement. Another type, on the other hand, concerns spatial mapping platforms. 'Health maps' are cartographies of territorial representation that amplify the possibilities of health promotion and user involvement (engagement), similarly to the Emilia-Romagna Region and Tuscany Region projects (Figg. 3-5).

Finally, the third type of particular interest concerns interactive maps that abstract from the territory, representing services as they relate to the individual user. The Atlas of Caregiving's project, CareMaps, designed by Studio Accurat for AARP and Santa Barbara Foundation (Figg. 6, 7), was of particular interest. The innovative elements taken into analysis here relate to the project's effectiveness in promoting the individual citizen's initiative, involving them more within their health support network while helping them visualize that network within the platform to facilitate access to services and

increase empowerment. Atlas of Caregiving's, in fact, is a conceptual map-diagram that, on an individual level, shows the support from family, friends, and the community surrounding the user; in the aggregate, however, the collection of data specific to the individual's experiences highlights issues and vulnerabilities in a localized geographic context. The intuition of such a design for raising the individual's awareness regarding their own health network is particularly effective in the research conducted by the Polisocial project, which nonetheless aspires to develop guidelines that have consistent directions with places, media and devices that involve the entire community, and thus are less individual and more relational.

Accessible territorial and digital networks: Communication Design for community well-being | The research was defined by analyses that effectively went far beyond the spaces of information and promotion. It focused on the potential provided through the definition of a tool useful for making the network of territorial health relationships explicit and accessible to citizens. People's well-being, in fact, is determined not only by services but also by the reality and contacts present in the territory, as well as by the ability to manage emergencies and knowledge of the possibilities offered by facilities in terms of prevention, treatment and care.

The phase of collecting data regarding ongoing prevention actions in the CdS was extended to autonomous external actors in Piacenza, hypothesizing the relationships between services on a cartographic basis, to understand the organization of actions aimed at healthy citizens. The areas pertaining to the Piacenza AUSL, including the currently active CdS, divided into the three different districts, were mapped to create guidelines for communication design (Fig. 8). Figure 9 illustrates the demographic characteristics and conformation of the observed CdS. The Piacenza area quite evidently presents a rich associative fabric. The Mixed Consultative Committees were identified, in the reconstruction of territorial relations, as the main interface body with the citizen and the territory (Fig. 10). A subsequent broader survey identified places of well-being promotion and health education, which represent 'non-health' opportunities that can contribute to maintaining a healthy lifestyle and preventing illness, starting from primary and secondary school (Register of Associations of the Municipality of Piacenza; Fig. 11). Figure 12 shows the overall data collected regarding the different actors involved: the public sector, volunteers, voluntary associations and private 'non-profit' entities, places of well-being promotion and health education.

What had emerged from the exploration of the physical territory at the beginning of the research was confirmed with the representation of the connections on a digital map. These are actual connections between realities, including very different ones, that gravitate around the CdS in an extremely extensive network. Making such connections visible clarified how the opportunity to share knowledge with citizens increases participation in activities, spreading awareness regarding the presence of a network of professionals available for care, and simplifying access to prevention services.

Conclusions and guidelines for territory with accessible healthcare | Having accepted the role of the CdS as a key node in the wellness network (Fig. 13), the communication project's underlying hypothesis acknowledged the need for a territory-based approach (physical and digital) capable of explicitly articulating the wellness network, while also envisaging the involvement of the 'healthy' citizen and the value of prevention. In this context, the designer takes on the role of 'mediator' in the relationships between the user, the health context and the territorial offer. The (dialogic) concept of apomediation, therefore, redefines the responsibility of communication as a bridge not only between doctor, patient and researcher but also and above all between technical information and possible prevention information aimed at the citizen of a specific territory and assigned local healthcare facility. Based on the implemented experience, the research aims to establish a new focus: the CdS within the territory shall correspond to the central role of the citizen in the communication framework (Fig. 14).

Following the conclusion of the studies conducted on the territory, the Design Guidelines for a map-based interface for the use of data and information are embedded within the overall project, which involves immersive and interactive remote digital tools, on-site interventions on the territory and the use of social community channels for citizen engagement (Fig. 15).

A consequent future step could consider the use of 'hybrid' immersive spaces widely distributed throughout the territory, such as CAVE – Cave Automatic Virtual Environment (Fig. 16), information-containing rooms capable of evoking experiential and substantive aspects of the real world (Gaba, 2004) for greater empathic-emotional involvement of the citizen in his or her healthcare territory. By raising awareness of the citizen's visible and accessible territorial offerings, the project aims to promote a renewed vision of the concept of prevention for health and well-being, through the offer of healthcare and social services.

The issues encountered in the study are those most closely related to the representation of the relationships between the other actors in the network: a limitation related to the need to highlight not only the 'functional', physical and tangible relationships, but also all the underlying collaborations in the territory that orient the citizen towards the experience of prevention and not just towards subsequent healthcare. The Piacenza case study represents a starting point for a broader investigation, in which the supply of health and prevention services is to be further investigated along with the physical location in the territory of healthcare spaces and their impact on the social sphere. In order to understand how to use services in an explicit strategic circuit, which is no longer primarily the prerogative of experts in the field, and to orient the citizen in the territory, it is necessary to develop a unified and widespread communication strategy, one that restores an active role to the citizen: apomediated and therefore collectively participated in, but also relational, exploring the potential of networks between physical and digital structures.

Notes

1) According to the Italian D.L. July 10, 2007, the Casa della Salute (CdS) in Emilia-Romagna (Italy) is a multi-purpose facility capable of delivering within a single physical space the full range of social-health services, promoting, through the spatial contiguity of services and operators, the unity and integration of essential levels of social-health services. More details can be found at: gazzettaufficiale.it/eli/id/2007/10/10/07A08580/sg [Accessed 28 September 2022].

2) A public policy approach across all sectors that systematically considers health in policy decisions, seeks synergies and avoids harmful health impacts in order to improve population well-being and health equity (WHO, 2014).

3) Hybrid territory is simultaneously made up of physical and digital elements; the blending of analogue and digital integrates traditional forms of territory, community, and sociality into hybrid forms of social fabric that live simultaneously online and in the streets (Quaggiotto, 2017).

4) According to Eysenbach (2008, p. 5) «[…] apomediation means that there are agents (people, tools) which stand by (Latin: apo- means separate, detached, away from) to guide a consumer to high-quality information and services without being a prerequisite to obtain that information or service in the first place, and with limited individual power to alter or select the information that is being brokered».

5) For more information, visit 'Guadagnare Salute – Rendere facili le scelte salutari' at the webpage: salute.gov.it/imgs/C_17_pubblicazioni_605_allegato.pdf [Accessed 23 August 2022].

6) Rappaport (1987, p. 122) defines 'empowerment' as a process through which individuals, organizations and communities gain greater control over issues vital to them, while Zimmerman (2000, p. 46) conceptualizes three different levels of 'empowerment' development in society: individual, organizational, community. This principle is the basis of the 'Progetti di Empowerment di Comunità, Programma n. 2, del Piano Regionale della Prevenzione – Costruire Salute 2015-2018 – Emilia-Romagna' available at the webpage: partecipazione.regione.emilia-romagna.it/iopartecipo-piazze-chiuse/costruire-salute/costruire-salute-piano-regionale-della-prevezione-2015-2018.pdf/view [Accessed 23 August 2022].

7) The concept of 'accessibility' is not intended as related solely to physical or psychological impediments (a medical concept), but rather to the difficulties of cultural inclusion dictated by the material and immaterial conditions of society itself (Greco, 2016).

References

Eysenbach, G. (2008), "Medicine 2.0 – Social Networking, Collaboration, Participation, Apomediation, and Openness", in *Journal of Medical Internet Research*, vol. 10, issue 3, e22, pp. 1-13. [Online] Available at: jmir.org/2008/3/e22/ [Accessed 23 August 2022].

Gaba, D. M. (2004), "The future vision of simulation in health care", in *BMJ Quality & Safety*, vol. 13, issue suppl. 1, pp. i2-i10. [Online] Available at: doi.org/10.1136/qshc.2004.009878 [Accessed 23 August 2022].

Greco, G. M. (2016), "On Accessibility as a Human Right, with an Application to Media Accessibility", in Matamala A. and Orero, P. (eds), *Researching Audio Description – New Approaches*, Palgrave, pp. 11-33. [Online] Available at: doi.org/10.1057/978-1-137-56917-2_2 [Accessed 23 August 2022].

Kreps, G. L. and Thornton, B. C. (1992), *Health communication – Theory & Practice*, Prospect Heights, Waveland Press.

Jones, P. H. (2013), *Design for care – Innovating healthcare experiences*, Rosenfeld Media, Brooklyn (NY). [Online] Available at: rosenfeldmedia.com/books/design-for-care/ [Accessed 23 August 2022].

Ministero della Salute – Direzione Generale della Prevenzione della Salute (2020), *Piano Nazionale della Prevenzione 2020-2025*. [Online] Available at: salute.gov.it/imgs/C_17_notizie_5029_0_file.pdf [Accessed 23August 2022].

Parrott, R. (2009), *Talking about Health – Why Communication Matters*, John Wiley & Sons, Hoboken. [Online] Available at: wiley.com/en-us/Talking+about+Health%3A+Why+Communication+Matters-p-9781444310825 [Accessed 23 August 2022].

Piscitelli, D. (2019), *First things first – Comunicare le emergenze – Il design per una contemporaneità fragile*, ListLab Editore, Milano. [Online] Available at: listlab.eu/catalogo/libri-altre-collane-books-other-series/serie-design-experience/first-things-first/ [Accessed 23 August 2022].

Quaggiotto M. (2017), "Servizi digitali per il territorio urbano – Progettazione integrata per spazi ibridi", in Bucchetti, V. (ed.), *Un'interfaccia per il welfare – Le funzioni sociali del design della comunicazione*, FrancoAngeli, Milano, pp. 83-92.

Rappaport, J. (1987), "Terms of empowerment/exemplars of prevention – Toward a theory of community psychology", in *American Journal of Community Psychology*, vol. 15, issue 2, pp. 121-144. [Online] Available at: doi.org/10.1007/BF00919275 [Accessed 23 August 2022].

Regionale Emilia-Romagna – Servizio Sanitario Regionale (2015), *Piano Regionale della Prevenzione 2021-2025*. [Online] Available at: salute.regione.emilia-romagna.it/prp [Accessed 23 August 2022].

WHO – World Health Organization (2021), *Health Promotion Glossary of Terms*. [Online] Available at: who.int/publications/i/item/9789240038349 [Accessed 23 August 2022].

WHO – World Health Organization (2017), *Communicating Risk in Public Health Emergencies – A WHO Guideline for Emergency Risk Communication (ERC) policy and practice*, Ginevra. [Online] Available at: apps.who.int/iris/handle/10665/259807 [Accessed 23 August 2022].

WHO – World Health Organization (2014), *Health in all policies – Helsinki statement – Framework for country action*. [Online] Available at: who.int/publications/i/item/9789241506908 [Accessed 23 August 2022].

Zimmerman, M. A. (2000), "Empowerment Theory – Psychological, Organizational and Community Levels of Analysis", in Rappaport, J. and Seidman, E. (eds), *Handbook of community psychology*, Springer, Boston (MA), pp. 43-63. [Online] Available at: doi.org/10.1007/978-1-4615-4193-6_2 [Accessed 23 August 2022].