UNICAMILLUS

UniCamillus Global Health Journal

no. 3 | issue 1 | pages 72 | December 2022

tab edizioni

Editor-in-Chief: Gian Stefano Spoto
Scientific Editors: Alessandro Boccanelli and Laura Elena Pacifici Noja
Registration no.: 103/2021, Ordinary Court of Rome
2 issues per year
ISSN print: 2785-3713
ISBN print: 978-88-9295-639-1
ISSN open access: 2785-4329
ISBN open access: 978-88-9295-640-7
Contributors: Francesco Aureli, Emanuele Caroppo, Paola Cavalieri, Giancarlo Ceccarelli, Stefano Collatina, Laura Dryjanska, Siria Grasso, Raffaella Inglese, Thomas Keaskin, Maria Angela Maina, Renato Mannheimer, Josè Mannu, Simone Naso, Giorgio Pacifici, Ugo G. Pacifici Noja, Gina Portella, Falu Rami, Martina Baiardo Redaelli, Dagmar Rinnenburger, Vincenzo Francesco Scala, Mir Abdul Azim Shahir, Ornella Spagnolello, Gilda Stivali, Rosario Valles, Louise Whitehead.
No. 3 | issue 1 | 2022
First edition December 2022

tab edizioni

viale Manzoni 24/c
00185 Roma
www.tabedizioni.it

UniCamillus Global Health Journal

UGHJ

edited by Alessandro Boccanelli and Laura Elena Pacifici Noja

no. 3 | issue 1 | December 2022

Table of Contents

Monoglot World

by Gian Stefano Spoto*

Every era has had its own international language, which is neither the most beautiful nor the most harmonious, it is not the most musical nor the most romantic, it is simply that of the countries that dominate the economy. It is also not strange to understand the panic of those who fear that I must start studying Chinese now.

Luckily for the Anglo-Saxons, English still holds on.

Too bad that, especially in Italy, its knowledge is often scarce, superficial, and awkwardly flaunted.

Beyond these considerations, the future of a globalized world cannot be linked to a single language, especially now that the planet is truly polycentric.

On the other hand, the communication of the future will require ever greater precision, and the use of a language other than our own will no longer be sufficient. It will not be sufficient even in cases in which it has been learned and practiced during many years of permanence abroad.

This is because languages are in our DNA, and it is excessive to claim to know others exactly like one's own, since our language is our thoughts and our feelings, with nuances that we will never find elsewhere, and it is precisely the nuances that shape the mind.

When it comes to health, medicine, science in general, precision is never enough. This occurs especially when two very distant cultures meet and the risks of inaccuracies in the dialogue multiply when a third language comes into play.

An article by Marco Trombetti explains very well the path that led us to the platform that makes our publications universal: we do not believe that we have found the definitive solution. We believe, however, that we have come closer to it than we could ever imagine in the very recent past.

It also doesn't matter who will be in control of the future in one, five, ten, twenty or thirty years. Whoever it will be, it will not have any scientific monopoly. It will be powerful, true, but the ever more extensive and rapid communication will allow discoveries and, above all, millions of contributions to scientists, researchers, professionals, scholars who are in even in the most remote parts of the world. Most importantly, they will be able to communicate in real time, with a real language.

* Editor-in-chief UGHJ.

UGHJ is young, indeed very young. We who conceive it have no pretence to make history or to claim any primogeniture should the topic of our third number become one of the dominant themes.

We just like to send a signal that others, we hope, will gather to solve this problem, which will soon become a must (forgive the now ancient Anglicism, I call on the platform to make up for it!).

The Value of Multilingual Understanding*

by Luca De Biase**

The great goals of post-pandemic humanity, from health to climate, from peace to social inclusion, transcend the interests of each, and are pursued only together with the interests of others: in fact, they are united by the need to arrive at a form of global understanding.

It can probably be argued that this is not particularly new. But the contemporary condition makes understanding, not to say cooperation, fundamentally necessary. For structural reasons. Research and education are integral parts of this contemporary dynamic.

What is it all about? In the age of knowledge, value is focused on the intangible: research, design, image, organization, the meaning of products. Digital infrastructure is essential for knowledge management, which precisely summarizes economic value. In turn, value is defined when the demander recognizes it in the offeror's proposal: thus it occurs in the dimension of communication. Unlike price, value is not only monetary, it is also cultural.

Hence, the dimension of essential exchange is transformed: it is not so much about the quantitative setting of prices and exchanged quantities of material goods, which takes place in the marketplace, but rather about the dialogue between humans who express and recognize the value of the knowledge embedded in products and services. In short, the knowledge economy works if those who offer and those who demand communicate and understand the value of the knowledge embedded in products and services. In a global context, these communications are international and cross-cultural and therefore must cross linguistic and cultural boundaries-which means that the services of the translation and localization industry are strategic. If this is true, the topic of mutual understanding between people and populations should move up the list of priorities for companies and buyers.

So what are the risks and opportunities that can be

* This journal can be published in several languages thanks to the technology and translator network of Translated, a company that states: "We are on a mission to open up language to everyone, using a powerful combination of expert human translators and machine intelligence". And Imminent, Translated's research center, has contributed this editorial, to share its views about the strategic importance of multilingual understanding.

**University of Modena and Reggio Emilia.

DOI: 10.36158/97888929564072

recognized in a scenario like this?

Busy in the daily business of developing their companies, entrepreneurs, managers of public and private enterprises, servants of the state and leaders of educational institutions may be tempted to postpone engagement in international communication activities. But innovation in the world of translation and localization may convince them to focus on the topic. If the transmission of a text from one language to another is becoming easier for major languages thanks to machine translation, the added value of taking into account different cultural contexts is all to be explored and becomes the task of important business activities. Not only marketing, at the downstream end of production, but also planning and design, at the upstream end: because products and services in themselves communicate. All platform activities, for example, are actually the product and communication of the firm combined. And the structure of platforms often adds to the form of institutions that provide a valuable service to society. Right from the design stage, the service must think about being accessible to generate mutual understanding among those collaborating in the development of social value forms.

There was a time when industrial economics might have been thought to be concerned first with the processes by which goods were produced and then with doing the advertising necessary to make them known in order to sell them. Today, communication-that is, the sharing of knowledge necessary to express and recognize value-is an integral part of the design of the product and the entire company that produces it. And the same goes for educational institutions, research centers, civic associations and so on.

Some might argue that international understanding is only effectively achieved through the development of a lingua franca, or a global tool of expression. But whatever language is chosen to bridge cultures, it actually imposes on communication the cultural structures of the country in which that language originated. Multilingualism enhances the depth of cultures that have developed their own languages over time: by adapting to another culture's modes of expression, people cannot draw on their own culture but must limit themselves to their knowledge of another's culture.

Cultural diversity is a form of wealth. As long as it does not become divisive.

How Close Are We to Removing Language Barriers in Healthcare

by Marco Trombetti*

Abstract
Language barriers create obstacles in providing high-quality healthcare and maintaining patient safety. Existing solutions, like interpreter services, cultural mediators, and smartphone apps, aren't able to overcome barriers adequately due to high costs, privacy implications, or poor quality. Machine translation offers a real solution once it becomes able to provide human-quality translations at reasonable prices. New research from Translated, a pioneer in AI-powered translation services, shows that this will soon be possible, thanks to the perfect symbiosis between professional translators and machine translation. Machine translation can radically impact the healthcare industry in three main areas: the translation of information for the general public, the translation of specialist publications such as scientific papers, patents, and disease reports, and seamless doctor-patient communication and the gathering of patient feedback.

Keywords
language barriers, machine translation, artificial intelligence, open source, innovation.

1. Introduction: The Availability of Universal Communication Tools and Their Impact on Healthcare

Allowing everyone to understand and be understood in their own language is one of the most significant challenges for humankind. Achieving this will facilitate unprecedented collaboration between human beings. Imagine, for example, if scientific research were available in every researcher's language as soon as it was published. We are not far from that, as proven by the research we conduct at Translated, a global language services provider and pioneer of AI-powered translation services. This groundbreaking research was presented at the last annual conference of the Association for Machine Translation in the Americas (AMTA) in Orlando.

By analyzing the edits made by 136,000 of the best professional translators in the world to 2 billion sentences processed by automatic translation software (machine translation), for the first time in history, we were able to quantify the speed at which we are approaching

* Computer scientist, entrepreneur, and investor.

DOI: 10.36158/97888929564073

the singularity in translation. The singularity is reached when the best-performing professional translators spend the same time correcting a translation produced by machine translation (MT) as they do correcting one completed by their peers.

In the medical field, breaking language barriers is even more impactful than in other areas. These barriers prevent patients from clearly understanding their clinical conditions, thus making it difficult for them to adhere to necessary therapy correctly. In addition, these barriers make it hard, if not impossible, for doctors to acquire the required consent to care and limit data and information needed for diagnoses and research. Today, many larger healthcare institutions offer interpreter services, but these come at significant costs. Thus, most organizations in the medical sector still rely on cultural mediators or DIY solutions, such as smartphone apps. The Covid-19 pandemic has made the need to address this problem more important than ever. According to the European Commission[1], the pandemic increased the demand for translation by 49% in the healthcare industry. Fortunately, technological advances are pushing the healthcare community to look at machine translation as a means of overcoming language barriers, and universal communication tools are close enough to provide adequate support.

We expect that machine translation will have a radical positive impact on the healthcare industry. Potential applications are in three main areas:

- The translation of information for the general public.
- The translation of specialist publications such as scientific papers, patents, and disease reports. This will provide access to global research studies and real-world data (e.g. clinical trials and drug discovery).
- Seamless doctor-patient communication and the gathering of patient feedback collection, even from discussions happening on social media among users. Here, we can combine MT with automatic speech recognition (ASR) and text-to-speech (TTS) technologies to support spoken language.

However, machine translation will perform well in healthcare only when it provides translations as good as those done by translation professionals. At Translated, we have been monitoring MT quality since 2011, and recently, we decided to use the massive amount of data we have collected to measure how far we are from providing human-quality machine translation. When we reach the singularity in translation, we can integrate real-time automatic translation in almost every device at a very accessible cost.

2. A Brief History of Machine Translation

The concept of automatic translation was mentioned for the first time in the 9th century when an Arabic cryptographer introduced techniques for systematic language translation that are, incredibly, still relevant[2]. However, the first public demonstration of machine translation was done in 1954 in the United States[3]. It was a small experiment, but it encouraged researchers to push forward. Early systems relied on bilingual dictionaries and rules stating how to translate words or phrases from a source language into a target language. Next, a statistical approach was developed: by analyzing large volumes of human translations, machines started predicting the equivalence of a phrase in the target language. The phrase-focused pattern-learning and pattern-forecasting approach drove the first version of Google Translate in the early 2000s.

Today, Google Translate and the most advanced machine translation engines rely on deep learning-based neural network models to learn and predict final outputs. This is a deeper, more reliable form of pattern detection and forecasting. In this kind of system, the translation is produced by a single sequence model trained to predict one word at a time, considering the entire source sentence and the translation that has already been provided.

In 2017, a consortium comprised of Translated, the Fondazione Bruno Kessler, the University of Edinburgh, and TAUS introduced the first adaptive machine translation, ModernMT[4]. It was initially a research project backed by the European Union[5] that later became open-source software and a commercial service powered by Translated. In this new model, MT learns in real-time from the translator's corrective feedback without retraining the translation model.

The idea for adaptive machine translation dates back to a previous research project conducted by Translated, the Fondazione Bruno Kessler, the University of Edinburgh, and Le Mans University, sponsored again by the European Union[6]. The initial idea was to create a tool to edit machine translation results and manage localization workflows. The research objective was an MT system that could learn from translators' corrections and automatically improve over time. The MT component of the solution was later separated to focus on the editing tool, which was finally released as open-source software in 2014. The European Commission included the project amongst those with the highest potential for innovation funded by the Seventh Framework Program. Translated further refined the research prototype and created a commercial version, Matecat[7], a free-to-use computer-assisted translation tool and MT editing software that the company adopted as its exclusive production tool. With Matecat and ModernMT, Translated is pushing hard for a perfect symbiosis between human creativity and machine intelligence: by removing redundant tasks, AI allows professionals to focus on the nuances of language, improving the quality of the translation. This synergy gives linguists better suggestions while MT keeps learning. Together, they become more efficient, adaptable, and cost-effective every day.

3. About the Process and the Data Collected

In 2011, Translated standardized and settled on a highly reliable metric to evaluate MT quality accurately. We call it Time to Edit (TTE): this is the average time per word required by the best-performing professional translators to check and correct MT-suggested translations. This makes it possible to switch from automated estimates still in use in the industry to measurements of human cognitive effort, reassigning the quality evaluation to persons traditionally responsible for the task: professional translators. We have been tracking Time to Edit for almost a decade, collecting over 2 billion edits on sentences effectively translated by 136,000 professional translators worldwide working across multiple subject domains, ranging from literature to tech-

nical translation and including fields in which MT is still struggling, such as speech transcription. The linguists were selected for the specific jobs they completed using proprietary AI called T-Rank[8], which gathers work performance and qualification data on over 300,000 freelancers who have worked with the company over the last two decades. The AI considers over 30 factors, including résumé match, quality performance, on-time delivery record, availability, and expertise in domain-specific subject areas.

Working in Matecat, translators check and correct translation suggestions provided by the MT engine of their choice. The data was initially collected using Google's statistical MT (2015-2016), then Google's neural MT, and most recently by Modern MT's adaptive neural MT, introduced in 2018, which quickly became the preferred choice amongst almost all our translators. Translated has been collecting the average time to edit a word continuously for over seven years.

To refine the sample, we only considered the following:

– Completed jobs delivered at a high level of quality.
– Sentences with MT suggestions that had no match from databases of previously translated segments of text.
– Jobs in which the target language has a vast amount of data available along with proven MT efficiency (English, French, German, Spanish, Italian, and Portuguese).

From the resulting pool of sentences, we removed:

– Sentences that didn't receive any edits since they did not provide information about TTE, and sentences that took more than 10 seconds per word to be edited, as they suggest interruptions and/or unusually high complexity. This refinement was required to make TTE comparison possible across multiple years.
– Work on adaptation to locale, i.e. translations between variants of a single language (e.g. British English to American English), since these are not representative of the problem at hand.
– Large customer jobs, since they employ highly customized language models and translation memories in which TTE performance is far better than average.

Time to Edit is impacted by two main variables other than MT quality: the evolution of the editing tool and the quality delivered by the translator. The influence of these two factors can be considered negligible when considering the long-run trend of improvement we observed.

4. A Surprising Linear Trend Approaching the Singularity in Translation

When plotted graphically, the TTE data shows a surprisingly linear trend. Our initial hypothesis to explain this is that every unit of progress towards closing the quality gap requires exponentially more resources than the previous unit, and we accordingly deploy those resources: computing power (doubling every two years), data availability (the number of words translated increases at a compound annual growth rate of 6.2% according to Nimdzi Insights), and the efficiency of machine learning algorithms (computation needed for training, 44x improvement from 2012-2019, according to OpenAI[9]).

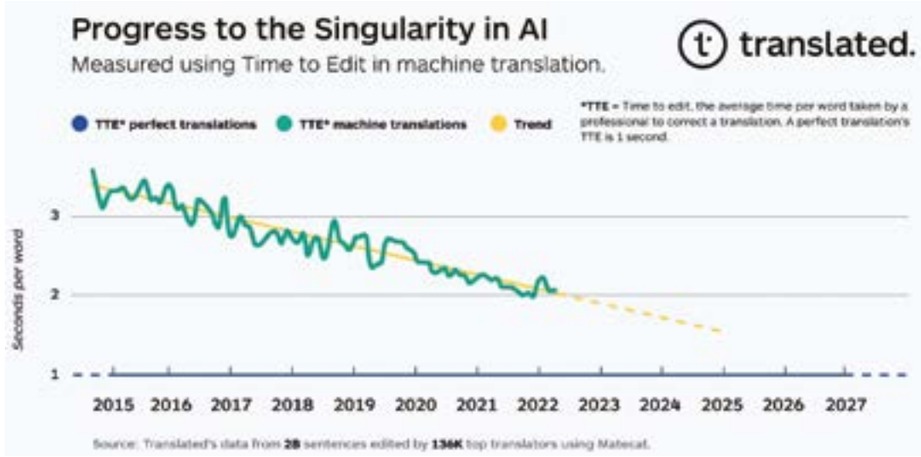

Fig. 1.

5. Conclusion: How Close We Are to Breaking Language Barriers

If progress in machine translation quality continues with the current trend, in about six years the best-performing professional translators will spend the same time correcting a translation produced by machine translation as they do correcting one completed by their peers. The exact date when we will reach the singularity in translation could vary somewhat, but the trend is clear. We are therefore close to being able to provide real-time, universal, accessible translation tools that will break the language barriers, allowing us to improve clients' health outcomes, lowering the risk of death.

From a research point of view, the evidence Translated has provided about the progress in MT quality is quite possibly the most compelling evidence of success at scale seen in both the MT and AI communities in general. Indeed, many AI researchers think that solving the language translation problem is equivalent to producing artificial general intelligence (AGI). Translated's discovery has thus quantified, for the first time in history, the speed at which we are approaching the singularity in artificial intelligence – the hypothetical future point in time at which artificial intelligence transcends human intelligence.

Notes

1. https://blogs.ec.europa.eu/emt/covid-19-how-has-it-affected-the-world-of-translation/.

2. DuPont Q. (2018), *The Cryptological Origins of Machine Translation: From al-Kindi to Weaver*, «Amodern», Issue 8, Translation-Machination.

3. https://www.semanticscholar.org/paper/The-first-public-demonstration-of-machine-%3A-the-%2C-7-Hutchins/ad014a7b7a3142e6f17eedddf4218489b56ab18e.

4. https://modernmt.com. More information on the project at https://slator.com/business-academia-join-forces-launch-next-gen-machine-translation/.

5. EU Horizon 2020 Innovation Action (2015-2017).

6. MateCat, acronym of Machine Translation Enhanced Computer Assisted Translation, is a 3-year research project (11/2011 – 10/2014) funded by the European Union's Seventh Framework Programme for research, technological development and demonstration.

7. https://matecat.com.

8. https://translated.com/t-rank.

9. https://openai.com/blog/ai-and-efficiency/.

References

Turchi M., Negri M., Farajian A., Federico M. (2017), *Continuous Learning from Human Post-edits for Neural Machine Translation*, Proceedings of the 20th Annual Conference of the European Association for Machine Translation, n. 108, June 2017.

Bertoldi N., Cattoni R., Cettolo M., A.F., Federico M., Caroselli D., Mastrostefano L., Rossi A., Trombetti M., Germann U., Madl D. (2017), *MMT: New Open Source MT for the Translation Industry,* Proceedings of the 20th Annual Conference of the EAMT.

Farajian M.A., Turchi M., Negri M., Bertoldi N., Federico M. (2017), *Neural vs. Phrase-Based Machine Translation in Multi-Domain Scenario,* Proceedings of the 15th Conference of the European Chapter of the Association for Computational Linguistics, Volume 2.

Bentivogli L., Bisazza A., Cettolo M., Federico M. (2018), *Neural versus Phrase-Based MT Quality: an In-Depth Analysis on English-German and English-French*, «Computer Speech and Language», Volume 49, May 2018.

Bentivogli L., Bisazza A., Cettolo M., Federico M. (2016), *Neural versus Phrase-Based Machine Translation Quality: a Case Study,* Proceedings of Conference on Empirical Methods in Natural Language Processing, November 1-5, 2016.

de Souza J.G.C., Federico M., Sawaf H. (2015), *MT Quality Estimation for E-Commerce Data*, Proceedings of MT Summit XV (AMTA 2015), October 30 – November 3, 2015, pp. 20-29.

de Souza J.G.C., Turchi M., Negri M., Anastasopoulos A. (2014), *Online and Multitask learning for Machine Translation Quality Estimation in Real-world scenarios*, Italian Computational Linguistics Conference (CLIC-it 2014), December 9-10, 2014.

Federico M., Negri M., Bentivogli L., Turchi M. (2014), *Assessing the Impact of Translation Errors on Machine Translation Quality with Mixed-effects Models*, Conference on Empirical Methods in Natural Language Processing (EMNLP 2014), October 25-29, 2014, pp. 1643-1653.

de Souza J.G.C., Turchi M., Negri M. (2014), *Machine Translation Quality Estimation Across Domains*, 25th International Conference on Computational Linguistics (COLING 2014), August 23-29, 2014, pp. 409-420.

Girardi C., Bentivogli L., Farajian M.A., Federico M. (2014), *MT-EQuAl: a Toolkit for Human Assessment of Machine Translation Output*, 25th International Conference on Computational Linguistics (COLING 2014), August 23-29, 2014, p. 120-123.

Federico M., Bertoldi N., Cettolo M., Negri M., Turchi M., Trombetti M., Cattelan A., Farina A., Lupinetti D., Martines A., Massidda A., Schwenk H., Barrault L., Blain F., Koehn P., Buck C., Germann U. (2014), *The MateCat Tool*, 25th International Conference on Computational Linguistics (COLING 2014), August 23-29, 2014, pp. 129-132.

Turchi M., Negri M., Federico M. (2014), *Data-driven Annotation of Binary MT Quality Estimation Corpora Based on Human Post-editions*, «Machine Translation», Volume 28, Issue 3-4, December 2014, pp. 281-308.

de Souza J.G.C., González-Rubio J., Buck C., Turchi M., Negri M. (2014), *FBK-UPV-UEdin participation in the WMT14 Quality Estimation shared-task*, 9th ACL Workshop on Statistical Machine Translation (WMT 2014), June 26-27, 2014, pp. 322-328.

Turchi M., Anastasopoulos A., de Souza J.G.C., Negri M. (2014), *Adaptive Quality Estimation for Machine Translation*, 52nd Annual Meeting of the Association for Computational Linguistics (ACL 2014), June 22-27, 2014, pp. 710-720.

Turchi M., Negri M., Federico M. (2013), *Coping with the Subjectivity of Human Judgements in MT Quality Estimation,* Proceedings of the 8th Workshop on SMT, August 8-9, 2013, pp. 240-251.

de Souza J.G.C., Esplà-Gomis M., Turchi M., Negri M. (2013), *Exploiting Qualitative Information from Automatic Word Alignment for Cross-lingual NLP Tasks*, Proceedings of ACL 2013, August 4-9, 2013.

MateCat: Machine Translation Enhanced Computer Assisted Translation, Project Presentation, Proceedings of the European Conference on Machine Translation (EAMT), May 28-30, 2012.

Digital Transformation, Global Communication and Value Generation

New Collaboration-based Models in the Health Sector

by Donatella Padua*

Abstract
This paper discusses, via the theoretical approach of Digital Sociology, how Digital Transformation has triggered new models of global collaboration and participation, also behind the strong drive of the SARS-CoV-2 pandemic, creating cross-countries areas of connection and cultural exchange and, relevantly, impacting the model of value generation.
The study applies the interdisciplinary Four Paradigm Model to the Health Care sector highlighting how this sector is engaged in a deep digital transformation where patient-to-patient and Health Care professional-to-patient collaborative models entail the need of cross-linguistic communication to express the full potential of a global and culturally diverse communication. However, several risks of inequalities have to be taken into account because of digit divide and linguistic divide issues.

Keywords
Digital Health Sociology, global communication, digital transformation, cultural diversity, inclusion, digital multilingualism.

1. Introductory Remarks

Digital Sociology is a subdiscipline of sociology, a field of science investigating the impact, development, and use of digital technologies and their incorporation into social worlds, social institutions, and concepts of selfhood and embodiment[1]. This recent discipline born in the digital age is still evolving[2]. Digital Health Sociology[3], or, Digital Sociology applied to the Health sector, aims to investigate under a sociological perspective the impact of digital health technologies on delivering Health Care (HC) in innovative ways, providing information to people, helping them to share their experiences of health and illness, training and educating HC professionals, helping people with chronic illnesses to engage in self-care and encouraging others to engage in activities to promote their health and well-being and avoid illness"[4]. In the Digital Health definition we find the evidence of the effects of Digital Transformation (DT) on societies, at global level: digital

* Associate professor of Digital Sociology at UniCamillus International Medical University in Rome.

technologies empower people by letting them access information and take part to decision processes once not possible; it allows patient-to-patient exchanges, opening a new era of social relations and shifting the focus of trust from traditional institutions and doctors to 'people like me', according to the peer-to-peer model[5]; it transforms patients as mere passive individuals into active and aware persons, informed and willing to participate, via open and citizen science, to the creation of new services, to research and health science advancements at global level. The interdisciplinary approach of Digital Health Sociology allows a multidimensional approach to the study of such a complex phenomenon as the Digital Transformation, under a cultural perspective, that is, based on the study of values, norms, definitions, languages, symbols, signals and behavioural patterns generated on the web. The SARS CoV-2 pandemic has represented an acceleration of the challenges which has added further complexity and uncertainty to this picture. Nowadays, our planet and our global society are facing massive challenges: the health of our planet and the survival of all animal and vegetal species, the climate emergency, remote work, distance training and education have made it evident during the pandemic how we all are connected. The next generations of high-speed fibre, Wi-Fi, cellular networks, low-power wide area networks, near-field communication between devices, and low-earth orbit satellite constellations are making the world more connected. The convergence of these technologies give Internet users greater speed and reliability, as well as lower latency, but deployment will require billions in capital investment from providers and this is likely to be uneven across geographies[6]. This will have a deep impact on communication: on the one side, work exchanges will extend across the globe; on the other, the massive amount of open data generated by open science platforms based on these technologies will require people to interact in different languages. This phenomenon will call for the massive use of automatic translators to have people of different cultures and ethnicities interact and share data. The intrinsic value of cultural diversity lies in the fact that if there is sameness and uniformity, there can't be any exchange, and without exchange nothing new is produced. The comparison between cultures makes it possible to create conditions that favor the exaltation of subjectivity, the development of creativity[7]. At the same time, extending the boundaries of sharing content to a global dimension encourages social inclusion and equal opportunities of development[8]: these are values at the bases of Diversity Management, an organizational model born alongside the process of globalisation[9] and widely inspiring a new concept of Digital Transformation.

Also, the idea of HC has evolved behind the pandemic drive, moving from a concept of public policy strictly grounded in national boundaries to an idea of a connected ecosystem, where people collaborate in research and innovation. At the base of it, the simple acknowledgement of being all connected, due to the evidence of the uncontrollable virality of the pandemic drive makes any country as any individual or organisation in the position of gaining a positive result from other countries' advancements in science. New needs have emerged for a resilient management able to face unpredictable surges in patient volumes, integration of in-person and virtual medicine intervention, key supplies reserves strategies, policies on critical HC; infrastructure, and contingency production facilities for critical medical equipment will all need to be addressed[10].

Digital Transformation is a great opportunity to increase the efficiency of the HC sector: more accessibility to medical services; personalized treatments; shorten waiting times (reservations, medical check-ups etc.) increasing the ability to diagnose and treat and improving the delivery of HC to citizens and patients; using computing platforms, connectivity, software, and sensors to pursue a wide range of goals: achieve and maintain a general level of well-being developing actual medical and diagnostic devices. Thanks to the new "Connected Care" system, the health services are increasingly connected and the communication distances between patients, doctors, and operators are increasingly reduced. This global scope of action calls for valuing diversity and inclusiveness, in other words, it exalts the Digital Transformation Social Mindset that we are going to illustrate in the next paragraph.

2. The Digital Transformation Social Mindset

In the current extensive organizational and management literature[11], digital transformation is explained as the introduction of digital technology into the areas of organisation, management, business. Indeed, social values, people, society and concepts as diversity, sustainability, multilingualism do not appear. If any transformation implies a creative effort, an innovative design, then, there is the human intellectual contribution, there is knowledge and information, but also a mindset that drives the connection of 'dots'. In other words, there are symbols, values, patterns, a cultural texture on which this connection of dots is made. There is something more that technology, then. This is a 'digital culture' at the basis of any organization, that we call the Digital Transformation Social Mindset (DTSM)[12]. The DTSM is "the social value of DT, aiming to generate sustainable innovation and a new social role of institutions. It is a transformational mindset providing new visions, values and abilities to dynamically analyse the context, to courageously challenge the status quo, generating innovation based on sociality by connecting people and technology to create a social value that is aware of the environment, of ethical values, of diversity and future generations"[13]. In a complex and constantly evolving digital environment, the Four Paradigm Model (FPM)[14] allows us to grasp DT in its multidimensionality and to know its genetic components, that is, principles and basic values. The FPM helps in exploiting the potentialities of the digital by any institution balancing technology with human, profit with planet, business with people. This means acquiring the mindset (DTSM) of being able to capture and drive opportunities to the advantage of the institution and its people and to society as well, by limiting distortions and negative impacts. Multilingualism is part of this model as it allows institutions to connect people in an inclusive way, respecting diversity and localization.

According to the FPM, the digital landscape may be explored by four key dimensions. These four dimensions synthesize phenomena of different nature: social, as social

movements, social networks and communities, peer-to-peer models; economic, such as value chains and business models; technological, as crowdsourcing platforms or cloud digital technologies; organizational, as organizational models. These phenomena aggregate around four paradigms: Bottom-up, Connecting the Dots, Horizontality, and Sharing[15] representing four different angles, each focusing on different sides of digital phenomena.

Below, the first paradigm is applied to some examples in the HC sector, to highlight how DT entails new models of collaboration, molding new patterns of value generation.

3. The Bottom-up Paradigm: the Revolution in Value Chains

Nowadays, social media empower customers to make the first move and generate comments, reviews, contents in any form such as videos, pictures, text throughout any social media and device, in any context as at home, on the go, and in formal and informal environments. Brands, institutions, organisations have to respond to manage this process. The focus of organizations, today, lies in designing digital marketing and communication strategies aiming to engage a customer, a user, a patient in a conversation. Moreover, if traditional media communication processes work one-to-many, social media and communities, today, allow a many-to-many conversation. If the customer, in the 'analogic age', was in a passive position, receiving 'top-down' information, today, s/he transforms into an uncontrolled 'bottom-up' content generator. Customers as patients are not anymore consumers with no rights to reply, but they are rather producers of information, services or products and consumers at the same time: the new 'pro-sumers'. This active approach can add value to an organization by incorporating individuals' cognitive and emotional resources. In the current digital age, society and people whose identity, personality, and social life have been deeply transformed, want and demand to participate, to be protagonists, to be active. They wish to interact with companies and collaborate in the creative process. They want to co-create, in other words. Co-creation shifts the place of creation and extraction of value into the interaction between business and consumer. Value is no longer created by transactions of goods and services but by a new model in which participation and experiences are at the centre of the value generation process. In this way, value generation is contextual to the process of creation or utilization of a product or service. The market becomes a forum for conversation and interactions among consumers, consumer communities, and companies. In the HC sector there are many examples of co-creation: The MaketoCare (www.maketocare.it) initiative is promoted by Sanofi Genzyme, Specialty Care division of Sanofi. Sanofi Genzyme is specifically providing solutions for rare diseases, multiple sclerosis, oncology and immunology. MaketoCare supports initiatives and projects arising from the cleverness and passion of the Maker community that collaborates to the design of new solutions. Nevertheless, the website performs only two languages, which means that many countries are excluded from this project and Sanofi can't exploit the full value out of the project. Likewise, Design HC Innovation (designHCinnovation), is a platform focusing its scientific interest on the study of bottom-up HC innovation processes: it concentrates particularly on those which present a collaborative nature and whose development journey is independent and experimental rather than institutional. This interesting initiative promoting bottom-up projects states the need of an inclusive approach, but in terms of language, it doesn't appear to be multilingual, performing two language options only.

Cuure is another example of brand-customer deep interaction in the HC-wellness area, as the platform allows a full customisation of food supplement via a co-creation interaction. Cuure (cuure.com) has a dedicated window to the recognition of different countries and languages, performing five languages. Global health crowdfunding platforms are other examples of tight bottom-up collaboration to the creation of new initiatives. Two examples are GoFundme, a crowdfunding platform for medical expenses, emergencies, health campaigns or Johnson&Johnson use of QuickFire Challenge crowdsourcing platform to help identify, empower and rehabilitate potential breakthrough HC ideas from innovators around the world. Other examples are online petition platforms as weareplannedparenthoodaction.org/ run by Change.org, which are global platforms to make petitions and activate change, or Foldit, a crowdsourcing computer game to take part in research via an open science model of bottom-up interaction. In these last cases, the platforms are multilingual and each country has a language-specific website, which appears to be an effective global strategic approach to international communication.

4. The Connecting the Dots Paradigm

According to the FPM, the CtD paradigm refers to digital-analogic ecosystems characterized by nodes and connections[16]. According to the theories of complexity[17], of social networks[18], of social capital[19], value is not only within the nodes (human nodes, represented by people, or technological nodes, represented by devices or servers) or touchpoints across the patient's experience journey, but it is also within what flows across the connections and is exchanged. Any kind of resource may be exchanged: information, data, decisions, actions, but, relevantly, also emotions, feelings: a key component of customer journeys.

The interaction is at the base of the value generation. The exchange generates a value which is superior than the sum of the single dots, taken separately, as the School of Gestaldt[20] teaches us.

CtD is quite a complex paradigm, very useful to grasp the 'philosophy' of the digital landscape, though. From the Steve Jobs' Connecting the dots to the sociologist Vilfredo Pareto's 'Instinct of combinations', in the digital ecosystem, 'platformization' of products is a phenomenon reflecting the dematerialization trend transforming tangible products into networks of intangible services connecting one to the other. Many are the reasons behind the transformation of physical products and services into service ecosystems: the increasing pervasiveness of the IOT technology, connecting objects via sensors, the demand for rich, quality and diversified experiences, the change of perceptions and behaviours of consumers. It is no longer important only what is sold to the final consumer, but everything that revolves around the product or service itself and

the entire flow of connections that are created. Products tend to evolve and transform into integrated systems that pass through the different stages of experience: from commodity to goods, to services, to experience.

An example is Apple Health app[21], to help users (doctors, professionals, nurses) to be engaged in their patients' health with ways to visualize, securely store, and share their health data. The app can aggregate patients' health records from multiple institutions alongside their patient-generated data, as well as share their health data with a provider to facilitate richer conversations. In this way, the patient is at the center of the caring process. Patients are enabled to download their health records and share their health data with a provider, being enabled to more actively participate in their health, as well help drive overall adoption of the patient portal. With real-time translation support for eleven different languages, the Apple Watch's built-in voice assistant can tell the patient how to say almost anything instantly. This technology indicates how Apple adopts an inclusive multilanguage strategy, effectively reinforced via the instant translator. CTD emerges also with on-demand products and services. Clouds in HC are examples of integrated capabilities to improve the entire HC experience, supported by AI solutions. Enhancing patient engagement, by delivering secure personalized experiences that engage patients through every point of care; empowering health team collaboration by connect, engaging and managing HC team with tools that help them provide the best possible care; Improve health data insights by getting insights to improve patient care by connecting data and using predictive analytics to identify clinical trends, while protecting health data. Microsoft[22] which is a leading company, performs ten languages and different localisations, valuing the role of language for communication, but, obviously, for profit as well.

5. The Horizontality Paradigm: Direct and Seamless Communication

There are some phenomena in the digital realm that highlight how social, technological, and economic patterns are turning from a vertical into horizontal models. Obviously, horizontality is a 'fictitious' device which tries to stigmatize a very complex and multidimensional revolution occurring across human, technological, and economic realms.

The Horizontality paradigm emerges from four key phenomena, as synthetically described below: 1. The pervasiveness of digital technologies puts social networks at the centre of new social models with fast interaction and high-speed communication, shaping a new 'horizontal society'. Easy access and constant connection empowers peer-to-peer relationships. Network relations oppose to linearity and verticality. 2. The creation of horizontal value chains based on peer-to-peer sharing and on the production and control of information is not governable by traditional top down value chains. 3. The exponential increase of global competition and the disruption of new competitive models as digital platforms force organizations to evolve their vertical top-down structures, their vertical power, and control systems into horizontal, network, and hivenet organizational models. 4. Speed of viral contagiousness fuelled by connectivity, pervasively spreading on 'the surface' through all connected

ecosystems. These phenomena imply that knowledge develops more 'on the surface' than according to mainstream vertical traditional patterns, the latter based on depth rather than superficiality. Main reason for this is the high speed at which we receive massive amounts of information, that does not leave us time to absorb it and provide depth. The sociologist Zigmunt Bauman has well defined how, in this context, relationships tend to become fluid, fast, hybrid, in one word, liquid[23].

What is relevant to our reflection is the value generated by a core feature of the horizontal paradigm: transmediality and convergence[24]. Transmediality, favoured by the proliferation of media across the digital landscape, is a phenomenon which is not media-specific and therefore can be realized by a large number of different media. Each media adds an enrichment, an integration to the user experience. A transmedial case is the campaign 'The Weight of the Nation'[25] which brings together the Institute of Medicine (IOM), Centers for Disease Control and Prevention (CDC), National Institutes of Health (NIH) and HBO. Designed to confront America's obesity epidemic, the campaign combined a documentary film series, social media engagement, books, DVDs and public screening kits. The content has flown across different media, sharing personal stories, informing family members, sharing experiences between individuals experiencing similar health conditions. In this case, the value of sharing the content globally via a multi language platform would have been massive.

6. The Sharing Paradigm

The sharing paradigm may be positioned under the umbrella of the so-called sharing economy, in a frame of 'collaborative economy' or the so-called co-economy, an umbrella term referring to the practices of sharing, exchanging, or rental of goods and services to others through IT without the transfer of ownership. Being the notion of 'collaboration' at the core of the sharing economy, concepts as 'collaborative consumption', 'peer-to-peer economy' express a decrease in transaction costs, in information asymmetry, and a consequent improvement of efficiency. But how can the health sector capture such value? On the web, the 'users' are people sharing experiences and knowledge with other people. The proliferation of social media empowers the web in transmitting opinions from peer to peer, spurring the virality of the message via WOM (word of mouth) and creating an environment which is increasingly more difficult for institutions to control. Sharing between health institutions and patients, citizens, helps in personalizing the one-to-one relationship and in producing trust and loyalty. This interactive communication, user-generated content (UGC) mainly, is a precious source of information in understanding needs, tastes, and behaviours in a much deeper way than through traditional offline market research. World Blood Donor Day was established in 2005 by the World Health Organization and is celebrated worldwide. On Instagram, #worldblooddonorday shares images and videos of the global event. Some of them are in various languages: English, German, Turkish, Portuguese, and many other Indonesian and Asian languages: automatic translation embedded in Instagram helps. Tik-Tok, the well-known social media has run a Search

for Multiple Sclerosis, with the intent of diffusing what are the symptoms of a MS attack or to support in case of Parkinsons' emergencies[26]. Stepes is a drag-and-drop portal which analyzes the video files and generates a translation quote in real time. This professional Tik-Tok video translator operates over 100 languages. The #istayhome-for Challenge Hashtag born during Covid-19 time spread all over Europe and world and across all social media, encouraging taking a selfie with a sign. It soon enough became viral and reached every corner of Europe helping the community stop the spreading of the virus. Most diffused Social media adopt powerful translation tools as Stepes. Also Vlogs and Podcasts for professionals like HCTransformers Actionable insights for executives, are powerful tools for training. Vitals instead, is the largest online database for patient reviews for doctors and facilities. These are just a few examples of how sharing on the web may become a powerful social tool: however, the more language diversity is observed by social media translators, the more the social impact is huge. Professional services as Translated perform an excellently extended range of languages, 195 exactly, supporting any form of need in translation.

7. Conclusive Remarks: Risks of Digital and Linguistic Divide

We have seen examples of the application of the FPM to the HC sector and how DT is deeply affecting the realm of health. The pervasiveness of digital technologies keeps changing our behaviours and impacting our lives. Rating a doctor, starring and making a review of a HC service; signing in for an online HC petition; twitting an opinion, good or bad, about an health device; posting a like to a picture of a global social HC initiative; blogging or vlogging a disease experience and sharing it with other patients; flash-mobbing for a social movement supporting governmental health public assistance. What do all these events have in common? Certainly: action, protagonism, freedom of expression, but also, identity and emotions, experiences, memories. These social phenomena find their origin in the stakeholders' empowerment provided by digital technology.

This paper has highlighted how digital technologies entail global social actions that gain value by the participation of different cultural geographies and regions. Connectivity, the widespread access to digital devices and omni-channel user-journeys disrupt any barrier to communication, fulfilling the Marshall McLuhan prophecy of a 'Global Village'. Behind it, individuals and groups' bottom-up initiatives, the connection of dots between technological and human nodes, patient-to-patient 'horizontal' patterns, viral sharing of user generated contents are the driving concepts behind the Four Paradigms Model[27] that explains the Digital Revolution under a socio-cultural and sustainable, inclusive, value oriented perspective.

In this study we have shed light on different multilingualism strategies: options for multi language translation, language specific websites, real-time translators via built-in voice assistants, different languages localization (multi language options for one country), machine translation apps, videos with subtitling translators.

In this picture, multilingual automatic translation technologies acquire a remarkable value as they represent a key prerequisite to a seamless global communication. Indeed, even if websites, social media, e-commerce platforms, forums and communities quite widely embed automatic translators, often the limited selection of languages provided or an imprecise translation lead to communication bugs and misunderstandings. But there are several other linguistic barriers that we ought to mention, that are not evident to web users, as they lie in the deeper layers of the web: multilingual SEO[28] or language-based, algorithmic information disparities generate dangerous forms of digit divide in accessing information in search engines. It is the case of crisis-prevention resources for suicide available through the Google search engine. A recent study[29] reveals that Google searches in English from within the United States still have the highest likelihood of triggering the display of additional crisis-prevention information prominently shown in addition to the regular search results (i.e., Google's suicide-prevention result), while searches in Spanish from within the United States appear to be informationally disadvantaged. Or the exclusion of ethnical minorities speaking languages not covered by translators due to limited value for money, as in the case of Guaranì speaking ethnical group in Paraguay[30].

This is just an example of how multilingualism, being a powerful tool to respect and manage cultural diversity (diversity management), may become a socio-political complex issue at global level.

The lack of a multilinguistic strategy in communication may not represent the only barrier to the exploitation of the benefits of a global digitally supported communication. Particularly in the HC sector, the shared definition of Digit Divide determined by the lack of digital infrastructures or devices, leads to disparities in patients' portal adoption, telehealth care access, or ability to utilize patient-facing practice management software, like online appointment schedulers; low literacy and income levels, geographical restrictions, lack of motivation to use technology, lack of physical access to technology, and digital illiteracy contribute to the digital divide.

Notes

1. Lupton D. (2015), *Digital Sociology*, Routledge, London, p. 1.

2. *Ibid.*; Neal R. (2010), *Expanding Sentience: Introducing Digital Sociology*, ed. by Dawson F., Neal S., Temetic Research, Silicon Prairie News; Orton-Johnson K., Prior N. (2013), *Digital Sociology. Critical Perspectives*, Palgrave Macmillan, London; Parsons T. (1937), *The structure of social action*, McGraw-Hill, New York; Deuze M. (2012), *Media Life*, Polity Press, Cambridge; Daniels J., Gregory K., McMillan Cottom T. (2016), *Digital Sociologies*, Policy Press, Bristol.

3. Henwood F., Benjamin M., *Understanding digital health: Productive tensions at the intersection of sociology of health and science and technology studies*, Volume 41, Issue S1 Special Issue: *Digital Health: Sociological Perspectives*, October 2019 pp. 1-15 [available at: https://onlinelibrary.wiley.com/doi/10.1111/1467-9566.12898#shil12898-bib-0036 date of last access 11/25/2022]; Lupton D. (2017), *Digital Health. Critical and Cross-Disciplinary Perspectives*, Routledge, London; Petersen H. (2018) *Digital Health and Technological Promise. A Sociological Inquiry*, Routledge, London.

4. Lupton D. (2017), *Digital Health. Critical and Cross-Disciplinary Perspectives*, Routledge, London.

5. Edelman Trust Barometer [available at: https://www.edelman.com/trust/2022-trust-barometer; latest access: 12/01/22].

6. McKinsey Social Institute, 2019, p. 29.

7. Wieviorka M. (2002), *La differenza culturale*, tr. it. Laterza, Roma-Bari.

8. Sen A. (2000), *Development is freedom*, Anchor, Hamburg.

9. Padua D. (2007), *Sociologia del Diversity Management. Il valore delle differenze culturali*, Morlacchi, Perugia.

10. McKinsey Global Institute (2020), *The path to the next normal* [available at https://www.mckinsey.com/~/media/McKinsey/Featured%20Insights/Navigating%20the%20coronavirus%20crisis%20collected%20works/Path-to-the-next-normal-collection.pdf; latest access: 11/20/22].

11. Westerman G., Tannou M., Bonnet D., Ferraris P., McAfee A. (2012), *The digital advantage: How digital leaders outperform their peers in every industry*, «MIT Sloan Management Review» and Capgemini Consulting, MA, 2, 2-23, 2012; Rogers, D.L. (2016), *The digital transformation playbook: Rethink your business for the digital age*, Columbia University Press, New York; Kane G.C., Palmer D., Nguyen-Phillips A., Kiron D., Buckley N. (2017), *Achieving digital maturity*, «MIT Sloan Management Review», 59(1) in «MIT Sloan Management Review» in collaboration with Deloitte University Press Research Rep.

12. Padua D. (2021), *Digital Cultural Transformation. Building Strategic Mindsets via Digital Sociology*, SpringerNature, New York.

13. *Ibidem*, p. 7.

14. *Ibidem.*

15. *Ibidem*, pp. 137-230.

16. Bar-Yam Y. (2002), *General features of complex systems*, Encyclopedia of life support systems, EOLSS UNESCO Publishers.

17. Luhmann N. (1995), *Social systems*, Stanford University Press, Stanford.

18. Chiesi A.M. (2003), *Problemi di rilevazione empirica del capitale sociale*, «Inchiesta», 33 (139), pp. 86-97.

19. Coleman J.S. (1990), *Foundations of social theory*, The Belknap Press of Harvard University Press, Cambridge, MA; Putnam R.D. (2000), *Bowling alone: The collapse and revival of American community*, Simon & Schuster, New York.

20. Max Wertheimer (1880-1943), Kurt Koffka (1886-1941), and Wolfgang Köhler (1887-1967) founded Gestalt psychology in the early 20th century.

21. https://www.apple.com/healthcare/health-records/, date of last access: 11/30/22.

22. https://www.microsoft.com/en-us/industry/health/microsoft-cloud-for-healthcare, date of last access: 11/30/22.

23. Bauman Z. (2000), *Liquid modernity*, Polity, Cambridge.

24. Jenkins H., Deuze M. (2008), Editorial: *Convergence culture*. «Convergence», 14 (1), pp. 5-12.

25. https://www.pm360online.com/the-rise-of-transmedia-storytelling/, date of last access: 11/18/22.

26. https://www.theverge.com/2021/1/23/22244673/parkinsons-tiktok-crowdsourced-pill-bottle, date of last access: 11/08/22.

27. Padua D. (2021), *Digital Cultural Transformation. Building Strategic Mindsets via Digital Sociology*, SpringerNature, New York.

28. Multilingual SEO is a digital marketing strategy and technique to increase visibility by ranking high on Search Engines to target multilanguage markets.

29. Scherr S., Arendt F., Haim M. (2022), *Algorithms without frontiers? How language-based algorithmic information disparities for suicide crisis information sustain digital divides over time in 17 countries*, «Information, Communication & Society», July 21, 2022, Taylor&Francis [available at: https://www.tandfonline.com/doi/abs/10.1080/1369118X.2022.2097017, latest access: 11/28/22.

30. Grazzi M., Vergara S. (2012), *ICT in developing countries: Are language barriers relevant? Evidence from Paraguay*, «Information Economics and Policy», Volume 24, Issue 2, June 2012, pp. 161-171.

Global Health Concepts Taught to Undergraduate Medical Students through an International Intensive Infectious Disease Course (IDEAL+) Organized by Erasmus+ Strategic Partnership Projects

by F.I. Wolf, K. de Gaetano Donati, R. Cauda, I. Johannessen, C. Macintosh, E. Vlieghe, J.-P. van Geertruyden, P. Van Damme, L. van Bruggen, V. Papaevangelou, M.M. Addo, C. Le Jeune, C. Charlier-Woerther*

Abstract

IDEAL programmes have been a constructive international initiative which allowed to organize successful international intensive infectious disease courses (I3DC, IDEAL and IDEAL+) for 8 consecutive years, progressively growing from 3 up to currently 7 partnering institutions across Europe. We here aim to share this teaching experience with the readers and stress how it turned out to be an opportunity to introduce undergraduate medical students to Global Medicine and Global Health, issues becoming more and more key in current medical education.

Keywords

Infectious disease training, international teachers, active learning, training the trainers, Covid-19 pandemia, online learning, migration, vaccination, socio-cultural conditions.

* Federica I. Wolf: UniCamillus International University of Medical and Health Sciences, via di Sant'Alessandro, 8, 00131 Roma. Katleen de Gaetano Donati, Roberto Cauda: Institute of Infectious Diseases, Gemelli Hospital, Catholic University of Sacred Heart, Rome, 00168, Italy. Ingo Johannessen, Claire Macintosh: University of Edinburgh and NHS Lothian Infection Service, Edinburgh, EH16 4SA, United Kingdom. Erika Vlieghe, Jean-Pierre van Geertruyden, Paul Van Damme: Department of General Internal Medicine Infectious Diseases and Tropical Medicine, Global Health Institute, Vaccine and Infectious Disease Institute, University of Antwerp, Wilrijk, 2610, Belgium. Lisette van Bruggen: University Medical Center Utrecht, NL. Vassiliki Papaevangelou: Third Department of Pediatrics, University Hospital Attikon, National and Kapodistrian University of Athens, Athens, 12462, Greece. Marylyn Martina Addo: University Medical Center Hamburg-Eppendorf, Institute for Infection Research and Vaccine Development (IIRVD), Bernhard-Nocht-Institute for Tropical Medicine, Department for Clinical Immunology of Infectious Diseases, Hamburg, Germany. Claire Le Jeune, Caroline Charlier-Woerther: Department of Internal Medicine, Cochin Port Royal Hospital, Necker-Enfants Malades, Institut Imagine, Assistance Publique – Hôpitaux de Paris, Paris, 75015, France, Institut Pasteur, French National Reference Center, WHO Collaborating Center for Listeria, Biology of Infection Unit, Inserm U1117, Paris, 75015, France, Université Paris-Cité, Paris.

DOI: 10.36158/97888929564075

1. The History

It all started from a group of prestigeous European medical schools (Charité –Berlin, Antwerp, Edinburgh, Karolinska – Stockholm, Semmelweis – Budapest, Cattolica – Rome, Descartes – Paris) partnering since years in Erasmus Projects, and willing to go a step further in this cooperation.

We challenged two very important issues: 1. how to implement student's international experience and 2. how to homogenize medical curricula around Europe to reach a standardized high level of medical training in EU countries. We were working on "tangible academic internationalization" following the principles of Bologna process, and anticipating what is now routinely evaluated in any European Academic Institutions.

This enthusiastic group, sparkled since 2010 a series of successful Erasmus cooperation projects (CHarME, MED MOTION) that then focused on Infectious diseases teaching. I3DC, late revolving as IDEAL, IDEAL+ and the current IDEALiTER) was implemented with the idea of organizing international focused teaching modules characterized by a commonly agreed core curriculum, officially recognized in each partnering Institution. The peculiarity of these modules was that the courses were held by expert international teachers from the various partners Institutions, traveling around Europe to lecture local students. The volunteer local students, and host Erasmus students if interested, would benefit from an international experience since they had selected teachers from different countries, and a newly structured course that was very challenging[1].

From the IDEAL+ programme that started in 2019, we also wanted to introduce challenging new methodology to implement interaction between teachers and students (flipped classes, role playing, case study, clinical cases, serious games) with the aim to enhancing the attractiveness and effectiveness of the course[2, 4].

2. Building up an ID International Intensive Course

Why did we choose to focus on Infectious Diseases? Interestingly, one of the topic suggested by an Erasmus student's survey was Infectious Diseases (ID) teaching. They felt they needed more teaching about transmittable diseases, predicting what would become the main medical issue of 2019-2020. In addition, ID course turned out to be a challenging choice for manyfold reasons, among which: 1. As suggested by the students survey, ID was taught in European medical curricula in different ways, most of the time it was spread in many, if not all, clinical disciplines which include infectious diseases, occasionally it was an independent course[5]. This made European medical students very heterogeneous concerning ID knowledge, leading to the need for harmonization. 2. ID is a discipline that continuously requires profound update and new expertises to adapt to patient's need, such as emerging infections, rapidly increasing internationalization and immigration, different social context, vaccinology, and other global health issues[6, 7]. It was therefore the ideal topic to challenge cooperation among teachers sharing and complementing their knowledge and clinical experience. Indeed many of them had practiced in the developing countries (Africa, South America and far East), or they were involved in projects to improve the local health system, as in the case of our partners from Global Health Institute, Antwerp University, Belgium[8].

In addition, as a part of the IDEAL programme, we also established a very interesting cooperation with some medical Institution of Uganda and we were able to invite some Doctors to join the teaching staff, sharing their experience in managing different tropical ID and dealing with outbreaks such as Ebola.

The core teaching staff (Paris, Rome, Edinburgh) met in Paris to develop the course program, with the aim to blend classical topics with active learning through paradigmatic clinical cases. The course was then enriched by adding complementary issues, such as gender infections, vaccinology, tropical medicine, basic approaches to outbreak management.

Another problem was the fact that students from participating European universities attended the course at different career levels, from 2nd to 5th year. To integrate the ID course into the different European curricula, we had student's groups from different levels: 3rd year students from Paris and Rome, fresh from microbiology and basic pathology concepts, for this students the ID course was granted as equivalent to the curricular course. Edinburgh students were heterogeneous in levels (from 2nd to 5th year) and was initially very successful because there was no ID focused course in their curriculum. Taking the course, students were granted optional credits. Antwerp groups were composed by more advanced students from 4-5th year and the course was included in the compulsory credits of student's choice. So how to attract attention by such a diversified student population? The answer was found in new teaching approaches: active involvement of students that, working in small groups, they could learn from each other, exchanging interpretation and reasoning. Indeed, student's feedback of the course was very important for us. We asked students to evaluate every single lecture and, at the end of the week, the overall course.

Interestingly, despite the heterogeneity in student's curricular levels, their course evaluation and comments were similar, indicating that the learning approach was effective regardless of the student's training levels.

In parallel to the course, a learning source was also established on the project website (https://ideal.u-paris.fr/). It contains essential information about the different topics, to be acquired before starting the practical classes. This learning open source is available to anybody wiling to study or to refresh ID topics, containing learning materials from the course teachers or web materials considered useful to the students.

To complete the ID skills, students who followed the course were invited to participate to a summer school held in Paris-Descartes where, for one week, they were challenged by ID emergency clinical cases, scientific exercise through games and they experienced, most of them for the first time, ICU (intensive care unit) simulation sessions at the Illumen simulation center of Paris-Descartes[9].

So far we have trained close to 1000 medical students around Europe: we are aware this number is exiguous within the medical student's population, and that the actual cost of this specific training could be relevant. Of note, all teachers volunteered to this experience with just travel cost reimbursements (see Table 2). While the ratio between students and teachers seems to be disproportionate and probably unreal, we should consider that we trained a fair amount of teachers that learned and experienced this successful methodology, applicable to any clinical courses. Indeed the trained teachers declared to have introduced the newly acquired teaching strategies in their regular courses. In addition, the online

training we experienced during Covid-19 lockdown, changed our vision of the course.

3. The Experience of the Covid-19 Lockdown

Beginning 2020, when the SARS-CoV-2 outbreak reached Europe, the first lockdown was declared. At that time, we had just concluded a teacher's training session held in Paris by a group of experts in medical education (from Dept. Of Medical Education of Utrecht, NL and Aston University, UK) who trained the teachers how to use modern tools to make lectures more attractive and effective[10].

We suddenly had to re-organize our International Intensive Infectious disease courses to be held completely online[11, 12]. It was a big challenge to keep the interactivity with and among the students. Taking advantage of the previous teaching experience and the summer school activities, we used web sources and tools, such as organizing virtual groups to make them work together on a specific topic or on a clinical case. Surprisingly we succeeded in maintaining interaction among students and teachers and the results were satisfactory and rewarding. This circumstance turned out to be an opportunity to experience how web could be instrumental to teaching and learning, an useful and handy resource to complement student's learning that we should continue using and proposing. We believe that the sudden changes that we had to introduce in medical education and skill acquisition during Covid-19 lockdown, is one of the good lesson learned during this terrible pandemic[13, 15].

4. The Future

The project was granted for the third time. IDEALiTER aims at creating a new advanced study programme that addresses unmet basic needs (crisis management, cooperation, communication). It targets EU-level health professionals on the frontline of crises and uses innovative training approaches to disseminate these skills. This new project, well situated in the international context, targets more advanced students but also care personnel (medical and paramedical) with working experience, by giving them a more global vision on emerging infections, vaccination, communication, media education including an international vision. This project, which involves the previous 7 EU Institutions, aims to prepare the health workforce of tomorrow who will have to know how to react to ID crises that have no borders. The project aims to promote new approaches to training health personnel at European level and contribute to European leadership in the fight against infectious diseases. The innovative nature of the project is reflected in 4 dimensions: content, target audiences, pedagogical methods and a new approach to dissemination by coaching non-partner Institutions. The new IDEALiTER project clearly focuses on Global Health issues.

5. Global Health Involvement

In recognition of our increasingly globalised world, global health is becoming a required component of the medical school curriculum in Europe[16]. Since the first course we organized in 2015, we focused on "Emerging infections", to evaluate how those infections spread around the globe and became a burden worldwide. We then addressed the migration-related diseases and discussed the interventions of more developed countries to control and contain ID in third countries (see Table 1).

As the years went by, we realized that it was particularly important to sensitize young

Table 1. Agenda of IDEAL course 2017 issue. Global Health related topics are shown in bold italic.

INTERNATIONAL INTENSIVE INFECTIOUS DISEASES COURSE 2017					
Time	**Monday 6th**	**Tuesday 7th**	**Wednesday 8th**	**Thursday 9th**	**Friday 10th**
9:00-9:50	Welcome & Basic principles (Italy)	Pneumonia (Italy)	Urinary Tract Infections **with quinolons** (France)	Infective Adenopathy (Scotland)	Viral hepatitis (Scotland)
10:00-10:50	Meningitis (Italy)	Tuberculosis (Italy)	***Conference on global antibiotic consumption and antibiotic resistance* (local team)**	Immunocompromized infections including HIV (Belgium)	***Emerging infections*** (Scotland)
11:00-11:50	Encephalitis including emerging encephalitis (Italy)	Pathological session (Italy)	Exanthema (Scotland)	***Fever in the returning traveller*** (Belgium)	Food-borne infections (France**)**
12:00-12:50	Skin infections (France)	Ear, nose and throat infections (France)	Sepsis + clinical cases (Scotland)	***Migrant and Health*** (Belgium)	Bites and scratches infections **with cyclins** (France)
13:00-14:00	**Lunch**	**Lunch**	**Lunch**	**Lunch**	**Lunch** /special cases session (France)
14:00-14:50	Sexually-transmitted diseases (France)	Nosocomial infections (France)	Endocarditis (Scotland)	***Interactive conference: working in Africa: everything you want to ask to JP and CM*** (Scotland+France)	Interactive Clinical cases adenopathy + Mononucleosis+ endocarditis **(local team)**
15 :00-15:50	HIV infection (Italy)	Role of Vaccination in control of Diseases (Belgium)	Antibiotic of the day 30 min aminoglycosides /glycopeptides (Scotland) and photoquiz 30 min (France)	Foreign body infections with clinical cases (Belgium)	Interactive clinical cases (TB, meningitis, pneumonia) **(local team)**
16:00-17:00	Antibiotic of the day: basics 30 min ***b-lactams*** 30 min **(local team)**	Vaccination (challenges & perspectives (Belgium)	Clinical cases (UTI/sepsis/skin) **(local team)**	Antibiotic of the day (macrolide/cotrimoxazole) (Belgium)	Photoquiz **(local team)**

Table 2. Students participating and teachers involved in I3DC and IDEAL courses 2015-2022.

PROJECT – Course Year		Course delivered	Trained students	Teachers involved
MED MOTION	2015	3	60	15
Self Supported	2016	3	70	20
IDEAL	2017	4 + 1*	82 +15	25 + 6
IDEAL	2018	4 + 1	85 + 19	26 + 5
IDEAL	2019	4 + 1	79 + 21	27 + 4
IDEAL+	2020	6	110	32
IDEAL+	2021	6	125	35
IDEAL+	2022	6	130	38
total		**39**	**796**	**232**

*Summer course on ID Emergencies at Paris-Descartes.

medical students to ID risks and prevention, organizing sessions with practical examples (e.g. traveller vaccination, sensitization and training). When we started with ID emergencies summer course we organized exercises on how to handle an epidemic event, how to do effective prevention by vaccine sensitization etc.

In addition, the participation of medical doctors from Uganda was an extraordinary opportunity to learn their experience on how to manage an outbreak, like in the case of Ebola[17].

Concepts of Global health were present from the beginning in our courses, but during these 8 years of teaching, the global health issues acquired increasing relevance in the ID course teaching materials. Calls for decolonizing global health have recently amplified, and medical schools must seize the opportunity to train practitioners better prepared to contribute equitably[18].

Finally, the newly approved project IDEALiTER, will concentrate specifically on ID characterization and management in crisis conditions, preparing doctors and paramedics to ID emergency with a specific vision of global medicine and health.

6. Conclusion

Worldwide increases in global migration and trade have been making communicable diseases a concern throughout the world and have highlighted the connections in health and medicine among and between continents. Physicians in developed countries are now expected to have a broader knowledge of tropical disease and newly emerging infections, while being culturally sensitive to the increasing number of international travellers and ethnic minority populations. Clearly, science is advancing at an amazing pace so there are prioritized topics that need to be taught to medical students, among those, global health issues, comprising emerging infections, migrant health, transmittable disease prevention, religious and socio-economic implications, investment strategies and their consequences. Exposing medical students to these global health issues encourages students to enter primary care medicine, obtain public health degrees, and practice medicine among the poor and ethnic minorities. We aspire to promote a generation of socially conscious physicians better prepared to care for an increasingly diverse global citizenry, no matter where they practice in the world.

Our International intensive ID course was the perfect opportunity to instill global health concepts to undergraduate students by providing concrete examples of IDs not only in term of prevention and management, but also related to socio-economic implications.

Notes

1. Charlier-Woerther C., Johannessen I., Mackintosh C.L., Wilks D., Cauda R., Wolf F.I., Le Jeunne C. (2017), *International infectious diseases teaching to undergraduate medical students: A successful European collaborative experience*, «Med Teach.», 39 (9), September 2017, pp. 981-986. DOI: 10.1080/0142159X.2017.1332364.

2. Aster A., Scheithauer S., Middeke A.C., Zegota S., Clauberg S., Artelt T., Schuelper N., Raupach T. (2022), *Use of a Serious Game to Teach Infectious Disease Management in Medical School: Effectiveness and Transfer to a Clinical Examination*, «Front Med», Volume 9, Lausanne, April 25, 2022, 863764. DOI: 10.3389/fmed.2022.863764.

3. Caitano A.R., Gusmão C.M.G., Dias-Trindade S., Barbalho I.M.P., Morais P.S.G., Caldeira-Silva G.J.P., Romão M.H., Valentim J.L.R.S., Dias A.P., Alcoforado J.L.M., Oliveira C.A.P., Coutinho K.D., Rêgo M.C.F.D., Valentim R.A.M. (2022), *Massive health education through technological mediation: Analyses and impacts on the syphilis epidemic in Brazil*, «Front Public Health», Volume 10, September 27, 2022, 944213. DOI: 10.3389/fpubh.2022.944213.

4. Dahler-Nashif S. (2021), *Doctors' Challenges During Infectious Disease Outbreaks: Medical Education Insights from Realistic Fiction Movies*, «Adv Med Educ Pract.». PMID: 33776502.

5. Chow K.M., Wu A.K., Szeto C.C. (2003), *Secular trend in medical education regarding infectious disease*, «Med Educ.», 37 (10), pp. 881-883. DOI: 10.1046/j.1365-2923.2003.01623.x.

6. Yusuf E., Ong Ds., Martin-Quiros A., Skevaki C., Cortez J., Dedic K., Maraolo A.E., Dusek D., Maver P.J., Sanguinetti M., Toccanelli. E. (2017), *A large survey among the European trainees in clinical microbiology and infectious disease on training systems and training adequacy: identifying the gaps and suggesting improvements*, «Eur J Clin Microbiol Infect Dis», 36 (2), February 2017, pp. 233-242. DOI:10.1007/s10096-016-2791-9.

7. Read R.C., Cornaglia G., Kahlmeter G. (2011), *Professional challenges and opportunities in clinical microbiology and infectious diseases in Europe*, «Lancet Infect. Dis.», 11 (5), 2011, pp. 408-415. DOI: 10.1016/S1473-3099(10)70294-2.

8. Zola Matuvanga T., Larivière Y., Lemey G., De Bie J., Milolo S., Meta R., Esanga E., Vermeiren P.P., Thys S., Van Geertruyden J.P., Van Damme P., Maketa V., Matangila J., Mitashi P., Muhindo-Mavoko H. (2022), *Setting-up an Ebola vaccine trial in a remote area of the Democratic Republic of the Congo: Challenges, mitigations, and lessons learned*, «Vaccine», 40 (25), May 31, 2022, pp. 3470-3480. DOI: 10.1016/j.vaccine.2022.04.094.10.1097/PHH.0000000000001600.

9. Charlier-Woerther C., Wolf F.I., Vlieghe E., Planquette B., Damme P.V., Gaetano K., Buffet P., Henry B., Cevik M., Leen C., Laurenson I., Cameron H., Ogavu J., Nabankema E., Omona V., Valnaud P., Mackintosh C., Johannessen I., Geertruyden J.V., Jeunne C.L., Cauda R. (2019), *A pilot experience of common European infectious diseases curriculum for medical students: the IDEAL summer school*, «Future Microbiol.», 14, March 2019, pp. 369-372. DOI: 10.2217/fmb-2019-0037.

10. van Bruggen L., van Dijk E.E., van der Schaaf M., Kluijtmans M., Ten Cate O. (2022), *Developing entrustable professional activities for university teachers in the health professions*, «Med Teach.», 44 (4), April 2022, pp. 425-432. DOI: 10.1080/0142159X.2021.1998402.

11. Cass A.L., Holt E.W., Murr S., Falcone K.A., Daniel M., Gilchrist A.E. (2022), *University student perceptions of health and disease during remote learning in the Covid-19 pandemic*, «J Am Coll Health.», April 15, 2022, pp. 1-9. DOI: 10.1080/07448481.2022.2057802.

12. Ten Cate O., Schultz K., Frank J.R., Hennus M.P., Ross S., Schumacher D.J., Snell L.S., Whelan A.J., Young J.Q. (2021), *Questioning medical competence: Should the Covid-19 crisis affect the goals of medical education?*, «Med Teach.», 43 (7), July 2021, PP. 817-823. DOI: 10.1080/0142159X.2021.1928619.

13. Penna A.R., Hunter J.C., Sanchez G.V., Mohelsky R., Barnes L.E.A., Benowitz I., Crist M.B., Dozier T.R., Elbad-

awi L.I., Glowicz J.B., Jones H., Keaton A.A., Ogundimu A., Perkins K.M., Perz J.F., Powell K.M., Cochran R.L., Stone N.D., White K.A., Weil L.M. (2022), *Evaluation of a Virtual Training to Enhance Public Health Capacity for Covid-19 Infection Prevention and Control in Nursing Homes*, «J Public Health Manag Pract.», 28 (6), November-December 2022, pp. 682-692. DOI: 10.1097/PHH.0000000000001600

14. Solomon D.A., Larrabee S., Ellis J., Erfani P., Johnson S.F., Rich K.M., Sandoval R.S., Osman N.Y. (2022), *A student-led interprofessional virtual outreach program for people with HIV during the Covid-19 pandemic: a pilot program at an academic medical center in Boston*, «BMC Med Educ.», 22(1), September 2, 2022, p. 657. DOI: 10.1186/s12909-022-03716-w.

15. Dhaliwal J.S., Mohamad Yusra M.A.M., Muharram S.H., Akkawi M.E., Hussain Z., Rahman H., Kok Y.Y., Dhaliwal S.K.S., Ming L.C. (2022), *Protocol for a three-phase prospective study to develop educational resource of antimicrobial resistance and stewardship for medical programme*, «BMJ Open.», 12 (2), e049867, February 28, 2022. DOI: 10.1136/bmjopen-2021-049867.

16. Drain P.K., Primack A., Hunt D.D., Fawzi W.W., Holmes K.K., Gardner P. (2007), Global health in medical education: a call for more training and opportunities, «Acad Med.», 82 (3), March 2007, pp. 226-230. DOI: 10.1097/ACM.0b013e3180305cf9.

17. Castro Delgado R., Fernández García L., Cernuda Martínez J.A., Cuartas Álvarez T., Arcos González P. (2022), *Training of Medical Students for Mass Casualty Incidents Using Table-Top Gamification*, «Disaster Med Public Health Prep.», September 21, 2022, pp. 1-7. DOI: 10.1017/dmp.2022.206.

18. Garba D.L., Stankey M.C., Jayaram A., Hedt-Gauthier B.L. (2021), *How Do We Decolonize Global Health in Medical Education?*, «Ann Glob Health.», 87 (1), March 24, 2021, p. 29. DOI: 10.5334/aogh.3220. PMID: 33816134; PMCID: PMC7996454.

Acknowledgements

The Authors acknowledges financial support by Erasmus+ strategic Partnership projects: Med-Motion 517702-LLP-1-2011-1-BE-ERASMUS-ESMO; IDEAL 2016-1-FR01-KA203-024171; IDEAL+, 2019-1-FR01-; IDEALiTER 2022-1-FR01-KA220-HED-000086662

Relationship between Climate Change, Food Security and Food Policy in Kenya

by Maria Angela Wangui Maina*

Abstract
Africa is one of the most climate-vulnerable areas of the globe and is currently facing a drought that has been the focus of the international stage. Kenya is one of the greatly affected African countries that suffers drought as a result of climate change, which has rendered it food insecure. Many studies have shown that there is a direct link between climate change, food security and food policies within Kenya, especially where frameworks can greatly assist in adaptation, mitigation and preparedness to cushion nationals against such crises. This is a study that offers a look into the Kenyan national policy efforts towards climate change and food security, giving suggestions for their improvement to enhance the promotion of the constitutional right to food.

Keywords
Kenya, food security, right to food, climate change.

1. Introduction

Climate change affects all of the earth's inhabitants. More specifically, the recent Climate Change Vulnerability Index (CCVI) identifies Africa as one of the most climate-vulnerable areas of the globe alongside South Asia[1]. This means that Africa is more likely to experience harm to its people, infrastru.cture and ecological resources. These changes are currently manifesting in Africa and directly affect the lives of its inhabitants.

Kenya is currently facing a drought that has been the focus of the international stage. On 25 October 2022, the United Nations High Commissioner for Refugees (UNHCR), Filippo Grandi issued a call to global leaders to focus their efforts on addressing this matter, with a specific focus on Kenya, which has suffered greatly because of the drought[2]. This matter is compounded by the fact that Kenya falls under the classification of food insecure, whereas 60 to 79.9% of the total population lacks access to a sufficient quantity of affordable, nutritious food[3].

The Food and Agriculture Organization (FAO) notes that climate change is indeed directly related to food security since climate variability and increas-

* LLB (Hons) Strathmore University, legal intern at Pavia e Ansaldo Studio Legale.

DOI: 10.36158/97888929564076

ing intensity of extreme events affect the stability of food supply, access and utilization, especially where populations are dependent on agriculture and natural resources[4]. In this case, agriculture currently remains one of the largest sources of income for both poor and non-poor households in rural Kenyan areas, yet there has been a decline in real value-added agriculture in the country since 2006 due to the effects of climate change[5]. As such, many studies referenced herein will show that there is a direct link between climate change, food security and food policies within the nation, in addition to where frameworks can greatly assist in adaptation, mitigation and preparedness to cushion nationals against such crises.

This study begins by establishing that the constitutional right to food equates to an assurance of food security. Thereafter, it offers a look into the national policy efforts towards climate change and food security, giving suggestions for their improvement.

Thus, this study is of great importance and serves to provide the reader with knowledge on the need for strong national policies and measures in Kenya to enhance the state of food security amidst drastic climate change, which threatens the constitutional right to life and the right to food against the backdrop of uncertain climate patterns.

2. The Right to Food Equates to an Assurance of Food Security

The Sustainable Development Goals (SDGs) are a blueprint for global sustainability in the future. Specifically, SDG 2 focuses on achieving Zero Hunger by the year 2030 through the elimination of undernourishment, yet this mission is not as practically simple as the theoretical idea presents. Kenya, as the jurisdiction of focus within this study, has a long-winding history of food insecurity that is fueled by inflated food prices[6], political instability and increasing poverty[7]. As of November 2021, 7.9 million people in Kenya (15.4% of the national population) lacked sufficient food for consumption[8]. Food insecurity in Kenya has been linked to ineffective and insufficient food policies, which are presently not enforced[9] and lack totality in addressing the three dimensions of food security (Availability, Accessibility and Adequacy) despite the recognition of the right to food within its Constitution[10].

The right to food is not an abstract concept and is rooted in law. Beginning with international law, Article 25 (1) of the Universal Declaration of Human Rights (UDHR) stipulates that everyone has the right to a standard of living adequate for the health and well-being for himself and for his family, including food. This article is further enshrined almost identically in legally binding international law codifications such as Article 11 of the International Covenant on Economic, Social and Cultural Rights (ICESCR) and Article 24 (2) (c) of the International Convention on the Rights of the Child (CRC), where the latter expressly adds the requirement for clean drinking water. Kenya has ratified both the ICESCR and CRC, thus indicating its acceptance of the general rules of international law as part of Kenyan law. Article 43 (1) (c) of the Constitution of Kenya 2010, which is the fundamental rule of national laws in the country, also expressly recognizes the right of its inhabitants to food. The aforementioned article indicates that "every person has the right to be free from hunger, and to have adequate food of acceptable quality"[11].

With these aspects in mind, food security, as defined in the 1996 World Food Summit, is a situation wherein "all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life"[12]. This definition sets out the three aforementioned dimensions of food security. Firstly, availability refers to the presence of food through natural resources or available for purchase. Next, accessibility requires that all should be able to obtain economic and physical access to food without the need to compromise other basic needs. Lastly, adequacy refers to the need for food to be able to satisfy dietary needs with the necessity that it supplies the required nutrients for physical and mental development as per each person's situation, such as children and pregnant women[13].

In light of the above, it is prudent to question whether the right to food equates to the assurance of food security in Kenya by the government. The answer is yes and the rationale can be found when one considers the Civil Petition No. 196/2001 of India. The petition which was lodged by the *People's Union for Civil Liberties versus the Union of India and Others*, heavily questioned why warehouses are stocked with food, yet the people of India had no access at all and even faced chronic hunger and undernutrition. In this case, the Supreme Court of India expressly recognizes that the right to food is intrinsically linked to the right to life and dignity, causing the need for the government to be responsible. The Court then took it upon itself to monitor every scheme related to food and its implementation, which led to improved food programs that positively impacted the lives of malnourished children[14]. The Supreme Court of India in the case of *Chameli Singh versus State of Uttar Pradesh* reinforces its view on the right to food where it states that "in any organized society, the right to live as a human being is not ensured by meeting only the animal needs of man. It is secured only when he is assured of all facilities to develop himself and is freed from restrictions which inhibit his growth"[15].

Moreover, it is equally judicious to question how the law plays a role in cushioning nationals from the effects of climate-induced food insecurity. For one, it is evident that it is a government's duty to make good on its constitutional duty. The best way for this to be done can be drawn from the lessons in the case of *People's Union for Civil Liberties versus the Union of India and Others*, which are:

a. States must be held responsible for not ensuring the right to food and this demands prompt action from authorities.
b. Judicialization of the right to food is a useful tool in realizing food rights[16].

We must therefore consider that Kenya has been making policy efforts to combat the food crisis. These policies are reviewed in the subsequent section to determine if they are sufficient to meet this goal and where improvements may be made.

3. Overview: Current National Food Policies and Possible Areas of Reform

3.1. *National Legal Framework*

3.1.1. Constitution of Kenya 2010

As earlier stated, Article 43 (1) (c) of the Constitution

expressly recognizes the right of its inhabitants to "adequate food of acceptable quality"[17]. In consideration that Kenya is a State Party to the ICESCR and therefore the State has the duty to progressively realize the right to food and must expeditiously and effectively ensure the enjoyment of this socio-economic right[18]. Furthermore, Article 21 (4) of the Constitution notes that it is the duty of the State to take legislative, policy and other measures, including the setting of standards to fulfill its international obligations in respect of human rights and other fundamental freedoms. In this case, there must be a law safeguarding the right to food.

The Kenyan government rightfully appears to be aware of this core obligation with the national Judiciary serving as a watchdog for its enforcement. In the case of the *Consumer Confederation of Kenya versus Attorney General and 4 others*, the Court affirmed that it has jurisdiction to adjudicate economic and social rights that fall under the Bill of Rights (Chapter 4 of the Constitution of Kenya 2010)[19].

Kenya has made significant efforts in terms of policy-making, alongside the East African Community (EAC) regional policies. As such, here below are what I view to be the fundamental policy frameworks focusing on the area of this study.

3.1.2. Climate Change Act (2016)

This is the first national legal instrument that focuses on the achievement of climate resilience and on the lowering of national carbon emissions. The Act establishes mechanisms such as the National Climate Change Council in Section 5 and the Climate Change Directorate in Section 9; the latter is the leading government agency on national climate action. The Consortium of International Agricultural Research (CGIAR) gives the Climate Change Act a weighted average score of 77% on aspects of its integration in agricultural productivity and food security (availability, access and utilization)[20].

3.1.3. National Climate Change Action Plan (2013)

It is the first national climate change plan that focuses on 5 years of action for adaptation and mitigation of the effects of climate change. The NCCAP prioritizes the development of the national agricultural industry with specific actions to promote drought-tolerant crops, water harvesting and index-based weather crop insurance that will contribute to lowering carbon emissions. It is through the NCCAP that we see the link between climate change and the food industry, alongside the need to appreciate such a link in the bid to achieve the SDGs and attain national food security. The CGIAR gives the Action Plan an average score of 68% on aspects such as those of the Climate Change Act[21].

3.1.4. National Climate Change Framework Policy (NCCFP) (2016)

The NCCFP was established to achieve the same outcome as the Climate Change Act. It specifically facilitates the coordination of coherent and effective responses to climate change through funding, planning and decision-making at national and county levels. Most importantly, the NCCFP is based on the recognition of the potential of the national agricultural industry to create green jobs for Kenyans. The CGIAR gives this Framework Policy an average score of 70% on earlier mentioned aspects[22].

3.1.5. National Food and Nutrition Security Policy (2011)

The Policy aims to address the state of food insecurity and malnutrition in Kenya by increasing food quantity, quality, accessibility and affordability, in line with the dimensions of food security. More so, the Policy emphasizes the need for climate change forecasting and adaptation to enable local communities to sustain themselves through agriculture. Through this policy, the government links the effects of climate change on food and nutrition security. Consequently, this Policy creates the Drought Management Authority and the Drought Contingency Fund to support drought-prone areas. The CGIAR gives this Policy a weighted average score of 34% on aspects of its integration in climate change (adaptability and mitigation)[23].

The above fundamental actions are further supplemented by supporting policies, strategy plans and agencies (both local and international) that work towards achieving these goals. It is evident that the above policies are being actively integrated based on the average scores given by the CGIAR, with the National Food and Nutrition Security Policy holding the lowest percentage. Yet, why is there constant food insecurity if all these systems and frameworks exist? Studies conducted by Kenyan researchers offer a look into why this is the case by providing potential areas for reform.

3.2. *Potential Areas for Reform*

The CGIAR effectively notes that the above are fundamental legal frameworks that prioritize climate change, agriculture and food availability in Kenya, together with other existing supporting policy efforts. Nevertheless, the CGIAR points out that there are overlaps in the focus areas of intervention which should be remedied by strengthening the design and implementation of policies coherently to enhance climate mitigation and adaptation in cross-cutting sectors[24].

Another study conducted by the University of Nairobi recommends that the government should formulate a national strategy that addresses the right to food for vulnerable groups in society, including women, the elderly, children, persons with disabilities and members of marginalized communities. What's more, the same study recommends that Kenyan courts should exercise their duty of evaluating whether policies, measures and laws made to address food shortage, are reasonable, comprehensive and coherent[25].

4. Conclusions

From the review of the law and supplementary research studies, I believe that Kenya's current policy frameworks do not comprehensively address the promotion of food security. The low integration percentage of the National Food and Nutrition Security Policy is a reflection of the same. The current policy on food security does not provide for the core principles of food policy that are intended to promote food security[26]. This study makes the following conclusions:

a. There must be active participation of the affected communities. Persons in arid and semi-arid areas of Kenya are the most affected by drought, yet they are also communities that rely on

agriculture as a source of food and income. These individuals need to be considered when it comes to the enactment of food security policies, rather than on the sole focus of donations and grants that are more of short-term solutions to a long-lasting problem.

b. Non-discrimination and attention should be given to vulnerable groups where Kenya faces an arbitrary rise in food prices enabling the poor in society to afford food, which recently manifested at the beginning of the Russo-Ukraine war, both countries who are large exporters of wheat to Kenya. The current framework falls silent on policy interventions on the regulation of food prices to facilitate access to food by all citizens equally.

c. There needs to be accountability whereas Kenya constantly faces corruption scandals without the actors being held effectively accountable. For example, subsidized fertilizer.

d. Unification and review of food policies and laws will ensure fulfillment of the core principles of food policy intended to promote food security.

Notes

1. Connecticut Institute for Resilience and Climate Adaptation (CIRCA), *Climate Change Vulnerability Index, University of Connecticut* [available at https://resilientconnecticut.uconn.edu/ccvi/#].

2. UNHCR (2022), *UNHCR's Grandi sounds alarm as drought grips Horn of Africa*, 25 October 2022 [available at https://www.unhcr.org/news/press/2022/10/63583c444/].

3. FAO (2022), *Food Insecurity Map, Prevalence of Moderate or Severe Food Insecurity, SDG Indicator 2.1.2* [available at https://www.fao.org/fileadmin/templates/SOFI/2022/docs/map-fies-print.pdf].

4. FAO (2015), *Climate Change and Food Security: Risks and Responses* [available at https://www.fao.org/3/i5188e/I5188E.pdf].

5. World Bank (2019), *Kenya Economic Update: Transforming Agricultural Productivity to Achieve Food Security for All*, 8 April 2019 [available at https://www.worldbank.org/en/country/kenya/publication/kenya-economic-update-transforming-agricultural-productivity-to-achieve-food-security-for-all].

6. KNBS, *Consumer Price Indices and Inflation Rates for February 2022*, Kenya National Bureau of Statistics (KNBS) [available at <https://www.knbs.or.ke/consumer-price-indices-and-inflation-rates-for-february-2022/>; latest access: 03/10/2022].

7. Statista, *Extreme Poverty Rate in Kenya from 2017 to 2021* [available at https://www.statista.com/statistics/1227076/extreme-poverty-rate-in-kenya/].

8. Statista, *Number of people facing insufficient food consumption in Kenya from January to November 2021* [available at https://www.statista.com/statistics/1236146/number-of-people-facing-food-insecurity-in-kenya/].

9. Kilonzo P. (2019), *Challenges in Implementing a Right to Food framework in Kenya*, Heinrich Boll Stiftung, Nairobi [available at https://ke.boell.org/en/2019/05/07/challenges-implementing-right-food-framework-kenya].

10. Constitution of Kenya (2010), Article 43 (1) (c).

11. *Ibidem*.

12. FAO (2006), *Food Security, Policy Brief Issue 2*, June 2006 [available at https://www.fao.org/fileadmin/templates/faoitaly/documents/pdf/].

13. *Ibidem*.

14. Birchfield L., Corsi J. (2010), *The Right to Life Is the Right to Food:* People's Union for Civil Liberties v Union of India & Others, «Human Rights Brief» 17, n. 3, pp. 15-18 [available at https://www.corteidh.or.cr/tablas/r24372.pdf].

15. Njiru G.K. (2019), *Implementing Article 43 (1) (c) of the Constitution; Right to Food in Kenya*, University of Nairobi, November 2019 [available at http://erepository.uonbi.ac.ke/bitstream/handle/11295/154151/Njiru_Implementing%20Article%2043%281%29%20%28c%29%20of%20the%20constitution%20right%20to%20food%20in%20Kenya.pdf?sequence=1&isAllowed=y].

16. Durojaye E., Chilemba E.M. (2018), *Accountability and the Right to Food: A Comparative Study of India and South Africa*, Food Security SA Working Paper Series #003, May 2018 [available at https://foodsecurity.ac.za/wp-content/uploads/2018/06].

17. Constitution of Kenya (2010), Article 43 (1) (c).

18. ICESCR, General Comment No. 3 of the ICESCR: The Nature of State Parties' Obligations (Art. 2, Para. 1, of the Covenant). Office of the High Commissioner for Human Rights [available at https://www.refworld.org/pdfid/4538838e10.pdf].

19. Njiru (2019).

20. Radeny M., Mungai C., Amwata D., Osumba J., Solomon D. (2020), *Climate Change, Agriculture, Food and Nutrition Security Policies and Frameworks in Kenya*, Working Paper No. 330, CGIAR Research Program on Climate Change, Agriculture and Food Security (CCFAS), December 2020 [available at https://www.researchgate.net/publication/348332194_Climate_change_agriculture_food_and_nutrition_security_policies_and_frameworks_in_Kenya].

21. *Ibidem*

22. *Ibidem*.

23. *Ibidem*.

24. *Ibidem*.

25. Njiru (2019).

26. US Agency for International Development (USAID) (2013), *Integrating Rule of Law and Global Development: Food Security, Climate Change and Public Health* [available at https://www.usaid.gov/sites/default/files/documents/1866/IntegratingRuleofLawandGlobalDevelopment.pdf].

Proposal for a Multidisciplinary Integrated Service Model for Taking Charge of Women Victims of Female Genital Mutilation

by L. Bello, M. Romanisio, A. Fortunato, F. Gervasoni, V. De Biasio, F. Colla*

Abstract

Objective: FGM is a form of violence and human rights violation that affects girls and women globally. The multicenter, multidisciplinary service model would meet the needs of a vulnerable and disadvantaged female subpopulation in terms of access to care.

Methods: Since November 2021, the "Center for Combating, Preventing and Managing Women Victims of FGM" has been open at the Asl Città di Torino within Ce.Mu.S.S. Between April and May 2022, five meetings which were attended by the health and associative realities engaged in the fight against FGM at regional level, chaired by Amref Health Africa Italy were held in Turin as part of the project "P-ACT: Pathways to Action Against Cutting Rights," attended by health organizations and associations involved in combating FGM at the regional level.

Results: The interaction between the various entities has created a network of support and exchange in charge of increasing the visibility of the FGM service at Ce.Mu.S.S. by outlining a path for the centralization of care for women with FGM.

Conclusions: It is necessary to implement a Hub-Spoke model that sees a FGM service at the center with a multidisciplinary team made up of gynecologists, midwives, urologists, coroners, sexologists, psychologists, cultural mediators. From this central unit (Hub) capillary territorial services (Spoke) would branch out to allow, bidirectionally, both the convergence of women towards the healthcare hub and the divergence from it towards the other entities forming part of the model. Taking care of women would thus be personalized, sustainable and complete with respect to all the needs that a phenomenon as complex as that of FGM implies.

Keywords

Integrated Service, Multidisciplinary Model, Female Genital Mutilation.

* Luca Bello: MD, Head of the service for the prevention and treatment of female genital mutilation, Centro multidisciplinare per la salute sessuale (CeMuSS), ASL Città di Torino, Ospedale Oftalmico. Martina Romanisio: MD, University of Turin. Anita Fortunato: Midwife, Centro multidisciplinare per la salute sessuale (CeMuSS), ASL Città di Torino, Ospedale Oftalmico. Fiammetta Gervasoni: MD, University of Turin. Valentina De Biasio: MD, Department of Prevention, ASL Città di Torino. Fabrizio Colla: MD, Centro multidisciplinare per la salute sessuale (CeMuSS), ASL Città di Torino, Ospedale Oftalmico.

1. Introduction

From the sub-Saharan belt that extends from the Atlantic coast to the Horn of Africa, the mutilation phenomenon spreads globally, dotting the planet with ritual traditions perpetuated on the female body[1,2].

Estimates portray a population of over 200 million girls and women victims of FGM/C worldwide, and more than 3 million girls each year are affected by the threat of mutilation[3,4].

However, the illegality of the practice, harshly condemned by the European Union, is not sufficient to hinder its diffusion: there are in fact about 600,000 women living in Europe, on whose bodies the indelible marks imprinted by the observance of this practice stand out[5].

The European community, due to the substantial migratory phenomena, is steeped with a multi-ethnicity that understandably drags along its own and varied baggage of popular traditions which, in the case of FGM/C, result in partial or total ablation of the external genitalia.

These customs increase the risk of physical, mental and sexual complications in the short and long term[6], irreparably altering the anatomy and physiology of the body. The age of submission varies from the first week of life to adulthood but the excision tradition occurs above all on minors, especially between the ages of three and eight[7,8].

In 2018, WHO published a clinical manual on female sexual mutilation to improve the knowledge, attitudes and skills of health professionals in the prevention and management of complications related to these practices[9].

In general, it must be noted that the political will of the international community has significally growth in order to boost the actions toward a total end of the practice, dramatically spread worldwide.

The National and International Guidelines recommend the implementation of a multidisciplinary management (already tested in the rest of Europe) which is expressed, at the regional level, through the proposal of a model (Hub-Spoke) of integrated and multidisciplinary service to provide assistance to victims of Female Genital Mutilation, in order to fulfill the complexity of the needs expressed by the women assisted: a vulnerable and disadvantaged underprivileged female population in terms of access to care[10,11,12].

2. Methodology

Taking into account the requests made by the Ministry of Health for the identification of reference centers for diagnosis, multidisciplinary treatment and the fight against mutilatory practices, together with the numerous initiatives that the ASL City of Turin has promoted, in November 2021 a service dedicated to FGM was opened at the new Multidisciplinary Center for Sexual Health (Ce. Mu.S.S.).

Ce.Mu.S.S. was born as the first and only center in Italy with this structure: based on the Anglo-Saxon Nurse-led model, it is organized starting from the unification of the three IST centers of the Metropolitan City of Turin with a multi-specialist footprint.

The FGM service, located within the Ce.Mu.S.S., fully adapts to the multidisciplinary model: it provides, in fact, the presence of two gynecologists, a coroner and a midwife who, in collaboration with the nursing staff, with psychologists and cultural mediators already present at the Ce.Mu.S.S., are able to provide high-level assistance in the prevention, diagnosis and treatment of FGM, as well as propose sexual health education interventions in the target population of women and in general.

The service aims to provide diagnostic and treatment services (de-infibulation and reconstruction of the genitals, coupled with psychological support for women victims of FGM), as well as to promote contrast to the practice through specific prevention activities for the population at risk, training courses for health workers, and with the production and spread of information material specific to citizenship.

The FGM center has a central role in defining relations with the local authorities that deal with the phenomenon and its main goal is to structure the implementation of a network between the territory and the birth centers, to be able to assist the women victim of FGM in their sexual and family life, during the period before and after delivery.

To fulfill this purpose, the five meetings held in Turin between April and May 2022 chaired by Amref Health Africa Italy in the framework of the project "P-ACT: paths of action against the cutting of rights" financed by the Asylum, Migration and Integration Fund (FAMI) of the Ministry of the Interior proved to be fundamental.

At the end of the aforementioned appointments, which were attended by the health and associative realities engaged in the fight against FGM at regional level, a first draft of the "Protocol for the launch of a territorial Network of prevention and contrast to FGM in Turin" was defined, which sets objectives, roles and responsibilities of the various local authorities as well as commitments, including economic ones, to be submitted to the attention of the institutions.

The achievement of the key objectives of the Territorial Network was made possible through the active involvement of the various participating entities that took part in the training events co-organized and scheduled during the meetings and provided by the Distance Learning (DL) system.

The appropriate training of those involved plays a key role in early risk interception, laying the foundations for the structuring of a more sustainable, fairer, less precarious social and health system, in which the right to health is not disregarded but assumes a priority role in the system of resource allocation.

Significant in this regard is the example of the Parisian health context: despite the absence of a standardized system for taking charge of women with FGM, it emerges that the proposal for a personalized, multidisciplinary and multi-specialized service to women living with FGM is a public health duty, as stated by the GAMS Federation (Groupe pour l'aboliation des Mutilations Sexuelles Féminines)[11, 13, 14].

3. Outcomes

The international examples supported by the International Guidelines show that the only possible approach to FGM is multidisciplinary and integrated. Taking into account the urban context of Turin and the territorial structures that already exist and already operate in the field of FGM, the center opened at Ce.Mu.S.S. plays the role of a hub and manages activities aimed at stakeholder involvement, staff training and medical and surgical care, if needed, for women victims of FGM.

The services present in the territory (*Spoke*) allow for a

two-way system that sees the convergence of women towards the health center and the divergence from it towards the other entities that are part of the model. This enhances and facilitates not only users' access to the center but also the opportunity to connect with FGM victims by offering them valuable support and assistance at various times and stages of their lives.

In particular, the health services responsible for the first level of assistance and interception of women victims of FGM are consultors, general practitioners (GP), hospitals and services against sexual violence.

Ce.Mu.S.S.'s FGM service aims to act as a HUB to be referred to in case territorial services need a specialized intervention such as surgical repair (e.g. deinfibulation and/or clitoral reconstruction). In addition, community services may respond to a specific need of the woman in terms of social assistance or psychological support for that requires more in-depth and structured long-term management and for which the hub center is available for referral.

Parallel to the health services, associative bodies are structured entities that come into contact with women also through the *Anello Forte*, anti-trafficking network of Piedmont and Valle d'Aosta[15].

This project, funded thanks to the national action plan against trafficking and serious exploitation, has allowed the construction of a system of services such as the mobile units, the toll-free number, the counters, the Extraordinary Reception Centers (Cas) and the Protection System for asylum seekers and refugees (Sprar). These have been involved, on various levels, in the project of Amref Health Africa – "P-ACT: paths of action against the cutting of rights" – thus allowing a fruitful exchange of contacts and the definition of standardized procedures for sending and receiving women victims of FGM, as well as for reporting any risk of recurrence of this pratice on newborns.

The territorial services that took part in the meetings chaired by Amref proposed to delegate a figure that could interface systematically with the MGF Service of Ce.Mu.S.S. in order to define relationships of constant updating, exchange and sharing.

One of the closest collaborations of the FGM Center has been defined with the social workers of the Corporate Social Service of the ASL City of Turin for which a contact person has been appointed. This person will be dedicated to the activities of the FGM Center, and will be consulted in case of particularly sensitive issues, involving minor or underlying situations of gender violence.

Due to the implication of FGM with the application for political refugee status, the role of social workers and coroners is crucial in order to best manage the relationship with the woman and her family, ensuring the protection not only of her safety and rights but also of compliance with Italian legislation.

The FGM Service is thus placed at the center of a ideal graph (Figure 1) at whose extremes we find, like petals of a flower, the territorial services that can intercept and consequently bring to the attention of the Service a particular case or, vice-versa, receive from Ce.Mu.S.S. specific reports for standardized social or health interventions intended for the patient.

By applying the system expressed in Figure 1, conceived through the ideas that emerged within the workshops organized

Fig. 1. Multicentre and Multidisciplinary Service Model for Women with FGM.

by Amref and from the discussion with international services already working in the field, it is therefore possible to ensure the personalization of patient care. Moreover, the system will ensure the long-term sustainability of the intervention (educational, health, psychological, social) implemented and comprehensiveness regarding all the needs that such a complex phenomenon as FGM entails.

Some of the achievements include training activities organized by the FGM Service and targeting different categories of health and social workers.

These allowed for the improvement of awareness and sharing of content and stimulus for a less superficial and more competent approach to healthcare. Specifically, the involvement of the GP and obstetrical-gynecological emergency room staff has allowed the construction of pathways not only for diagnosis and treatment, but also for prevention. In this way, attention is drawn to the mutilatory phenomenon as early as during the first contact with the woman, so that she can have the time and tools to consciously and freely reflect, remember and decide respecting her own body and health. It is essential to de-link the "first contact = urgency" association typical of FGM women's access, and also to set the foundation for a constructive and welcoming dialogue on the topic of FGM. These foundations should be laid as early as adolescence and, in any case, hopefully before the onset of sexual activity.

This "preventive" rather than "interventional" approach expresses its value not only towards women already victims of FGM but also in newborns and in all generations of girls at risk of perpetuation of the phenomenon, both in the countries of origin and in Europe.

At the social level, on the other hand, the training of educators, psychologists, so-

cial workers, and in general all those involved on the local level within cooperatives or associations in contact with the migrant population, contributed exponentially to the increase in the number of accesses and visits provided by the FGM Service in the second half of 2022. This fact confirms the success of the Hub-Spoke dialogue in the management of FGM.

4. Limitations

The topic of FGM is still little known and most professionals, especially in the health care field, lack the skills to deal with it. This lack leads to an inadequate and deficient service, as well as an inherent and concrete difficulty in building significant diagnostic-clinical pathways. Although in Turin there is a very specialized service such as the one opened at the Ce.Mu.S.S., at the territorial level this does not translate with as much immediacy. This delays – if not compromises – the definition of integrated pathways and the management of less complex cases by the services already existing.

This limitation can be overcome through to the wide-ranging training interventions organized by the FGM Service and Amref Health Africa, but will significantly delay the implementation of the hub-spoke model.

In addition, the formation of a territorial network is not sufficient for the long-term functioning of the relations between the territory and the institution. Therefore, it is also necessary to define roles in relation to the need to interact with institutions to enable discussion on the allocation of funds dedicated to combating FGM. To this end, the definition of a supra-local/regional lead subject and the formalization of a multi-departmental and inter-institutional standing committee for the prevention and combating of FGM is essential. These objectives are also mentioned in the draft protocol drawn up by the actors who participated in the meetings with Amref Health Africa in Turin between April and May 2022.

5. Conclusion

National plans and regional investment to open a dedicated service to fight and manage FGM at the Sexual Health Center need an area context to interface with.

The Ce.Mu.S.S. is an excellent example of a multidisciplinary reality from which to define paths for sharing the burden resulting from the management of this phenomenon.

Within the FGM service there are specialists responsible for managing the most complex clinical cases and organizing training and consulting courses aimed at local authorities.

The implementation of this service designed on the basis of the Hub-Spoke model and described in the results of the research project, concretely responds to the needs that emerged from the careful analysis of needs conducted at regional level on FGM. The territorial context with which to interact is the resource identifiable in the capillary territorial services (Spoke) that allow the convergence of women to the health center (Hub). The Hub is recognizable by the multidisciplinary team of gynecologists, obstetricians, urologists, forensic doctors, sexologists, psychologists, and cultural mediators that make up the FGM outpatient clinic located within the Ce.Mu.S.S.

Taking charge of these cases would be personalized, sustainable and complete with respect to all the needs that such a complex phenomenon implies. A phenomenon, that of FGM, which ultimately reflects a profound and atavistic gender inequality at the worldwide level between man and woman and violence against women and girls.

Notes

1. IOM (2022), *Interactiveor Report 2022*.
2. Andro A., Lesclingand M. (2017), *Les mutilations genitales feminines dans le monde*, «Population and Societies», 4, 2017, No. 543, pp. 1-4.
3. UNICEF (2013), *Female Genital Mutilation/Cutting: A Statistical Overview*.
4. WHO, *Female genital mutilation*. Published 2022.
5. European Parliament (2020), *Female genital mutilation: where and why it is still practiced*, Current affairs / European Parliament.
6. Obermeer C.M. (2005), *The consequences of female circumcision for health and safety: an update on the evidence*, «Cult Health Sex», 7 (5), September-October 2005, pp. 443-461. DOI: 10.1080/14789940500181495.
7. Morrone A. (2006), *Immigration and female genital modification*, «En Ost Gin», 11, 2006.
8. World Health Organization. Division of Family Health (1996), *Female genital mutilation : report of a WHO technical working group*, Geneva, July 17-19, 1995.
9. World Health Organization (2016), *Lignes directrices de l'OMS sur la prise en charge des complications des mutilations sexuelles féminines Resumé*, published online.
10. Gori G. (2001), *Protocol Joint Interinstitutional Table Reggio Emilia*, published online.
11. Federation nationale GAMS (2019), *Plan National d'action Visant a Eradiquer Les Mutilations Sexuelles Féminines*.
12. Ministry of Health (2007), *Guidelines for Carrying Out Prevention, Assistance and Rehabilitation Activities For Women and Girls Already Subjected to Female Genital Mutilation Practices*.
13. Federation GAMS, *Pertuation of the eision*.
14. Abramoic Icz S., Oden S., Dietrich G., Marpeau L., Resch B. (2016), *Evaluation of anatomiques, fonctionnels et identitaires apres transposition du clitoris chez 30 patientes*, «Journal De Gynecologie Obstetrique Et Biologie De La Reproduction», 45 (8), October 2016, pp. 963-971. DOI: 10.1016/j.jgyn.2016.03.010.
15. Piedmont Region (2017), *The strong Ring: anti-trafficking network of Piedmont and Valle d'Aosta*, Regione Piemonte.

Global Health and the Challenges of Prevention

From EU to UN Emergency Preparedness Mechanisms

by Andrea Pettini, Maria Letizia Zamparelli*

Abstract
In response to Covid-19, in 2020, the European Commission announced the EU "Health Emergency and Preparedness Response Authority" (HERA) as part of a broader set of proposals for an EU Health Union. The proposals aim to build a Europe that is better prepared for the next cross-border health threat, by allocating a 5 million budget, which is ten times larger than the last health budget. Even more, the UN's Universal Health Coverage (UHC) deal with this challenge considering the different national approaches and different social conditions all over the world.

Keywords
HERA as a pillar of the European Health Union; crisis governance; EU Member States preparedness phase; UN "Healthy for everyone"; facing the worldwide inequalities in health system access.

As we are already aware – or, we may definitively assess on our daily bases experience – that the Covid-19 Pandemic has changed our perception around that we already thought about the topic "emergency", "health", "global" and "virus"; and from both sides, *personally* and *collectively*. The Covid-19 pandemic has created the "impetus" for a European strategy to better prepare for, and respond to, different health emergencies. To quote the European Commission President von der Leyen, when Covid-19 hit Europe in March 2020, "too many [EU Member states] initially looked out for themselves [...], too many initially gave an 'only for me' response". To be better prepared in the future, the European Commission has put forward ambitious plans for a European Health Union, to protect the health of EU citizens and respond to cross-border health threats.

Now that we can clearly acknowledge and agree that Covid-19 will not be the last world's last public health emergency we will have to face Based on this assessment, Europe needs to be better prepared to anticipate and address jointly, the ongoing and increasing risks, not only of pandemics but also of *man-made* threats such as bioterrorism or chemical macro-incident. For sure, every community, from any *level* or

* Andrea Pettini: former IFRC Emergency Respond Unit's Fact Member and IHL legal adviser. Maria Letizia Zamparelli: ItRC head of mission in Kosovo and Cambodia and expert on International cooperation.

dimension, may need to prepare new response-mechanism to be able to face unthinkable or unimaginable threats and hazard that may crack or even weaken the EU way of life.

The best hope to manage future health crises is to *anticipate* and *prepare* before that any sort of hazard can materialise. The new Health Emergency preparedness and Response Authority (HERA[1]) is a new panel that is being set up to strengthen Europe's ability to prevent, detect, and rapidly respond to cross-border health emergencies, by ensuring the development, manufacturing, procurement, and equitable distribution of key medical countermeasures[2].

The core mission of HERA will be:

- to strengthen health security coordination within the Union during preparedness and crisis response times, and bringing together the Member States, the industry and the relevant stakeholders in a common effort;
- to identify and address potential vulnerabilities and strategic dependencies within the Union related to the development, production, procurement, stockpiling and distribution of medical countermeasures;
- to contribute to reinforcing the global health emergency preparedness and response architecture.

HERA will be established within the Commission as a shared resource for Member States and EU alike. Establishing HERA within the Commission will allow for a swift operationalisation by early 2022, flexibility in its organisation and the mobilisation of the Commission's existing powers, tools and programmes. HERA has been defined as a "key pillar of the European Health Union" [3] as announced by President von der Leyen in her 2021 State of the Union address "and will fill a gap in the EU's health emergency response and preparedness". The Health Union[4] will be funded with a sizable EUR 5.1 billion over a seven-year period (2021-2027), a total that is ten times larger than the previous health budget. The proposals include extending the mandates of the European Medicines Agency (EMA[5]) and the European Centre for Disease Prevention and Control (ECDC[6]) and revising the Regulation on serious cross-border health threats. The EU Health Emergency Preparedness and Response Authority (HERA) was also announced as part of this package – framed by President Ursula von der Leyen as an Authority to be modelled on the US Biomedical Advanced Research and Development Authority, BARDA[7].

Based on an interesting evaluation study on the EHRA's effective ability to realistically meet the needs of affected communities during an emergency health crisis by the Federation of European Academies of Medicine, (FEAM[8]), we may try to summarise the following main points that could define the role, and task of HERA:

- HERA need be focused, yet at the same time, flexible enough to deliver results, build credibility, efficacy, and consider the long-term implications and risks In the short-term, HERA should seek to understand in detail and remedy the gaps at a European level on medical countermeasures for pandemic preparedness and response. HERA must ensure these are accessible to low and middle income countries. At the same time, it should be realistic about what it can achieve with the limited funding available.
  - HERA's structure, remit and funding must be ambitious and flexible enough to react in scenarios different from the Covid-19 context.
  - In the mid to long-term, the Commission should analyse all cross-border health threats facing European citizens and propose a larger ambition role for HERA. Activities, that HERA pursues in the future should be defined after an in-depth gap analysis.
  - The creation of HERA is an opportunity to harmonise the European research and development biomedical landscape for pandemic preparedness and rapid response capacity.
  - HERA should formalise and coordinate end-to-end oversight for R&D efforts across the EU during health emergencies.
  - HERA must maintain expertise and resources between crises. HERA should embed a One Health approach.
- HERA must be *collaborative* to build on strengths in the EU health and research system.
  - HERA must work closely with other EU institutions (including European health related agencies), initiatives and programmes to enable and amplify, rather than detract from, existing activities.
  - HERA must work closely with Member States to build legitimacy and trust, incorporating and sharing national expertise.
  - HERA must build and maintain relationships between crises so that in emergencies it can respond quickly in collaboration with trusted partners.
  - HERA must prioritise building strong relationships with industry.
  - HERA must build a broad base of support to be effective and to gain trust.
  - HERA must be *global* in its approach to health threats to reflect European values, by embedding collaboration and access in its work.
  - HERA must take a global approach to emergency preparedness and rapid response capacity.
  - HERA should prioritise equitable access in its funding and operations.

1. International Context

1.1. *Universal Health Coverage (UHC)*

- Universal Health Coverage (UHC)[9] means that all individuals and communities receive the health services they need without suffering financial hardship. It includes the full spectrum of essential, quality health services, from health promotion to prevention, treatment, rehabilitation, and palliative care across the full life course.
- The delivery of these services requires sufficient staffing of skilled and competent Health and Care workers with an optimal skills mix at facility, outreach and community level, and who are equitably distributed, adequately supported and enjoy decent work conditions. The UHC strategies will need to enable everyone to access the services that address the most significant causes of disease and death and ensures that the quality of those services are good enough to improve the health of the people who receive them.

- These challenges are as relevant in low and middle income countries, so that expanding coverage also translates into better health outcomes for all.
- Protecting people from the financial consequences of paying for health services out of their own pockets reduces the risk that people will be pushed into poverty because unexpected illness requires them to use up their life savings, sell assets, or borrow – destroying their futures and often those of their children[10].

1.2. *How can countries make progress towards UHC?*

- Many countries are already making significant progress towards UHC, although everywhere the Covid-19 pandemic impacted the availability the ability of health systems to provide undisrupted health services. All countries can take actions to move more rapidly towards UHC despite the setbacks of the Covid-19 pandemic, or to maintain the gains they have already made. In countries where health services have traditionally been accessible and affordable, governments are finding it increasingly difficult to respond to the health needs of the populations and the increasing costs of health services.
- The Covid-19 pandemic dramatically demonstrated the invaluable role of the health and care workforce and the importance of expanding investments in this area.
- To meet the health workforce requirements of the SDGs and UHC targets, over 18 million additional health workers are needed by 2030. Gaps in the supply of and demand for health workers are concentrated in low and lower-middle-income countries. The growing demand for health workers is projected to add an estimated 40 million health sector jobs to the global economy by 2030.
- Investments are needed from both public and private sectors in health worker education, as well as in the creation and filling of funded positions in the health sector and the health economy. The Covid-19 pandemic, which has initially affected the health workforce disproportionately, has highlighted the need to protect health and care workers, to prioritize investment in their education and employment, and to leverage partnerships to provide them with decent working conditions.
- UHC focuses not only on *what* services are covered, but also *how* they are funded, managed, and delivered. A fundamental shift in service delivery is needed such that services are integrated and focused on the needs of people and communities. This includes reorienting health services to ensure that care is provided in the most appropriate setting, with the right balance between out and in-patient care and strengthening the coordination of care.
- Therefore, to achieve SDG target 3.8 of Universal Health Coverage for all by 2030, at least 1 billion more people will need to have access to essential health services in each five-year period between 2015 and 2030.
- The efforts of UHC is to create an universal access to a strong and resilient people-centred health system with primary care as its foundation. Community-based services, health promotion and disease prevention are key components as well as immunization, which represents a strong platform for primary care upon which UHC needs to be built.

1.3. *Can UHC be measured?*

The answer is YES the monitoring progress towards UHC should focus on 2 things:

- The proportion of a population that can access essential quality health services (SDG 3.8.1).
- The proportion of the population that spends a large amount of household income on health (SDG 3.8.2).

Measuring equity is also critical to understand who is being left behind, where and why. Together with the World Bank, WHO has developed a framework to measure and track the progress of UHC by monitoring both categories, taking into account both the overall level and the extent to which UHC is equitable, offering service coverage and financial protection to all people within a population, such as the poor or those living in remote rural areas.

2. OECD Perspective About Global Health And Its Impact At National Level

According to OECD last report "Healthy for everyone?"[11] good health is a key component for the well-being of a population. Well-being doesn't necessary mean only to be not be medically ill but to consider the individual in an holistic approach: "the influence on social, education and labour market outcomes – being in good or bad health has also wider implications on people's chances of leading a fulfilling and productive life output".

Inequalities in health system access create a massive impact in living and working conditions and in behavioural factors[12] at all level and in a great part of the world, especially in the South-south cooperation.

A general overview on that can be picked up looking at the OECD Health Database which offers the most comprehensive source of comparable statistics on health and health systems across OECD countries. It is an essential tool to carry out comparative analyses and draw lessons from international comparisons of diverse health systems[13].

Notes

1. https://ec.europa.eu/info/departments/health-emergency-preparedness-and-response-authority_en.
2. *Medical countermeasures* are products that can be used to diagnose, prevent, protect from or treat conditions associated with any kind of serious health threat. Examples are vaccines, antibiotics, medical equipment, chemical antidotes, therapeutics, diagnostic tests and personal protective equipment (PPE), such as gloves and masks.
3. https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_21_4701.
4. In the 2020 *State of the Union address*, the European Commission President Ursula von der Leyen announced the necessity to establish an European Health Union. In her own words, "For me, it is crystal clear – *we need to build a stronger European Health Union*. And to start making this a reality, we must now draw the first lessons from the health crisis. [...] It is clearer than ever that we must discuss the question of health competences. And I think this is a noble and urgent task for the Conference on the Future of Europe". The European Health Union is a new program developed by the European Commission aiming at improving EU-level protection, prevention, preparedness and response against human health hazards.
5. https://www.ema.europa.eu/en.
6. https://www.ecdc.europa.eu/en.
7. https://aspr.hhs.gov/AboutASPR/ProgramOffices/BARDA/Pages/default.aspx.
8. https://www.feam.eu/.
9. See: Universal Health Coverage (who.int).
10. See: Universal Health Coverage (who.int).
11. See: Health for Everyone?: Social Inequalities in Health and Health Systems |en|OECD.
12. See: Health Inequalities – OECD.
13. See: OECD Health Statistics 2022 – OECD.

The Nexus between The Rule of Law and Development

by Mario Di Giulio*

Abstract
While considering the different factors that may influence the development of a country, the foremost considered are those that are of a real nature, such as natural resources, access to clean water, energy and geographical position. Sometimes governments, policy makers, politicians and scholars neglect immaterial factors that have a relevant impact anyway: one of them is the actual effectiveness of the rule of law.
This article will focus on the relevance of the rule of law on the development given by the international organizations that promote the development. For sake of clarity, the analysis will not consider opinions given by scholars.

Keywords
Developing countries, development, rule of law

1. Introduction: the Rule of Law

Normally, developing countries are identified by means of indicators such as the Pro-capita GDP (Gross Domestic Product) or the HDI (Human Development Index). Where the first is a concrete measure given by the gross domestic production divided by the number of population, the second one counts also data referred to life expectancy at birth and their education.

After all, the fact that GDP (or the Gross National Product, that includes also the net revenues produced by the migrants abroad and then transferred to their home countries) was not a sufficient indicator for measuring the prosperity of a nation, was a clear concept yet before the introduction of the HDI: it is sufficient to recall the famous speech of Robert F. Kennedy in 1968 at the Kansas University[1].

It is also sufficient to think of countries such as Mexico, with its thousands of killed people every year[2], to understand how much other factors need to be contemplated in order to consider the development of a country.

Considering the above, for those who study the factors influencing the development of countries, one of the first thoughts goes to the rule of law.

* Adjunct professor of law of Developing Countries at Campus Bio-Medico University.

DOI: 10.36158/97888929564079

The rule of law is defined by the Encyclopedia Britannica as "the mechanism, process, institution, practice, or norm that supports the equality of all citizens before the law, secures a non-arbitrary form of government, and more generally prevents the arbitrary use of power"[3].

In order to better understand the concept, it is worth noting that – according to the United Nations Organization – "the rule of law is a principle of governance in which all persons, institutions and entities, public and private, including the State itself, are accountable to laws that are publicly promulgated, equally enforced and independently adjudicated, and which are consistent with international human rights, norms and standards. It requires measures to ensure adherence to the principles of supremacy of the law, equality before the law, accountability to the law, fairness in the application of the law, separation of powers, participation in decision-making, legal certainty, avoidance of arbitrariness, and procedural and legal transparency".

Commonly, the rule of law is believed to lay on four pillars. They are the following:

a. The law applies to everyone;
b. The laws are not secret or arbitrary;
c. The laws are enforced fairly; and
d. The justice system is fair.

It is clear that the rule of law substantially is a mean to ensure social life between citizens, ensuring protection of rights through clear rules and actual enforcement.

An observer may clearly understand that the rule of law is the essential background to allow the development of a prosperity and, somehow, it is influenced from the underlying circumstances as in a sort of sympathetic relation where each party is stronger as the others become stronger.

2. The Rule of Law and Development

In the chart of the United Nations Organization, the Preamble describes four areas that are the pillars of the United Nations:

– Peace and Security.
– Human Rights.
– The Rule of Law.
– Development.

In accordance with the UN, these four pillars are all interconnected. "You cannot fully achieve one without achieving all of them". This statement is very meaningful because it immediately links the rule of law with the development and vice versa.

The strict link between the rule of law and the development is also highlighted by the UN Declaration of the High-level Meeting on the Rule of Law, where Member States noted "that the rule of law and development are strongly interrelated and mutually reinforcing, that the advancement of the rule of law at the national and international levels is essential for sustained and inclusive economic growth, sustainable development, the eradication of poverty and hunger and the full realization of all human rights and fundamental freedoms, including the right to development, all of which in turn reinforce the rule of law". This declaration was given in the year 2012[4].

This declaration stands a milestone in respect of the goals (well known as Sustainable Development Goals) set out in 2015 by the United Nations Organization with reference to the rule of law, since the Millennium Goals did not comprise the rule of law.

By the above-mentioned declaration, the relevance of the rule of law is highlighted and the rule of law has become one of the targets through which one of the Sustainable Development Goals which goes under the title "peace, justice and strong institutions" (16) may be achieved. This SDG no. 16 has the following mission statement "Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels".

This mission should be achieved through different targets[5].

Among them, for our purposes, Target 16.3 rises, which reads: "Promote the rule of law at the national and international levels and ensure equal access to justice for all".

It is worth noting that the United Nations indicators for assessment of the achievement of the target are the following:

– *Indicator 16.3.1:* Proportion of victims of violence in the previous 12 months who reported their victimization to competent authorities or other officially recognized conflict resolution mechanisms;
– *Indicator 16.3.2:* Un-sentenced detainees as a proportion of overall prison population;
– *Indicator 16.3.3:* Proportion of the population who have experienced a dispute in the past two years and who accessed a formal or informal dispute resolution mechanism, differed by type of mechanism.

The first indicator is a basic element to understand how and to which extent the law is applied and enforced. The notification of violence indeed is reported to authorities if the victims of the violence may rely on the action of the state to punish those who used the violence.

The second indicator shows how the justice is actually applied and how the citizens may be subject to the arbitrary exercise of power; while the third one is self-explanatory.

The collection of data on the above helps the nations and those organizations that support the development to identify gaps and define the course of action.

Reading the single targets that compose the 16th Goal and the indicators related to the rule of law, makes it easy to note that many of the targets are strictly correlated with the one of our interest: at least 16.1, 16.4 and 16.5 and, more generally, all of them.

The relevance of the rule of law is also recognized by the European Union by setting up the European Rule of Law Mechanism that "provides a process for an annual dialogue between the Commission, the Council and the European Parliament together with Member States as well as national parliaments, civil society and other stakeholders on the rule of law".

In this regard, it is meaningful to highlight the pillars on which are based the annual reports on the rule of law. These indicators show how many aspects are relevant in order to verify whether the rule of law is effective or not.

They are the following: the justice system, the anti-corruption framework, media pluralism and other institutional issues related to checks and balances.

How international cooperation may foster the rule of law in developing countries

Since the rule of law is a key feature for achieving the development, many are the organi-

zations that operate at a global or a regional level in order to assist the developing countries in achieving a real rule of law.

Among them, a relevant role is carried out by IDLO and UNDP.

The first, is an intergovernmental organism. Its acronym stands for International Development Law Organization.

From its website, IDLO gives this description of itself:

"IDLO is the only global intergovernmental organization exclusively devoted to promoting the rule of law to advance peace and sustainable development".

It is worth noting what the rule of law means for this Institution. "The rule of law is a cultural and daily practice. It is inseparable from equality, from access to justice and education, from access to health and the protection of the most vulnerable. It is crucial for the viability of communities and nations, and for the environment that sustains them". Considering the title of the journal where this article is published, it is lightening the nexus between the rule of law and the access to health and protection of the most vulnerable.

At an international level, there is also the UNDP that supports the real effectiveness of the rule of law.

The United Nations Development Programme is an international organization established in 1966, upon a resolution of the General Assembly of the United Nations approved in 1965.

One of the purposes of the UNDP is to strengthen the pillars on which the United Nations are based, including the rule of law. Among other tasks, the UNDP is the organism in charge for the reporting on the status of implementation of the 16.3 target (i.e. the promotion of the rule of law and ensuring equal access to justice) pursuant to the Sustainable Development Goals.

Other organizations, like the Commonwealth of Nations, promote the same values among their members. It is very interesting to examine the declaration of this Institution about the rule of law and the extension that it could have.

"The Commonwealth promotes the rule of law by providing support to member countries through knowledge and expertise sharing programmes, leading on work in law and development, implementing the Cyber Declaration and promoting democracy".

In this regard, it is worth noting the link expressed between the rule of law and development. Furthermore, it is meaningful the mentioning of the Cyber Declaration, highlighting how much the cyber space is getting relevance in order to ensure social and economic development.

3. Conclusions

Despite many declarations of principle on the relevance of the protection of human rights, the observance of the law and its non-discriminatory application, the substantial role that a well-functioning justice system has in ensuring the development, the actual attention of the policy makers is often leaded by other aspects and priorities, so that many of the efforts towards development often produce very limited impacts.

This is an issue not only for the developing countries, where the capacity to give growth to the economy and the wellness are affected by the absence of clear rules and applications, but is also an issue for the countries that have achieved higher levels of development[6].

Indeed, it is worth noting that also in the so-called developed countries, the succession of different wings governments in short periods causes the abrogation, in a direct or indirect manner, of the measures taken by the former government.

These changes in laws and regulations create uncertainty on the actual application of the laws and on how they will be applied in the future: these facts compromise the actual observance and compliance of the laws by the citizens, with adverse effects on the development of the country.

It is easy to note that the uncertainty on the actual application of a law has a double negative effect: on one hand, it frustrates those who observed the law, by paying a tax or complying with a duty, and then discover that who did not comply is not punished, and, on the other hand, it may constitute a brake in the observance of the law for those who hope in a possible change of it in a short period.

A fair administration of justice, a proper length of the legal proceedings and their predictability are other factors that are of relevance for the rule of law: all these factors could affect the level of development of a country and, also in this case, it is sad noting that many countries – among those that are considered developed – lack of an efficient management of justice that causes loss of chances, benefits those who act in bad faith and, last but not least, leaves room to abuses and corruption.

Considering all of the above, it appears clear the reason why the rule of law is one of the targets established by the declaration of the United Nations Assembly of 2015 to achieve a sustainable development: the underlying nexus between the rule of law and development.

Notes

1. "Even if we act to erase material poverty, there is another greater task, it is to confront the poverty of satisfaction – purpose and dignity – that afflicts us all.

Too much and for too long, we seemed to have surrendered personal excellence and community values in the mere accumulation of material things. Our Gross National Product, now, is over $800 billion dollars a year, but that Gross National Product – if we judge the United States of America by that – that Gross National Product counts air pollution and cigarette advertising, and ambulances to clear our highways of carnage. It counts special locks for our doors and the jails for the people who break them. It counts the destruction of the redwood and the loss of our natural wonder in chaotic sprawl. It counts napalm and counts nuclear warheads and armored cars for the police to fight the riots in our cities. It counts Whitman's rifle and Speck's knife, and the television programs, which glorify violence in order to sell toys to our children.

Yet the gross national product does not allow for the health of our children, the quality of their education or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages, the intelligence of our public debate or the integrity of our public officials. It measures neither our wit nor our courage, neither our wisdom nor our learning, neither our compassion nor our devotion to our country, it measures everything in short, except that which makes life worthwhile. And it can tell us everything about America except why we are proud that we are Americans.

If this is true here at home, so it is true elsewhere in world".

2. In 2021, 33,308 homicides have been registered with a murder rate of 3.6 every 100,000 habitants (Reuters sourcen21 January 2021).

3. The Law Dictionary, powered by Black's Law Dictionary, second edition, summarizes this concept in a sentence: "nobody is above the law".

4. The High-level Meeting of the 67th Session of the General Assembly on the Rule of Law at the National

and International Levels took place at the United Nations Headquarters in New York on 24 September 2012.

5. 16.1. Significantly, reduce all forms of violence and related death rates everywhere; 16.2. End abuse, exploitation, trafficking and all forms of violence against and torture of children; 16.3. Promote the rule of law at the national and international levels and ensure equal access to justice for all; 16.4. By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime; 16.5. Substantially reduce corruption and bribery in all their forms; 16.6. Develop effective, accountable and transparent institutions at all levels; 16.7. Ensure responsive, inclusive, participatory and representative decision-making at all levels; 16.8 Broaden and strengthen the participation of developing countries in the institutions of global governance; 16.9 By 2030, provide legal identity for all, including birth registration; 16.10 Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements; 16.A Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime; 16.B Promote and enforce non-discriminatory laws and policies for sustainable development.

6. This consideration is confirmed by the fact that the European Union monitors the effectiveness of the Rule of Law in its Member States that are all developed countries.

References

https://www.un.org/ruleoflaw/what-is-the-rule-of-law/.

The Law Dictionary, 2nd edition.

https://www.un.org/en/model-united-nations/4-pillars-united-nations.

https://www.un.org/ruleoflaw/rule-of-law-and-development/#:~:text=The%20rule%20of%20law%20fosters,for%20the%20violation%20of%20rights%20.

https://www.un.org/millenniumgoals/.

https://ec.europa.eu/info/policies/justice-and-fundamental-rights/upholding-rule-law/rule-law/rule-law-mechanism_en#:~:text=It%20covers%20four%20pillars%3A%20the,related%20to%20checks%20and%20balances.

https://www.idlo.int/what-we-do/rule-law.

Announcement of Upcoming Congresses

Event: Global Health, Syndemia and Female Genital Mutilation. *Health meets human rights*

Event Date: March 2023
Event Location: UniCamillus, via di S. Alessandro 8, Rome
ECM Credits: 100 participants (maximum number of eligible people in the classroom)
100 participants (maximum number of eligible people in the classroom)

8.30-09.00
Registration of participants
9.00-09.20
Greeting from the Rector and presentation of UniCamillus and its "vocation"

I Session. Moderator: Massimo Papa
9.20-9.40
Oreste Foppiani, *FGM: a geopolitical overview of the phenomenon*
9.40-10.00
Maria Angela Wangui Maina, *How Climate Change Affects Health*
10.00-10.20
Giancarlo Ceccarelli, *Female Genital Mutilation and Migrants*
10.00-10.40
Laura E. Pacifici Noja, *FGM: ethics and scenarios*

II Session. Moderator: Alessandro Boccanelli
10.40-10.50
Viola Liberale, *The importance of screening. FGM-related disorders*
10.50-11.10
Anita Fortunato, *The reproductive health of the patient in the presence of FGM (contraceptive methods, sexuality, diagnostic surveys in pregnancy and the accompanying path to childbirth). Focus on: the infibulated patient*
11.10-11.30
Luca Bello, *The approach to the surgical patient. Different FGM and possible reconstruction. The experience of dedicated clinics*

11.30-11.40 Coffee Break

III Session. Moderator: Gian Stefano Spoto
11.40-12.00 Ugo G. Pacifici Noja, *International legislation and the transposition of the Italian legal system*
12.00-12.20 Valentina De Biasio, *The medical examiner's point of view*
12.20-12.40 Mario Di Giulio, *The protection of women between human rights and constitutional freedoms*

12.40-13.00 Interactive discussion
13.00-13.30 ECM Questionnaires

Chair of the Conference

Gianni Profita

Scientific Chairs

Luca Bello
Alessandro Boccanelli
Laura E. Pacifici Noja

Rationale

Global health and female genital mutilation (FGM) represent a complex and articulated subject with which health professionals, also as a result of recent migratory flows, will have to increasingly confront in the coming years. Both topics testify that health and above all the right to health must become increasingly reality in every part of the world. A conference that deals with Global Health together with the drama of female genital mutilation may seem uneven, but it is not at all: they testify to two dramatic injustices that meet where there is the absence of a real right to health, both personal and at community level.

FGM refers to all procedures that include partial or total removal of the female genitalia, for cultural, religious or other non-therapeutic reasons.

The phenomenon of female genital mutilation, although illegal, does not stop: the estimate of women who have suffered genital mutilation in Europe amounts to 500 thousand. Female genital mutilation is a problem that also affects migrant girls and young women who live in our territory, often at risk of being subjected to it when they return to their country of origin to visit relatives. According to a research coordinated for Italy by the University of Milan – Bicocca, the women present in Italy who were subjected to mutilation during childhood would be between 61,000 and 80,000. The largest group is Nigeria, which, together with the Egyptian community, makes up more than half of the total number of women with genital mutilation. Further surveys have made it possible to estimate the prevalence of the phenomenon within individual communities: women from Somalia have a higher prevalence (83.5%), followed by Nigeria (79.4%), Burkina Faso (71.6%), Egypt (60.6%) and Eritrea (52.1%). 35 thousand are in our country the victims of FGM under the age of 17, and 1000 potential ones every year.

It is imperative that healthcare professionals are prepared to understand the need for a multidisciplinary approach to Global Health and FGM, rights and climate change, syndemia and training. In so doing, they can become an active part in the definition of patient care and prevention strategy.

A multidisciplinary therapeutic approach, framed in the guidelines of the World Health Organization and the international regulatory system, will allow the protection of women and the promotion of a preventive attitude free of prejudice and cultural resistance.

The course focuses on the main clinical information on FGM, providing healthcare professionals with the tools to deal with a type of patient who needs innovative and specific therapies for optimal psychophysical rehabilitation, and legal and social protection that can also be a driving factor in their integration path.

Speakers and moderators

Prof. Foad Aodi – adjunct professor – Sapienza University, Rome-President Amsi and UU.
Prof. Luca Bello – specialist doctor in Gynecology and Obstetrics – contract professor – Department of Public Health and Paediatric Sciences – University of Turin, Faculty of Medicine and Surgery – head of the service for the prevention and treatment of FGM – Multidisciplinary Center for Sexual Health – ASL City of Turin.
Prof. Alessandro Boccanelli – professor of Narrative Medicine and Moral Philosophy – UniCamillus, Rome.
Prof. Giancarlo Ceccarelli – medical specialist in infectious diseases – technician of Global Health and Migration – president of the Migrant and Global Health Research Organization (Mi-HeRO) – University Clinic of Infectious Diseases of the Policlinico Umberto I of Rome.
Dr. Valentina De Biasio – medical specialist in forensic medicine – Multidisciplinary Center for Sexual Health – ASL City of Turin.
Prof. Oreste Foppiani – visiting research and associate professor of International History and Politics-Robert Schuman Centre for Advanced Studies – European University Institute – Geneva.
Dr. Ost. Anita Fortunato – Midwife – Multidisciplinary Center for Sexual Health (Ce.Mu.S.S.) – ASL City of Turin.
Dr. Viola Liberale – medical surgeon specialist in Gynecology and Obstetrics – Multidisciplinary Center for Sexual Health (Ce.Mu.S.S.) – ASL City of Turin.
Prof. Laura Pacifici Noja.
Prof. Ugo G. Pacifici Noja.
Prof. Massimo Papa – full professor of Muslim Law and Islamic Countries, Faculty of Law, University of Rome Tor Vergata.
Prof. Gianni Profita – president and CEO of the Health Project Foundation and rector of UniCamillus International University of Health Sciences-Rome.

Sponsorships required

UniCamillus
University of Turin
Asl City of Turin
ANSMI
ANCI-Federsanità
The Order of Doctors of Rome
The Turin Medical Association
AOGOI

Authors

Luca De Biase
Writer, blogger and journalist, at «Il Sole 24 Ore». He contributes to Translated's research center, Imminent. He teaches Knowledge Management at the University of Pisa, and Digital Citizenship at the University of Modena and Reggio Emilia. He has written numerous books: the most recent is *Eppur s'innova* (Luiss University Press 2022).

Luca Bello
Currently medical director at the Obstetrics and Gynecology Unit of the Maria Vittoria Hospital in Turin and at the Multidisciplinary Center for Sexual Health (Ce.Mu.S.S.). He is responsible for the service for the prevention and treatment of FGM of the City of Turin ASL. Adjunct professor of Obstetrics and Gynecology at the Faculty of Medicine of Turin. He is a member of the "Working group on sexually transmitted diseases (GLIST)" of the Italian Clinical Microbiologists Association (AMCLI).

Mario Di Giulio
Adjunct professor of Law of Developing Countries at Campus Bio-Medico University in Rome and partner at Pavia e Ansaldo Law Firm.
He is member of the Scientific Committee of Master in Fashion Law at Luiss Guido Carli University and member of the Steering Committee of the biennial specialization course in Technology Innovation and Security at Luigi Vanvitelli University of Campania.

Donatella Padua
PhD, associate professor of Digital Health Sociology at UniCamillus University, author. Has been scientific director at Intelligent Positioning Research Centre (UK) and at Futura Italia, Italian Ministry of Education – Digital Innovation General Directorate. Member of the Italian Minister of University Research Policies Technical Secretariat.

Andrea Pettini
graduated in Philosophy, and former legal adviser on International Humanitarian Law, In the past had been coordinating the Humanitarian Protection and Restory Family Link Office of the Italian Red Cross for several years.
After different humanitarian missions in Iraq, Kosovo, Sri Lanka, Haiti and Iran hi is now working at the Farnesina and dealing with Justice in Europe.

Gian Stefano Spoto
Born in Bologna became a professional journalist in 1983. He wrote for numerous newspapers including «la Repubblica», «Il Resto del Carlino», «Corriere medico». In 1988 he joined the italian television corporation(Rai) where he was special correspondent , editor-in-chief Tg2, Vice-director Raidue and Rai International, correspondent from Middle East in Jerusalem. He has conducted several programs including Linea verde and Futura City on new technologies. Author of numerous publications and five books, the last two about the war in Gaza.

Marco Trombetti
He is a computer scientist, serial entrepreneur, and investor. In 1999, together with Isabelle Andrieu, he founded Translated to solve one of humanity's most significant challenges: to allow everyone to understand and be understood in their own language. Translated pioneered the use of artificial intelligence to support professional translators and is one of the leading translation companies today, with over 270,000 customers, including world-leading tech companies. With the profits from these and other ventures, Marco co-founded Pi Campus, a venture capital firm investing in early-stage technology startups, mainly in the AI field, with over 50 investments in its portfolio across Europe and the United States. In 2017, Pi Campus launched Pi School, an innovative educational reality to create a new class of AI specialists.

Maria Letizia Zamparelli
graduated in Political Sciences, specializing in international politics with a degree thesis in Comparative Law on Refugees. Many years of experience in the field of International Humanitarian Law and Lecturer at the Faculty of Law in LUISS Guido Carli.
Experience in international missions on behalf of the Italian Red Cross (Kossovo and Cambodia), currently officer at the Ministry of Foreign Affairs and International Cooperation.

Maria Angela Wangui Maina
She is a Kenyan lawyer and advocate-in-training with a Bachelor of Laws Degree from Strathmore University (Kenya). She is currently a legal intern at Pavia e Ansaldo Studio Legale and the Chief Research Coordinator – Africa at The Thinking Watermill Society. Through these roles, she exercises her strong interest in International Development Law, specifically sustainable development, human rights, and gender equality. Her skill set includes research, analysis, writing, advocacy, creative problem-solving, and public speaking. Her recent achievements include participating as a guest lecturer in the 2022 EULab Summer School on Labour and Migration in the EU hosted by Università degli Studi di Napoli Federico II.

Federica I. Wolf
She is a full professor of general Pathology at UniCamillus. She spent most of her career at Università Cattolica del Sacro Cuore at the Department of Translational Medicine and Surgery, up to 2021.
Since 1991, she organized Erasmus exchange activities for medical students.
Post-doctoral fellow (CNR-NATO) for 3 years at the Department of Biochemistry and Biophysics, University of Pennsylvania, Philadelphia, PA and Department of Biochemistry, Michigan State University, East Lansing, MI. Visiting Scientist (2016) at the Laboratory of cellular and molecular physiology (LPCM), Faculty of Biotechnology, University of Picardie Jules Verne, Amiens, France.
President of SDRM (International Society for the Development of Research on Magnesium). Co-editor in chief of the journal «Magnesium Research» and section editor for the journal «Nutrients».
Her research activity focused on the role of divalent cations in metabolism of normal and transformed cells, she authored more than 250 publications and 10 book chapters.

Since we were children we have an instinct to climb towards the sun, to see the whole world from above. For everyone to look at us and admire us, because we are taller, more and more. Then we realize that the peaks are solitude, while the net on which we climb can be stretched out and widened to cover the land that we used to consider a dot. Just break down the barriers, the misunderstandings, starting with the languages that often divide. And that's what we're doing: at the beginning of the UCAI adventure it was a dream, and this dream is already coming true in the third issue.

euro 14,00
issn: 2785-3713
isbn: 978-88-9295-639-1
www.tabedizioni.it