

## Pioneering Activities Raising Awareness and Acceptance of the Veterinary Telemedicine

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### Abstract

Since 2002: the story of the birth of Veterinary Telemedicine. In 2003 the term Veterinary Telemedicine was not in use and nothing was known about it. This paper aims to tell the efforts made by undersigned to spread the culture of this new applications and the possibilities it is able to achieve in the veterinary field. In particular to overcome the first resistance at editorial level. In 2020 the Federation of Veterinarians of Europe (FVE) acknowledging the specificity, issues its recommendations on Veterinary Telemedicine using for the first time this terminology.

The opportunity to connect a demand for assistance with a system of services at distance in which competencies are world-wide distributed, increases the necessity of the use of Veterinary Telemedicine. It's particularly desirable in order to support Developing Countries.

**Keywords:** ICT; New Technologies; Innovation; Network; Interdisciplinarity

**List of abbreviations:** IZS: Istituto Zooprofilattico Sperimentale; SISVET: Italian Society of Veterinary Science; @ITIM: Italian Association of Telemedicine and Health Informatics; SIT: Italian Society of Telemedicine; FNOVI: National Professional Order of Italian Veterinaries

## Introduction

“It could be too arrogant reporting personal experience, but it is ethic by a responsible report mostly in terms of autobiographical exposition [1].”

Emilia Forlani is an Italian citizen born in Salerno, Italy. Veterinary Medicine degree at the Faculty of Veterinary Medicine of Pisa, she projected, developed and studied for the creation of “project TeleVetNet”. The initiative was a first in Italy on the theme in the veterinary field. It aimed to promote the meet of the Telemedicine world with the Veterinary Medicine in order to better the cultural connections and the integration of disciplines, to increase the level of interest towards the possibilities nascent in the field of Veterinary Medicine.

### Master in Telemedicine history

Emilia Forlani's first knowledge of Telemedicine, in 2002, came from the University of Pisa's website during her research on the Internet. Information was provided about a Master in Telemedicine from the Department of Surgery at the Santa Chiara University Hospital. Understanding the importance of Telemedicine, she increased her study of the material provided, to verify her hypothesis regarding the subject. Masters were allowed for graduates in Engineering, Computer Science, Physics, Law and Medicine. However, Forlani asked why not Veterinary Medicine? After some days of reflection she asked the office of the Director of the Master of Telemedicine and was given an appointment with the Prof. Enrico Cavina. This meeting marked the beginning of the Master of Telemedicine in Veterinary Medicine where Emilia Forlani participated and received her degree in 2004.

### Financial support from the European Social Fund

During her Master research program, Emilia Forlani innovated the creation of free lance work through the utilization of apparatuses were programmed for the use of Telemedicine and for this she received financial support. Thanks to the funds obtained, she was able to equip the proper instruments to develop new possibilities for work. She experimented and developed the first practical applications for Telemedicine in the Veterinary field which became the focus of the thesis in Pathology and Pet Animals Clinics titled “Telemedicine in Veterinary

Medicine: first practical applications of Tele-electrocardiography”. This experience set the groundwork for her development of the integration of traditional veterinary medical practices with telecommunication technology to implement new possibilities for veterinary services. This study was finalized in the Master thesis in Telemedicine titled “Organizational and administrative hypothesis in Telemedicine in the field of Veterinary Medicine”. This research was the initial base that created the development of the TeleVetNet project.

### The first publications in the Veterinary field

From the start, based on her developing, specialized knowledge acquired during her studies, Emilia Forlani has attempted to spread the culture of Telemedicine in the Veterinary field. However, the process has not been without difficulties.

At first, the Editors of Italian specialized journals for Veterinary Medicine, did not believe that Telemedicine was topic of interest for their readers since it was not a practice that was conducted in veterinary structures. Thus, the first necessity was to sensitize publishers to the important educative role they would have to play. Only through the cultural process of creating awareness to colleagues throughout the area, would it be possible to achieve the opportunities that Telemedicine creates for Veterinary Medicine. The key to introducing the Telemedicine argument in the Veterinary field was discovered by proposing the organization of a day dedicated to its study in a seminar at the School of Specialization, where Forlani was attending. The seminar took place on March 15<sup>th</sup>, 2003 thanks to the collaboration of Cardioline, a prestigious, Italian company that produces electrocardiography apparatuses. This meeting produced a great interest and a description of the activities of the day of study received rapid publication in “The Veterinary Weekly” [2], a scientific information weekly. Consequently, Forlani quickly published a second more technical article and gradually, followed with others.

### The publication in specialized journals of Telemedicine

In December 2004, the article titled “Telemedicine in Veterinary Medicine: first practical applications of Tele-electrocardiology” was published by the Editor of “Telemedicine Today [3]”, an Italian specialized journal of Telemedicine in Human field.

## **The Veterinary Telemedicine is presented at the international show Health Expo in Bologna**

The collaboration with the University of Pisa intensifies and Forlani in May 2004 presents the “Veterinary Telemedicine” to the vast attention of the scientific community during the international exposition of the biennial Health Expo of Bologna, reserved pavilion for Animal Health. The simulation of tele-electrocardiography emergency operations were presented. This initiative succeeded in terms of visibility and elevated the level of awareness of the nascent possibilities of Telemedicine in Veterinary Medicine.

## **The first publication of the Proceedings of the Expo e-learning**

At the “2005 Expo e-learning Fair” at University of Ferrara, Forlani presented her paper “Telemedicine in Veterinary Medicine: first practical applications of Tele-electrocardiography”. It was selected among all those presented at the University of Pisa, to be part of the seminar program. The article was published among the Convention proceedings [4].

## **The first attempt to publish in a scientific veterinary review**

Strengthened by her experience at Ferrara, Forlani submitted an article to a quarterly review of specialized Veterinary Medicine. However, the theme of Telemedicine in Veterinary Medicine, despite having been published in other specialized reviews in Telemedicine and recognized by the prestigious e-learning Convention Fiery Expo, was rejected. At this point Forlani contacted the Editor of the review and explained the necessity of this pioneering work. It had to be judged by a pair review.

## **The first publication in a scientific review of the field. “Telemedicine: A practical case study”**

Thanks to her activity in promotion and awareness and her persevering character, in December 2006, Forlani succeeded in publishing, as the sole author, the article “Telemedicine: a practical case [5]”. This represented the acknowledgment of the scientific base of the experience and study as well as the efficacy of her attitude to publicly disseminate the science, overcoming the human resistance to new technology.

The goal of the article was to create awareness of Telemedicine to practicing veterinarians in Italy, with definitions, historical notations and descriptions of the first experiences of Tele-electrocardiography conducted in Veterinary Medicine in the digital age. The article clarified that it had no presumption of completeness in a subject of such breadth and complexity. It chose, rather, to solicit interest towards deepening understanding of an argument of great importance for the applications that could be implemented. It was shown that only through the cultural acceptance and the knowledge of its use, Telemedicine can exploit its full potential. New technologies tend to challenge pre-existing habits and methodology and thus create resistance that must be overcome. This article was cited in a chapter from the book “In Telepathology” by Sajeesh Kumar and Bruce E. Dunn, Springer, 63-69, 2009. This first publication was followed by others [6-20], with the goal to increase the propensity to use ICT as part of a professional system. This was an attempt to accept the value of the idea despite uncertainties and to strengthen the conviction to use it in the practice of Veterinary Medicine. It also aimed to communicate with the various groups of diverse scientific disciplines that are interconnected in the field of Veterinary Medicine. Furthermore, it also communicated to stakeholders to initiate significant partnerships. These publications were accompanied conventions, communications aimed at interdisciplinary groups in the scientific community, activities in telematic promotion and direct contact with interested parties.

## **Results**

As a result of her dedication to these activities, in 2009, Forlani directs the initiation of the first Group of Interdisciplinary Study in Veterinary Telemedicine [18].

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## Disclosure

The author reports no conflicts of interest in this work.

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