

# Epidemiological Analysis of Covid-19 Infections, Treated At the Queen Apostolorum Hospital of Albano Laziale, Rome, Italy

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## ABSTRACT

*In 2020, the Queen Apostolorum Hospital, located in the southern Province of Rome, was chosen as a provincial reference point, by the ASL Roma 6 for the care and assistance of the sick suffering from Covid-19 respiratory syndrome, with Opening of the Department of Infectious Diseases, starting from 19 March 2020, making a point of reference for the territorial ASL, as well as for the same Lazio region, for the care and treatment of patients suffering from this disease. During the care and assistance of the patients transferred to this*

*nosocomium, it was possible to elaborate the first statistical data, referable to the first pandemic wave, whose results are presented in this study. Being a "new disease", it was not clear what the researcher could have obtained from the results, being one of the first absolute studies referable to Covid-19 respiratory syndrome. The purpose of this study was to compare the data relating to the patients treated and assisted during the first national pandemic wave within the hospital.*

**Keywords: Coronavirus, Italy, Deseas, First Flap, Covid-19, 2020, Hospitalization.**

## INTRODUCTION

The Covid-19 pandemic is a widespread epidemic on a global level still in progress, of the so-called "disease from the new Coronavirus", better known with the Covid-19 acronym. The first known cases involved mainly workers in Wuhan's wet market. In

the first weeks of January 2020 scientists identified in these strange pneumoniates caused by a new coronavirus, designated Sars-Cov-2 (severe acute respiratory syndrome from Coronavirus 2), a result to be similar to at least 70% of its gene sequence to that of SARS-COV [1] [2] [3] [4]. At the end of January 2020 the characteristics of the virus had not yet been determined, although the ability to transmit from person to person was ascertained, and uncertainties remained on the exact methods of

transmission and pathogenicity (the ability to create damage) [5]. The associated disease was recognized with the name of Covid-19 [6].

The first signs of the spread of the virus in Italy had reached 30 January 2020, when two Chinese tourists were positive for the SARS-COV-2 in Rome [7]. In response, the Italian government suspended all flights from and to China and declared the state of emergency [8]. On January 31, the Council of Ministers Italian Giuseppe Conte, appointed Angelo Borrelli, Head of Civil Protection, Special Commissioner for Emergency from Covid-19 [9] [10]. An unsound group of COVID-19 cases was then subsequently detected starting from 16 cases confirmed in Lombardy on 21 February and 2 in Veneto, in the province of Padua [11]. On 22 February the Council of Ministers of the Italian Republic announced a new law decree to contain the epidemic, which foreseen the quarantine of over 50,000 people from 11 different municipalities in northern Italy [12], While on March 4th, the government ordered the complete closure of all the schools and universities of every order and at national level, having registered in the country 100 deaths due to the disease. All the main sporting events, including Serie A football matches, should be kept behind closed doors until April [13].

On February 21st, at least ten cities in Lombardy and Veneto, with a total population of 50,000 inhabitants, were blocked in a quarantine procedure following an epidemic burst in Codogno, in the province of Lodi. The police imposed a curfew, closing all public buildings and checking access through police locking places to the so-called "red area", with sanctions for violations. The Regional President of Basilicata, Vito Bardi, instead of a mandatory quarantine of 14 days for the people who arrived from the areas of Northern Italy

affected by the epidemic [14]. On 8 March 2020, the PDC Conte stated that much of the territories of Northern Italy, including Milan, Venice and the whole Lombardy region, would have been quarantined, with movement restrictions that would affect about 16 million people. A draft of d.p.c.M. It was widespread by the printing bodies the night before the entry into force, and even if the first voices spoke of a leak of about 20 thousand people from Milan to Southern Italy between Saturday 7 and Sunday 8 March. [15] [16]. On the evening of 9 March 2020 the quarantine was then extended to all of Italy and all public activities were closed, outside of groceries, supermarkets, pharmacies, and other supplier activities of basic necessities [17].

Right at that time, from the first cases of positivity, the Queen Apostolorum hospital organized, at the explicit request of the competent ASL, to contain and treat coronavirus infections, within the respiratory disease department, And within a few days the entire hospital was converted, for the care and assistance of patients suffering from Covid-19 respiratory syndrome.

## 1.0 – METHODS

In the period in which the Queen Apostolorum hospital was converted for the care of patients suffering from Covid-19, in Italy there was at the absolute first peak of the infection, it was the first European state and in general the first Western State which was committed to Fight and contain this health problem. It was hard work for everyone. The following is the statistical summary of the cases treated within the hospital in question.

The data has been extrapolated from the stay departments of respiratory disease with patients

with patients with Covid-19 respiratory syndrome, and precisely at two specific hospital departments:

- a) Diseases of the respiratory system  
COVID-1
- b) Diseases of the respiratory system  
COVID-2

Both departments were set up for the complete isolation of patients and health personnel, in a confined environment, in which he worked in hermetic overalls using individual protection devices, as described by the National Institute Infectious Diseases - Lazzaro Spallanzani, Of Rome, whose recommendations were considered by the health facilities in the province of Rome.

At the end of the first wave of Italian infection and at the end of the hospitalization of the sick, the data was analyzed to evaluate the numbers and percentages, in a statistical and non-clinical sense. This is in fact a purely statistical and non-clinical research, whose analyzes and the results of which are contained in the next chapters

## 2.0 – RESULT

The results were obtained by analyzing the data of the hospitalizations, at the end of the period of hospitalization of the patients, disbursed, transferred or deceased, from the Queen Apostolorum hospital. These results contemplate different types of data:

- Number of admissions made;
- Number of resignation that occurred;
- Number of deaths taken.

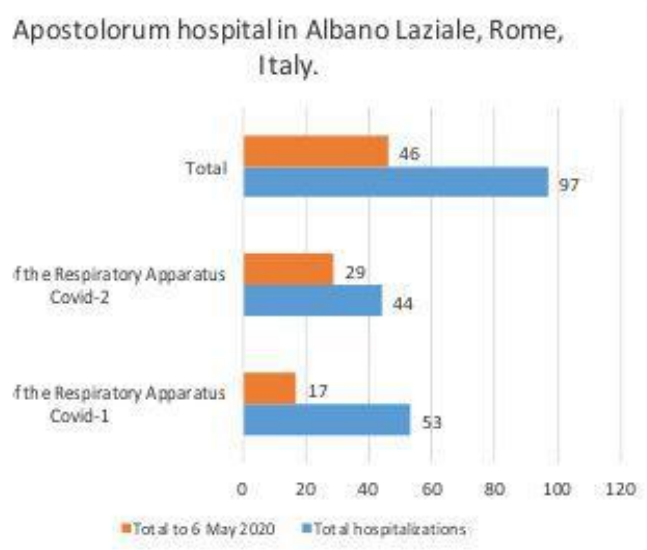
These data have been reported between them, to understand and understand, how the Covid-19 has affected the target of patients who came into contact with this disease.

### 2.1 – Analysis of admissions.

Both hospitalization departments for Covid-19 patients are located between the entire hospital structure of the Queen Apostolorum hospital in Albano Lazio, Rome, Italy. The data examined are those relating to all patients treated at the two insulation departments and suffering from Covid-19, from 19 March 2020 to 6 May 2020. **Tab 1** shows the data relating to the totality of the shelters carried out:

**Tab 1**

Service Unit	Total hospitalizations	Total to 6 May 2020
Diseases of the Respiratory Apparatus Covid-1	53	17
Diseases of the Respiratory Apparatus Covid-2	44	29
<b>Total</b>	<b>97</b>	<b>46</b>



**Tab 1 – Data relating to the number of total hospitalizations, divided by insulation department, within the Queen Apostolorum hospital in Albano Lazio (RM). In red the patients present in the department on 6 May 2021, in blue, the total admission carried out in the hospital. Credits: Queen Apostolorum Hospital.**

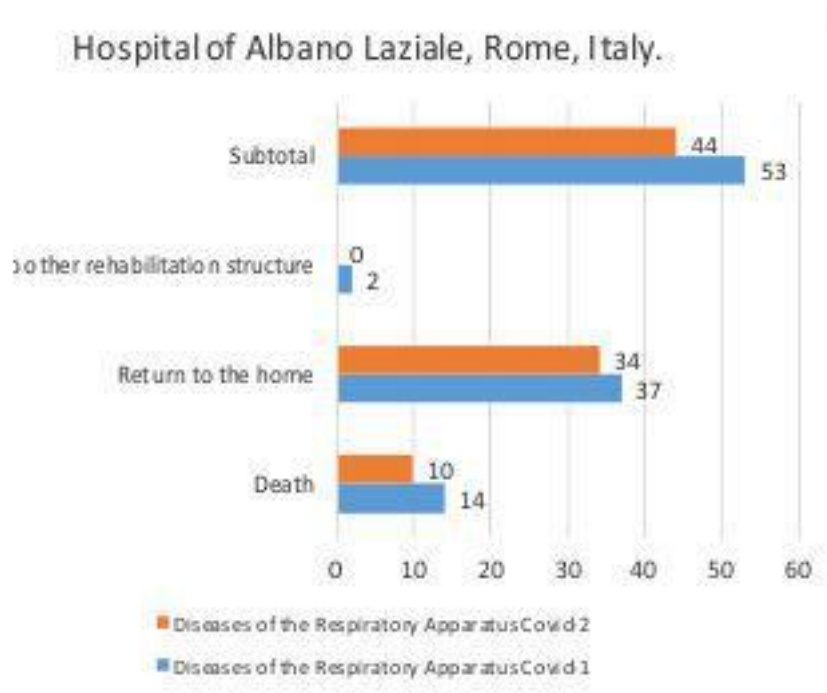
**2.2 – Analysis of dimissions.**

The study of data began with identifying the type of resignation carried out in the isolation departments at the end of the admission period

considered. It should be confirmed here that the discharge took place even in weakly positive patients or who have not presented symptoms. In this case the data relating to the resignation are the following (**Tab 2**):

**Tab 2**

Patient count	Reason for dimissions			
	Death	Return to the home	Transfer to other rehabilitation structure	Subtotal
Diseases of the Respiratory Apparatus Covid-1	14	37	2	53
Diseases of the Respiratory Apparatus Covid-2	10	34	-	44
<b>Total</b>	<b>24</b>	<b>71</b>	<b>2</b>	<b>97</b>



**Tab 2 – Data relating to the type of discharge of patients treated at the Queen Apostolorum Hospital of Albano Laziale, Rome, Italy, during the first wave, for coronavirus infection (Covid-19). In red patients treated in the Covid-2 department) and in blue patients treated in the Covid-1 department). Credits: Queen Apostolorum Hospital.**

In **Tab 2**, we can observe the trend of the resignation of patients admitted to the Queen Apostolorum Hospital, it is clear how there were a total of 24 deaths (23.28%), 71 patients (68.87%) returned to the Private domicile, and two transferred to other facilities (1.94%). In total, cured patients were 97 and all followed by the hospital team that worked in a confined environment for a few months. How can you understand, the percentage relating to deaths, during the first wave, is really great, if compared to

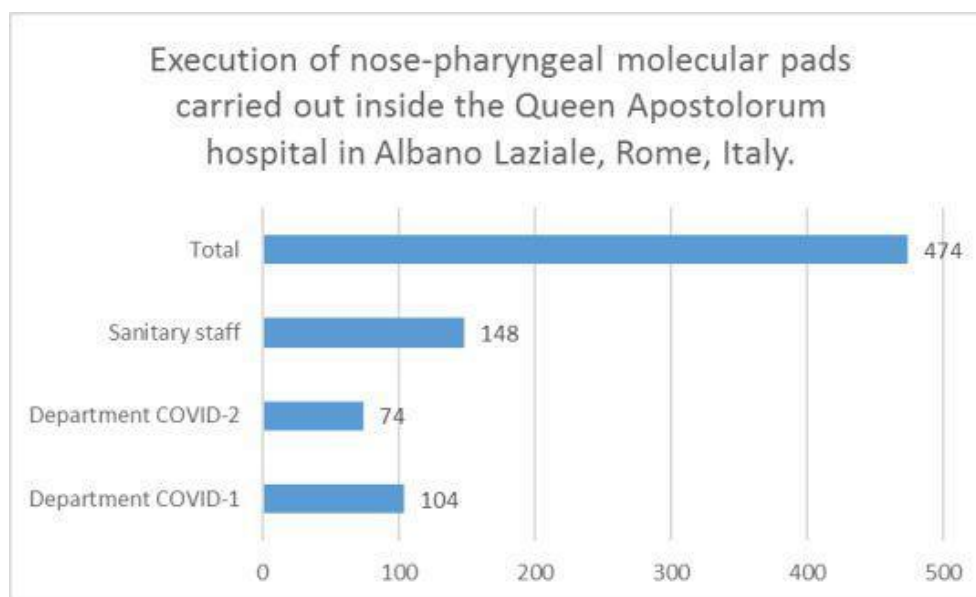
the number of total patients hospitalized, for a total of 97.

### 2.3 – Control pads.

An important data is supplied on the number of buffers carried out, both on patients admitted in isolation departments (COVID-1 and COVID-2), both health personnel, at risk of infection and engaged in the care and assistance of hospitalized patients. The results are the visible ones in **Tab 3**:

Tab 3

Execution of nose-pharyngeal molecular pads (TFCV)	
Department COVID-1	104
Department COVID-2	74
Sanitary staff	148
<b>Total</b>	<b>474</b>



**Tab 3 – Data relating to the number of buffers (nose-pharyngeal), carried out on patients hospitalized and health personnel, engaged in the care and assistance of patients themselves and at risk of infection.**

**Credits: Queen Apostolorum Hospital.**

The dice demonstrate how the number of swabs have been very high, especially towards the hospital employees, implicated in the care of patients suffering from Covid-19. This indicates that health control has been effective and important, as well as the number of pads performed on patients hospitalized to keep their level of coronavirus infection under control.

The percentages are in fact important, we have 148 pads performed on health personnel, or 31.22% of the total; Then there are 15.61% of pads performed on patients admitted to the COVID-2 defined

containment department (44 patients) and 21.94% of pads performed on patients admitted in the containment department defined COVID-1 (53 patients).

This means that if we make a relationship of the pads made on each patient hospitalized, we have an average of 1.68 buffers performed for each patient admitted to the Covid-2 department, and an average of 1.96 pads performed on each patient admitted to the Covid-2 department.

### 3.0 – DISCUSSION

#### 3.1 General organization of health personnel.

The results obtained represent the evidence of the work of organization between health professionals and the Hospital Health Management. Organization that represented the humus on which the assistance and care of the patients was based, as well as the mitigation of the contagion risk.

A fundamental role was that of the availability and professionalism of all the operators involved, as well as the flexibility demonstrated to cover the shift and adoption of precise procedures. In this context, multidisciplinary has played a primary role, with the collaboration between different professional figures.

The adoption of the DPI - individual protection devices - was fundamental to trying to mitigate and contain the risk of contagion, between operator and patient, between operator and operator, and among operators and their family members. In this context, the number of PPE, their quality and use have certainly contributed to the excellent result achieved in the time window considered in this study.

Safety for operators was one of the main points of discussion within the health equipility, with constant updates and the daily organization for the use of the same, organization that guaranteed the adequate number of dpi made available and the Their correct use. Healthcare professionals have guaranteed the correct management and use of the DPIs, after specific training that has made use of the training phases, by vision of specific movies and verification of the stages of clothing and swest as per the protocol sent by the health management.

Daily updates have contributed to the mitigation of insorgent problems from time to time, representing the decisive choice for achieving specific welfare goals and for the levels of security in which to operate.

#### 3.2 Issues found initially.

The initial issues, of fundamental importance, were those referred to the identification of the appropriate environments, dedicated not only to direct assistance but also to the dressing, undressing and the decontamination of health professionals, as well as the definition of the paths clean and those contaminated . The primary purpose was to guarantee the safety of all health personnel, not only for that involved directly in isolation departments (Covid-1 and Covid-2) but also for the one present in the rest of the hospital structure.

The indications, for the continuous improvement of the quality of work and organizational processes, have all took place with reference to the emerging issues, during the assistance and in compliance with the procedures and provisions that continuously were incorporated and disseminated throughout the structure. Suggestions and reports by the personnel involved, have provided real and measurable indications on how to deal with the various issues that emerged. This obviously happened from time to time, especially in the initial phase of the opening of the Dealing Departments Covid-19.

Solidarity demonstrated among health professionals and their active participation have allowed the organization of work to be constantly improved, even in a work regime, certainly not

reassuring, as is normally that of infectious insulation.

### 3.3 Statistical data.

The data confirmed a high mortality of patients hospitalized and affected by the respiratory syndrome from Covid-19, despite the efforts made by the health equipune, to treat and assist patients were huge, finding us in the face of a new disease, i Effects, especially if in medium and long term were still unknown.

The results show how the Queen Apostolorum hospital also took care of health control, in relation to its employees, performing a large number of pads, for the control of Covid-19 infections on the sanitary facilities themselves. This provided a valid aid to contain and isolate infections between health professionals, in the phase of the first wave, against a new reorganization of the entire hospital.

Additional data, indicate how, although we can speak of a small provincial reality, the Queen Apostolorum hospital, was able to treat an important number of sick, significantly influencing, at a territorial level, to contain and cure infection From Coronavirus (Covid-19).

### 4.0 – CONCLUSIONS

According to the data extrapolated by the study presented here, the number of patients suffering from Covid-19 has certainly been high in the initial phase of the study, when the Queen Apostolorum hospital began to take care of the assistance and treatment of this type of patients, A number of admissions adequate to the Italian national health emergency situation.

In the descent phase of the contagion (Italian national trend), the number of hospitalized patients at the two departments (Covid-1 and Covid-2), was still high due to new infecties taken at neighboring rehabilitation structures to the Roman province, from What are other new positive patients took place.

The study poses the importance of the work carried out in the hospital, by the nursing team, in the temporal field in which the pandemic peak of the Covid-19 led to the saturation of the national health sector. At this context, attention has been paid by analyzing data from health work by obtaining these conclusions. In the Queen Apostolorum hospital, nurses assigned to Covid departments have guaranteed the high quality assistance level, in a situation for which it was not prepared.

The factor that, among others, has determined the effective sequence and as activities, connected within the different processes both assistance and diagnostics, during the Covid-19 emergency was the "Time" factor: everything has been planned Quickly to be immediately translated into immediate operations, and everyone responded with professionalism and respect for the procedures, to the sudden emergency that involved the whole hospital structure.

### 4.1 – The "lived" experience from the nurses of the Queen Apostolorum Hospital of the Covid Departments.

All multidisciplinary relationships in the management of the Covid-19 problem have had an effective effect not only professional, but also on every single "nurse".



Which best words can represent these moments if not through the concrete testimonies of the nurses who have made their professionalism available?

The testimonies of nurses committed to assistance at the Covid-1 ward of the Queen Apostolorum hospital in Albano Laziale (Rome) are reported below.

We believe it is important to transmit them and do not leave them in the drawer, with the aim of having more understanding of the psychological state, still little considered, of those who worked directly with the patients Covid-19, in infectious isolation departments.

#### **First testimony**

*“This work period more than leaving something, removed, weakened and strengthened at the same time. He removed so many forces, physicists don't even need to justify them, and mental. He has weakened an emotion that had never crossed the doorstep of the department's door, an emotion that today is present, at all times, with which we coexist, we work. He strengthened our ability to make group, to be united, to be a team. He strengthened the reason we have, I feel he could talk to the plural, chosen to be nurses: to try that sense of unexplained gratification when you take care of someone, and you do it well. Thanks to all those who work with normal. Clearing too much, suddenly, at the end of the turn. We faced and managed a situation without being ready, without notice. What we didn't need, it was the experience with death. Already strong of his for other experiences, working and not. Not from this death, who put us in front of procedures that are emotionally destabilizing, who have taken for granted that we would also be ready. This*

*experience was a sacrifice, from every point of view. Physiological and relational perhaps more than the others. But the difference, compared to other realities, make the people you have next to, with whom you build, apply, verify the results, rejoice, it is suffered, you go proud or not, you make the accounts. Accounts that show many lost lives, lots of pain listened to a phone's handset, but just as many smiles escaped from an unexpected video call once, even a few hours before death arrived. This left. The fortune of having had a group so, at all obvious, so every day, somehow it will be fine...”.*  
*(Dr. Marzia Colagrossi – Nurse).*

#### **Second testimony**

*“...I remember how on March 9, 2020, I was able to write the following words about my personal diary: For about a week we are busy, in the hospital, to assist some patients, infected Covid-19. We have implemented all possible procedures for not infecting... It was the first my written words in relation to the incredible and unexpected health problem ... on a diary where I transcribed from the 90s. Fear and concern came to be part of my everyday life, towards an invisible enemy and with the concrete risk of being able to get sick ... Everything seemed to happen quickly and in PO-Co less than a week I found myself in close contact with the first cases suffering from Covid- 19. Find yourself catapulted in such a situation, in which the whole world closed its borders and images projected by national TV, radio and media making us see hundreds of deaths every day, put it to test myself and my colleagues From a psychological point of view, yet despite I often thought that they are experiencing a nightmare, like the worst science fiction film, the one I lived was reality. A heavy boulder than from the first days of March 2020, I still carry around today. The first things*

*you are asking, in a period of the genus are the people to whom you care, to the person who lives with you and that he shares your life ... to your family that you are forced to not see and the things you can't Do ... Simple things but of a fundamental importance, which you probably manage to estimate only in moments of deprivation. There is also the fear of infecting ... and to infect the people you care about, and this takes you to use pragmatic behaviors, modulated by your experience ... from fear itself, trying to always do the best so that you can not infect you. But it was still hard ... it's still. I believe that our profession has donated much to Italy, to our country ... to the people we have witnessed and to their help of help ... we certainly didn't take back, as often could happen in any other context ... we have always been there, Near people who no longer saw their family ... Isolated forever among their affections and the hospital. Often it was reflected at the meaning of life, as it could have been the life of these people without the coronavirus ... what could have done, for sure they could have spent their existence together with their affections ... but so it was not for many Of them ... People who would do anything to not leave, yet it was not allowed. And so when it is reflected in the sense of life ... with reference to this global journey, it is understood that there is no sense on certain speeches linked to the economy, the spread, to the deficit of certain percentages ... because what matters ... And that he should count is life ... everyone's life. My personal hope is that things can*

*improve, improving health, through which we all pass ... trying to make an important part of our country more human, which still envy many ... but you have to do it all together and you have to do it in Hurry ... taking care of the malatas in a more human way, thinking about what the Coronavirus taught us in these horrible months. Only in this way will it be possible to design a system that respects our humanity, our needs and that can dignitously cure those who are sick...". (Dr. Daniele Cataldi - Nurse).*

From this experience we all have acquired added values, as it was expressed by our nurses, with their testimonies:

- Value of the collaboration,
- Value of constant and responsible presence,
- Value of the possibility of removing even in front of completely unknown events,
- Value of "You can count on me, without herself and without but",
- Value of the mediation revised between the patient and his family members.

The work was difficult and involved on professionalism and people, leaving the signs of an indelible experience in each one and, like all "strong" experiences, has allowed us to maturity further, because the nurses have always been aware of a dynamic way, oriented to change, to the continuous improvement of assistance.

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