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EDITORIAL

Nothing will ever be as before. Reflections on the COVID-19 epidemics by nephrologists in eleven countries

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It is difficult to define the COVID-19 epidemics: it is the black swan challenging what we thought we knew, confronting countries with a high level of technology with problems that seemed to belong to the past. It is a disaster foretold, predicted by prophetic writers and enlightened politicians; it is the fraudulent mistake that has put everyone in the world at risk… However we see it, this epidemic is also a life-changing experience for patients and physicians [1–3].

For this reason, we decided to ask to some young-but not-too-young colleagues who currently work in clinical practice in 11 different countries to tell us something about their experience with the COVID-19 epidemic. They were not selected on the basis of a brilliant curriculum, or a list of outstanding publications, but simply invited as friends, or friends of friends. Most of them answered.

The questions were straightforward, touching rapidly on the logistics involved, and also regarding the fears and the hopes engendered by being confronted with "the infection".

The answers, summarized and commented on in this editorial, should make us reflect not only on the impact of the epidemics, but also, in a broader sense, on the way the "next generation" of our colleagues is reacting and how they will probably integrate the lessons learnt now in the long years of their future clinical practice.

The first question was simple: please, introduce yourself and your work. Yet, albeit simple, the answers, which mirror our different cultures, are interesting: many did not write their names, and two completely skipped the presentation, as if their names mattered little in comparison to the problem they were going to discuss.

I'm 30 years old. I'm a nephrologist working in Italy, in the city of Bari (Puglia). I work in the COVID unit in the Policlinico, a large university hospital.

Nicoletta Pertica, 46 years old, MD nephrologist, University Hospital, Verona, Italy.

My Name is Alejandra Orozco Guillen. I'm 39 years old, I work for a national health institute in Mexico City.

My name is Luis Vicente Gutiérrez Larrauri. I am 45 years old, I work as a nephrologist in Mexico City in a general hospital that belongs to the social security, which has approximately 200 beds.

I'm 45 years old, a nephrologist, working in a large general hospital, Moscow, Russia.

My age: 45. Setting: district general hospital in North London (North Middlesex Hospital).

I am 49 years old. I live in Belgium, in Brussels, and work in a large teaching hospital; the nephrology unit is very much in demand by students and trainees.

Dr Georgina L. Irish, Consultant Nephrologist; age: 33. Setting: Australia, Royal Adelaide Hospital: University Tertiary Hospital located in a city.

My name is David Cucchiari, I am 34 years old and I currently work at the Hospital Clínic in Barcelona, Spain, in the Nephrology and Renal Transplantation Department, a tertiary-care teaching hospital located in the city centre.

Age: 51, working in a private dialysis unit and teaching/research at a university hospital in Switzerland.

Age: 40, CHU de Quebec, l'Hôtel-Dieu de Québec Hospital, Université Laval, Quebec City, Canada.

Age: 31. Country: United States. City: New York.

Not all the nephrologists in this heterogeneous group of people, that do not stand out for an excess of ego, had the chance to be in a setting which was prepared for the epidemics. Some experiences are reported here: in Italy, the delay was short, but, differently from other countries that initially

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overlooked the importance of the "Italian flu", the importance of the Lombardy crisis was immediately clear [3, 4].

In Verona, the Lombardy experience led to a rapid upgrade of our procedures: our division established procedures against COVID-19 very early, based on the guidelines of the Italian Society of Nephrology and the experience of Lombardy colleagues. In Bari, as soon as the COVID-19 epidemic spread in the north of Italy, a COVID centre was established in a 5-floor building in my hospital, including internal medicine, pneumology, infectious diseases, nephrology, intensive care and medicine wards.

The Italian and European experience was useful for many. In Canada, our hospital started to organize things in early March, since we had the opportunity to learn from what happened in Europe (France, Italy…), although it is quite difficult to prepare for a situation like this. Over 6000 beds were reserved in the province of Quebec for potential patients with COVID. All non-essential medical activities were suspended in advance, particularly non-urgent surgeries. So far, we are ok for equipment. Outbreaks and high mortality rates in long-term healthcare facilities currently remain the major challenge here.

In the hospital dedicated to high-risk pregnancy in Mexico City, we prepared approximately 20 days before the arrival of the first case. However, we did not have much personal protective equipment but we quickly received many donations from the population and from private initiatives.

In Adelaide, after COVID-19 cases started escalating dramatically, the hospital worked quickly to become prepared. The logistics of the hospital workflow was changed to have a dedicated COVID team made up of general medicine physicians. The medical workforce was changed to allow doctors to be deployed to areas of greater need. New doctors were employed to help cover the increased workload. Elective surgery and live and deceased donor transplantation were paused. There was enough PPE with simple masks in our hospital as the supply chain is local, however it was unclear if there would be enough N95 masks if there was a surge of infections. There was a large amount of planning to get the hospital ready to deal with a flood of COVID-19 infections. Luckily, we were able to slow the transmission early and this was mostly not required.

In such a context, a few days can make a big difference, as our colleague in Paris reports: our hospital was up against COVID-19 at the beginning of March. During February, the hospital was not prepared to face the COVID-19 epidemics. But with the outbreak of COVID-19 in the north of Italy and in the east of France, the worry increased and it allowed us to think about our future organization.

The first COVID-19 positive patient was admitted to our hospital on 27th February, 2020. At the beginning (..) few people were wearing masks. Rapidly, a lot of new patients were diagnosed, and many health workers were infected.

The first patient in our haemodialysis division was diagnosed on 12th March, 2020 and admitted to the intensive care unit. Six days before, we were warned by the publication of the experience of our Chinese colleagues, and we transposed the guidelines from the Chinese and Taiwanese Society of Nephrology (…).

However, many were less fortunate, and not only in developing countries. As one colleague wrote: unfortunately, my hospital and nephrology clinic were not prepared to deal with the COVID epidemic, especially considering the WHO guidelines issued as early as February 2020. In short, we were clearly behind the virus. As our reporter in New York says, new solutions have to be found, since nobody was fully prepared: what we experienced during the peak of the pandemic in New York City during the first week of April collapsed every preparation we had, as the number of patients with acute kidney injury in the setting of COVID-19 was higher than expected (…). The vast influx of patients presenting aggressive metabolic abnormalities (…) rapidly overwhelmed our capacities. As a result we were mandated to come up with strategies to mitigate the burden imposed to our dialysis services. Of all, one of the strategies with high impact and success in doing this was the opening of the acute peritoneal dialysis program.

And from Russia: when the COVID-19 pandemic reached Moscow, my hospital was not dedicated to COVID-19 patients, later on a special unit was selected for suspected cases, and last week we opened a COVID-19 center (2 buildings). Initially we were supposed to be "clean", procedure and logistics developed in rush. However, all hospital stuff got a short training course. Very soon patient's triage started, the "red zone" was equipped with PPE's, and presently doctors and nurses, recruited for work in the COVID centre get special training.

Life changed for many.

Our young colleague in Bari reports: everyday life has been totally revolutionized by the COVID-19 pandemic. We are making sacrifices that nobody would have imagined. Before the pandemic, I spent most of my days working. Everyday working life was very different, however. I shared every moment of the day with my colleagues. We shared work decisions and difficulties but with convivial and collective breaks. After work, I spent most of my evenings out with my friends or colleagues. This pandemic forced us to give up our "family environment" at work. We are working with physically and mentally heavier rhythms. We are few at work. We eat at different times to reduce contacts. I avoid contacts with my colleagues as much as possible. We have given up what made our job so beautiful. Now I leave home only to go to work. I live alone, so I have no social contacts except with my colleagues in the workplace. I haven't been home to my parents since late February.

In London, sadness for the many losses, especially of dialysis patients, is also accompanied by some hope for a better future. Daily routine, before crisis: ward rounds, clinics, academic work, meetings, and never being able to breathe or catch up, let alone stop to think. During crisis: still heavy ward rounds, with many sad outcomes, but clinics now virtual, meetings virtual and more focused, more time to chat to colleagues (keeping 2 m distance of course!), encouragement to take rest (never before uttered in the history of the NHS). Overall an increase in productivity, new ways of thinking and doing, and paradoxically, happiness at work.

The adaptation to a crisis that, as our colleague in Switzerland underlines, paralyzed all research activities, was not easy for many: we were not allowed to see ambulatory patients anymore except for urgent consultations but hundreds of phone calls had to be answered by us especially in the first weeks because patients were very confused and desperate.

Regrets are nicely described by our colleague in Barcelona: one of the big changes after the epidemics hit was renouncing social life. April is the month in which people start to go to the beach in Barcelona, just to have a walk, play beach volleyball, have some tapas with a cerveza or go swimming (the bravest). After the winter I was eager to enjoy the spring but for the moment we have to wait to go back to the beach (one more year?).

In Moscow: before the epidemic everything was, say, “normal”. (1) Brief morning meeting with the reports from the night shift. (2) Seeing patients (newly admitted the previous night first, then planned admissions, then others). (3) Discussing the most severe and/or “problematic” cases with the head of the department. (4) Instructing the nurses, supervising infusions of biological agents. (5) Preparing the documents for patients being discharged. (6) Looking for the work-up results in the hospital net. (7) Discussing the results of recent kidney biopsies with the nephropathologist and the head of the department. (8) Entering data on medical charts, etc.….

After—planned hospital admissions closed, kidney biopsy temporarily stopped, we admit only emergencies. Therefore, instead of nephrotic syndrome, lupus nephritis, renal amyloidosis and other “classic” nephrology patients, we now deal with AVF thrombosis, catheter-associated bloodstream infections, dialysis peritonitis, acute graft dysfunction…. The work is more or less hectic. (…).

In Belgium, our colleague described silence (Figs. 1, 2): my day starts with PPE for low risk situations. I then check the urgent cases (there are few at the moment because of quarantine and low patient movement). Consultations have been replaced by teleconsultations. The logistics of our dialysis unit had to be adapted (…). Students were exempted from in-hospital training, resulting in less teaching time. The days are marked by silence.

Fig. 1 About silence: daylight. Courtesy of Agnieszka Pozdzik

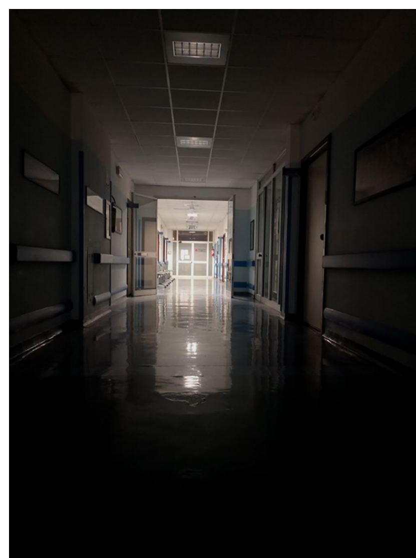

Fig. 2 About silence: nighttime. Courtesy of Emanuela Cataldo

No-one was fully prepared, and many things were unexpected. Some regard the disease: our colleague in Verona underlines the rapidly worsening symptoms of patients who need admission to ICU: a few hours before they were breathing normally and few hours later they didn’t breath anymore. As Louis Gutiérrez Larrauri, who works in a large public hospital in Mexico City, serving a disadvantaged population, points out: I am surprised by the number of young seriously ill patients. I am surprised when I get to an area where many

patients are treated, and where there were many sounds, and many familiar noises. Now the place has been transformed (…) and the predominant sound is now the alarms of mechanical ventilators, infusion pumps and hemodialysis machines. Now it´s an alien place for everyone.

Emanuela Cataldo a young nephrologist working in a COVID Unit in Bari, talks about loneliness in a surreal scenario: this pandemic took two fundamental things away from me: freedom and close contact with people. Only now do I realize how precious little freedoms, such as human relationships, passions, going out are. (…) Nobody would have thought of giving up these inalienable rights. Furthermore, this pandemic took away the most beautiful aspect of my job: living humanity fully. The scenario of social distancing is surreal, especially for the doctors. I think that non-verbal language is fundamental in the relationship with patients. Hospitalized patients see only our half-covered faces. We are not allowed to hug them. Our sense of fear, loneliness and distance is only a droplet when compared to the sense of bewilderment and the need for comfort of our patients distant from their families and from their trusted doctors.

But there is also a bright side, as our colleagues, in Barcelona, Brussels and Adelaide underline: I have never breathed such a climate of mutual collaboration and understanding among colleagues and I hope it will continue for a long time after the epidemics. And: We have been impressed by the professional commitment of our staff to providing high quality care for all our patients.

When Georgina Irish, a nephrologist in Adelaide, went back to work after two weeks of quarantine, the organization had changed and there was fear for the future and for our patients. Yet, what had not changed was the camaraderie and resilience amongst our colleagues. The ability to support each other whilst rising to a challenge is one of the greatest strengths of the nephrology team.

From Paris, Pierre-Antoine Michel, who admits he enjoys jogging between home and the hospital because buses are passing less frequently, reports: what surprised me most was the surge of public support for caregivers and the commitment of many volunteers and all hospital staff despite the fear of the virus. And, further: paradoxically, this allows me to have a little more time to eat, we benefit from the hospital with a very tasty meal tray which lets a little ray of sunshine into our day. I worked 2 sessions for 12 consecutive days but fatigue is not felt too much because we are kept going by the enthusiasm of the nursing team, by the kindness of many people and by the impression of being useful. This commitment gives meaning to our days.

Patients' reactions are likewise a lesson, as Alejandra Orozco, a nephrologist in the largest referral maternal hospital in Mexico City points out: I'm amazed how strong a mother can be during a critical moment. I´m surprised at the strength she has to live for her baby.

There is no better definition of fear, than in these words from Emanuela: working with COVID patients makes you feel their desperate condition. People live the disease in total solitude, far from their family, in contact with medical staff recognizable only by the eyes visible under the big overalls. They often die in total loneliness. This is the strongest image that I associate with the term fear. And it is such a strong image that I fear it will condition our lives forever.

While many only wish to emerge healthy from this devastating experience, since, as Louis says, I wish to remain healthy, because that way I can take care of the rest, shared fears are for parents and grandparents, the most fragile family members. As Alejandra says, I´m scared I'll infect my loved ones, I'm not afraid to die. I know that nothing will ever be like before.

Facing the infection strengthens social bonds, as Pierre-Antoine points out: my other fear would be a serious form and, even worse, the death of a member of our healthcare team or their families.

Dealing with the epidemic has created the nightmarish scenario of having to choose between life and death. Our colleagues in Canada and Australia underline the fear of having to deal with this ethical dilemma: my biggest fear was having the healthcare system overwhelmed to the point that treatment needed to be rationed based on age cut offs. We do not want to choose between patients to treat and others that will not be treated.

In fact, when asked to list three Aladdin-lamp wishes, along with a vaccine and the health of their loved ones, our colleagues voiced their hope to see a profound social and global perception of the link between social and planetary health and the present crisis. The wishes from Russia were for the world—a global net of environmentally friendly rubbish recycling factories; for my country—unselfish and competent government whose main goal is the welfare of the community and development of the country.

From New York, after the craziest phase of the epidemic, our colleague expresses his wishes as follows: I wish the power of reason, as people need to see that the world can't be the same as it was before and that we all need to support each other as we are all vulnerable.

While many only want to return to "normal life", our Australian colleague would like to put the clock back, wishing that COVID-19 had never happened, or since it did, that we had taken steps earlier to curb its spread.

Lessons have been learnt, and should not be forgotten as our Belgian and Italian colleagues point out: please stop this outbreak now, we are aware of our vulnerabilities. I hope my nation always keeps the heart and strength that Italians show in times of crisis. I wish that these scars will make me a better doctor. As the Canadian doctor writes, we need to work together, to learn more about working together: we must stand and face this epidemic together. We need to help

each other to pass through this and work together to find an effective therapy.

A healthier planet and healthier governments are shared needs: I wish for greater cooperation and fraternity between countries. I wish for corruption to end, as this impedes social justice and the development of my country. Pierre-Antoine wishes: for the world, a change in the policy of excessive globalization which exposes us to climate change, to the economic and health fragility of many countries, including industrialized countries. I would like all countries to be united and no longer in competition or in trade wars. For France, a change to reinvesting significantly in public services (health, school, culture …) so that they are no longer seen as costs but as wealth. And, in the UK our colleague expresses his hopes and describes the lessons he has learnt: for the world, I wish that we can permanently secure some of the benefits of lockdown (more time with family, better relationships with colleagues, less pollution, gratitude for all the simple non-materialistic pleasures of life). For the UK, I wish that people can continue behaving respectfully as they are doing now, and that the government can be honest when they get things wrong. For myself, I would like to acquire antibodies without having the disease, and take forward the new momentum of a more intelligent and peaceful way of working.

But let us finish on a lighter note, Elena's music: personal wishes: for myself—the talent of a blues singer.

The last word comes from Emanuela: I finally hope Aladdin's lamp works.

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Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest statement.

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