

Dear friends at ESPID

Triggered by colleagues who asked me to share our experience with the Coronavirus here in Italy, at the forefront of the pandemic, as it might be useful for those who see the same increase from 200 to > 10'000 cases within 2 weeks, I wrote this personal snapshot. Please feel free to share any additional ideas or measures you think could help us and others.

*Ospedale dei Bambini* where I work, is the Paediatric Section of *Spedali Civili*, the University Hospital here in Brescia (pop 200'000, with surroundings roughly 1 million), the second most hit city in Italy.

Our hospital has now separate entrances for the personnel and patients, the latter being screened with a questionnaire. The adult ER entrance has a big tent for triage to be performed outside of the hospital building. No more visitors allowed, relatives must leave gifts and personal belongings for the patients at the entrance.

The paediatric ER does not have enough physical space to do the same, but we are testing all children that need to be hospitalized, while all others are not tested. For those tested positive we cohort them in an *ad hoc* created separate CoViD+ ward. All elective surgery was stopped and Paediatric ENT and Orthopaedics joined Paediatric surgery in what is now the only paediatric surgical ward. Ventilators were taken out of the theatres and given to the adults (see below).

We created a separate staff to cover the CoViD-ward in a 3-shift schedule 24/7 (= 90+ extra shifts to cover every month) to avoid spread of the virus within paediatrics. Staff working there, many from day hospitals and outpatient clinics that have been shut-down as much as possible, is fully equipped with PPD. Any adult, be it staff or parent, has to wear a mask all the time being in the hospital. (One of the problems: in contrast to adults, positive children often not tolerate to wear masks.)

Brescia's second Hospital has closed its Paediatric Unit completely in order to free space for adults with CoViD, sending all children in need for hospitalization to us. Lucky enough all other childhood ailments seem to be cured by *Coronafear*: the lock-down of the city (I'm not allowed to ride my bike any longer) reduces trauma, asthma and all those febrile illnesses and belly-pains that used to crowd our ER by >50%.

Gladly enough children are < 1% of the infected population, as of now, the total in Italy is close to 300. We have seen 10 so far, all but one, who had pre-existing cardiac problems and is in C-PAP, fared well with supplemental oxygen. This allows us to relieve our adult colleagues a bit by rising our upper age limit and take care of infected young adults in our CoViD unit as well. (We feel we are better prepared for them, than for the typical older patient with lots of comorbidities.)

Staff tests are for symptomatic people only, if positive quarantine is ordered, and two negative tests are needed before they are readmitted at work. No tests for contacts (unless family member). However, we already experience staff shortage, many are in quarantine, some are sick and a few needed intubation and mechanical ventilation. As expected, the positive rate among health care workers is higher than average.

In HaemOnc we try to contact parents by phone the day before scheduled visits or hospitalizations to ask some triage questions and arrange for a test. We use a separate entrance and ask them to fill in a questionnaire (if not done already by phone). We allow only one adult who again must wear a mask all the time. Visitors, teachers, clowns etc are not allowed anymore to enter the hospital. The waiting room has now only 2 seats for patient + adult in every corner to allow sufficient distance and all toys that usually are shared among the kids, are hidden. Routine follow-ups are possibly rescheduled and control intervals prolonged. I'm aware of three paediatric patients with oncologic diseases that were found Coronavirus positive, but to my knowledge all are doing fine respiratory-wise.

There is also a problem with stem cell transplant as international flight restrictions hamper timely arrival of stem cells from international donors - some of them even have withdrawn. We now need to switch to haploidentical or national donors. Radiotherapy is also closed at this time, as the technicians are in quarantine. Blood donors are sometimes avoiding the hospital which might become a problem in near future.

We are considering next steps to take, which might be to transfer the ward haem-onc altogether into the BMT-unit and the adjacent day hospital (so some children will sleep in parent's beds, parents in the kitchen). The waiting room will then host the arm-chairs for transfusions and patients will have to wait in a nearby auditorium...). An alternative could be to incorporate another paediatric oncologic unit in Lombardy to free space there. All this to create more space for additional adult CoViD patients – as the worse is probably yet to come...

In fact the situation in the adult part of all hospitals here is dramatic, many wards were transformed to hospitalize CoViD patients, but it's simply not enough. Walls were teared down and new Oxygen pipes installed to transform kitchens and locker rooms to take in additional patients. Ventilators were taken from everywhere but it's still difficult. Rumour has it that after Milan and Bergamo also Brescia might get a 500-bed field hospital... Meanwhile the hospitals in town work together in order to reduce redundancies, retired staff was called back in service, all holidays and vacation cancelled, physicians and nurses in the last year of training are working full. Some of our colleagues do additional shifts in CoViD units, there is a need also for prescriptions, documentation, lots of paper work to be done.

Initially the plan was to continue University courses on a virtual platform, but actually this is almost impossible.

However, people finally seem to understand how serious the situation is and stay home, no hamstring, no panic, lots of gratitude.

I wish you prepare as much as you can, it comes lightning fast and hits damned hard – it hurts!

Stay home and healthy –as we say here: *Tutto andrà bene!*

Fabian Schumacher

On a personal note: I believe that if ALL wear a (even home-made) mask while being out of home, this could help squeeze  $R_0$  close to 1. So please start doing so, your example might inspire others!