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BRIEF REPORT

ACTA PÆDIATRICA NURTURING THE CHILD WILEY

Management strategies adopted by a paediatric palliative care network in northern Italy during the COVID-19 pandemic

The Veneto region of northern Italy, which has about 5 million inhabitants, was the second area of the country, after Lombardy, to face the spread of COVID-19. After the first case on February 21, 2020, the number of cases increased exponentially, and lockdown was enforced. The regional healthcare system was forced to implement appropriate measures to protect patients and healthcare providers from the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection, which causes COVID-19, while ensuring continued care.

Our paediatric palliative care (PPC) referral centre in Padua deals with the needs of children with life-limiting and life-threatening diseases and their families in the Veneto region.[1] It was imperative to provide continued care during the pandemic, while protecting these vulnerable patients and their families from the virus.[1]

We care for about 180 patients a day, both in the inpatient paediatric hospice and at home. Our staff are also available 24/7 to supervise the management of patients eligible for PPC in regional community care hospitals.

When the outbreak started, we identified four critical issues that needed to be dealt with. We needed to continue addressing the needs of patients and their families and ensure the safety of our staff. In addition, we needed to stock-up with personal protective equipment (PPE) and train our staff to treat COVID-19. We decided to implement changes to our standard of care in two consecutive phases (Figure 1).

Phase one was defining the strategies to handle the emergency, after consultation with experts on infectious diseases and healthcare organisations. This comprised five elements. We monitored the literature on COVID-19 and how to prevent it and then held multidisciplinary meetings to share our approach with healthcare providers involved in PPC in the Veneto region. PPE training material was acquired and provided for the entire staff, the infection status of all healthcare providers was assessed and we prepared educational material on COVID-19 for patients and their families.

During phase one, we redefined PCC activities in the Veneto region. First, we decided that cover for the PPC home care network needed to be maintained 24/7. Non-urgent home activities were reduced as much as possible, but urgent interventions were not postponed. Managing non-urgent needs was achieved by round-the-clock consultations and training for the COVID-19 emergency for healthcare providers and families. We continuously monitored and trained patients and families by using telemedicine, namely audio and video conferences with dedicated mobile applications or Internet-based tools. As most of the healthcare providers provided home management of adult patients with COVID-19, all children were followed, in the wide majority of cases, by our staff.

During phase one, the paediatric hospital was closed for 7 days. If diseases became worse or symptoms were not manageable at home, patients were referred to local hospitals, who were in continuous contact with our staff.

During phase two, access to the paediatric hospital was permitted if patients met any of five key criteria. Hospitalisation was decided by the need for end-of-life care, symptoms, such as severe pain and dyspnoea, not manageable at home, worsening of clinical conditions, the first evaluation of a new admission and training of caregivers on life-saving devices or management of symptoms.

Patients and their families were tested for SARS-CoV-2 before they were allowed into the paediatric hospital. Swab tests were performed at home if access was not urgent, with the results available in 2 days. If they were urgent, tests were performed in a dedicated hospital setting, with results due in 3 hours and medical attention was guaranteed while they waited. The child could be hospitalised if they tested negative and could be accompanied by both parents and visited by close relatives. Patients who were tested positive for COVID-19 were referred to a dedicated ward in the Department of Pediatrics at the University Hospital of Padua and were managed by our staff and hospital staff.

During phase two, we continued to guarantee home assistance for urgent or undelayable procedures and telemedicine for monitoring whenever possible. We made PPE available to patients, their families and healthcare providers.

During the entire COVID-19 emergency, end-of-life support was guaranteed. Complex cases were discussed by staff and the child's parents and the advice of other medical specialists and the bioethical committee were sought when necessary.

Data on the patients were also prospectively collected to monitor the performance of the implemented measures and make any appropriate changes. These data will also be useful for research purposes and will be presented in another manuscript. In addition, fundraising initiatives were undertaken to purchase PPE and implement telemedicine tools. Staff received daily updates on COVID-19, together with protection measures and repeated screening with swabs every 2 weeks.

At the time of writing, our revised PCC strategy was in its 11th week and the above-described measures were proving successful. Despite the increased workload, and the inherent difficulties of this situation,

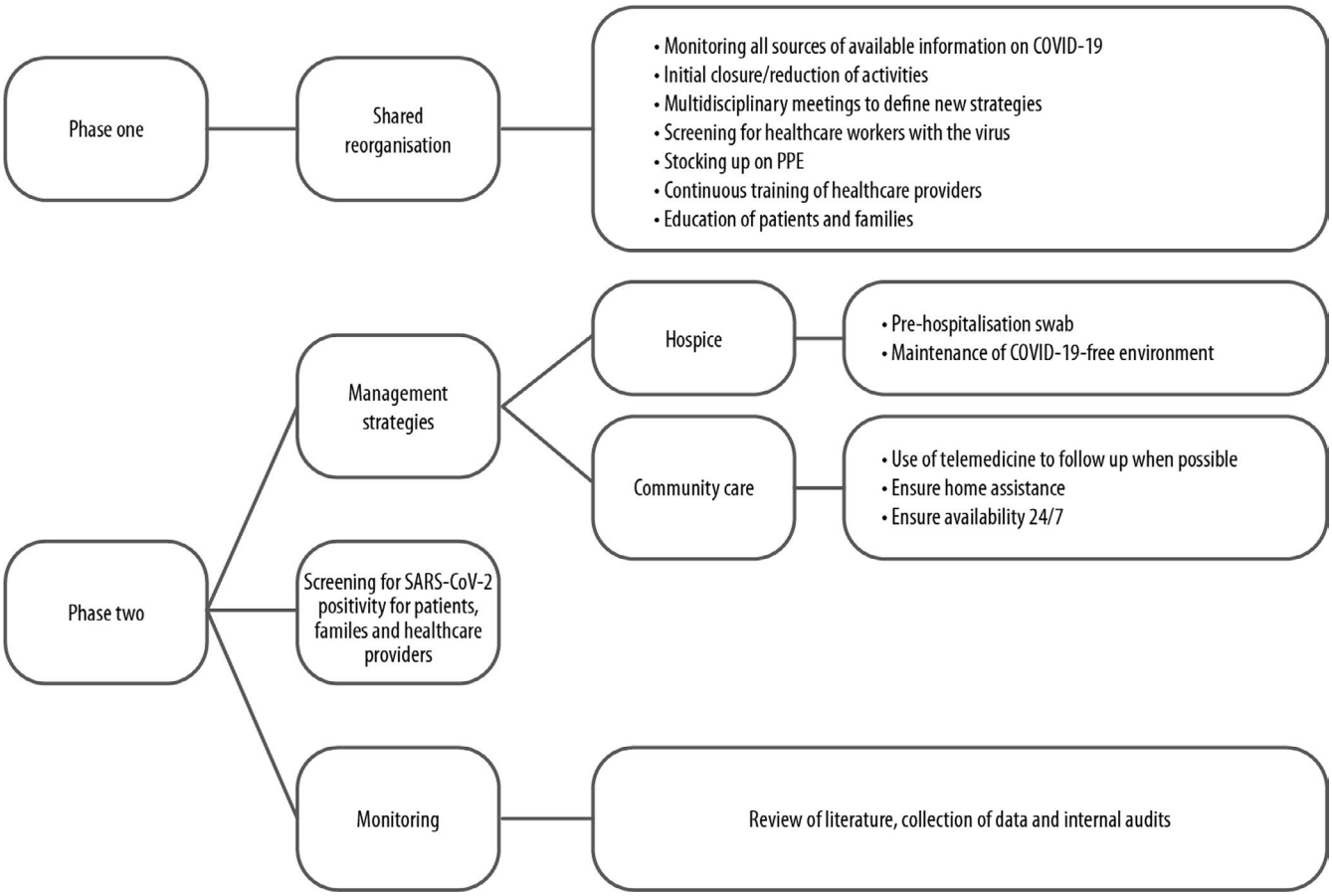

FIGURE 1 Strategies adopted by the PPC network in the Veneto region of Italy to ensure continuing care during the COVID-19 pandemic

we provided patients and their families with satisfactorily assistance and none of our patients tested positive for SARS-CoV-2. One parent was positive for SARS-CoV-2 and was isolated. Overall, the families reported a high satisfaction, with 85% of cases scoring 4 or 5 on a 5-point Likert scale when they completed an anonymous questionnaire.

Our experience of the Italian COVID-19 outbreak showed that, in order to ensure adequate PPC, we needed to immediately reorganise our activities and define new care procedures, which included delaying non-urgent interventions. Moreover, training of healthcare providers, using telemedicine and providing PPE, were of the utmost importance. These measures allowed us to successfully face the first round of the COVID-19 pandemic, but they would need to be adapted to any changing needs.

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CONFLICT OF INTEREST

The authors have no conflicts of interest to declare.

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REFERENCES

1. He Y, Lin Z, Tang D, Yang Y, Wang T, Yang M. Strategic plan for management of COVID-19 in paediatric haematology and oncology departments. *Lancet Haematol*. 2020; 7: e359-e362.