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Current situation of pediatric intensive care specialty and pediatric intensive care units in Turkey: Results of a national survey

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What is already known on this topic?

- *Pediatric intensive care units are very important in reducing the mortality and morbidity rates of critically ill children.*
- *The development of the pediatric intensive care subspecialty program s in our country have been delayed compared to other pediatric subspecialty programs.*

What this study adds on this topic?

- *Our study revealed that pediatric intensive care specialism has taken in this process since the first pediatric intensive care units started to be established in Turkey 20 years ago.*
- *Today, the importance of pediatric intensive care units with their newly trained specialists and an increasing number of academicians in many centers, is increasing.*

ABSTRACT

Objective: In this study, we have planned to present the results of a national survey performed to evaluate the last situation of pediatric intensive care specialty and pediatric intensive care units in Turkey.

Material and Methods: We have sent an electronic survey which includes 47 questions about the characteristics of pediatric intensive care units, staff, and equipment to members of the Turkish Society of Pediatric Emergency and Intensive Care via email.

Results: A total of 58 participant units responded to our survey. 93.2% of the centers have tertiary level pediatric intensive care units. There were 841 tertiary level pediatric intensive care beds. There were 35 pediatric intensive care faculty members, 44 pediatric intensive care specialists, and 53 pediatric intensive care fellows. In the participant units, the total number of invasive mechanical ventilators in the units was 806, the number of specific non-invasive mechanical ventilators was 126. It was learned that 79.3% of the centers could apply continuous renal replacement therapy, 84.4% of therapeutic plasma exchange, 46.5% of extracorporeal membrane oxygenation.

Conclusion: We see that the way we have traveled in the 20 years since the establishment of the first units is very important and proud. The number of educated new generation pediatric intensive care specialists and the well-equipped pediatric intensive care units established by these specialists in every region of our country together with the fellowship education applied in many centers make a great contribution to the treatment of the critically ill pediatric patient population in our country.

Keywords: Fellowship, pediatric intensive care, survey, Turkey

Introduction

Pediatric intensive care is the special care and treatment services provided in the pediatric intensive care units (PICUs) of hospitals for children aged 1 month – 18 years with a critical illness (1). Pediatric intensive care units are very important in the treatment of children with critical illnesses who have dysfunction in one or more organs or organ systems and often require the joint evaluation of more than one discipline (2). The design of these units should be privileged in terms of continuous monitoring and treatment of the critically ill patient, and also, they should be equipped with advanced technological devices (3). When compared to other subspecialty branches, the training of pediatric intensive care subspecialists and the establishment of pediatric intensive care units were delayed in our country. Especially since the 2000s, the number of pediatric intensive care units with contemporary features has become increasingly widespread (4). Also, with the increasing interest in this field in recent years, the increase in the number of centers providing subspecialty education and

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the training of qualified subspecialists promise hope for the future. It is very important to see the current situation of pediatric intensive care in all its aspects in terms of plans and ensuring the continuity of development. Survey studies previously carried out for this purpose in Korea, Pakistan, Nepal, the United States of America, and our country in 2005 and 2012 have been presented to the literature (4-9). Also in 2008 and 2015, the 'pediatric intensive care physician manpower in Turkey report' was prepared by The Society of Pediatric Emergency and Intensive Care (1, 10).

Here, we aimed to present the results of our national survey to evaluate the latest status of PICUs and specialization education to see how far we have come in critically ill pediatric care in Turkey.

Material and Methods

A multi-center, cross-sectional, descriptive questionnaire was prepared. The 47-question SurveyMonkey questionnaire we prepared was sent to the member centers of The Society of Pediatric Emergency and Intensive Care via e-mail. Access to the survey was granted in the first 15 days of March 2020. The main topics in the survey are the architectural features of the surveyed center and the pediatric intensive care unit, the scope of the unit, the number and qualifications of the pediatric intensive care specialists working in the unit, and the attendance of various courses organized by the The Society of Pediatric Emergency Medicine and Intensive Care, the number and certification status of the nurses, mechanical ventilation in the unit, extracorporeal methods and the equipment used for advanced hemodynamic monitoring. The study was approved by the Çukurova University Medical Faculty clinical research ethics committee (Date:10/04/2020, meeting number:98).

Statistical analysis

A statistical analysis method was not used. Since the questionnaire questions did not contain any patient information, patient consent was not obtained. The study was conducted in accordance with the criteria of Helsinki declaration.

Results

The questionnaire was delivered electronically to 60 pediatric intensive care units managed by a pediatric intensive care specialist. 58 of the centers answered our questionnaire. 5 of the centers (8.6%) were city hospitals, 7 (12%) were state hospitals, 25 (43.2%) were university hospitals, 21 were (36.2%) training and research hospitals. Participating centers are given in Table 1. Fifty-four of the centers (93.2%) were tertiary care, 2 (3.4%) secondary care, 2 (3.4%) secondary and tertiary mixed units. There were a total of 841 tertiary level pediatric intensive care beds, 37 secondary level pediatric intensive care beds, 128 of which were isolated pediatric intensive care beds. The number of full beds was 820 (93.3%) on the day of the survey. When the centers were asked about the number of patients hospitalized in the PICU in 2019, it was learned that a total of 28.005 pediatric intensive care patients were followed up in 1 year in centers other than 5 centers, which did not have 2019 data since they were newly established. When the scope of the centers was asked, 22 (37.9%) units were medical + surgery + cardiac intensive care, 29 (50%) units of medical + surgical intensive care, and 7 (12.1%)

Table 1. Pediatric intensive care units participating in the survey

City	Center
İstanbul	Marmara University Pendik Training and Research Hospital Hospital
	Bakırköy Dr. Sadi Konuk Training and Research Hospital Hospital
	İstanbul University Faculty of Medicine
	İstanbul University-Cerrahpaşa, Cerrahpaşa Faculty of Medicine
	Haseki Training and Research Hospital Hospital
	Kanuni Training and Research Hospital Hospital
	Okmeydanı Training and Research Hospital Hospital
	Şişli Etfal Training and Research Hospital Hospital
	Bağcılar Training and Research Hospital Hospital
	Medeniyet University Göztepe Training and Research Hospital Hospital
	İstinye University Bahçeşehir Liv Hospital
	Medipol University
	Acıbadem Mehmet Ali Aydınlar University
	Bezmialem Foundation University
	Zeynep Kamil Training and Research Hospital Hospital
	Ümraniye Training and Research Hospital Hospital
Ankara	Ankara University
	Dr. Sami Ulus Children's Hospital
	Ankara City Hospital
İzmir	Dokuz Eylül University
	Ege University
	İzmir Tepecik Training and Research Hospital Hospital
	Dr. Behçet Uz Children's Hospital
Adana	Çukurova University
	Seyhan State Hospital
	Adana City Hospital
Kayseri	Erciyes University
	Kayseri City Hospital
Diyarbakır	Diyarbakır Children's Hospital
	Diyarbakır Gazi Yaşargil Training and Research Hospital Hospital
Antalya	Akdeniz University
	Antalya Training and Research Hospital Hospital
Mersin	Mersin University
	Mersin City Hospital
Kocaeli	Kocaeli University
	Kocaeli Derince Training and Research Hospital Hospital
Konya	Selçuk University
	Konya Training and Research Hospital Hospital (2 independent units)
Zonguldak	Bülent Ecevit University
Elazığ	Elazığ Fethi Sekin City Hospital
Sivas	Cumhuriyet University
Van	Van Training and Research Hospital Hospital
Adıyaman	Adıyaman University
Afyonkarahisar	Afyonkarahisar University of Health Sciences
Hatay	Hatay State Hospital
Erzurum	Atatürk University
	Erzurum Regional Training and Research Hospital
Denizli	Denizli State Hospital
Bursa	Bursa Higher Specialization Training and Research Hospital Hospital
Manisa	Celal Bayar University
Samsun	Ondokuz Mayıs University
Çanakkale	Onsekiz Mart University
Isparta	Isparta City Hospital
Eskişehir	Osmangazi University
Şanlıurfa	Şanlıurfa Training and Research Hospital
Gaziantep	Cengiz Gökçek Children's Hospital
Nicosia/Cyprus	Dr. Burhan Nalbantoğlu State Hospital

Table 2. Patient profiles accepted by the units	
	n (%)
Multiple trauma	46 (79.3)
Hematology-oncology	47 (81)
Heart diseases	53 (91.3)
Neuromuscular diseases	58 (100)
Respiratory diseases	58 (100)
Pediatric surgery post-op patient	52 (89.6)
Cardiac surgery post-op patient	25 (43.1)
Neurosurgery post-op patient	50 (86.2)
Transplant patient	13 (22.4)
Nephrology	53 (91.3)
Gastroenterology	50 (86.2)
Endocrine	54 (93.1)
Metabolism	47 (81)

Table 3. Equipment in the units	
	n (%)
Bedside hemodynamic monitor	58 (100)
Invasive mechanical ventilator	58 (100)
Non-invasive mechanical ventilator	42 (72.4)
High-flow oxygen nasal cannula	52 (89.6)
High-frequency oscillatory ventilation	23 (39.6)
EEG	20 (34.4)
BIS	18 (31)
NIRS	28 (48.2)
PiCCO	10 (17.2)
Intracranial pressure monitor	21 (36.2)
Flexible pediatric bronchoscope	11 (18.9)
Bedside ultrasonography	43 (74.1)
EEG, Electroencephalogram; BIS, Bispectral Index; NIRS, Near-Infrared Spectroscopy; PiCCO, Pulse index Contour Cardiac Output	

units of medical intensive care. The patient profile accepted by the units is given in Table 2. When the architecture of the units was questioned, 36 (62%) were open-plan units and 22 (38%) were single rooms. A total of 35 pediatric intensive care lecturers, 44 pediatric intensive care specialists, and 53 pediatric intensive care subspecialists were working in the centers. The number of physicians participating in the 'Invasive and Non-invasive Mechanical Ventilation Course' organized by The Society of Pediatric Emergency and Intensive Care is 73 (55.3%), the number of physicians attending the 'Renal Replacement Therapies Course' is 77 (58.3%), the number of physicians attending the 'Bedside Ultrasonography Course' was 80 (60.6%) and the number of physicians attending the 'Cardiac Intensive Care Course' was 42 (31.8%). The number of physicians who attended the "Pediatric Advanced Life Support-Provider" course also organized by our society and supported by the American Heart Association was 70 (53%), and the number of physicians participating in the "Pediatric Advanced Life Support-Instructor" course was 30 (22.7%). The number of physicians who attended the 'Extracorporeal membrane oxygenation (ECMO) Course supported by the Extracorporeal Life Support Organization (ELSO) was 29 (21.9%). The nurse bed ratio was 1:2 in 38 (65.5%) units, and 1:3 in 20 (34.5%) units. The total number of invasive mechanical ventilators was 806, the number of specific non-invasive mechanical ventilators was 126, and the number of high-flow nasal cannula oxygen (HFNC) devices was 247 in the units participating in the survey. When the use of extracorporeal methods was questioned, it was learned that continuous renal replacement therapy (CRRT) could be applied in 46 (79.3%) centers, therapeutic plasma exchange in 49 (84.4%) centers, and ECMO in 27 (46.5%) centers. The rates regarding the advanced monitors and equipment in the units are given in Table 3.

Discussion

Intensive care service forms a very important part of healthcare in developed countries (11). Pediatric intensive care emerged as a new specialty in the field of medicine in the 1960s, with the awareness that a separate subspecialty is required to care for critically ill pediatric patients (9). The first PICU in the United States of America was established by John Downes in the Children's Hospital of Philadelphia in 1967 (3). In the following 40 years, pediatric intensive care services have gained importance in many developing countries around the world and new units have been established. The first PICU in our country, with a responsible physician trained in the field of pediatric intensive care, was established in 1994 by Prof. Dr. Metin Karaböcüoğlu within the body of Istanbul University Faculty of Medicine, with a 4-bed capacity in the Pediatric Emergency Service. This unit is considered to be the first truly PICU in our country (12). In our country, The Society of Pediatric Emergency and Intensive Care was established on January 19, 1998, as the "Pediatric Emergency Association". Faculty members dealing with the Pediatric Emergency and Pediatric Intensive Care in teaching hospitals and universities have come together in the first meeting held in Istanbul, Turkey in 2000, and here, it was decided to change the name of the association to "The Society of Pediatric Emergency and Intensive Care" and it was envisaged to serve as a national association (1). The number of PICUs has increased in our country since the early 2000s with the high individual efforts of this idealistic, hardworking, and enthusiastic group of clinicians (3).

Köroğlu et al. (4) who have made great contributions to the development and institutionalization of pediatric intensive care medicine in our country have conducted a survey study in 2005 in 34 PICUs in our country and 76% of the centers participating were university hospitals. Most of the participating units were in our 4 big cities, Ankara (8 units), Istanbul (4 units), Izmir (4 units), Adana (1 unit). In our study, 58 PICUs administered by a pediatric intensive care specialist with subspecialty training were evaluated. 15 of the centers participating in our survey were in Istanbul, 4 were in Izmir, 3 were in Ankara, and 3 were in Adana. However, our results showed that the units are not only in big cities but also there are units under the supervision of pediatric intensive care specialists in cities such as Şanlıurfa, Gaziantep, Van, Diyarbakır, and Elazığ in the Eastern and Southeastern Anatolia regions of our country. The Ministry of Health has set the target number of beds in the Pediatric Intensive Care as 1,138 in Turkey (1 intensive care bed for 20,000 children) (13). In the survey results of Köroğlu et al. (4), the total number of pediatric intensive care beds was reported as 196. It was reported in the survey of Bayrakçı et al. (8) that there were 602 secondary and tertiary level pediatric intensive care beds in 2012, 147 of which were in centers with pediatric intensive care specialists. It was reported that there were 113 pediatric intensive care beds in 13 PICUs in a similar national survey study conducted by Yoon et al. (5) in Korea in 2015. The results of a

similar survey study conducted by Haque et al. (6) on the status of PICUs in Pakistan showed that there are 155 pediatric intensive care beds in 16 PICUs. A survey conducted in 2016 regarding pediatric intensive care services in Nepal showed that there are 93 pediatric intensive care beds (9). Our results showed that there were 841 tertiary level pediatric intensive care beds, 37 secondary level pediatric intensive care beds, and 878 pediatric intensive care beds in total, of which 128 were isolated pediatric intensive care beds. The presence of a pediatric intensive care specialist with formal subspecialty training is very important in reducing the mortality of critically ill pediatric patients (14). The number of pediatric intensive care specialists in our country was only 12 in the period when Köroğlu et al. (4) conducted the survey. Since there was no formal subspecialty training for pediatric intensive care in our country at that time, most of these specialists had received subspecialty training for 6, 12, and 24 months in developed countries. Also, some specialists were trained in our country and went to observe abroad to increase their knowledge level. Köroğlu et al. (4) mentioned in the survey that the state plans to adopt pediatric intensive care as a subspecialty soon and they hope the state will educate the subspecialists. Pediatric Intensive Care subspecialty was established with the Medical Specialties Statute issued in 2002 in our country, but the implementation of the regulation due to legal problems was made possible by the Regulation on Specialty Education in Medicine and Dentistry published in 2009. 25 pediatricians who have done sufficient research, practice, and examination in Turkey or abroad before the date of coming into force of this Regulation have been given a "Pediatric Intensive Care Subspecialty Certificate". Subspecialty training has started in Pediatric Intensive Care as of 2011 in Turkey (10). It was reported in a similar survey study conducted by Bayrakçı et al. (8) in our country in 2012 that the number of pediatric intensive care specialists at that time was 19 and only 9 subspecialists were receiving training. It was stated in the report published by the The Society of Pediatric Emergency and Intensive Care in 2015 that the number of registered pediatric intensive care specialists was 29 as of 2014 (10). The number of Pediatric subspecialists per 100,000 children was less in some subspecialties in Turkey when compared with Europe (Intensive Care, Emergency, Neonatology, Cardiology, Hematology-Oncology, Chest diseases, Neurology, Endocrinology), was similar to Europe in some subspecialties (Pediatric Gastroenterology), and it was more than Europe in some subspecialties (infection, Nephrology, Rheumatology, Allergy). It is thought that it would be appropriate to target 570-600 Pediatric Intensive Care specialists for Turkey based on the number of pediatric intensive care beds and the number of specialists by pediatric population (10). After the acceptance of pediatric intensive care as a subspecialty, 12 positions were opened in the first year in the subspecialty exam, while the number of staff was increased in the following years and 45 positions were opened in 2019 (10). 94% of the 257 centers surveyed had pediatric intensive care specialists according to the results of the 2005 survey of the United States of America (7). Our survey results showed that the total number of pediatric intensive care lecturers, specialists, and subspecialists is 132 today. Also, our results show that 36 months of formal fellowship education is being provided in 15 centers (university and training-research hospitals), that there are currently 53 pediatric intensive care subspecialty students, 44 pediatric intensive care specialists who have established new PICUs in many regions of the country, and the number of lecturers is 35. When we look around the world, it was reported in a study evaluating pediatric intensive care services in Scandinavian countries that anesthetists were responsible for PICUs in these countries, and neonatologists were responsible for early childhood patients in many hospitals in Italy (15, 16). Our society, which thinks that pediatric intensive care is managed by specialist physicians and is a separate discipline, is taking important steps towards increasing the number of pediatric intensive care subspecialty staff and providing qualified formal subspecialty training in more centers.

Pediatric intensive care units are very important for critically ill children who require a multidisciplinary approach due to medical and surgical reasons to reach the treatment they need and to reduce mortality and morbidity (17). 4 of the 13 PICUs participating in the survey in Korea were reported as medical, 1 as surgical, 3 as cardiac and 4 as medical + surgical intensive care units (5). 12 of the units in Pakistan were medical, 3 were cardiac, 1 was medical + cardiac + surgical intensive care unit (6). It was reported in a similar survey study published in 2005 in the United States of America that there were PICUs in 257 hospitals at that time and 25 of these centers had a separate pediatric cardiac intensive care unit (7). In a similar survey study conducted in Spain in 2000, all 31 centers participating were medical + surgical intensive care, 18 of these centers were only PICUs, 12 were providing pediatric intensive care and neonatal intensive care at the same time, and 1 center followed the child and the adult patient together (18). It was observed in the survey results of Köroğlu et al. (4) that postoperative surgical patients were followed up in only 4.2% of centers at that time, and 50% of the centers participating in our survey were medical + surgical PICUs and the patients who had postoperative cardiac surgery were followed up in 37.9% of the centers.

In the past, intensive care units were designed as wards and large units, but today the most important change in intensive care architecture is patient rooms (11). In addition to reducing the risk of infection, single-patient rooms have become the most important criterion in intensive care unit design, especially after the transition to patient care understanding that puts the patient and the patient's family at the center in recent years (19, 20). Positive effects of single-patient rooms have been reported, especially on the sleep-wake cycle of patients (19). Also, in a survey conducted with pediatric intensive care nurses, it was concluded that the one-person patient arrangement reduced the stress level of the nurses (21).

In the survey of Köroğlu et al. (4), pediatric intensive care was in the form of separate units in only 28% of the centers, and pediatric intensive care patients were treated in adult intensive care units in many centers. Most units were sharing their equipment or rooms with the pediatric ward and pediatric emergency. In fact, in 14.7% of hospitals, pediatric intensive care service was provided in pediatric wards with the necessary equipment such as ventilators and monitors at the bedside. In our country, a separate PICU is now being designed, especially in newly built hospitals. An open layout is prevalent in most units. All 58 centers that participated in our survey had a separate PICU administered by a pediatric intensive care specialist. There were units in the form of single rooms in 22 (38%) of the units.

The way to provide qualified and sufficient service in the unit is through good teamwork. In this context, the most important assistant healthcare personnel is the nurse (22, 23). Since it is known that even a pediatric patient who does not need intensive care needs more nursing care than an adult, nursing care is one of the most valuable elements of intensive care service (19, 21). A nurse team headed by a separate responsible nurse and passing the necessary training and certification programs at regular intervals is indispensable for pediatric intensive care (24). The pediatric intensive care nurse team must attend the advanced life support courses at regular intervals and obtain certificates and keep their medical information up-to-date with intermittent in-service training. It is known that a low nurse patient ratio in the unit increases the risk of nosocomial infection and mortality (25). Also, long working hours and low wages in intensive care units reduce the morale and motivation of the team and reduce professional satisfaction (26). For this reason, having a sufficient number of personnel working is very important in terms of providing effective intensive care service. In the Pakistan survey, 37% of the participating centers reported the nurse: bed ratio as 1: 1 or 1: 2 (6). In the survey of Köroğlu et al. (4), nurse: bed ratios were approximately 1: 4.4, while this ratio was 1: 2 in 38 (65.5%) units and 1: 3 in 20 (34.5%) units in our survey. It was stated in the data presented by Bayrakçı et al. (8) in 2012 that there were 811 pediatric intensive care nurses. The total number of pediatric intensive care nurses in the centers that participated in our survey was 1415.

Another factor as important as a trained and experienced team in critically ill pediatric care is the availability of appropriate mechanical support systems and advanced equipment (27). According to the results of the Pakistan survey, it was reported that 15 of 16 PICUs had mechanical ventilators, invasive hemodynamic monitoring was performed in 8 centers, and CRRT, therapeutic plasma exchange, intracranial pressure monitoring, and HFOV service could be provided in only one center (6). It was reported in the survey of Köroğlu et al. (4), which showed the situation of our country in 2005 that all participating centers had mechanical ventilation, CRRT in 37.5%, flexible bronchoscope in 35.5%. It was reported in the results of the Nepal survey that 32% of 16 participant centers had 1 mechanical ventilator, 38% had 2 mechanical ventilators and the remaining part had 3-6 mechanical ventilators (9). Our survey results showed that invasive mechanical ventilation can be performed in all centers, non-invasive mechanical ventilation in 72.4% centers, HFNC in 89.6% centers, and HFOV in 39.6% centers. Among the advanced monitoring methods, it was observed that the number of centers with Bispectral Index (BIS), Near-Infrared Spectroscopy (NIRS), Pulse index Contour Cardiac Output (PiCCO) is gradually increasing. The number of centers that can apply ECMO in our country was 27.

Some authors suggest that bedside ultrasound can be described as the new stethoscope for pediatric intensive care specialists (28). If you have a trained and experienced team in ultrasound, bedside ultrasonography offers you a rapid, non-invasive, and reproducible evaluation of critically ill patient care (29). The frequency of bedside ultrasonography use in our survey, which was 74.1%, showed that it is widely used not only for central catheter insertion in PICUs but also in many different areas. "Bedside Ultrasonography Course" is held every year by the The Society of Pediatric Emergency and Intensive Care in the national annual congress and our survey results show that the rate of physicians participating in this course is 60.6%.

PALS training has been given in 4 centers since 2015 in our country. Our survey results show that the rate of physicians participating in the "Pediatric Advanced Life Support-Provider" course organized by our association and supported by the American Heart Association is 53%, and the rate of physicians participating in the "Pediatric Advanced Life Support-Instructor" course is 22.7%. Also, our survey results show that 91.6% of pediatric intensive care physicians in our country have been trained in the PALS course organized by the Pediatric Emergency Medicine and Intensive Care Association for 18 years.

Although we want to compare our survey results with the data of developed countries such as North America and European countries, we compared them with developing countries due to the lack of similar data reported from these countries recently. We also know that there are PICUs in our country that do not have a pediatric intensive care specialist. We included only units managed by a pediatric intensive care specialist in the survey. Although these two situations create limitations for our study, our primary purpose in the study was to make a comparison with the data of the studies conducted in our country in 2008 and 2012 and to find an answer to the question of "where did we come from?"

When we compare the results of our survey with the results of the survey of Köroğlu et al. (4) to see the path we have covered since the first unit was established, we see that the point reached is very important and proud. Since the first day of its establishment in our country, the importance of PICUs that provide high-quality service and their contribution to critically ill child care is increasing. Despite the aforementioned developments, the number of PICUs and beds and the number of specialist physicians and nurses trained in our country are still not at the desired level and improvement efforts should continue in a versatile way. With the increasing number of pediatric intensive specialists and the efforts of these specialists, the increase in the number of PICUs to be established in disadvantaged regions of our country with limited resource access means that more critically ill children will reach the care they should receive. Also, pediatric intensive care certification programs and PALS courses are organized for pediatric health and disease specialists by The Society of Pediatric Emergency and Intensive Care in cooperation with the T.C. Ministry of Health. To continue these courses increasingly and to ensure participation are very important in terms of the correct implementation of pediatric intensive care services. We aim to increase the number of centers that provide critically ill child care services, to achieve good clinical results, and to minimize the mortality and disability rates. For this purpose, we think that increasing the subspecialty training in qualified centers, increasing the number of subspecialists and the number of pediatric intensive care beds is the priority that should be targeted.

Ethical Committee Approval: The study was approved by the Çukurova University Medical Faculty clinical research ethics committee (Date:10/04/2020, meeting number:98).

Informed Consent: Since the questionnaire questions did not contain any patient information, patient consent was not obtained.

Peer-review: Externally peer-reviewed.

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