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EDITORIAL

Child and Adolescent Psychiatry: New Concepts and New Strategies for the Future

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The editors of *Academic Psychiatry* are pleased to present this special collection of articles focusing on child and adolescent psychiatry. Child and adolescent psychiatry is a vital and unique subspecialty that is generally a prerequisite for serving children and adolescents who are under age 18 and who represent nearly one-quarter of the US population. Child and adolescent psychiatrists have a critical opportunity to intervene with youth and their family system to prevent psychiatric disorders, of which almost half begin prior to the age of 18 years. Especially in the face of a global pandemic that disrupts youths' health and development in so many ways, there is a critical need to ensure that the future workforce of psychiatrists, physicians, and allied health professionals is adequately built and sufficiently prepared to serve the mental health needs of children, adolescents, and families, in homes, schools, juvenile detention centers, and communities.

The papers in this issue focus on five critical themes and lessons. First, workforce size and recruitment remain a challenge. Second, various recruitment strategies have focused on the potential benefits of early exposure, early commitment, or streamlined training. Third, it is important to provide, on the larger systems level, the resources to support specialty training and practice. Fourth, overall, child and adolescent specialty training curricula need to adapt to contemporary issues and practice challenges. Finally, an important common ground may be strengthening child and adolescent psychiatry training and the developmental perspective in general psychiatry training.

Workforce Size and Recruitment Remain a Challenge

In an analysis of US National Resident Matching Program (NRMP), Accreditation Council for Graduate Medical Education (ACGME), and Association of American Medical College (AAMC) databases from 1996 to 2021, Williamson et al. [1] found that, while the number of programs participating in the Match (as opposed to outside of the Match) and the percentage of programs that fill their positions in the Match are increasing, so too is the surplus of positions relative to the number of applicants. It should be noted that even if all the positions were filled and there were no attrition in the current workforce, there would only be about 8300 child and adolescent psychiatrists in the USA (estimated from 2017) to meet the clinical needs of about 7.7 million youth with a treatable mental health disorder [2, 3]. The American Academy of Child and Adolescent Psychiatry estimates that the country needs 47 child psychiatrists per 100,000 youth ages 0–19, whereas the current number is only 9.75 [4, 5]. Based on these estimates, it would seem that the country would need approximately 38,000 child and adolescent psychiatrists. Of note, there are only approximately 4000 child and adolescent psychologists [6]. We do not know the exact numbers of clinical social workers who specialize in youth, as a large number provide advisory services to schools rather than direct clinical services.

Needless to say, the need for recruitment and for an expanded workforce is critical, particularly in the context of the recent

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pandemic, as the rates of depression, anxiety, stress, loneliness, and suicidal ideation and attempts have skyrocketed. Accordingly, the US surgeon general has declared that there is a current youth mental health crisis [3]. Likewise, the American Academy of Pediatrics, American Academy of Child and Adolescent Psychiatry, and Children's Hospital Association have similarly declared a national emergency in child and adolescent mental health [7].

Furthermore, in the context of the overall shortage of general psychiatrists, graduating residents appear to be securing salaries and job options (including locum tenens and moonlighting) that are highly competitive, thus partially diminishing an interest in additional specialty training and further increasing the challenges with recruitment into child and adolescent psychiatry.

Various Recruitment Strategies Have Focused on the Potential Benefits of Early Exposure, Early Commitment, or Streamlined Training

Budimirovic and Province [8] described a novel, year-long practicum that exposed undergraduate premedical students at Johns Hopkins University to child and adolescent psychiatry. They found a self-reported positive impact on students' clinical knowledge, empathy, and understanding of and interest in a child and adolescent psychiatry career and an academic medicine career. Himmelstein et al. [9] showed that over a 17-year period, 14 US medical schools with medical student mentorship programs in child and adolescent psychiatry had higher match rates into psychiatry, compared with 13 non-participating US schools. Shapiro [10] described positive feedback from a novel, 2-month-duration medical student summer immersion program in child and adolescent psychiatry. We believe that these innovative programs have the promise of both increasing recruitment and improving the knowledge and skills of future colleagues who may eventually choose disciplines other than child and adolescent psychiatry.

Cheng and Mohiuddin [11], in a study of factors influencing child and adolescent psychiatry specialty choice among general psychiatry residents from three programs, found that the majority of the residents viewed length of training as being extremely or very important, and that slightly fewer than 30% of residents surveyed agreed or strongly agreed that child psychiatry fellowship training was too long. Norris et al. [12] found that in an urban, public, allopathic, medical school, fourth-year medical students interested in applying to psychiatry, pediatrics, and family medicine were interested in residencies that allowed child and adolescent psychiatric specialization in fewer years.

Kleinschmit et al. [13] described outcomes of a 5-year combined training program in pediatrics, psychiatry, and child and adolescent psychiatry (i.e., triple board program) that celebrated its 30th class of graduates in 2021. Beyond its role in solidifying a career trajectory in child and adolescent psychiatry for graduating senior medical students, it prepares trainees for practice in more than one specialty (as reported by the majority of triple board graduates) and for collaborative and interdisciplinary care. The authors recommended that, in the face of stagnant graduate medical education funding and shifting institutional priorities, there should be national advocacy for increasing the funding for the expansion of triple board programs and other programs geared towards increasing the CAP workforce.

As summarized by Shaligram et al. [14], there have been various training pathway alternatives proposed in the USA to support workforce building. Some of these pathways involve early commitment (e.g., the so-called Child Track in the Match) and/or shortened training, including 3-year child and adolescent psychiatry training only or a 4-year combined general and child and adolescent psychiatry training model, while others have focused on broadened recruitment from other primary specialties, such as the 3-year post-family medicine fellowship model. Some of these models extrapolate from the experience of triple board training, namely, the completion of general (18 months) and child and adolescent (18 months) psychiatry training in a 3-year period. Overall, these models are in various stages of development and professional organizational consideration.

Sengupta et al. [15] surveyed child and adolescent psychiatry programs to demonstrate a rising popularity over the last 10 years of integrated 5-yeargeneral/child and adolescent psychiatric training tracks in the USA. They suggested that long-term benefits to child psychiatric workforce recruitment were likely.

While cutting short the necessary training may be appealing to students and residents, it is not clear that shorter subspecialty training, in the face of an expanded scientific knowledge and range of clinical interventions as described in the Accreditation Council for Graduate Medical Education (ACGME) milestones, could adequately prepare residents for competent, specialized practice upon graduation. Hence, it may be important to pursue other ways of fostering the appeal of child and adolescent psychiatry, such as increased reimbursement levels for clinical interventions. Nevertheless, some of the strategies presented are worthy of further exploration, and we endorse the recommendation of increasing the number of triple board programs.

It Is Important to Provide, on the Larger Systems Level, the Resources to Support Specialty Training and Practice

Simmons et al. [16] made a case for traditional, 6-year training (as opposed to shortened training) that incorporates 4 years of general psychiatry residency followed by 2 years of child and adolescent psychiatry fellowship. They advocated for more to be done to mitigate the potential financial impacts of extended

training by, for example, providing loan repayment programs, reimbursement models that appropriately credit complex care rendered by child and adolescent psychiatrists, and moonlighting opportunities while still in training.

Mann et al. [17] examined the survey responses of early career psychiatrists and concluded that the top reasons for pursuing a child psychiatric career included working with children, working in an interesting field, and helping society. In this study, 45% of the participants owed more than $150,000 in educational debt; while in 1999, the average student loan debt was $70,000. They concluded that medical student loan repayment programs and other financial incentives for graduates to remain in-state after graduation may be important for workforce development. We agree that, especially with the current national crisis and workforce shortage, loan repayment programs and adequate remuneration for child and adolescent psychiatric services should be high priority for advocacy efforts in psychiatry.

Overall, Child and Adolescent Specialty Training Curricula Need to Adapt to Contemporary Issues and Practice Challenges

Taking an international perspective, Shaligram et al. [14] discussed curricular aspects that may differ in child and adolescent psychiatry training across various countries. These included the duration of training, the balance of inpatient versus community experience, assessment, examination, and certification processes, the degree of focus on neurodevelopmental disorders, academic/research opportunities, psychotherapy experiences, experiences with transitional age youth, and infant and perinatal psychiatry experiences. They further discussed curricular components needed to prepare the child and adolescent psychiatrist for twenty-first century practice. Such components include academic and research literacy, collaborative care, population health and health policy, prevention and early intervention particularly within family and school settings, teaching and training, cultural humility, and trauma-informed care.

We believe that the extent of these critical areas necessary for independent practice should lead to a thoughtful examination of the optimal length of training in child and adolescent psychiatry and an assessment of the resources needed to support and evaluate such training. In this context, a cogent case could be made for not shortening the current length of child and adolescent training.

Kronsberg et al. [18] investigated teaching within US child and adolescent psychiatry fellowship training programs on the social determinants of mental health, which is a key topic across all psychiatric specialties. While the majority of responding program directors believed that this topic is essential for fellowship training, they acknowledged differences in the degree to which various subtopics were covered. Structural and historical factors seemed to be taught less effectively and receive less instructional time than familial factors. The social, cultural, and environmental factors influencing youth development are particularly important. In particular, child and adolescent psychiatrists must appreciate the impact of adverse childhood experiences, environmental and cultural variations in clinical presentations, and the role of stigma in seeking help. They must also skillfully ally with parents, teachers, and caregivers of all sorts in the prevention and early intervention for psychiatric disorders. It should be emphasized that half of all psychiatric disorders begin in childhood and adolescence [19]. Many of these disorders can be mitigated with a better understanding of the bio-psycho-social determinants of illness and application of this understanding in caring for children and adolescents.

Han et al. [20] described a well-received curriculum that focused on Asian American and Pacific Islander mental health. This curriculum utilized a combination of grand rounds and lectures and covered anti-racism, cultural identity, family-based treatment approaches, explanatory models of illness, disparities, the model minority myth, and aspects of psychotherapy.

We commend Kronsberg et al. [18] and Han et al. [20] on curricular initiatives that have the potential to optimally prepare future child and adolescent psychiatrists to address mental health disparities that begin in childhood and adolescence.

In improving the accessibility of mental health care, the future child and adolescent psychiatrist also needs to be prepared to effectively interface with other medical specialties. On the basis of a needs assessment survey, Meadows et al. [21] identified a need for high-quality, online learning modules for pediatric consultation-liaison psychiatry, with priority topics being psychiatric complications of medical illness, catatonia, and delirium.

Richards [22] discussed a perinatal collaborative care program that places child and adolescent psychiatry fellows in a maternal outpatient mental health services (“MOMS”) clinic. Here, the fellows were provided with opportunities to address intergenerational trauma and to optimize children’s mental health at the earliest opportunity though working with the parent-infant dyad. Very impressively, in the context of the COVID-19 pandemic, they described a 30% increase in the patient volume, which was likely related to a loss of psychosocial supports for new mothers, as well as an almost non-existent no-show rate, related, in turn, to the provision of telehealth. We believe that such experiences in perinatal psychiatry deserve further emphasis in the training of child and adolescent psychiatry fellows (who traditionally focus on direct

care for patients aged 17 years and under) and general psychiatry residents.

As training must cover an ever-expanding scope of curricular topics and clinical skills, and especially with models that either shorten or do not expand the current length of training, competency-based assessment tools will become increasingly relevant. Aras and Demirgören [23] described a 14-year positive experience from the Dokuz Eylül University Faculty of Medicine in Turkey with the use of an objective structured clinical examination in child and adolescent psychiatry resident training.

All of these new programs bring a wealth of ideas that could be applied to child and adolescent psychiatry training programs. We also believe that contemporary child and adolescent psychiatry training should incorporate team leadership, given the need to leverage the expertise of specialists in short supply relative to the population's need.

An Important Common Ground May Be Strengthening Child and Adolescent Psychiatry Training and the Developmental Perspective in General Psychiatry Training

In a thought-provoking essay focusing on the essential nature of child and adolescent psychiatric training in caring for patients above the age of 18 years, Agrawal [24] asserted, "I never see adults any longer. Only children that have grown up. And in some instances—have not." One practical recommendation is to redesign general psychiatry training to emphasize, across psychiatric conditions, normal development and developmental psychopathology and its impact on development [24]. Given that most psychiatric illnesses start prior to young adulthood, that the brain continues to develop throughout young adulthood, and that substance use, trauma, and other adversities have distinct impacts at different stages of brain development, we fully agree with this recommendation.

It should be noted that in all general residency psychiatric training, the minimum requirement for training in child and adolescent psychiatry is only 2 months full time equivalent, which is perhaps inadequate preparation to treat even transitional youth in the age range of 18–26. Further, while relationships are fundamental in psychiatry, there is no requirement for family and marital therapy in general psychiatry residency training. These are essential skills for working with youth and their families.

Especially in the face of the population's needs and the multiple impacts of the COVID-19 pandemic on children's development, we believe that now is the time to strongly consider proposals to increase the length (perhaps, as much as 12 months) and depth of training in child and adolescent psychiatry. It might be that expanding the ACGME general psychiatry milestones for competently evaluating and managing youth would not only grow the number of psychiatrists capable of treating young people but would also improve the care of adults, particularly those whose psychopathology has derived from adverse childhood experiences and trauma. This additional competency is particularly important in the treatment of adults with personality disorders, posttraumatic stress disorder, attention-deficit hyperactivity disorder, and substance use disorders that often begin in teenage years. In this context, we further recommend revisiting the current demarcations wherein most adult psychiatrists do not routinely work with children and adolescents and are not generally credentialed to do so by most institutions. It should be noted that for other mental health clinicians, such as psychiatric nurse practitioners, it is possible to work with children after basic certification. We believe that, with restructured training and increased exposure to child and adolescent psychiatry, well-trained general psychiatrists should at least have the option to work with children and adolescents and should be no less qualified to do so than other certified mental health clinicians, provided that the foundational training in all disciplines ensures competency in caring for these age groups.

This last essay by Agrawal [24] and all of the other papers in this special collection [1, 8–18, 20–23] remind us that child and adolescent psychiatry training is not just of interest to child and adolescent psychiatrists. All psychiatrists, physicians, and most other professionals serve in roles that influence, whether directly or indirectly, the mental health of young people and adults who have had chronic conditions that began in youth.

In summary, the recent COVID-19 pandemic has highlighted the degree to which workforce growth and optimized training are urgently needed in child and adolescent psychiatry. The papers in this special issue have provided multifaceted solutions to address these formidable challenges. Now is a critical time for psychiatric educators and other stakeholders to heed this important call to secure the necessary resources and implement curricular innovations that enhance recruitment into child and adolescent psychiatry and that ensure that *all* psychiatrists are fully prepared to address the mental health needs of youth and their families.

Declarations

Disclosures On behalf of all authors, the corresponding author states that there is no conflict of interest.

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