Statement of Gabrielle Carlson, M.D.
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My name is Gabrielle Carlson. I'm a professor of psychiatry and pediatrics from Stony Brook University School of Medicine on Long Island, New York and president-elect of the American Academy of Child and Adolescent Psychiatry. The American Academy of Child and Adolescent Psychiatry (AACAP) is the medical association representing physicians dedicated to the health of children and families around the globe. I am honored to speak to you today about an important topic-treatment of children with serious mental illness who may require medication treatment.

Knowing the high morbidity for children with emotional disturbance, I developed a consultation program between our child psychiatry training program and school districts in Suffolk County, New York in 1990. We have seen over 3000 cases since then. Some are managed in the community and in regular education schools, some have needed psychiatric hospitalization and some need a combined school and mental health program.

Let me give you 6 examples of students who were referred for "threat assessments" because someone at school was worried about their potential violence. The identifying information has been removed so that their privacy is protected.

Adam was in 2nd grade. He was being bullied especially on the school bus so he kept a Boy Scout knife in his pocket to protect himself. When he impulsively brandished it, he was suspended and ultimately referred to us to ascertain if he was truly a danger.

Brian was a high school junior. His life was a series of mishaps and bad decisions including smoking marijuana in school. His most recent infraction was a phone call threatening to blow up the school. Parents openly disagreed about discipline and thought he was just expressing boyish "hi-jinks".

Colin is 11 and has long, severe outbursts where he screams, threatens and is physically aggressive when he doesn't get his way, if he feels overwhelmed by a task, has

to switch tasks, or things get too noisy and confusing. Outbursts last for up to an hour. His communication skills are poor, he takes everything literally and when he is enraged, there is no talking to him. He is unmanageable in school.

Emily was in 9th grade and had always been shy. She had had significant absences from school since kindergarten. She learned early that if she got uncomfortable in a situation and could avoid it, she felt better. In 9th grade she stopped going to school and had threatening to kill herself and everyone else if mom tried to make her go.

Jonelle was also in 9th grade. She described herself as mean and angry, hated anything fun like parties or class movies, and said she wanted to be left alone. She lashed out at everyone and had detentions for fighting. Previously a good student, her grades had slipped because she was unmotivated and cut class.

Raffaele was 17. He had become increasingly withdrawn and seemed paranoid. That is, he misinterpreted events around him, personalizing them when there was no evidence that anyone or anything was against him. He, too, had been a reasonable student in the past but appeared to lose the ability to be logical when he spoke or wrote. His notebook was found to have weird drawings of dismembered bodies of people and animals.

Adam and Brian have "ADHD" – attention deficit hyperactivity disorder. The symptoms of this condition spell HIDE which is what you want to do around these kids sometimes. H=hyperactive, I=impulsive, D=distractible and disorganized and E=emotional. The world-wide prevalence is about 5% (Polanczyk et al. 2015). Adam was uncomplicated. He wouldn't sit or be quiet in class, did impulsive things (like carry knives he knew he shouldn't have), was disorganized and lost his homework assuming he did it, and had tantrums when upset. He was "caught" early. He responded to an ADHD medication (up to 80% of children will), the teachers and parents worked together on a behavior plan and he improved considerably. There is evidence that t supports the long term effectiveness of medication for ADHD, (Maia, 2017) so there is good reason to believe he will remain functional.

Brian is an example of what happens with untreated ADHD. ADHD symptoms often continue into adolescence and adulthood such that drop out, arrests, drug abuse and car accidents are common consequences. His parents didn't believe in prescription

medication so their son used marijuana. He slid under the radar until secondary school. Parents minimized the problems until the school arranged for this evaluation. It probably isn't too late to treat him. Teens do respond to ADHD medications. However, the possibilities of diversion, difficulty monitoring effectiveness, and even getting the teen to take the medication because of stigma make treatment much more complicated. In fact, up to 40% of youths with ADHD don't get treated at all (Merikangas et all., 2013) and the 60% who may get medication do not necessarily have their treatment optimized. Brian may well end up in a jail. The prevalence rates of mental illness in the juvenile justice area are as high as 70.4 % (Shufelt and Cocozza, 2006).

Colin is an example of diagnostic complexity. It would be easy to mistake his problems for ADHD or even "brattiness". In fact, he has autism. This is a disorder that probably starts at birth, and impacts social interaction, language development and ability to switch gears quickly or tolerate excess sensory input. When those systems are overwhelmed, the child does what animals do when stressed: shut down, run away, or become aggressive. Like all medical conditions, autism comes in "mild, moderate, and severe". Up to 2.4% of people may have autism though some are more impaired than others (Kim, Leventhal et al 2011). Sometimes medication can help the child regulate the emotional overload (Fung et al., 2016). The medications that have been studied for this are drugs that have also been used to treat other serious disorders and are called "antipsychotics" even though they are useful for other symptoms. Children who previously might have been institutionalized can be maintained in the community, sometimes even in regular education classrooms. Colin needed to be hospitalized, where the correct diagnosis was established, treatment was initiated and he was referred to a school program for behaviorally dysregulated children with autism. The educational, psychological and psychiatric supports will help the outburst behavior but the waiting list to get into the program was long.

Emily and Jonelle look like they have behavior problems but in fact, they are suffering from anxiety and depressive disorders. Emily had been shy as a child but the more avoidant she was allowed to be, the worse she got. She developed social anxiety disorder – an extreme fear of criticism or looking foolish that keeps people from talking or going to school. Significant anxiety disorders affect around 8.3% of teens and can be

crippling. Only 30% of social anxiety disorder is treated (Merikangas et al., 2013) in spite of the fact that we have robust and effective treatments! In a federally funded study of children and adolescents with severe anxiety disorders, 80% of participants responded to combined cognitive-behavior therapy (CBT) and medication (Walkup et al. 2008). Unfortunately, those treatments are often not available to people. Treatment requires motivation and competent providers. Sometimes a treatment team needs to begin to provide services in the home since the child won't leave home. Those resources are very rare.

Jonelle is tricky because she appears grouchy and irritable. In fact, depression in young people often presents that way. Underneath, Jonelle is miserable and said so when asked. She was not a chronic behavior problem and mystified her parents and school counselor because of the dramatic change in her behavior. That change is often the clue to a mood disorder. Depression can be fatal with suicide as an end result. Like anxiety disorders, there is a great toll taken on the sufferer in part because the diagnosis is frequently missed. Thus 60% of depressions go untreated (Merikangas et al., 2013). That is a shame because like with anxiety, there are effective treatments. While depression appears to take a longer time to respond than anxiety disorders, response to treatment over 12 weeks is still quite good: in an important study, 71% responded to combined CBT and medication, and up to 80% responded after 36 weeks (March et al., 2007). Although we have worried about whether medications "cause" suicide, more evidence is on the side of their preventing suicide (Gibbons 2005) with the benefits clearly outweighing risks (Bridges et al. 2007). Teen depression is also a risk factor for adult depression (Johnson et al., 2018). It is extremely concerning that there has been a concomitant rise in both depression and suicide rates in young people (Hawton et al.,2009).

Raffaele has the least common condition of those conditions I've discussed but it is one where the most time and effort is needed to make an accurate diagnosis. He appears to be developing a psychosis – a loss of the ability to distinguish what is real from what is in one's own thinking. It affects logic, concentration and motivation. Up to 100,000 young people will develop a first episode of psychosis. Although up to 63% of such patients can reached symptomatic remission , treatment is multifactorial and

requires considerable skill (Conus et al., 2017). Raffaele needs a psychiatric program embedded in the schools. These have become increasingly necessary with the decrease in hospital beds and lengths of stay in those hospitals.

These cases are intended to demonstrate 3 points:

1) mental illness in youth is significant and impairing. ,

2) it is treatable but treatment requires an accurate diagnosis and attention to the individual circumstances and presentation of each child, his or her school and family. We often know what to do. It is the lack of resources that keep us from doing it.

3) Medication is one aspect of treatment. We have considerable knowledge about how to use it. And often it works best in combination with psychosocial treatments including family and/or individual psychotherapy. It is a tragedy that misinformation, stigma and lack of access keep people from effective treatment.

I've described these children because they made threats about violence in schools. The odds that they contribute to the epidemic of actual school violence is very low. However, their problems cause themselves and the system considerable distress and warrant our full attention. Our children are the future of all of us. I want to thank this commission for the intense attention and study of the situation of children in American Schools. I encourage this commission to continue to work with professionals in the field to help every one of our children have the best opportunity for growing up to become great adults.

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