Introduction:

This case report details the collaborative care, by a primary care physician (JM), a psychologist (WF), and a school/office nurse (LS), of a young man over seven years as he manifested, and we recognized and treated, a complex neuropsychiatric disorder involving features of depression, anxiety, episodic or epilepsy spectrum rapidly cycling mood disorder, attention deficit disorder, and post traumatic stress disorder. Our combined observations, insights, skills, and knowledge, available to him in a unified health care setting, yielded, we report, clearer diagnostic formulations, more closely observed responses to therapy, a combination of medical and psychological treatments, and better support of this young man through several years of turmoil, distress, and development, eventuating in a good result.

This case is emblematic in several respects of the sorts of neuropsychiatric problems which may appear in any primary care medical or psychology practice. These cases may involve considerable complexity, as much in primary care as in many specialty settings. Intertwined problems often only become evident as these evolve or appear over time and primary care physicians can be well informed and comfortable prescribing and monitoring relatively sophisticated pharmacology for such patents.

The context is also familiar to all who are experienced in or undertake to study primary care. The preponderance of such cases present in, and most are cared for in primary care settings. Many serious emotional disturbances in children and adolescents do not receive psychiatric or medical attention at all, and only a fraction of those which have medical care ever see a child and adolescent psychiatrist, even for a consultation. And mental health services are overtaxed and underfunded, making access problematic.

The collaboration between a psychologist and a physician, assisted in this instance by an attentive nurse in the student’s school, proved invaluable in this particular instance, the efforts of all contributing to our success. In this respect our practice is atypical, since most primary care practices are not fortunate to be set up to enable and encourage such a cooperative and long term collaboration as we have. We believe that our center’s organization is a model for collaborative practice which others might profit from duplicating in their practice environments.

The consequences of not successfully addressing these disorders in children and youth are also all too familiar, with family disruption, educational failure, drug and alcohol abuse, unintended pregnancy, legal entanglements, unemployment, chronic disability, incarceration, and suicide known risks to these individuals throughout their lives. The alternatives to receiving good care often involve great human costs, heartbreak, and societal expense. These disorders arise in the lives of some individuals in all of our communities and in all of our practices every month or week, if not each day. We cannot afford to leave these disorders undetected or their victims untreated.

The Setting:

The Health Center, in Plainfield, Vermont, is a private, non-profit health care organization located in a small rural village ten miles east of Montpelier, the state capital, itself a small New England town of some 8,000 residents. The Health Center, founded in 1974, has long served persons from all segments of the diverse population of central Vermont, with a broad range of programs, including medical, dental, psychological, laboratory, pharmaceutical, dietary, physical therapy, and social services. Persons of all ages and all socio-economic groups are welcomed, with a sliding fee scale for local residents with limited means and without insurance.

Our Organization and Working Relationships:

Since its inception, the Center has had psychologists and clinical social workers on staff providing counseling and psychotherapy to its patients, most of whom are also engaged in medical care with the Center’s physicians and physicians assistants. We also, for many years, have staffed a school based clinic in the town of Cabot, of cheesemaking renown, where the students and adults from the community are seen for medical care and where a nurse from the Center’s staff is the grade K through 12 school’s school nurse.

The Center is open 60 hours a week and currently provides care for more than 8,000 persons enrolled as active patients. Having psychological care in the same facility which houses medical and dental services diminishes barriers to having patients avail themselves of this care. Many referrals for “psych” care come from members of the medical staff.
Whether by reducing stigma through the endorsement of the medical staff, by saving mileage, by being convenient, or by being presented as part of our coordinated, complete, collaborative care, it seems that our patients are more apt to follow through with counseling or psychotherapy within our organization than at separate mental health agencies or private psychological practices outside of our building.

Referrals may also come from psychologists to members of the medical staff when an individual appears to have the potential to benefit from medications. We observe similar better likelihood of acceptance of medications, particularly among adolescents, when the psychologist endorses their use. The counselor can also encourage the patient to try the medications, help educate the individual concerning the medication, assist in monitoring for side effects, and urge the patient to report side effects rather than stopping the medication prematurely.

Records of medical and psychological care are kept in the same chart, in separate color coded sections, so that either provider may review the notes of the other when referrals and collaborative care are underway. This approach has broken down the silo effect so often seen in separate practices and eliminated problems with lack of record exchange. We have never had the experience of a patient not wishing to see an in house counselor for reasons of privacy and have had very good acceptance, historically, by patients of explanations of the advantages of collaboration and of sharing the same record. Our setting also allows for informal consultations with the other member(s) of the medical-psychological team, which often prove of more benefit than letters or telephone conferences with out-of-house psychologists for comparing our insights and understandings.

A Success Story:

Our case report is a success story. Certainly, there are other cases in collaborative care here, as there are elsewhere, that are less successful. But this case illustrates the advantages of close collaboration, over time, in the sorting out of a multi-dimensional, complex situation. Like most young people with serious emotional disturbances, our young man has suffered the consequences of inherited and, probably, acquired biological disorders or propensities as well as situational, “psychodynamic” aspects of the etiology, promulgation, and presentation of his bio-psycho-social serious emotional disorders. Our collaboration, including the participation of the school/office nurse, has resulted, we believe in a much more thorough understanding of our young man and a much better outcome, to date, than either of us might have achieved alone or working in the usual silos of behavioral medicine and of psychological evaluation and counseling.

Seven Years of Collaboration:

Our care of this young man began over twelve years ago and our medical / psychological care collaborative efforts have played out over the last seven of those twelve years. The problems he manifests, typical of the elaboration of complex neuropsychiatric disorders in adolescents, evolved over time. They also came to our attention or gained our recognition over time, in the course of his development and of our various clinical encounters with him.

After several years of his evolving clinical picture and our evolving insights, we now have a young man who is doing very well with diagnoses of Depression, Attention Deficit Disorder, Post Traumatic Stress Disorder, and Epilepsy Spectrum or Episodic Disorder with mood volatility and psycho-sensory symptoms, treated with four medications and ongoing psychotherapy. From a condition, when at his worst, of having an episode of screaming and laying curled up on the floor of the school corridor, he is not just stabilized, but very successful, a student at the governor’s institute, on the local school board, and heading to college.

Our Patient:

Jeb is the middle of three sons of a bright woman, a nurse, who lives in rural Vermont. His father left the family before Jeb was born. The three boys were adopted by a step father who proved to have a very big problem with alcohol abuse and was, in time, divorced by the boys’ mother and subject to a restraining order because of his behavior. Both of Jeb’s brothers have neuro-psychological disorders, one an episodic disorder responsive to Dilantin, and one with ADHD of remarkable severity when younger, which has been substantially less a problem in his later teen years. Mother has depression and ADD, nicely responsive to Bupropon (Wellbutrin). Our Health Center medical practice has provided his care since Jeb was eight years old.

Chronology:

When he was twelve and a half years old the school asked that he see WF, our psychologist, because Jeb was not functioning well academically or socially, with displays of excessive anger. This previously cooperative, obviously bright student had begun to show angry and oppositional behaviors at school. He was refusing to attend classes and not completing work. His mood had changed from positive and easygoing to angry, dysphoric, and clearly agitated at times.
His mother presented the classic, “This is not my sweet old Jeb....”

The first complaints registered by Jeb were of feeling unaccepted by his classmates and a sense of grief over the loss of his former rurally set country home since his family had moved. He spoke of the hypocrisy of school authorities and bemoaned the infamy of his family name. Many of his complaints regarding public schools were normal for a young teen. Much of his behavior was easily rationalized by the therapist and the patient for a few months. He had some depressive symptoms, but these waxed and waned and seemed to have some situational basis involving his being at a new school, leaving old friends behind, and so on.

However, about nine months later, at thirteen and a half years old, when, despite accommodations, his mood and behavior deteriorated, his depression was of sufficient concern that WF requested a review from his primary care physician (JM) for depression and the possible use of medications. In our collaborative setting, a medical appointment was scheduled quickly, yielding a prompt medical review and discussion between the two clinicians. Up to date information on school work and behavior was also available through LS, our school nurse. He was seen by JM, found to be depressed, with quite a few symptoms in the old Weinberg criteria list (Carlson & Cantwell, 1982; Poznanski, Mokros, Grossman & Freman, 1985), which we still find useful. He was started on Bupropion (Wellbutrin). Within a month WF found him to have “less negative affect and more optimism about the future”.

He took his medication irregularly so arrangements were made to have him see the school nurse (LS) each school day. She kept a supply of his medication at the school based clinic to make up doses that he missed. She also took care to see him most days at school and to inquire as to how he was doing. When his mother was at work and he was at school, he had a reliable adult ally and friend, whom he knew cared for him, giving him support and endorsing his value in his sometimes difficult situations at school and home. With this strategy in place, enabling his having a more consistent serum level of medication, this episode of depression improved. After more than nine months of substantial benefit when he managed to take his medications consistently, when he was 14 years old he stopped the Bupropion and was not substantially depressed for some time without medications. He remained off medications for about two years. Note was made of "anxiety in large places" when he had been off medication for about six months.

During this time depression symptoms had been increasing. "Father" issues had been talked about more and more in counseling sessions. Memories of learning farming and woodworking abounded in Jeb’s presentation. “The Father” as a religious reference became prominent in Jeb’s discussions. Negative transferential issues emerged and termination of treatment with WF was broached. But then our young man crashed.

Some two years after stopping the Bupropion, when he was sixteen years old, he became agitated and withdrawn on a school field trip, isolating himself under a tree and screaming, “Leave me alone and let me talk to my father!” He was placed in an alternative to hospital program for an evaluation after again becoming depressed and excessively angry. In retrospect he reported the reappearance of depression some eight months previously, after roughly sixteen months off medications. In this setting he reported, or recalled, for the first time, having witnessed domestic violence as a child and having intervals of confusion. Psychological testing in this setting included the MMPI-A and the Reynolds Adolescent Depression Scale. He was judged to be depressed, without psychosis, and restarted on Bupropion.

After this evaluation and restarting medications, Jeb returned to treatment with WF and was more engaged and forthcoming. He made occasional references to the difficult and frightening behaviors of his (step) father, while at the same time retreating into a fantasy world of his own creation. So important was the safety of this imaginary land that he created its own police force, a castle keep, and even its own language. This land’s people lived by old world ethics and embodied many of the positive aspects of his father. The land was isolated from the rest of the world for “safety”. Jeb and his imaginary counterpart began to admit hiding from people and the hurt they can cause.

Subsequently, as an outpatient in the medical practice, the presence of ADHD in the family led to our postulating ADD as a component of Jeb’s problems. Though the Bupropion (Wellbutrin) that he was on has been shown to roughly equal the benefit of Methylenphenidate (Ritalin) for ADD or ADHD (Barrickman, Perry, Allen et al, 1995), he still had attention problems as well as considerable social anxiety. Buspirone (Buspar), which can treat ADD or ADHD (Biederman & Spencer, 2000) as well as anxiety, and then methylphenidate (Ritalin), were added, for social anxiety (Apter & Allen, 1999) and ADD, (Barkley, Connor & Dwansnik, 2000) in the subsequent two months. The former aided his sleep and decreased anxiety and the latter was of help, allowing him to be “better able to organize and complete work” and “better able to sit and listen”. Familiar ADHD accommodations (Kutscher, 2002) were added to his Individual Education Plan at the school. Both WF and JM noted some gains from each treatment. His school performance picked up and his highly rationalized explanations of his lack of success in school despite superior intelligence faded.
Four months after his discharge from the alternative program, at sixteen and a half, while he was on Bupropion, Buspirone, and Methylphenidate and doing better than ever, his ex-stepfather broke the restraining order and called their home. Three months later, to JM, he reported having a four day interval of “really up there” in mood and energy. It was decided that WF, who was seeing him weekly, would help monitor Jeb for possible developing bipolar symptoms. Three months later, at a consultation with a urologist, he came dressed in a full length North African-style robe with an “Arab” headdress, which he explained to the urologist he wore because it was comfortable. The urologist managed to keep his composure. During this interval he had discontinued all of his medications, hoping not to need them.

Two months later he had restarted his Bupropion on his own and reported it again benefitted his recurrent depression symptoms. With reference to an earlier serum drug level and his weight increasing with normal adolescent growth, his dose was increased to target the active metabolite, hydroxy-bupropion, in the steep portion of the dose - response curve (Daviss, Perel, Brent et al, 2006). While he reported the increased Bupropion dose “really starting to help”, he still had considerable social anxiety and rumination. These were promptly reduced by the addition of a small dose of Sertraline (Zoloft)(Carrasco, Diaz-Marsa & Saiz-Ruiz, 2000). Cognitive Behavioral as well as systematic desensitization were also continued in his work with WF to reduce social separation.

In this interval he reported to WF that his ex-stepfather had showed up at his church, which scared him “into a panic”. He began to recall, or to report, witnessing domestic violence as a child. Even vague reminders of his ex-stepfather began to trigger anxious responses. This bright and creative young man again retreated into his made up world where he felt safe and in control as the powerful, benevolent ruler of the idealized realm. As emotional safety was gained through fantasy, he began to remember and share with WF traumatic memories of domestic violence by his ex-stepfather. Symptoms played out through triggers and traumatic dreams. As is often the case in both psychology and medicine, more relevant information began to surface over time from examination of his family history and day to day behavior. Only after an acute emotional episode at school did he divulge an episode of domestic violence previously known but downplayed.

In the early fall of 2004, when he was seventeen years old, he was reported by the school nurse to have had a bizarre interval of anger, shouting, and laying curled up on the floor of the school corridor. This episode lasted one and a half hours, culminating in his being taken to the emergency room, where a very sensitive physician’s assistant found him cooperative and somewhat baffled by his outburst. When Jeb was soon thereafter in to see WF, it turned out that the school event had occurred after Jeb had seen a Marine recruiter in dress blues walking into the school. His step father, who had beaten his mother, was a marine who was at times in dress blues. This had triggered an emotional flashback that tipped us off to his having PTSD. Counseling with WF began to sort out the dimensions of this newly apparent problem. JM prescribed Prazocin (Minipress), which can sometimes remarkably reduce PTSD flashbacks and intrusive dreams (Brkanac, Pastor & Storck, 2003), but Jeb did not start this medication until he also reported to WF, and then to JM, hearing a woman and her children who lived across the valley meadow screaming and being beaten. Knowing this family to be very unlikely to have this going on, JM persuaded him to start the Prazocin.

Several psychological techniques for treating PTSD were also employed. In short order the children were recognized to be playing and “hollering to each other” in fun across the meadow. After this, lengthy descriptions of years of domestic violence began to be described. Most of these involved frightening episodes of hearing his stepfather assault his mother, of hearing dishes crash, and of finding his mother black and blue in the morning. Finally, one episode of being beaten with the metal end of a vacuum cleaner hose was reported, with repressed affect bursting through in screams and tears.

After this catharsis, the news from his fictitious world read “the walls have been breached, but (the ruler) lives!” The wall holding back memories of past trauma and creating a split from current life experiences had begun to crumble, no longer being necessary. In the make believe kingdom a major philosophical/political shift was reported. The safety of the keep was no longer necessary and new technologies previously banned were admitted and being used nationally.

Jeb and WF discussed several specific techniques for dealing with PTSD. Eye Movement Desensitization and Reprocessing was considered but not pursued, WF not having been trained in this technique. Multi-sensory Trauma Processing was employed, together with therapeutic stories, designed to evoke positive outcomes of the trauma. (Davis, 2003)

In the course of these therapies Jeb’s social functioning progressively improved in both quality and quantity. He has remained on a low dose of Prazocin since, with no return of the PTSD symptoms. He later reported the disappearance of “horrible” dreams, the existence of which he had kept secret until these were gone with the new medication in use. We
have heard little or nothing from the imaginary kingdom since.

In this same interval his prior report of intervals of confusion, of memory gaps and of brief high moods brought JM to screen for an episodic or epilepsy spectrum disorder. His chart contained records from two emergency room visits, the first from when he was nine years old and had been an unrestrained passenger in the back seat of the family car when it was involved in a head-on accident. He had hit his head on the back of the front seat in the impact, but had not been felt to have had a concussion by the emergency room physician, who had found that he had a cervical sprain. He then had been involved in a similar accident one year later, with a similar outcome.

He reported a good number of the symptoms of an epilepsy spectrum disorder (Eames & Wood, 2003), including intervals of slowed thoughts, sudden intense fear, sudden intense depression, jumbled thoughts, amnestic episodes, time disorientation, unformed auditory hallucinations, sudden rage, sudden dysphoria, and Jama'is Vu, and was thence begun on Valproic Acid, (Murro, 2006) on which, together with Bupropion and Sertraline, he reported his depression to be “pretty much gone”, with reduction in the psycho-sensory symptoms of the episodic disorder. Side effects on the Valproate led to a switch to Oxcarbazepine (Trileptal), (Marson, Hutton, Leach et al, 2001; Sachieo, Beydoun, Schachter et al, 2001) which, like Valproic Acid, has mood stabilizing, anti-seizure, and antidepressant effects.

With the Oxcarbazepine (Trileptal) at 600 mg twice a day, he reported marked reduction in his episodic / psycho-sensory symptoms, and his mood to be “a lot more smooth, without the sharps and speeds”. He judged himself to be “ninety percent better”, and was more able to take his medications properly using a medication box which he stocked two weeks at a time.

With his noncompliance with medication eased, so that he was taking his medications regularly, his school and social situations improved. Through academic channels and through our nurse (LS) it was reported that his social and course work performance were moving in a positive direction. Our socially anxious and academically non-compliant young man was achieving excellent grades and entertaining peers with his standup comedy routines.

Interestingly, he then reported the long occurrence of what might be a type of synesthesia, with visualization of colors associated with thinking of the names of certain companies when he was learning about the stock market. He continued to occupy himself learning Arabic and German and some Chinese on the internet, with learning about currency trading, and with a foreign exchange account that allowed his modeling currency trades.

As psychological and medical visits became less frequent, some symptoms of depression occurred at times. However, at eighteen and a half, he was able to handle most of his own symptoms, relate to peers on a comfortable and satisfying level, and achieve top grades in advanced academic courses. During the summer of 2006 he attended the Governor’s Institute and studied Asian Cultures, which he found “awesome”. He was chosen as the student member of the school board, and has been admitted to college for the coming fall of 2007.

We discontinued Bupropion because it interfered with his sleep, substituting Buspirone, which has seemed to suffice for his ADD and to contribute to the control of his depression. He continues to see WF for supportive counseling and to take his medications, Buspirone, Sertraline, Oxcarbazepine, and Prazocin. His most recent clinical note in the medical practice describes him as “logical, pleasant, insightful, and bright” with stable and optimistic mood, no episodic symptoms, and no PTSD events.

Summary:
Jeb’s case illustrates the advantages of collaboration, over a long interval, in the care of a typically evolving complex neuro-psychological disorder in a young man who, excepting his exceptional intelligence, is fairly typical in his maturation and his acceptance of the necessity of taking his medications, punctuated by intervals of forgetting or stopping his medications. The support and collaboration of his psychologist, his medical providers, and the school nurse have been essential to the better and progressive understanding of his multi-faceted disorder and to its successful treatment. The potential of collaborative health care, the facility of “one stop shopping” as Jeb calls it, and the practical gains from integrated work are clear in this case, as are the strengths of this impressive young man as he worked with us through these difficult circumstances in his life.

Conclusion:
Our organizational structure and working relationships mitigate many of the potential barriers between the clinical and operational spheres with respect to the collaborative care of our patients. In this particular instance, we had no significant
interference from the financial sector, because he had Vermont Medicaid as his insurance coverage for most of the interval involved. In this latter regard, his case differed from many other situations, particularly with non-Medicaid insurances, when we have to contend with the considerable and extremely frustrating interference of utilization review and pharmacy benefits management personnel from various insurers.

The big costs, of course, in the care of a seriously emotionally disturbed individual are those that occur when hospital care is necessary or, sadly, when drug or alcohol abuse, educational failure, incarceration or disability result. When these outcomes are avoided, as these disorders are successfully treated in the outpatient setting, the societal and fiscal costs avoided, not to say the human costs averted, are very substantial. Not knowing what poor outcomes may have resulted in the absence of the care of a particular individual, we cannot say what savings offset the relatively small costs of our work with one person. But, in the aggregate, the savings – human, societal, and financial – that result from successful interventions, of the sort we describe in this case report, are incalculable.


