Evidence In-Sight:
Best Practices for adolescent girls with conversion disorder
The following Evidence In-Sight report involved a non-systematic search and summary of the research and grey literature. These findings are intended to inform the requesting organization, in a timely fashion, rather than providing an exhaustive search or systematic review. This report reflects the literature and evidence available at the time of writing. As new evidence emerges, knowledge on evidence-informed practices can evolve. It may be useful to re-examine and update the evidence over time and/or as new findings emerge.

Evidence In-Sight primarily presents research findings, along with consultations with experts where feasible and constructive. Since scientific research represents only one type of evidence, we encourage you to combine these findings with the expertise of practitioners and the experiences of children, youth and families to develop the best evidence-informed practices for your setting.

While this report may describe best practices or models of evidence-informed programs, Evidence In-Sight does not include direct recommendations or endorsement of a particular practice or program.

This report was researched and written to address the question:

- Are there any best practice guidelines for working with females between the ages of 8-15 with conversion disorder?

We prepared the report given the contextual information provided in our first communications (see Overview of inquiry). We are available at any time to discuss potential next steps.

We appreciate your responding to a brief satisfaction survey that the Centre will e-mail to you within two weeks. We would also like to schedule a brief phone call to assess your satisfaction with the information provided in the report. Please let us know when you would be available to schedule a 15-minute phone conversation.

Thank you for contacting Evidence In-Sight. Please do not hesitate to follow up or contact us at evidenceinsight@cheo.on.ca or by phone at 613-737-2297.
1. Overview of inquiry

This request originated with a small community agency that works primarily with children with developmental disabilities. In the last two years several girls have presented with conversion disorder. This is an unusual condition for the staff to encounter in their work, and they do not feel prepared to provide treatment. The agency’s focus is on physical and occupational therapy; other agencies in the area provide direct mental health services. While there are some good partnerships between agencies, there is currently insufficient support to work collaboratively to treat girls with conversion disorder. This agency has asked Evidence In-Sight to help identify best practice guidelines for working with females between the ages of 8-15 with conversion disorder, what approach works best for dealing with the physical manifestations of the disorder, and examples of coordinated efforts between physiotherapists, occupational therapists and social workers/psychologists to achieve optimum results.

2. Summary of findings

- There is no proven treatment strategy for conversion disorder (Hinson et al, 2005).
- Conversion reactions represent a somatic defense against threats to mental stability and are often attributable to an underlying mood disorder such as depression (Hurwitz, 2003).
- Randomized controlled trials have indicated that cognitive behavioral therapy is the treatment of choice for somatoform disorders. Data on cognitive behavioral therapy for conversion disorder is limited to a small study that reported some benefit (Feinstein, 2011).
- Although some authors recommend a multidisciplinary approach to treatment (for instance using pharmacotherapy, psychotherapy, physiotherapy, and social worker intervention (Feinstein, 2011) evidence is lacking.
- The most effective physiotherapy treatment element probably involves a graded physiotherapy program linked to a reward system and directed by an empathetic therapist (Leary, 2003).
- The overall research literature on the role of physiotherapy in treating conversion disorder is vague and needs further research to better define roles in multidisciplinary teams.

3. Search strategy


4. Findings

Conversion disorder is an alteration or loss of physical functioning where the symptoms suggest a medical condition but no medical condition can be found by a physician (Ruddy & House, 2005). The disorder is likely caused by a psychological stressor or conflict (Ruddy & House, 2005). Conversion disorder is characterized by the presence of medically unexplained neurological symptoms or deficits with psychological factors, and is one of six different somatoform disorders (DSM-IV-TR; American Psychiatric Association, 2000). The symptoms or deficits in motor function suggest a neurological or physical condition, but the direct condition cannot be identified in a neurological examination. Symptoms are not feigned or deliberately produced, but reflect the conversion of underlying emotional distress into physical symptoms. Four types of conversion disorder are specified: motor symptoms or deficits, sensory symptoms or deficits, pseudo-seizures, and mixed presentation (Feinstein, 2011).

The prognosis of those with conversion disorder has been poorly studied. Studies to-date suggest that prospects for quick recovery are good but there is risk for relapse. Quick recovery is most likely if there is an acute onset and prompt...
intervention (Ruddy and House, 2005). Consideration of comorbidity should be included in assessment and treatment. A patient presenting with conversion disorder who has co-occurring major depression may benefit from treatment that targets the depression (Feinstein, 2011).

While there is literature on conversion disorder and more broadly on general somatoform disorder, there is little specific to the condition in children and youth, and we did not identify conclusive findings. The literature is predominantly limited to mental health and neurology realms, and we found very little related to physiotherapy or physical rehabilitation.

Psychological interventions
A review of randomized controlled trials (RCTs) for the treatment of somatoform disorders concluded that there is strong evidence for the use of cognitive-behavioral therapy (CBT) in treatment, and moderate evidence supporting a psychiatric consultation letter to the primary care physician (Kroenke, 2008). However, the three RCTs that specifically pertained to conversion disorder were very small and only looked at treatments other than CBT (hypnosis and paradoxical intention). For the purposes of this review, no treatment was confirmed for conversion disorder. A Cochrane Systematic Review drew the same conclusion (Ruddy & House, 2005). Of 260 studies, the authors only identified three RCTs that compared psychosocial interventions for conversion disorder with standard care or other interventions (biological or psychosocial). The review found no conclusive results and was not able to clearly state the benefits or harms of psychosocial interventions.

A 2011 overview of conversion disorder similarly reviewed the literature, although we cannot say how thoroughly or systematically the review was conducted (Feinstein, 2011). In summarizing treatment approaches, it found that CBT is the treatment of choice for somatoform disorders, but CBT has only been studied in a small pilot study for conversion disorder and needs further investigation. Preliminary findings of studies with small sample sizes suggest that antidepressant medication, behavioral therapy, paradoxical intention, and transcranial magnetic stimulation may be effective (Feinstein, 2011). Further study is needed to confirm these results.

Although not a systematic review, a recent study (2009) from the United Kingdom provides a useful overview of the condition (Nicholson & Kanaan). Conversion disorder is relatively common in neurology settings in the United Kingdom, with 6% of new outpatient referrals having functional conversion symptoms, the same as for multiple sclerosis and for all movement disorders combined (Nicholson and Kanaan, 2009). Co-morbidity with other disorders such as depression and anxiety is quite common and these diagnoses should take precedence over the conversion symptoms. The authors concluded that there are no proven treatments specifically for conversion disorder but the best practice approach is a combination of intensive rehabilitation that includes physiotherapy and occupational therapy. No particular strategies were elucidated.

Role of rehabilitation
Although conversion disorder is a diagnosable mental health condition, it appears that physiotherapy plays a role in treatment when other mental health diagnoses (i.e. depression) are not the primary focus. The Centre of Excellence has a mandated focus on mental health, and we are less familiar with the neurology or physiotherapy literature. Terminology varies across disciplines, but we did find some relevant articles.
There is a body of evidence that states the importance of physiotherapy for successfully treating conversion disorder (Ness, 2007). However, there is an absence of therapeutic guidelines or systematic reviews, and there are few case reports of successful courses of treatment. What literature does exist is almost exclusively adult focused so generalizability to child and youth clients is problematic.

A 2003 summary article stated that therapeutic success can take different approaches, but the most effective probably involves a graded physiotherapy program linked to a reward system and directed by an empathetic therapist (Leary, 2003). This aligns with conclusions from other articles that emphasize the importance of the doctor-patient relationship and its influence on outcome (e.g. Stonnington et al, 2006). The importance of therapeutic alliance is commonly held throughout child and youth mental health, and it might also be an important factor in therapy for conversion disorder involving a physiotherapy component. Based on three case reviews, Ness (2007) proposed a set of physical therapy guidelines for working with clients with conversion disorder:

- Have an interdisciplinary treatment team that is consistent and communicates well.
- Rule out organic illness through a complete diagnostic workup. Avoid further testing or diagnosis once the diagnosis has been made.
- Avoid confrontation, and instead develop strong therapeutic relationships.
- Progression to next step depends on mastery of previous step. Movements must be done well, not frequently.
- Allow face saving options to avoid risks of vulnerability.
- Establish concrete measures of goals and progress.
- Reinforce through positive feedback, and ignore abnormal behavior.
- Use techniques for stress management.
- Maintain open communication with the rehab team and with the family. Include family in rehabilitation so they are clear on expectations outside of treatment.

Other treatment considerations
The literature indicates that conversion disorder is an inherently psychiatric problem, oftentimes with an underlying mood disorder (Hurwitz, 2003). A thorough neurological assessment is required to confirm that patients have a somatoform disorder and not an organic medical issue. While the first-line treatment strategy is psychosocial, physiotherapy plays a role in facilitating recovery from the conversion symptoms while the underlying mental health issue is addressed.

Family therapy is often necessary because families invest heavily in patient symptoms and devote considerable time and resources to helping patients deal with their neurological disabilities (Hurwitz, 2003). The family has to come to terms with the diagnosis that the disability is caused by a mental illness, and they may need guidance in making this transition and continuing to provide appropriate support through the recovery process.

5. Next steps and other resources
We found a psychiatrist in Hamilton who may be available to consult on this topic. Dr. Patricia Rosebush is Head of Inpatient Psychiatry at St. Joseph’s Hospital and an Associate Professor in Psychiatry and Behavioral Neurosciences at McMaster University Psychiatry Inpatient Service. Since 1990 Dr. Rosebush has personally studied, followed and treated
40 patients with severe conversion disorder. Although she lives in Toronto, she has family in Windsor and travels there frequently. We may be able to arrange a visit during one of these trips, though she could only work directly with patients with a direct request from a physician. We can provide her contact information on request. It would be ideal to pre-plan well ahead of this type of offer so we can ensure that her knowledge informs an overall treatment approach, not only a client-specific issue.

For a recent review of conversion disorder, see the article *Conversion Disorder: Advances in our Understanding* (Feinstein, 2011).

For a relatively accessible general overview of somatization disorders including conversion disorder that is written for clinical practitioners, see the Pediatrics in Review paper *Somatization Disorders: Diagnosis, Treatment, and Prognosis* by Tomas Jose Silber at [http://pedsinreview.aappublications.org/content/32/2/56.extract](http://pedsinreview.aappublications.org/content/32/2/56.extract).

Knowing what works and receiving training on an evidence-informed practice or program is not sufficient to actually achieve the outcomes that previous evaluations indicate are possible. A program that has been shown to improve mental health outcomes for children and youth but that is poorly implemented will not achieve successful outcomes (Fixsen et al, 2005). In order for a program to be evidence-informed, it needs to be applied with fidelity to the design and it needs to be implemented using supportive “drivers” related to staff competency, organizational leadership and organizational capacity. These drivers include assessing and monitoring the outcomes of your practice using evaluation or performance measurement frameworks, which are particularly important when there is insufficient evidence in the literature to guide clinical decisions. Choosing a practice is an initial step toward implementation, but the implementation drivers are essential to ensure that the program reaches appropriate clients, that outcomes are successful and that clinical staff members are successful in their work.

The Ontario Centre of Excellence for Child and Youth Mental Health has a number of resources and services available to support agencies with implementation, evaluation, knowledge mobilization, youth engagement and family engagement.

For more information, visit: [http://www.excellenceforchildandyouth.ca/what-we-do](http://www.excellenceforchildandyouth.ca/what-we-do) or check out the Centre’s resource hub at [http://www.excellenceforchildandyouth.ca/resource-hub](http://www.excellenceforchildandyouth.ca/resource-hub).

For general mental health information, including links to resources for families: [http://www.ementalhealth.ca](http://www.ementalhealth.ca)
References


