Medically Unexplained Symptoms: The Emotional Processes involved for Patients and Healthcare Professionals

Family Medicine Forum - Nov 2016

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Learning Objectives*

Learning Objective #1
- Use biopsychosocial models to offer patients with MUS credible explanations for the development of their symptoms

Learning Objective #2
- Detect some of your own emotional processes that are triggered with this population to reduce stress and burnout

Learning Objective #3
- To assess and link observable physiological processes to a patient's particular MUS presentation to enhance treatment options.
‘Sorrow that finds no vent in tears may make other organs weep’

Sir Henry Maudsley 1835-1918
The Scale of the Problem

- MUS in the NHS: 15% - 30% primary care, rising to 50% in secondary care and 60% in tertiary/specialty services
- The leading cause of outpatient medical visits, at least 33% medically unexplained (Kroenke, 2003)

Royal College of General Practitioners (2011)

- Associated with 20-50% greater costs
- Associated with 30% more hospitalisation.
- Patients frequently experience unnecessary referrals to medical specialities, yet high health-care utilisation is actually associated with poorer outcomes for this group (Richardson & Engel, 2000)
1) MUS are extremely common in Medical Patients:
   - Up to 84% of common referral problems lead to no diagnosis
   - 75% of chest pain and 88% of abdominal pain in Emergency receive no diagnosis

2) Somatization of emotions can affect every bodily system from skin to gut

3) Physicians/Providers can have MUS, leading to:
   - Errors of omission and commission (discussed later)
   - Unhealthy behaviors e.g. substance use
   - Burnout, 49% of physicians report burnout (CMA Report)

4) MUS are positively diagnosable with specific established interviewing techniques and treatable with specific brief therapies
MUS and the Medical Model

- Unlike many diseases/disorders which show pathological changes upon investigation, MUS:
  - “are not primarily explained by pathophysiological or structural abnormalities.” (Reuber et al, 2005) and therefore
  - “cannot be explained by traditional medical models” (Kenny and Egan, 2011).
- Biopsychosocial model emphasizes the importance of “psycho-physiological responses to life change (or stress)
- We now know there are physiological changes which occur via a complex interaction of processes in the brain and the body that can often be attributable to emotional dysregulation
Attachment

- Early attachment experiences shape how we deal with and regulate internal and external forms of stimulation (Siegel, 1999)
- We are born with a limited capacity for self-regulation and use our caregivers to develop these capacities into lifelong tendencies for regulating arousal of stimulus and our reactions (Ogden, 2006)
- The interactive dynamic between parent and baby is believed by neuroscientists to facilitate the development of key emotional and arousal processing centers of the brain
- Neuroscience and trauma researchers have found the capacity to self-regulate is the key foundation upon which a functional sense of self develops (Ogden, 2006)
- Early life disruptions to our attachments result in diminished capacity to modulate arousal systems, impair the development of healthy relationships and our ability to cope with stress (Siegel, 1999)
Attachment Trauma

http://www.youtube.com/watch?v=apzXGEbZht0
Adverse Childhood Experiences Study \textit{Anda et al, 2006; n = 17,337}

- Emotional (11%), physical (29%) or sexual abuse (21%) under age 18
- More adverse events $\rightarrow$ worse physical health, mental health and behavioral outcome in adulthood
- Trauma affects the brain, autonomic nervous system and other body systems
Internal Factors

Mechanisms by Which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan
BOND With Parents

BOND With Others
BOND With Parents

PAIN FEAR

Trauma
Physical Pain and Social Rejection (trauma) mediated by same brain regions (Vastag, JAMA November 12, 2003)
BOND With Parents

Trauma

PAIN

FEAR

Reactive Rage, Guilt about the Rage & Grief

This results in problems handling conflicts/anger, relational problems, ill health and life stressors
BOND With Parents -> Trauma

PAIN FEAR

Rage, Guilt, Grief

MUS
Theory of MUS development

Triangle of Person

- HCP
- Past
- Triangle of Person
- Current Life
Current Person
Doctor, Boss, Spouse

Past Person
Example: Father, Mother, Sibling, Abuser

= Transference
Anxiety Pathways & Symptoms

**Striated Muscles (Somatic NS)**
- Hand clenching
- Tension in arms, neck, shoulders, head
- Sighing respiration
- Fidgeting, tension in legs, feet and abdomen

**Smooth Muscles (Sympathetic NS)**
- Bladder urgency
- IBS and diarrhoea
- Migraines
- Asthma
- Pain
- Auto-immune disorders – lupus, multiple sclerosis

**Cognitive-Perceptual Disruption (Parasympathetic)**
- Drifting, dissociation, confusion
- Visual blurring or narrowing of visual field
- Fainting, freezing, fugue state
- Hallucinations

**Conversion**
- Weakness

- Rheumatology
- Orthopedics
- General Surgery

- GI
- Respiratory
- CV
- Urology

- Neurology
- Psychiatry

**SEVERITY**

- Rheumatology
- Orthopedics
- General Surgery

- GI
- Respiratory
- CV
- Urology

- Neurology
- Psychiatry

- SEVERITY
Common Factor of Emotion Dysregulation

Irritable Bowel
Dyspepsia
Abdominal pain
Chemical Sensitivity
Fibromyalgia
Fatigue
Psoriasis
Dermatitis
Depression
Anxiety
Panic
Headache
Confusion
Bladder dysfunction
Pelvic Pain
Hypertension
Chest pain
Conversion
Pseudoneurological Phenomena
Headache
Confusion
Bladder dysfunction
Pelvic Pain
Hypertension
Chest pain
Conversion
Pseudoneurological Phenomena
What’s your Anxiety Pathway?

- Interactive test....
Recap
Life Stressors e.g. loss/divorce/transition trigger old unprocessed emotions e.g. pain, rage, guilt, grief

Avoided emotions lead to somatization, self-destructive behaviors, and excess social and health care expense.

Emotional factors can be directly diagnosed.

Identifying and experiencing avoided emotions can reverse these cycles.

What do we Know – as Adults
## “Stress” Holmes Rahe Scale

<table>
<thead>
<tr>
<th>Life event</th>
<th>Life change units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death of a spouse</td>
<td>100</td>
</tr>
<tr>
<td>Marital separation</td>
<td>65</td>
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<tr>
<td>Imprisonment</td>
<td>63</td>
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<tr>
<td>Death of a close family member</td>
<td>63</td>
</tr>
<tr>
<td>Marriage</td>
<td>50</td>
</tr>
<tr>
<td>Dismissal from work</td>
<td>47</td>
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<tr>
<td>Marital reconciliation</td>
<td>45</td>
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<tr>
<td>Retirement</td>
<td>45</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>40</td>
</tr>
<tr>
<td>Sexual difficulties</td>
<td>39</td>
</tr>
<tr>
<td>Gain a new family member</td>
<td>39</td>
</tr>
<tr>
<td>Outstanding personal achievement</td>
<td>28</td>
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Wikipedia partial list only
## “Stress” Holmes Rahe Scale

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Wikipedia partial list only
Precipitating Events

- 35% - Death or Illness of a loved one
- 30% - ‘Other’ Stressful event e.g. moving/having children/work conflict
- 18% - Accident or Illness of self
- 12% - Relationship Breakdown

KEY POINT: Please ask about life stressors in your consults!! Then you can link to the brain and body’s responses. - BIOPSYCHOSOCIAL
Experiencing the Emotions

- Experiencing feelings including rage and guilt overrides the unconscious anxiety about hurting those with love.
- This can permanently change brain operations so that the frontal inhibitory forces can relax (e.g., worrying).
- Guilt and the need to self-sacrifice and self-punish are diminished or removed which improves self-care.
- ANS is reset: BP, muscle tone, bowel etc normalize.
Educating Patients about MUS
Overcoming Skepticism

Firstly – Introducing the idea of how stress impacts the body at the earliest opportunity with all of your patients.

1. You can say that you are assessing their symptoms for both a medical disorder, signs of stress or a combination of the two

2. Talk to patients in non-stigmatizing ways about the connection between stress and the body e.g. interviews, embarrassing situations, knots in stomach etc. You should also include medical information e.g. role of the ANS in the fight flight response and/or the same brain regions are activated in physical pain as in emotional pain.

3. Let the patient know that the only difference between a physical disorder and a stress based one is the cause, not the experience of pain or distress – that is just as real!
Identifying MUS (1)

Adapted from Clarke, D. (2016), Family Systems and Health (see handout)

1. Acquire a chronology of illnesses and symptoms over time, including the onset – then ask about life stressors occurring just before the symptom (see handout ‘might I have a mind-body problems’.) Patients can complete this and bring it back in FU

2. Investigate current stressors – you can use the Rach’s stress scale to guide you and please remember good events can be stressful too e.g. marriage! Link symptoms to life stresses and check if the patient agrees

3. Investigate Adverse Childhood Experiences (see handout). Patient’s have been shown to have improvements in outcomes just from talking about the difficult life events they have been through
4. Check if anxiety, depressive or PTSD like symptoms are evident – they often are co-morbid with MUS but the patient might not verbally disclose this information (mostly unconscious). Observing how the patient responds in the room with you can help with your assessment.

5. Have they been unsuccessfully assessed or treated for this condition in the past? Has there been an increase in physician visits since the onset of the symptoms?

6. Your own counter transference reactions can help detect emotional processes in the patient.
Next steps in MUS

- Once you and the patient agree on the role of stress in their symptoms you can then invite the patients to explore these links further e.g. counseling with physician, self-directed work such as writing exercises (see handout) or self-help books (see Clarke 2016 article for details) or referral for talking therapy.

- The overall aim is to enable the patient to become conscious of the feelings that they are getting anxious about and to experience these feelings instead of repressing them somatically.

- Another aim is to move patients from a purely medical view to a biopsychosocial view - this helps prevent over prescribing of medication/referrals as patient’s learn that their symptoms may have a stress not a medical basis.
Your Own Emotions
Why get to know your own Emotions?

• If you don’t know what you are feeling or tend to avoid emotions, you too are in danger of developing MUS, anxiety, depression, substance use issues etc.
• It may lead to poorer functioning, greater errors and burnout
• Build your own self-reflective capacity
• Increase your work life enjoyment – by avoiding the build up of anger, guilt, worry, frustration
• Prevent treatment misalliances
Case Examples

- Patient has minor car accident that they have caused
- Patient comes to consult with body pain as well as chest pain – has full work up which reveals nothing abnormal
- Patient goes to ER a number of times for chest pain – tests come back negative, determined non cardiac
- Patient is frustrated by lack of findings and in next 2 consults is blaming and critical of physician’s care
- Physician reacts by becoming critical inwardly, anxious and sends the patient to another cardiac specialist, agrees weekly FUs.
- Physician notices increased back pain in the days after the consult
Past feelings of attachment, grief, rage and guilt are stirred with patients.
Countertransference

BOND

Trauma

PAIN

FEAR

RAGE, GUILT

Grief

MUS
Unconscious Defence:
- Substance Use
- Depression
- Somatic Symptoms
- Abuse patient
- Neglect patient
- Work to hard
- Self harm

Past Feelings

Unconscious Anxiety:
- Striated muscle
- Smooth muscle
- Cognitive-perceptual

These feelings manifest as unconscious anxiety and defense.
Over and Under doing: Medical Error  

Crosskerry, Abbass & Wu, 2008, 2010

Under doing: Omission bias
- Detached from patient
  - Ignoring the patient
  - Dismissing severity of Symptoms
- Neglecting to manage
- Not giving needed direction
- Avoid tests and examinations
- Avoid procedures

Overdoing: Commission Bias
- Over-involved with patient
  - Sexual or paternal roles
- Rescuing
- Criticizing, belittling, battling patient
- Rough examination
- Too many procedures/investigations
  - more invasive: more adverse events

Alternation between extremes
What is the Healthy Alternative?

1. Being able to allow your caring feelings to sit beside your angry feelings in order to be empathic as well as assertive.

2. Being able to use your anger constructively, to create boundaries with your patient, to remain firm and clear in your role e.g. no further referrals, watch and see approach.

3. To allow yourself good feelings in order to trust when you are doing a good job and not be pushed into believing something that isn’t true.

4. To notice if you are getting anxious or avoidant of certain patients, to seek support, to talk with colleagues, to create solutions and to ultimately take care of yourself when you need to – don’t sit in silence, ruminate and beat yourself down.
Experiential Exercise*

1. Bring the person to mind who is mobilising strong emotions within you
2. Pay attention to your body – how does it immediately respond? Feelings/anxiety/defence?
3. See if you can allow the immediate feelings to come up through your body and in your mind, visualize what the feeling wants to do in your mind?
4. What feelings come up once you have let that image go though your mind?
5. Look at the person in the image, what do they look like? How do you feel towards them now? Does it remind you of anything in your past? What information does this provide you?
Evidence Base for Treatment of MUS
Treatment Options for MUS

- **Short-term Dynamic Psychotherapies (STDP)** have moderate to large effects and appear cost effective across multiple symptoms and systems. Emotion-focused > intellectual insight models.

- **Cognitive Behavioral Models (CBT)** can be effective with range of somatic conditions with moderate effects: improve ability to tolerate anxiety and emotions

- Various other models can be effective e.g. Mindfulness based to be aware of emotions and improve regulation

- **Medications**: variable modest effects but may be no better than placebo

- A main outcome variable across all models is **emotional mobilization and experience**
890 treated patients. 7.3 sessions of Short-term Dynamic Therapy. Total Doctor + Hospital Costs

Abbass et al, 2015
A 3 year funded pilot project to offer an evidenced based emotion focused assessment and brief treatment to patients who present with MUS across 2 family medical centers

- Emotion focused diagnostic assessment (trial therapy) with options:
  - Liaison with referrer and referral back for follow up. Could include request for further medical investigations.
  - Follow-up assessment to test response to initial interview
  - Intensive short-term dynamic psychotherapy (ISTDP)
- Monthly teaching workshops with doctors, nurses and residents
- Daily huddles to disperse psychological knowledge and encourage appropriate referrals
Data at 18 months

- 126 referrals
- Average wait = 31 days.
- 93 patients have been seen for a trial therapy assessment. 9 on waiting list - 81% attendance.
- 77% females and 23% Males with an average age of 48.
- The most common referral reasons are:
  - 1) Chronic Pain
  - 2) Gastro Intestinal Issues
  - 3) Headache
  - 4) Fatigue
  - 5) Concentration or Memory difficulties
Cost Data - Physician visits

- 6 month pre and post data (n = 37)

- Significant at p=0.03 – 40% reduction in visits.
- Cost saving of $140 per person per year ($14,000 for 100 patients)
Future Healthcare Data

- Pre/Post ER visits
- Pre/Post Specialty visits (total)
- Pre/Post Specialists
- Pre/Post Medication
- Pre/Post Employment
- Pre/post Benefits
- Pre/Post Symptom measures
- If ER & Specialty visits show a similar reduction as physician visits, the cost savings per patient will be significant
Patient Video

- 10 minute patient video explaining his MUS journey
- [https://youtu.be/fJDx6wmaxx8](https://youtu.be/fJDx6wmaxx8)
Summary...

- MUS is a common, distressing and costly phenomenon.
- Strong counter-transference reactions are common in these cases.
- Emotion focused techniques can directly diagnose and treat the presence of somatization.
- High level of patient satisfaction when we ask about life stresses and emotions, so please do and link to symptoms.
- Cost effective and effective interventions.
- You are an integral part of the treatment process – your attitude towards MUS has a direct bearing on the patient’s attitude towards their difficulties.
Take Home Messages

• See the handouts that are online which you can print off and use to help you identify MUS
• Begin to take note of your own emotional reactions with hard to reach patients – what does it trigger for you and what might you need to deal with to prevent burnout?
• Don’t underestimate the importance of talking with your patients about their stressors, their emotional responses and linking this to their body’s physiology (this is the definition of the biopsychosocial model)
• The more you understand about the mind body link – the more you will help your patients to understand.
• Employ a psychologist at your practice to save you money!
Physician & Resident Service Evaluation
Preliminary Results:

Dr. Pamela Lai
Dr. Alexandra Seal
Resident Research Project

- Resident and physician views on the psychotherapy service
  - Is the service valued?
  - What are referring providers’ perceptions regarding MUS and its management?
  - What are barriers to learning about and/or managing MUS?
Resident Research Project

- Surveys emailed to 22 Dalhousie Family Medicine physicians and 14 second-year residents
- Survey respondents were invited to participate in a semi-structure in-person interview to further explore their views on MUS and the psychotherapy service
Results: Demographics

- 15/36 responses (41.7%)
  - 80% female
  - 1 participant had certification in Psychology
Results – Management of patients with MUS

I feel prepared to manage patients with MUS

![Bar chart showing the percentage of participants who strongly disagree, somewhat disagree, somewhat agree, and strongly agree before and after intervention. The bars are color-coded: blue for before and teal for after.](chart.png)
Results – Before the MUS service...

How did you typically feel when you saw a patient with MUS?

- I enjoyed working with them
- I felt comfortable
- I often felt unsure of what to do
- I worried about disciplinary action
- I worried about missing illness
- I felt angry

Not at all  A little  Somewhat  Much  Very much
Results – After the MUS service...

How did you typically feel when you saw a patient with MUS?

- I enjoyed working with them: ↑33%
- I felt comfortable: ↑47%
- I often felt unsure of what to do: ↓33%
- I worried about disciplinary action: ↑33%
- I worried about missing illness: ↑33%
- I felt angry: ↓33%

Legend:
- Blue: Not at all
- Green: A little
- Gray: Somewhat
- Yellow: Much
- Red: Very much
Results – Before the MUS service (2)...

How did you typically feel when you saw a patient with MUS?

- **I sometimes used CBT techniques**
- **I thought they took up too much of my time**
- **I resented seeing them**
- **I was confident in my approach**
- **I felt anxious**

![Bar chart showing percentage of responses for each feeling category.](chart.png)

- **Not at all**
- **A little**
- **Somewhat**
- **Much**
- **Very much**
Results – After the MUS service (2)...

How did you typically feel when you saw a patient with MUS?

- I sometimes used CBT techniques
- I thought they took up too much of my time
- I resented seeing them
- I was confident in my approach
- I felt anxious

↑ 27%

↓ 20%
Results – Barriers to learning about and/or managing MUS

- 40% feel *MUS is not a widely known term or concept*
- 40% feel there is *limited Continuing Medical Education on MUS*
- 67% feel there is *limited time to put towards learning about MUS*
- 20% find it difficult to bring up MUS to patients
- 20% feel patients to not seem to buy into the concept of MUS or related therapy
Next Steps

- Further explore concepts with qualitative data from semi-structured interviews
- Compile barriers and explore possible solutions to increase education about MUS and its management
Patient Service Evaluation Preliminary Results:

Dr. Alexandra Seal
Purpose of the Study

- Qualitative study to explore the views of patients who have been referred to the mind/body service
- It explored the following areas:
  - If the service is valued,
  - The impact on attitudes towards symptoms,
  - Pre and post healthcare use
  - Pre and post doctor-patient relationship
  - Recommendations for the service
- Preliminary results are presented but based on a small sample
How often do you see a doctor?

- Almost never: 0, 0%
- Only very rarely: 0, 0%
- About 4 times a year: 3, 50%
- About once a month: 3, 50%
How many different doctors, chiropractors or other healers have you seen in the past year?

- None: 0 (0%)
- 1: 0 (0%)
- 2 to 3: 2 (33%)
- 4 to 5: 4 (67%)
Do you believe you have a physical disease but the doctors have not diagnosed it correctly?

<table>
<thead>
<tr>
<th>Response</th>
<th>Total</th>
<th>Response Percent</th>
</tr>
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<tbody>
<tr>
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<td>2</td>
<td>33%</td>
</tr>
<tr>
<td>Rarely</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Sometimes</td>
<td>2</td>
<td>33%</td>
</tr>
<tr>
<td>Often</td>
<td>2</td>
<td>33%</td>
</tr>
</tbody>
</table>
Did your Doctor offer a mind-body explanation for your symptoms?

- Yes: 4 (67%)
- No: 2 (33%)
Has your participation in the specialist mind/body service changed how you view the cause of your symptoms?

“I knew I had bad bowel days during times of stress but I did not realize how much my feelings really affected my physical ailments.”

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<tbody>
<tr>
<td>Strongly Agree</td>
<td>1</td>
</tr>
<tr>
<td>Agree</td>
<td>2</td>
</tr>
<tr>
<td>Neutral</td>
<td>2</td>
</tr>
<tr>
<td>Disagree</td>
<td>1</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0</td>
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Do you think it is a good idea to have a specialist mind/body service based at the family medicine practice?
“I strongly agree with having a specialist for mind/body services in family medicine… To connect my thinking, memories to the physical pain my body was in… It has given me a new perspective on how to deal with life, gave me some self esteem back, as well as significantly decreased my physical symptoms that I continuously sought medical attention for.”
Questions??
Contact

- Dr Angela Cooper
  - drcooper1@hotmail.com
  - Angela.cooper@nshealth.ca
  - @emotihealth
While you were growing up, during your first 18 years of life:

1. Did a parent or other adult in the household often …
   Swear at you, insult you, put you down, or humili ate you?
   or
   Act in a way that made you afraid that you might be physically hurt?
   Yes  No  If yes enter 1     ________

2. Did a parent or other adult in the household often …
   Push, grab, slap, or throw something at you?
   or
   Ever hit you so hard that you had marks or were injured?
   Yes  No  If yes enter 1     ________

3. Did an adult or person at least 5 years older than you ever…
   Touch or fondle you or have you touch their body in a sexual way?
   or
   Try to or actually have oral, anal, or vaginal sex with you?
   Yes  No  If yes enter 1     ________

4. Did you often feel that …
   No one in your family loved you or thought you were important or special?
   or
   Your family didn’t look out for each other, feel close to each other, or support each other?
   Yes  No  If yes enter 1     ________

5. Did you often feel that …
   You didn’t have enough to eat, had to wear dirty clothes, and had no one to protect you?
   or
   Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
   Yes  No  If yes enter 1     ________

6. Were your parents ever separated or divorced?
   Yes  No  If yes enter 1     ________

7. Was your mother or stepmother:
   Often pushed, grabbed, slapped, or had something thrown at her?
   or
   Sometimes or often kicked, bitten, hit with a fist, or hit with something hard?
   or
   Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?
   Yes  No  If yes enter 1     ________

8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?
   Yes  No  If yes enter 1     ________

9. Was a household member depressed or mentally ill or did a household member attempt suicide?
   Yes  No  If yes enter 1     ________

10. Did a household member go to prison?
    Yes  No  If yes enter 1     ________

Now add up your “Yes” answers: _______ This is your ACE Score
Somatization: Diagnosing it sooner through emotion-focused interviewing

Allan Abbass, MD, FRCPC
Faculty of Medicine, Dalhousie University, Halifax, Nova Scotia

Practice recommendations

- Obvious anxiety in a patient with physical complaints should prompt an evaluation for somatization.
- Become familiar with the 4 patterns of somatization and their manifestations.
- Learn how to conduct an emotion-focused interview, which, when applied appropriately, will help rule somatization in or out.

A 42-year-old man has chronic fatigue and fibromyalgia that has led to a 13-month disability leave from work. The reason for his current office visit is longstanding pain in his shoulders. As you take his history, he is sitting with hands clenched and he generally appears tense.

A 38-year-old woman with severe incapacitating gastroesophageal reflux disease, irritable bowel syndrome, and depression has been too disabled to work for 2 years. At the time of your interview, her posture is relaxed and she shows no signs of anxiety.

These 2 very different patients (whose cases I will review in detail) share a common problem:

somatization, the translation of emotions into somatic problems or complaints. It is well documented—though still largely unrecognized in practice—that somatization accounts for a large proportion of office visits to primary care physicians as well as specialists, leading to unnecessary testing, treatment, and hospitalization, disability and corporate financial loss, likely earlier mortality, and frustration for patients and physicians.

No longer a diagnosis of exclusion

Despite the burden somatization places on the medical system, the diagnosis is often made by indirect methods such as checklist, speculation, or exclusion when other problems are ruled out.

The common position, even in recent reviews, is that somatization should be treated by nonspecific measures, such as frequent office visits to increase the patient’s and physician’s ability to cope with what is often seen to be a chronic and incurable disorder. Such a position is no longer warranted.

Based on recent quantitative and extensive case-based research, specific emotion-focused brief therapies and videotape-based research have clarified how emotions are experienced in the body and how somatization of emotions occurs (see The physiology of emotions). These methods, including short-term dynamic psychotherapy (STDP) have been used to diagnose and treat somatization effectively since the 1980s.

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need no longer be diagnosed by exclusion nor treated palliatively without specific diagnostic testing.

THE 4 PATTERNS OF SOMATIZATION

Videotaped case-series research shows 4 main patterns of somatization: 1) striated muscle unconscious anxiety, 2) smooth muscle tension 3) cognitive-perceptual disruption, and 4) conversion. 27

Striated muscle tension due to unconscious anxiety manifests through hand clenching, sighing, and even hyperventilation that the patient is not aware of. These patients may report panic attacks, chest pain, headache, fibromyalgia, and other musculoskeletal complaints. These conditions are often frustrating to family, employers, and physicians since conditions like chronic pain respond to treatment slowly or not at all.

Smooth muscle tension due to unconscious anxiety causes acute or chronic spasm of blood vessels, GI tract, airways, and the bladder. Patients exhibiting smooth muscle tension may present with GI symptoms, migraine, hypertension, urinary frequency, and upper airway constriction mimicking asthma. They often report histories of depression, panic, substance abuse, personality disorders, and past sexual or physical abuse.

Cognitive perceptual disruption due to unconscious anxiety typically involves visual blurring, tunnel vision, loss of train of thought, and “drifting,” wherein the patient is temporarily mentally absent from the room. These patients have chronically poor memories and concentration. They are commonly victims or perpetrators of partner abuse, have frequent accidents, and have transient paranoia. They often end up seeing neurologists and undergoing expensive testing. Most have histories of dissociative disorders, personality disorders, or childhood abuse. In the family doctor’s office they frequently forget what was said and call back after the appointment. They appear confused and easily flustered and either avoid physical examinations entirely or

The physiology of emotions

To diagnose and manage somatization we must know how emotions are experienced and how they may become somatized. Davanloo discovered through studying several hundred case videotapes that specific emotions manifest in specific ways regardless of gender, age, or ethnicity.28 This emotion physiology constitutes a norm to compare with a patient who somatizes emotions.

For example, rage is experienced as an internal energy sensation, heat, or “volcano” that rises from the lower abdomen to the chest, neck, and finally to the hands with an urge to grab and do some form of violence. Guilt about rage is experienced with upper chest constriction or even pain, intense painful feeling with waves of tears and with thoughts of remorse about experiencing the rage. 23 When feelings are experienced consciously, by definition they are not being somatized at that moment.

Why somatization occurs

When feelings are intense, frightening, or conflicted, they create anxiety and defense mechanisms to cover the anxiety (Figure). If these feelings are unconscious to the patient, the subsequent anxiety and defenses may also be outside of awareness.

This is the finding common in people who have been traumatized by someone close to them: feelings of rage toward a loved one are unacceptable, frightening, and avoided through somatization and other defenses. 24 Diverse research has found that patients with hypertension, migraine, irritable bowel syndrome and other conditions internalize anger and thus increase their somatic problems.25-27 Blocking and inhibiting of emotions, including anger, is a common finding in somatizing patients.
endure them with great anxiety.

**Conversion** manifests as muscle weakness or paralysis in any voluntary muscle. Patients with acute conversion describe dropping items or even dropping to the floor as muscles give way without explanation. They will often report histories of witnessing or experiencing violent abuse.

**One pattern usually predominates**
The total amount of somatized emotion is distributed over the 4 pathways (Table 1). One pathway generally prevails at any given time, though different pathways may come into play as anxiety waxes or wanes. When anxiety is expressed primarily through smooth muscle tension, cognitive perceptual disruption, or conversion, the striated muscles are relatively relaxed.

This finding of apparent calm while somatizing has been noted elsewhere in research of patients with hypertension. This is the “belle indifference” a patient expresses as they are temporally relieved of muscle tension through somatization elsewhere.\(^2^8\)

**Major types of defense**
Two important categories of defense include *isolation of affect* and *repression*.

**Isolation of affect** is awareness of emotions in one’s head without experiencing them in the body. Intellectualization is a form of isolation of affect.

**Repression** is the unconscious process by which emotions are shunted into the body rather than reaching consciousness at all. For example, strong emotions, including rage, may directly cause sighing and a panic attack without the person being aware of either the emotion or the sighing.\(^2^9\)

**Experiencing the emotions overcomes somatization**
Videotaped research also shows that if a person can experience true feelings in the moment, somatization of these feelings is weakened and
overcome. The feelings being experienced push out the anxiety and somatization (Figure). Thus, somatization can be reduced or removed by helping a patient feel emotions being stirred by recent events or from past events. Through this process one may diagnose somatization and also produce a therapeutic effect for a patient.

**DIRECT DIAGNOSIS OF SOMATIZATION**

**An objective assessment**

Because the process of somatization is unconscious to the patient, diagnosis is based on objective findings during examination rather than on a patient’s report. This is similar to evaluating a patient with abdominal pathology: we would not expect the patient to report an abdominal mass, even though we could detect it and train the patient to palpate it.

The somatizing patient believes the problem is physical, so the history reported is more likely to lead to physical testing and medical treatments than to a direct examination of the emotional system. Although clues in the history may suggest a patient is somatizing, the definitive test, like that of an abdominal examination, is “hands on,” observing the patient’s direct response to an emotion-focused interview.

**Actively exploring emotions**

Examination of the emotional system is analogous to a physical examination of other systems, and progresses from observation to “palpation” or “percussion” (Table 2).

Observe the patient for visible unconscious anxiety. Then, in the context of a supportive patient-doctor relationship, explore emotionally charged situations that generate symptoms.

Alternatively, one may ask in what way strong emotions like anger affect the patient’s physical problems. Asking about specific recent events and feelings that were triggered usually mobilizes emotions, giving you and the patient a direct look at how emotions affect them physically.

If a patient is anxious in the office, it will be most meaningful to examine the feelings they experience during the interview.

**Managing defenses**

At times, the defenses used to avoid feelings must be pointed out before the patient can see and interrupt these behaviors. If the process is too
detached or intellectual, then feelings will not be activated and the system cannot be assessed. The physician’s rapport allows him or her to clarify the process and the need for the patient to try to approach and experience feelings when speaking about them. This is analogous to the process of examining a sore abdomen when a patient is guarding: the patient must relax for examination to take place, and we help them do this by explaining the process.

Patients who are defensive and insist the problem is not related to emotions are managed differently. These patients usually are quite tense and already emotionally activated. An open examination of feelings the patient has about coming to see you that day is a good way to begin. Through this focus one can see the patient’s somatizing patterns directly as well as develop a working rapport.

Managing anxiety
If the patient becomes anxious when asked about emotions, introduce a calming step by asking the patient to intellectualize about the specific bodily anxiety symptoms. This reduces the anxiety by using the defense of intellectualization.

Recap and planning
The interview is concluded by reviewing the findings with the patient in the same way one would share findings of a blood test. Management options would depend on the findings and may include another interview, further medical investigations, referral for treatment, or follow-up to gauge the patient’s response to the interview itself.

Exploring emotions in a patient-centered interview

<table>
<thead>
<tr>
<th>Action</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation</td>
<td>Note any signs of unconscious tension, somatic distress, or defensiveness from the start of the interview</td>
</tr>
<tr>
<td>Ask about emotions</td>
<td>Can you describe a situation when the symptoms get worse? What feelings do you have when you talk about that? How do you experience the feeling of anger in your body when it is there?</td>
</tr>
<tr>
<td>Distinguish feelings from anxiety or defenses</td>
<td>The tension you had was anxiety, but how did the anger feel? Becoming quiet was what you did but how did you feel inside?</td>
</tr>
<tr>
<td>Observe physical responses</td>
<td>Observe the physical and behavioral responses in the patient when the emotional system is activated.</td>
</tr>
<tr>
<td>Give feedback and plan</td>
<td>Review all findings with the patient. Verify the patient agrees with what you have observed. Plan any further treatments or referral</td>
</tr>
</tbody>
</table>

| TABLE 2 |

INTERPRETING THE PATIENT’S RESPONSES
With the focused assessment, the somatic symptoms will transiently increase or decrease, disappear, or not change at all (Table 3).

An increase in symptoms with emotional focus suggests that emotions aggravate or directly cause the problems.

A decrease in symptoms during the test also suggests a linkage to emotions.

Disappearance of the symptoms by bringing emotional experiences to awareness is the best direct evidence that somatization of these emotions was causing the patient’s symptoms.

No change in a patient’s symptoms or
signs—provided there was adequate emotional activation—suggests no somatization of emotions. In these cases, other physical factors must be sought. For example, a woman with chronic left leg weakness and numbness had no shift in symptoms with this test: she was found to have neuropathy due to multiple sclerosis. We have found that 5% to 10% of patients referred to our diagnostic clinic have physical problems that were mistaken for somatization.

False negatives
False negatives occur when the test does not detect the process of somatization when it is present. This will occur if the level of emotion mobilized was too low, if the patient is too sedated, if the defenses the patient used were not sufficiently interrupted, or when the patient is not working collaboratively with the doctor during the test. In each case the patient must allow emotions to be mobilized and the doctor must focus adequately on the emotional experiences to yield an interpretable response.

False positives
False positives occur when the patient has a rise or fall in symptoms during the test for other reasons—eg, coincidental shifts in episodic conditions like muscle spasm or symptom reduction due to distraction during the test itself. It is important in these cases to repeat the test more than once and see if the results are reproducible.

### TREATMENT: SHORT-TERM DYNAMIC PSYCHOTHERAPY

STDP is clinically effective for patients with somatization

Short-term dynamic psychotherapy (STDP) formats specifically help a patient to examine trauma and loss-related emotions that result in somatization, depression, anxiety, and self-defeating behaviors. Case-series videotaped research

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**Table 3: Interpretation of responses to emotionally focused assessment**

<table>
<thead>
<tr>
<th>Response</th>
<th>Interpretation and Response</th>
<th>Beware of</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Response 1:</strong> Symptoms go up with emotional focus then down after focusing away from emotions</td>
<td>The diagnosis is likely somatization. Prescribe emotion-focused psychotherapy and monitor for gradual symptom removal</td>
<td>False positives due to coincidental symptom changes in interview; Health problems unrelated to the somatization could always be present</td>
</tr>
<tr>
<td><strong>Response 2:</strong> Symptoms are improved or removed by emotional focus or emotional experience in the office</td>
<td>The diagnosis is (was) somatization of those emotions. Follow-up to see if gains are maintained</td>
<td></td>
</tr>
<tr>
<td><strong>Response 3:</strong> No change in symptoms</td>
<td>Somatization is unlikely to be the cause of the symptoms. Look for other physical causes. May or may not be an emotion-based component in the symptoms. Repeat test, consider other diagnostic tests or referral for emotion-focused diagnostic testing</td>
<td>False negatives due to high defenses, sedation, lack of cooperation, inadequate focus by physician</td>
</tr>
<tr>
<td><strong>Response 4:</strong> Unclear response</td>
<td></td>
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</tr>
</tbody>
</table>
over the past 30 years has established the effectiveness of the methods in both short and long term follow-up.12

**STDP is efficacious in controlled trials and meta-analyses**

In 1995, Anderson and Lambert, conducted a meta-analysis of 26 controlled studies and found STDP to be superior to minimal treatment controls and wait lists including in samples with somatization. It was found to be as effective in removing anxiety and depressive symptoms as cognitive behavioral therapy.13 A recent meta-analysis,14 using more strict inclusion criteria, yielded the same findings. In a recent randomized controlled trial of symptomatic patients with personality disorders, STDP brought significant symptom reduction while cognitive therapy did not, suggesting that STDP may have added benefits in more resistant and complex symptomatic patients.15

In our current Cochrane review search,16 we have found 40 published randomized controlled trials supporting its efficacy with a range of disorders including ulcer disease, irritable bowel syndrome, dyspepsia, and urethral syndrome.17–20 Our review has likewise found STDP to be superior to minimal treatment or waitlist controls and that the gains are maintained in follow-up averaging over 1 year.

**STDP is cost-effective and reduces health care utilization**

STDP has been shown to reduce healthcare utilization and to be cost-effective in treating patients with dyspepsia, irritable bowel syndrome, depression, and self-harm and treatment-resistant conditions.21 Of specific cost figures cited in reviewed papers, 27 out of 34 showed cost savings with STDP including reduction in total costs, medication costs, disability, hospital, and physician use.

**CASE ILLUSTRATIONS**

**Case 1: Striated muscle anxiety**

This 42-year-old man had chronic fatigue and fibromyalgia which lead to a 13 month disability up to the time of consultation. He came to the office with longstanding pain in his shoulders. His hands were clenched during the interview, and he appeared tense while giving his history.

**Doctor:** Can you tell about a specific time when you had an emotional upset so we can understand how exactly it affects you?

**Patient:** Yeah, problems at home with my wife…. Saturday she wanted me to do some work on the garage. She started to yell. Every day it’s the same thing and I’m getting tired of it….

**Doctor:** So how do you feel toward her?

**Patient:** [Takes a deep sigh, hands become clenched] Mad.

**Doctor:** You mean mad … angry?

**Patient:** Yeah.

**Doctor:** How do you experience the anger inside physically?

**Patient:** Very, very… tense

**Doctor:** That is tension…anxiety?

**Patient:** Yeah.

**Doctor:** How did you experience the anger?

**Patient:** I start to ignore her.

**Doctor:** Is that a mechanism to deal with anger? But how do you experience anger underneath?

**Patient:** It’s really hard to put a word on it…. I get really mad… it’s like a rage.

**Doctor:** So how do you experience the rage?

**Patient:** [Patient takes a big sigh and clenches his hands tightly]

**Doctor:** Do you notice you sigh and become tense when you talk about the rage.

**Patient:** No, I didn’t. I don’t feel anxious.

**Doctor:** But, do you notice the sigh and your hands?

**Patient:** I do now, but didn’t see it before.

**Doctor:** Is this what is happening to you … that you are getting all tensed up about these feelings?

**Patient:** Yeah, it must be.
At a later point in the 1-hour session, the patient was able to feel the visceral emotions of rage, guilt about the rage, and sadness over several years of conflict. When the feelings were experienced in the office, he had an abrupt drop in muscle tension and bodily pain: this was further evidence he had been somatizing, or as he said, “bottling up” these complex feelings.

As is typical of patients with primarily striated muscle anxiety, he denies being nervous despite showing obvious anxiety in the interview. He denies anxiety because it has been unconscious to him, thus free to create fibromyalgia pain. Through this single interview a link is made for both patient and doctor between blocked feelings and body pain. With 10 treatment sessions focused on this process, his fibromyalgia resolved; he returned to work and no longer needed antidepressants.

Case 2: Smooth muscle anxiety
This patient is a 38 year-old woman with severe incapacitating GERD, irritable bowel syndrome, and depression who was disabled from work for 2 years at the time of consultation. This woman had a very relaxed posture with relaxed hands and an absence of obvious anxiety. After 10 minutes of exploring situations and events that make her stomach worse, we arrive at the following point.

**Doctor:** Can you tell me about another time when your stomach feels worse?
**Patient:** Yes. There was once when my sister-in-law did something and it made me angry. Yeah, when people make me angry I don’t tell them, I just avoid them.

**Doctor:** Can you describe one of those times, so we can see how that affects you.
**Patient:** Once she was arguing with my brother, like they usually do....

**Doctor:** How did you feel then?
**Patient:** ... Now I just got that again [pointing to her stomach and chest with upward motion and burps]

**Doctor:** Heartburn? Just came on?
**Patient:** Yeah, heartburn, just came on.

**Doctor:** Is there anything else you notice? Like in your stomach?
**Patient:** No, just that … but I can hear my stomach churning.

**Doctor:** So is it when you have anger your stomach churns and you get this acid?
**Patient:** Must be....

**Doctor:** ...because in your approach to talk about anger you got cramps and acid. So is that one way the anger goes?

**Patient:** Yes it must be, but I never thought of that part. [Stomach stops churning and heartburn stops as we talk about it for few minutes.] You know, this all started to get worse when my fiancé dumped me. [She goes onto describe a story of being not only rejected but also feeling humiliated by how it was done. She never felt emotional about it but just got severe diarrhea and was confined to her room for 3 weeks.]

**Doctor:** How did you feel toward your fiancé when he dumped you that way?
**Patient:** I was just so sick and depressed. I didn’t feel any anger. [Patient burps again this time rubs abdomen due to some discomfort.]

**Doctor:** Did you get the stomach upset just now again?
**Patient:** My stomach is upset again. Just the noise and acid again.

**Doctor:** So again, when we focus on the feelings, the cramps and acid come back.

**Patient:** For sure. What can we do about that?

**Doctor:** Can we try to help you identify these feelings before they go to your stomach, to try to interrupt that process. Can you tell me about another incident like that?

The patient required 3 one-hour sessions to improve her tolerance of anxiety, so she could intellectualize about feelings rather than have them directly affect her stomach. The feelings of rejection had triggered rage and guilt about rage associated with sexual abuse by her brother and the abandonment she felt from
her mother when she told her mother about it. With 12 sessions of therapy, she was able to stop her IBS medication, anxiolytic, and antidepressant.

This vignette is typical for patients with primarily smooth muscle unconscious anxiety. The patient had no visible anxiety but had GI symptoms when focusing on emotions about recent trauma. The symptoms were mobilized and reduced repeatedly, confirming a link with emotions. Note that outwardly she looked calm, but the emotions mobilized were being shunted to her GI tract.

**INCORPORATING EMOTION DIAGNOSTICS INTO PRACTICE**

To perform these interview procedures, the physician must understand emotion physiology and the patterns of somatization as outlined above. This is entirely intuitive to many physicians the first time seeing this material: they can readily employ that which they already know. In general, though, physicians reading this will want to ponder it and see how it may apply case by case as they develop skills with it over time. Senior clinicians have usually done these assessments by default, by pressure from patients, or because they learned elements of this over time from various experiences.

**Helpful short-cuts**

Family physicians trained in emotion assessment note that abbreviated elements can easily be incorporated into a patient-centered assessment process. For example, one may ask how “stress,” “emotions,” or “anger” affects the person and their body or ask how the person handles anger in specific incidents.

In an initial patient questionnaire, one can include a few questions that encourage the patient to think about how stress affects them and to describe their body’s tendency to experience anxiety. When they later present with symptoms, one can use these baseline data to aid in the new assessment. Thus, a culture of considering emotional factors can be woven into practice, weakening any resistance to the idea that emotions and health, mind and body, are tightly bound.

**Time factors**

Based on our experience, family physicians can perform two thirds of these diagnostic assessments during 15 minutes of focused interviewing. More complex cases, such as patients with cognitive disruption or multiple manifestations of anxiety, may take longer to diagnose and generally need more specialized care or referral. If required, a patient could be asked back for a 1 half-hour session later in the day or week.

**Taking care of ourselves**

Despite the importance of the emotional system in medicine, medical curricula generally fail to provide sufficient education in this area. At the same time, up to half of our own ranks report emotional burnout. Even with the lack of mainstream medical teaching about emotions and health, it behooves us to learn what we can about the emotional system as it applies to the patient and to ourselves in relation to these most challenging problems. Focused seminars, peer case review, select reading, and videotape training can all help in this educational process.

**ACKNOWLEDGMENTS**

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**REFERENCES**


Mind-Body Information Sheet

- Anxiety and stress can affect the body in many different ways, often without you even realizing it.
- Once your doctor has evaluated you and ruled out any serious causes to your problems, we can begin to investigate your levels of stress, tension and the emotional processes which can disturb the normal functioning of your nervous system.
- When your nervous system becomes overactive, it can cause lots of different problems in many parts of your body. Please see the picture below:

![Diagram showing parasympathetic and sympathetic nerves](image_url)

*Figure 45-20 Biological Science, 2/e © 2005 Pearson Prentice Hall, Inc.*
The table below highlights some common symptoms and diagnoses that are often associated with an overactive nervous system.

<table>
<thead>
<tr>
<th>Muscular Issues</th>
<th>Nervous System Issues</th>
<th>Neurological Issues</th>
<th>Other Contributory Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Back Pain</td>
<td>IBS</td>
<td>Migraine</td>
<td>Anxiety</td>
</tr>
<tr>
<td>Chronic pain</td>
<td>Chronic Fatigue</td>
<td>Confusion</td>
<td>Depression</td>
</tr>
<tr>
<td>Fibromyalgia</td>
<td>Stomach &amp; Bowel e.g. nausea, reflux, diarrhea, constipation</td>
<td>Weakness</td>
<td>Trauma</td>
</tr>
<tr>
<td>Tension Headache</td>
<td>Bladder Dysfunction</td>
<td>Tinnitus</td>
<td>Current or Ongoing Stress</td>
</tr>
<tr>
<td>Chest Pain</td>
<td>Psoriasis</td>
<td>Dizziness</td>
<td>Adverse Childhood Experiences</td>
</tr>
<tr>
<td>Jaw Pain</td>
<td>Dermatitis</td>
<td>Insomnia</td>
<td></td>
</tr>
<tr>
<td>Neck Pain</td>
<td>Chemical Sensitivity</td>
<td>Pseudoseizures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hypertension</td>
<td>Fainting/Falling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pelvic Pain</td>
<td>Visual Blurring</td>
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<tr>
<td></td>
<td></td>
<td>Drowsiness</td>
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<tr>
<td></td>
<td></td>
<td>Paralysis</td>
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</tr>
</tbody>
</table>

- If you feel you might be suffering with one or more of these symptoms and medical testing has come back negative, you can begin to make a plan with your doctor about the best steps forward to address your difficulties.

- You might want to begin this journey by using our handout and educating yourself about the links between stressful events, your emotional reactions and the symptoms you have developed.

- You might also want to consider a referral to our mind-body specialist who, if appropriate, can offer you an assessment to help you determine if emotional stress is contributing to your symptoms.
Writing Exercise to help you THINK about what you are FEELING

The goal of this exercise is to try to turn your emotional experiences into a story; that is, a narrative with a beginning, middle, and end. There is evidence that if we take our stressful experiences, memories, and feelings, and organize them into a logical story, then it becomes less stressful and more in our control.

You will complete this exercise over 3 days and only spend a maximum of 15 minutes on each exercise.

**Day 1 (15 minutes max):** Take a piece of paper and write about an upsetting event that you believe still impacts you emotionally today. For this first part, write about the event in chronological order where you describe the actual facts of the event from beginning, middle and end. Only write about the actual facts of the event, not your thoughts or feelings as that is for Day 2.

**Day 2 (15 minutes max):** Now write down your thoughts and feelings about the upsetting event from Day 1, as well as the impact it has had on you. Try to present your thoughts and feelings in the order that they happened. You might allow yourself to go into more depth about this experience, to describe more feelings, or to expand on it even further. Perhaps you can tell more of the story.

**Day 3 (15 minutes max):** Now write down your current perspectives on the event now that some time has passed, note down what you would have wished for, what you really wanted to happen and also how you plan to cope with this event in the future. Ask yourself how you might like to deal with things differently? What resources do you have to do this? Has the passage of time changed your reflections?

**What next?**

- You do not have to share your story with anyone if you are not comfortable, you can destroy it and just reflect on it in your own mind
- If you do feel comfortable, you can discuss what you have written with your health care provider and begin to notice how you feel about the event now, you can also begin to notice the impact the event has on your body and mind. You might also want to discuss your options to ensure that this event has less impact on your life from now on.
MIGHT I HAVE MIND-BODY PROBLEMS?

In order to help you decide if your physical symptoms might be linked to emotionally stressful events, please complete the table below:

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Year/Date of Onset</th>
<th>Potential Triggering Event (including positive or negative)</th>
<th>Emotions that were triggered e.g. anger/sadness/guilt</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>
ANXIETY CHANNELS

Next, please circle which anxiety channels you experience when you think about these emotionally stressful events:

<table>
<thead>
<tr>
<th>Muscular Issues</th>
<th>Nervous System Issues</th>
<th>Neurological Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muscle tension</td>
<td>Fatigue</td>
<td>Lightheadedness</td>
</tr>
<tr>
<td>Jaw clenching</td>
<td>Increased heart rate</td>
<td>Visual blurring</td>
</tr>
<tr>
<td>Sighing</td>
<td>Sweating</td>
<td>Blindness</td>
</tr>
<tr>
<td>Tension in your head</td>
<td>Dry mouth</td>
<td>Mental confusion</td>
</tr>
<tr>
<td>Tension in chest</td>
<td>Cold hands</td>
<td>Dizziness</td>
</tr>
<tr>
<td>Hyperventilation</td>
<td>Tingling sensations</td>
<td>Fainting</td>
</tr>
<tr>
<td>Tension in shoulders</td>
<td>Bladder spasms</td>
<td>Pseudoseizures</td>
</tr>
<tr>
<td>Tension in back</td>
<td>Migraine</td>
<td>Paresthesias</td>
</tr>
<tr>
<td>Tension in stomach</td>
<td>Urge to pee</td>
<td>Jelly legs/weakness</td>
</tr>
<tr>
<td>Tension in pelvis</td>
<td>Diarrhea</td>
<td>Drowsiness</td>
</tr>
<tr>
<td></td>
<td>Reflux</td>
<td>Hallucinations</td>
</tr>
<tr>
<td></td>
<td>Nausea</td>
<td>Paralysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loss of voice</td>
</tr>
</tbody>
</table>
PERSONALITY TRAITS
Next, take a look at the following personality styles which have been found to be related to mind body symptoms. Please tick any of them that apply to you:

<table>
<thead>
<tr>
<th>What personality styles best describe you:</th>
<th>Tick if Apply</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Having low self-esteem</td>
<td></td>
</tr>
<tr>
<td>2. Being a perfectionist</td>
<td></td>
</tr>
<tr>
<td>3. Having high expectations of yourself</td>
<td></td>
</tr>
<tr>
<td>4. Wanting to be good and/or be liked</td>
<td></td>
</tr>
<tr>
<td>5. Frequently feeling guilt</td>
<td></td>
</tr>
<tr>
<td>6. Feeling dependent on others</td>
<td></td>
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<tr>
<td>7. Being conscientious</td>
<td></td>
</tr>
<tr>
<td>8. Being hard on yourself</td>
<td></td>
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<tr>
<td>9. Being overly responsible</td>
<td></td>
</tr>
<tr>
<td>10. Taking on responsibility for others</td>
<td></td>
</tr>
<tr>
<td>11. Often worrying</td>
<td></td>
</tr>
<tr>
<td>12. Having difficulty making decisions</td>
<td></td>
</tr>
<tr>
<td>13. Following rules strictly</td>
<td></td>
</tr>
<tr>
<td>14. Having difficulty letting go</td>
<td></td>
</tr>
<tr>
<td>15. Feeling cautious, shy, or reserved</td>
<td></td>
</tr>
<tr>
<td>16. Tending to hold thoughts and feelings in</td>
<td></td>
</tr>
<tr>
<td>17. Tending to harbor rage or resentment</td>
<td></td>
</tr>
<tr>
<td>18. Not standing up for yourself</td>
<td></td>
</tr>
</tbody>
</table>

WHY DO THESE PERSONALITY TRAITS MATTER?

- Conflicts between what your mind says and what your body wants can perpetuate mind body symptoms.
- The traits above are aspects of your conscience—they are things that you might feel obligated to do or ways you might feel obligated to be.
- Most people with mind body symptom are people who try hard, who care what others think of them, who want to be good and want to be liked. They tend to be conscientious, responsible, and hard on themselves.
- These personality traits are generally found in good people, people you would like to know and be friends with. The problem is that people like this put extra pressure on themselves. They tend to get down on themselves and beat themselves up for their failings.

Written by Dr Angela Cooper_V2
• When external events and stressors occur and we compound the stress by putting more pressure on ourselves, we are much more likely to develop mind body symptoms.

**DO YOU NOTICE ANY LINKS?**

• Now that you have completed the tasks above, see if there is a link between the onset of your symptoms, emotionally stressful events, your anxiety channels and your personality style.
• If there are no links, you are unlikely to have a mind-body problem.
• If you find some links, it might be helpful for you to explore the emotional basis of your symptoms in addition to or sometimes instead of further medical investigations in order to begin treating your symptoms.

**WHAT NOW?**

If you would like to investigate these links further, you can discuss these findings with your doctor. Your doctor will help you make a plan to address the underlying cause(s) of your problems.
Medically Unexplained Symptoms: The Emotional Processes involved for Patients and Healthcare Professionals

Family Medicine Forum - Nov 2016

Dr. Angela Cooper
Clinical Psychologist & Assistant Professor
Dalhousie University, Halifax, Canada
Learning Objectives*

Learning Objective #1
- Use biopsychosocial models to offer patients with MUS credible explanations for the development of their symptoms

Learning Objective #2
- Detect some of your own emotional processes that are triggered with this population to reduce stress and burnout

Learning Objective #3
- To assess and link observable physiological processes to a patient's particular MUS presentation to enhance treatment options.
‘Sorrow that finds no vent in tears may make other organs weep’

Sir Henry Maudsley 1835-1918
The Scale of the Problem

- MUS In the NHS: 15% - 30% primary care, rising to 50% in secondary care and 60% in tertiary/specialty services
- The leading cause of outpatient medical visits, at least 33% medically unexplained (Kroenke, 2003)

Royal College of General Practitioners (2011)
- Associated with 20-50% greater costs
- Associated with 30% more hospitalisation.
- Patients frequently experience unnecessary referrals to medical specialities, yet high health-care utilisation is actually associated with poorer outcomes for this group (Richardson & Engel, 2000)
General MUS Observations

1) MUS are extremely common in Medical Patients:
   - Up to 84% of common referral problems lead to no diagnosis
   - 75% of chest pain and 88% of abdominal pain in Emergency receive no diagnosis

2) Somatization of emotions can affect every bodily system from skin to gut

3) Physicians/Providers can have MUS, leading to:
   - Errors of omission and commission (discussed later)
   - Unhealthy behaviors e.g. substance use
   - Burnout, 49% of physicians report burnout (CMA Report)

4) MUS are positively diagnosable with specific established interviewing techniques and treatable with specific brief therapies
MUS and the Medical Model

Unlike many diseases/disorders which show pathological changes upon investigation, MUS:

- “are not primarily explained by pathophysiological or structural abnormalities.” (Reuber et al, 2005) and therefore
- “cannot be explained by traditional medical models” (Kenny and Egan, 2011).

Biopsychosocial model emphasizes the importance of “psycho-physiological responses to life change (or stress)

We now know there are physiological changes which occur via a complex interaction of processes in the brain and the body that can often be attributable to emotional dysregulation
Attachment

- Early attachment experiences shape how we deal with and regulate internal and external forms of stimulation (Siegel, 1999)
- We are born with a limited capacity for self-regulation and use our caregivers to develop these capacities into lifelong tendencies for regulating arousal of stimulus and our reactions (Ogden, 2006)
- The interactive dynamic between parent and baby is believed by neuroscientists to facilitate the development of key emotional and arousal processing centers of the brain
- Neuroscience and trauma researchers have found the capacity to self-regulate is the key foundation upon which a functional sense of self develops (Ogden, 2006)
- Early life disruptions to our attachments result in diminished capacity to modulate arousal systems, impair the development of healthy relationships and our ability to cope with stress (Siegel, 1999)
Attachment Trauma

http://www.youtube.com/watch?v=apzXGEbZht0
Adverse Childhood Experiences Study *Anda et al, 2006; n = 17,337*

- Emotional (11%), physical (29%) or sexual abuse (21%) under age 18
- More adverse events $\rightarrow$ worse physical health, mental health and behavioral outcome in adulthood
- Trauma affects the brain, autonomic nervous system and other body systems
Internal Factors

Mechanisms by Which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan
BOND With Parents

BOND With Others
BOND With Parents

Trauma

PAIN FEAR
Physical Pain and Social Rejection (trauma) mediated by same brain regions (Vastag, JAMA November 12, 2003)
BOND With Parents

Trauma

PAIN

FEAR

Reactive Rage, Guilt about the Rage & Grief

This results in problems handling conflicts/anger, relational problems, ill health and life stressors
BOND With Parents

Trauma

PAIN FEAR

Rage, Guilt, Grief

MUS
Theory of MUS development

- Unconscious Feelings (Anger, guilt, grief, love, pain)
- Unconscious Anxiety/ANS (1.2 milliseconds after)
- Unconscious Defences = Homeostatis (100 milliseconds after)

Triangle of Person

- HCP
- Current Life
- Past

Triangle of Person
Current Person

Doctor, Boss, Spouse

Past Person

Example: Father, Mother, Sibling, Abuser

= Transference
Anxiety Pathways & Symptoms

**Striated Muscles (Somatic NS)**
- Hand clenching
- Tension in arms, neck, shoulders, head
- Sighing respiration
- Fidgeting, tension in legs, feet and abdomen

**Smooth Muscles (Sympathetic NS)**
- Bladder urgency
- IBS and diarrhoea
- Migraines
- Asthma
- Pain
- Auto-immune disorders – lupus, multiple sclerosis

**Cognitive-Perceptual Disruption (Parasympathetic)**
- Drifting, dissociation, confusion
- Visual blurring or narrowing of visual field
- Fainting, freezing, fugue state
- Hallucinations

**Conversion**
- Weakness

- **Rheumatology**
- **Orthopedics**
- **General Surgery**
- **GI**
- **Respiratory**
- **CV**
- **Urology**
- **Neurology**
- **Psychiatry**
Common Factor of Emotion Dysregulation

- Irritable Bowel
- Dyspepsia
- Abdominal pain
- Chemical Sensitivity
- Fibromyalgia
- Fatigue
- Psoriasis
- Dermatitis
- Depression
- Anxiety
- Panic
- Headache
- Confusion
- Bladder dysfunction
- Pelvic Pain
- Hypertension
- Chest pain
- Conversion
- Pseudoneurological Phenomena
- Headache
- Confusion
- Bladder dysfunction
- Pelvic Pain
- Hypertension
- Chest pain
- Conversion
- Pseudoneurological Phenomena
What’s your Anxiety Pathway?

- Interactive test....
Recap
Life Stressors e.g. loss/divorce/transition trigger old unprocessed emotions e.g. pain, rage, guilt, grief

Avoided emotions lead to somatization, self destructive behaviors, and excess social and health care expense.

Identifying and experiencing avoided emotions can reverse these cycles

Emotional factors can be directly diagnosed
<table>
<thead>
<tr>
<th>Life event</th>
<th>Life change units</th>
</tr>
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<tbody>
<tr>
<td>Death of a spouse</td>
<td>100</td>
</tr>
<tr>
<td>Marital separation</td>
<td>65</td>
</tr>
<tr>
<td>Imprisonment</td>
<td>63</td>
</tr>
<tr>
<td>Death of a close family member</td>
<td>63</td>
</tr>
<tr>
<td>Marriage</td>
<td>50</td>
</tr>
<tr>
<td>Dismissal from work</td>
<td>47</td>
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<tr>
<td>Marital reconciliation</td>
<td>45</td>
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<tr>
<td>Retirement</td>
<td>45</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>40</td>
</tr>
<tr>
<td>Sexual difficulties</td>
<td>39</td>
</tr>
<tr>
<td>Gain a new family member</td>
<td>39</td>
</tr>
<tr>
<td>Outstanding personal achievement</td>
<td>28</td>
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</tbody>
</table>
## “Stress” Holmes Rahe Scale

<table>
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</tbody>
</table>

*Wikipedia partial list only*
Precipitating Events

- 35% - Death or Illness of a loved one
- 30% - ‘Other’ Stressful event e.g. moving/having children/work conflict
- 18% - Accident or Illness of self
- 12% - Relationship Breakdown

**KEY POINT:** Please ask about life stressors in your consults!! Then you can link to the brain and body’s responses. - BIOPSYCHOSOCIAL
Experiencing the Emotions

- Experiencing feelings including rage and guilt overrides the unconscious anxiety about hurting those with love.
- This can permanently change brain operations so that the frontal inhibitory forces can relax (e.g. worrying).
- Guilt and the need to self sacrifice and self punish are diminished or removed which improves self-care.
- ANS is reset: BP, muscle tone, bowel etc normalize.
Educating Patients about MUS
Overcoming Skepticism

Firstly – Introducing the idea of how stress impacts the body at the earliest opportunity with all of your patients.

1. You can say that you are assessing their symptoms for both a medical disorder, signs of stress or a combination of the two.

2. Talk to patients in non-stigmatizing ways about the connection between stress and the body e.g. interviews, embarrassing situations, knots in stomach etc. You should also include medical information e.g. role of the ANS in the fight flight response and/or the same brain regions are activated in physical pain as in emotional pain.

3. Let the patient know that the only difference between a physical disorder and a stress based one is the cause, not the experience of pain or distress – that is just as real!
Identifying MUS (1)

Adapted from Clarke, D. (2016), Family Systems and Health (see handout)

1. Acquire a chronology of illnesses and symptoms over time, including the onset – then ask about life stressors occurring just before the symptom (see handout ‘might I have a mind-body problems’.) Patients can complete this and bring it back in FU

2. Investigate current stressors – you can use the Rach’s stress scale to guide you and please remember good events can be stressful too e.g. marriage! Link symptoms to life stresses and check if the patient agrees

3. Investigate Adverse Childhood Experiences (see handout). Patient’s have been shown to have improvements in outcomes just from talking about the difficult life events they have been through
Approach to Identifying MUS (2)

4. Check if anxiety, depressive or PTSD like symptoms are evident – they often are co-morbid with MUS but the patient might not verbally disclose this information (mostly unconscious). Observing how the patient responds in the room with you can help with your assessment.

5. Have they been unsuccessfully assessed or treated for this condition in the past? Has there been an increase in physician visits since the onset of the symptoms?

6. Your own counter transference reactions can help detect emotional processes in the patient.
Next steps in MUS

- Once you and the patient agree on the role of stress in their symptoms you can then invite the patients to explore these links further e.g. counselling with physician, self-directed work such as writing exercises (see handout) or self-help books (see Clarke 2016 article for details) or referral for talking therapy.

- The overall aim is to enable the patient to become conscious of the feelings that they are getting anxious about and to experience these feelings instead of repressing them somatically.

- Another aim is to move patients from a purely medical view to a biopsychosocial view - this helps prevent over prescribing of medication/referrals as patient’s learn that their symptoms may have a stress not a medical basis.
Your Own Emotions
Why get to know your own Emotions?

- If you don’t know what you are feeling or tend to avoid emotions, you too are in danger of developing MUS, anxiety, depression, substance use issues etc.
- It may lead to poorer functioning, greater errors and burnout
- Build your own self-reflective capacity
- Increase your work life enjoyment – by avoiding the build up of anger, guilt, worry, frustration
- Prevent treatment misalliances
Case Examples

- Patient has minor car accident that they have caused
- Patient comes to consult with body pain as well as chest pain – has full work up which reveals nothing abnormal
- Patient goes to ER a number of times for chest pain – tests come back negative, determined non cardiac
- Patient is frustrated by lack of findings and in next 2 consults is blaming and critical of physician’s care
- Physician reacts by becoming critical inwardly, anxious and sends the patient to another cardiac specialist, agrees weekly FUs.
- Physician notices increased back pain in the days after the consult
Past feelings of attachment, grief, rage and guilt are stirred with patients
Countertransference

BOND → Trauma

PAIN → FEAR

RAGE, GUILT → Grief

MUS
Unconscious Defence:
Substance Use
Depression
Somatic Symptoms
Abuse patient
Neglect patient
Work to hard
Self harm

Unconscious Anxiety:
Striated muscle
Smooth muscle
Cognitive-perceptual

Past Feelings

These feelings manifest as unconscious anxiety and defense
Over and Under doing: Medical Error  Crosskerry, Abbass & Wu, 2008, 2010

Under doing: Omission bias
- Detached from patient
  - Ignoring the patient
  - Dismissing severity of Symptoms
- Neglecting to manage
- Not giving needed direction
- Avoid tests and examinations
- Avoid procedures

Overdoing: Commission Bias
- Over-involved with patient
  - Sexual or paternal roles
  - Rescuing
  - Criticizing, belittling, battling patient
- Rough examination
- Too many procedures/investigations
  - more invasive: more adverse events

Alternation between extremes
What is the Healthy Alternative?

1. Being able to allow your caring feelings to sit beside your angry feelings in order to be empathic as well as assertive.

2. Being able to use your anger constructively, to create boundaries with your patient, to remain firm and clear in your role e.g. no further referrals, watch and see approach.

3. To allow yourself good feelings in order to trust when you are doing a good job and not be pushed into believing something that isn’t true.

4. To notice if you are getting anxious or avoidant of certain patients, to seek support, to talk with colleagues, to create solutions and to ultimately take care of yourself when you need to – don’t sit in silence, ruminate and beat yourself down.
Experiential Exercise*

1. Bring the person to mind who is mobilising strong emotions within you
2. Pay attention to your body – how does it immediately respond? Feelings/anxiety/defence?
3. See if you can allow the immediate feelings to come up through your body and in your mind, visualize what the feeling wants to do in your mind?
4. What feelings come up once you have let that image go through your mind?
5. Look at the person in the image, what do they look like? How do you feel towards them now? Does it remind you of anything in your past? What information does this provide you?
Evidence Base for Treatment of MUS
Treatment Options for MUS

- **Short-term Dynamic Psychotherapies (STDP)** have moderate to large effects and appear cost effective across multiple symptoms and systems. Emotion-focused > intellectual insight models.

- **Cognitive Behavioral Models (CBT)** can be effective with range of somatic conditions with moderate effects: improve ability to tolerate anxiety and emotions.

- Various other models can be effective e.g. Mindfulness based to be aware of emotions and improve regulation.

- **Medications**: variable modest effects but may be no better than placebo.

- A main outcome variable across all models is **emotional mobilization and experience**.
890 treated patients. 7.3 sessions of Short-term Dynamic Therapy. Total Doctor + Hospital Costs

Abbass et al, 2015
Halifax MUS Pilot Project

- A 3 year funded pilot project to offer an evidenced based emotion focused assessment and brief treatment to patients who present with MUS across 2 family medical centers
- Emotion focused diagnostic assessment (trial therapy) with options:
  - Liaison with referrer and referral back for follow up. Could include request for further medical investigations.
  - Follow-up assessment to test response to initial interview
  - Intensive short-term dynamic psychotherapy (ISTDP)
- Monthly teaching workshops with doctors, nurses and residents
- Daily huddles to disperse psychological knowledge and encourage appropriate referrals
Data at 18 months

- 126 referrals
- Average wait = 31 days.
- 93 patients have been seen for a trial therapy assessment. 9 on waiting list - 81% attendance.
- 77% females and 23% Males with an average age of 48.
- The most common referral reasons are:
  - 1) Chronic Pain
  - 2) Gastro Intestinal Issues
  - 3) Headache
  - 4) Fatigue
  - 5) Concentration or Memory difficulties
Cost Data - Physician visits

- 6 month pre and post data (n = 37)
  - Significant at p=0.03 – 40% reduction in visits.
  - Cost saving of $140 per person per year ($14,000 for 100 patients)
Future Healthcare Data

- Pre/Post ER visits
- Pre/Post Specialty visits (total)
- Pre/Post Specialists
- Pre/Post Medication
- Pre/Post Employment
- Pre/post Benefits
- Pre/Post Symptom measures
- If ER & Specialty visits show a similar reduction as physician visits, the cost savings per patient will be significant
Patient Video

- 10 minute patient video explaining his MUS journey
- https://youtu.be/fJDx6wmaxx8
Summary...

- MUS is a common, distressing and costly phenomenon.
- Strong counter-transference reactions are common in these cases.
- Emotion focused techniques can directly diagnose and treat the presence of somatization.
- High level of patient satisfaction when we ask about life stresses and emotions, so please do and link to symptoms.
- Cost effective and effective interventions.
- You are an integral part of the treatment process – your attitude towards MUS has a direct bearing on the patient’s attitude towards their difficulties.
Take Home Messages

- See the handouts that are online which you can print off and use to help you identify MUS.
- Begin to take note of your own emotional reactions with hard to reach patients – what does it trigger for you and what might you need to deal with to prevent burnout?
- Don’t underestimate the importance of talking with your patients about their stressors, their emotional responses and linking this to their body’s physiology (this is the definition of the biopsychosocial model).
- The more you understand about the mind body link – the more you will help your patients to understand.
- Employ a psychologist at your practice to save you money!
Physician & Resident Service Evaluation
Preliminary Results:

Dr. Pamela Lai
Dr. Alexandra Seal
Resident Research Project

- Resident and physician views on the psychotherapy service
  - Is the service valued?
  - What are referring providers’ perceptions regarding MUS and its management?
  - What are barriers to learning about and/or managing MUS?
Resident Research Project

- Surveys emailed to 22 Dalhousie Family Medicine physicians and 14 second-year residents
- Survey respondents were invited to participate in a semi-structure in-person interview to further explore their views on MUS and the psychotherapy service
Results: Demographics

- 15/36 responses (41.7%)
  - 80% female
  - 1 participant had certification in Psychology
Results – Management of patients with MUS

*I feel prepared to manage patients with MUS*
Results – Before the MUS service...

How did you typically feel when you saw a patient with MUS?

- I enjoyed working with them
- I felt comfortable
- I often felt unsure of what to do
- I worried about disciplinary action
- I worried about missing illness
- I felt angry

Not at all | A little | Somewhat | Much | Very much
Results – After the MUS service...

How did you typically feel when you saw a patient with MUS?

- I enjoyed working with them
- I felt comfortable
- I often felt unsure of what to do
- I worried about disciplinary action
- I worried about missing illness
- I felt angry

↑33%  ↑47%  ↓33%

Not at all  A little  Somewhat  Much  Very much
Results – Before the MUS service (2)...

How did you typically feel when you saw a patient with MUS?

- I sometimes used CBT techniques
- I thought they took up too much of my time
- I resented seeing them
- I was confident in my approach
- I felt anxious

[Bar chart showing responses for each statement]
Results – After the MUS service (2)...

How did you typically feel when you saw a patient with MUS?

- I sometimes used CBT techniques
- I thought they took up too much of my time
- I resented seeing them
- I was confident in my approach
- I felt anxious

↑ 27%
↓ 20%

Legend:
- Not at all
- A little
- Somewhat
- Much
- Very much
Results – Barriers to learning about and/or managing MUS

- 40% feel *MUS is not a widely known term or concept*
- 40% feel there is *limited Continuing Medical Education on MUS*
- 67% feel there is *limited time to put towards learning about MUS*
- 20% find it *difficult to bring up MUS to patients*
- 20% feel *patients to not seem to buy into the concept of MUS or related therapy*
Next Steps

- Further explore concepts with qualitative data from semi-structured interviews
- Compile barriers and explore possible solutions to increase education about MUS and its management
Patient Service Evaluation
Preliminary Results:

Dr. Alexandra Seal
Purpose of the Study

- Qualitative study to explore the views of patients who have been referred to the mind/body service
- It explored the following areas:
  - If the service is valued,
  - The impact on attitudes towards symptoms,
  - Pre and post healthcare use
  - Pre and post doctor-patient relationship
  - Recommendations for the service
- Preliminary results are presented but based on a small sample
How often do you see a doctor?

<table>
<thead>
<tr>
<th>Response</th>
<th>Total</th>
<th>Response Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost never</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Only very rarely</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>About 4 times a year</td>
<td>3</td>
<td>50%</td>
</tr>
<tr>
<td>About once a month</td>
<td>3</td>
<td>50%</td>
</tr>
</tbody>
</table>
How many different doctors, chiropractors or other healers have you seen in the past year?

- None: 0 (0%)
- 1: 0 (0%)
- 2 to 3: 2 (33%)
- 4 to 5: 4 (67%)
Do you believe you have a physical disease but the doctors have not diagnosed it correctly?
Did your Doctor offer a mind-body explanation for your symptoms?

<table>
<thead>
<tr>
<th>Response</th>
<th>Total</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>4</td>
<td>67%</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>33%</td>
</tr>
</tbody>
</table>
Has your participation in the specialist mind/body service changed how you view the cause of your symptoms?

“I knew I had bad bowel days during times of stress but I did not realize how much my feelings really affected my physical ailments.”
Do you think it is a good idea to have a specialist mind/body service based at the family medicine practice?
“I strongly agree with having a specialist for mind/body services in family medicine... To connect my thinking, memories to the physical pain my body was in... It has given me a new perspective on how to deal with life, gave me some self esteem back, as well as significantly decreased my physical symptoms that I continuously sought medical attention for.”
Questions??
Contact

- Dr Angela Cooper
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  - Angela.cooper@nshealth.ca
  - @emotihealth
Diagnosis and Treatment of Medically Unexplained Symptoms and Chronic Functional Syndromes

David D. Clarke, MD
Oregon Health & Science University

Medically unexplained symptoms and chronic functional syndromes are common but few health care professionals have had formal training about their connection to psychosocial issues. A systematic approach to diagnosis and treatment is described that is based on published evidence and detailed interviews with more than 7,000 of these patients. This approach is designed to meet the needs of primary care teams using techniques for assessing and treating current life stresses, the prolonged impact of adversity in childhood and somatic presentations of depression, posttraumatic stress, and anxiety disorders.

Keywords: medically unexplained symptoms, chronic functional syndromes, bodily distress syndrome, psychophysiologic disorders, somatization

In primary care, 25%–33% of patients experience medically unexplained symptoms (MUS), chronic functional syndromes (CFS), or (in Europe) bodily distress syndrome (BDS; Kroenke, 2003; Landa, Peterson, & Fallon, 2012). Clinicians have struggled to define these conditions for many years (Aronowitz, 2001) and the cost is $256 billion annually in the United States alone (Barsky, Orav, & Bates, 2005). In these patients, pain or other symptoms (often more than one) can affect almost any structure, organ system or body region.

There is growing evidence from controlled trials that addressing psychosocial problems in this population leads to significantly improved outcomes (Escobar et al., 2007; Guthrie, Creed, Dawson, & Tomenson, 1993; Hsu et al., 2010; Laird, Tanner-Smith, Russell, Hollon, & Walker, 2016; Powers et al., 2013; Speckens et al., 1995). These studies imply a benefit from systematically uncovering psychosocial issues. It is unfortunate that that benefit is not reflected in the labels MUS, CFS, or BDS. These terms also fail to take into account functional MRI studies of fibromyalgia (Kim et al., 2015), somatoform pain disorder (Günel et al., 2008) and irritable bowel (Drossman et al., 2003) showing pain is processed with brain circuits that differ from those of healthy people. A more accurate and informative diagnosis that incorporates the concepts of stress and altered neuroanatomy is psychophysiologic disorder (PPD). (The word psychophysiologic is taken from the initial description of the biopsychosocial model that emphasized the importance of “psychophysiologic responses to life change”; Engel, 1977).

Most patients with PPD referred to a behavioral or mental health professional (BMHP) are treated with techniques devised for patients whose primary concern is a mental health issue. But PPD patients typically deny psychological problems and tend to resent any implication otherwise. As a result, outcomes often are unsatisfactory.

The approach to PPD described below is based on detailed interviews with more than 7,000 adult or adolescent PPD patients and on relevant studies (Burton, 2003; Edwards, Stern, Clarke, Ivbijaro, & Kasney, 2010; Kroenke & Swindle, 2000; Rasmussen et al., 2006; Smith et al., 2003). Initial assessment should be by a
medical clinician. Depending on the needs of the patient, the clinician’s training and experience, and the care setting, collaboration with a BMHP often is appropriate to complete the process. The BMHP can, if necessary, also refer for specialty mental health consultation.

Addressing Skepticism

The first step in evaluating PPD is to address patients’ reluctance to consider stress as a cause of physical symptoms. Several techniques can alleviate this concern, as outlined below.

The earlier in the diagnostic evaluation you discuss stress affecting the brain as one possible etiology for symptoms, the more patients will accept this as part of a thorough assessment (Drossman et al., 1999).

Point out that physical responses to stress are common. Examples include tension headache, a “knot” in the abdomen in threatening situations, and blushing with embarrassment (Peters, Stanley, Rose, & Salmon, 1998).

Clarify there is no suspicion that symptoms are imaginary, self-inflicted, or due to deficient coping skills, malingering, or hallucination.

If a BMHP collaborates, inform the patient they are helping evaluate effects of stress on the brain.

The Stress Evaluation

Stress evaluation is my (nonstigmatizing) term for the six-part process of diagnosing PPD. The information can be gathered over several appointments concurrent with thorough diagnostic testing for organic/structural causes. If no significant stresses are found or treatment of psychosocial issues fails to relieve the physical symptoms, then further evaluation for an organic/structural etiology should be considered.

Part 1: Illness Chronology

Begin by acquiring a detailed chronology of the patient’s illness including the symptoms’ onset and pattern over time. Then ask about life stresses that coincide with (or immediately precede) the start of the illness or flares of symptoms.

Case 1. A 37-year-old woman had irritable bowel symptoms three times in her life: at age 22 during a stressful first job more than 1,000 miles from home, at age 31 during a divorce, and currently during her second divorce.

Listen for clues that symptoms are highly unlikely to have an organic or structural cause.

Case 2. A 40-year-old man had abdominal pain only while driving to work and not when driving home or on days off work.

Case 3. An older man had more than 25 years of daily lumbar pain, but no symptoms during his annual 2-week fly-fishing vacation even when helping to clear brush from around the lodge.

Case 4. A 29-year-old woman had brief, severe attacks of abdominal cramps and diarrhea two-three times per week for nine months but not one episode at home.

When assessing abnormalities on imaging studies, remember that many of these are common in asymptomatic people. Examples include mild spinal disk bulge or protrusion (Jensen et al., 1994), endometriosis, ovarian cysts, and pelvic adhesions (Harrop-Griffiths et al., 1988). These findings are unlikely to be a cause of pain and usually will respond to intervention with no more than placebo benefit. This is also often true for gallstones when abdominal pain is atypical for biliary colic.

Part 2: Current Stresses

A range of life stresses can be associated with physical symptoms (Burton, Farley, & Rhea, 2009; Baraković, Avdibegović, E., & Sinanović, 2013; Hatcher & Arroll, 2008; Miranda, Pérez-Stable, Muñoz, Hargreaves, & Henke, 1991; Tomenson et al., 2012). Ask if there is a personal crisis, issues with religious faith, problems with a spouse or partner, lesbian/gay/bisexual/transgender concerns, difficulty with children or parents, workplace stress, financial problems, or a dilemma involving a friend or neighbor. Remember to inquire about stressful events that link chronologically to symptom flares.

Another common theme is a lack of self-care skills. Good questions that loved ones can help answer are listed below.
Do you care for those close to you but have difficulty finding time for yourself?
What do you do for enjoyment and how often?

For most of these patients, their only relief from endless obligations is when symptoms force them to rest. A majority experienced a challenging childhood that diverted them from attending to their own needs. They were left with little experience taking time for personal fulfillment and recreation.

**Case 5.** A 32-year-old woman in the emergency department is receiving intravenous opiates for acute abdominal pain. Diagnostic tests are unrevealing. She was a competitive springboard diver from ages 4–18, practicing before and after school and on weekends. Currently she is working full time, as is her husband. She coaches her two daughters and others, drives children long distances to competitions, and volunteers as swim club director. Personal time is rare. Her symptoms moderated after discussion about how much she had missed as a child. She was discharged with analgesic tablets and a plan to take regular time focused on personal enjoyment. Her pain resolved 8–10 weeks later after discovering great pleasure in piano lessons.

### Part IIIa: Adverse Childhood Experiences (ACEs)

ACEs increase the risk for many types of poor health outcome (Felitti et al., 1998), including PPD, which can begin during childhood, adolescence or well into midlife. Symptoms can be mild or severe, single or multiple, and can persist for years or even decades. A good sequence of questions is as follows.

1. Were you under stress as a child?
2. On a scale of 1–10, 10 being worst, how stressed were you as a child?
3. Please tell me what leads you to choose that number.
4. How have you been affected later in life?
5. If you learned that a child you care about was growing up exactly as you did, how would that make you feel? (Patients often minimize the adversity they experienced. This question can help them to a more accurate assessment.)

After each question, listen for mistreatment capable of causing enduring harm to self-esteem and/or anger, fear, shame, grief, or guilt. This suffering often proves to be the source of unresolved emotions that are then expressed somatically. This is the fundamental cause of PPD in ACE survivors. Common forms of childhood mistreatment in this population include abuse, neglect, lack of praise or emotional support, excessive responsibilities, bullying by peers, and parental violence or substance abuse.

Most children suppress their emotional reaction to chronic adversity (Miller, 2008; KIrken- gen, 2010). Consequently, as adults they might recall only a fraction of the distress associated with their mistreatment. Detailed questioning (particularly question five above) combined with empathy skills often is needed to comprehend the full depth of emotion in people who do not perceive it themselves. Patients who are unable to recall their childhood might benefit from an interview by a psychotherapist.

### Part IIIb: Stages of ACE Recovery

In my PPD patients with ACEs, a majority experiences up to three overlapping stages of recovery. Finding manifestations of this during a Stress Evaluation improves understanding of the patient’s healing process. PPD can begin at any time, even in Stage Three when, outwardly, life appears less stressful.

**Stage One.** Personality traits that develop in response to ACEs include poor self-esteem, stressful personal relationships, perfectionism, detrimental levels of self-sacrifice and increased vigilance. Anxiety and depression often are present. Also common are behaviors that support coping such as eating disorders, addictions (alcohol, drugs, nicotine, exercise, work, sex, gambling, shopping), and self-injury. Additional coping characteristics include reliability, attending to details, a capacity for hard work and compassion for others in need.

**Stage Two.** Negative traits from Stage One diminish and the positive traits generate supportive feedback from friends and colleagues. This leads to steady growth in self-esteem. ACE survivors eventually recognize they deserve to be treated far better than they were as children. For the first time they feel worthy of mutually supportive relationships.
Stage Three. Declining stress, improving self-esteem and feeling worthy of better treatment contrasts with and generates emotion about adversity experienced as a child. But because of years spent suppressing emotional reactions, patients lack conscious awareness of anger, fear, grief, shame or guilt even when an ACE perpetrator is still active in the patient’s life. The result is emotion that is expressed somatically (causing symptoms) rather than verbally or via behavior. (It is not uncommon for symptom onset to coincide with the first supportive relationship, which I refer to as the good-partner/bad-illness syndrome.) Recovery results from conscious recognition of these emotions followed by converting their somatic expression into verbal expression (see the Treatment section below).

It is remarkable how frequently ACE survivors are unaware of emotions powerful enough to cause illness. The following patient’s illness was unexplained after consultation by more than a dozen specialists including a psychiatrist.

Case 6. A 50 year-old woman was admitted to a university hospital about four times annually for 15 years for days-long attacks of nausea, vomiting, and vertigo. Symptoms resolved rapidly and permanently after discovery that nearly all the attacks were directly linked to episodic interactions with her verbally abusive mother (although most ACE survivors with PPD need months or years to fully recover).

Part 4: Depression

In primary care patients with depression, somatic rather than emotional symptoms predominate (Kroenke et al., 1994). A large majority of my patients denied feeling depressed though most of them felt stressed or frustrated. A vague, nonspecific description of the symptoms and desperation to find relief that is out of proportion to findings on physical exam are clues to depression. Confirmation usually follows from inquiry into early morning awakening, anhedonia, fatigue, anorexia, tearfulness, thoughts of self-harm, and loss of hope for the future.

Part 5. Posttraumatic Stress

Routinely ask about traumatic, terrifying, or horrifying life events (Andreski, Chilcoat, & Breslau, 1998; Gupta, 2013; Hoge, Terhakopian, Castro, Messer, & Engel, 2007; Mcfarlane, Atchison, Rafalowicz, & Papay, 1994). The link to PPD is clear when symptoms begin soon after the trauma, especially when accompanied by manifestations of posttraumatic stress, such as flashbacks, nightmares, avoidance of reminders of the trauma, emotional numbness, and increased vigilance.

PPD that begins long after the trauma is more challenging to diagnose and is not rare. Symptoms usually follow a triggering event linked to the trauma.

Case 7. A 34-year-old woman had a 3-year history of episodic nausea, vomiting and right lower quadrant (RLQ) abdominal pain. She indicated the site of pain by forming her hand into the shape of a pistol and pointing the “barrel” at the RLQ. Thirteen years earlier she witnessed the murder of her brother by gunshot to the RLQ. Ten years later, just before the onset of symptoms, she unexpectedly encountered her brother’s killer in a store (shortly after his release from prison), although he did not recognize her.

Part 6: Anxiety Disorders

The prevalence of generalized anxiety disorder (GAD) in primary care is 7%–8% and most complain of physical symptoms rather than worry or fear (Stein & Sareen, 2015). A clue to GAD is that the somatic illness tends to be significantly less severe at times when the patient feels safe.

Case 4 above who had diarrhea attacks only away from the safety of her home is an example. Another patient experienced progressive stiffness and discomfort in the neck and shoulders if he left his home but not if he remained there. Most GAD patients will admit to excessive worry about minor matters if asked specifically.

A variant of GAD is social anxiety disorder where symptoms are triggered by social situations such as public speaking or the presence of large numbers of people. Patients often worry about embarrassing themselves or being judged by others.

Case 9. An adolescent had severe diarrhea but only on Tuesdays and Thursdays when she played soccer for her high school team and felt very anxious about her performance. Symptoms
responded well to the selective serotonin re-uptake inhibitor (SSRI) paroxetine.

Panic attacks also can be misdiagnosed as organic disease. Sudden onset and a rapid peak of intense fear often accompanied by shortness of breath, heart palpitations, chest discomfort, trembling, a choking sensation, or nausea should prompt consideration of panic. The diagnosis is likely if episodes abort rapidly after taking a short-acting benzodiazepine.

**Treatment**

A useful diagnostic technique that also initiates treatment is to have the patient compile a list of all their life stresses past and present. This has value for several reasons.

During a stress evaluation, many patients want to provide more information than time permits. They can be encouraged to add these disclosures to their list of stresses for review during follow-up.

The number of listed stresses and their tendency to cluster in particular areas (such as workplace or spouse) can be a revelation.

Often patients feel prompted to find solutions to some items with subsequent improvement in their symptoms.

Patients who lack self-care skills should, ideally, set aside 2–5 hr per week (best as a block) for trial and error in search of an activity whose primary purpose is enjoyment. This process can require months, often induces guilt (at first) and benefits from support by other members of the patient’s household. But once people acquire the ability to put themselves on the list of those for whom they care, the improvement in symptoms is gratifying and enduring.

PPD resulting from ACEs often benefits from psychotherapy. However, there are several straightforward techniques a BMHP or medical clinician can implement that are surprisingly helpful. Supportive, nonjudgmental listening about ACEs builds trust. It is also therapeutic with a 35% reduction in doctor office visits though this is not sustained beyond one year without follow-up (Felitti & Anda, 2010). Reframing coping behaviors (eating disorders, addictions, self-injury) as normal responses to an abnormal past environment conveys acceptance and compassion.

The next step is to facilitate greater conscious recognition of emotions about childhood mistreatment. Even patients who deny these feelings often reconsider when asked to imagine a young loved one enduring the same experience.

**Case 10.** A 33-year-old man had a 20-year history of multiple PPD symptoms. After his parents’ divorce when he was age 8, they continued to live in the same home, sleeping separately, with daily mutual hostility. The patient denied significant impact until asked to imagine observing his beloved 6-year-old niece experiencing the same environment for a week. Following a long pause, the patient said, “After that week, I would shoot myself.”

Once the patient appreciates the magnitude of their anger, fear, grief, shame or guilt, it is important to help them take pride in the heroic accomplishment of surviving their ACEs. This reframing, when encouraged by a health care professional, can initiate meaningful growth in self-esteem that is fundamental to further progress. Concurrently, the patient can convert the somatic expression of emotion (physical symptoms) into verbal expression by writing thoughts and emotions in a journal or in a letter to the ACE perpetrator (usually not mailed; Pennebaker & Smyth, 2016), imagining a child enduring what the patient experienced and writing what they would communicate to that child, and meeting with an experienced psychotherapist.

If a patient has ongoing interaction with their ACE perpetrator(s) it is often essential to change the nature of the encounters or set relationship boundaries. This is challenging until self-esteem has grown but can be a key contributor to symptom relief.

Depression, PTSD, and the anxiety disorders can be managed with counseling and/or medication, depending on the patient’s preference and local expertise.

Another therapeutic option is self-help books about PPD that are based on published evidence and extensive clinical experience (see Table 1). Asking patients if they “like to read” can gauge patients’ interest in these and also functions as a
screen for literacy. Finally, faith-based or other support groups and/or adjunctive practice of mindfulness, relaxation technique, meditation, or yoga are helpful to many.

### The Stress Medicine Group Appointment

A classroom is a nonthreatening venue for presenting the ideas above. A significant fraction of attendees will seek individual BMHP support after hearing this information. A 6-year experience with this class produced a statistically significant increase in attribution of symptoms to stress, a 22% decrease in medical office visits (Clarke, 1999) and a 50% annual increase in referrals to the class by medical clinicians. My annotated slide set is available online at no charge (http://www.stressillness.com/Lectures.php).

### Conclusion

Millions of patients experience PPD, but few health professionals have had formal training in uncovering and managing the psychosocial causes. The result is a large blind spot in the health care system. Francis Peabody discussed this failure and its remedies at length in a famous speech in 1925, summarizing many useful ideas by saying: “In all your patients whose symptoms are of functional origin, the whole problem of diagnosis and treatment depends on your insight into the patient’s character and personal life” (Peabody, 1927, p. 882).

In the 90 years since then, management of PPD patients has not achieved its potential. However, with the diagnostic process and therapeutic measures described above, outcomes in PPD patients can move closer to parity with results achieved for structural abnormalities and organic disease.

### References


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