Clinical Integration and the Functional Medicine Matrix

Part 1

Dan Lukaczer, ND

Applying Functional Medicine in Clinical Practice
London, England
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Disclosures

Dan Lukaczer, ND has indicated he has no financial relationships with any commercial interest relevant to this activity.
Navigating the Functional Medicine Roadmap
It is much more important to know what sort of a patient has a disease than what sort of disease a patient has.

William Osler
Objectives

• Review the tools that have been introduced and discussed over the past week at AFMCP.
• Develop skills in the work up of a patient using the functional medicine matrix model
• Integrate concepts from the functional medicine matrix model that help in the recognition of clinical patterns
Functional Medicine
Key Tools and Resources
Join Us For The First Functional Medicine Detox Summit!

What is The Detox Summit?
The Detox Summit (August 4-11) is a FREE online summit featuring interviews with 30 experts in detoxification— including Functional Medicine thought-leaders like Dr. Mark Hyman, Dr. Jeffrey Bland, and many other IFM faculty members.

The Detox Summit will provide you with all of the information you need to:
- Learn about environmental toxins in food, air and water
- Identify symptoms of toxic overload
- Understand the signs of detoxification (i.e., the “detox reactions”)
- Learn how to support detoxification

To register as an affiliate and learn more click here.

Patients

IFM Calendar

FOCUS ON: Changing Gene Expression Without Changing Genes

One of the most absorbing topics emerging from modern health science is epigenetics, defined as “heritable changes in gene activity that are not caused by changes in the DNA sequence…” This is one of the concepts, discussed in the following article, that profoundly shifts our understanding of health and disease and of the nature vs. nurture debate— particularly when nutrition enters the picture.

Click here to read the article.

JOIN THE MOVEMENT
Welcome Dan Lukaczer

Welcome to your new IFM Learning Center. Here, you can keep track of your enrollments, browse future programs, learn about IFM certification, and interact with members of your community. If you have recently taken a course, you can access your course materials from "My Current Courses" below or whenever you click on "My Education" above.

My Current Courses

11/7/14 - Energy Advanced Practice Module - Miami, FL
03/23-27/2015 - Applying Functional Medicine in Clinical Practice - Tucson, AZ
IFMCP Review Course 2015
11/06-08/2015 - Energy Advanced Practice Module - Dallas, TX
07/12-15/2015 - Detox Advanced Practice Module - Chicago, IL

A New Approach to Treating Cardiovascular Disease

Cardiovascular disease is the number one cause of death in the United States.

It is also largely preventable.

At IFM's Cardiometabolic Advanced Practice Module, March 6-8, learn new and effective approaches to preventing and treating CVD.

LEARN MORE

IFM Planning Calendar

View All My Enrollments
Welcome to IFM's community page

Welcome to Communities, the new home of the IFM forum. If you are a member, have registered for an upcoming program, or have attended a past program, the "Communities" drop down menu above will allow you to access to discussion forums and information exclusively for members of your community.

Topics and discussions from the IFM forum have been imported to Communities so that you may continue your previous conversations where you left off. We have made our best effort to ensure that the transition to Communities is seamless, but we cannot guarantee that there will be no technical issues. Please contact us if you have any questions about how to use the new Community functions.

How do I get started?

Within your community forum, click on "Start a discussion" to post to the forum. Chose from the list of CATEGORIES at the top left. Go to the START A DISCUSSION box. Enter your topic and your message and click "Submit." To respond to an existing post, click "Reply" and enter your message where indicated.

You may forward a post of interest to any colleague who is also a member of your community by selecting "Send to a Friend" under the name of the post.

How do I search the forum?

Within your community forum, click on "View My Discussions". Select a subject from the CATEGORIES box. You may also select <All> Categories. Go to the SEARCH box, just below CATEGORIES. You may search only your own discussions by ticking the box. Enter a search term and click "Search". Selecting "Advanced" will allow you to search within a specific date range.

How do I subscribe to a topic?

Select a CATEGORY and go to Discussions (blue button to left of screen.) Select a time period: "Today/This Week/This Month/All Time". Click on the topic name. Select "Subscribe". A new box will open offering choices on your email notification triggers and frequency. If you would like to change your subscription or unsubscribe to this topic in the future, go to the topic,
## Communities

<table>
<thead>
<tr>
<th>Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFMCP Community</td>
</tr>
<tr>
<td>APM Cardiometabolic Community</td>
</tr>
<tr>
<td>APM Detox Community</td>
</tr>
<tr>
<td>APM Energy Community</td>
</tr>
<tr>
<td>APM GI Community</td>
</tr>
<tr>
<td>APM Immune Community</td>
</tr>
<tr>
<td>IFM Cohort 2015</td>
</tr>
<tr>
<td>Member Community</td>
</tr>
</tbody>
</table>

*Have any questions about how to use the new Community functions.*

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Gather Oneself & Timeline
Organize on Matrix
Tell the Patient’s Story
Order of your Priorities
Initiate Assessment and Care
Track Progress
Table of Contents
FUNCTIONAL MEDICINE MATRIX

Physiology and Function: Organizing the Patient’s Clinical Imbalances

- Assimilation
- Defense & Repair
- Structural Integrity
- Mental
- Emotional
- Energy
- Spiritual
- Communication
- Transport
- Biotransformation & Elimination

Retelling the Patient’s Story

- Antecedents
- Triggering Events
- Mediators/Perpetuators

Modifiable Personal Lifestyle Factors

- Sleep & Relaxation
- Exercise & Movement
- Nutrition
- Stress
- Relationships

Name: __________________________ Date: __________ CC: ________________________
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FUNCTIONAL MEDICINE MATRIX

Physiology and Function: Organizing the Patient’s Clinical Imbalances

- Assimilation (e.g., Digestion, Absorption, Microbiota/GI, Respiration)
- Defense & Repair (e.g., Immune, Inflammation, Infection/Microbiota)
- Mental (e.g., cognitive function, perceptual patterns)
- Emotional (e.g., emotional regulation, grief, sadness, anger, etc.)
- Spiritual (e.g., meaning & purpose, relationship with something greater)
- Transport (e.g., Cardiovascular, Lymphatic System)
- Biotransformation & Elimination (e.g., Toxicity, Detoxification)

Antecedents (Predisposing Factors—Genetic/Environmental)
- Structural Integrity (e.g., from Subcellular Membranes to Musculoskeletal Structure)

Triggering Events (Activators)
- Communication (e.g., Endocrine, Neurotransmitters, Immune messengers)

Mediators/Perpetuators (Contributors)
- Energy (e.g., Energy Regulation, Mitochondrial Function)
- Biotransformation & Elimination (e.g., Toxicity, Detoxification)

Retelling the Patient’s Story

- Modifiable Personal Lifestyle Factors
  - Sleep & Relaxation
  - Exercise & Movement
  - Nutrition
  - Stress
  - Relationships

Name: __________________________ Date: __________ CC: __________________________
# Medical Symptoms Questionnaire (MSQ)

Patient Name________________________ Date______________

Rate each of the following symptoms based upon your typical health profile for the past 14 days.

**Point Scale**

0 – Never or almost never have the symptom

1 – Occasionally have it, effect is not severe

2 – Occasionally have it, effect is severe

3 – Frequently have it, effect is not severe

4 – Frequently have it, effect is severe

## HEAD
- Headaches
- Faintness
- Dizziness
- Insomnia

## EYES
- Watery or itchy eyes
- Swollen, redden or sticky eyelids
- Bags or dark circles under eyes
- Blurred or tunnel vision
  (Does not include near or farsightedness)

## EARS
- Itchy ears
- Earaches, ear infections
- Discharge from ear
- Ringing in ears, hearing loss

## NOSE
- Stuffy nose
- Sinus problems
- Hay fever
- Sneezing attacks
- Excessive mucus formation

## MOUTH/THROAT
- Chronic coughing
- Gagging, frequent need to clear throat
- Sore throat, hoarseness, loss of voice
- Swollen or discolored tongue, gums, lips
- Canker sores

## SKIN
- Acne
- Itch, rash, dry skin
- Hair loss
- Flushing, hot flashes
- Excessive sweating

## HEART
- Irregular or skipped heartbeat
- Rapid or pounding heartbeat
- Chest pain

## MIND
- Stuttering or stammering
- Slurred speech
- Learning disabilities

## EMOTIONS
- Mood swings
- Anxiety, fear, nervousness
- Anger, irritability, aggressiveness
- Depression

## OTHER
- Frequent illnes
- Frequent or urgent urination
- Genital itch or discharge

Grand Total ________
### Purpose

**GATHER**

- **GATHER ONESELF:** Mindfulness; optimizing the therapeutic relationship
- **GATHER INFORMATION** through intake forms, questionnaires, the initial consultation, physical exam, and objective data. A detailed functional medicine history taken appropriate to age, gender, and nature of presenting problems.

### IFM Tools (examples)

- Mindful Meditation
- Health History and Intake Forms
- Medical Symptoms Questionnaire
- Timeline
  - Chronological Story
  - ATMs and the Patient's Story
  - ABCDs of Nutritional Evaluation
  - Request and Report
  - Nutrition Physical Exam Forms

### ORGANIZE

- **ORGANIZE** the subjective and objective details from the patient's story within the functional medicine paradigm. Position the patient's presenting signs and symptoms, along with the details of the case history on the timeline and functional medicine matrix.

### TELL

- **TELL** the story back to the patient in your own words to ensure accuracy and understanding. The re-telling of the patient's story is a dialogue about the case highlights, including the antecedents, triggers, and mediators identified in the history, correlating them to the timeline and matrix.
  - Acknowledge patient's goals.
  - Identify the predisposing factors (antecedents).
  - Identify the triggers or triggering events.
  - Identify the perpetuating factors (mediators).
  - Explore the effects of lifestyle factors.
  - Identify clinical imbalances or disruptions in the organizing physiological systems of the matrix.
  - Ask the patient to join in correcting and amplifying the story, engendering a context of true partnership.

### ORDER

- **ORDER** and prioritization emerges from the dialogue of professional and patient. The patient's mental, emotional, and spiritual perspective is of primary importance for prioritizing the next steps.

### INITIATE

- **INITIATE** further functional assessment and intervention based upon the above work:
  - Perform further assessment
  - Initiate patient education and therapeutic intervention
  - Referral to adjunctive care if needed
  - Nutrition Professional
  - Lifestyle Educator
  - Healthcare Provider
  - Specialist

### TRACK

- **TRACK** further assessment, note the effectiveness of the therapeutic approach, and identify clinical outcomes at each visit—partnership with the patient.

- Medical Symptoms Questionnaire
- Body Composition Tracking

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Diet, Nutrition, and Lifestyle Journal

The Food

Personalised Lifestyle Factors

Mental, Spiritual, Emotional
## Day 1

<table>
<thead>
<tr>
<th>Time Event</th>
<th>Food &amp; Drink Intake (quantity, type, amount, brand)</th>
<th>Macronutrients (PFC) and Phytonutrients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td>P, F, C</td>
<td>R, O, D, G, B/P/BL, W/T/BR</td>
</tr>
<tr>
<td>Mid AM Snack</td>
<td>P, F, C</td>
<td>R, O, D, G, B/P/BL, W/T/BR</td>
</tr>
<tr>
<td>Lunch</td>
<td>P, F, C</td>
<td>R, O, D, G, B/P/BL, W/T/BR</td>
</tr>
<tr>
<td>Mid PM Snack</td>
<td>P, F, C</td>
<td>R, O, D, G, B/P/BL, W/T/BR</td>
</tr>
<tr>
<td>Dinner</td>
<td>P, F, C</td>
<td>R, O, D, G, B/P/BL, W/T/BR</td>
</tr>
<tr>
<td>PM Snack</td>
<td>P, F, C</td>
<td>R, O, D, G, B/P/BL, W/T/BR</td>
</tr>
</tbody>
</table>

### Sleep & Relaxation
- Quantity (hours): ____________
- Quality: ____________
- Deep Sleep: ____________
- Good Relaxation: ____________
- Type/Amount: ____________

### Exercise & Movement
- Type: ____________
- Duration: ____________
- Intensity: ____________

### Stress
- Type: ____________
- Duration: ____________
- Intensity: ____________
- Stress Reduction Practices:
  - ____________
- Supporting: ____________
- Non-sustaining: ____________

### Relationships
- Type: ____________
- Duration: ____________
- Intensity: ____________
- Stress Reduction Practices:
  - ____________
- Supporting: ____________
- Non-sustaining: ____________

## Mentality
- Mental: ____________
- Emotional: ____________
- Spiritual: ____________
Objectives

• Review the tools that have been introduced and discussed over the past week at AFMCP.
• Develop skills in the work up of a patient using the functional medicine matrix model
• Integrate concepts from the functional medicine matrix model that help in the recognition of clinical patterns
Evaluating a Case of Fatigue (and a whole bunch of other stuff) using the Functional Medicine Model
Gather information through intake forms, questionnaires, the initial consultation, physical exam, and objective data.

A detailed functional medicine history taken appropriate to age, gender, and nature of presenting problems.
It takes only 23 seconds before a physician interrupts their patient.

Generally speaking, you aren't learning much when your lips are moving.

54 year old white female

- CC: long term fatigue x 15 years
- Irritable Bowel Syndrome x 40 years
- Depression x 24 years
- Chemical Sensitivity x 19 years
- Hypothyroidism x 6 years
- Hyperlipidemia & Hypertension x 5 years
- Also reports long term history of Weight Gain, Memory Changes, Emotional Lability, and Headaches
Physical Exam Findings

• 5 foot four inches; 162 pounds (BMI 27.8)
• BP 130/82
• Nasal mucosa boggy
• Achilles deep tendon reflex slightly reduced
• Vibratory sense slightly reduced both lower extremities
The journey may start with the diagnosis…

but it doesn't end with it
The Problem with Diagnostic Medicine

• In conventional medicine, diagnosis becomes the end of inquiry, not a waypoint in the process of understanding disease.
• It should be the beginning of asking a new set of questions, based on systems theory.
• We often don’t explore the underlying aetiology and mechanisms leading to the observed pathology or dysfunction.
Knowledge is having the right answer

Intelligence is asking the right question
Asking the Right Questions … in the Right Way

- Tell me your story…
- When were you last well?
  - What do you think resulted in your not feeling well?
  - What do you think caused or might be contributing to your illness?
- What life events occurred just before or around the onset of your illness?
- Did anything out of your normal happen in the year or so before your change of health?
- If you could erase 3 problems with a magic wand, what would they be? What is the single most problematic issue you are dealing with? What’s the next one?
Focus on Important Clues

- Past Illnesses, injuries, surgeries (no matter how minor it may seem)
- Past or present long term or recurrent medications
- Past or present life stressors
- Changes in circumstances; job, relationship, etc.
- Chemical/environmental/medication sensitivities
- Digestive history
- Food reactions and dietary history
- Dental history
Depression, Headaches, Insomnia & ‘Brain Fog’
Resistant Weight Loss
Preconception

FHx:
• Depression
• Hypothyroidism
• Diabetes (dad)
• HTN (dad)
• Breast CA (mom)

Triggers or Triggering Events

Signs, Symptoms or Diseases Reported

• Diet
• Smoking

Mediators/Perpetuators

Depression, Headaches
Insomnia & ‘Brain Fog’
Resistant Weight Loss
Results: Participants exposed to maternal smoking during pregnancy had a higher risk of depression in midlife
FUNCTIONAL MEDICINE TIMELINE

Antecedents

FHx:
- Depression
- Hypothyroidism
- Diabetes (dad)
- HTN (dad)
- Breast CA (mom)

Triggers or Triggering Events

C-Section/Bottle-Fed

Preconception

Prenatal

- Diet
- Smoking

1-3

7-10

Colic

Chronic OM

Signs, Symptoms or Diseases Reported

IBS, Abd Pain

Current Concerns

Depression, Headaches
Insomnia & ‘Brain Fog’
Resistant Weight Loss

Diet
Smoking

Depression,
Headaches
Insomnia & ‘Brain Fog’
Resistant Weight Loss
FHx:
- Depression
- Hypothyroidism
- Diabetes (dad)
- HTN (dad)
- Breast CA (mom)

Antecedents
- Diet
- Smoking

Triggers or Triggering Events
- C-Section / Bottle-Fed
- Frequent Antibiotics

Preconception
- Colic
- Chronic OM

Prenatal
- 1-3
- 7-10

Current Concerns
- Depression
- Headaches
- Insomnia & 'Brain Fog'

Signs, Symptoms or Diseases Reported
- IBS, Abd Pain
- Resistant Weight Loss
**Preconception**

- Diet
- Smoking

**Antecedents**

FHx:
- Depression
- Hypothyroidism
- Diabetes (dad)
- HTN (dad)
- Breast CA (mom)

**Triggers or Triggering Events**

- Chronic Antibiotic use for 2+ years;
- Chronic OM
- Dysmenorrhea, Acne

**Signs, Symptoms or Diseases Reported**

- Colic
- Chronic OM
- IBS, Abd Pain

**Mediators/Perpetuators**

- C-Section/Bottle-Fed
- Frequent Antibiotics
- Chronic Antibiotics, RetinA, OCPs

**Current Concerns**

Depression, Headaches, Insomnia, 'Brain Fog', Resistant Weight Loss
Severe Fatigue Began

Preconception

- Chronic Antibiotic use for 2+ years;
- 3 Children born; at ages of 25, 27, 29

Current Concerns

- Chronic OM
- Colic
- Dysmenorrhea, Acne
- IBS, Abd Pain
- Depression, Headaches
- Insomnia & ‘Brain Fog’
- Resistant Weight Loss

Antecedents

FHx:
- Depression
- Hypothyroidism
- Diabetes (dad)
- HTN (dad)
- Breast CA (mom)

Triggers or Triggering Events

- C-Section / Bottle-Fed
- Frequent Antibiotics
- Chronic Antibiotics, Retin-A, OCPs
- Post-Partum Depression

Signs, Symptoms or Diseases Reported

- Diet
- Smoking
- 3 Children born; at ages of 25, 27, 29

Prenatal

- Depression
- Hypothyroidism
- Diabetes (dad)
- HTN (dad)
- Breast CA (mom)
Severe Fatigue Began

Antecedents

- FHx:
  - Depression
  - Hypothyroidism
  - Diabetes (dad)
  - HTN (dad)
  - Breast CA (mom)

Preconception

- Diet
- Smoking

Triggers or Triggering Events

- 3 Children born; at ages of 25, 27, 29
- Chronic Antibiotic use for 2+ years;
- Chronic OM
- Colic
- IBS, Abd Pain
- Dysmenorrhea, Acne
- Severe Fatigue Began

Current Concerns

- Depression, Headaches
- Insomnia & ‘Brain Fog’
- Resistant Weight Loss

Signs, Symptoms or Diseases Reported

- Prenatal
  - C-Section/Bottle-Fed
  - Frequent Antibiotics
  - Chronic Antibiotics, RetinA, OCs
  - Post-Partum Depression
  - Depression, Headaches
  - Insomnia & ‘Brain Fog’
  - Resistant Weight Loss
Percent of U.S. Population **NOT** Meeting the Dietary Reference Intake (DRI) for Specific Nutrients

http://www.ba.ars.usda.gov/cnrg/services/cnmapfr.html
Severe Fatigue Began

Preconception

Antecedents

FHx:
- Depression
- Hypothyroidism
- Diabetes (dad)
- HTN (dad)
- Breast CA (mom)

Diet
Smoking

Chronic Antibiotic use for 2+ years;

3 Children born; at ages of 25, 27, 29

Triggers or Triggering Events

C-Section/Bottle-Fed
Frequent Antibiotics
Chronic Antibiotics, RetinA, OCPs
Post-Partum Depression

Chronic OM

Dysmenorrhea, Acne

IBS, Abd Pain

Severe Fatigue Began

“Chemical Sensitivity”

Depression, Headaches, Insomnia & ‘Brain Fog’, Resistant Weight Loss

Current Concerns

Signs, Symptoms or Diseases Reported

Prenatal

1-3
7-10
14-18
25-29
30
35

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**FUNCTIONAL MEDICINE TIMELINE**

**Antecedents**
- FHx:
  - Depression
  - Hypothyroidism
  - Diabetes (dad)
  - HTN (dad)
  - Breast CA (mom)

**Triggers or Triggering Events**
- C-Section/Bottle-Fed
- Frequent Antibiotics
- Chronic Antibiotics, RetinA, OCPs
- Chronic Antibiotic use for 2+ years;
- 3 Children born; at ages of 25, 27, 29

**Mediators/Perpetuators**
- Exposure?

**Preconception**
- Diet
- Smoking

**Prenatal**
- Diet
- Smoking

**Signs, Symptoms or Diseases Reported**
- Dysmenorrhea, Acne
- IBS, Abd Pain
- Severe Fatigue Began
- “Chemical Sensitivity”

**Current Concerns**
- Depression, Headaches
- Insomnia & ‘Brain Fog’
- Resistant Weight Loss

**Name:**
**Date:**
**CC:**
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Organise

the subjective and objective details from the patient’s story within the functional medicine paradigm.

Positioning the patient’s presenting signs and symptoms, along with the details of the case history on the timeline and functional medicine matrix.
FUNCTIONAL MEDICINE MATRIX

Physiology and Function: Organizing the Patient’s Clinical Imbalances

- Assimilation
  (e.g., Digestion, Absorption, Microbiota/GI, Respiration)
- Defense & Repair
  (e.g., Immune, Inflammation, Infection/Microbiota)
- Structural Integrity
  (e.g., from Subcellular Membranes to Musculoskeletal Structure)
- Mental
  e.g., cognitive function, perceptual patterns
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- Spiritual
  e.g., meaning & purpose, relationship with something greater
- Communication
  (e.g., Endocrine, Neurotransmitters, Immune messengers)
- Biotransformation & Elimination
  (e.g., Toxicity, Detoxification)
- Transport
  (e.g., Cardiovascular, Lymphatic System)

Retelling the Patient’s Story

Antecedents
(Predisposing Factors—Genetic/Environmental)

Triggering Events
(Activators)

Mediators/Perpetuators
(Contributors)

Physiology and Function: Organizing the Patient’s Clinical Imbalances

- Assimilation
- Defense & Repair
- Structural Integrity
- Mental
- Emotional
- Spiritual
- Communication
- Biotransformation & Elimination
- Transport

Modifiable Personal Lifestyle Factors

- Sleep & Relaxation
- Exercise & Movement
- Nutrition
- Stress
- Relationships

Name: ___________________________ Date: ___________ CC: ___________________________ © Copyright 2011 Institute for Functional Medicine
Clinical Decision Tree

Medical History
- Current Concerns/HPI
- Review of Systems
- Family History
- Timeline

Questionnaires
- Diet, Nutrition, Lifestyle
- MSQ
- TEQ-20
- Other questionnaires

Anthropometrics
- BMI, WC & WHR
- BIA/Body Fat
- BP & Pulse

Biomarkers
- CBC, CMP
- LFT/GGT
- UA/Creatinine
- Inflammatory Markers

Clinical Indicators
- Mouth Exam
- Nail Exam
- Skin Exam
- Peripheral Nerves

The IFM Clinical Matrix

- Mental
- Emotional
- Spiritual

Defense
- A-T-Ms

Energy
- Sleep

Communication
- Movement

Structure
- Nutrition

Transport
- Stress

Assimilation
- Relationships

Biotransformation
- Movement
- Nutrition
- Sleep
- Defense
- Energy
- Communication
- Structure
- Transport
- Assimilation
- Biotransformation
Antecedents, Triggers, and Mediators

- **Antecedents** are factors, genetic or acquired, that predispose individual to an illness or pattern.

- **Triggers** are factors that provoke the symptoms and signs of illness.

- **Mediators/Perpetuators** are factors, biochemical or psychosocial, that contribute to pathological changes and dysfunctional responses.
Antecedents, Triggers, and Mediators

• Stress (physical, psychological)
• Toxins (biologic, elemental, synthetic)
• Infections acute and chronic (bacteria, yeast, parasites, etc.)
• Food (dietary insufficiencies and excesses)
• Allergens, sensitivity, intolerance (food, mold, dust, pollens, chemicals)
FUNCTIONAL
MEDICINE MATRIX

Retelling the Patient’s Story

Antecedents
Family History: Mother’s
• Depression
• Hypothyroidism SAD
• Diabetes II smoker

Triggering Events
Chronic antibiotics
3 Children born between 25-29
Mother dying from BrCA.
Divorce
Major Job change

Mediators/Perpetuators
Major life stressors:
• Single mother
• Divorce
• Job
• Isolation
Extra weight/adiposity

Physiology and Function: Organizing the Patient’s Clinical Imbalances

Modifiable Personal Lifestyle Factors

Sleep & Relaxation
Exercise & Movement
Nutrition
Stress
Relationships

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**Antecedents**

Family History:
- Depression
- Hypothyroidism
- Diabetes II

Mother's pregnancy:
- SAD
- Smoker

**Triggering Events**

Chronic antibiotics
3 Children born between 25-29
Mother dying from BrCA.
Divorce
Major Job change

**Mediators/Perpetuators**

Major life stressors:
- Single mother
- Divorce
- Job
- Isolation
Extra weight/adiposity
**FUNCTIONAL MEDICINE MATRIX**

**Retelling the Patient’s Story**

### Antecedents
- **Family History:**
  - Depression
  - Hypothyroidism
  - Diabetes II
- **Mother’s pregnancy:**
  - SAD
  - Smoker

### Triggering Events
- Chronic antibiotics
- 3 Children born between 25-29
- Mother dying from BrCA.
- Divorce
- Major Job change

### Mediators/Perpetuators
- Major life stressors:
  - Single mother
  - Divorce
  - Job
  - Isolation
- Extra weight/ adiposity

### Sleep & Relaxation
- Poor sleep hygiene, reads in bed, falls asleep but then wakes frequently, takes naps; unrefreshed.

### Exercise & Movement
- In the past but too tired now

### Nutrition
- Diverse diet but she does have significant carb cravings (candy etc)

### Stress
- Divorce
  - Single mother
- Job change

### Relationships
- Lives alone
  - No hobbies
  - Uses facebook casually to stay in touch with children

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**Physiology and Function: Organizing the Patient’s Clinical Imbalances**

- **Assimilation**
- **Defense & Repair**
- **Energy**
- **Structural Integrity**
- **Biotransformation & Elimination**
- **Transport**
- **Communication**
- **Spiritual**
- **Mental**
- **Emotional**

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**Name:**________ Date:________ CC:_________ © Copyright 2011 Institute for Functional Medicine
FUNCTIONAL MEDICINE MATRIX
Retelling the Patient’s Story

**Antecedents**
- Family History: 
  - Depression
  - Hypothyroidism
  - Diabetes II
- Mother’s pregnancy: SAD

**Triggering Events**
- Chronic antibiotics
- 3 Children born between 25-29
- Mother dying from BrCA.
- Divorce
- Major Job change

**Mediators/Perpetuators**
- Major life stressors:
  - Single mother
  - Divorce
  - Job
  - Isolation
- Extra weight/adiposity

**Sleep & Relaxation**
- Poor sleep hygiene, reads in bed, falls asleep but then wakes frequently, takes naps; unrefreshed.

**Exercise & Movement**
- In the past but too tired now

**Nutrition**
- Diverse diet but she does have significant carb cravings (candy etc)

**Stress**
- Divorce
- Single mother
- Job change

**Relationships**
- Lives alone
- No hobbies
- Uses facebook casually to stay in touch with children

**Physiology and Function: Organizing the Patient’s Clinical Imbalances**

- Assimilation
- Defense & Repair
- Structural Integrity
- Mental
- Emotional
- Communication
- Spiritual
- Biotransformation & Elimination
- Transport

**Modifiable Personal Lifestyle Factors**

Name:____________________________ Date:___________ CC:_____________________________________
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FUNCTIONAL MEDICINE MATRIX

Retelling the Patient’s Story

Antecedents

Family History:
- Depression
- Hypothyroidism
- Diabetes II

Mother’s pregnancy:
- SAD
- Smoker

Triggering Events

Chronic antibiotics
3 Children born between 25-29
Mother dying from BrCA.
Divorce
Major Job change

Mediators/Perpetuators

Major life stressors:
- Single mother
- Divorce
- Job
- Isolation
Extra weight/adiposity

Communication

(e.g. ↓Thyroid, ↑Cytokines, Altered Cortisol, HPAT, & SNS)

Sleep & Relaxation

Poor sleep hygiene, reads in bed, falls asleep but then wakes frequently, takes naps; unrefreshed.

Exercise & Movement

In the past but too tired now

Nutrition

Diverse diet but she does have significant carb cravings (candy etc)

Stress

Divorce
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Job change

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Name: ___________________________ Date: ___________

CC: _______________________________
Physiology and Function: Organizing the Patient’s Clinical Imbalances

Assimilation

Defense & Repair

Communication

Biotransformation & Elimination

Structural Integrity

Mental

Emotional

Spiritual

Energy

Transport

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- Family History:
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  - Hypothyroidism SAD
  - Diabetes II smoker

**Triggering Events**
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- 3 Children born between 25-29
- Mother dying from BrCA.
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Name: __________________________ Date: _____________ CC: _______________________

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The Patient's Story Retold

**Antecedents**
- Family History: Mother’s
  - Depression
  - Hypothyroidism
  - Diabetes II
- Pregnancy: SAD

**Triggering Events**
- Chronic antibiotics
- 3 Children born between 25-29
- Mother dying from BrCA.
- Divorce
- Major Job change

**Mediators/Perpetuators**
- Major life stressors:
  - Single mother
  - Divorce
  - Job
  - Isolation
- Extra weight/adiposity
- Hypothyroidism
- Post? Menopause
- Hx of Dysmenorrhea
- Acne
- Hyperlipidemia

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  - Divorce
  - Single mother
  - Job change
- **Relationships**
  - Lives alone
  - No hobbies
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**Questions to Ask**

- Is there a pattern of dysinsulinemia and dysglycemia?
- Is there a family or personal history of Cardiovascular or Cardiometabolic disease?
- Is there a history or suspicion of sleep apnea or other sleep disturbances?
- High saturated fat/high sugar/high GL?

**Assessments to Consider**

**NCEP ATP III:**
- Increased waist circum., Incr. Blood Pressure, Elevated FBS, Elevated Triglycerides, Decreased HDL, Visceral Adiposity, Bio impedance Analysis, Hyperinsulinemia
- Dysglycemia
  - Elevated Inflammatory markers such as hs-CRP.
  - Elevated A1C.
  - Insulin resistance
  - Elev TG/HDL (>=3)
  - Apo B/Apo A-1 > 0.8
FUNCTIONAL MEDICINE MATRIX

Physiology and Function: Organizing the Patient’s Clinical Imbalances

Assimilation

Defense & Repair

Communication/Transport

Questions to Ask

• Are there seemingly vague and broad-spectrum symptoms?
• Is there a history of removal or injury to any endocrine organ?
• Is the patient taking any hormones of any kind, or medications that affect hormones?
• Is there un-refractory fatigue?
• Is there unexplained weight gain and/or loss of muscle mass?
• Do the symptoms in general seem to be somewhat cyclic in nature?
• Is there unexplained anxiety irritability, depression or fatigue?
• Is there insomnia and/or poor sleep patterns (not necessarily accompanied by hot flashes or night sweats)?
• Is there an otherwise unexplained decrease in libido?
• Is there otherwise unexplained muscle pain, edema, skin or hair changes?

Assessments to Consider

• TSH, T4, fT4, rT3
• Cortisol and DHEA
• Oestrogens, Progesterone, Testosterone, SHBG

Clinical evidence of abnormal endocrine function (even with apparently “normal” levels).

Fasting Blood Glucose and Insulin

SNPs in Detoxification pathways.
### Retelling the Patient’s Story

#### Antecedents
- **Family History:**
  - Depression
  - Hypothyroidism
  - Diabetes II
- **Mother’s pregnancy:**
  - SAD
  - Smoker

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#### Stress
- Divorce
- Single mother
- Job change

#### Relationships
- Lives alone
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---

**Biotransformation & Elimination**

(e.g. Pesticides, PCBs, Heavy Metals, Constipation)

---

**Hypothyroidism**
**Post? Menopause**
**Hx of Dysmenorrhea**
**Acne**
FUNCTIONAL MEDICINE MATRIX

Retelling the Patient’s Story

Antecedents

Family History: Mother’s
- Depression
- Hypothyroidism
- Diabetes II

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3 Children born between 25-29
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Physiology and Function: Organizing the Patient’s Clinical Imbalances

Assimilation
Defence & Repair

Structural Integrity
Mental
Emotional
Energy
Spiritual
Communication

Transport

Biotransformation & Elimination
- Possible exposure to toxins as a nurse/instructor
- Sensitive to scents/perfume
- Depressed Mood
- NSAIDs for HA
- Fluoxetine for Depression
- Acne

Hypothyroidism
Post? Menopause
Hx of Dysmenorrhea
Acne

Hyperlipidemia

Modifiable Personal Lifestyle Factors

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Stress
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Job change

Relationships
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Name: ________________________ Date: ___________ CC: ____________________________

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Biotransformation

Questions to Ask:
• Is there exposure in the patient’s history? Home? Work? Hobby? Childhood?
• Is the patient “sensitive” to perfumes etc.?
• Are the patient’s TEQ-20 and MSQ suspicious for toxicity?

Assessments to Consider
• Evidence of Dysbiosis
• SNPs that impair detoxification
• Toxic exposure questionnaire implies a past or ongoing exposure.
• Direct measurement of toxins.
• Impaired hepatic function: GGT.
• Toxic Metals (hair, stool, blood, urine)
Assimilation
(e.g. Micronutrient ↓, ↑SCFA Propionate, ↓Oxygen)

Antecedents
- Family History:
  - Mother’s pregnancy:
    • Depression
    • Hypothyroidism
    • Diabetes II

Mediators/Perpetuators
- Major life stressors:
  - Single mother
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Physiology and Function: Organizing the Patient’s Clinical Imbalances

Communication

Structural Integrity

Biotransformation & Elimination
- Possible exposure to toxins as a nurse/instructor
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- NSAIDs for HA
- Fluoxetine for Depression
- Acne

Hyperlipidemia

Transport

Spiritual

Energy

Emotional

Mental
The Patient’s Story Retold

Personalized Lifestyle Factors

Nutrition & Hydration

Physiology and Function: Organizing the Patient’s Clinical Imbalances

Mediators/Perpetuators

Major life stressors:
- Single mother
- Divorce
- Job
- Isolation

Extra weight/adiposity

Structural Integrity

Antecedents

Family History: Mother’s pregnancy:
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- Diabetes II

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Meditators/Perpetuators

Hypothyroidism
Post? Menopause
Hx of Dysmenorrhea

Acne

Hyperlipidemia

Possible exposure to toxins as a nurse/instructor
Sensitive to scents/perfume
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Name: ______________________ Date: ___________ CC: ____________________
The Patient's Story Retold

**Antecedents**
- Family History: Mother's
  - Depression
  - Hypothyroidism
  - Diabetes II
- SAD
- Smoker

**Triggering Events**
- Chronic antibiotics
- 3 Children born between 25-29
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**Physiology and Function: Organizing the Patient’s Clinical Imbalances**

- **Assimilation**
  - Carb Cravings
  - Hurried eating
  - Long Hx of IBS
  - Chronic ABX use early in life
  - Bottle Fed

- **Defence & Repair**
  - Hypothyroidism
  - Post? Menopause
  - Hx of Dysmenorrhea
  - Acne

- **Structural Integrity**
  - IBS symptoms
  - 3 children in short order
  - NSAIDs=Increased IP

- **Communication**
  - Hypothyroidism
  - Acne

- **Spiritual**
  - Hyperlipidemia

- **Transport**

- **Energy**
  - Possible exposure to toxins as a nurse/instructor
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**Modifiable Personal Lifestyle Factors**

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- **Relationships**
  - Lives alone
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Assimilation/Structural Integrity

Questions to Ask
- Are symptoms frankly associated with food/eating? From what we now know, could those symptoms possibly be associated with food?
- Does the patient have high scores in the MSQ sections for “digestive tract” and “weight” sections?
- Are there medications or surgeries that may impair digestion and/or absorption?
- Assessing the patient’s diet, is it deficient/insufficient? Inflammatory? Hurried, emotional eating?

Assessments to Consider
Stool Analysis
- Digestion/Absorption
  - Digestive enzyme levels/fibers, Bile acids
- Immunology/Inflammation
  - Calprotectin, Lactoferrin, Fecal sIgA
- Metabolic and Microbiome
  - Parasites: O&P, EIA,
  - Bacteria, yeast: culture and sensitivity, SCFAs
**FUNCTIONAL MEDICINE MATRIX**

**Retelling the Patient’s Story**

**Antecedents**
- **Family History:**
  - Mother’s pregnancy:
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    - Hypothyroidism
    - Diabetes II
  - SAD
- **Smoker**

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**Physiology and Function: Organizing the Patient’s Clinical Imbalances**

**Assimilation**
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**Structural Integrity**
- Hypothyroidism
- Post? Menopause
- Hx of Dysmenorrhea
- Acne

**Energy**
- Hyperlipidemia

**Biotransformation & Elimination**
- Possible exposure to toxins as a nurse/instructor
- Sensitive to scents/perfume
- NSAIDs for HA
- Fluoxetine for Depression
- Acne

**Defence & Repair**
- (e.g. Auto-Immune, Inflammation, Infection)

**Communication**
- IBS symptoms
- 3 children in short order
- NSAIDs=Increased IP

**Transport**
- Hyperlipidemia

**Sleep & Relaxation**
- Poor sleep hygiene, reads in bed, falls asleep but then wakes frequently, takes naps; unrefreshed.

**Exercise & Movement**
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- Job change

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**Name:** ____________________  **Date:** ___________  **CC:** ____________________________________

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## Retelling the Patient’s Story

### Antecedents
- **Family History:**
  - Mother’s pregnancy: SAD
  - Hypothyroidism
  - Diabetes II
- **Mediators/Perpetuators:**
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    - Divorce
    - Job
    - Isolation
  - Extra weight/adiposity

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### Physiology and Function: Organizing the Patient’s Clinical Imbalances

#### Assimilation
- Carb cravings
- Hurried eating
- Long Hx of IBS
- Chronic ABX use early in life
- Bottle Fed

#### Defense & Repair
- Hashimoto’s?
- Adiposity=inflammation

#### Structural Integrity
- IBS symptoms
- 3 children in short order
- NSAIDs=Increased IP

#### Communication
- Hypothyroidism
- Post? Menopause
- Hx of Dysmenorrhea
- Acne

#### Transport
- Hyperlipidemia

#### Biotransformation & Elimination
- Possible exposure to toxins as a nurse/instructor
- Sensitive to scents/perfume
- Depressed Mood
- NSAIDs for HA
- Fluoxetine for Depression
- Acne

### Modifiable Personal Lifestyle Factors

- **Sleep & Relaxation:**
- **Exercise & Movement:**
- **Nutrition:**
- **Stress:**
- **Relationships:**
**Defense & Repair**

**Questions to Ask**
- Does the patient have an Inflammatory diet such as high fried, processed, high simple sugar, high GL, low Omega 3?
- Does the patient have a highly antigenic diet? (Gluten, Milk etc.)
- Has the patient had environmental exposure to potentially inflammatory triggers? (smoking, pesticides, solvents, alcohol)
- Is there a traumatic event in the patient’s timeline?

**Assessments to Consider**

**Signs of inflammation:**
- Allergic shiners, boggy mucosa, pain, congestion

**Labs:**
- Autoantibodies
- Increased levels of inflammatory mediators such as histamine and various cytokines and Interleukins.
- AA:EPA ratio >3
- Elevated hs-CRP, Leukocytosis
**FUNCTIONAL MEDICINE MATRIX**

**Retelling the Patient’s Story**

**Antecedents**

- Family History: Mother’s pregnancy
  - Depression: SAD
  - Hypothyroidism
  - Diabetes II

**Triggering Events**

- Chronic antibiotics
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**Mediators/Perpetuators**

- Major life stressors:
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  - Job
  - Isolation
- Extra weight/adiposity

**Energy**

(e.g. ↓ATP, ↑OxStress/ROS, Mitochondrial Dysfunction)

**Assimilation**

- Carb Cravings
- Hurried eating
- Long Hx of IBS
- Chronic ABX use early in life
- Bottle Fed

**Defense & Repair**

- Hashimoto’s?
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**Communication**

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**Biotransformation & Elimination**

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**Transport**

- Hyperlipidemia

**Structural Integrity**

- IBS symptoms
- 3 children in short order
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**Modifiable Personal Lifestyle Factors**

**Sleep & Relaxation**

- Poor sleep hygiene, reads in bed, falls asleep but then wakes frequently, takes naps; unrefreshed.

**Exercise & Movement**

- In the past but too tired now

**Nutrition**

- Diverse diet but she does have significant carb cravings (candy etc)

**Stress**

- Divorce
- Single mother
- Job change

**Relationships**

- Lives alone
- No hobbies
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### Physiology and Function: Organizing the Patient’s Clinical Imbalances

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Questions to Ask

- Is the patient experiencing: prolonged inflammation? An increased need for detoxification? Or increased stress?
- Is there a toxic exposure (increases the need for cellular energy and potentially inhibits its production)?
- Chronic shallow breathing?

Assessments to Consider

Total Antioxidant Capacity (TAC); GSH:GSSG; Cysteine:Cystine

Antioxidant Enzymes:
- Superoxide Dismutase
- Glutathione Peroxidase
- Catalase

Oxidative Damage:
- Lipid peroxides; oxidized LDL
- HgbA1c, AGEs
- 3-Nitrotyrosine
- 8-OH Deoxyguanosine
FUNCTIONAL MEDICINE MATRIX

Retelling the Patient’s Story

Antecedents
Family History:
- Mother’s pregnancy: SAD
- Hypothyroidism
- Diabetes II

Triggering Events
Chronic antibiotics
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Major Job change

Mediators/Perpetuators
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- Job
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Physiology and Function: Organizing the Patient’s Clinical Imbalances

Assimilation
- Carb Cravings
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Mental
- IBS symptoms
- 3 children in short order
- NSAIDs=Increased IP

Emotional
- Hypothyroidism
- Post? Menopause
- Hx of Dysmenorrhea
- Acne

Spiritual
- Severe fatigue
- Un-refreshing sleep
- Depressed Mood

Structural Integrity
- Hashimoto’s?
- Adiposity=inflammation

Energy
- Hyperlipidemia

Transport

Communication

Biotransformation & Elimination
- Possible exposure to toxins as a nurse/instructor
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Modifiable Personal Lifestyle Factors

Sleep & Relaxation
- Poor sleep hygiene, reads in bed, falls asleep but then wakes frequently, takes naps; unrefreshed.

Exercise & Movement
- In the past but too tired now

Nutrition
- Diverse diet but she does have significant carb cravings (candy etc)

Stress
- Divorce
- Single mother
- Job change

Relationships
- Lives alone
- No hobbies
- Uses facebook casually to stay in touch with children

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Antecedents
Family History:
- Depression
- Hypothyroidism
- Diabetes II
Mother’s pregnancy: SAD

Triggering Events
Chronic antibiotics
3 Children born between 25-29
Mother dying from BrCA.
Divorce
Major Job change

Mediators/Perpetuators
Major life stressors:
- Single mother
- Divorce
- Job
- Isolation
Extra weight/adiposity

Physiology and Function: Organizing the Patient’s Clinical Imbalances

Assimilation
- Carb Cravings
- Hurried eating
- Long Hx of IBS
- Chronic ABX use early in life
- Bottle Fed

Defense & Repair
- Hashimoto’s?
- Adiposity=inflammation
- Diverse diet but she does have significant carb cravings (candy etc)
- Acne
- Hyperlipidemia

Structural Integrity
- IBS symptoms
- 3 children in short order
- NSAIDs=Increased IP

Mental
- Divorce
- Single mother
- Job change

Emotional
- Severe fatigue
- Un-refreshing sleep
- Depressed Mood

Spiritual
- Hypothyroidism
- Post? Menopause
- Hx of Dysmenorrhea

Transport
- Acne

Communication
- Hyperlipidemia

Biotransformation & Elimination
- Possible exposure to toxins as a nurse/instructor
- Sensitive to scents/perfume
- Depressed Mood
- NSAIDs for HA
- Fluoxetine for Depression

Modifiable Personal Lifestyle Factors
Sleep & Relaxation
- Poor sleep hygiene, reads in bed, falls asleep but then wakes frequently, takes naps; unrefreshed.

Exercise & Movement
- In the past but too tired now

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**FUNCTIONAL MEDICINE MATRIX**

**Retelling the Patient’s Story**

**Antecedents**
- Family History:
  - Mother’s pregnancy: SAD
  - Hypothyroidism
  - Diabetes II
- Other:
  - Major Job change

**Triggering Events**
- Chronic antibiotics
- 3 Children born between 25-29
- Mother dying from BrCA
- Divorce
- Major Job change

**Meditators/Perpetuators**
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**Physiology and Function: Organizing the Patient’s Clinical Imbalances**

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**Name:** ____________________  **Date:** __________  **CC:** ____________________
**FUNCTIONAL MEDICINE TIMELINE**

**Antecedents**
- FHx:
  - Depression
  - Hypothyroidism
  - Diabetes (dad)
  - HTN (dad)
  - Breast CA (mom)

**Preconception**
- Diet
- Smoking

**Prenatal**
- C-Section/Bottle-Fed
- Frequent Antibiotics
- RetinA, OCPs

**Triggers or Triggering Events**
- Chronic Antibiotic use for 2+ years;
- 3 Children born; at ages of 25, 27, 29

**Prenatal**
- Colic
- Chronic OM
- Dysmenorrhea, Acne
- IBS, Abd Pain

**Birth**
- 7-10
- 14-18
- 25-29
- 30
- 35
- 40
- 42
- 47

**Signs, Symptoms or Diseases Reported**
- Depression, Headaches
- Insomnia & ‘Brain Fog’
- Resistant Weight Loss
- Chronic Antibiotic use for 2+ years;
- LMP
- Chronic OM
- 3 Children born; at ages of 25, 27, 29
- Severe Fatigue Began
- Dx: Dyslipidemia & Hypothyroidism
- “Chemical Sensitivity”
- Depression, Headaches
- Insomnia & ‘Brain Fog’
- Resistant Weight Loss

**Mediators/Perpetuators**
- Major Life Stressors
- Exposure?
### Physiology and Function: Organizing the Patient's Clinical Imbalances

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### Mediators/Perpetuators
- Major life stressors:
  - Single mother
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### Antecedents
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### Modifiable Personal Lifestyle Factors

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Patient Centred Care

Retelling the Patient’s Story with sTMs
Organizing the Clinical Imbalances
Personalising Lifestyle Factors
Tell the story back to the patient in your own words to ensure accuracy and understanding.

The re-telling of the patient’s story is a dialogue about the case highlights including the antecedents, triggers, and mediators identified in the history, correlating them to the timeline and matrix. The patient is asked to join in correcting and amplifying the story, engendering a context of true partnership.
Where are the Points of Leverage?
Points of Leverage

• Touch back to the model to clarify the most important ATMs.
• Touch back to the model to clarify who this patient is?
• Touch back to the model to focus on foundational lifestyle factors for that particular patient.
• Be able to ‘tell the story’ and co-create the plan with the patient.
Order and then prioritise the patient’s information:

1) Acknowledge patient’s goals.
2) Address modifiable lifestyle factors.
3) Sidney Baker’s too much/not enough model: what are the insufficiencies/excesses?
4) Identify clinical imbalances or disruptions in the organising systems of the matrix.
Clinical Decision Tree

GATHER
- Medical History
  - Current Concerns/HPI
  - Review of Systems
  - Family History
  - Timeline
- Questionnaires
  - Diet, Nutrition, Lifestyle
  - MSQ
  - TEQ-20
  - Other questionnaires
- Anthropometrics
  - BMI, WC & WHR
  - BIA/Body Fat
  - BP & Pulse
- Biomarkers
  - CBC, CMP
  - LFT/GGT
  - UA/Creatinine
  - Inflammatory Markers
- Clinical Indicators
  - Mouth Exam
  - Nail Exam
  - Skin Exam
  - Peripheral Nerves

ORGANIZE
- The IFM Clinical Matrix
  - Mental
  - Emotional
  - Spiritual
  - Energy
  - Structure
  - Transport
  - Assimilation
  - Biotransformation
  - Communication
  - A-T-Ms
  - Sleep
  - Relationships

TELL
- Review relevant findings and Timeline via the patient’s story

ORDER
- Assimilation
- Detox
- Communication
- Defense and Repair
- Transport
- Energy
- Structural

Recognize the Clinical Patterns Via Questioning, Testing, and Intuition
Co-creating
How to know where to start?

• We have a great picture of the patient…
• We have a lot of great tools…

How do we proceed with helping this patient?
Objectives

• Review the tools that have been introduced and discussed over the past week at AFMCP.
• Develop skills in the work up of a patient using the functional medicine matrix model
• Integrate concepts from the functional medicine matrix model that help in the recognition of clinical patterns
What is the General Order of Things?

- Reduce Triggers and Modulate Mediators
- A ‘bottom of the matrix’ Lifestyle, Dietary and “Food First” approach
- Assess and address Optimal Function of the organs of elimination, (i.e. ‘when it doubt treat the gut’)
- Assess, prioritise and address the clinical imbalance(s)
What Does the Patient Need to GET?
What Does the Patient Need to Get RID of?

• Does this person have some unmet individual need—food, nutrient, connection, path—that is required for their optimal function?
• Does this person need to get rid of something stressful, toxic, infectious, allergic/sensitive etc.?
The Story
The Story
The Story
The Story
The Story
The Story
The Story
The Story
Story telling is therapeutic

Being understood is the root of hope
Analogies and Metaphors

1. General
   a. We must search for the upstream causes of downstream symptoms and disease.
   b. Functional Medicine turns to get to the underlying cause of the dysfunction as opposed to just suppressing symptoms.
   i. It's the difference between turning off the stove and just putting a lid on a boiling pot.
   ii. It's the difference between treating the smoke instead of the fire.
   c. The human body is analogous to a bicycle.
      i. A typical bicycle wheel has 36 spokes. When even one spoke breaks, the whole wheel will be thrown out of balance, making it likely that other spokes will break as well.
      ii. Think of a mobile phone; when you put one part of the mobile, the rest of the mobile moves as well. If you pull one side of mobile down, you get an imbalance system.
      iii. When you cut one piece off, you get an imbalance system.
   d. It's like a web; if you catch one part of the web, you have vibrations all the way on the other side.
   e. If you pull on a chain, it always breaks at the weakest link. It could be at the end closest to you, in the middle, or toward the other end.
   f. Our body's immune system is similar to our brain's immune system.

2. Metaphors to Help Tell the Story
   a. "Lifestyle" diet includes metabolic risk factors.
   b. "Diet" is the process of losing weight.

3. Metaphors to Help Explain the Process
   a. "Dieting" is analogous to "starvation.
   b. "Exercise" is analogous to "workout.

4. Metaphors to Help Understand the Effects
   a. "Fat cells" are analogous to "energy tanks.
   b. "Blood" is analogous to "fuel.
   c. "Muscles" are analogous to "engines.

The fat cells are always ready to accept the "pizza" delivery men, storing it away instead of using it. Even though the "pizza" delivery men don't always get the "pizza," they can still "show up" and "deliver it.

For more information on Analogies and Metaphors, please visit our website at www.functionalmedicine.com.
Initiate

1) Perform further assessment
2) Referral to adjunctive care
   a. Nutritional Professional
   b. Lifestyle Educator
   c. Healthcare Provider
   d. Specialist
3) Initiate therapy
Clinical Decision Tree

Gather
- Medical History
  - Current Concerns/HPI
  - Review of Systems
  - Family History
  - Timeline
- Questionnaires
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  - UA/Creatinine
  - Inflammatory Markers
- Clinical Indicators
  - Mouth Exam
  - Nail Exam
  - Skin Exam
  - Peripheral Nerves

Organize

Tell
- The IFM Clinical Matrix
- Review relevant findings and Timeline via the patient’s story

Tell

Order
- Assimilation
- Detox
- Communication
- Defense and Repair
- Transport
- Energy
- Structural

Initiate
- Further Appropriate Testing, Lifestyle and Dietary Interventions
- Further Appropriate Testing, Node-specific Interventions

Recognize the Clinical Patterns
Via Questioning, Testing, and Intuition
Points of Leverage

• Touch back to the model to clarify the most important ATMs
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Physiology and Function: Organizing the Patient’s Clinical Imbalances

Modifiable Personal Lifestyle Factors

- Sleep & Relaxation
- Exercise & Movement
- Nutrition
- Stress
- Relationships

Name: ______________________ Date: ___________ CC: ________________________

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Functional Medicine is participatory medicine
The Patient's Story Retold

Personalized Lifestyle Factors

Nutrition & Hydration

Physiology and Function: Organizing the Patient's Clinical Imbalances

Mediators/Perpetuators

Spiritual

Sleep & Relaxation

Family History:
• Depression
• Hypothyroidism
• Diabetes II

Mother's pregnancy: SAD and smoker

Major life stressors:
• Single mother
• Divorce
• Job
• Isolation

Extra weight

Chronic antibiotics

3 Children born between 25–29

Mother dying from BrCA.

Divorce

Major Job change

In the past but too tired now

Poor sleep hygiene, reads in bed, falls asleep but then wakes frequently, takes naps; unrefreshed.

Diverse diet but she does have significant carb cravings (candy etc.)

In your Toolkit

Better Sleep & Relaxation Response

In your Toolkit
The Exercise Prescription: Getting Your Patients Moving

Elizabeth Pegg Frates, MD

Clinical Assistant Professor
Department of Physical Medicine and Rehabilitation
Spaulding Rehabilitation Hospital
Harvard Medical School
Biotransformation & Elimination

Energy Communication Defense & Repair

Structural Integrity Assimilation

Antecedents

Family History: Mother’s

Triggering Events

The Patient’s Story Retold

Personalized Lifestyle Factors

Nutrition & Hydration

Physiology and Function: Organizing the Patient’s Clinical Imbalances

Mediators/Perpetuators

Spiritual Sleep & Relaxation

Nutrition, A Deep Dive

Carb Cravings
Hurried eating
Long Hx. of IBS
Chronic ABX use early in life
Bottle Fed

Hashimoto’s?
Adiposity=inflammation

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Chief Complaints

→ Signs & Symptoms

→ → Diagnoses

→ → → Conventional Tx

Identifying & Addressing Upstream Physiologic Causes

It’s all the same iceberg

The Functional Focus
Medicine is a science of uncertainty and an art of probability.

William Osler