An Interdisciplinary Approach to Managing Eating Disorders

Presenter:
Jennifer L. Gaudiani, M.D., CEDS

Open Forum

April 4, 2017 ~ 12-1:30 pm
Providence St. Vincent Medical Center

April 5, 2017 ~ 12-1:30 pm
Providence Portland Medical Center

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Established in 2006, the Goldman-Berland Lectureship in Palliative Medicine honors two Providence St. Vincent Medical Center physicians, Robert Goldman, MD, and John Berland, MD. These physicians have been recognized for their outstanding whole-person patient care and for being advocates and innovators in palliative care. Dr. Goldman was a medical oncologist who helped initiate the Providence Home Hospice Program in the 1970s. Dr. Berland, a retired general internist, has a passionate interest in palliative care, and wants to make sure that Providence clinicians know how to provide excellent care for patients with advanced chronic, life-limiting or terminal illnesses.

The Lectureship is a funded program of the Providence Center for Health Care Ethics. The Center was established in 2000 and contributes to excellence in health care by providing ethics education, consultation, research and scholarship. The Center also supports palliative care by coordinating palliative care efforts throughout the Oregon region of Providence Health & Services, and by sponsoring educational opportunities in palliative care, such as a palliative care elective for Providence internal medicine and family medicine residents.

The Goldman-Berland Lecturer is a clinician recognized nationally for excellence in palliative and end of life care. Previous Goldman-Berland scholars and their Medical Grand Rounds topics include the following:

2007 - Steven Pantilat, MD, FACP, Founding director of the Palliative Care Service at University of California San Francisco Medical Center, and professor of clinical medicine in the Department of Medicine at UCSF School of Medicine. *Palliative Care: What It Offers Patients and Clinicians.*

2008 - Ira Byock, MD, Director of Palliative Medicine at Dartmouth-Hitchcock Medical Center, Chair of Palliative Medicine at Dartmouth Medical School in Lebanon, New Hampshire. *What Are Doctors For? The Physician-Patient Relationship through the End of Life.*

2009 - Judith Nelson, MD, J.D., Associate director of the ICU at Mt. Sinai Medical Center and professor of medicine, Mt. Sinai Medical School of Medicine, New York City. *Palliative Care in the ICU: Closing the Gap Between What We Know and What We Do.*

2010 – Kathleen Puntillo, RN, DNS, FAAN, Professor emeritus of nursing and research scientist at University of California, San Francisco with ongoing clinical practice in critical care nursing. *The Epidemic of Procedural Pain in Acute and Critical Care.*

2011 – Mary Hicks, MSN, APN-BC, Palliative Care nurse practitioner and Elizabeth DiStefano, RN, BSN, Palliative Care administrator, St. John Health System, Detroit, MI. *How Palliative Care Transformed Our Hospital: Lessons from Detroit.*

2013 – Angelo Volandes, MD, MPH, Faculty at Massachusetts General Hospital and Harvard Medical School, Boston, MA. *Patient Decision-Making in 2013: How Video Tools Break Down Barriers in the ICU/Clinic.*

2014 – Erik Fromme, MD, MCR, FAAHPM, Medical director of Oregon Health & Science University Palliative Care Service, assistant director of OHSU Center for Ethics in Health Care and associate professor of medicine, nursing and radiation medicine, Portland. *Jocelyn White, MD, FAAHPM, FACP, FAAPP, Medical director of Legacy Hospice and Hopewell House, Portland. Communication Tools for All Inpatient Admissions.*

2015 – Michael Rabow, MD, FAAHPM, Professor of Clinical Medicine and Urology at the University of California, San Francisco, director or Symptom Management Service at the Helen Diller Family Comprehensive Cancer Center, director of Symptom Management and Palliative Care Consultation Service at UCSF/Mount Zion Hospital. *The Evolution of Palliative Care: What All Providers Need to Know.*
Jennifer L. Gaudiani, M.D., CEDS

Dr. Gaudiani is the Founder and Medical Director of the Gaudiani Clinic. Board Certified in Internal Medicine, she completed her undergraduate degree at Harvard, medical school at Boston University School of Medicine, and her internal medicine residency and chief residency at Yale, where she won numerous clinical awards. Dr. Gaudiani moved to Denver in 2007, choosing Colorado with her husband because its emphasis on the outdoors, incorporating nature into daily life, and the importance of family activity time seemed like a great way to foster work-life balance.

In 2008, she helped start the ACUTE Center for Eating Disorders at Denver Health in its current form, as the nation’s top medical stabilization center for adults with eating disorders too medically compromised to receive care in a mental health setting. After seven great years there, she left as its Medical Director to pursue her vision of outpatient care, founding the Gaudiani Clinic. During her years at ACUTE, Dr. Gaudiani became a nationally recognized internist for her work on the medical complications of eating disorders.

Dr. Gaudiani has lectured nationally and internationally, is widely published in the scientific literature as well as on blogs, is on the editorial board of the International Journal of Eating Disorders, and sits on the board of IAEDP (International Association of Eating Disorder Professionals) as the only internist. She is one of the only outpatient internists in the United States who carries the Certified Eating Disorder Specialist designation. In founding the Gaudiani Clinic, she has established a nationally unique outpatient medical setting, not dictated by restraints on visit time or insurance rules, where strong, supportive, and healing relationships with patients help them achieve wellness while remaining in their communities. Through lectures and consulting work, Dr. Gaudiani continues to improve the quality of medical care for patients with eating disorders in treatment programs around the country.
An Interdisciplinary Approach to Managing Eating Disorders

Jennifer L. Gaudiani, MD, CEDS
Founder & Medical Director
Gaudiani Clinic

Objectives

• By the end of this talk, participants will...
  – Recognize the importance of an interdisciplinary team in the treatment of eating disorders
  – Have increased awareness of the medical complications of caloric restriction
  – Have increased awareness of the medical complications of purging

What are eating disorders?

• Anorexia nervosa (restrictive or purging subtype)
• Bulimia nervosa
• Binge eating disorder
• Avoidant restrictive food intake disorder
Anorexia Nervosa (AN)

- **Genetic** predisposition in personality & temperament “loads the gun”
- **Environment**, with hyper-focus on dieting, weight loss, and thinness, “pulls the trigger”

Altered/unrealistic body image is everywhere

Not just the girls
Not just size

Epidemiology of AN

• 0.5-1% of American women have AN
• Highest mortality rate of any mental illness
• Fewer than 50% recover, 30% improve, and about 20% develop a severe and enduring form of the illness


Epidemiology

• 5-20% of patients with AN will die from it
  – Half from medical causes, half from suicide
• 90% of patients with AN are female
• Those with AN have a 6x mortality rate compared with age-matched peers, up to 45x for those with lowest BMI (<10 kg/m2)

Epidemiology

- Even with treatment, many with AN do not recover (20-25% long term)
- “Severe and enduring anorexia nervosa,” or SE-AN, also called SEED (“severe and enduring eating disorder”)
- However, full recovery is possible, even for those who have been ill for years

Reconnecting body & soul

- This is the work the interdisciplinary team does
  – MD/DO (internist/FP/psychiatrist)
  – RN
  – CNA
  – RD
  – Therapist
  – PT/OT
  – SLP
  – LCSW

Why eating disorders?

- Many clinicians begin their journey in the art of caring for people
- Caring for humans who suffer from eating disorders touches all aspects of caring: mind, body, soul
How RNs are vital

- A successful treatment program always has well integrated nursing care
- Nurses cannot be just visitors, passing out medications three times a day
- Nurses have to be trained to speak a therapeutic language, helping clients navigate their somatic experience

How doctors fail

How medical types fail patients with eating disorders

Much of wellness and illness cannot be measured
Be storytellers & listeners

- Metaphor
- Narrative
- Creativity
- Expertise
- Vulnerability
- Deep commitment

Role of the team

Even when we can't cure disease or sufficiently improve symptoms, we can bear witness

What do patients with EDs need?

- An interdisciplinary team that communicates regularly
- A non-assumptive, non-binary, patient goals-oriented perspective
- A consistent message
- Permission to be seen as a whole person, and for the ED to be placed in that context
- ED expertise
USE invaluable evidence of body suffering to…

- Break through denial
- Improve physical outcomes and create a safe medical space so psychological/nutritional work can progress
- Unify the treatment team around shared messages
- Save lives

All shapes/sizes

- Rapid weight loss, with body weight still at or above 100% IBW, can cause the same, and equally severe, medical problems as profound chronic underweight

In a nutshell…

- In AN-R/ARFID
  - Organ dysfunction due to under-weight/rate of weight loss and malnutrition
  - High risk for refeeding syndrome
- In purging (AN or BN)
  - Type of purging used, frequency, and duration
  - “Detox” can be complicated too
- In BED
  - Mechanical complications of bingeing
  - Medical sequelae of higher body weight (varies by person)
Big picture

• What happens to you when you starve yourself?
  – “Cave girl brain” kicks in to save you
  – Metabolism slows
  – Risk instinct rises
  – Growth and reproductive systems halt
  – Body sustains “essentials” only

The good news

Nearly all medical complications can resolve with consistent nutrition and **full** weight restoration

Vignette: “Sarah”

• A 25 year old woman with AN-R presents in follow up
• She has great energy, runs 3 miles a day, restricts to 1200 kcal/day with no motivation to increase
• She notes as ever that she’s “fine”
The measurables

- VS: Temp 34.5 C, pulse 40 at rest, BP 79/50
- 5'6”, weight 98 lbs, BMI around 15 kg/m2 and stable from prior
- EKG shows junctional bradycardia at 43
- Blood glucose 40, no symptoms
- WBC 2.9 K/uL, rest of CBC normal
- LFTs: AST 75 U/L, ALT 35 U/L, bili normal, albumin normal

Physical findings

Vital signs

- Hypothermia
- Hypotension
Vital signs

- Heart rate changes in AN are not orthostasis
- Orthostatic pulse and BP changes happen when someone has lost blood volume or is severely dehydrated
- On standing, pulse rises, BP drops

Vital signs

- Vital signs abnormalities highly prevalent:
  - Hibernation mode due to high vagal tone
  - Bradycardia at rest
  - “Walk across the room test” helps distinguish between athletic and starved hearts

Hypoglycemia

- Probably the killer in AN
  - Glucoses < 60 mg/dL are low
  - In underweight, result from depletion of glucose “building blocks” in liver
  - In the moment, give glucose
  - Broadly speaking, adequate nutrition will recharge glycogen stores
  - If hypoglycemic, must be in higher level of care
Pancytopenia (low blood cell counts)

- Gelatinous Marrow Transformation
  - Replacement of cell-producing marrow with an acellular "goo" due to starvation
  - All cell lines may be affected
  - Source of inappropriate workup

- Abnormalities of 1-3 cell lines common
  - 53 ACUTE patients, nadir BMI 12.4 kg/m2, 90% women, mean age 28
  - 83% with anemia
  - 79% with leukopenia
  - 30% with neutropenia
    - Most resolved by hospital day
  - 25% with thrombocytopenia
  - 35% with thrombocytosis, half developing in-hospital

Hepatitis

- Liver function tests (LFTs) are often elevated in AN
  - Starvation mediated:
    - Autophagy on biopsy, recovers with refeeding
    - AST or ALT > 3 x normal independently predict hypoglycemia
    - Often worsens for 1st week of refeeding.
  - Refeeding mediated:
    - Steatohepatitis, recovers with slowed refeeding
“Sarah”

- Patient notes she has not had a menstrual period in 2 years and wants your opinion on getting on the pill for her bones and “to get a period”
- With first period at age 15, very triggering because she assumed it was due to high body fat content and thus started to diet
- She exercises in part because “it’s good for my bones as a thin white woman”

Amenorrhea

- Brain reverts to pre-puberty
- Sign of imbalance between nutrition and exertion, chronically
- No estrogen + high stress hormone levels = “Not a safe time to have a baby”
- Bone density loss happens early & fast
- Check DEXA within 6 months of amenorrhea, then every 2 years

Osteoporosis prevalence

<table>
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<th>Z score</th>
<th>Normal density</th>
<th>Osteopenia</th>
<th>Osteoporosis</th>
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<tr>
<td>Z score &lt; -2.5</td>
<td>25%</td>
<td>38%</td>
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<tr>
<td>Z score -1.0 to -2.5</td>
<td>50%</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>Z score &gt; -1.0</td>
<td>50%</td>
<td>25%</td>
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</tbody>
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Osteoporosis

• **Gold standard: weight restoration**
  – Until resumption of menstrual cycle in women
  – 2010 Spanish study compared BMD improvement in AN patients restoring weight (20% mean increase in weight) with those who did not gain weight
    • At 2 years, gainers had improved bone density 2 to 5%
    • Non-gainers had lost 1% to 4% bone density


Role of estrogen

• **Estrogen**
  – Virtually all RCTs conclude...just say no to estrogen
  – Use obscures the benefits of natural menstrual cycle resumption (and precipitates monthly blood loss)

Exercise

• Doesn’t exercise help bone density?
• **While underweight**: exercise worsens bone density
• **Once restored**: even intense exercise helps bone density

Use it

*Serious exercise is a privilege of full recovery.*

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**Men**

- Men typically have 1/3 the rate of osteoporotic hip and vertebral fracture rates of women
- Men with AN had greater loss of bone than women even though men typically had shorter duration of their disorder
- Men may fracture at higher bone density level than women


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**Adolescents**

- **Girls & young women** with AN have a 60% increase in fractures compared with age-matched controls, even when bone scans did not show reduced bone mineral density.
- Higher risk for fracture was observed as early as one year into the diagnosis of AN, and the results were independent of the amount of exercise being done

Athletes

• High risk athletes
  – Athletes tend to have higher BMD (by 5-15%) vs. age-matched controls
  – Thus a z-score < +1.0 in an athlete requires evaluation!

Return to play

• Terrific, ground-breaking article


Return to play: Scorecard

EA: Energy Availability
BMD: Bone Mineral Density
Table used with permission of the author Dr. De Souza
“Sarah”

- Even without abnormal lab values, Sarah acknowledges she gets full really fast when she does eat. The feeling is uncomfortable emotionally and physically. Constipation has become more of an issue as well.
- On questioning, she’s always had a pretty sensitive belly
- She wonders if a gluten and dairy free diet might help. Her family keeps saying, “Just eat.”

Gastroparesis

- Loss of normal stomach peristalsis (movement)
  - Nearly universal in severe underweight
  - Causes early fullness, nausea, bloating, gassiness
  - Rarely is a nuclear med emptying study needed in this population
  - A sign of slowed metabolism
Gastroparesis

Worsens
- High fiber diets
- Long time underweight

Helps
- Smaller meals
- Liquids/semi-solids
- Low fiber
- Kcal dense

Gastroparesis

• Prescription options
  – Metoclopramide 2.5 mg 30-45 min AC
  – Erythromycin ethinylsuccinate 200 mg AC, or Azithromycin 250 mg a day (not optimal)
  – Limited time
  – Review risks and benefits

Constipation

• Constipation universal in severe underweight
  – Slowed GI transit
• High fiber worsens at low weights
• Long term laxative abuse slows the colon further, maybe permanently
**Constipation management**

- Colace: probably not harmful, not helpful
- Lactulose: causes gas, tastes sweet
- Miralax: optimal, dose to need

Eat everything: moderation in moderation

- Unless there's a true allergy, with eating disorders, it's best not to restrict food groups

“Sarah”

- A month later, you see Sarah again. She’s lost weight now, 10 lbs in the past month. She admits she’s started to binge and purge.
- Her doctor has now sent you lab results that show hypokalemia (low potassium) and hypercarbia (high bicarbonate)
- She tried to stop purging a week ago, and her weight shot up 5 lbs, to her immense distress
**Potassium and Bicarbonate**

- Her potassium is 2.5 mEq/L.
  - She has U-waves on her EKG
- Her bicarbonate is 35 mEq/L = **Contraction metabolic alkalosis**

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**What's going on?**

- **Secondary hyperaldosteronism**

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**Pseudo-Bartter Syndrome**

- **Key points to treat**
  1. Stop purging
  2. **Slowly** rehydrate
  3. Treat the hormone over-production until body down-regulates

  - Spironolactone 25 mg daily for 2 weeks if mild
  - For those with laxative abuse, may need 150 mg a day and a slow taper over 6 weeks
Watch the bicarbonate

- Very high bicarbonate = Pseudobartter Syndrome in this population
  - Anything over 30 mEq/L with purging, assume they need spironolactone, etc
  - Anything over 40 mEq/L with purging: risk increases for seizure or serious complication of purging cessation. Consider checking a venous pH. Consider ICU starting here.

Binge Eating Disorder

- The most prevalent eating disorder
- 2-4% of population, males=females

BED

- Stigma
  - Doctors are the biggest culprit after family, more than classmates, members of community, friends
  - Weight discrimination occurs more frequently than gender or age discrimination
- Not all who are in larger bodies have BED
- “Overweight” (BMI 25-29 kg/m²) is associated with lowest morbidity and mortality
- Many with BED avoid seeing doctors because of shame/weight-focused discourse
Some radical concepts

- Dieting doesn't work
  - 95% of weight lost through dieting is regained
- Terms like “people in larger bodies” rather than “overweight/obese” reduce shame
- “Health At Every Size” (HAES)
  - Accept/respect the natural diversity of body sizes and shapes
  - Eat in a flexible manner that values pleasure and honors internal hunger cues
  - Move for joy and to become more physically vital

The truth about size/shape

- “When you eat a broad variety of foods, in sufficient quantities, and you move regularly for joy, your body will take on a size and shape mostly determined by your genetics.” - Me

Communication

(We all want to be known)
Provider Self-Care

Any questions?
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