Guidelines for Endocrinology Referrals:

Appropriate pre-consultation work-up for common endocrine disorders

Presenters:

Dr. John McKenna

Dr. Marshall Kubota

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Housekeeping

- All lines are muted
- This session will be recorded
- Slides and recording will be posted on PHC Site
  www.partnershiphp.org
- To ask a question:
  - Logistical question: Use Question/CHAT to the Host
  - Questions for Speakers: Use Question/CHAT and questions will be addressed at the end of the presentation

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Today's Speakers

John McKenna, MD

Endocrinologist

TeleMed2U

Marshall Kubota, MD

Regional Medical Director

Partnership HealthPlan of California

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Objectives

- Be able to order appropriate laboratory and imaging studies for endocrine disorders sufficient for the consultant endocrinologist to advance the care of patients without delay
- The rationale behind the laboratory and imaging studies discussed in the referral guidelines
- Be able to order and if necessary, be able to perform the in-office provocative testing required to diagnose certain endocrine disorders

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Why Guidelines?

- Endocrinologist consultations are one of the most sought after referrals and difficult to obtain due to relative scarcity
- We want to utilize the time efficiently to advance the care of the patients
- Guidelines for pre-consultation visit help the endocrinologist to make decisions and reduce the number of repeat visits opening up availability to other patients

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What this means

- If there are few specialty slots available then use them wisely
- Well prepared referrals
- Try to end with a treatment decision
- Avoid multiple visits when fewer would suffice
- Patients MUST show for their appointments

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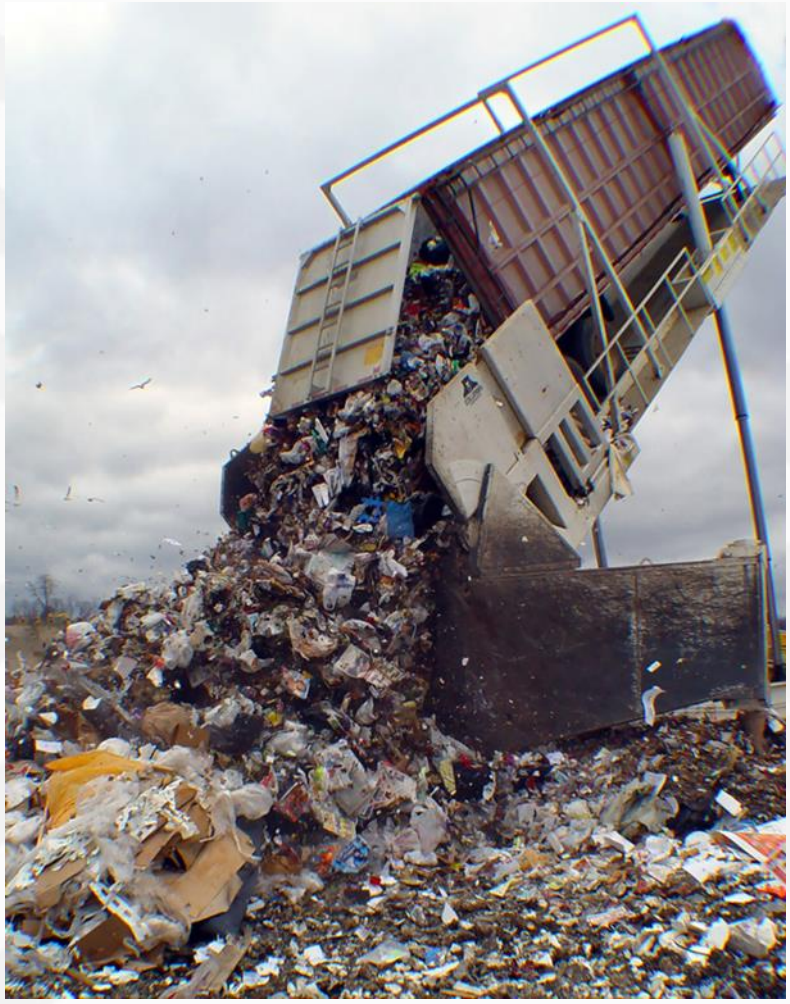
Do Not Dump



- In the world of endocrinology this means:
  - Don’t refer non-adherent patients
    - Type II diabetes
    - Hypothyroid
- We are looking for diagnoses and resultant treatment decisions

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Well Prepared Referrals

What is the question to be answered:

- All the necessary information
- BUT no unnecessary information
  - Chart litter – Last 5 visits / all labs since California Statehood / All imaging including kindergarten school pictures
  - No push button electronic records.
- All the labs / imaging necessary – but no extra
- Up to date med list
- Legible
- Received at the other end well before the appointment
- Ideally, a letter from the clinician –can be added to the clinical note plans
- Avoid a specialist consultation that generates more labs and another visit
  - This is taking a visit from someone else

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Topics

- Diabetes mellitus
- Thyroid – hypo, hyper, nodule
- Hypercalcemia / hypocalcemia
- Male hypogonadism
- Adrenal disorders
- Pituitary
- Others

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Diabetes Mellitus I & II

- Preliminary labs
  - Hemoglobin A1C
  - TSH
  - Fasting lipid panel
  - Spot urine for albumin / creatinine ratio
  - Retinal exam
  - Monofilament exam
  - Finger-stick diary log
- Secondary labs
  - 24 hr urine for protein, creatinine if spot abnormal
- Other referrals
  - Dietician
  - Ophthalmology
  - Podiatry

Thyroid: hyperthyroid

- Preliminary labs
  - Serum TSH, Free T4, Total T3, TPO, Thyroglobulin antibody, Thyroid stimulating antibody, Thyrotropin receptor binding inhibitory immunoglobulin
  - Thyroid ultrasound
- Secondary labs / imaging
  - If not pregnant, RAIU and scan if appropriate (helps in the DD – Grave's, nodule, thyroiditis).
- Other referrals
  - Revisit if not responding to therapy

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Thyroid: hypothyroid

- Preliminary labs
  - TSH, Free T4
- Secondary labs
  - If TSH is elevated, or thyroid is palpable
    - Thyroid peroxidase
    - Thyroglobulin antibodies
- Other referrals

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Thyroid: nodule

- Preliminary labs / imaging
  - Thyroid US
  - TSH, Free T4 and T3
- Secondary labs
  - If TSH is low CBC,CMP
  - If hyperthyroid
    - RAIU as long as not on treatment with propylthiouracil or tapazole
- Other referrals
  - Biopsy as needed
  - Any patient with high risk history (head/neck radiation, fam hx of thyroid cancer, suspicious features of US, nodule $\geq$ 1 cm or abnormal TSH)

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Calcium Disorders: hypercalcemia

- Preliminary labs
  - Calcium, albumin, phosphorus, intact PTH
  - 24 hour urine calcium and creatinine
  - Make sure patient is not taking thiazides
- Secondary labs/ imaging
  - Combined thyroid /parathyroid US to locate parathyroid adenoma
  - Sestamibi scan of parathyroids especially if diagnosis uncertain
    - Vitamin D should be normalized prior to the scan
- Other referrals

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Calcium Disorders: hypocalcemia

- Preliminary labs
  - Calcium, albumin, phosphorus, intact PTH, Mg
- Secondary labs
- Other referrals

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Male Hypogonadism

- Preliminary labs
  - 8 a.m. serum total, free testosterone, sex hormone binding globulin
- Secondary labs
  - If borderline or low serum LH, FSH, CBC, Prolactin
- Other referrals
  - PSA if thought necessary

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Adrenal: Insufficiency (Addison's Disease)

- Preliminary labs
  - Electrolytes, serum a.m. cortisol, ACTH, plasma renin activity, aldosterone, FBS, TSH
- Secondary labs
  - ACTH (Cortrosyn, Cosyntropin) stimulation test
- Other referrals
  - May need referral for management if subnormal ACTH stimulation test and low result
  - Advice for stress periods

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Adrenal: Cushing's Disease

- Preliminary labs
  - 24 hr urine for creatinine and free cortisol.
    - May repeat up to 3 times. Any abnormal is referable
    - http://www.questdiagnostics.com/testcenter/BUOrderInfo.action?tc=135286&labCode=AMD
- Secondary labs
  - Dexamethasone suppression test
    - http://www.questdiagnostics.com/testcenter/BUOrderInfo.action?tc=6921&labCode=MET

OR

  - Midnight salivary cortisol
    - http://www.questdiagnostics.com/testcenter/BUOrderInfo.action?tc=19897X&labCode=QBA
  - Other referrals

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Pituitary: adenoma

- Preliminary labs
  - 8 a.m. serum levels of:
    - Free T4, TSH, cortisol, ACTH, prolactin, FSH, LH, IGF-1
  - Estradiol in women
  - 24 hour urine creatinine and free cortisol
  - 8 a.m. testosterone for men
- Secondary labs
  - Pituitary MRI – if highly suspicious or already available
  - Urine specific gravity if diabetes insipidus concern
- Other referrals
  - Also refer for acromegaly, Cushing syndrome, galactorrhea/ amenorrhea/ oligomenorrhea, abnormal pituitary radiology

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Others

- Endocrine hypertension (pheochromocytoma)
- Galactorrhea
- Hirsuitism
- Hyperaldosteronism – resistant hypertension

Questions?