2025-2026
INTERN GUIDE TO OUTPATIENT MEDICINE

2025-2026
Mount Sinai Hospital
Internal Medicine Associates

Table of Contents

INTRODUCTION TO IMA CLINIC

WHEN YOU HAVE QUESTIONS/CONCERNS/ISSUES:

1. You should always discuss them with your team preceptors, especially if they are clinical issues (e.g., intervisit patient care such as phone calls, mychart messages, medication refills, etc).

2. You should reach out to the ambulatory chiefs, Nick Safian & Shaleen Thakur, and Mayce Mansour (the Associate Program Director for Ambulatory Care for the residency program) for ANY issues, big or small – clinical issues, administrative issues, educational issues, etc. We have a system set up to help you so PLEASE ASK!
    a. ***Use the chief residents as a resource!***

3. Send a message to **p IMA Feedback Pool**

SCHEDULE

12 Mo	*13 Tu*	*14 We*	*15 Th*	*16 Fr*
OP IMA PTC ↑ Admin ↓ IMA PTC	*OP* IMA MSK ↑ Admin ↓	*OP* Panel Management ↑ Admin ↓	*OP* Educ ↑ IMA PTC ↓	*OP* IMA PTC ↑ IMA PTC ↓
19 Mo	*20 Tu*	*21 We*	*22 Th*	*23 Fr*
OP IMA PTC ↑ Admin ↓ IMA PTC	*OP* IMA DM ↑ Educ ↓	*OP* IMA GYN ↑ Admin ↓	*OP* Educ ↑ IMA PTC ↓	*OP* IMA PTC ↑ IMA PTC ↓

IMA PTC: continuity clinic for primary care
Admin: Time to catch up on intervisit care
Subspecialty clinics:

Clinic	**Time & Location**	**Description**
Diabetes Clinic (IMA DM)	Tuesdays 8:30 AM - 12 PM 7E Conference Room for Didactics, Firm B for patient care Preceptors: Drs. Cary Blum and Kenneth Fifer Here is the link for the drive.	Session begins with didactics in the 7E conference room. You will see patients with diabetes alongside a multidisciplinary team and see how managing diabetes takes a village!

IMA Weight Management	Tuesdays 8:45 AM - 12 PM Firm E Preceptor Room Preceptors: Drs. Schindler & Sundaresh Here is the link for the drive.	Session begins with didactics in Firm E Side Preceptor Room or Dr. Sundaresh's office (you will receive an email). This is on the 3rd floor, East Elevators. You will then see patients to counsel about weight management and receive feedback on your counseling and communication skills.
GYN Clinic (IMA GYN)	Wednesdays 8:30 AM – 12 PM 7E Conference Room / Firm D Preceptors: Drs. Irene Rahman and Sara Towne Here is the link for the drive.	Session begins with didactics in the 7E conference room. You will see patients for routine cervical cancer screening, contraception, menopause symptom management, and more.
Panel Management	Wednesdays 9 AM - 11 AM **via zoom!** Workshop content and tasks located in our drive folder. Preceptor: Dr. Mayce Mansour coordinates	AKA how to become the best PCP! You will learn tips and tricks on how to maximize continuity and ensure your patients are up to date with evidence-based, quality care.
Specialty clinic didactic materials are linked above and are in your curriculum google drive folder found in the CareTeam app		

FIRST DAY AT IMA

- Where to go: 17 E 102nd St.
  - West elevators, 7th floor, take you to firms A&B
  - East elevators, 7th floor, take you to firms C&D
  - East elevators, 3rd floor, take you to firm E
  - Resident room is on 7, firm D in the back hallway (code 1-2-3) & behind firm A
- What to bring: white coat and stethoscope
- Your business cards are in your Firm Precepting Room. You will find during the scavenger hunt.

SETTING UP EPIC: Ask your preceptor for help

- Ask your resident buddy and team preceptors for help. We are happy to get you organized so that things run as smoothly as possible.
- Choose your "context"- **17 East 102nd St IMA Firm X**. **This is important for placing orders.**
- Click on "Schedule" (top left) → "My Schedule" (middle left) → folder with your name on it
- Add quick access tabs to the left: More Activities tab on bottom left corner → Menu Personalization → Click on the star, which will turn yellow

    - Recommended tabs to add to the top of the screen: **medications, health maintenance, problem list, mark all as reviewed, letters**
- Favorite some **useful letters**: Medications taking, IMA Medical Condition Letter DTC, IMA Normal & Abnormal Letter, IMA Work Excuse/School Letter, IMA Housing Conditions, IMA Utilities Electricity
- Use wide screen mode to allow you to see 2 screens at a time

TEAM MEETINGS: A chance to touch base with your preceptors and team members and to receive curriculum on health disparities and the social determinants of health that impact our IMA patients

- Weekly on OP blocks (including op-elective), Monday morning 8:30-9:30AM with your IMA team – preceptors and co-residents – to review all patients scheduled for the week. You will receive summary care gap statistics on your panel via email.
- Goal is to help prepare for visits and proactively address any pertinent social determinants of health. **Utilize your team's attendings and colleagues – if you are facing challenges in providing optimal care to your patients, ask for their help!**
- This is also a good time to follow up on any questions for your preceptors – sign outs, lab results, mychart messages, or anything else that you are unsure how to address.

WORK FLOW OF IMA: Dots communicate with the interdisciplinary team to keep everyone on the same page

- Monday huddles: 9:20AM in firms B, C & E; 12:50PM in firms A & D. This is your opportunity to get to know our interdisciplinary colleagues. This is also an opportunity to learn about new and existing clinic workflows.
- MAs:
    - Scrub color: navy blue
    - Responsibilities: take vitals, coordinate rooms, draw labs, EKG's, act as chaperone, retinal exam
- Nurses:
    - Scrub colors: RNs - teal; LPNs - maroon
    - Responsibilities: everything an MA can do and can administer vaccines and give in-clinic medications (nebulizer treatments, BP medications, etc.).
        - FYI, they Also do separate visits for BP and INR checks; you may see these encounters in your patients' charts.
- **Dot Guide:**
    - No Dot: The patient has not yet arrived in clinic
    - White: The patient has checked in at the front desk
    - Blue: The patient is being vitalized (usually done by MAs)
    - Green: READY FOR **YOU**!
    - Black: **YOU** CHANGE TO BLACK after you are done with patient and you need post-visit tasks done by the MA/RN team (e.g., EKG, blood work, vaccines, etc.).
        - **Early in the year, talk to your preceptor before changing, to make sure no missing orders.**
    - Red: **YOU** CHANGE TO RED after you are done with the patient if there is nothing needed from the MA/RN team.
    - Yellow: The patient no-showed to their appointment OR patient was called by MA but no response
        - We have a 20-minute late policy at IMA (with some rare exceptions). The front desk will always check in with you about this, and feel free to talk through with your preceptor.

BEFORE THE VISIT: Precharting

- Pre-visit planning (learn about your patient the night before- saves time the next day!). **You can pre-chart in EPIC, including pending some orders you anticipate you'll need using problem-based charting.** Please discuss with your attending before signing during the visit.
    - Always review:
        - Last time at IMA
        - Interval results (labs, images, procedures): best to translate/summarize than autopull
        - *Briefly review* assessments/plans from specialty providers for major changes
- Huddle Notes: You can ask the MA's to complete other tasks while vitalizing the patient by entering things into the "Same Day Huddle" field. Things that may be helpful to consider: point-of-care

testing (POCT) such as A1c or INR, urine collection (for UA, microalb/Cr ratios, urine toxicologies), etc.

STARTING THE VISIT: Personalize the patient's chart

- Once the patient has arrived, double click the patient's name to open up the chart.
- Use Smart Text or dot-phrase to pre-populate the note in the right-hand window pane
    - If a follow-up visit, can copy forward previous visit note
- Favorite **"Mark All as Reviewed"** for problem list, medications, & allergies. Review this page and click the button at the bottom prior to your visit to make orders easier.
- If your patient is new and does not have a PCP already…
    - Assign yourself and tell your patient that you are their PCP—give them your business card to make it official.
    - Explain that this is a resident run clinic so you will schedule the patient to see you for chronic concerns, but for urgent issues they may see another clinician within your team.
- This is your patient now! Feel free to clean up their problems and medications so you can stay organized.
    - Clean up the med list under the **"Medications" tab** - if they are no longer taking, remove it! Do **NOT** do this in "Medications taking," as it does not carry forward to future visits.
    - Remove non-active problems; usually, these are out of date or symptom-based problems in the problem list. Scrollable lists are overwhelming.
- Update any HCM (Health Care Maintenance) tab on the top of the EPIC screen
- **Language translation services through Pacific Interpreters: 1-800-264-1552; Access # 828099**; you will need your life number when you call.
- **Agenda setting** is your friend: You cannot (and should not) try to address all the patient's medical conditions at a visit. As a quick rule of thumb, can discuss 1-2 acute concerns (patient chooses) and 1-2 chronic issues (you choose). Any more than 3-4 problems addressed and everyone's head will spin!
- **3 types of visits:**
    - **RETURN with PCP**: This is a return visit and you are the PCP. Ideally, you should prechart 1-2 agenda items ahead of this visit and chip away at the preventative health tab to-dos.
    - **URGENT**: Address their urgent concern, arrange follow-up with PCP.
    - **NEW**: Goal is to get the ball rolling on their care. Do NOT feel like you need to accomplish everything in one visit.

  Make sure the visit type is on your schedule. Under your schedule right-click on your name and click on properties. Under available columns, search for and add both: PCP ("This column displays the name and credentials of a patient's current PCP") and Type ("This column shows the patient's visit type"). This way, you can figure which of the above visit "types" to do.

PRECEPTING: Organization saves time!

- Give the 1 liner, active issues by problem, physical exam, and tentative problem-based plan, including 1-2 health care maintenance issues per visit.
- Preceptor will go in to see the patient with you for at least the first 6 months of intern year; after that, they will come in to see all new patients, and may also come in for more complicated patients (when you need help or want to review pertinent exam findings) and when there are teaching opportunities.

ENDING THE VISIT: Dot phrases are your friend, and improve continuity

- With the patient:
    - Always ask your patient for the best way to follow-up with them (e.g. via mychart vs phone). This is a good time to double-check we have the correct phone number for them in Epic. If they have an updated phone number, you can forward to the front desk pool to correct *(p ima firm X front desk pool*).
    - Put in all orders using the "Orders" bar at bottom left hand corner of EPIC.
    - All medications should be e-prescribed to the patient's pharmacy (double check with patient to make sure it is the correct pharmacy in EPIC; if not, please update and get rid of inactive pharmacies to avoid confusion).
    - Go to the tab "Wrap Up "- **use the dot phrase ".checkout"** to pull up a template for post-visit planning.

    - Print the "**After Visit Summary**" and hand to the patient before you leave. This will help organize MAs and front desk on their after-visit tasks. Consider highlighting and circling important items for your patient–the clearer you make their to-dos, the easier you'll make it for them to engage in their care until the next visit.
    - At the top of the AVS, **insert your clinic dates** (.[LastName][FistInitial][TeamColor], *i.e.* intern John Doe of Red Team would be: .DoeJRed) to have the front desk schedule follow-up. This is a very useful tool to maintain good continuity with patients.
- With your preceptor:
    - Click the level of service—**ask your preceptor what level to bill**
        - 3 = 1-2 problems addressed
        - 4 = complicated AND preceptor came into room
        - Modifiers:
            - GE = preceptor did NOT come into the room with you
            - GC = preceptor came into the room with you

REFERRALS: E-Consults and .CHECKOUT are your friends

- Consider placing an **E-Consult**:
    - Available for a number of specialties and a number of chief complaints
    - Can help serve as temporizing measure/treatment while patients are waiting for in-person referral and/or save the patient time and copay of a referrals
        - The maximum copay for e-consults for our publicly-insured patients is $8 (can be as high as $40 for private insurance). Please alert patients that they may receive this charge before placing the e-consult so they do not get any surprise bills.
    - A great way for us to learn! Using our colleagues in real-time for case-based learning.
    - Data suggests that they can LESSEN time to specialty referral, as help triage cases that can be managed by PCP.
- Specialty Referrals:
    - Place appropriate referral in orders tab
    - Give patients the **number to schedule using .CHECKOUT**. **We should advise patients to call specialists to schedule their appointments**. (While patients should be contacted for an appointment within 1 week to schedule appointment, over 1/3 cannot be reached)
- IMA clinic referrals:
    - Add to patient instructions using **.CHECKOUT–**these are in the right-hand column
    - Refer patient to front desk to schedule appointment after visit.

FOLLOWING UP WITH YOUR PATIENTS: INTERVISIT CARE

- You are responsible for contacting patients with ANY (even normal) results for tests that YOU order
    - See "IMA Policies" for lab-follow up policy
- Document this call back via the "**Result Note"** icon.
    - There is NO need to also create a phone note–this is less efficient and is not connected to the result itself, so not as useful for colleagues to understand your reasoning.
- Normal results should be discussed within 5 business days and/or before you rotate off block
- Abnormal results should be discussed with the patient within **48-hours** to make a follow-up plan.
- All results should be addressed by the end of your ambulatory block – if any results are still pending at the end of your block, these should be signed out to your colleagues for follow-up.

UNDERSTANDING THE IN-BASKET: "DONE" is your friend

- **Results**: here you will see any results that come back for patients for whom you are the PCP (you are responsible only for the tests that YOU ordered).
- **Result Notes**: you should write a result note to summarize the results and confirm that you followed up with the patient; route these notes to the preceptor who saw that patient with you.
- **Overdue Results**: tests that you may have ordered for a patient that they are overdue on getting done, you can send a letter to remind the patient to complete these if they are time-sensitive. Otherwise, you can address at your follow-up appointment.
- **Staff Message**: look out for messages from preceptors, social work, etc. regarding your patients
- **E-Consults:** Please see above. A form of telehealth that can really improve access for our patients.
- **Telehealth: Patient Rx Request and Patient Advice Request**: these are direct patient requests and messages through the patient portal. **These should be addressed within 72 hours of receiving**.

INTERN YEAR CONFERENCE ROOMS

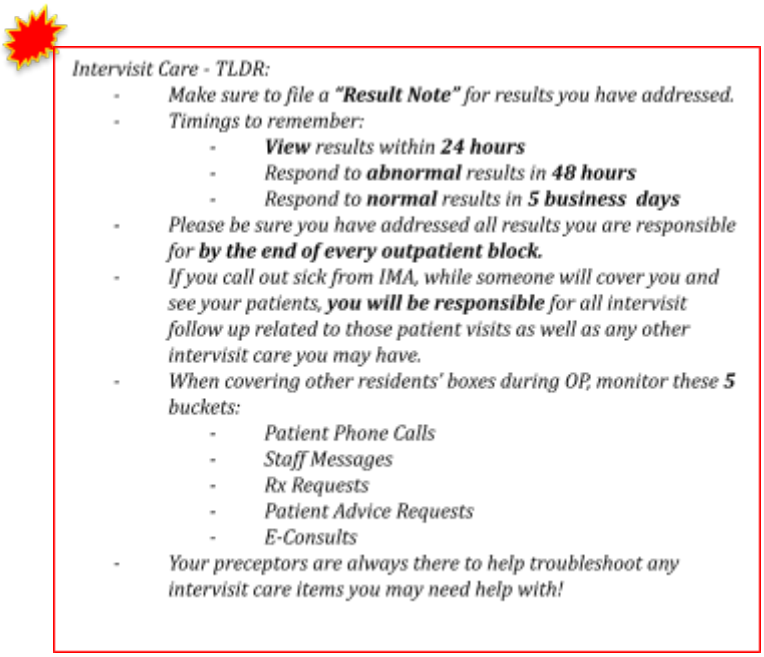
- **CAM 7E D7-246: take East elevators to 7th floor, back of Firm D. This will be your primary conference room intern year.**
- CAM 6W D6-148: take West elevators to 6th floor, located on back right corner

OUTPATIENT EPIC TIPS & TRICKS: **This will be addressed during Panel Management**

- Dot Phrases/templates: Very useful to set up dot-phrases
  - Can make your own dot phrase for anything (IMA New Patient, IMA Follow Up, your clinic dates, etc.)
  - To create a dot phrase, click red EPIC button at top left, then "My SmartPhrases"
  - Label your unique dot phrases starting with your initials so you can easily search for them
- There are a number of dot phrases we have created for you to help streamline and get you started. Some that I would recommend checking out are:
  - Intervisit care: .**IMADME** (for durable medical equipment such as orthopedic supplies, diapers etc) and .**IMAMEDICATIONREFILL** for safe medication prescribing between visits.
  - Clinical care: .**IMAMSK** has a few dot phrases that can help bolster your musculoskeletal exam.

IMA POLICIES TO KNOW:

- Chart Closure Policy: All charts must be closed **within 72 hours** of seeing a patient.
- Lab Follow-Up Policy: Must view results **within 24 hours, respond to abnormal results within 48 hours, and respond by the end of each ambulatory week for normal results**.
  - To convey results can: call (especially for any abnormal results), send a mychart message or send a letter (only for normal results). All of these options should be documented as "Result Notes"
- Late Patient Policy: 20-minute grace period for most of our patients. If patients are more than 20 minutes late, the front desk will discuss with you and the preceptor whether you are still able to see them. Feel free to say no, if you do not think it's necessary–the front desk can help get patients rescheduled.



Intervisit Care - TLDR:

- *Make sure to file a **"Result Note"** for results you have addressed.*
- *Timings to remember:*
  - ***View** results within **24 hours***
  - *Respond to **abnormal** results in **48 hours***
  - *Respond to **normal** results in **5 business days***
- *Please be sure you have addressed all results you are responsible for **by the end of every outpatient block.***
- *If you call out sick from IMA, while someone will cover you and see your patients, **you will be responsible** for all intervisit follow up related to those patient visits as well as any other intervisit care you may have.*
- *When covering other residents' boxes during OP, monitor these **5** buckets:*
  - *Patient Phone Calls*
  - *Staff Messages*
  - *Rx Requests*
  - *Patient Advice Requests*
  - *E-Consults*
- *Your preceptors are always there to help troubleshoot any intervisit care items you may need help with!*

Outpatient Logistics

Day starts at 8:30 almost every day on OP (Monday AM Team meetings, Tues AM DOM Grand Rounds vs. Diabetes clinic, Wed AM GYN Clinic, Thurs AM DGIM Grand Rounds, Fri AM Clinic) and the day ends at 5PM except on your evening clinic day.

Education/didactics:

- To find your lecture schedule and room location, go to **IMA app → Docs → Intern Ambulatory Lectures**

OP-ELEC:

- Everyone will have one OP block per year that is an "OP-ELEC" – you will have a number of elective options that you can schedule through the residency office. These blocks are a split between an elective and regular OP clinic.
- You can schedule your elective through the residency office (as you would for your regular electives); the options are limited to a number of outpatient- or radiology-focused electives. The other option (**and one we encourage if your OP-ELEC is later in the year)** is to do a research elective.
- During your OP-ELEC block, in addition to your elective schedule you will still need to:
    1) Attend Monday 8:30AM team meetings. If there is a major conflict with your elective, you must let your preceptors know ahead of time that you will miss the meeting.
    2) Attend all OP didactics (Tues PM and Thurs AM).
    3) See patients in clinic as per amion schedule (will have your usual evening clinics and 2 other half-days of clinic) – 4 total clinic sessions in the 2-week block
    4) Provide mailbox/phone call coverage for your horizontal team as you would on a usual OP block.
    5) Serve as sick call for a portion of the time.
- As you will have a mix of ELEC and OP responsibilities, **we STRONGLY ADVISE you against doing an elective that block in something you think is your chosen field**. You should use your other elective block for that (as you can spend the entire block uninterrupted with that specialty and will be able to more effectively connect with mentors). **Do something you think is interesting and will help you clinically, but that you won't feel guilty about having to leave the team/clinic to go to didactics or your own clinic.**

Continuity in Clinic: Key to ambulatory success (and enjoyment)

The reason anyone does primary care is to see their own patients and build that longitudinal relationship, so we want to make sure you are seeing your own patients as much as possible in clinic. Some suggestions for you:

- **When you are seeing a patient for the first time, TELL THEM YOU ARE THEIR PCP!** Tell them that they should always ask to see you in clinic. Give them your card on their way out as a reminder!
- **Use your continuity dotphrase in EPIC for every patient in the wrap-up section.** This will help the front-desk schedule patients efficiently (for you and for your colleagues). Your dotphrase (which has all the dates you are in clinic for the year) is: .[LastName][FirstInitial[TeamColor], e.g., Nick Safian on team Red is .SafianNRed
- Make sure patients leave with an appointment – you can confirm in the wrap-up section when you are closing their chart.
- If you are seeing a NEW patient, have them come back for short-term follow-up (either next block or the block after) – that can help them identify you as their PCP and also make those first visits a lot less overwhelming.
- Utilize the front desk leads to help schedule patients of yours you need to see using Epic pools function

IMA Rescheduling Policy

1. In order to ensure patient access and continuity at IMA, ***a maximum of 25% of scheduled continuity clinic sessions can be cancelled by residents during each clinic block with exceptions listed below.*** This means:

- **Up to TWO half-days of continuity clinic can be cancelled during your regular 10 session clinic block**
    - I.e., you must attend **at least 8 clinic sessions** during these regular blocks OR 75% of scheduled sessions
- **Up to ONE half-day of continuity clinic can be cancelled during your OP-ELEC blocks**
    - I.e., you must attend **at least 3 clinic sessions** during these OP-ELEC blocks with **at least 1 clinic session scheduled each of the 2 week block**
- **You may also request to shuffle ONE of your half-day continuity clinic sessions during OP-ELEC to another time within your normal color team template**
    - This request must be discussed with the chiefs and will need to be approved by IMA leadership.

2. **Please note that swapping clinic sessions between residents is NOT allowed under any circumstances.**

Type of Request	*Lead Time*	*Resident's Responsibility*
Half Day - (2) requests per academic year - POMA and Asthma clinic cannot be cancelled; if need to miss, have to find a swap for coverage	Minimum of 6 weeks	If a request is made with fewer than 6 weeks in advance, the resident may be asked to apply a wellness day and maintain the minimum number of clinic sessions as outlined above.
Wellness Day - (1) request per quartile (this is the same set of WDs as those offered on inpatient medicine) - POMA and Asthma clinic cannot be cancelled; if need to miss, resident must find a swap for coverage - Only full-day cancellations, even if you are taking (1) clinic session off - See policy from inpatient for details	Minimum of 1 week	The administrative team will reschedule and contact patients but residents may be asked to outreach to respond to urgent medical needs.
Fellowship / Job Interview - (5) requests per resident, with (1) request per continuity clinic session - Must maintain at least (2) or (5) continuity clinic sessions during OP-ELEC or OP blocks respectively - See policy as outlined above	Minimum of 4 weeks (if possible)	If a request is made within 1 week, utilisation of sick call coverage may be required.
Step 3 - (2) requests per resident during their training	Minimum of 6 weeks	If a request is made with fewer than 6 weeks in advance, the request may be denied. The administrative team will reschedule and contact patients but residents may be asked to outreach to respond to urgent medical needs.

Jury Duty - (1) request per resident during their training	Minimum of 6 weeks	You may be excused from 1 day at IMA for jury duty summons that cannot be delayed.
Night Call Swap - As needed	2 business days	These requests involve multiple system updates, so please give as much notice as possible. Please keep this in mind when requesting for weekend swaps.
Research Conference *NEW* - Half Day and Wellness Day requests for Research Conferences now only need to maintain at least (2) or (5) continuity clinic sessions during OP-ELEC or OP blocks respectively - At least (1) continuity clinic session maintained per week	Minimum of 6 weeks	These requests still need to follow all other lead time and clinic requirements. Please discuss all Research Conference requests with the chiefs.

Guide to Intervisit Care:

We have a robust cross-coverage system at IMA so that when you are on inpatient/elective months, your patients are covered by your colleagues. This means that while you are on clinic blocks, you will be assigned to cover some of your colleagues' inboxes. This grouping will remain the same throughout intern year (and usually beyond).

You have SIX main tasks with inbox coverage for you AND your cross-coverage colleagues:

1. **Phone calls**: These need to be checked daily and ***responded to within 48 hours.***
    a. See below for details
2. **Mychart messages:** These need to be checked daily and ***responded to within 48 hours.***
3. **RX Requests:** These are direct patient requests for refills through mychart. There is NO need to contact patients after these are completed, as their pharmacy should outreach once received.
4. **E-Consults:** These are orders placed in Epic which may return after your colleagues rotate off block (they can take a few days). Your attending can help guide on next steps if any questions.
5. **Staff Messages:** These are sent by various clinic staff, specialists, etc. If any questions, send to your preceptors to troubleshoot.
6. **Paper mailbox** (in your firm): Includes forms to be signed, outside records, etc.
    a. Many of these things can be shredded but, if you receive something with important medical information (e.g. outside results or consultations), you should create a MISCELLANEOUS encounter summarizing so everyone is aware that this document was received, then place in scan box so AAs can upload into the Media section of a patient's chart.

While you will have specific intervisit care sessions during your ambulatory blocks, we strongly encourage you to clear your inbox at the end of every day. The most efficient (and least painful) way to keep up with intervisit care is to do it throughout the week. You can do admin work in the resident room behind Firm A (3 computers), in the precepting room (if it's not busy), in an open exam room (if you can find one), in Levy Library, or at home. **If you are have spent more than 2 minutes trying to figure out next steps but are still not sure, please reach out to your attendings and/or chiefs. Intervisit care is not intuitive–there is no reason to struggle with it since we're happy to help.**

PHONE CALLS: **Should respond within 48 hours, but we strongly encourage you to respond to phone calls the same day they are received. This helps make intervisit care more reasonable.**
When patients call the call center, the first thing they are asked is if it is an urgent matter and if they want to speak to a nurse. If the message is coming to you, it means the patient declined to speak to the nurse.

- **MEDICAL CONCERN**: **Keep in mind that your goal is to triage, not to diagnose. For many of these questions, you will want to route to the front desk for an appointment. You should not spend more than 5 minutes on this, because if it takes longer, it needs to be a visit.** Is it a problem that can wait until their next scheduled primary care visit? Do you need to move up the appointment (if so, send a staff message to the front desk pool)? Do they need an urgent visit (if so, send a staff message to the front desk pool)? Do they need to go to the ED (if maybe, touch base with your preceptor)?
    - Please send an Epic Message to the front desk pools for all appointment scheduling: ***p ima firm A/B/C/D/E front desk pool***. It can be useful to indicate if you think video (think about counseling, medication management, forms) or in-person (think about if something requires a physical exam for diagnosis) is appropriate, so the patient has the option for what is most convenient.
- **MEDICATION REFILL**: ***We have nursing assistance for this: p IMA Firm X Nurse Pool***
  By far the most common reason for a call. **Generally speaking, so long as they have been seen in the last 6-12 months it is okay to refill their medications. If you are considering NOT refilling, please check in with your preceptor.**
    - **Main steps of a medication refill: Use the dot phrase .IMAMEDICATIONREFILL to help guide and organize this process**
        - **Step 1:** Check the last time they were seen in clinic.
        - **Step 2:** Check the last time relevant labs were checked. If it has been >12 months, give a one month supply of the medication and send a Staff Message the front desk to get the patient an appointment.
        - **Step 3:** Check to see if they have an upcoming appointment. If not, after refilling the medications, send the call to the front desk pool to schedule with PCP.

        - If you cannot figure out what medications they are supposed to be on from the chart, your options are:
            - 1. route to the nursing pool to have them outreach the patient and/or pharmacy to clarify
            - 2. route to the front desk to have them come in for a visit. This is important for patient safety.
        - Give a uniform # of refills. If it is a long-term medication, you should provide a **12 month supply (**i.e., you should give 30 pills x 11 refills or 90 pills x 3 refill). Giving patients very few refills just means they or the pharmacy will call again soon. The pharmacy will notify the patient that the medication is available for pick-up.
- **INSURANCE REFERRALS**: ***We have admin assistance for this: p ima rad pa/referrals***
    - **Step 1:** Make sure there is a referral in Epic. If not, as long as you think it appropriate, place the referral. **If you're not sure if the referral request is appropriate and/or are not sure what the referral is for, route to the front desk to have the patient schedule an appointment.**
    - **Step 2:** If the message mentions need for "insurance authorization," route the message to our referrals authorization team: ***p ima rad pa/referrals.*** Nothing else for you to do with this!
- **IMAGING OR STRESS TEST PRIOR AUTHORIZATIONS**: ***We have admin assistance for this: p ima rad pa/referrals***
    - **Step 1**: Order the appropriate study in Epic (this should be in the context of a visit)
    - **Step 2:** Make sure to appropriately document the reason for study in your note, including relevant physical exam findings and relevant prior studies. Give as much pertinent background info as possible, since if it gets declined, you will have to do the appeal so it's in your best interest to give as much info as possible up front.
    - **FYI: You do NOT need to call the insurance company (yay!).** Our admin pool, ***p ima rad pa/referrals*** will automatically submit this request and let you know if any further action is needed.
    - **Note that mammograms, ultrasounds and x-rays do NOT require authorization. You can simply place these orders. If in doubt, ask your preceptor!**
- **LAB/TEST RESULT FOLLOW-UP**: Review results, document as a **Result Note,** and call patient to discuss. *NO NEED to also document as a phone call–save yourself the clicks.*
- **LETTERS FOR PATIENT**: Can write letter by clicking on Red EPIC button in upper left corner and choosing Send Letter option under Patient Care. Can either: **1) route to them electronically via mychart (preferred)**, 2) mail letter to patient, 3) leave at front desk for them to pick up (there is an accordion for this)
- **MEDICATION PRIOR AUTHORIZATIONS**: ***We have admin assistance for this: p IMA Medication Prio-Auth Req***
    - Your firm's administrative assistant can help you with prior authorizations. Please see the "AA Assistance with Prior Authorizations" section on the IMA App under Docs. The most important first step is to try to AVOID the need for prior authorization by making sure that the medication is appropriate and that you have first tried the approved formulary alternative (more info on this on the app!).

COVERING EPIC MESSAGES: Staff Messages, E-Consults, Patient RX Request & Patient Advice Request

At the beginning of the year, speak to your preceptors about attaching the inboxes of your colleagues whom you will cover. You will need to check your colleagues EPIC Inbox at least 2 times per week (I'd strongly recommend daily) to look for staff messages, E-consults or MyChart requests relating to IMA patient care. **These will appear as: 1) Staff Message, 2) E-Consult, 3) Patient Rx Request, or 4) Patient Advice Request.** Since intervisit care is important for patient safety and satisfaction, you will be asked about your colleagues cross-coverage in new-innovations. Remember, you are paying it forward to each other by staying on top of things.

COVERING THE CONCRETE MAILBOX

This is by far the least time intensive portion of cross-coverage. Be sure to ask your preceptors for help if you are stuck looking at something for more than 30 seconds. Downtime during precepting is a great time to empty this out.

Your section of the mailbox will have your name on it as well as the other members of your horizontal team. Please make sure to leave the Mailbox EMPTY at the end of your 2 week block. Despite what you may see stamped all over papers, there is NO such thing as an "urgent" or "emergent" letter or fax in the bin. If it was urgent, they would have called.

If a form requires an attending signature **(e.g. insists on attending signature or asks for license #'s),** place in your team preceptor's mailbox (above yours) to have it signed.

Typical requests include:

- **VNS FORMS / HOME CARE RENEWAL ORDERS**: These forms make up 80%+ of the forms in your box, and should take <1 minute to complete. These are generally just FYIs from visiting nurse or other home care services to let you know what they are doing. **If you have any questions about these, ask your preceptors,** but in >90% of the time, you can just put in your preceptor's box to sign.
    - **Step 1**: Check to see if there is a medication list included. If there is, cross it out and attach an updated list
        - **Medication lists can be created as a "MEDICATIONS TAKING" letter**
          For most things, you can sign without even looking through the chart – physical therapy is good for everyone.
    - **Step 2:** Place in preceptor's mailbox to sign
- **HOME CARE Orders (M11Q & CDPAS)**: If a patient is requesting a RENEWAL for existing home health aide services, it is up to the MD to sign a form. Painful, but we have social work to help (yay!).
    - **Step 1**: This requires a visit within 30 days, so if the patient has not seen someone at IMA in the past month, please send a staff message to the front desk to schedule the patient for an appointment. If they have been seen that recently…
    - **Step 2**: Put in a "CONSULT TO IMA SOCIAL WORK" referral. Our social work team will help get this to the appropriate place.
    - **NOTE: If a patient is requesting brand new services, they should be advised to call 855-222-8350 to get the process started.**
- **OUTSIDE RECORDS**:
    - **Step 1**: Create a MISCELLANEOUS ENCOUNTER in the chart to document that records have been received.
    - **Step 2**: Quickly scan for key points, include this is the MISCELLANEOUS encounter
    - **Step 3**: Fill out scan cover sheet and place in scanning bin in firm precepting room to have it added to chart (scanned items will be added to the Media section of a patient's chart).

MISCELLANEOUS: Useful DOTPHRASES .IMA…

- In order to facilitate both efficiency and learning, we have created a number of dotphrases that can be used within Epic.
    - Administrative:
        - .CHECKOUT: allow patients to efficiently and effectively navigate visits after you have finished with them
        - .IMAMEDICATIONREFILLS: a guide to safely refilling medications
        - .IMADME: a guide to getting your patients their durable medical equipment (e.g., canes, shower chairs, walkers, diapers, etc)
        - .IMABEHAVIORALHEALTH: community mental health resources
        - .IMADIABETESPREVENTIONPROGRAM: useful for our patients with prediabetes
        - .IMAPRIOAUTH… : useful dot phrase for a number of medication PAs
        - .IMASIGNOUT: a guide to the email sign out components at end of block
        - .IMADIAGNOSTICTESTING: numbers for diagnostic studies
        - .IMAREFERRAL: numbers to schedule specialty referrals
        - .COLOGUARD: Patient instructions after Cologuard is ordered
        - .ISTOP: should be used anytime you prescribe a controlled substance
    - Clinical: **.IMA…**
        - .IMAMSK…
            - Knee, Shoulder, Low Back(exams)
        - .IMADM…

        - Monitoring, insulin titration, foot exam
    - .IMACANCERSCREENING
    - .IMALIVER…
        - FIB4, MELDPELD
    - .IMAHFMEDICATIONS
    - .IMAANTIOBESITYMEDS

- *Please note that these have been added at the suggestion of your colleagues, which is to say please let us know if you'd find others useful.*
- *Also remember to create your own dotphrases as the year goes on. These are useful not only for efficiency, but also to help reinforce learning.*
    - *You can also "steal" dot phrases from colleagues. Ask a senior or chief if you'd like to know how.*

1. Health Care Maintenance

Overview:

- **The USPSTF is the go-to resource for up-to-date screening guidelines.** These suggestions are evidence-based and updated regularly. Please note that sometimes they differ from society guidelines, but as general internists, we should go to USPSTF first.

Options at IMA:

Breast Cancer (females age 40-74 q2y):

- Order:
  - Search "Mammogram Screening" under **SmartSets**. The SmartSet includes the correct diagnosis code.
- CAM Radiology is on the 6th Floor on the East Side (below Firm D). When you order a mammogram, order requisition will print with location/phone # so patients can either:
  - Walk down immediately after visit to get mammogram (often done within an hour)
  - Can call number provided in .CHECKOUT

Colon Cancer (age 45-75, 3 modalities offered as below)

- Note: **You will often need to manually update this, as it's complicated because screening intervals vary based on testing modality and results.** The HM topic will automatically update with Cologuard and FIT results, but colonoscopy results require manual entry.
- **Colonoscopy**
  - **Place order in EPIC: "Ambulatory Referral to Colonoscopy (Screening)**" UNLESS patient is on anticoagulants or has active GI problems/symptoms (upper or lower, including iron-deficiency anemia). In those cases, they need a GI referral. Routine monitoring of polyps can go straight to screening colonoscopy.
  - Our colonoscopy navigator is **Mike Guzman,** whom you can message *if there is a need to expedite (for instance, positive stool test for screening) or reschedule, but please be judicious with this.*
  - *Do not prescribe prep for the patient.* There are many prep protocols, and the endoscopy nurse will review the chart and prior colonoscopies if available, and the GI team will determine the prep and advise the patient. Most prep is available OTC, but on occasion Mike may message you asking to place the order for prep medications (after that review process) if their insurance covers it (many plans do not cover OTC meds).
  - Once colonoscopy results, you need to MANUALLY update the Health Maintenance topic. If they recommend a screening interval other than 10 years, you need to add that as a "Modifier" in the HM tab. *More to come about this during your panel management session.*
- **Cologuard (q3y multitarget stool DNA)**
  - **Place order in EPIC: "Cologuard".** The order transmits to the company, who contacts patients with instructions and mails the kit to the patient. After the kit is mailed back, results will come back like any other lab in EPIC.
  - While you precept or while the patient waits for labs, play the Cologuard instruction video for them. **iPads on rolling carts are in each firm area for this purpose with a shortcut on the homepage.**
  - Sign the order BEFORE printing the AVS. It will automatically print instructions for the patient, you do not need to add anything to the patient instructions.
  - *We have a dedicated Cologuard Navigator at IMA:* ***Jennifer Owens***. If you receive any questions from patients re: completing this test, please route to her.
    - If the patient phone number is not correct, she will not be able to reach them. In general, please check patient's phone numbers before they leave, especially if we are ordering any studies that will require follow-up.
  - **Positive results should be referred DIRECTLY for colonoscopy without GI referral, and also message Mike Guzman to expedite.**
- **FIT (annual stool blood test)**
  - Cologuard has superior test characteristics, but FIT can be considered for patients who cannot follow the instructions or do not have stable housing to receive the kit.
  - **Positive results should be referred DIRECTLY for colonoscopy without GI referral, and also message Mike Guzman to expedite.**

Prostate Cancer (shared decision-making in age 55-69 <u>unless family history or above-average risk</u>)

- USPSTF is still a C recommendation for 55-69 but if you decide not to screen, you need to ensure there is no first-degree family history of prostate cancer.
- We recommend discussing with your preceptor before deciding on whether to start screening, as there are high-risk populations (e.g., people with a family history, people who smoke)
- **Order: "PSA" total serum.** You do not need free and total PSA. You do NOT need to do a DRE.

Finding prostate cancer may not improve mortality for certain groups.

False positives can occur.

Follow up invasive procedures may be needed (biopsy) which have risks (including erectile dysfunction)

Lung Cancer (age 50-80, 20+ pack-years, currently smoke OR quit within past 15 years)

- NOTE: Most eligible patients are not recognized by the Health Maintenance topic due to inadequate tobacco history documentation.
  - Pack-years is the [total years smoked] x [AVERAGE packs per day over that time period].
  - If the patient does in fact meet criteria, update the tobacco history accordingly so that they will be included in the Health Maintenance topic which will remind you annually they are due for screening.
- **Order: search "low dose CT chest" and choose the option for screening (not research)**
- Be sure to document the number of pack years and if/when patient quit smoking in your note. This will facilitate prior authorization approval and help you avoid extra work.
- **Send a message to p IMA rad.pa/referrals: they will take care of all your PAs!**

Cervical Cancer Screening (anyone with a cervix 21-30 years q3y, 31-65 q5y with HPV cotesting)

- Options:
  - 1. Do pap yourself during visit. The MAs can help set up and serve as your chaperone.
    - Order: "cytology" w/ HPV co-testing if >30 years old.
  - **2. Refer to IMA GYN (IM staffed): Order is called "Ambulatory Referral to Well Women's Clinic,"** click "IMA GYN" Box on .CHECKOUT. The front desk can schedule.
  - **3. Refer to GYN clinic (OB/GYN staffed): Order "Amb Referral to Gynecology."** You should go with this option if the patient has a history of abnormal PAPs, is requesting LARCs, etc. Generally, though, this has long wait-times so is not preferred.

AAA Screen (men age 65-75y who have ever smoked):

- **Order: "US Doppler Aorta and Iliac Arteries (Vascular Lab)" ICD 441.4 in EPIC**
  - Make sure to write the indication "AAA screen"
  - Ask patient to schedule appointment by calling vascular lab number provided in .CHECKOUT

HIV:

- **Order: "HIV Ab/Ag".**
- If positive, talk to your preceptor and refer to Jack Martin Fund Clinic for treatment. More information on how to refer in the IMA app.

Hepatitis B and C:

- **Order: "Hepatitis B screening panel" which includes sAg, sAb, cAb.** This is now recommended for ALL adults.
- **Order: "Hep C surface Ab with reflex to RNA PCR".** If positive, can refer to the IMA staffed REACH clinic; however, if decompensated cirrhosis, then refer to Liver Medicine.

DEXA (women 65y+):

- **Order: "DEXA- Axial Skeleton"**. Patients can call the number provided in .CHECKOUT

Vaccines should all be ordered via SMARTSETS under the This Visit tab. This

Useful tools!

USPSTF App: "ePSS"

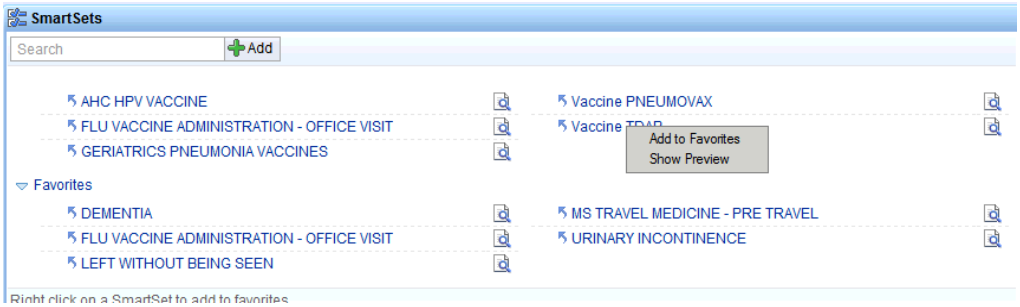
Can enter patient's sex, age, smoking history and it will give you the appropriate screening recommendations

IMA app for phone numbers and prior authorization emails

associates the appropriate diagnosis code. Some of these vaccines, specifically Shingrix, require a copay depending on insurance, so talk to your preceptor first.

IMMUNIZATION	Demographic	Options	EBM/Notes
COVID-19	Come one, come all!	Sinai only carries Pfizer	Don't forget to get your patients boosted
Shingles	Adults ≥ 50yo at 0 and then 2-6 months later	NEW: Recombinant shingles vaccine (Shingrix)	Reduced the incidence of zoster by ~97% in those 50-70yo and ~91% in those ≥70yo NNV ~ 30 (ZOE-50 and ZOE-70 Studies)
Pneumovax	All adults ≥50yo Adults age 19-49 if cigarette smoking, CHF, asthma, COPD, DM, alcoholism, chronic liver disease, or immunocompromised	PCV 21	*With prior Pneumovax, should check CDC guidelines *For asplenia or functional asplenia, vaccinate q5 years
HPV / Gardasil	Females age 9-26 Males age 9-21 "Catch up" Males 22-26 if MSM, HIV+	Gardasil-9: HPV 6, 11, 16, 18, 31, 33, 45, 52, 58	Three doses at 0, 2 & 6 months.
Influenza	*Everyone! Every year!*	Influenza vaccine High dose influenza vaccine (patients >65yo). Better to get something rather than nothing, if out of high-dose.	Annual vaccination reduces mortality from influenza by 41% (Lancet 1995) Multicenter trial 31K adults ≥65 years of age, high-dose was modestly more effective than standard-dose (NEJM 2014)
Hepatitis B	All adults 19-59 + Adults ≥60 w/Risk Factors	Two shots ≥1month apart	Risk factors for adults ≥60 are DM2, liver disease, immunocompromise

- **As a rule of thumb, okay to increase the interval between vaccines, but not good to do booster too early.**
- **Place order for vaccine using SMARTSET (contains both the vaccine & order to administer)**
- If RN/LPN are available they can give the vaccine while you are waiting to precept (or can be given after the visit). Turn dot black once you order so they know you ordered, and put up the RN flag outside your door.
- Make sure to add all common vaccines to your favorites so they are easier to order!



Social Determinants of Health:

- **Zoster vaccine: Shingrix is the way to go, and is huge for quality of life, but is expensive.** Low utilization <25% of patients over 60yo, most expensive vaccine, only stocked in ~50% of general internist offices.
  - General rule of thumb is that patients who have Medicare only should go to their pharmacy to avoid an unexpected copay. You do NOT need to order this vaccine if

sending the patient to their pharmacy to receive.

Population Health / Systems-Based Practice:

- ✔ Make sure to document all completed screening in the **Health Care Maintenance Tab**
- ✔ **EDIT Modifiers so they are appropriate for your patients!**

2. Diabetes

Overview:

(a) Who to screen:

- **USPSTF**: Adults 35-70yo with BMI > 25. Screen **Q3 years**.
- **ADA**: All adults with BMI > 25 and ≥ 1 risk factor OR those > 45yo. Screen **Q3 years**.

(b) Screening Tests:

	Diabetes	Pre-Diabetes
Hemoglobin A1C	≥6.5%	5.7-6.4%
Fasting Plasma Glucose	> 126	> 100-125
Random Plasma Glucose	>200 and symptomatic	
OGTT	>200 after 2 hours	

- **To make a diagnosis of diabetes, need to confirm with at least two of these tests**
- If A1c is normal, can repeat every 3 years unless significant changes in risk factors or concerning symptoms. No need to screen more often.

(c) Type I DM Testing (patients with LADA—Latent Autoimmune Diabetes of Adulthood—will also have +Abs)

- Anti-islet cell antibodies
- GAD-65 (Glutamine Decarboxylase) antibodies

(d) Routine Care for Diabetic Patients: .IMADMMONITORING

- Eye Examination (annual)
- Foot Examination (at least annually)
- Nephropathy Screening (Microalbumin/Cr ratio)—need to confirm any positive test with repeat
    - Screen starting at diagnosis for T2DM
    - Start screening 5 yrs after diagnosis for T1DM
    - If microalbuminuria is seen on ≥2 screenings, start ACEi/ARB +/- SGLT2
- FIB4: screening for MASLD recommended in everyone with diabetes
- Dietary/Lifestyle Counseling: get help from the IMA nutritionist and our diabetes educators
- Smoking Cessation Counseling
- ?ASA Therapy?—Unclear whether ASA is indicated in primary prevention (particularly in patients on statins), but the ASCEND Trial (NEJM Nov 2018) suggests the risks=benefits, so may consider skipping to decrease pill burden, especially in adults >65 given the results of the ASPREE Trial (NEJM 2018)
- Statin Therapy

(e) A1c Goals: Goals vary based on patient characteristics. Tight glycemic control is most beneficial in terms of reducing microvascular complications within the first 10 years of diagnosis. Things that may push you toward tighter control include no history of early microvascular disease and young age. Older age, lack of hypoglycemic awareness, hypoglycemia, or significant macrovascular disease may push you toward more lenient goal. **KEY POINT is that YOU need to set a target A1c for your patients.**

- **Most patients: 7-8**
- Younger patients early in diagnosis: <7

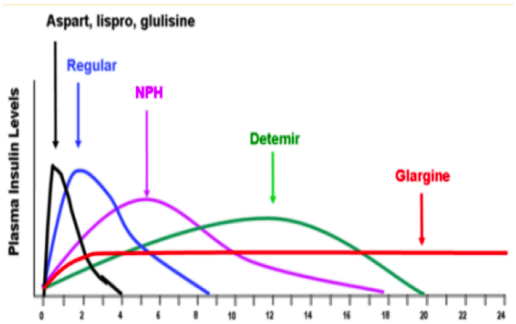
(f) Initial Medical Management of DM: You have diabetes clinic to hammer out the details!

- Unless there is a contraindication, **all patients with T2DM should be on metformin**
- Medication #2 is either a GLP-1 or an SGLT-2 (rationale being that there is evidence to reduce risk of cardiac events; GLP-1s help with weight loss).
- Medication #3 is whichever you didn't start as #2
- If A1c>10, strongly consider insulin.

Drug Class	Examples	A1c Reduction	Side Effects	Comments	Healthfirst Medicaid	Fidelis Medicaid	Healthfirst Medicare
Biguanides	Metformin Metformin ER	1-2%	GI distress. Lactic Acidosis (rare but can be seen in those with CKD).	Weight neutral. No hypoglycemia. Okay to use in stable CHF.	Metformin Metformin ER	Metformin Metformin-ER	Metformin Metformin ER

Sulfonylureas	Glipizide Glipizide XL Glyburide Glimepiride	1-2%	HYPOGLYCEMIA	Efficacy wanes over time.	Glipizide Glipizide XL Glimepiride	Glipizide Glipizide XL Glyburide Glimepiride	Glipizide Glipizide XL Glimepiride
SGLT-2 Inhibitors	Canagliflozin (Invokana) Empagliflozin (Jardiance) Dapagliflozin (Farxiga)	0.5-1%	Polyuria, Increased UTIs, increased genital infections, hyperkalemia; increased risk of amputations (black box warning)	Improves CV outcomes (EMPA-REG OUTCOME Trial)	Ertugliflozin (ST)	Ertugliflozin (ST)	Empagliflozin (ST) Dapagliflozin (ST)
DPP-4 Inhibitors	Sitagliptan (Januvia) Saxagliptan Linagliptan (Tradjenta)	0.5%	Headaches, GI upset. Slight increase in risk of URIs. ? Risk of arthralgias	No CV benefit. No definitive link to pancreatitis.	Alogliptan (ST)	Alogliptan (ST)	Sitagliptan
GLP-1 Agonists	Exenatide (Byetta) Exenatide XR (Bydureon) Liraglutide (Victoza) Dulaglutide (Trulicity) Albiglutide (Tanezum)	~ 1.0%	Injection site reactions. N/V. Risk of pancreatitis seems not real; however, increase in risk of biliary disease. Increased risk of medullary thyroid cancer.	Associated with weight loss (~3kg on average). No risk of hypoglycemia. Improves CV outcomes (LEADER Trial)	Dulaglutide (ST) Liraglutide (ST) Semaglutide (ST)	Dulaglutide (ST) Semaglutide (ST)	Dulaglutide (ST) Liraglutide (ST) Semaglutide (ST)
Long-Acting Insulins	Glargine (Lantus, Basaglar, Toujeo) Detemir (Levemir) Degludec (Tresiba)				Degludec Basaglar Toujeo	Basaglar Semglee	Degludec Basaglar Detemir

(g) Starting Insulin: RULES OF THUMB



- **When to consider:**
  - A1c >10% at diagnosis
  - A1c >9% and already on metformin
  - A1c >8-8.5% and already on metformin + another agent
- **Steps to Starting Insulin**
  - **Step 1**: Start Basal Insulin
    - 0.2-0.3 units/kg/day; *usually can start with 10u*
    - Degludec or Glargine in AM or PM; Detemir only in PM
    - Decrease if renal dysfunction, elderly, or insulin-naïve
  - **Step 2**: Titrate Basal Insulin to good fasting control
    - Goal 80-120 fasting in AM
    - Patient can increase insulin by 2-3U every 3 days as long as FSG is above goal
      - Remember to use the .**IMADMINSULINTITRATION** dot phrase
  - **Step 3**: Start checking FSG pre-lunch, pre-dinner, and bedtime.
    - If control is inadequate, start prandial insulin *with biggest meal* or adjuncts.
  - **Step 4** (If needed): Start Prandial insulin with 4-6 units and titrate to good pre-meal control
    - Goal pre-meal FSG 70-130
    - Goal 2 hour postprandial (clock starts when patient starts eating): <180
    - Increase by 2U q3 days until adequate control achieved
    - *Consider targeting the largest meal first: this can bring down number of FSGs*
  - **Step 5**: Assess need for further titrations, other adjuncts (will often continue metformin, DPP-4 or GLP-1, and/or SGLT-2s while on insulin as they have other helpful benefits and reduce the required dose of insulin).

Treating Diabetes at IMA:

- ***Order*: "hemoglobin A1C"**

- Almost all patients should have a regular "Hemoglobin A1c" order
- For patients in whom you highly suspect a new diagnosis of diabetes or who had prior A1c>9, order the "**Hemoglobin A1c (POCT)" during the visit if you anticipate it will change your management.** You can put this in the huddle note so it gets done during vitals and is available to you early on in the visit. This test is expensive, so please do not order in everyone (value based care FTW).

- *Diabetic Foot Exam*: **.IMADMFOOT**
  - **Inspect** for skin integrity, calluses, gait, balance
  - Palpate **pulses**, ask about claudication
  - Test **sensation** using monofilament + vibration v. pinprick v. proprioception
  - Document both in note AND health maintenance tab.
  - Remember to use the dot phrase .IMADMFOOTEXAM in your physical exam portion of the note
- *Eye Exam: Two options:*
  - **OPH1120:** this is a **retinal scan** our MAs can do after a visit. A great option for patients who want to avoid further specialty appointments. The only caveat is that patients need to be able to stand to complete.
    - Retinal scan results will populate in your results tab. They will indicate if the screening test is positive, and let know if/when to refer to ophtho.
  - **AMB referral to Ophthalmology:** 8th Floor of CAM building. Can either have patient walk up to 8th floor to schedule after visit OR call 212-241-0939
    - A good option for folks who have had abnormal results in the past or have other ophtho conditions (eg glaucome, cataracts) that need to be comanaged

Referrals for Assistance:

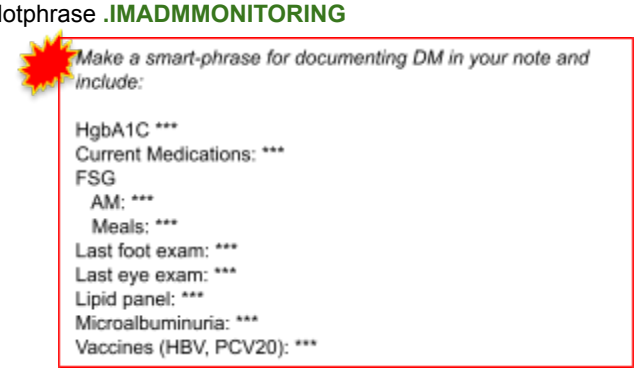
	Intervention	How to Do It
DM1 Pregnant women	Refer to Hospital Diabetes Clinic	Epic referral to "Hospital Diabetes Clinic" Can call the clinic to make appointment
A1c 8 - 12%	IMA Diabetes Clinic	Order "consult to IMA Diabetes Educator"
	PCP f/u Q 2-3 months	Remember to include the correct dot phrase so front desk knows when to schedule the patient
A1c 5.7 – 6.4%	YMCA Diabetes Prevention Program	For more information use the dot phrase: .IMADIABETESPREVENTIONPROGRAM
	Nutrition consult	Order "Consult to Nutrition" in Epic. Front desk can schedule if you check that nutrition box on .CHECKOUT in your AVS.

Social Determinants of Health & Community Resources:

- Individuals with lower income and education are 2-4 times more likely to get T2DM.
- The physical environment in low-income areas often is not conducive to outdoor exercise (sidewalks in disrepair, lack of neighborhood safety).
- Food insecurity and food swamps may be correlated with worse outcomes in diabetes.
- Ask your patient about their barriers. In particular, if patients are not taking medications as prescribed, one of the things on your differential should include food insecurity, so check in. If they report difficulty with food access, place a social work consult so they can be connected to appropriate resources.
  - Resources include SNAPP benefits, local discounted Farmer's Markets, and community organizations such as food pantries (raw materials) and prepared meals

Population health/systems-based practice:

- ✔ Make sure to satisfy the BPAs for eye exams, nephropathy screening and foot exams in the Health Maintenance tab
- ✔ Use the dotphrase **.IMADMMONITORING**



3. Obesity & Clinical Nutrition

Overview:

- Weight is very complex metabolically and has to do with a combination of **structural determinants of health, genetics** and **energy balance**: resting energy expenditure (organ and muscle function) + additional expenditure from physical activity.
    - **Weight gain**: 5% energy mismatch (intake>expenditure) for 1 year = 15kg weight gain.
    - **Weight loss**: energy balance must be net negative. Goal deficit ~3500 calories/week ≈ 1 lb body fat, achieved through calorie restriction (more vegetables, whole grains) and increased physical activity.
    - Muscle is highly metabolically active, even at rest, so **add strength training** to maintain healthy weight.
- **BMI**:
    - "Normal" weight 18.5-25
    - **Overweight 25-30**
    - **Obese 30+** (class I 30-35, II 35-40, III 40+)
    - *These cutoffs are somewhat arbitrary, don't account for things like muscle mass and don't apply to all populations equally. Some newer metrics such as Waist-to-Hip rations and Body Roundness Index better capture metabolic risk, but they have not yet been routinely integrated into practice yet.*
- **Nutrition essentials: Refer to "IMA Nutrition,"** the front desk can make these appointments.
    - The **type of fat** (unsaturated, fish oils) is more important than total fat.
    - **Fruit/vegetables** (~5 servings daily) associated with decreased risk of CVD, breast cancer, mortality.
    - **Limit refined carbs/sugar** (↑CHD and DM risk).
    - **Food Label Quick Tips**: Pay attention to servings per container. Ingredients are listed by weight–avoid food with sugar in the first 3 ingredients.

Population Health

- Nationwide, **~70%** overweight and **~35%** obese.
- In recent decades, large increases in obesity with parallel increases in diabetes, CVD
- Owing largely to structural determinants of health, there are disproportionately high obesity prevalence in:
    - Populations of color, notably Black and Hispanic
    - Harlem and the Bronx, where most IMA patients live
- **Population health impact of healthy lifestyle change**: Huge, better than putting all patients with pre-diabetes on metformin (Diabetes Prevention Program, NEJM 2002).
- Sustained weight loss of 3-5% body weight produces clinically meaningful reductions in CV risk factors. Recommend 5-10% weight loss as initial 6-month goal for greater benefits.

Obesity at IMA

- Referral to **"IMA Weight Management Clinic" & "IMA Nutrition"--** the front desk can make these appointments.
    - Criteria that need to be met for referral: Obesity by any definition or Overweight plus one or more co-morbidity (T2DM, HTN, etc.)
- **One of the hardest changes we ask our patients to make is to lose weight**, so you CANNOT fix in one visit! Must build rapport and bring the patient back often to monitor progress.
- **Initial assessment** can be a **24-hr diet recall** or the **3-day food diary**. MyFitnessPal is a great, free food tracking app.
- Assess **cultural norms** and **time/financial constraints**.
- Use your motivational interviewing skills: Assess the stage of change and ask "what do you think you can do to improve your diet?"
- Set SMART (specific, measurable, action-based, realistic, time-limited) goals
- **Outside of the Mediterranean Diet, no compelling evidence for one diet vs. another** (intermittent fasting, low fat, low carb, etc.).
- **Goal = energy deficit** through healthy eating and regular exercise.
- Remember that medication management is right for some. While GLP1s are NOT covered for weight loss by Medicaid (and only if concurrent OSA for patients with Medicare), there are other possible options. Use **.IMAANTIOBESITYMEDICATIONS** to learn more.

Socioeconomic barriers & Community Resources:

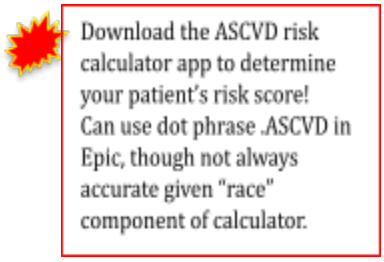
- See above barriers for patients with diabetes.

4. Hyperlipidemia

Overview:
Elevated LDL is associated with CV events and mortality. Lowering LDL levels reduces CV events in patients with and without CVD; therefore, our goal is to lower patient's risk using therapeutic lifestyle changes and medications.

a. Who to screen?

- All adults once before the age of 45 to look for familial hyperlipidemia. Indicated to treat if LDL>190.
- Screen average-risk men starting age 35 and women starting age 45 then repeat every 5 years (though ASCVD cannot be calculated until age 40)
- **Who is at "high risk?"**
  - Prior CVD event
  - Diabetes
  - CKD3+
  - Obesity
  - HTN
  - Smoking history
  - Older age
  - Family history of CVD



(b) Primary Prevention- patients *without* known atherosclerotic disease

- Decide whom to treat based on risk assessment
  - The new & improved PREVENT score
  - USPSTF: give statin if ACC/AHA Risk score > 10% 10-year risk
  - Take-away: Definitely treat if ASCVD> 10% 10-year risk, consider if 7.5-10%, probably not if <7.5%

(c) Secondary Prevention- patients with known atherosclerotic cardiovascular disease (CAD, carotid artery disease, PVD, AAA)

- Treat with high-intensity statin therapy
- Goal: 50% reduction in LDL , target LDL<70 (and new guidelines suggest <55)
- Also treat with ASA

(d) Statin therapy

	Medication	Comments
High intensity	Atorvastatin 40-80 mg	Covered by NYS Medicaid
	Rosuvastatin 20-40 mg	Most potent
Moderate intensity	Lovastatin 40 mg	
	Pravastatin 40 mg	Lowest risk of myopathy Covered by NYS Medicaid
	Simvastatin 40 mg	Patient must take at night
	Atorvastatin 10-20 mg	

- Side effects/ interactions:
  - Myopathy
    - Strategies to overcome myopathy: re-trial at lower dose, replete vitamin D, switch to lower intensity statin or every other day dosing
  - Multiple medication interactions including (but not limited to) cyclosporine, protease inhibitors, calcium channel blockers, gemfibrozil, etc

(e) Other Agents: Secondary Prevention

- Niacin: No role for use (AIM-HIGH, NEJM 2011)
- Ezetimibe: Limited data for use. Consider in SECONDARY prevention for patients with very high-risk features, on maximally-tolerated statin dose, and LDL still significantly above goal (LDL<70)

- PCSK9 Inhibitors: Good data for use. Consider in SECONDARY prevention for patients with very high-risk features, on maximally-tolerated statin dose, on ezetimibe, and LDL still significantly above goal. Can refer to cards to facilitate this class of medications.
- Fibrates: no role outside of hypertriglyceridemia (FIELD Study, Lancet 2005)

(f) Hypertriglyceridemia

- Linked with CV events but no evidence of causation. Can put at risk for pancreatitis if TG>500.
- Lifestyle modification for all for at least 12 weeks: EtOH cessation, dietary modification, weight loss, smoking cessation
- Treatment: *Remember to repeat lipid panel fasting if only one-time high value.*
    - HIGH TG ONLY: Treat with fibrates if TG > 500-1000
    - HIGH TG AND LDL: If ASCVD Risk > 10% and TG < 1000, may be able to start high-intensity statin to get TG < 500. If > 1000, start fibrate to get TG down, then consider statin therapy.
    - For patients with TG>1000 and familial syndrome, new agents are Apolipoprotein C3 (APOC3) inhibitors. These are prescribed by cardiology.

Treating HLD at IMA

- Order: "Lipid panel"- **does not need to be fasting**!
    - *Non-fasting samples mostly elevate triglycerides, with minimal changes to TC or HDL and artificially lowers LDL, since LDLis a calculated value; therefore if there is a high LDL on a non-fasting lipid panel then it is most definitely high! Can repeat fasting if TGs are very high*
    - Total cholesterol: HDL ratio is most predictive (JAMA 2007, 2009) hence their use in the ACC/AHA risk calculator (and neither are affected by non-fasting samples)

Social Determinants of Health:

- Food access—access to affordable and **heart healthy foods—whole grains, beans, nuts, seeds, vegetables, fruit.** Note that these foods can be expensive. Plant-based diets have been shown to help, but can be expensive.
    - Food desert- residents have low access to a supermarket or large grocery store
    - Food swamp- abundance of low nutrient foods (read: fast food) compared to healthy food options

Community Resources: Refer to SW!

- Supplemental Nutrition Assistant Program (SNAPP)
- Farmers Markets- some accept SNAPP/food stamps
- Sinai's Greenmarket – SNAPP users get a $2 bonus for every $5 they spend

Evidence Based Medicine: HYPERLIPIDEMIA

Study	Finding	Take-Away
West of Scotland Coronary Prevention Study (WOSCOPs) (NEJM 1995)	Pravastatin reduced non-fatal MI rates and cardiac mortality in men with LDL >150. NNT 217. 22% reduction in all-cause mortality of borderline statistical significance.	Statins work as primary prevention.
Scandinavian Simvastatin Survival Study (4S, Lancet 1994)	Patients with HLD and CAD; 4% reduction in total mortality at 5.4 years with significant reductions in CV events.	Established statins as standard of care in secondary prevention of cardiovascular events.
ODYSSEY Trial (NEJM 2015)	Patients at high risk for CV events, the use of monoclonal Ab alirocumab in addition to high intensity statin therapy resulted in additional 62% reduction in LDL.	
AIM High Trial (NEJM 2011)	Compared simvastatin vs. simvastatin + niacin. Did significantly increase HDL levels	No clinical benefit of niacin.

	but failed to reduce cardiovascular events.	
IMPROVE IT (NEJM 2015)	Compared simvastatin vs. simvastatin + ezetimibe. Reduction in CV mortality, major CV event or nonfatal stroke. NNT 50.	Relatively small benefit and only in those with very high CV risk

5. Hypertension

Overview

- HTN is the #1 reason for non-pregnant adults to visit a medical office
- Affects ~30% of adults; only 50% of those affected are controlled
- HTN is the most important *modifiable* risk factor for cardiovascular and cerebrovascular disease

Measuring BP:

- Ambulatory BP
  - Ambulatory BP measurement is a much better predictor of CV events than in-office readings
  - Threshold for diagnosing HTN in ambulatory readings is >130/80
  - Create a **dot phrase** for patients (see below) as to how to appropriately check and include in wrap up
  - **IMA HTN Clinic is a major resource**
- Office BP measurement: for diagnosis, must have ≥ 3 values over 2 visits
  - Seated position, arm at level of the heart
  - Appropriate cuff size, not placed over clothing
  - Patient seated quietly for 5 minutes prior to measurement
  - Limit background noise, stressors

HTN Risk factors:

- Age, obesity, family history, race, high salt diet, excessive alcohol, physical inactivity, stress

Secondary HTN:

- When to worry about *Secondary* HTN:
  - Resistant HTN: patient is maxed on three agents, including a diuretic
  - HTN emergency or malignant HTN
  - Acute rise in BP after previously stable values
  - HTN in <30yo non-obese patient with no FHx
  - Onset before puberty
- Causes of Secondary HTN:
  - Routinely consider:

Disorder	Routine Eval?	Clinical Clues	Initial Diagnostic Evaluation	Confirmatory Evaluation	Management	Management's Effect on BP
CKD	**Yes**	DM? HTN?	BMP	BMP, urine protein	Control BP +/- ACE-I/ARB	NA
RX Induced	**Yes**	Med Rec	Med Rec	Again, med rec–OTCs ediition	Stop Med	:)
Renal Artery Stenosis	**Yes**	Renal bruit; >50% increase in Cr after ACEI	Doppler US	Angiography	ACEI/ARB! No data to support stenting, so won't really change mgmt	Meh
1ary Hyperaldo	**Yes**	Hypokalemia	AM Aldo to Renin Ratio	Aldo Suppression with Salt Load; Imaging	If unilateral adenoma, resection. If not, aldo antagonist	Excellent!
OSA	**Yes**	STOP-BANG	Sleep Study: WATCHPAT	x	CPAP	-Ish (2-3mmHg HTN, 6-7 R-HTN)

BP Targets:

- Varies depending on recommending body and target population, **but typical goal for most of our patients at IMA is <130/80**.

Workup of Patients with HTN:

- Look for signs of end-organ damage and/or curable causes of secondary HTN, *if indicated*
  - BMP, hgbA1C, lipid panel, UA

HTN Treatment:

- Lifestyle modifications:
  - Weight loss: *1 point per kg*
  - Lifestyle: typically reduce BP by 5-10 mmHg
    - Na+ restriction <2400mg/day
    - DASH diet
    - Exercise (especially aerobic)
    - ↓EtOH

First-Line Medications:

- ACE-Inhibitors:
  - Examples: **Lisinopril**, Enalapril, Captopril, Ramipril, Benazepril
  - Side Effects: Dry cough, Angioedema, Hyperkalemia
  - Absolute Contraindications: Prior Angioedema, Pregnancy
- ARBs
  - Examples: **Olmesartan**, Losartan (shorter acting), Candesartan, Valsartan
  - Side Effects: Hyperkalemia
  - Absolute Contraindications: Pregnancy
- Dihydropyridine CCBs
  - Examples: Amlodipine, Nifedipine
  - Side Effects: Lower Extremity Edema, Headache, Flushing, Constipation
  - Absolute Contraindications: N/A
- Thiazide Diuretics
  - Examples: **Chlorthalidone,** Hydrochlorothiazide
  - Side Effects: Hyperglycemia, Hyperuricemia, Hypokalemia, Hyponatremia, Polyuria,
  - Contraindications: Gout, Sulfa Allergy

The **CCB-ACEI combination amlodipine-benazapril and CCB-ARB amlodipine-valsartan** is covered by most NYS Medicaid and Medicare plans and can be a good way to reduce pill burden. Consider in patients with diabetes *(ACCOMPLISH trial)*

Second-Line Medications:

- Aldosterone Antagonists: **Spironolactone** (probably the best choice for a 4th agent), Eplerenone
- Loop Diuretics: Furosemide (especially if GFR<30), Bumetanide, Torsemide
- Beta-Blockers: Labetalol, Carvedilol
- Vasodilators: Hydralazine
- Alpha2-Agonist: Clonidine

HTN AT IMA: *Please check the app for our many resources to help get your patients' BPs under control!*

- **Step 1**: If BP is > target BP, **RECHECK** once your patient is in the room (during triage, BP often is taken with clothes on, without adequate rest time, etc.)
- **Step 2:** If BP is persistently elevated, do a **MED REC** and make sure your patient is taking all of their home antihypertensives (*Did they run out of refills? Are they taking them correctly?*). Also check for any BP-raising meds or over-the-counter medications.
- **Step 3:** If concerned for true lack of BP control, consider combination medications or adding low/moderate dose of an agent with a different mechanism before maximizing dose of a single agent. The main exception to this would to max and ACE/ARB in patients with proteinuria or CV disease.
- **Step 4:** Utilize other clinic resources outlined in the IMA app

6. Cardiac Symptom Evaluation

(a) Palpitations

Overview

- Common ambulatory complaint
- Symptom timing and cardiac causes:
  - Transient palpitations often due to premature beats
  - Slow onset and offset more consistent with sinus tachycardia
  - Rapid onset and termination may suggest SVT or VT
- Differential to consider in work-up of palpitations:
  - **Cardiac**: arrhythmias, valvular heart disease, atrial myxoma, cardiomyopathy
  - **Endocrine/Metabolic**: thyrotoxicosis, hypoglycemia, pheochromocytoma
  - **Medications/Substances**: nicotine, caffeine, cocaine, amphetamines, sympathomimetic agents, vasodilators (e.g. CCBs), anticholinergic medications, BB withdrawal
  - **Psych**: panic disorder, GAD, depression w/ anxiety, somatization
  - **Other**: anemia, pregnancy, high fevers, stress

The cause is cardiac in nature **<10%** of the time in patients without known prior cardiac disease

At IMA:

- Work-up:
  - **12-lead ECG** (Place order in EPIC, Black Dot, Put up red door flag, ask MA [Blue Scrubs] to perform, leave patient in room)
  - **Lab work**: talk to your preceptor, but usually CBC, TSH, BMP
  - **Imaging**: TTE in pts w/ signs/symptoms/risk for structural heart disease
  - **Ambulatory EKG monitoring (AKA "Holter")**: Refer to cardiology ("Consult to Cardiology" or an e-consultation) if you believe this is necessary, particularly in patients whose evaluation suggests an arrhythmia and those at higher risk (i.e., male gender, event duration >5 mins, syncope, irregular rhythm, hx of cardiac disease)

(b) Chest Pain Evaluation

Overview: Remember that your pretest probability of disease varies in the inpatient and outpatient setting. Your work-up should vary accordingly.

- Differential Diagnosis:
  - **MSK**: costochondritis, muscle strain
  - **CV**: CAD, coronary vasospasm, pericarditis, dissection
  - **GI**: GERD, achalasia, DES, esophagitis
  - **Pulm**: PE, Lung Cancer, Pneumonia, Pneumothorax, Pleuritis
  - **Other**: Anxiety, Zoster
- Defining chest pain:
  - **1)** substernal chest discomfort of characteristic quality (i.e., pressure, heaviness) and duration (seconds to minutes, not hours to days) **2)** exacerbated by exertion and **3)** relieved by rest or SL nitroglycerin
    - **Typical**: fits all three characteristics
    - **Atypical**: two of the characteristics
    - **Non-anginal** or **non-cardiac chest pain**: 0-1 of the characteristics
- Risk Stratification: by type of chest pain, age, and gender
- Management:
  - **Low risk**: reassurance
  - **Intermediate risk**:
    - Ideal candidate for a stress test
    - To determine what type of stress test to order, see below

A negative stress test in a high-risk patient is not enough to rule out CAD!

- **High risk:**
  - Refer to cardiology for possible catheterization vs. repeat stress testing

Stress Testing

- There are multiple modalities at our disposal for the evaluation of CAD
- Determining the need for a stress test must take into account the **pre-test probability** that the patient's chest pain is related to CAD. Notice that pretest probability increases with AGE and with "TYPICAL SYMPTOMS."
  - 1st: Determine the type of chest pain your patient is having (see above)
  - 2nd" Determine whether your patient falls into a low, intermediate, or high-risk group
    - Stress test is most appropriate and of highest yield for patients with **intermediate-risk**
    - **Like any testing, anticipate if your patient is appropriate and amenable for downstream work-up.** Before considering a stress test for your patient, be sure they would be open to pursue the further workup involved with a positive stress test. Would you and your patient pursue a **left-heart catheterization**? If the answer is no, consider whether it is then worthwhile to even get a stress test.
- Thinking through which stress test to order for your patient?
  - *1) Can the patient exercise?*
    - **Yes**:
      - *2) Are there underlying ECG abnormalities?*
        - **No** → Exercise ECG
        - **Yes**:
          - *3) Known wall motion abnormalities?*
            - **No** → Exercise ECHO
            - **Yes** → MPI
    - **No**:
      - *3) Known wall motion abnormalities?*
        - **No** → Pharmacologic stress ECHO
        - **Yes** → MPI

At IMA:

- Tests that we can order from IMA:
  - Exercise stress test (remember that exercise is preferred)
  - Myocardial perfusion stress test (Nuclear)
  - Dobutamine Stress test
- If a prior authorization is often necessary but, fortunately, the the prior authorization team will contact patient with information once approved, but the phone # to schedule is 855-674-3278.
  - If indications are not clear in the note, you may be contacted by the PA team, so please clearly document the reason for testing within your note.
- For all other tests or complex decisions, consider referring your patient to cardiology: "Consult to Cardiology" and the patient can call the number in .CHECKOUT to schedule.
- If an expedited appointment is needed, you can email the schedulers listed in the IMA app under the "Cardiology" section

Types of Stress Tests:

	ECG	Echo	Nuclear / MPI
	Sens ~60-70% Spec ~70-80%	Sens ~ 80% Spec ~ 80%	Sens ~ 90% Spec ~ 80%
Exercise	Always preferred option when possible		
Pharmacologic	*Not an option*	Dobutamine	Adenosine *or* Dipyridamole
What is studied	ST-segment changes, T	Regional wall motion	Myocardial perfusion and

	wave inversions, or arrhythmias w/ exercise	abnormalities	viability
Pro	Simple, inexpensive, well-validated. Physiologic. Assesses exercise capacity. No need for IV access or radiation	Well-validated No radiation exposure Can be exercise or pharmacologic Shows myocardial function and regional wall motion abnormalities	Most sensitive Provides anatomic details and LV function Provides prognostic information Provides assessment of myocardial viability
Con	Less sensitive (especially in women) Requires good exercise tolerance Cannot be used in pts w/ pre-existing ECG abnormalities: 1) underlying BBB 2) ST-segment depressions/TWI 3) on Digoxin 4) WPW	Hypertensive response to stress may result in FPs (reversible wall motion abnormalities) Pts who may have poor windows for echo (consider chest wall adiposity)	Expensive Radiation exposure Slow More prone to artifact Adenosine must be avoided in pts with asthma

6.2 Atrial Fibrillation

Valvular AF refers to patients with mechanical valves or mitral stenosis. **All valvular AF needs Warfarin as AC, not DOACs.**

Symptoms/Signs:

- Palpitations, Shortness of Breath, Pre-Syncope
- Irregular pulse, raised JVP without a-waves, pulse deficit on auscultation

Key Outpatient Issues

- Thromboembolism is the most important complication of AF
- Typically seen in elderly patients (approximately 10 % of individuals > 75yrs have AF)
- Mean stroke risk in a patient with AF is ~4% per year.
- Risk decreases to ~1% per year with anticoagulation
- Patients a relatively low risk for thromboembolism may be maintained on ASA alone, but no reliable data exists to guide decision between 81 mg and 325 mg ASA doses
- Screening for AF in the outpatient setting is recommended with pulse check in all patients over 65
- TTE is recommended in all AF patients to evaluate for presence/absence of valvular pathology and evaluate LA size

Risk Assessment

- Use the **CHA_2DS_2 VASc scoring system** to determine who needs anticoagulation or not.
- Use the HASBLED score with CHA_2DS_2 VASc to weigh bleeding risk
- Patients with AF and **no risk factors** (CHADsVASc = 0) do not routinely require anticoagulation, can just be given aspirin

At IMA:

1. Patients with new diagnosis of atrial fibrillation should be referred to cardiology: **"Consult to Cardiology"** and patients call the number in .CHECKOUT to schedule.
2. Patients on Warfarin should have monthly INR testing if ranges are maintained with 2.0 – 3.0 range.
    a. **Firm based nursing often runs the show for this—they help monitor. Ask your preceptor how to set this up for patients new to IMA who require monitoring.**
    b. Every IMA firm has the ability to check a POCT INR
3. Patients on DOACs should have routine liver function monitoring every 6-12 months

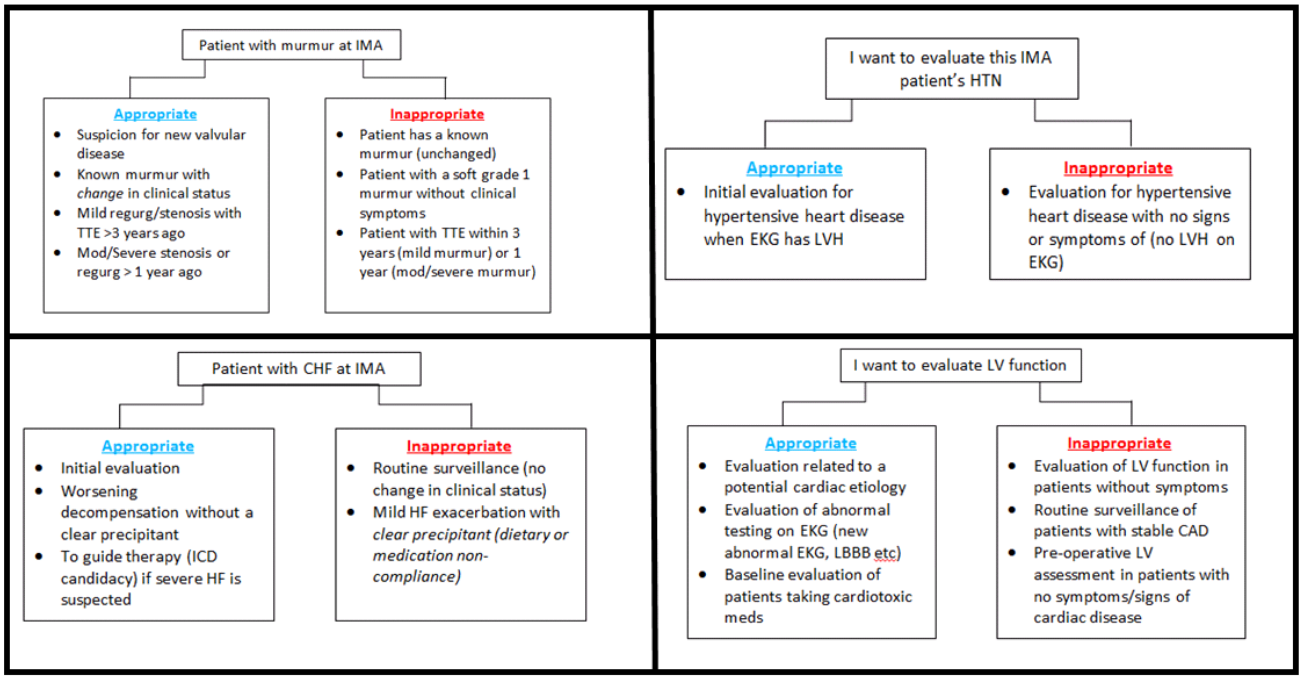
4. Though insurance formularies are always changing, all the NYS Medicaid and Medicare plans cover one of the DOACs (usually rivaroxaban or apixaban), so insurance is NOT a barrier to using DOACs for our patients in most circumstances.

6.3 Ordering a Transthoracic ECHO at IMA: Cheat Sheet

- Approximately ~30% of TTE's are deemed "inappropriate" after applying appropriate use criteria
    - The following IMA cheat sheet for various scenarios can be used to provider guidance

- At IMA: Ask the patient to schedule Transthoracic Echocardiogram by calling the number in .CHECKOUT

- Note: May require prior authorization, so our PA team may reach out to follow-up. This is why it's important to document your clinical reasoning in your notes.



***Adapted from the ACCF/ASE/ACEP/ASNC/SCAI/SCCT/SCMR 2007 appropriateness criteria for transthoracic and transesophageal echocardiography.*

7. Hypothyroidism

Overview:

Types of Hypothyroidism:

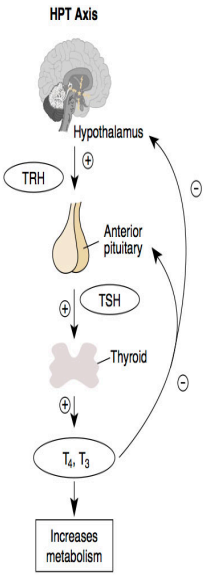
(a) Primary hypothyroidism (problem in the gland itself): **low T3/T4, high TSH**

- Accounts for **95%** of cases of hypothyroidism
  - Causes: autoimmune thyroiditis, Hashimoto's, previous Graves s/p treatment, Down syndrome, Turner's syndrome, previous thyroidectomy or other neck surgery, previous iodine therapy, external radiation

(b) Subclinical hypothyroidism**: high TSH but normal T3/T4**

(c) Secondary/Tertiary/Central hypothyroidism (problem in the pituitary/hypothalamus glands): **low T3/T4 and low/inappropriately normal TSH**

- Causes: hypothalamic or suprasellar mass, history of radiotherapy/surgery to the brain, infiltrative disease (sarcoid, hemochromatosis); pituitary tumor, hx of pituitary surgery/radiotherapy, Sheehan's syndrome



Pathophysiology/Clinical Signs/Symptoms:

- Generalized slowing of metabolic processes
  - fatigue, weakness, cold intolerance, weight gain, constipation
- Accumulation of matrix substances
  - coarse hair/skin, loss of lateral eyebrows, periorbital edema, carpal tunnel syndrome
- TRH increases prolactin levels which inhibit GnRH
  - oligo or amenorrhea, infertility
- Exam findings:
  - Delayed relaxation of DTRs, bradycardia, non-pitting edema, goiter
- Lab abnormalities:
  - Normocytic anemia, hypercholesterolemia, hyponatremia (SIADH), hyperprolactinemia, CK elevation

Treatment:

- Thyroid replacement therapy: levothyroxine/Synthroid
  - Initial dose: 1.6 mcg/kg body weight per day (112 mcg/day in a 70-kg adult)
  - Re-check TSH in 6-8 weeks (long half life so takes a number of weeks to reach steady state). If TSH still elevated, increase by 12-25mcg/day and then re-check TSH in another 6-8 weeks

Synthroid should be taken on an empty stomach with water; 1 hour before breakfast/other medications

- Special situations:
  - Elderly patients >50-60 years old: initial dose 50mcg/day
  - History of CAD: initial dose 25mcg/day
  - Pregnancy: increased T4 requirements due to increased TBG

Treating Hypothyroidism at IMA:

- Order: "TSH" if a patient is on synthroid. No need for reflex fT4 as it will NOT guide management (high value care FTW!)
- Who to test?
  - **NO population-based screening for hypothyroidism**
  - Only test if patient is symptomatic or if asymptomatic but <u>at risk:</u>
    - History of goiter, history of autoimmune disease, family history of thyroid disease, previous radioactive iodine therapy, and/or head and neck irradiation, family history of thyroid disease; on medications such as lithium, amiodarone
- **Endocrine E-Consult:** For complex or challenging cases. Allows you to submit clinical questions to Sinai endocrinologists and get timely responses/recommendations. Find under orders as "E-Consult".

8. Abnormal LFTs

Overview:

- Patterns of abnormal liver function tests:
  - **Hepatocellular Damage:** predominantly elevated AST, ALT
    - AST: ALT = 1
      - >300s: ischemic, viral, drug-induced
      - <300 (mildly elevated): NASH, Fatty Liver, EtOH, medications
    - AST:ALT >2.5: EtOH hepatitis
      - Alcohol induced deficiency of pyridoxal phosphate
      - Usually < 200s
  - **Cholestatic pattern:** elevated alk phosphatase, GGT, bilirubin
    - Alkaline phosphatase: produced in hepatocytes, bone, placenta, small intestine
    - GGT: liver specific and a sensitive marker of EtOH ingestion
    - Bilirubin:
      - Isolated hyperbilirubinemia: unconjugated vs conjugated
        - Unconjugated: hemolysis, drugs, genetic diseases (Gilbert's)
        - Conjugated: obstructive most commonly
- Markers of synthetic function:
  - PT/INR, albumin
- Approach to abnormal LFTs:
  - Discontinue any hepatotoxic medications, alcohol use, evaluate for metabolic syndrome and then repeat testing in 2-4 weeks
    - If alk phos is elevated, check GGT
  - Persistent or unexplained ALT and AST abnormalities should be worked-up further:
    - HCV, HBV; serum iron, ferritin, TIBC; INR, albumin, CBC
    - Calculate a **FIB4** to determine risk for significant fibrosis in patients with possible MASLD
      - ".FIB4" dot phrase available
    - Consider RUQ U/S vs. Fibroscan

All coagulation factors are synthesized in the liver except factor VIII

AT IMA

Hepatitis C

- **Who to screen for hepatitis C?**
  - All adults (ages 18-79)! (USPSTF Grade B Recommendation, updated 03/2020)
- Order: "Hep C surface Ab with reflex to RNA PCR"
- If positive:
  - All patients with virologic evidence of chronic HCV infection (detectable HCV viral level over a six-month period) should be considered for antiviral treatment. If decompensated cirrhosis, refer to Liver medicine clinic. If no decompensated cirrhosis, refer to REACH (more resources, shorter wait time).
  - **IMA REACH = Hepatitis C + Substance Use Disorder clinic**
    - This clinic has care coordinators and on-staff psychologists who help run support group meetings. There is a lot of psychosocial support for these patients, so even more of a reason to refer patients!
    - Can send an email to # REACH to provide any relevant patient context for providers in that clinic.
    - Front desk can schedule patients for this clinic
- After initiation of treatment:
  - Quantitative HCV RNA is repeated at week 4 of therapy
  - Sustained Virologic Response (**SVR**) defined as undetectable viral load at **12 weeks** following cessation of therapy
- After completion of treatment:
  - If no cirrhosis: Will generally confirm SVR with HCV PCR at 1 year, then no further follow-up if needed unless ongoing risk factors for reinfection.
  - If advanced fibrosis/cirrhosis: Still need liver follow-up due to risk of decompensation or HCC. Will check 1-year HCV PCR plus regular imaging assessment (generally Q6month) with US

20-40% of patients will clear HCV within 2-6 months but will have +HCV antibodies –this is why it is important to wait for VL if Ab+

Hepatitis B

- **Who to screen for hepatitis B?**
  - All adults (ages 18+)! (CDC Guidelines updated in 2023)
- Order: Hepatitis B Surface Ag + Ab & Hep B Core Ab Total

- If positive:
    - All patients with hepatitis B should be referred to liver for management.
    - **Hepatitis B requires routine (q6mo) US screening for HCC**

Community Resources:

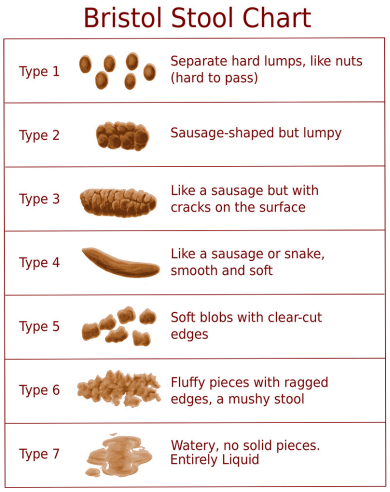
- For patients with presumed MASLD, consider screening for food insecurity
- New York syringe exchange programs for IVDU: **https://nasen.org/directory/ny/**

9. Anorectal Complaints/Constipation

Overview:

(a) Constipation

- Risk factors: advanced age, physical inactivity, low socioeconomic status, depression
- Rome III Constipation definition:
  - 1-2+ of following for 12 weeks in 6 month period:
    - Straining during >=25% defecations
    - Lumpy or hard stools >=25% defecations
    - Sensation of incomplete evacuation >=25% of time
    - Manual maneuvers to facilitate defecation of >=25% of time
    - <3 defecations/week
    - Loose stools rarely present w/o laxative
    - Insufficient criteria for IBS
- Causes include:
  - Normal transit/functional constipation, slow transit (medications, hypothyroidism, hypercalcemia, spinal cord disease), outlet obstruction (rectal mass, pelvic floor dysfunction), lifestyle (low fluid/fiber intake), eating disorders



- Treatment:
  - Address underlying cause if one exists
  - Drink at least 2L/water/day
  - Recommend 20-35 g fiber/day
  - Encourage regular exercise
  - If needed, use fiber supplements/bulk-forming laxatives, osmotic laxatives, stimulants and stool softeners (see below)
  - If refractory, consider sending to GI for discussion of further management, including biofeedback (effective to retrain muscles used in defecation if pelvic floor dysfunction) or surgery (abdominal colectomy + ileorectal anastomosis)

(b) Hemorrhoids

- Symptoms: itching, pain, bleeding; ~75% of patients will have at some point in their life!
- Types:
  - External: painful 2/2 innervation by somatic nerves
  - Internal: generally present as painless rectal bleeding because covered by insensate columnar epithelium
- Treatment:
  - Sitz baths (warm water)
  - Anesthetics (benzocaine cream)
  - Astringents and protectants: witch hazel, zinc oxide
  - Bulk-forming laxatives
  - Topical corticosteroids (Preparation H)
  - Stool softeners
  - If more severe, refer to Colo-Rectal Surgery: external (surgical excision) vs. internal (band ligation, radiofrequency treatment

(c) Pruritus Ani

- Symptoms: itch or burn in perianal area
- Etiology: usually idiopathic or due to "**ITCH**:" Infection, Topical irritants, Cutaneous/Cancer, Hypersensitivity
- Treatment:
  - Keep stools soft, stop itching and/or excessive cleansing, sitz baths (4X/d), avoid tight clothing/moisture trapping fabrics, witch hazel pads (topical antipruritic), topical hydrocortisone (max 1-2 weeks otherwise risk skin atrophy), systemic antihistamines (atarax for symptom relief)

(d) Anal Fissure- tears occurring distal to dentate line in anal canal

- Etiology: usually due to hard BMs/straining or anal insertive sex
  - *Usually ANTERIOR or POSTERIOR to ANUS*

Lateral fissure—think syphilis, TB, carcinoma, HSV, IBD

- Treatment:
    - Keep stools soft, sitz baths, rectal suppository (containing topical steroids, local anesthetics), topical lidocaine, NTG ointment or topical CCB (relaxes internal anal sphincter)

(e) Rectal Bleeding

- Causes of bright red blood:
    - Hemorrhoids, diverticula, UC, infectious colitis, cancer, polyps, AVM, fistula, fissure, chronic solitary ulcer
- Causes of occult bleeding:
    - Gastritis, gastric ulcer, gastric CA, esophageal varices, AVM, esophagitis, duodenitis, duodenal ulcer, polyps, cancer

(f) Condyloma acuminatum

- Etiology: HPV
    - Once infected with HPV, the entire anogenital tract is involved!
    - If one lesion present**,** complete anogenital exam to detect additional growths
- Higher risk if anal intercourse but majority of patients with perianal condylomata have NOT engaged in anal intercourse!
- HPV infection also increases risk of anal cancers, so high risk patients need annual anal pap smears

(g) Fistula

- Most common cause = infection of anal glands
- High index of suspicion for Crohn's Disease

(h) Skin tags

- Usually asymptomatic, remnants of previously thrombosed external hemorrhoids (removed only if symptomatic)

At IMA:

- History—ask patients about:
    - BM frequency, consistency, any change in stools, fluid intake, diet, opioid use
- Evaluate for tenderness, skin breakdown, fistulae, fissures, masses on exam
    - Bring a chaperone into the room when examining (i.e., either an MA or your preceptor)--document this in your note!
- Consider colonoscopy in patients with alarm symptoms, remember **screening colonoscopy for all adults ≥45**
- Diet/exercise counseling!
- Can refer to GI (constipation) or colorectal surgery (other complications) for severe/refractory cases

Social determinants of health:

- Many patients are uncomfortable discussing this topic, but be sure to ask about it in your ROS!
- Major sources of dietary fiber include fruits and vegetables which may not be as available (physically- and financially-speaking) – look into whether patients would qualify for SNAP (quickest way to do this is to refer to SW).

10. GERD / Dyspepsia

Overview:

- Definition of Dyspepsia (ROME IV criteria)
  - **o** >1 of the following symptoms:
    - Postprandial fullness/bloating
    - Early satiation
    - Epigastric pain or burning
- Etiologies: ~25% underlying organic causes, ~75% functional/idiopathic
  - **o** Organic/structural: PUD, GERD, Gastritis, Malignancy
  - **o** Functional: meeting ROME IV criteria with no underlying structural disease (diagnosis of exclusion)
- Selected differential diagnosis (THINGS TO CONSIDER AND/OR EXCLUDE):
  - o ***Coronary artery disease***
  - o Biliary tract disease
  - o Pancreatitis
  - o Metabolic derangements (hypercalcemia)
  - o Chronic mesenteric ischemia (think pretest probability, pain out of proportion with exam)
  - o Gastroparesis
  - o Medications
- Initial workup
  - o History & physical: **Rule out ALARM FEATURES:**
    - Onset age >60
    - Family history of upper GI malignancy
    - Weight loss (>5-10% over 6-12 months)
    - GI bleeding, iron deficiency anemia
    - Progressive dysphagia, odynophagia
    - Chronic Nausea/Vomiting
    - Palpable mass, lymphadenopathy
    - Jaundice
    - Dysphagia/Odynophagia
- Management: If Dyspepsia…
  - o If age >60 or + alarm symptoms → referral to GI for early endoscopy
  - o If age <60 and – alarm symptoms →test for H. pylori
    - If H. pylori positive, treat with quad therapy (PPI + Bismuth + Metronidazole + Tetracycline).
      - Test for cure (when off the PPI) >2 wks after therapy.
      - If they fail, consider ID E-consult for further guidance
    - If H. pylori negative, H2 blocker vs. PPI trial x 8 weeks (no benefit of any specific PPI over another)
      - If patients do NOT respond to PPI after 8 weeks, they should be referred to endoscopy
  - **o Remember that vast majority is functional dyspepsia (meaning normal EGD findings, no PPI response). First-like treatment for functional dyspepsia is TCAs.**
  - o If typical GERD symptoms, educate on diet/lifestyle modifications and consider H2 blocker
  - o Optional Labs: CBC (for iron deficiency anemia), CMP (hepatobiliary etiologies)

DYSPEPSIA AT IMA

- Prevalence of H. pylori high in East Harlem (> 10%)--this means that if positive, you should treat! And resistance rates are high, so should be with quad therapy.
- FUTURE order “Stool H. Pylori Ag (Feces)”
  - o NOT serum Ag as it will be positive if someone has had H. pylori in the past and had been treated
- Order “Consult to Gastroenterology” if + alarm symptoms and needs evaluation for endoscopy
- If predominantly GERD symptoms, consider referral to nutrition to discuss dietary modification.

11. Dysuria / UTI

Overview:

Urinalysis: essential to diagnose conditions such as calculi, urinary tract infection, and even malignancy.

- **Dipstick urinalysis:**
  - Specific gravity: correlates with urine osmolality and concentrating ability of kidneys.
    - Normal: 1.003-1.030
  - pH: normal pH 5.5-6.5. Often correlates with serum pH.
    - Useful in UTI, for example: alkaline urine indicates urea-splitting organism
  - Hematuria: Gross vs. Microscopic (3+ RBCs per high-powered field in 2+ urine samples)
    - Dipstick test detects RBC's peroxidase activity, so a positive test can also mean myoglobinuria or hemoglobinuria.
    - **20% of patients with *gross* hematuria have urinary tract malignancy: require further work up with cystoscopy and abdominal imaging.**
    - Microscopic hematuria work-up depends on patient's risk category
  - Proteinuria: urine protein excretion >150 mg/day (microalbuminuria is 30-150 mg/day).
    - U-dip is typically sensitive to albumin specifically
  - Glycosuria: will be positive if glucose is present at >180-200 mg/dL.
  - Ketonuria: Uncontrolled diabetes, pregnancy, carb-free diets, fasting
  - Nitrites: Present when certain gram-negative and gram-positive bacteria reduce nitrates.
    - Bacteria load is >10,000/mL if positive.
    - Highly specific but not sensitive so a negative result does **not** rule out UTI!
  - Leukocyte esterase: Produced by neutrophils. Suggests pyuria.
- **Microscopic urinalysis:** used to detect cells, casts, crystals, and bacteria.
  - Cells: squamous epithelial cells suggest contamination; transitional epithelial cells are normal; renal tubule cells suggest kidney pathology.
  - Casts: can help localize disease to specific part of GU tract
  - Crystals: calcium oxalate, uric acid, triple phosphate (often seen in alkaline urine, UTI), cysteine
  - Bacteria: 5 bacteria per HPF equates to about 100,000 CFU/mL

*Specimen collection: **mid-stream** and clean-catch; no proven benefit to external cleansing.*

Urinary Tract Infections: Outpatient Evaluation and Management

- KEY QUESTION: *What is the pretest probability of UTI?*
  - If low pretest probability: NO TESTING
  - If intermediate pretest probability: Udip vs. UA/UCx
  - If high pre-test probability: EMPIRIC TREATMENT. Can consider UCx if at risk for resistant organisms.
- Algorithm: Upper vs. Lower Infection
  - Systemic symptoms: fevers/chills, nausea/vomiting
    - If yes→likely upper infection (i.e., pyelonephritis)...consider escalating management/ED referral
    - If no→consider patient substrate *as this determines antibiotic duration*
      - Uncomplicated: premenopausal cis-gendered women
      - Complicated: everyone else
- The most common form of UTI is **acute uncomplicated cystitis**:
  - Symptoms: dysuria, urinary frequency or urgency in healthy, non-pregnant female patients
  - Physical exam: usually normal, but may see suprapubic tenderness in 10-20%.
  - Diagnosis: defined as symptoms above + positive urine culture ($\geq 10^3$ CFU/mL of bacteria).
    - Note, however, that empiric treatment *without* urine culture results is the mainstay of management in the outpatient setting for patients with suggestive features.

At IMA:

- Order: urine-dip and urinalysis for patients with urinary symptoms and intermediate probability
  - Make sure to put patient's full name and DOB on specimen cup; ask MA (blue scrubs) to run urine dipstick when needed
  - If there are WBCs, +nitrite, +leuk esterase, treat empirically
  - +Nitrite is more useful than +leuk esterase

    - If both nitrite and leuk esterase are negative, the chance of UTI is reduced by 40-60%
- Order urine culture if history of recurrent UTIs OR if no improvement with empiric treatment
- Patient-initiated therapy: women with history of UTI are given a prescription with instructions to initiate treatment at symptom onset (an option for certain patients)

12. Low Back Pain

Overview

- Very common, **~80% of adults will have low back pain at some time in their lives**
  - Vast majority of cases will be non-specific low back pain
  - Usually lasts 6-8 weeks and will have at least 1 recurrence
  - Rarely a harbinger of serious medical illness
- Risk factors:
  - Occupation/strenuous work, central adiposity, age >30, female gender, physical inactivity, arthritis, stress, depression, smoking
- Acuity
  - Acute <4 weeks
  - Subacute 4-12 weeks
  - Chronic >12 weeks
- **RED FLAGS** for cord compression/cauda equina syndrome:
  - Bladder/bowel dysfunction (loss of tone), saddle anesthesia, weakness, numbness, B-symptoms (fever, weight loss, night sweats), history of cancer, IVDU
- Physical exam: *Remember* .**IMAMSKLOWBACK** *dot phrase to help document/guide your exam.*
  - Inspection: rash, asymmetry, deformity
  - Palpation: point tenderness vs. paraspinal muscle tenderness
  - Range of motion, sensation, strength, reflexes
  - Special maneuvers:
    - Straight leg raise (sens 90%, spec 30%)—passively raise leg with ankle dorsiflexed; if elicits pain beginning at low back and radiating down the leg at 30-60 degree angle then positive. If pain at >60 degrees nonspecific, as hamstring tightness is a common confounder.

- Differential diagnosis:

Etiologies	Findings
Muscle Sprain/Injury	MOST COMMON! (by a landslide)
Spinal Stenosis (bony overgrowth)	Bilateral radiation; worse with ambulation, better with sitting or leaning forward; "pseudoclaudication"
Herniated disc	Unilateral radiation = Sciatica
Osteoarthritis	Older age, associated with activity and relieved by rest
Metastatic disease	Hx of cancer- breast, lung, thyroid, kidney, prostate. Nighttime pain.
Spinal epidural abscess	Fever, malaise, hx of IVDU or spinal manipulation (ex: epidural)
Vertebral osteomyelitis	Post-procedural, immunocompromised, IVDU
Vertebral compression fracture	Acute onset localized back pain; osteoporosis
Outside the spine: pyelonephritis, pancreatitis, nephrolithiasis, Herpes Zoster	Do not anchor on MSK etiologies!

- IMAGING IS RARELY NEEDED! It will not change management (PT & weight loss FTW!).
  - MRi is only covered by insurance for chronic back pain that has "failed" at least 6 weeks of conservative management, including physical therapy
- Immediate Imaging with MRI only IF:
  - Major risk factor for cancer
  - Recent infection, or current fevers
  - Signs of cauda equina syndrome
  - Severe/acutely progressive neuro deficits
- Treatment: In the acute phase, topical agents (diclofenac and lidocaine) or acetaminophen/NSAIDS. In the long term, **PHYSICAL THERAPY AND WEIGHT LOSS!** No medications have been shown to significantly improve back pain in the long term, so our goal is to first do no harm IF we do choose to prescribe medications.
  - Acetaminophen mainstay of long-term therapy or in those who cannot tolerate NSAIDs

CHOOSING WISELY *is an excellent campaign for high-value care that you can reference for common concerns like LBP. They also have patient resources to explain rationale.*

    - High dose NSAIDs in short-term for acute back pain: Naproxen 500 BID or Ibuprofen 600-800 TID or Meloxicam 15 mg daily x 7-14 days.
    - Muscle relaxants (flexeril, tizanidine): ONLY if visible/palpable spasm. Advise patients to take at bedtime and avoid driving, as can cause drowsiness.
    - Gabapentin/pregabalin if radicular pain (mostly helps with sciatica symptoms, NOT with the pain that localizes to the back). Keep in mind neuropathy dosing of gabapentin is generally at least 600 mg TID, and that gabapentin has significant potential harms.
    - SNRIs, duloxetine, can be considered
    - **Data suggests chronic opiates confer harms >>> benefits. Should NOT be prescribed for chronic low back pain.**
- Patient education is important—provide information as to the cause of their back pain, the favorable prognosis and minimal value of diagnostic testing and advise them to stay active!
    - 70-90% improve within 6-8 weeks
    - Recurrences are common (50% within 6 months) but recurrences also have a favorable prognosis
- Predictors of disabling chronic low back pain:
    - Maladaptive pain coping behaviors (ex: avoid activity out of fear), functional impairment, poor general health status, presence of psychiatric comorbidities or nonorganic signs

Back Pain at IMA

- Referral to "Physical Therapy": Will automatically print a prescription and a list of physical therapy places/contact information at the nursing station (never in the rooms). Wait times can be long at Sinai CAM location so encourage community locations near patient's homes. Make sure to give patients their prescriptions to take with them if they plan to go outside of Mt Sinai.
    - SPEAR PT has multiple locations throughout the city and takes a number of insurance companies
- For radicular pain refractory to conservative management, can refer to Orthopedics or Neurosurgery for consideration of injections or other advanced therapies.

13. Gout

Overview:

Gout = monosodium urate crystal deposition disease

- Caused by extracellular fluid urate saturation which exceeds solubility and the deposits in the joint spaces
- Acute Gouty Arthritis
    - First presentation is usually monoarticular
    - 80% of initial attacks involve the lower extremity, most often the base of the great toe (first MTP joint) called podagra
        - Severe pain, redness, warmth, swelling and disability
        - Onset more often at night — secondary to low cortisol levels
    - Provoking factors:
        - Trauma, surgery, starvation, fatty foods, dehydration, any drugs that raise or lower serum urate concentrations (allopurinol, thiazide or loop diuretics, ASA), alcohol consumption, ingestion of meat/seafood
- Chronic tophaceous gout
    - Collections of solid urate accompanied by chronic inflammatory and often destructive changes in the surrounding connective tissue

Treating Gout at IMA

- If you suspect gout, you should confirm diagnosis with arthrocentesis and analysis of synovial fluid, especially if first attack→ "Consult to Rheumatology," can expedite the appointment by placing an E-consult. Can get away without doing so if typical symptoms for patients and no high-risk symptoms (e.g. high fevers) suggestive of septic arthritis.
- Need to refer to rheumatology for joint aspiration: if needed immediately (i.e., high perceived risk of septic joint), send to ED.
- Treatment algorithm:
    - < 24 hours of symptoms? If yes, can consider colchicine.
    - > 24 hours of symptoms? If so, then prednisone course is more likely to be effective.
    - Any contraindication to NSAIDs (AKI, CKD, CHF, PUD, on A/C)?
        - If not, then treat with NSAIDs- naproxen 500mg q12hrs or indomethacin 50mg q8hrs
        - If yes, treat with steroids. If only 1 joint, consider intra-articular steroids (if patient has established rheumatology care already). If > 2 joints involved, consider oral steroids (prednisone 30-40mg daily until resolution begins, then taper over 7-10 days).
    - Start allopurinol AFTER the acute gouty attack resolves, goal uric acid < 5 if tophi, < 6 without.
        - Consider concurrent colchicine administration as allopurinol can precipitate a flair
        - Remember renal dosing for these medications
    - Avoid thiazide/loop diuretics for blood pressure control in these patients. ARBs (specifically olmesartan and losartan) may be helpful (uricosuric, so will reduce uric acid levels over time).

14. Depression

Overview

Screening:

- **PHQ-2** for every patient once a year. **This is done by MAs during intake, who will alert you to the positive screen under reason for visit.**
  - (1) During the last month, have you often been bothered by feeling down, depressed or hopeless? (yes/no)
  - (2) During the last month, have you often been bothered by having little interest or pleasure in doing things? (yes/no)

Diagnosis:

- Administer the **PHQ-9** if screen positive with PHQ-2 **or for patients with pre-existing depression**.
  - 89% sensitive and 78% specific
  - Consider a depressive disorder if score >5
  - Must consider alternative diagnoses:
    - Bipolar disease, substance use disorder, seasonal affective disorder, adjustment disorder, borderline personality, bereavement, postpartum depression
    - Medications (steroids, beta blockers, interferon), dementia, hypothyroidism, pancreatic cancer, Parkinson's disease, hypercalcemia

Treatment: Psychotherapy vs. Pharmacotherapy

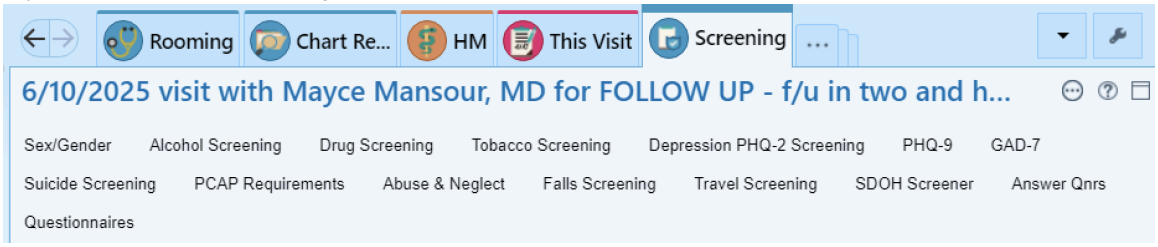
"**+**" signifies that, on average, the medication is more likely to cause the given side-effect

Medication	Usual dose range	Drowsy/ sedating	Insomnia/ activating	Weight gain	Sexual side effects	GI upset	P-450 inhibition	Notes
SSRIs								
escitalopram *Lexapro*	10-20mg qd	0	1+	1+	1+	1+	1+	Tolerated Efficacy
sertraline *Zoloft*	50-200mg qd	0	2+	1+	2+	2+	1+	Tolerated Efficacy
fluoxetine *Prozac*	20-80mg qd	0	2+	0	2+	3+	2+	Wt neutral, no w/drawal
citalopram *Celexa>*	10-40mg qd	0	1+	1+	1+	1+	1+	QT:ECG Monitor
paroxetine *Paxil*	20-60mg qd	2+	1+	1+	3+	2+	2+	SE ++, + w/drawal
SNRIs								
venlafaxine *Effexor XR*†	75-375mg qd	0	2+	0	1+	2+	1+	Tx hot flash, w/drawal
duloxetine *Cymbalta*‡	30-60mg bid	0	2+	0	1+	2+	2+	Tx pain fibromyalgia, np
DNRI								
bupropion *Wellbutrin XL*§	150-450 mg qd	0	2+	-1∫	0	1+	1+	-Smoking +seizures, mild wt loss
NSSA								
mirtazepine *Remeron* ❦	15-45mg qhs	4+	0	3+	0/1+	0	0/1+	Sleep and eat

> may prolong QT – max dose 40mg – check ECG prior to start and upon each titration.
† may raise blood pressure
‡indicated for chronic pain
§lowers seizure threshold
❦ paradoxical effect of increased sedation at lower doses
∫ bupropion is associated with mild weight loss, on average

AT IMA

- PHQ-2 is administered by the MA before the encounter → If positive, MD to administer the PHQ-9 form which you can add in the screening tab



  - Sometimes the patient screens positive but does not get the PHQ-9 form; in that case, you will see a BPA notification to proceed to PHQ-9 & an alert in the health maintenance tab
- Options for mental health referral—*there are many options and this is always changing so confirm referral pathways using the IMA app.*
  - **IMA Behavioral Health is an internal clinic, with orders placed in Epic and front desk able to help schedule.** IMA Behavioral Health has three different options:
    - (1) IMA Eval
      - Clinic staffed by you all during your second year
      - Specifically for evaluation and medical management of patients with depression and anxiety
    - (2) Depression Care Program:
      - Short term (~6 month) talk therapy with clinical SWers
      - Also your pathway for patient to see psychiatry (for severe/refractory depression, or for bipolar disorder, personality disorders, ADD/ADHD, OCD, PTSD, or severe anxiety with functional impairment)
    - (3) IMA Psychiatry: Dr. Dan Suter who can help with trickier management and diagnosis questions
    - **Make it clear what your patient wants when placing this referral! This is a useful referral to place with your preceptor.**
    - Must have PHQ-9 >9 for Depression and Medicaid insurance
  - External referral
    - **Consult to SW** for assistance: IMA SW Triage can assist with identifying resources and making appointments
    - .**IMABEHAVIORALHEALTH** has a number of community resources for longer term therapy, take very similar insurances to IMA (including medicaid plans)
    - Patients can also check with their insurance companies about outside providers.
    - Psychologytoday.com is a great online resource to help find therapists.
  - If active SI/HI, consider sending patient to psych ED—*talk to your preceptor and follow directions in the app*

Social Determinants of Health:

- Risk factors for depression:
  - Substance use, lack of support system, adverse childhood experiences/trauma, chronic illnesses, high frequency utilizers
- Risk factors for suicide: **screen for substance use (potentially increased impulsivity) and weapons (potentially increases lethality)**
  - Isolation, substance abuse, new diagnosis, older, young adults, weapon owners, socioeconomic status, unemployment, history of psychiatric illness
- Protective factors:
  - Social support, religion/faith, caregiver role, forward-thinking, pets

Population Health

- Depression is the most common psychiatric disorder and the most common mental health condition among patients seen in primary care.

- Screening is important because depression can be difficult to detect; untreated depression is associated with decreased quality of life, increased mortality and increased economic burden.

15. Anxiety

Overview:

- **Generalized Anxiety Disorder (DSM-5):**
  - Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least six months, about a number of events or activities (such as work or school performance).
  - The individual finds it difficult to control the worry.
  - The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
  - The disturbance is not attributable to the physiological effects of a substance (eg, a drug of abuse, a medication) or another medical condition (eg, hyperthyroidism).
  - The disturbance is not better explained by another mental disorder
- Consider alternate vs. concurrent diagnoses:
  - Panic disorder—panic attacks characterized by episodes of intense anxiety, diaphoresis, dyspnea
  - Social phobia
  - Obsessive Compulsive Disorder
  - Post traumatic Stress Disorder
  - Depression
  - Hypochondriasis—worried principally about medically unexplained symptoms
- Risk factors:
  - Female sex, poverty, recent adverse life events, chronic physical illness, chronic mental disorder, parental loss or separation, low affective support during childhood, history of mental problems in parents

AT IMA

- **Screen with GAD-7**—positive score is >8 points. Input directly into "GAD-7" under the Screening tab in EPIC (as with PHQ-9, noted above).
  - 5-9- mild
  - 10-14- moderate
  - 15-21- severe; treatment warranted
- History: ask about substance use, medical history, family history of psychiatric illness, social history (history of sexual/physical/emotional abuse); consider side effects from medications
- Labs to rule out organic causes are **NOT** warranted unless other symptoms present to suggest secondary causes: TSH, CBC, BMP, EKG
- Treatment: *See resources listed above*
  - Cognitive-behavioral therapy
  - 1st line pharmacotherapy: SSRIs and SNRIs (see chart under Depression section)
  - Other: buspirone, pregabalin
  - Can use hydroxyzine prn for episodic anxiety attacks.
    - Benzodiazepines are effective however risk of dependence and tolerance, so avoid prescribing.
  - **Referral to IMA Behavioral Health for further evaluation of anxiety for patients with GAD7>8 who have Medicaid (similar options as depression)**

16. Alcohol and Drug Screening

Overview:

- Unhealthy alcohol and other drug use are among the most common causes of preventable death and often goes unrecognized
- Goal: screen all adult primary care patients annually to identify individuals with unhealthy use and to provide a brief intervention
    - **SBIRT** (**S**creen, **B**rief **I**ntervention, **R**eferral to **T**reatment)
- Recommended limits of alcohol use:
    - For healthy men up to age 65: no more than 4 drinks/day and no more than 14 drinks/week
    - For healthy women, and for men over age 65: no more than 3 drinks/day and no more than 7 drinks/week
- Tools: can be found under Screening Tab as for PHQ-9 and GAD-7.
    - **AUDIT-C:** brief 3 question alcohol screen that can help identify persons who are hazardous drinkers or have active alcohol use disorders
    - DAST-10: 10 yes/no items; has some utility in assessing severity

Alcohol/Substance Abuse Screening at IMA

1st: Single-Item Screening Questionnaire should be **administered by MAs: Strongly suggest you screen your own patients, as answers often differ to MD provider at any new patient appointments and at their annual physical visits.**

- Do you sometimes drink beer, wine, or other alcoholic beverages:
    - If yes, how many times in the past year have you had 4 (for women) or 5 (for men) drinks in a day?
- How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons?

2nd: If positive, patient is handed the Audit-C (for alcohol) or the DAST-10 (for drug use)

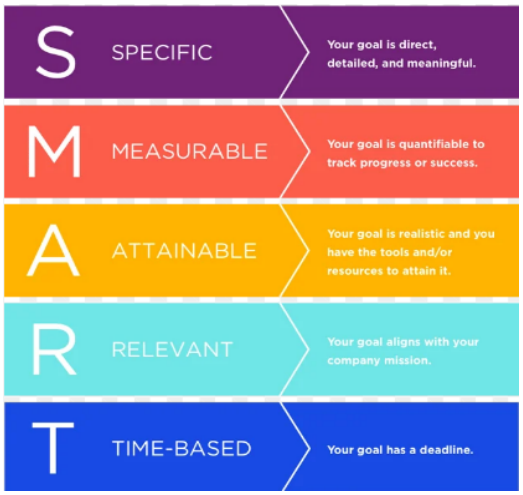
- **These screening questions should be answered directly in Epic under Screening Tab.**

- Intervene based on risk:

	AUDIT-C	DAST-10	Intervention
Low Risk	0-2 women, 0-3 men	0-2	Update alcohol history
Moderate Risk	3-7 women, 4-7 men	3-5	Brief intervention using the dotphrase .alcoholdrugintervention
High Risk	8+	6+	Place SW referral and provide a warm handoff for more extensive substance abuse treatment vs **referral to IMA REACH clinic**

Components of the Brief Intervention:

- Feedback on the patient's personal risk or impairment including physical or lab findings
- Open-ended question asking what the patient thinks of the feedback
- Explain why change is important
- Provide clear advice to change (example: abstinence vs. cutting down vs. drinking in less risky situations)
- Generate "SMART" goals and discuss strategies to achieve them



Community Resources (see app for contact info):

- **IMA REACH Clinic** (see App for information on referrals): First and Best option.
- **Refer to SW** for external resources.
- Mount Sinai West/St. Luke's Addiction Institute of NY is a useful resource for more severe SUD with concurrent psychiatric illness.

17. Smoking Cessation

Overview:

- Smoking is the leading preventable cause of death
- 2/3rd of smokers say they want to quit and 50% of smokers report attempting to quit within the past year; however, only 3-6% of smokers who make an *unaided* quit attempt at still abstinent 1 year later
- Primary barrier to quitting is addictiveness of nicotine and withdrawal syndrome
    - Symptoms peak in first 3 days of cessation and subside over the next 3-4 weeks
    - Symptoms include increased appetite, weight gain, changes in mood, insomnia, irritability, anxiety, difficulty concentrating, restlessness

5 A's Algorithm:

- **Ask-** must ask all patients if they have ever smoked cigarettes (and ask about 2nd hand smoke!)
    - If yes → frequency of use, products used (cigars, hookahs, e-cigs), degree of nicotine dependence (ex: how soon after waking up?), history of previous quit attempts, readiness to quit
- **Advise**
    - Clear evidence that brief clinician advice to quit (< 5 minutes) at each encounter can increase smoking abstinence rates
- **Assess** readiness to change and tailor next steps to stage
    - Pre-contemplation (not ready to quit)
    - Contemplation (considering a quit attempt)
    - Preparation (actively planning a quit attempt)
    - Action (actively involved in a quit attempt)
    - Maintenance (achieved smoking cessation)
- **Assist**
    - Set a quit date and ensure access to appropriate resources (if patient in preparation/action stage)
    - Have a treatment plan that combines behavioral and pharmacologic treatments
        - (1) Nicotine withdrawal symptoms → nicotine replacement pharmacotherapy
        - (2) Situations where they usually smoke (ex: with their morning coffee, end of a meal) → counseling

Pharmacologic Options:

- **Nicotine replacement therapy (NRT)—**combination NRT is most effective
    - Patch is used to control baseline nicotine withdrawal symptoms
        - Initial dose of patch depends on # of cigarettes smoked and then gradually tapered as nicotine withdrawal symptoms subside.
            - >10 cigarettes/day: Begin with 21 mg/day patch x 6 weeks before taper
            - ≤10 cigarettes/day: Begin with 14 mg/day patch x 6 weeks before taper
        - Onset of benefit slow (several hours), so not a PRN option for when craving strikes.
    - Add a short-acting form (lozenge/gum) to control cravings on an as-needed basis
        - *"Chew and park"* is recommended—chew until the nicotine taste appears, then park in the buccal mucosa until taste disappears → chew more and repeat for 30 minutes until all the nicotine has been released
- **Varenicline (Brand name: Chantix)**
    - Partial agonist at the alpha-4-beta-2 subunit of the nicotinic acetylcholine receptor which works to (1) partially stimulate the receptor and decrease symptoms of nicotine withdrawal and (2) blocks nicotine from tobacco smoke from binding to the receptor thereby decreasing the rewarding aspects of smoking
    - Advise patients to set a quit date 1 week after starting varenicline
    - Dose: prescribe "starter pack" + "continuation pack" (via Order Sets in EPIC)
    - **Safe and effective to give in addition to NRT options listed above.**
- **Bupropion**
    - Enhances CNS noradrenergic and dopaminergic release
    - Also takes 5-7 days to reach steady state so advise patient to quit 1 week after starting
    - Dose: start with 150mg/day x 3 days then increase to 150mg BID thereafter x12 weeks

AT IMA / Community Resources:

- Be sure to get credit for the screening you do! To do so, do one of the following:
  1) In Screening Tab, choose option “Tobacco Screening” and click on the verified button
  2) In History Tab, under smoking tab, click on “Mark as Reviewed” – must review on every patient every 18 months
- 1-800-QUIT-NOW: Quitline and access to resources
- In the US, insurance plans are required to cover tobacco-cessation interventions including behavioral counseling and medications approved by the FDA
- The Margarita Camche Smoking Cessation Program is a useful resource for patients https://www.mountsinai.org/care/pulmonology/services/smoking-cessation-program

18. Asthma

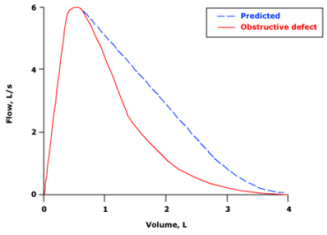
Overview:

Asthma= chronic inflammatory disorder of the airways characterized by bronchial hyper-responsiveness, the tendency of airways to narrow excessively in response to a variety of stimuli

- Typically diagnosed at a young age (75% before age 7) but can develop at any age
- History— recurring, episodic symptoms of dyspnea, wheezing, cough and presence of triggers
    - Common triggers: exercise, cold air, allergens (pollen, trees, grass, weeds), pets, mites, molds, cockroaches, rodents, moisture/dampness
- Exam findings: wheezing; can look for nasal polyps, skin changes consistent with atopic dermatitis

Evaluation:

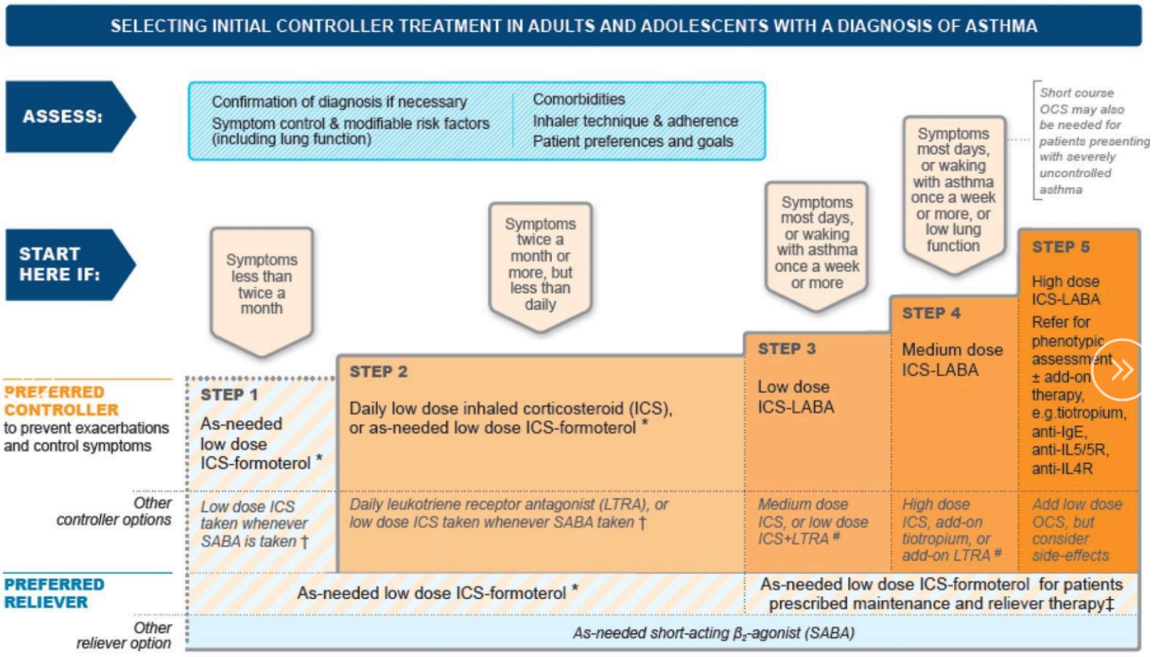
- History or presence of respiratory symptoms that are episodic + documented variable expiratory airflow obstruction
- **Pulmonary Function Testing (PFT w/methacholine challenge). This is used to:**
    - Calculate FEV1/FVC ratio
        - Restrictive- normal ratio and FVC <80% predicted
        - Obstruction- reduced ratio (0.70) or scooped/concave appearance to expiratory portion of flow-volume loop
    - Assess reversibility of obstruction with administration of a bronchodilator (can click albuterol)
    - Characterize severity of obstruction (% of normal predicted value)
    - For suspected asthma, order bronchoprovocation testing (methacholine) to stimulate bronchoconstriction and prove hyperresponsiveness



- **Determine Severity:**
    - *Intermittent*= <2 days/week and <2x/month nighttime awakenings
    - *Persistent*
        - Mild: >2 days/week but not daily and 3-4x/month nighttime awakenings
        - Moderate: daily symptoms and >1x/week nighttime awakenings but not nightly
        - Severe: throughout the day, nightly awakenings, need to use SABA several times/day

Management:

- 4 components:
    - Routine monitoring of symptoms and lung function: Monitor with peak flow (PEF)
    - **Patient education: Must understand how to use inhalers properly! Consider referral to CLINICAL PHARMACIST to help with education.**
    - Controlling environmental triggers (e.g., food in containers to avoid cockroaches, avoiding cloth curtains, etc)
    - Pharmacologic Step-Based Therapy (GINA Guidelines)



**SABA= albuterol
**ICS= beclomethasone, budesonide, flunisolide, fluticasone, triamcinolone acetonide, mometasone
Combination ICS + LABA= fluticasone/salmeterol (“Advair”) or budesonide/formoterol (“Symbicort**”)
**LTRA= leukotriene receptor antagonists such as montelukast (singulair)

GINA Guidelines were updated in 2022 with some big changes. First, recommend that for Step 1 instead of SABA PRN you either: 1) Use SABA PRN but take dose of inhaled steroid at the same time from separate inhaler, or 2) (preferred)** Use a LABA/ICS combination (Symbicort in most studies) PRN. **LABA-ICS is easier and the current standard.** FYI, insurances including medicaid should cover Symbicort. That said, just using PRN albuterol for mild intermittent asthma is still reasonable and what many providers are doing.**

Asthma at IMA:

- Suspect asthma? Get PFTs for the patient. Place order **Pulmonary Function Test w/ Bronchodilator & METHACHOLINE challenge** so you get ALL the information you need to make the diagnosis.
- Provide the PFTs scheduling phone number using .CHECKOUT, since patient will need to call to schedule
- Insurance formularies are always changing, but EVERY insurance will cover one medication in each class. So before you call for a prior authorization, find the formulary online or call the pharmacy to check to see which LABA/ICS combination is covered–usually budesonide-formeterol (AKA **Symbicort)**. Will save you time!
- **If asthma is uncontrolled, consider the IMA Asthma clinic, which is staffed by our division head Dr. Wisnivesky and you all as PGY3s. The front desk can schedule these appointments.**

19. Sinusitis/Pharyngitis

Overview:

- **Acute Viral Rhinosinusitis: VAST MAJORITY**
  - Most common organisms: *Rhinovirus, parainfluenza virus, coronavirus*
  - Symptoms usually resolve or begin to improve after 7-10 days
  - Symptoms peak in severity between days 3-6
  - Usually no fevers
  - Management:
    - **No treatments have been shown to shorten clinical course**
    - **Supportive care**
      - NSAIDs, acetaminophen
      - Saline irrigation
      - Oral decongestants (e.g., pseudoephedrine), intranasal decongestants
- **Acute Bacterial Rhinosinusitis: RARE (2% of cases)**
  - Most common organisms: *Strep pneumo, H. flu, Moraxella*
  - Diagnosis with IDSA Criteria:
    - Symptoms more than 10 days without improvement, OR
    - Onset of severe symptoms or signs of high fever and purulent discharge/facial pain for at least 3 consecutive days at beginning of illness
    - Symptoms of typical viral illness that are slowly improving but then worsen again with more severe symptoms after 5-7 days– *"double-sickening"*
  - Treatment
    - Patients with stable symptoms can be observed for additional 7-10 days if low risk for complications without giving antibiotics
    - Antibiotics result in small reduction in symptom burden and duration, but at the cost of increased adverse events (often minor, such as GI upset from antibiotics)
    - **Recommend supportive care**
    - **If decision made to give antibiotics:**
      - **First-line Augmentin 875-125mg BID for 5-7 days**

Antibiotics for ABRS: NNT 10-15, NNH 8 and ~80% resolve on their own

- **Pharyngitis**
  - Differential of etiologies:
    - Viral etiologies (MAJORITY of cases): rhinovirus, adenovirus, influenza, coxsackie, coronavirus, HSV-1
    - Bacterial: Group A Strep, Group C/Group G Strep, less common are Chlamydia, Mycoplasma, Diphtheria (tightly adherent grey membranes), Fusobacterium, Neisseria gonorrhea
    - Infectious mononucleosis (EBV, CMV)
    - Primary HIV: present with fever, rash, adenopathy, fatigue, myalgias
    - Epiglottitis: sore throat, fever, odynophagia, fever, muffled voice, drooling, stridor
    - Peritonsillar abscess: severe sore throat, fever, "hot potato" voice, pooling of saliva, trismus (spasm of jaw muscles)
    - Submandibular infections (Ludwig's angina): fever, chills, mouth pain, stiff neck, drooling, dysphagia
    - GERD, post-nasal drip, thyroiditis foreign body
  - Can quickly rule out dangerous stuff above by general appearance and lack of alarm symptoms (voice changes, drooling, high fevers).
  - **Centor Criteria:** Used to decide on rapid strep testing/throat culture, estimates probability that pharyngitis is streptococcal
    - **(1) Age 3-14**
    - **(2) Fever >38 C**
    - **(3) Tonsillar exudate**
    - **(4) Tender anterior cervical LAD**
    - **(5) Absence of cough**
      - If score -1, 0, 1: no testing, no empiric treatment
      - If score 2-5: rapid strep testing and treat if positive

Rapid Ag Detection Test sens 70-90% and spec 90% therefore in most cases you do not need to obtain cultures

  - Why treat Strep pharyngitis?
    - Reduce severity and duration of symptoms
    - **Reduce risk of complications:**

        - Abscess, otitis media, sinusitis
        - Scarlet fever
        - Glomerulonephritis
        - Rheumatic Fever
        - Strep Toxic Shock Syndrome
    - Reduce risk of transmission by decreasing infectivity
- **Treatment:**
    - First line: PO Penicillin V: 500mg BID or TID for 10 days
    - Alternates: amoxicillin 500mg BID x 10 days
    - If penicillin allergy: cephalexin, azithromycin, clindamycin
    - No longer contagious after 24hrs of antibiotics

Sinusitis/Pharyngitis at IMA:

- Swabs to test for strep pharyngitis can be found in the top drawer of all exam rooms (for exact swab, see picture in Influenza section; labeled as “Cotton Tipped Applicator”).
- If you want to test for Strep, let the RN (teal scrubs) or LPN (red scrubs) know first so they can set up the test kit→ swab the patient→return swab to RN/LPN. You can start precepting while you are waiting for the results to return.
    - **Order: Strep A Screen (POCT)**

20. Upper Respiratory Infections & Influenza

Overview

- Main aim is TRIAGE: Differentiating bacterial syndromes (Strep pharyngitis, Pneumonia, Sinusitis) vs. Influenza/COVID vs. "Viral URI" ("the common cold")
- Illness Scripts for common items in differential:
    - Strep Pharyngitis: Fever, pain worse near onset of symptoms, lack of cough. On exam, tonsillar erythema/exudates and tender anterior cervical lymphadenopathy
    - Bacterial Pneumonia: Fever, productive cough. Abnormal pulmonary examination.
    - Bacterial Sinusitis: Fevers, sinus pain/pressure, purulent nasal discharge
    - Allergies: History of similar symptoms in preceding years, history of atopy or other allergies, watery nasal discharge with post-nasal drip

Non-Influenza Viral Upper Respiratory Infection (= Viral URI = Common Cold)

- **Test for COVID19**—even if mild disease, important for community spread and public health tracking.
    - Patient should be advised to wear a mask until results return
    - Consider **Paxlovid (nirmatrelvir and ritonavir)** therapy for appropriate patients and within 5 days of symptom onset.
        - Paxlovid must be renally dosed AND you must check for any drug interactions with their home medications. with the recommendation for them to hold those meds until Paxlovid course is completed
        - More on this in the IMA App (under Infectious Disease/public Health tab)
- That said, > 200 viruses can cause the common cold
- Symptoms: sore throat, cough, mild fatigue, runny nose with clear nasal discharge. Fevers are unusual. Examination is typically normal or with minimal abnormalities.
- Management: Nearly all therapies for viral URIs have limited efficacy and evidence, so goal is often to **target most bothersome symptoms with 1-2 medications**. By symptom, options include:
    - **PAIN:** Acetaminophen, NSAIDs
    - **RUNNY NOSE:** Antihistamines, Nasal Saline, Intranasal Ipratropium, Decongestants (pseudoephedrine, phenylephrine)
    - **COUGH**: Dextromethorphan-Guaifenesin ("Robitussin"), Benzonatate ("Tessalon Pearls")
- Other therapies have generally not proven effective. Specifically, Vitamin C does not reduce duration of symptoms. Zinc has some benefit in reducing duration of symptoms but has been associated with anosmia (especially the intranasal formulation) so is often avoided.

Influenza

- Influenza: Fever, productive cough, myalgias, significant fatigue.
- **TESTING FOR INFLUENZA:**
    - During flu season, testing should be obtained for patients who have consistent symptoms and are: 1) Immunocompetent patients at high-risk for influenza complications (e.g. significant COPD, unstable CAD, elderly patients), 2) Immunocompromised patients (e.g., on PO steroids, DM), OR 3) Hospitalized patients
    - **OF NOTE**, immunocompetent patients who are not at high risk for complications DO NOT NEED TO BE TESTED since there is no clear benefit from treatment (i.e., do not do a test if it will not change your management). Decisions re: management should be made based on clinical judgment alone. This is because the rapid test has limited sensitivity and viral culture is too slow to impact antiviral medication decisions.
- Management: Supportive care and therapies as for other viral URIs (as above)
- LOW-RISK patients who present within 48 hours of symptom onset with strongly suggestive symptoms can be treated with oseltamivir to reduce symptom duration. Oseltamivir 75mg BID x 5 days is standard.
- HIGH-RISK patients are generally tested for influenza. IF test is + OR if your pre-test probability of influenza is very high, would treat with Oseltamivir (75 mg BID x 5 days) regardless of symptom onset (e.g. even if > 48 hours after onset).

VIRAL URI / INFLUENZA AT IMA

Nursing can help identify and provide the appropriate swabs but it is the provider responsibility to actually obtain the test.

Population health/Systems-based practice:

- All patients should be offered vaccinations. The vaccine becomes available at IMA in early September and is given through the end of Influenza season (mid-to-late spring depending on CDC guidance).
- **If patients decline, mark it DECLINED in the health maintenance section.** *FYI, this is one of the only metrics that you "get credit" for just asking on your care care gap reports!*

21. Headaches

Overview:

For PCPs in the outpatient setting, goal is to TRIAGE and treat low-risk headache syndromes

- OUR TASK:
  - 1) Quickly rule out unusual primary headache syndromes AND concerning secondary headaches
  - 2) Differentiate Tension-Type and Migraine Headaches: POUND criteria (see below)
- Causes of **primary headaches:**
  - Most common: **tension-type and migraine**
  - Cluster headaches
  - Trigeminal neuralgia
  - Hemicrania continua
  - Exertional headache
- Causes of **secondary headaches**—to consider briefly
  - Sinusitis-allergic or infectious
  - OSA, particularly if morning headaches
  - Cerebral Hemorrhage (Subdural, SAH)
  - Temporal Arteritis-vision changes, temporal tenderness to palpation
  - CNS Malignancy
  - Meningitis
  - Glaucoma
  - Hypertensive Emergency
- Ruling out concerning headaches: **RED FLAG SIGNS:**
  - New headache in older (age > 50) adults
  - Head trauma
  - Previous headache history but with significant change in frequency/severity
  - Systemic illnesses (immunocompromised, malignancy)
  - Neurologic abnormalities on examination
  - **SNOOP Mnemonic: S**ystemic signs and symptoms, **N**eurologic Symptoms, **O**nset new or changed and patient >50 years of age, **O**nset in thunderclap presentation, **P**apilledema/**P**ulsatile tinnitus/**P**ositional provocation/**P**recipitated by exercise

Tension-Type vs. Migraine Headache

- 3 most important features that distinguish migraines from tension-type headaches:
  - 1) Disabling pain (e.g. patient will leave work, stop their activities; may go lie down in dark room) 2) Nausea, and/or 3) Photophobia
  - **POUND Criteria:** (≥2/5 likely migraine, ≥3/5 has a LR of 24 for migraine)
    - **P**ulsatile/pounding
    - h**O**urs: 4-72hrs
    - **U**nilateral
    - **N**ausea
    - **D**isability
- TENSION-TYPE HEADACHES:
  - Generally lack associated symptoms
  - Abortive Treatment:
    - Acetaminophen (1000mg) vs. NSAIDs first-line (ibuprofen 800mg)
    - Excedrin (Acetaminophen + ASA + Caffeine) can be effective as second-line therapy
  - Prophylactic Treatment: TCAs can be effective if frequent
- MIGRAINE HEADACHES:
  - Abortive Treatment—*early aggressive treatment!*
    - Excedrin for mild headaches
      - Caffeine helps!
    - Triptans for anything more severe
  - Prophylactic Treatment: Lots of options, need to carefully consider patient characteristics and potential for side effects.

Triptan dosing:
PO: *50mg is starting dose. If ineffective after 30 mins, prescribe Excedrin. If ineffective after 2 hours, repeat dosing.*
Since only 10 tabs covered per month, ***prescribe 100mg*** *tablet and ask pt to split in half.*
No more than 8-10x/month

- PPX should be considered when frequency is >4 days/month and is always appropriate if >10 days/month

HEADACHES AT IMA

- For treatment-resistant or unclear headache patterns, can refer to neurology clinic but given the long wait times (>1 year) **consider a Neurology E-Consult for assistance in management**
  - If concerned, can expedite appt using the overbook email address in the IMA app
  - Neuro may refer to their headache-specialty clinic after initial consultation.
- Sumatriptan (PO and Intranasal) is covered by all managed Medicaid and Medicare plans in NYS so is generally the go-to triptan (no data exists suggesting one triptan is superior to another). Rizatriptan and Zolmitriptan tend to be covered by all plans as well, so if a patient fails one triptan may make sense to try another.
- Propranolol, Amitriptyline, and Topiramate are generally available from all insurance plans, so have lots of options for prophylactic therapies for migraines.

22. Dizziness

Overview: Differentiate LIGHTHEADEDNESS vs. VERTIGO (if possible), as this will help with DDX and work-up

Vertigo Pathophysiology: PERIPHERAL (most common) vs. CENTRAL (consider pretest probability)

- **Peripheral Vertigo:**
  - *Benign positional vertigo: MOST COMMON!*
    - Symptoms lasting SECONDS to MINUTES
    - Caused by abnormal movement of endolymph due to detached otoliths that settle in the most dependent portion of the inner ear, usually the posterior semicircular canal.
  - *Meniere's disease:*
    - Symptoms lasting HOURS, concurrent changes in hearing and/or tinnitus
    - Poorly understood pathophysiology
    - Most commonly thought to be due to increased endolymph pressure, leading to breaks in the intralabyrinthine membranes, and subsequently vertigo.
  - *Vestibular Neuronitis/Labyrinthitis*
    - Symptoms lasting DAYS, usually preceded by viral prodrome
    - Caused by spontaneous mononeuropathy of the vestibular division of the eighth cranial nerve on one side. Mostly thought to be virally mediated.

- **Central Vertigo:** *Consider pretest probability!*
  - Vertebral insufficiency, severe carotid artery stenosis
    - Vertical/rotational nystagmus, neurologic deficit, sudden onset with symptoms lasting days, need for assistive device

Special Maneuvers

- *Dix Hallpike maneuver:* designed to **reproduce peripheral vertigo**
  - Positive test must have 3 components
    - Reproduces the patient's vertigo and nystagmus
    - Has a latency period of several seconds to a minute before the vertigo and nystagmus are provoked
    - The vertigo and nystagmus resolve in <1 minute.
- *Head impulse test:* designed to **distinguish central and peripheral causes**
  - ONLY perform in patients with sustained vertigo!
  - Peripheral disease is suspected when patient has abnormal test results
- **Other tests:**
  - *Orthostatic hypotension:* check for anemia, electrolytes, and renal function
  - *Menieres:* audiometry, syphilis testing
  - *Suspected posterior fossa disease:* truncal ataxia, skew deviation, saccadic pursuit, and direction-changing nystagmus, MRI

Treatment

- *BPPV:*
  - **Epley maneuver**: designed to move the patient through sequential positions to rid the affected canal of the abnormal otoliths, move them back into the saccule. Effective to resolve symptoms in 1 week for 74% of patients treated.
    - Indicated in patients with positional vertigo and a positive Dix-Hallpike test.
  - Self-administered canalith repositioning can be done daily at home with instructions.
    - Can refer to youtube (or to physical therapy) to practice these maneuvers.
  - **Medications:**
    - literature strongly advises **against** antihistamines and benzodiazepines because they increase rates of falls and urinary retention in older adults.
    - But we still do see patients on **meclizine:** H1 antagonist. Start at 25mg, and can go up to 100mg daily in divided doses. Likely just helpful because makes patients sleepy.
- *Meniere disease:*
  - Referral to audiologist or otolaryngologist as hearing loss may worsen over time.
  - Vestibular rehabilitation: physical therapy that allows patients to improve central nervous system compensation.
  - Sodium restriction

    - Thiazide diuretics
- *Vestibular neuronitis:*
    - Difficult to treat, but usually resolves with time. Can consider steroids but data is iffy.
- *Light-headedness:* usually involves mediation adjustment or treatment of underlying cause.
- *Multiple sensory deficits:* can use physical therapy, home evaluation for environment changes as well giving assistive devices to patients can help.

Prognosis:

- Follow up in 4-6 weeks. Most dizziness will resolve in 1 month.
- For BPPV, if symptoms do not resolve, can repeat Epley maneuver again vs. Refer to ENT vs. to Occupational Therapy for vestibular rehab (particularly if recurrent or resistant to treatment)
- Must consider patient safety! Evaluate whether their job situation is safe, and see if there is family support for the patient.
- Consider ambulation assistive devices to avoid falls