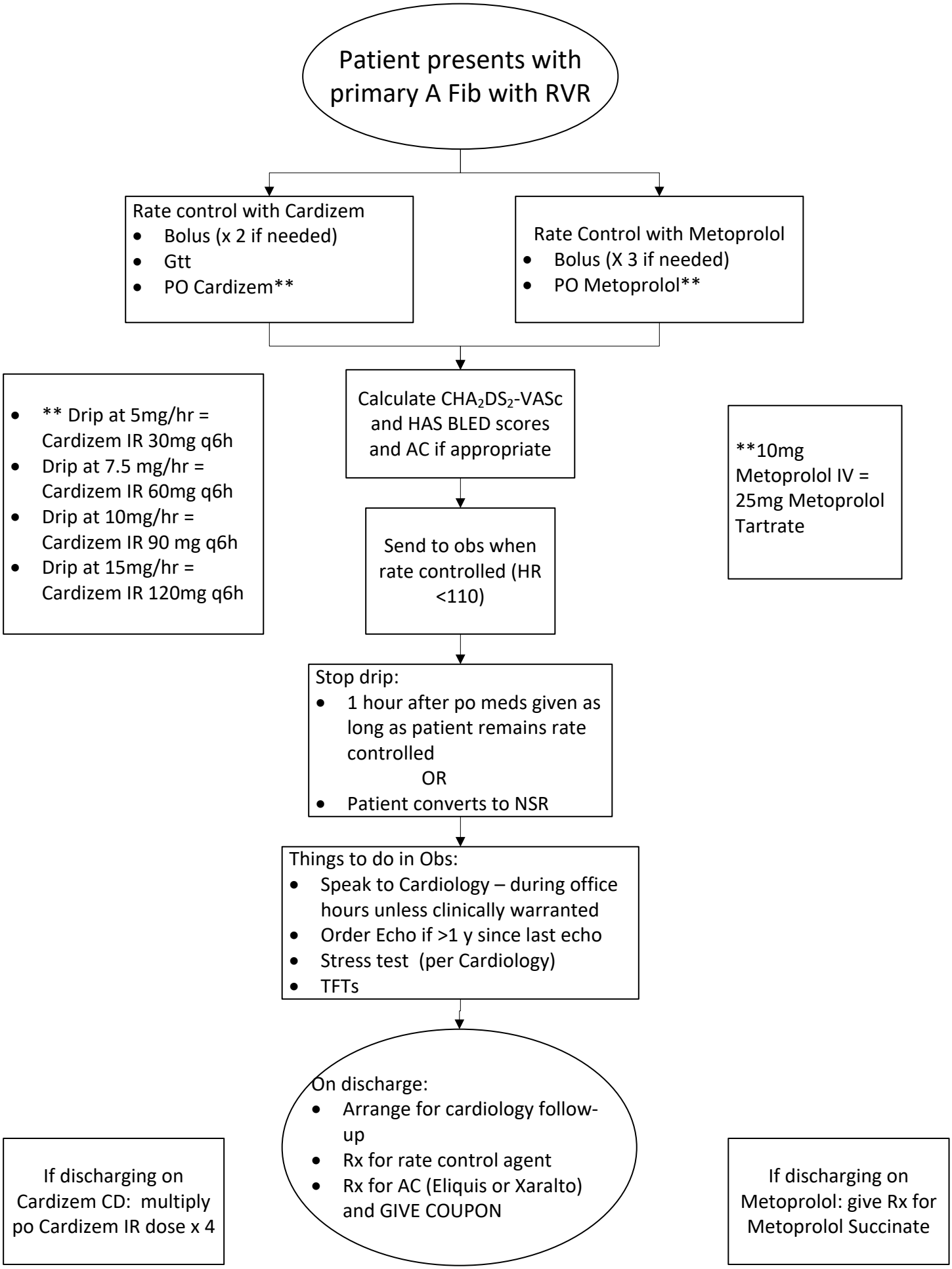
Patient presents with primary A Fib with RVR
Rate control with Cardizem
Bolus (x 2 if needed)
Gtt
PO Cardizem**
Rate Control with Metoprolol
Bolus (X 3 if needed)
PO Metoprolol**
** Drip at 5mg/hr = Cardizem IR 30mg q6h
Drip at 7.5 mg/hr = Cardizem IR 60mg q6h
Drip at 10mg/hr = Cardizem IR 90 mg q6h
Drip at 15mg/hr = Cardizem IR 120mg q6h
Calculate CHA2DS2-VASc and HAS BLED scores and AC if appropriate
**10mg Metoprolol IV = 25mg Metoprolol Tartrate
Send to obs when rate controlled (HR <110)
Stop drip:
1 hour after po meds given as long as patient remains rate controlled
OR
Patient converts to NSR
Things to do in Obs:
Speak to Cardiology – during office hours unless clinically warranted
Order Echo if >1 y since last echo
Stress test (per Cardiology)
TFTs
On discharge:
Arrange for cardiology follow-up
Rx for rate control agent
Rx for AC (Eliquis or Xaralto) and GIVE COUPON
If discharging on Cardizem CD: multiply po Cardizem IR dose x 4
If discharging on Metoprolol: give Rx for Metoprolol Succinate

ED/Obs Guidelines for the Management of Primary Acute Atrial Fibrillation
Department of Emergency Medicine, Northern Westchester Hospital

Inclusion:

- Patients presenting with primary acute atrial fibrillation – not a fib thought to be secondary to another acute medical process.
- Patients with atrial fibrillation with no other primary problems, defined in exclusions.

Exclusions: Other underlying pathology/precipitants including, but not limited to: **sustained, uncontrolled rates > 110 bpm despite treatment in the ED, sepsis/infection, ACS, acute decompensated congestive heart failure, new renal failure, bleeding / symptomatic anemia (Hg <7), alcohol withdrawal, significant hemodynamic instability (SBP<90 or MAP<65), concern for cardiogenic shock, workup likely to require 2 overnights, requires dialysis, or other inpatient procedures.**

Rate Control:

DILTIAZEM:

- Diltiazem 0.25mg/kg IVP (max 25 mg IV); followed by diltiazem drip at 5 mg/hr ASAP
- If HR >100 – 2nd bolus of 0.35mg/kg IVP (max 25mg IV) and increase drip rate to 10mg/hr
- Once rate < 100-110 bpm, send to obs on diltiazem drip if SBP is >90
- Start oral medications **ASAP** (in the ED!)
  - Drip at 5mg/hr – 30mg Cardizem IR q6h
  - Drip at 7.5mg/hr – 60mg Cardizem IR q6h
  - Drip at 10mg/hr – 90 mg Cardizem IR q6h
  - Drip at 15mg – 120 mg Cardizem IR q6h
- RNs will stop drip 1 hour after po given per their protocol as long as rate is controlled
- If patient requires an additional bolus in obs, the MD/ACP must push it or order it IV piggyback
- If patient converts to NSR – > stop drip immediately and get EKG. Start oral CCB or BB (if not done already). A conversion pause is **not** a contraindication to oral CCB or BB rx
- Diltiazem is contraindicated in 2nd, 3rd degree heart block (unless patient has a pacemaker), acute MI, acute CHF, or hypotension.

METOPROLOL:

- Metoprolol 5-10mg IVP, repeat dosing q5-20min. Maximum total dose of 15 mg in most settings. Follow IV bolus dose with oral rate control agent as soon as possible.
- Goal HR < 100 -110 bpm and place in obs if SBP is > 90
- Start oral medications ASAP based on required IV dosing for initial response: 10mg IV metoprolol roughly equivalent to 25mg metoprolol tartrate PO q6h.

- Contraindications to metoprolol: 2nd and 3rd degree heart block, cardiogenic shock, pheochromocytoma, active COPD/Asthma. Use cautiously in acute CHF.

Refractory rate control, if sustained rates >110bpm despite adequate dosing, consider:

- Additional dosing of above agents.
- Trial of an alternate agent: if no improvement with IV diltiazem bolus, trial metoprolol IV bolus and vice versa
- Consider rhythm control if a candidate (electrical or chemical cardioversion) – discuss with cardiology.

Anticoagulation

Calculate CHA_2DS_2-VASc score:

0: start 325mg ASA qd

>=1: anticoagulate if no possible contraindications **and** HAS-BLED score <2. If patient has contraindication or HAS-BLED> 2 then discuss with cardiology before anticoagulating

Possible Contraindications:

- Neurosurgical procedure, Head Trauma, Stroke within past 3 months
- Severe, Uncontrolled Hypertension
- Active Bleeding or Acute Anemia
- Major trauma: must consider site, extent, and time interval since event
- Platelets less than 100K, baseline aPTT> ULN, hepatic failure
- Previous ICH: must consider cause and time interval
- Intracranial or spinal tumor
- Severe Bleeding Diathesis

HAS-BLED score (calculate on MD Calc):

0/1 = Low risk – can start AC

2 = Moderate risk – weigh risk and benefits

3 = High risk – consult with cardiology before starting AC

Rivaroxaban (Xarelto):

- 20mg qd if GFR> 50
- 15 mg qd if GFR <50 or on dialysis

Apixaban (Eliquis): 5mg PO BID

- 5 mg bid **unless** patient has any 2 of the following: Age ≥ 80 years, weight ≤ 60kg, or Cr ≥ 1.5 mg/dL, then reduce dose to 2.5 mg bid.

For Xarelto and Eliquis: Avoid in antiphospholipid syndrome patients, careful in patients already on dual antiplatelet or SSRIs (consider Coumadin instead). Must warn patients not to suddenly discontinue drug (should be bridged with another anticoagulant) due to risk of stroke

If not candidate for a DOAC, can start Lovenox and bridge to Coumadin or stay on Lovenox in consultation with cardiologist.

- Coumadin 2-5mg PO Daily
- For patients with high risk for VTE, consider bridge therapy with Lovenox 1mg/kg SQ BID for 2 days

Cardiology should be contacted at some point while the patient is in the obs unit in order to review management, discuss anticoagulation, and establish follow-up. As long as the patient is stable, there is no reason to contact cardiology off-hours. The Northwell cardiologists will see all of these patients in the Obs unit EXCEPT Caremount patients.

Testing in Observation

Get **thyroid function studies (TSH, free T4)** if this a first presentation of A fib

Echo: obtain if a first-time presentation or if has been more than a year since last echo to ensure there is no underlying structural heart disease and help the cardiologists determine future management

Stress Testing:

- Discuss with cardiology prior to ordering – do NOT order routinely as there can be false positives soon after an episode of paroxysmal a fib. Stress testing **may** by reasonable for patients with signs or symptoms of ischemic heart disease to help guide pharmacotherapy, gauge adequacy of heart rate control during exercise.
- If a patient has sufficient risk factors (chest pain, significant rate related ST changes, significantly elevated troponins) then cardiology may send the patient straight to cath.

Discharge

Discharge from obs when:
Patient converts to NSR
OR
Pt is rate controlled on po meds: HR <100 at rest or <110 with ambulation **and** is not symptomatic.

Patients will typically go home with 2 prescriptions:

1. Rate Control agent:
   Long Acting Diltiazem: Multiply Cardizem IR dose by 4 and order CD formulation.
   OR
   Metoprolol Succinate
2. AC (if no contraindication) – usually a DOAC

**We must ensure that patient can obtain their prescriptions.

Case managers can assist with obtaining a 30-day supply from Vivo pharmacy if you are worried the patient won't go to a pharmacy to pick up the prescriptions even if we give them a coupon

We have coupons for Xarelto and Eliquis in the Obs unit that are good for a one month supply for all patients (uninsured, commercial insurance, Medicare)

Link for Xarelto coupon:
https://www.janssencarepath.com/patient/xarelto/cost-support

**Must arrange for cardiology follow-up

- Santina can arrange for follow-up with Northwell cardiologists
- Caremount Patient Navigators (Nicole Masi, Alison Fuentes are available via tigertext) can arrange for follow-up with Caremount cardiologists