**Primary care management of metabolic disease made ridiculously simple 7.13.16**

Chris Farnitano is totally responsible for this document

**Hypertension:**

**Who to treat (Target BP goals):**

150/90: age 60+ without DM or CKD (JNC8 2014)

140/90: all others (JNC8 2014)

120/90: age 50+ without DM or hx of stroke but with either known CVD, GFR<60, 10 year CVD risk >15% or age >75 (Modification based on Sprint 2015)

**What to treat with:**

1 algorithm for all:

**Lisinopril/Hydrochlorothiazide** 10/12.5 mg 1 tab a day

Increase to Lisinopril/HCT 20/25 1 tab a day

Increase to Lisinopril/HCT 20/25 2 tabs a day

**Add amlodipine** 5mg 1 tab a day

Increase amlodipine 10 mg 1 tab a day

**Add spironolactone** 25 mg a day (do not initiate if K+ Is high (>5.1), discontinue if K+ >6.0

**Teaching points:**

-most patients need more than one med

Most patients need a diuretic as second med

Fewer pills and doses improves compliance

Lower doses of combo pills better tolerated than full doses of single agents

Ethnic differences in responses to different classes are minimal once you are on multiple meds

Adding spironolactone to patients on 3 drugs already decreases BP by mean of 22/10

Watch for gynecomastia in men with spironolactone

Put in problem list “HTN, goal x/90”

**Cholesterol:**

**Who to treat (2013 guidelines):**

1. LDL>190 and >21 years old: use high dose statin
2. Known CVD:
   1. Age <75 high dose
   2. Age >75 mod dose
3. DM age 40-75 and LDL>70
   1. If 10 year risk >/=7.5% high dose
   2. If 10 year risk <7.5% mod dose
4. All others if LDL >70 and age 45-75 then calculate 10 year CVD risk using Pooled Cohort Equations
   1. If 10 year risk >/=7.5% mod or high dose

**What to treat with:**

1 algorithm for all:

**Atorvastatin** 40 mg qd (high dose) or

Atorvastatin 10-20 mg qd (moderate dose)

**Teaching points:**

Only high dose statins are atorvastatin 40+, rosuvastatin 20+

80mg doses of all statins associated with higher rate of liver test abnormalities, no proven additional benefit over 40 mg atorvastatin

Atorvastatin is cheap and covered and potent, no need for any other drug for most patients

Rosuvastatin lowers numbers better but no proven mortality advantage, more expensive

No non-statin drugs have any proven mortality benefit. Don’t use them.

Put in problem list “hyperlipidemia, mod/high dose statin is/is not indicated”

**Diabetes Type 2**

**Who to treat:**

Goal A1c<7 in young, healthy diabetics, <8 in others

**What to treat with:**

1 algorithm for all (type 2):

**Metformin** 500 mg po qa dinner, increase no more often than weekly (to minimize GI upset):

Metformin 500 mg bid ac, then Metformin 850 mg bid ac, then Metformin 1000 mg bid ac

**Add glipizide** 5 mg qam, then Increase to 5 mg bid, Increase to 10 mg bid

**Add long acting insulin** Lantus 10 u qday, increase by 10 units at a time until fasting glucose <120

If fasting glucose <120 but A1c still >8 check post prandial glucose.

**Add short acting insulin** lispro to 1 meal each day where highest post prandial sugars are (or biggest meal). Give lantus and lispro at same time (but different syringes)

**Consider\*** for patients who are not controlled on 100+ units of lantus and or refuse to use insulin:

**Adding Canagliflozin** (sodium-glucose co-transport inhibitor) as combo pill with metformin: Invokamet 50/1000 bid (covered by CCHP with PA)

**Teaching points:**

Metformin only\* hypoglycemic drug with proven mortality benefit.

Do not use glyburide: higher risk of severe hypoglycemia due to renal excretion, long half life

Metformin XL does not have fewer side effects, may actually have more

Doesn’t matter when to give lantus, just same time each day

Above does not apply to Type 1 DM. These are rare in your practice. Consider referring to internal medicine for management.

Sliding scales have no role in ambulatory management of diabetes, especially in type 2s

\*One large study showed a mortality benefit with one sodium-glucose co-transport inhibitor (empaglifozin, not canagliflozin) with decreased death from any cause by 32% in patients with known CVD. Causes yeast infections, UTIs, dehydration, patient falls, ketoacidosis, lowers BP 5 points.

Put in problem list “DM2, goal A1c ,7/8”