CHCANYS DEFINING NEW DIRECTIONS
Community Health Care Association of New York State www.chcanys.org

COMMUNITY HEALTH CENTER FQHC QUALITY

CHCANYS NYS-HCCN Workshop:
"Activating Clinical Care and Support Staff to Promote Patients' Health Outcomes through Medication Adherence"

SAMPLE POLICIES AND PROCEDURES

Sources:

Bellin Health
"Achieving Population Health through Team-Based Care Playbook"
For more information, go to:
http://www.wha.org/Data/Sites/1/education/Team-Based%20Care%20Summit/Achieving%20Population%20Health%20Through%20Team-Based%20Care.pdf

YouTube Videos:
https://www.youtube.com/user/BellinHealthSystems/videos

Harvard Vanguard Medical Associates and the
MacColl Center for Healthcare Innovation, "Primary Care Team Guide"
For more information, go to:
http://www.improvingprimarycare.org/search/resources?f%5B0%5D=field_resource_type%3A29

For more information on building an empowered support team, also visit the general "Primary Care Team Guide," and view the modules, publications and videos:
http://www.improvingprimarycare.org/work

APPENDIX EEE: Utilizing RN in Blood Pressure Checks

Utilizing the RN in TBC: BP checks

The importance of the office RN in Team Based Care continues to be increasingly recognized. Having the RN more involved in patient care leads to a more satisfying role for the RN, as they are able to engage directly with patients. In addition, many of their visits are billable, which helps the sustainability of this work. The goal for sustainability is for each RN to have 6 billable visits per day. This is easily obtainable - there are some RNs that are able to do 10 or more visits a day.

Blood Pressure Checks:

In order for the RN to be able to bill a 99211 there needs to be the following:

- Documentation in the patient's chart from the physician/APC stating that he or she recommends patient be seen by the RN for blood pressure follow-up.
- Documentation of consultation between the RN and physician/APC OR documented titration instructions from the BP protocol in the PLAN portion of the RN visit note. Helpful Tip - It is helpful for the physician/APC to introduce the RN as part of the Care Team at the office appointment where it was determined that the patient would benefit from seeing the RN for blood pressure follow-up. At this time, the physician/APC can reinforce the benefits of the RN visit - reviewing lifestyle modification, assessing the accuracy of their home blood pressure monitor, review of home readings etc. Patients are very responsive to these visits when introduced in this way.

During the visit:

- The RN will obtain a full set of vitals and do a quick assessment of symptoms
- This is a good time to check the accuracy of the patient's home blood pressure device. The RN can compare the reading on that device versus the actual office reading and make recommendations for a new device if not accurate.
- The RN will then review the plan of action with the patient, provide some brief education,
- and schedule follow-up appointment as needed.
- The RN will then route the office visit progress note to the referring physician/APC that is in the clinic for a co-signature (In order to bill 99211, this is required).
- If the patient's situation falls within the approved Bellin Hypertension protocol, then the RN will make the adjustments as per protocol and notify the physician/APC with a copy of the visit documentation. If the situation falls outside of the protocol, then the RN will consult with the physician/APC regarding appropriate treatment adjustments and follow up.

How much will it cost patients?

- For all insurers, we are billing a 99211 and getting reimbursed according to their plan benefits. Copays and deductibles may apply.

Rev 2/13/18

APPENDIX FFF: Utilizing the RN in Diabetic Education

Utilizing the RN in TBC: Diabetic Education

Basic Diabetic Education:

RN's can provide brief diabetic education to patients that are seen in the office. Appropriate patients can be identified during the morning huddles. Appropriate patients for these visits may include newly diagnosed diabetes, patients who are not well controlled and need basic information, and patients who decline to see a diabetes educator. Once the office visit with the physician/APC is complete, a warm hand-off occurs between the core team and the RN.

Engaging the patient with the RN for basic diabetes education is an excellent way to get the patient more understanding of diabetes, and enhances their involvement in the care of their diabetes. Even if they decline to see a diabetic educator or other extended care team member, the RN can provide a gateway to future involvement of other team members.

During the Visit:

- The RN will assess the patient's knowledge of Diabetes. The RN will do brief and basic education on the following: 1) why diabetes control is important 2) diabetic lab results and explanation 3) diet and exercise 4) medication overview and possible side effects
- The RN will then use motivational interviewing techniques to elicit patient stated goals regarding his or her diabetes. What's important to the patient?
- The RN will follow-up with the patient intermittently via telephone, mychart, or face-to face until the next plan care visit and review goals that were set and provide additional education as needed.
- If the patient is unable to meet with the RN after the office visit with the physician/APC this can be documented in the patient's chart to follow-up with the RN to discuss his or her diabetes. The patient will then be placed on the RN schedule for a 30 minute appointment. The RN will then provide diabetes education at the scheduled office visit. Since it is on a different day from when the patient was seen by the physican/APC, a 99211 billing code can be used.

How much will it cost patients?

- For warm handoffs on the day the patient sees the physician/APC there is no charge. For those appointments scheduled on a different day, the a 99211 would be charged. These are covered in the same way that the RN blood pressure visits are covered.

Rev 2/13/18

APPENDIX EE: Competency – Medication Reconciliation

bellinhealth
02/03/17 Updated: 7/27/17

*Name:*_____

Medication Reconciliation – Ambulatory TBC Rooming Staff

Instructions: Review medication reconciliation policy, competency below, and demonstrate medication reconciliation to nurse team facilitator/super-user/educator. Actions may be performed by the provider or delegated to rooming staff. All medication changes should be provider directed.

Job-Specific Skill	Resource/Location	Resource Reviewed	Skill Validated
Review the Pre-visit summary (PVS) with the patient:	Medication Reconciliation Policy - PROC.092		
• Confirm that all medications the patient takes are on the PVS; including all over the counters, supplements, herbals, and other medications prescribed by providers outside of the Bellin network.			
• Compare medication bottles, if brought in, to the PVS and validate the PVS reflects how the patient is taking the medications.			
• Write any discrepancies on the PVS to reflect how the patient is taking the medication.			
• Communicate any discrepancies to the provider and hand off the PVS.			
Update Meds & Orders as directed by the provider.			
• Add new prescribed medications by searching in "Search for new order".			
• Add non-prescription medications by searching in "Patient-Reported Medications".			
• Change existing medications that the patient is taking differently than prescribed by clicking "Change".			
o Send a "Note to pharmacy" that includes helpful instructions if appropriate.			
• Edit existing patient-reported medications by clicking "Edit".			
• Discontinue medications by clicking "Discontinue" and enter a reason.			
At the direction of the provider-if this provider is not the prescriber of medications in question:			
Discontinue the medication the patient is not taking or taking differently by clicking "Discontinue" and enter a reason.			
Re-enter the medication as a patient-reported medication by clicking "Patient-Reported Medications", search for the medication, and enter it as the patient is taking it.			
Send a telephone encounter or CC chart to the prescribing provider communicating the change.			
• Sending a telephone encounter (Will show up in the recipients Pt Call folder)			
o Use "Medication Reconciliation" as the reason for call.			
o Use the smartphrase - .BLNMEDRECTELENC for your documentation.			
o Route to the managing prescriber if the prescriber is within the Bellin System.			
o Sign the encounter.			
• Routing the Chart: (Will show up in the recipients CC Chart folder).			
o Add the managing provider in the Recipient field			

APPENDIX AA: Workflow – RN Blood Pressure Check

bellinhealth
4/14/18

Name: _____

Team-Based Care RN Blood Pressure Check Competency

Instructions: Obtain accurate blood pressure and patient assessment, complete patient education utilizing Motivational Interviewing and Teach Back skills with RN preceptor present to validate skills upon new hire and annually thereafter.

Job-Specific Skill	Resource/Location	Resource Reviewed	Skill Validated
1.Prior to office visit, identifies appropriate documentation required for RN blood pressure check			
2. Patient Arrival • Views schedule in Epic for arrived status • Calls patient back from waiting room using his/her first name • Greets patient with smile and introduces self • Obtains medication list to verify patient's last name and DOB			
3. Standard Rooming Process • Performs Hand Hygiene • Opens Visit Navigator within the room from the RN schedule • Documents correct Chief Complaint- blood pressure • Links or assigns Episodes as appropriate • Confirms and updates Allergies • Reviews Medications and indicates taking or not taking. Adds any medications not currently in the patient record • Validates/updates pharmacy • Completes/updates Health History • Assess and document readiness to quit as well education/counseling offered if indicated • Offers My Bellin Health-if not already enrolled			
4. Documentation and Assessment • Obtains vital signs(weight, blood pressure, pulse, temperature, respirations, and pain) and enters into computer • Opens progress note using standardized smart phrase • Asks appropriate assessment questions			
5.Provider Consultation and PLAN • Consults with the provider regarding blood pressure and any other pertinent assessments • Completes the PLAN portion of the progress documenting consultation with provider occurred • Reviews PLAN with patient and provides patient education • Marks the co-sign required box and the consulted provider is checked in progress note • 99211 is selected as LOS • Appropriate diagnosis is selected based on patient's problem list			
6. Follow-up • Schedules follow up appointments, orders new			

APPENDIX AA: Workflow – RN Blood Pressure Check (CONTINUED)

bellinhealth
4/14/18

Name:

Job-Specific Skill	Resource/Location	Resource Reviewed	Skill Validated
medications/labs if applicable based on providers recommendations • Prints and reviews AVS with patient • Verifies that patient understands goals, follow up plan etc. (Teach back)			

I have been able to take part in my evaluation of competency and have no objections or concerns:

Signature of Orientee _____ Date _____

Signatures validate his/her competence.

Signature of Preceptor _____ Date _____

Signature of Preceptor _____ Date _____

Harvard Vanguard Medical Associates
Atrius Health

RN Hypertension Medication Titration Protocol

Thiazide – Hydrochlorothiazide (HCTZ)

Time 0 – APC or MD Start	HCTZ 12.5mg once daily in the morning
Week 4	↓ *Confirm medication adherence, review for exclusion criteria and side effects. Review home BP readings (4 minimum). If at goal, schedule patient for RN BP check in office. If any single home reading or any single office reading is above goal, and none is < 100/60, increase dose to:* HCTZ 25mg once daily in the morning
Week 8	↓ *Confirm medication adherence, review for exclusion criteria and side effects. Review home BP readings (4 minimum). If at goal, schedule patient for RN BP check in office. If any single home reading or any single office reading is above goal, and none is < 100/60 :* Consult clinician to add an additional agent.
Monitoring:	Order: Follow-up labs (BMP) at 2 weeks after starting Hydrochlorothiazide therapy OR changing Hydrochlorothiazide dose. If patient is taking Lithium, a Lithium level also required at 2 weeks after starting Hydrochlorothiazide therapy OR changing Hydrochlorothiazide dose and communication to BH prescribing provider (HVMA and outside HVMA prescribers) at start and each dose change. Lithium levels should be checked 12 hours after last dose.

RN 2nd level check of exclusion criteria (at each dose increase):	**Side effects (at each dose increase):**	**Monitoring (at time of enrollment):**
- Age ≥ 80yr - Current anti-arrhythmic therapy - eGFR < 45 - Current digoxin therapy - Current lithium therapy - Diagnosis of atrial fibrillation - Sulfa allergy - Gout - Pregnancy **If present, consult with clinician.**	- Signs and symptoms of allergic reaction (including rash) - Dizziness, lightheadedness, orthostasis - Photosensitivity (precaution, e.g. seasonally related, sun vacationing, tanning) - Sexual dysfunction (Do you have any change in sexual function?) **If any significant side effects, consult with clinician.**	Review last lab values for: - Sodium, potassium, BUN, creatinine, glucose, calcium, eGFR (renal function) within the last 6 months If patient has a diagnosis or history of gout: - Uric acid within the last 6 months If patient is on Digoxin: - Digoxin level within the last 6 months If patient is on Lithium: - Lithium level within the last 6 months If no results available within the last 6 months, order required labs as listed above. Lithium levels should be checked 12 hours after last dose. **If any lab abnormalities, consult with clinician.**

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RN Hypertension Medication Titration Protocol

Thiazide - Chlorthalidone

Time 0 – APC or MD Start	Chlorthalidone 12.5mg once daily in the morning
Week 4	↓ *Confirm medication adherence, review for exclusion criteria and side effects. Review home BP readings (4 minimum). If at goal, schedule patient for RN BP check in office. If any single home reading or any single office reading is above goal, and none is < 100/60, increase dose to:* Chlorthalidone 25mg once daily in the morning
Week 8	↓ *Confirm medication adherence, review for exclusion criteria and side effects. Review home BP readings (4 minimum). If at goal, schedule patient for RN BP check in office. If any single home reading or any single office reading is above goal, and none is < 100/60 :* Consult clinician to add an additional agent.
Monitoring:	Order: Follow-up labs (BMP) at 2 weeks after starting Chlorthalidone therapy OR changing Chlorthalidone dose. If patient is taking Lithium, a Lithium level also required at 2 weeks after starting Chlorthalidone therapy OR changing Chlorthalidone dose and communication to BH prescribing provider (HVMA and outside HVMA prescribers) at start and each dose change. Lithium levels should be checked 12 hours after last dose.

RN 2nd level check of exclusion criteria (at each dose increase):	**Side effects (at each dose increase):**	**Monitoring (at time of enrollment):**
- Age ≥ 80yr - Current anti-arrhythmic therapy - eGFR < 45 - Current digoxin therapy - Current lithium therapy - Diagnosis of atrial fibrillation - Sulfa allergy - Gout - Pregnancy **If present, consult with clinician**	- Signs and symptoms of allergic reaction (including rash) - Dizziness, lightheadedness, orthostasis - Photosensitivity (precaution, e.g. seasonally related, sun vacationing, tanning) - Sexual dysfunction (Do you have any change in sexual function?) **If any significant side effects, consult with clinician.**	Review last lab values for: - Sodium, potassium, BUN, creatinine, glucose, calcium, eGFR (renal function) within the last 6 months. If patient has a diagnosis or history of gout: - Uric acid within the last 6 months If patient is on Digoxin: - Digoxin level within the last 6 months If patient is on Lithium: - Lithium level within the last 6 months If no results available within the last 6 months, order required labs as listed above. Lithium levels should be checked 12 hours after last dose. **If any lab abnormalities, consult with clinician.**

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RN Hypertension Medication Titration Protocol

ACEi – Lisinopril

Time 0 – APC or MD Start	Lisinopril 5mg once daily
Week 4	*Confirm medication adherence, review for exclusion criteria and side effects. Review home BP readings (4 minimum). If at goal, schedule patient for RN BP check in office. If any single home reading or any single office reading is above goal, and none is < 100/60, increase dose to:* Lisinopril 10mg once daily
Week 8	*Confirm medication adherence, review for exclusion criteria and side effects. Review home BP readings (4 minimum). If at goal, schedule patient for RN BP check in office. If any single home reading or any single office reading is above goal, and none is < 100/60, increase dose to:* Lisinopril 20mg once daily
Week 12	*Confirm medication adherence, review for exclusion criteria and side effects. Review home BP readings (4 minimum). If at goal, schedule patient for RN BP check in office. If any single home reading or any single office reading is above goal, and none is < 100/60 :* Consult clinician to add an additional agent.
Monitoring:	Order: Follow-up labs (Creatinine, Potassium) at 2 weeks after starting Lisinopril therapy OR changing Lisinopril dose. If patient is taking Lithium, a Lithium level also required 2 weeks after starting Lisinopril therapy OR changing Lisinopril dose and communication to BH prescribing provider (HVMA and outside HVMA prescribers) at start and each dose change. Lithium levels should be checked 12 hours after last dose.

RN 2nd level check of exclusion criteria (at each dose increase):	**Side effects (at each dose increase):**	**Monitoring (at time of enrollment):**

- Age ≥ 80yr
- Current therapies:
  • ARB
  • anti-arrhythmic
  • lithium
- eGFR < 45
- Documented angioedema reaction to an ACEI or ARB
- Diagnosis of atrial fibrillation or idiopathic/hereditary angioedema
- Women of child bearing potential
- Pregnancy
If present, consult with clinician.
	- Signs and symptoms of allergic reaction (including rash)
	- Dizziness, lightheadedness, orthostasis
	- Cough
	- Sign and symptoms of angioedema
	- Sexual dysfunction (Do you have any change in sexual function?)
	
	If any significant side effects, consult with clinician.
		Review last lab values for:
		- Potassium, creatinine, eGFR (renal function) within the last 6 months.
		If patient is on Lithium:
		- Lithium level within the last 6 months
		
		If no results available within the last 6 months, order required labs as listed above. Lithium levels should be checked 12 hours after last dose.
		
		If any lab abnormalities, consult with clinician.

RN Hypertension Medication Titration Protocol

Calcium Channel Blocker – Amlodipine

Time 0 – APC or MD Start Week 4 Week 8	Amlodipine 2.5mg once daily ↓ *Confirm medication adherence, review for exclusion criteria and side effects. Review home BP readings (4 minimum). If at goal, schedule patient for RN BP check in office. If any single home reading or any single office reading is above goal, and none is < 100/60, increase dose to:* Amlodipine 5mg once daily ↓ *Confirm medication adherence, review for exclusion criteria and side effects. Review home BP readings (4 minimum). If at goal, schedule patient for RN BP check in office. If any single home reading or any single office reading is above goal, and none is < 100/60:* Consult clinician to add an additional agent.	
Monitoring:	None required	
RN 2nd level check of exclusion criteria (at each dose increase):	**Side effects (at each dose increase):**	**Monitoring (at time of enrollment):**
- Age ≥80yr - Current anti-arrhythmic therapy - eGFR < 45 - Diagnosis of atrial fibrillation - Heart failure - Women of child bearing potential - Pregnancy **If present, consult with clinician.**	- Signs and symptoms of allergic reaction (including rash) - Dizziness, lightheadedness, orthostasis - Peripheral edema - Sexual dysfunction (Do you have any change in sexual function?) **If any significant side effects, consult with clinician.**	**None**

RN Hypertension Medication Titration Protocol

ARB - Losartan

Time 0 – APC or MD Start	Losartan 25 mg once daily
Week 4	↓ *Confirm medication adherence, review for exclusion criteria and side effects. Review home BP readings (4 minimum). If at goal, schedule patient for RN BP check in office. If any single home reading or any single office reading is above goal, and none is < 100/60, increase dose to:* Losartan 50mg once daily
Week 8	↓ *Confirm medication adherence, review for exclusion criteria and side effects. Review home BP readings (4 minimum). If at goal, schedule patient for RN BP check in office. If any single home reading or any single office reading is above goal, and none is < 100/60, increase dose to:* Losartan 100 mg once daily
Week 12	↓ *Confirm medication adherence, review for exclusion criteria and side effects. Review home BP readings (4 minimum). If at goal, schedule patient for RN BP check in office. If any single home reading or any single office reading is above goal, and none is < 100/60:* Consult clinician to add an additional agent.
Monitoring:	Order: Follow-up labs (Creatinine, Potassium) at 2 weeks after starting Losartan therapy OR changing Losartan dose. If patient is taking Lithium, a Lithium level also required at 2 weeks after starting Losartan therapy OR changing Losartan dose and communication to BH prescribing provider (HVMA and outside HVMA prescribers) at start and each dose change. Lithium levels should be checked 12 hrs. after last dose.

RN 2nd level check of exclusion criteria (at each dose increase):	**Side effects (at each dose increase):**	**Monitoring (at time of enrollment):**

- Age ≥ 80yr
- Current therapies:
  • ACEi
  • anti-arrhythmic
  • lithium
- eGFR < 45
- Documented angioedema reaction to an ACEI or ARB
- Diagnosis of atrial fibrillation or idiopathic/hereditary angioedema
- Women of child bearing potential
- Pregnancy
	- Signs and symptoms of allergic reaction (including rash, angioedema, cough)
	- Dizziness, lightheadedness, orthostasis
	- Sexual dysfunction (Do you have any change in sexual function?)
	
	If any significant side effects, consult with clinician.
		Review last lab values for:
		- Potassium, creatinine, eGFR (renal function) within the last 6 months.
		If patient is on Lithium:
		- Lithium level within the last 6 months
		
		If no results available within the last 6 months, order required labs as listed above. Lithium levels should be checked 12 hours after last dose.
		
		If any lab abnormalities, consult with clinician.

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RN Hypertension Medication Titration Protocol

ARB - Irbesartan

Time 0 – APC or MD Start	Irbesartan 75 mg once daily
Week 4	*Confirm medication adherence, review for exclusion criteria and side effects. Review home BP readings (4 minimum). If at goal, schedule patient for RN BP check in office. If any single home reading or any single office reading is above goal, and none is < 100/60, increase dose to:* Irbesartan 150mg once daily
Week 8	*Confirm medication adherence, review for exclusion criteria and side effects. Review home BP readings (4 minimum). If at goal, schedule patient for RN BP check in office. If any single home reading or any single office reading is above goal, and none is < 100/60, increase dose to:* Irbesartan 300 mg once daily
Week 12	*Confirm medication adherence, review for exclusion criteria and side effects. Review home BP readings (4 minimum). If at goal, schedule patient for RN BP check in office. If any single home reading or any single office reading is above goal, and none is < 100/60:* Consult clinician to add an additional agent.
Monitoring:	Order: Follow-up labs (Creatinine, Potassium) at 2 weeks after starting Irbesartan therapy OR changing Irbesartan dose. If patient is taking Lithium, a Lithium level also required at 2 weeks after starting Irbesartan therapy OR changing Irbesartan dose and communication to BH prescribing provider (HVMA and outside HVMA prescribers) at start and each dose change. Lithium levels should be checked 12 hrs. after last dose.

RN 2nd level check of exclusion criteria (at each dose increase):	**Side effects (at each dose increase):**	**Monitoring (at time of enrollment):**

- Age ≥ 80yr
- Current therapies:
  • ACEi
  • anti-arrhythmic
  • lithium
- eGFR < 45
- Documented angioedema reaction to an ACEI or ARB
- Diagnosis of atrial fibrillation or idiopathic/hereditary angioedema
- Women of child bearing potential
- Pregnancy
If present, consult with clinician.
	- Signs and symptoms of allergic reaction (including rash, angioedema, cough)
	- Dizziness, lightheadedness, orthostasis
	- Sexual dysfunction (Do you have any change in sexual function?)
	
	If any significant side effects, consult with clinician.
		Review last lab values for:
		- Potassium, creatinine, eGFR (renal function) within the last 6 months.
		If patient is on Lithium:
		- Lithium level within the last 6 months
		
		If no results available within the last 6 months, order required labs as listed above. Lithium levels should be checked 12 hours after last dose.
		
		If any lab abnormalities, consult with clinician.

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RN Diabetes Medication Titration Protocol

Metformin (Glucophage) – Biguanide

Medication titration:	
Time 0 – APC or MD Start	Metformin 500mg (500mg in the morning, taken with food)
Week 1	↓ *Confirm medication adherence, review for exclusion criteria and side effects. If none increase dose to:* Metformin 1000mg (500mg in the morning and 500mg in the evening, taken with food)
Week 2	↓ *Confirm medication adherence, review for exclusion criteria and side effects. If none increase dose to:* Metformin 1500mg (1000mg in the morning and 500 mg in the evening, taken with food)
Week 3	↓ *Confirm medication adherence, review for exclusion criteria and side effects. If none increase dose to:* Metformin 2000mg (1000mg in the morning and 1000mg in the evening, taken with food) – maximum effective dose
Outcome Monitoring: Metformin 2000mg reached or maximum tolerated dose	Order A1c with an expected date of T+90 and an expired date of T+180

RN 2nd level check of exclusion criteria (at each dose increase):	**Side effects (at each dose increase):**	**Monitoring (at time of enrollment):**

Review record for :
- Creatinine levels in the last 12 months
  o Contraindicated in renal disease
  ▪ SCr ≥ 1.4 for females and SCr ≥ 1.5 for males
  ▪ eGFR <40
  ▪ eGFR 40-59 per consult only
- Problem List diagnosis of hepatitis, cirrhosis, abnormal LFTs, nonalcoholic steatohepatitis
- Age ≥ 80
- Excessive alcohol use (Males: ≥3 drinks/day; Females: ≥ 2 drinks/day)
- Pregnancy
If any of the above are present, consult clinician
	- Diarrhea, nausea, vomiting, bloating, abdominal discomfort, flatulence, GI intolerance
	  o If GI side effects are present, verify medication is taken with food
	- Weakness
	- Metallic taste
	- Rash, headache
	- Hypoglycemia* (if used in combination with other DM agents)
	If any side effects → consult with clinician
		- Creatinine and CBC every 12 months, B12 every 24 months.
		- If no creatinine or CBC results within the past 12 months, order creatinine and/or CBC. If no B12 results within the last 24 months, order B12.
		If any lab abnormalities → consult with clinician

Safety Instructions: **Stop Metformin at the time of and for 48 hours after IV contrast studies, procedures or surgery**

During acute episodes of sickness, please consult clinician.

* Signs and symptoms of hypoglycemia are sweating, hunger, rapid heart rate, irritability, weakness, confusion, tremor, shakes and dizziness.

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Atrius Health

RN Diabetes Medication Titration Protocol

Metformin ER (Glucophage XR) – Biguanide

Time 0 – APC or MD Start	Metformin ER 500mg (500mg once daily, taken with food)
Week 1	*Confirm medication adherence, review for exclusion criteria and side effects. If none increase dose to:* Metformin ER 1000mg (two 500mg tablets once daily, taken with food)
Week 2	*Confirm medication adherence, review for exclusion criteria and side effects. If none increase dose to:* Metformin ER 1500mg (three 500mg tablets once daily, taken with food)
Week 3	*Confirm medication adherence, review for exclusion criteria and side effects. If none increase dose to:* Metformin ER 2000mg (four 500mg tablets once daily, taken with food) – max effective dose

Outcome Monitoring: Metformin ER 2000mg reached or maximum tolerated dose	Order A1c with an expected date of T+90 and an expired date of T+180

RN 2nd level check of exclusion criteria (at each dose increase):	**Side effects (at each dose increase):**	**Monitoring (at time of enrollment):**

Review record for :
- Creatinine levels in the last 12 months
  o Contraindicated in renal disease
  ▪ SCr ≥ 1.4 for females and SCr ≥ 1.5 for males
  ▪ eGFR <40
  ▪ eGFR 40-59 per consult only
- Problem List diagnosis of hepatitis, cirrhosis, abnormal LFTs, nonalcoholic steatohepatitis
- Age ≥ 80
- Excessive alcohol use (Males: ≥3 drinks/day; Females: ≥ 2 drinks/day)
- Pregnancy
 	
If any of the above are present, consult clinician
	- Diarrhea, nausea, vomiting, bloating, abdominal discomfort, flatulence, GI intolerance
	  o If GI side effects are present verify medication is taken with food
	- Weakness
	- Metallic taste
	- Rash, headache
	- Hypoglycemia* (if used in combination with other DM agents)
	
	If any side effects → consult with clinician
		- Creatinine and CBC every 12 months, B12 every 24 months.
		- If no creatinine or CBC results within the past 12 months, order creatinine and/or CBC. If no B12 results within the last 24 months, order B12.
		
		If any lab abnormalities → consult with clinician

***Safety Instructions:* Stop Metformin ER at the time of and for 48 hours after IV contrast studies, procedures or surgery.**

During acute episodes of sickness, please consult clinician.

* Signs and symptoms of hypoglycemia are sweating, hunger, rapid heart rate, irritability, weakness, confusion, tremor, shakes and dizziness.

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RN Diabetes Medication Titration Protocol

<table>
<tr><td colspan="3">Glimepiride (Amaryl) – Sulfonylurea</td></tr>
<tr><td>Time 0 – APC or MD Start

Week 2

Week 4</td><td colspan="2">Glimepiride 1mg (once daily with breakfast)
↓
Confirm medication adherence, review for exclusion criteria and side effects and assess home fasting blood glucose readings. If average fasting blood glucose is >130 (minimum of 7 readings required) and no single blood glucose reading <70 including a minimum of four post-prandial readings increase dose to:
Glimepiride 2mg (once daily with breakfast)
↓
Confirm medication adherence, review for exclusion criteria and side effects and assess home fasting blood glucose readings. If average fasting blood glucose is >130 (minimum of 7 readings required) and no single blood glucose reading <70 including a minimum of four post-prandial readings increase dose to:
Glimepiride 4mg (once daily with breakfast)</td></tr>
<tr><td><u>Outcome Monitoring:</u>
Glimepiride 4mg or maximum tolerated dose</td><td colspan="2">Order A1c with an expected date of T+90 and an expired date of T+180</td></tr>
<tr><td>RN 2nd level check of exclusion criteria:</td><td>Side effects (at each dose increase):</td><td>Monitoring (at each dose increase):</td></tr>
<tr><td>- Review record for sulfa allergy
- Pregnancy
- Age ≥ 80

If present, consult clinician</td><td>- Hypoglycemia*
o In the elderly population, the following symptoms may be more common: confusion, 'funny' spells, feeling spacey or bad dreams
- Weight gain
- GI intolerance
- Weakness, dizziness, headache
- Allergic reaction
- Sleep disturbance
- Photosensitivity
If any side effects → consult with clinician</td><td>- Assess for any signs or symptoms of hypoglycemia* or any low blood glucose readings < 70

If any abnormalities → consult with clinician</td></tr>
<tr><td colspan="3">During acute episodes of sickness, please consult clinician.</td></tr>
</table>

* Signs and symptoms of hypoglycemia are sweating, hunger, rapid heart rate, irritability, weakness, confusion, tremor, shakes and dizziness.

Harvard Vanguard Medical Associates
Atrius Health

RN Diabetes Medication Titration Protocol

<table>
<tr><td colspan="3">Insulin Glargine (Lantus)</td></tr>
<tr><td>Time 0 – APC or MD Start

Every 3 days</td><td colspan="2">Lantus insulin
10 units subcutaneously at the same time each evening, OR 0.1- 0.2 units/kg subcutaneously at the same time each evening

Confirm medication adherence, review for side effects and assess home blood glucose readings.

If average fasting blood glucose is ≤ 130 (minimum of 3 required readings) and no single blood glucose reading <70, no dose change required.
OR
If average fasting blood glucose is 131-179 (minimum of 3 required readings) and no single blood glucose reading <70 increase dose by 2 units
OR
If average fasting blood glucose is ≥ 180 (minimum of 3 required readings) and no single blood glucose reading <70 increase dose by 4 units</td></tr>
<tr><td>If also on Glimepiride or other Sulfonylurea:</td><td colspan="2">Decrease sulfonylurea to half the current dose once the average fasting blood glucose is <180 (minimum of 3 readings required).
Consult with clinician once average fasting blood glucose is <140 (minimum of 3 readings required).</td></tr>
<tr><td><u>Outcome Monitoring:</u> Once effective dose of lantus insulin is reached</td><td colspan="2">Order A1c with an expected date of T+90 and an expired date of T+180</td></tr>
<tr><td>RN 2nd level check of exclusion criteria:</td><td>Side effects (at each dose increase):</td><td>Monitoring (at each dose increase):</td></tr>
<tr><td>- Pregnancy
- Age ≥ 80
If present, consult clinician.</td><td>- Hypoglycemia*
o In the elderly population ,the following symptoms may be more common: confusion, 'funny' spells, feeling spacey or bad dreams
- Injection site reaction
- Allergic reaction
- Rash
- Pruritus
- Weight gain
- Edema
If any side effects → consult with clinician.</td><td>Assess for any signs or symptoms of hypoglycemia* or any low blood glucose readings < 70

- Confirm patient injection technique - administration of insulin

If any abnormalities,→ consult with clinician.</td></tr>
<tr><td colspan="3">During acute episodes of sickness, please consult clinician.</td></tr>
</table>

* Signs and symptoms of hypoglycemia are sweating, hunger, rapid heart rate, irritability, weakness, confusion, tremor, shakes and dizziness.

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<table>
<tr><td colspan="3">Insulin Detemir (Levemir)</td></tr>
<tr><td>Time 0 – APC or MD Start

Every 3 days</td><td colspan="2">Levemir insulin
10 units subcutaneously at the same time each evening, OR 0.1- 0.2 units/kg subcutaneously at the same time each evening

Confirm medication adherence, review for side effects and assess home blood glucose readings.

If average fasting blood glucose is ≤130 (minimum of 3 required readings) and no single blood glucose reading <70, no dose change required.
OR
If average fasting blood glucose is 131-179 (minimum of 3 required readings) and no single blood glucose reading <70 increase dose by 2 units
OR
If average fasting blood glucose is ≥180 (minimum of 3 required readings) and no single blood glucose reading <70 increase dose by 4 units</td></tr>
<tr><td>If also on Glimepiride or other Sulfonylurea:</td><td colspan="2">Decrease sulfonylurea to half the current dose once the average fasting blood glucose is <180 (minimum of 3 readings required).
Consult with clinician once average fasting blood glucose is <140 (minimum of 3 readings required).</td></tr>
<tr><td><u>Outcome Monitoring:</u> Once effective dose of Levemir insulin is reached</td><td colspan="2">Order A1c with an expected date of T+90 and an expired date of T+180</td></tr>
<tr><td>RN 2nd level check of exclusion criteria:</td><td>Side effects (at each dose increase):</td><td>Monitoring (at each dose increase):</td></tr>
<tr><td>- Pregnancy
- Age ≥ 80

If present, consult clinician.</td><td>- Hypoglycemia*
o In the elderly population ,the following symptoms may be more common: confusion, 'funny' spells, feeling spacey or bad dreams
- Injection site reaction
- Allergic reaction
- Rash
- Pruritus
- Weight gain
- Edema
If any side effects → consult with clinician.</td><td>Assess for any signs or symptoms of hypoglycemia* or any low blood glucose readings < 70

- Confirm patient injection technique - administration of insulin

If any abnormalities → consult with clinician.</td></tr>
<tr><td colspan="3">During acute episodes of sickness, please consult clinician.</td></tr>
</table>

* Signs and symptoms of hypoglycemia are sweating, hunger, rapid heart rate, irritability, weakness, confusion, tremor, shakes and dizziness.

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