



# Congestive heart failure, stroke and diabetes

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To refer a patient to the  
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### Goshen Physicians Endocrinology

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### A summary of three recent presentations

The three presentations summarized in this issue of Spotlight were given in November 2021 at Goshen Health's Primary Care Update, CME event. The theme was the top causes of death. To watch the complete presentations, go to GoshenHealth.com, select "For providers" in the top orange bar, then select the "Continuing Education CME" orange button.

### Advances in treating heart failure

**Dr. Abrar Sayeed, Invasive Cardiologist**  
*Goshen Heart & Vascular Center*



Important breakthroughs in medications have redefined opportunities to change the natural history of heart disease, specifically as they relate to treating heart failure for patients with ejection fraction of less than 40 percent. However, most of these medication management techniques can also be applied to patients with a higher ejection fraction rate.

### New medication therapies

The three new medication therapies are 1) angiotensin receptor-neprilysin inhibitor (brand name Entresto); 2) the sodium-glucose cotransporter-2 inhibitors dapagliflozin and empagliflozin; and 3) ivabradine.

#### Entresto

In a clinical study, Entresto, showed a significant decrease in hospitalizations and deaths due to cardiovascular events. The biggest problem we are finding with Entresto is the reluctance of insurance companies to cover the higher cost. If we can't offer due to cost issues, we can go back to ace inhibitors and angiotensin receptor blockers.

When transitioning a patient from ACEI to ARNI, it is important to wait for 36 hours before starting Entresto. If you start Entresto immediately, there is a higher risk of angioedema. If someone is on ARBs, you don't have to wait 36 hours.

For all patients once we initiate these therapies, we need to follow up in three to six months after target (or maximally tolerated doses are achieved) to determine the need for device therapies such as implantable cardioverter-defibrillators and cardiac resynchronization therapy.

#### Dapagliflozin and empagliflozin

The second medication group – the dapagliflozin and empagliflozin – have also been shown to reduce cardiovascular mortality and hospital admissions. With dapagliflozin, we need to be careful if the eGFR is less than 30; with empagliflozin, we need to be careful if it is less than 20. Both these can be used in patients who are not diabetic.

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*(Advances in treating heart failure cont.)*

If these are not effective and the heart rate continues to be over 70, then we can use ivabradine as the next step.

### **Ivabradine**

Ivabradine is used for patients whose heart rate is over 70 despite being on maximally tolerated doses of beta blockers. For people more than 75 years old, start at 2.5 mg. twice daily. If less than 75, start at 5 mg. twice daily. If the heart rate continues to be more than 60 beats per minute, you can go up from 2.5 to 5 mg or from 5 mg to 7.5 mg. If the heart rate is less than 50 beats per minute, decrease the dosage by 2.5 mg. If they're just on 2.5 mg, stop the ivabradine completely.

The target is 50-60 beats per minute in this group of patients because lower heart rates portend better outcomes, lower hospitalizations and fewer deaths from cardiovascular events.

Ivabradine is not recommended for patients who

1. are in A-fib 100 percent of the time
2. use 100 percent atrial pacemaker or
3. have sick sinus syndrome.

It is useful for patients who are in regular rhythm.

### **Knowing when to refer to cardiology**

Providers can feel comfortable starting Entresto with heart failure patients. If you have trouble getting it approved by insurance, we may be able to help there.

Referring to a cardiologist is important if you have patients who are continuing to have symptoms, like fluid overload, despite doing the first line of medications. We also recommend referring if you have a patient with a new diagnosis of heart failure and an ejection fraction of less than 40. In these cases, we would do a catheterization to determine if ischemia is causing the poor ejection fraction.

And, also, we cardiologists at Goshen Heart & Vascular Center are happy to help if you have a question about one of your patients.



**To refer a patient to Goshen Heart & Vascular, call (574) 364-3921.**

## **Stroke updates**

**Dr. Liz Nafziger, Neurology**  
**NeuroCare Center Goshen Physicians**



Stroke is a very common neurological disorder, and one that can be largely prevented with appropriate risk reduction strategies. The most common type of stroke is due to ischemia, rather than hemorrhage. It produces the acute onset of focal neurologic symptoms. When symptoms are transient and do not cause abnormalities on MRI of the brain, transient ischemic attack is the more appropriate term (although the causative mechanisms for stroke and TIA are the same). If diagnosed early in the course of symptoms, there are acute therapies that can be employed to reduce the likelihood of disability and death.

For stroke management, there are acute and chronic therapies. Acute therapies at Goshen Hospital are handled by the StrokeCare Now Network. They assess whether the patient is a candidate for treatment with TPA or mechanical thrombectomy.

After someone is treated, they are hospitalized for monitoring for complications of treatment, to determine the mechanism of stroke and risk factors for recurrent stroke and to begin rehabilitation efforts.

The major, common mechanisms for stroke are:

- Small vessel disease, which relates to blood pressure, cholesterol, smoking and diabetes
- Large vessel disease (atherosclerosis)
- Cardioembolic, such as atrial fibrillation

The largest risks are related to blood pressure, physical inactivity, smoking and abdominal obesity. By adding aspirin, statins, blood pressure medications – along with diet and exercise, we can reduce people's risk of recurrent stroke by 80 percent.

So how do we do that? Focus treatment options on:

- Reducing vascular risk: HTN, DM, HLD and tobacco
- Lifestyle: low salt/Mediterranean diet, regular physical activity
- Antithrombotic therapy: single vs dual antiplatelet
- Anticoagulation for atrial fibrillation
- Intervention on extracranial carotid stenosis
- Medical management for intracranial stenosis
- PFO closure for specific populations

For antithrombotic and anticoagulation therapies, I recommend aspirin (81 mg daily). It does remarkably well at reducing stroke. Other therapies include Clopidogrel (75 mg daily) and less frequently, dual antiplatelet therapy (usually is time limited, given for early mild stroke, high risk TIA, and/or severe intracranial atherosclerosis). Long term, risk of bleeding is higher for dual antiplatelet therapy, but risk reduction is similar to monotherapy.

After 24-72 hours of permissive hypertension, people need to return to normal blood pressures (<130/80). For hyperlipidemia, targeting LDL goals <100 (and closer to 70) is advised. Aside from that, studies have shown that high-intensity statins reduced recurrent stroke risk even with “normal” lipids. Moderate intensity statin for those over 75 years old has been shown to be just as effective and better tolerated in reducing stroke than high intensity statins.

The other common cause for stroke that has a time-sensitive component to its management is carotid stenosis. Aggressive medical management is indicated, with statins and antiplatelet therapies. For people with >70-99 percent stenosis, the greatest benefit of intervention (endarterectomy or stenting) is within two weeks from time of stroke/TIA. While a mild benefit may be realized for those with 50-69 percent stenosis (particularly for men), there is no benefit to intervening for those with <50 percent stenosis.

Beyond addressing stroke risk factors, the key for minimizing damage due to stroke is for people to recognize the symptoms of stroke, so they can call 9-1-1. We use the FAST mnemonic: facial droop, arm weakness, speech impairment – time is critical. More recently, you may see BE-FAST, to include looking for balance or eye (vision) problems. Tell your patients: when you suddenly lose any neurologic function, you need to call 9-1-1 right away because time is critical for us to assess your candidacy for treatments that can prevent disability or death. If you wait too long, we may be left managing partially or irreversible deficits with hopes of preventing a second stroke.

If you ever have questions, please feel free to reach out to me or Dr. Jody Neer. We’re glad to help.

(Dr. Nafziger also began by reviewing dementia, covering the testing, diagnosis, treatment options, caregiver support and medications. That section is available online.)



**To refer a patient to NeuroCare Center Goshen Physicians, call (574) 537-0219.**

## Clinical updates for type 2 diabetes care

**Dr. Lily Kwatampora, Endocrinologist**  
*Goshen Physicians Endocrinology*



### Providing patient-centered care

For a new diabetes diagnosis, you initially want to assess for comorbidities, risk factors and complications. Because a diagnosis of type 2 diabetes can be overwhelming, you’ll want to be sure the patient understands that together you’re working toward preventing complications and optimizing their quality of life.

Comorbidities and risk factors include obesity, obstructive sleep apnea, fatty liver disease, hypertension and dyslipidemia. Associated complications are broadly categorized into small and large vessel disease as well as dental problems. In microvascular (small vessel disease), evaluate for nephropathy (UACR, creatinine and eGFR), retinopathy (glaucoma and cataracts), neuropathy (peripheral and autonomic), peripheral artery disease (ankle brachial index) and erectile dysfunction. While we focus on peripheral neuropathy, we often also see autonomic neuropathy in older patients. In macrovascular, you’re looking at atherosclerotic cardiovascular disease-ischemic heart disease, stroke and related complications.

### Treatment selection

I always start with – and recommend – lifestyle modifications. In addition to nutrition and physical activity, I emphasize the importance of sleep, stress management, using alcohol in moderation and stopping use of tobacco products.

When selecting medications, we all deal with cumbersome insurance authorizations. I consider their other medication costs and try to select carefully. I also look for medications that won’t cause weight gain. Some of the newer medications now have heart and renal benefits as well.

### Technology advancements in diabetes management clinical care

One area where technology has advanced is glucose management. It’s important to aim for early glycemia control when diabetes is initially diagnosed, because patients will do better long term. How tightly you want to control A1c depends on disease duration, life expectancy, comorbidities, established vascular complications, patient preference and their resources/support system.

Continuous glucose monitoring (CGM) is available through new technologies offering 7-day, 10-day, 14-day and 90-day wear. The 14-day wear is probably the easiest and cheapest to get, available in many pharmacies. These CGMs provide real-time glucose levels, trends and warnings – as well as the ability to share data with providers and caregivers.

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## Congestive heart failure, stroke and diabetes: A summary of three recent presentations

*This publication is for healthcare providers*

*(Clinical updates for type 2 diabetes care cont.)*

CGMs provide reports that show variability, target range, daily profiles and more. I review the data with the patient and pick one area for the patient to work on before the next visit. The glucose management indicator (GMI) provides info on how long the patient has been in the target range overall. If a patient can achieve 70 percent of their time in the target range, I call that a success.

When you're selecting medications for type 2, you don't want to just prescribe insulin initially because these patients also have insulin resistance. They do better with a combination of medications targeting different sites of action to decrease hyperglycemia. For example, metformin works at sites in the liver and muscles while SGLT-2 medications such as Jardiance or Farxiga work to increase glucose excretion in urine.

For a younger patient with type 2 diabetes, obesity and few other comorbidities, instead of going directly to insulin, I might do a dual therapy approach and use metformin with a GLP-1 or SGLT-2. However, due to the cost of these newer medications, I wouldn't hesitate to use medications we've had for a long time (like pioglitazone) as they work well for many patients and are affordable.

Smart caps and pens are newer devices that work with smart phones and can help patients better manage insulin delivery. The daily wearable delivery system, VGO, has been around for several years, but serves the same purpose of simplifying insulin delivery like insulin pumps such as the OmniPod or Tandem.

### **Support for primary care clinicians**

Diabetes burnout is real, for both patients and clinicians. When you repeatedly see uncontrolled diabetic patients and struggle to get through to them, it's helpful to remember that we have certified diabetes educators who can help in providing clinical, educational and psychological support for these patients. Additionally, they provide a multidisciplinary approach to clinical diabetes care.



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**To refer a patient to Goshen Physicians Endocrinology,  
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### **TO REFER A PATIENT**

To refer a patient, fax a referral form to (574) 533-7145. A referral form can be downloaded at [GoshenQuickGuide.com](http://GoshenQuickGuide.com).  
Call for an appointment at (574) 364-3921.

We make every effort to see referrals the same day or within 24 hours as needed.

If you would like more information or to meet any of our doctors, please contact **Jenny Rupp, Physician Liaison**, at [jrupp2@goshenhealth.com](mailto:jrupp2@goshenhealth.com) or (574) 364-2978.

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