Reasons Primary Care should consider HRV testing with the PD2i Analyzer™ in patients with DM, CHF, CAD, or HTN.

Identify the patient at high risk for silent MI: Because of the reduced appreciation of cardiac ischemic pain in persons with CAN, underlying cardiac disease may project minimal symptoms. Silent MI is twice as prevalent in diabetics with CAN. Vague symptoms, such as cough, unexplained nausea, unexplained dyspnea, new fatigue or subtle ECG changes, should prompt the physician to evaluate for ischemia in this diabetic subset with extra caution as they have a 2x increase in mortality. This information is thus important to patient management as the provider should have a lower threshold to investigate vague symptoms. (In summary, silent MI is twice as common and twice as fatal if a diabetic has CAN.)

ICD referrals: Many doctors do not refer most of their patients with an ejection fraction below 35% for an EP evaluation. The MUSIC trial data suggest that these low EF patients can be further risk stratified. Those with a PD2i® score of below 1.4 demonstrate twice the rate of all cause and cardiac death. Knowledge of the PD2i® score may increase appropriate referrals for ICD or resynchronization therapy.

Pre-operative assessment and recommendations: The peri-operative cardiac morbidity and mortality in diabetics with cardiac autonomic neuropathy (CAN) are increased 2-3 times over non-diabetics. This may warrant pre-operative nuclear stress testing for major surgery in diabetic patients with CAN. Additionally, those patients identified as having autonomic dysfunction can benefit from the anesthesiologist recognizing that they will need more vasopressor support and are more prone to hypothermia under anesthesia.

Physician input on exercise programs: Persons with CAN need to use their "perceived" level of exertion to guide their intensity of exercise, not heart rate. Many persons with CAN are unable to reach the target percentage of their age adjusted maximum heart rate. Attempting to do so might induce a cardiac event or syncope. The physician should consider stress testing in these at risk patients before endorsing an exercise plan.

B-Blocker toxicity: Sympathetic depression on HRV testing in association with ejaculatory impairment, depression, inappropriate fatigue or orthostasis should prompt one to consider B-blocker dose reduction.

Hypoglycemic unawareness: The patient with autonomic impairment is less likely to experience the warning symptoms of sweating or rapid heat rate before developing a dangerously low blood glucose level that could cause injury to themselves or others. You can make sure the patient and the family understands this potential problem. You can justify recommendation of liberal glucose testing and consider less than "tight control" as a goal.

Sudomotor Neuropathy: Nerve damage may impair sweat gland function and can cause abnormal sweating. The patients should be advised that they are more prone to heat exhaustion or heat stoke in routine outdoor situations such as gardening or social events. Creams to the feet should be encouraged as excessively dry skin is prone to cracking and infection.

Cardiac Autonomic Neuropathy is manifested as the loss of heart rate variability and complexity on PD2i® testing. This can be improved with exercise, the use of b-blockers in the setting of heart failure, ACE inhibitor use, as well as the addition of spironolactone to ACE/lasix/digoxin therapy in congestive heart failure patients.

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Recommended PD2i Analyzer™ Staffing and Revenue Projections Based on Test Volume

Staffing Option	Weekly Costs and Test Capacity	Annual Costs
Part-time employee* 8am - 1 pm, M-F No benefits	30 hr/wk @ $10/hr = $300/wk 50 tests per week	$15,600.00

*This is a very desirable position for a parent of school age children.
Consider owner or employee family members.
The test can easily be administered by non-medical personnel.

Projected PMT** - Analysis Fee - Consumables = $99 per test income, less staffing costs

**Adjust the spreadsheet below to give you a reimbursement scenario based upon the payer mix of your practice demographics.

Tests per day	Tests per week	Annual Site Revenue Adjusted for Payer Mix*
2	10	$51,480.00
3	15	$77,220.00
4	20	$102,960.00
5	25	$128,700.00
6	30	$154,440.00
8	40	$205,920.00
10	50	$257,400.00
12	60	$308,880.00
14	70	$360,360.00
16	80	$411,840.00

CPT	SC Medicaid	SC Medicare	Cigna	State BC/BS	BC/BS
95921	$58.26	$69.09	$65.55	$77.00	$77.00
95922-52**	$50.00	$60.00	$60.00	$82.00	$74.00
93040	$10.58				
99211*	$14.96	$17.61			
Total	$133.80	$146.70	$125.55	$159.00	$151.00
100.00%	30.00%	45.00%	10.00%	7.50%	7.50%
	$40.14	$66.02	$12.56	$11.93	$11.33
					$141.96

*Billable if not seen by the physician that date - Physician Supervision of a Service.

**Estimated based on modifer effect on other codes - remittances pending.

Note - 93000-59 will also pay $18.52 for a 12 lead ECG if this is desired while testing.