



Welch Allyn  
*Advancing Frontline Care*



HYPERTENSION



DIABETIC  
RETINOPATHY



CARDIOPULMONARY  
SCREENING AND DIAGNOSIS



VISION DISABILITIES  
IN CHILDREN



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## Primary care is at the forefront of population health.

Primary care clinicians represent the front lines of a complex healthcare system. You are tasked not only with treating acute and chronic conditions, but also with identifying health risk factors early to help improve patient outcomes and keep system costs lower.





At Welch Allyn, we advance the capabilities of frontline care providers with smarter tools to help you identify, diagnose and manage many of the most prevalent health issues your practice sees every day.

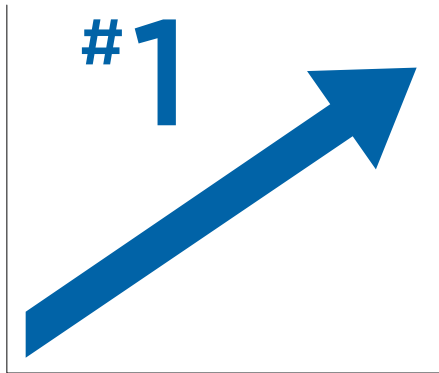
**Together, we can do more to advance frontline care.**

*Keep reading to learn how.*



## HYPERTENSION

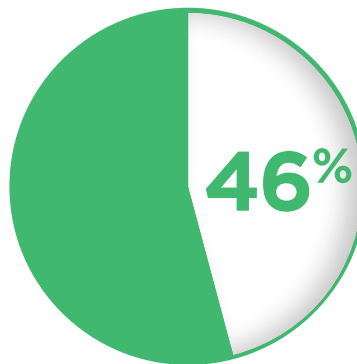
# THE CHALLENGE



High blood pressure is the **#1 risk factor** for heart attack, stroke and kidney disease.<sup>1,2</sup>



**One in three American adults** have high blood pressure.<sup>3</sup>



**46% of people with high blood pressure** do not have the condition under control.<sup>3</sup>

# THE SOLUTION

Welch Allyn offers solutions that extend beyond the four walls of your practice to help you get a more accurate view of a patient's blood pressure in various settings.



# THE IMPACT

1

## Identify:

Better identify hypertension with accurate, automated and averaged blood pressure readings in the office.

2

## Diagnose:

Strengthen your diagnoses with multiple readings inside and outside the office. The U.S. Preventive Services Task Force calls ambulatory blood pressure monitoring “the best method for diagnosing hypertension.”<sup>4</sup>

3

## Manage:

Effectively manage hypertensive patients to help them reach target blood pressure. Clinician-connected remote patient monitoring has been proven to help get patients to their target blood pressure.<sup>5</sup>



Connex® Spot Monitor



ABPM 7100 Ambulatory Blood Pressure Management System



Welch Allyn Home™ Hypertension Program

<sup>1</sup> Mayo Clinic. High blood pressure dangers: Hypertension's effects on your body. Mayo Clinic website. <http://www.mayoclinic.org/diseases-conditions/high-blood-pressure/in-depth/high-blood-pressure/art-20045868>. February 18, 2014. Accessed October 17, 2016.

<sup>2</sup> World Heart Federation. Cardiovascular disease: Risk factors. World Heart Federation website. [http://www.world-heart-federation.org/fileadmin/user\\_upload/documents/Fact\\_sheets/2012/PressBackgrounderApril2012RiskFactors.pdf](http://www.world-heart-federation.org/fileadmin/user_upload/documents/Fact_sheets/2012/PressBackgrounderApril2012RiskFactors.pdf). Accessed October 17, 2016.

<sup>3</sup> American Heart Association and American Stroke Association. 2016 Heart Disease and Stroke Statistics Update

<sup>4</sup> Margaret A. Piper, PhD, MPH; Corinne V. Evans, MPP; Brittany U. Burda, MPH; Karen L. Margolis, MD, MPH; Elizabeth O'Connor, PhD; and Evelyn P. Whitlock, MD, MPH: Diagnostic and Predictive Accuracy of Blood Pressure Screening Methods With Consideration of Rescreening Intervals: An Updated Systematic Review for the U.S. Preventive Services Task Force

<sup>5</sup> Green B et al. Effectiveness of Home Blood Pressure Monitoring, Web Communication, and Pharmacist Care on Hypertension Control. JAMA 2008;299(24):2857-2867



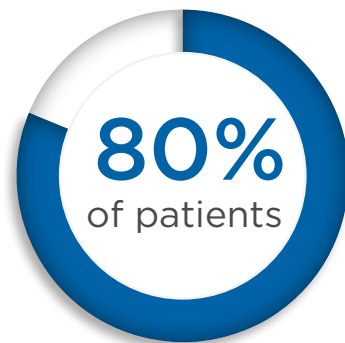


## DIABETIC RETINOPATHY

# THE CHALLENGE



**414 million people** globally are living with diabetes.<sup>6</sup>



**80% of patients** with diabetes will develop diabetic retinopathy.<sup>7</sup>



With early detection, up to **95% of vision loss** cases are preventable.<sup>8</sup>



Yet documented compliance with annual retinal exams is often **less than 50%**.<sup>9</sup>

# THE SOLUTION

The Welch Allyn RetinaVue™ Network makes diabetic retinal exams **SIMPLE** and **AFFORDABLE** for primary care.



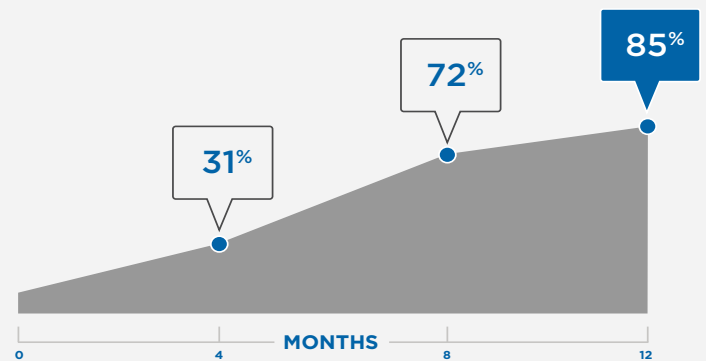
RetinaVue™ Network

# THE IMPACT

1

## Compliance:

RetinaVue Network can **double patient compliance rates** for diabetic retinal assessment in just 12 months.<sup>10</sup>



2

## Patient outcomes:

Help preserve vision in patients with diabetes through early detection.

3

## Financial outcomes:

Most commercial healthcare plans provide coverage for RetinaVue Network DR screening. Consult your payer partners to understand coding and coverage options. Annual retinal examinations are also included in the NCQA® HEDIS® ratings program, the **Medicare Advantage STAR quality rating program** and Medicare quality rating programs. By intercepting patients during routine office visits, healthcare providers can potentially qualify for financial incentives under these programs.



<sup>6</sup> IDF Diabetes Atlas, Seventh Edition 2015, page 50. [www.idf.org](http://www.idf.org)

<sup>7</sup> American Academy of Ophthalmology Retina/Vitreous Panel. Preferred Practice Pattern® Guidelines. Diabetic Retinopathy. San Francisco, CA: American Academy of Ophthalmology; 2014. [www.aao.org/ppp](http://www.aao.org/ppp).

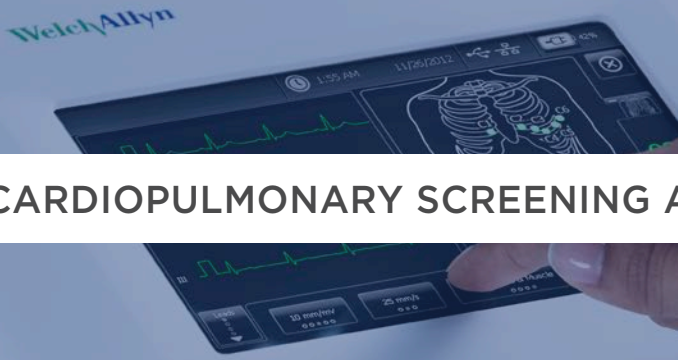
<sup>8</sup> National Eye Institute, Facts about Diabetic Eye Disease. <https://nei.nih.gov/health/diabetic/retinopathy>

<sup>9</sup> Monitoring Visual Status: Why Patients Do or Do Not Comply with Practice Guidelines; Frank A. Sloan, Derek S. Brown, Emily Streyer Carlisle, Gabriel A. Picone, and Paul P. Lee. Health Services Research, October 2004.

<sup>10</sup> Garg S, Jani PD, Kshirsagar AV, King B, Chaum E. Telemedicine and Retinal Images for Improving Diabetic Retinopathy Evaluation. Arch Intern Med. 2012; Oct 1: 1-2.



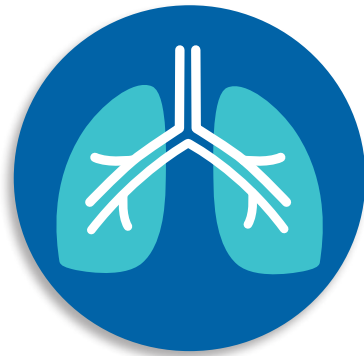
## CARDIOPULMONARY SCREENING AND DIAGNOSIS



# THE CHALLENGE



Heart disease is the **leading cause of death** in the United States.<sup>11</sup>



**COPD** is a major cause of disability, and the **third leading cause of death** in the United States.<sup>12</sup>

1. Heart disease
2. Cancer
3. COPD
4. Diabetes
- 5. STROKE**
6. Alzheimer's disease
7. Kidney disease



Stroke is the **fifth leading cause of death** in the United States, killing more than 130,000 Americans each year—that's **1 of every 20 deaths**.<sup>13</sup>



# THE SOLUTION

Welch Allyn cardiopulmonary devices help clinicians quickly detect signs of heart disease, stroke and COPD, and connect data to the specialists who can help patients effectively manage and treat their conditions.

# THE IMPACT



Q-Stress® Cardiac Stress Testing System



ELI™ 280 Resting ECG



CP 150™ Resting ECG



H3+™ Holter Recorder

1

## Patient outcomes:

Help improve patient outcomes by offering resting ECG, stress ECG, spirometry, holter and other cardiopulmonary screening solutions that are simple enough for use in primary care, yet equipped with comprehensive tools a specialist needs.



2

## Efficiency:

A variety of connectivity options, including WiFi® and DICOM® communication, make it easy to send timely, accurate data directly to your EMR.



3

## Financial outcomes:

Maximize your return on investment by keeping reimbursable procedures in house, rather than referring to another provider.



<sup>11</sup> Mozaffarian D, Benjamin EJ, Go AS, et al. on behalf of the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics—2016 update: a report from the American Heart Association. *Circulation*. 2016;133:e38-e360.

<sup>12</sup> <https://www.nhlbi.nih.gov/health/health-topics/topics/copd>

<sup>13</sup> Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death 1999-2013 on CDC WONDER Online Database, released 2015. Data are from the Multiple Cause of Death Files, 1999-2013, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program: <http://wonder.cdc.gov/ucd-icd10.html>. Accessed on Feb 3, 2015.



## AMBLYOPIA AND VISION DISABILITIES IN CHILDREN

### THE CHALLENGE

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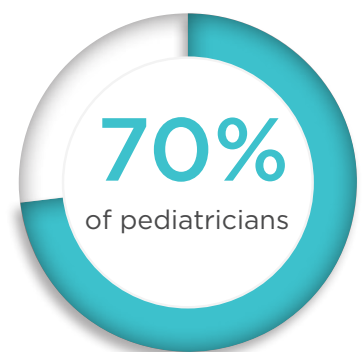
Vision disability is the **single most prevalent** disabling condition among children.<sup>14</sup>



**Only one in three U.S. children** has had a vision screening before kindergarten.<sup>15</sup>



The AAP recommends instrument-based vision screening at as **early as 12 months of age**, if available.<sup>16</sup>



Yet **70% of pediatricians** are not doing automated vision screening.<sup>17</sup>

# THE SOLUTION



Spot™ Vision Screener

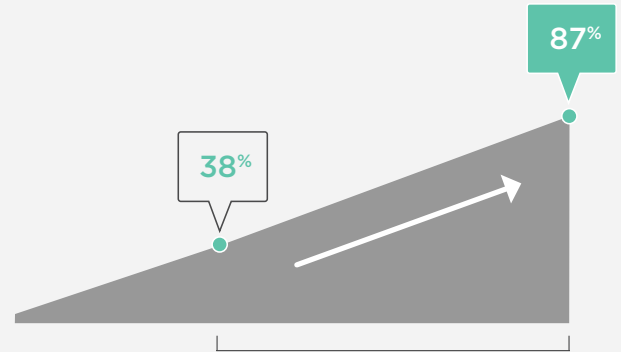
- Hyperopia
- Myopia
- Astigmatism
- Anisometropia
- Strabismus
- Anisocoria

# THE IMPACT

1

## Efficiency:

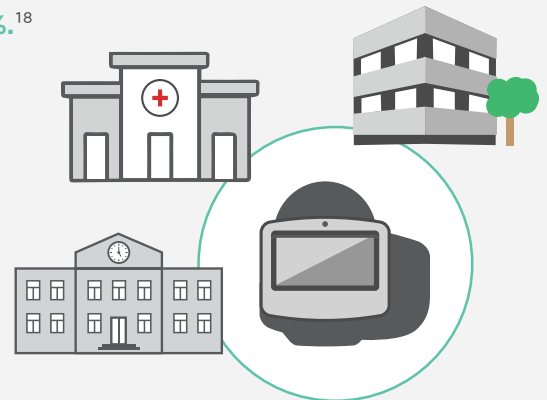
In one study, use of the Spot Vision Screener at Pediatric Physicians' Organization at Boston Children's Hospital helped staff increase completion rates in three- to five-year-old children over chart-based screening. Improvement was observed for each age, but the most impressive result was among three-year-old children—increasing from **38.6% to 87.1%**.<sup>18</sup>



2

## Financial outcomes:

Instrument-based vision screening is a smart investment. Practices can realize immediate economic benefits through reimbursement with **CPT Code 99177**<sup>19</sup> and reduce the rate of unnecessary referrals to specialists.



3

## Standardization:

A fast, objective and consistent approach to vision screening across the healthcare network can help enhance operational efficiency and patient outcomes. 11 out of 12 practices in the Boston Children's project experienced a statistically significant improvement in completed vision screening with instrument screening compared with chart-based screening.<sup>18</sup>

<sup>14</sup> Centers for Disease Control and Prevention: Improving the Nations' Vision Health: A Comprehensive Public Health Approach. [http://www.cdc.gov/visionhealth/pdf/improving\\_nations\\_vision\\_health.pdf](http://www.cdc.gov/visionhealth/pdf/improving_nations_vision_health.pdf)

<sup>15</sup> Zabba, Joel N. "Children's Vision Care in The 21st Century & Its Impact on Education, Literacy, Social Issues & the Workplace: A Call to Action." Journal of Behavioral Optometry (2011)

<sup>16</sup> Source: <http://www.aappublications.org/news/2015/12/07/Vision120715>

<sup>17</sup> Welch Allyn Market Research 2016

<sup>18</sup> Louis Vernacchio, MD, MSc; Jonathan Modest, MPH; Katherine Majzoub, RN, MBA; Bruce Moore, OD; Vijeta Bhamhani, MS, MPH; Emily K Trudell, MPH; Temitope Osineye, MBBS, MPH; Glenn Focht, MD; Jean Santangelo, RN, BSN (2015). INSTRUMENT-BASED VISION SCREENING FOR PRESCHOOL AGED CHILDREN: AN IMPLEMENTATION STUDY. Poster presented at the Healthcare Improvement 27th Annual Summit, December 2015

<sup>19</sup> CPT 99177: Instrument-based ocular screening (e.g., photoscreening, automated refraction), bilateral; with on-site analysis.

# Advancing Frontline Care Together

Your patients expect you to offer the portfolio of services they need to help address increasingly serious conditions. You can expect the same from us.

Welch Allyn offers a wide range of solutions designed with your most pressing patient needs in mind—all from the name primary care clinicians have relied on for more than 100 years.

Talk to your Welch Allyn representative today, or learn more at [www.welchallyn.com](http://www.welchallyn.com).

Condition(s)	Procedure	Welch Allyn Product	Selected CPT Code(s)*
<b>Diabetic Retinopathy</b>	Diabetic Retinal Exam	RetinaVue™ Network	92250
<b>Amblyopia</b>	Automated Vision Screening	Spot™ Vision Screener	99177
<b>Heart Disease and Stroke</b>	Resting ECG	CP 150™ Resting ECG	93000
		Burdick® ELI™ 280 Resting ECG	93005 93010
	Stress ECG	Quinton® Q-Stress Cardiac Stress Testing System	93015
			93016 93017 93018
Holter Monitoring	Burdick Vision Express Holter Monitoring System	93224 93225 93226 93227	
<b>Chronic Obstructive Pulmonary Disease (COPD)</b>	Spirometry	SpiroPerfect® PC-Based Spirometry	94010 94060 94070 94150 94200 94375
<b>Hypertension</b>	Ambulatory Blood Pressure Monitoring	ABPM 7100 Ambulatory Blood Pressure Monitoring System	93784 93786 93788 93790
	In-Office Blood Pressure Averaging	Connex® Spot Monitor	n/a
	Remote Blood Pressure Monitoring	Welch Allyn Home™ Hypertension Program	n/a

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