

A middle-aged man with grey hair is sitting on a dark couch in a dimly lit room. He is wearing a blue button-down shirt under a grey cardigan and dark blue jeans. He is holding a smartphone in his right hand and looking at it with a slight smile. The background is a warm, textured wall, possibly stone or brick, with a soft light source on the left.

Doctor On Demand Case Study:

Improving Chronic Disease Outcomes

dr+ on demand



Doctor On Demand study shows significant reductions in Cholesterol & Hemoglobin A1C levels — using virtual care providers

Executive Summary

The ability to successfully manage chronic health conditions over time improves patient health outcomes and reduces health care costs associated with complications. To measure Doctor On Demand's chronic care management capabilities, the company's in-house data team studied a subset of patients with two or more appointments and lab values associated with diabetes and high cholesterol, both conditions linked to cardiovascular disease. Preliminary results found significant reductions in LDL/Total Cholesterol and in Hemoglobin A1C for patients.

Background

The CDC reports that 60% of adults in the U.S. live with a chronic disease, and that 40% have two or more. Chronic diseases are the leading causes of death and disability and, not surprisingly, account for enormous health care costs. Yet, 30% of Americans don't have access to the continuum of care and ongoing management that a primary care physician provides.

As the nation's first virtual primary care platform, Doctor On Demand is filling the gap in chronic care management today and continuing to innovate and define the scope of practice for responsible virtual care. The company has evolved from treating purely urgent care conditions to providing ongoing primary care. In 2017, Doctor On Demand became the first full-service telemedicine provider to offer fully integrated laboratory services to its patients — a major step in advancing the quality and range of services treatable via telemedicine.

Through its fully employed clinical practice, Doctor On Demand has developed robust clinical practice guidelines, point-of-care tools, and self-management tools that empower the patient population. The company also invests in Continuing Medical Education to ensure the highest quality care. With these tools, Doctor On Demand clinicians have proven they can close measure-specific gaps to reach additional members and thereby help improve HEDIS targets and health plan performance scores such as Star Ratings.



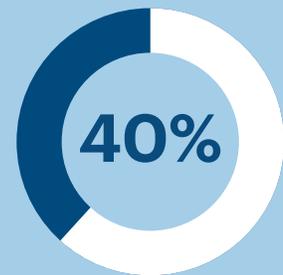
Chronic Disease in the U.S.

BY THE NUMBERS



60%

of U.S adults live with chronic disease



have two or more chronic diseases



30%

of Americans don't have access to care & ongoing management of a primary care physician

Preliminary Clinical Findings

Cholesterol

Doctor On Demand identified more than 100,000 patients in their population who are living with elevated cholesterol and/or diabetes. Lowering cholesterol and controlling blood sugar are important drivers in the effort to reduce your risk of heart attacks and strokes¹.

Low Density Lipoprotein (LDL), often called “bad cholesterol,” is the blood substance that damages arteries and produces premature cardiovascular disease.

Doctor On Demand identified a cohort of patients with high LDL levels > 190, which the American Heart Association has identified as a key level where action is necessary in their recently updated November 2018 practice guidelines. These individuals are at high risk for cardiovascular disease, which is likely to lead to strokes, heart attacks, and other ER/Hospitalization events. These outcomes are costly for health plans and employers, and potentially devastating for patients and their families.

Doctor On Demand was successful in lowering LDL Cholesterol by 29.7% and Total Cholesterol by 18.3%². Furthermore, 80% of patients with LDL > 190 mg/dl were treated to goal < 190 mg/dl.

Patients with LDL cholesterol \geq 190 mg/dl are at highest risk of heart disease and stroke

Total Cholesterol:

18.3%

Reduction

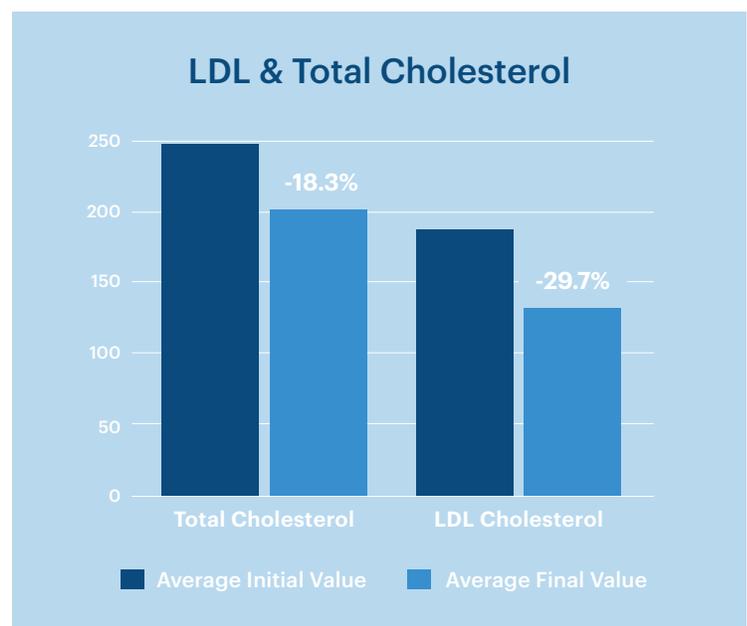
LDL Cholesterol:

29.7%

Reduction

80%

of patients with LDL > 190 mg/dl were treated to goal < 190 mg/dl



1. Martín-Timón I, Sevillano-Collantes C, Segura-Galindo A, Del Cañizo-Gómez FJ World J Diabetes. 2014 Aug 15; 5(4):444-70.
 2. Chronic disease population seen for at least 2 separate episodes of care.

A1C

Hemoglobin A1C has been strongly shown over the past 30 years to be a valuable predictor and marker of organ damage from uncontrolled diabetes. The international goal is to get the level of Hemoglobin A1C below 7.0 which indicates good control of diabetes. Studies of the importance of Hemoglobin A1C showed an increase of 1 point was associated with close to a 30% increase in mortality and an even greater increase (40%) in cardiovascular or ischemic heart disease mortality³. Looking at this another way, lowering Hemoglobin A1C by 1 point has been calculated to extend a person's lifespan by five years, extend healthy vision by 8 years, and preserve kidney health in diabetics by six years⁴. Additionally, studies have shown that a one-point difference in A1C levels leads to a reduction in medical costs of \$1,200 per patient with diabetes, per year⁵. Doctor On Demand's medical practice follows the latest American Diabetes Association guidelines to focus on lifestyle, diet changes, and medications to move diabetes wellness to a much healthier level, often within just 2 or 3 video visits.

Lowering Hemoglobin A1C by 1 point can extend a person's lifespan by **5 years**

Over half (58.3%) of Doctor On Demand's critically high risk patients with diabetes (A1C > 9.0) saw an impressive drop of 24.5% in Hemoglobin A1C levels, which the American Diabetes Association equates to better clinical outcomes.

Patients were divided into two groups:

A1C ≥ 7.0

19.3%

reduction in A1C for ≥ 7.0

33.3%

of diabetics ≥ 7.0 achieved therapeutic goal ≤ 7.0

A1C ≥ 9.0

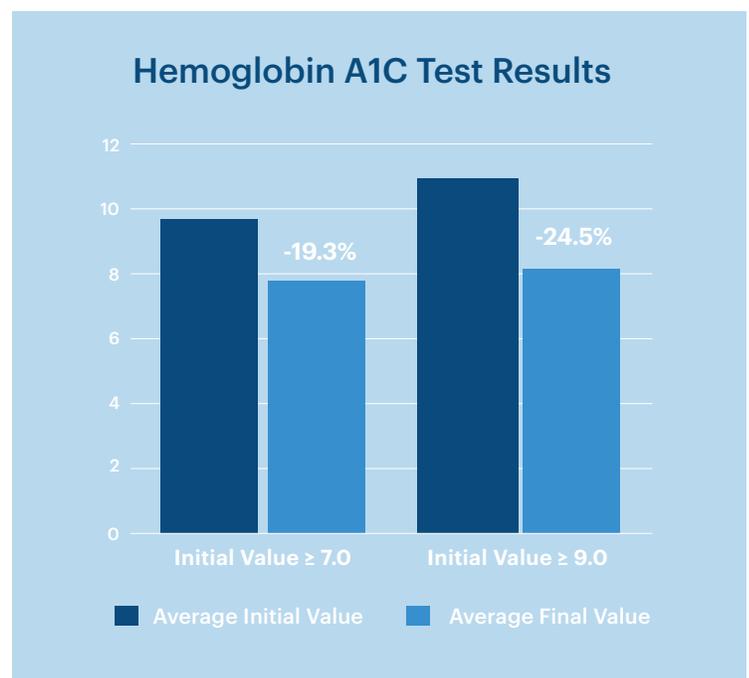
Critically High

58.3%

of patients ≥ 9.0 were reduced below critical range

24.5%

reduction in A1C for ≥ 9.0



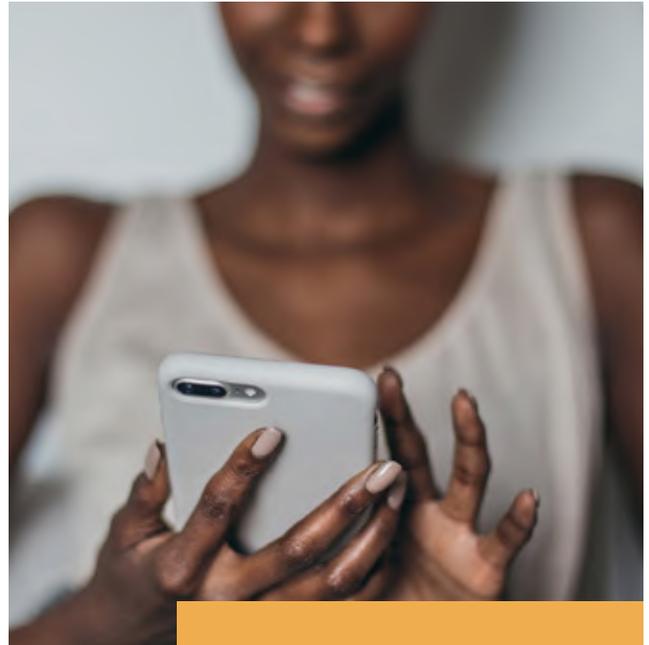
3. Khaw KT, Wareham N, Luben R, Bingham S, Oakes S, Welch A, Day BMJ. 2001 Jan 6; 322(7277):15-8.

4. National Committee for Quality Assurance: The State of Health Care Quality 2010: HEDIS Measures of Care, pp. 47-51.

5. Wagner EH, SandhuN, Newton KM, et. al., Effect of improved glycemic control on health care costs and utilization, JAMA. 2001;285:182-89.

Patient Story

A 28 year-old female living in the Midwest scheduled a video visit with Doctor On Demand after discovering a red rash on one of her feet. The patient had diabetes and had not seen a doctor in two years. During the video visit, the physician conducted a full examination, ordered lab work, and diagnosed the rash as cellulitis of the foot, obesity, and uncontrolled Type 2 diabetes. As an immediate next step, the physician sent in an electronic prescription for an oral antibiotic, and after a follow-up visit learned that the infection resolved in one week. During the first visit, the physician also discussed with the patient a diet plan and medication management. As a result, the patient showed improvement over several follow-up visits with the same physician.



The improvement in this patient's diabetes management is likely to prevent kidney damage, poor eyesight, foot infections, expensive cardiovascular hospitalizations, and a need for dialysis.

Lab results showed the patient had a Hemoglobin A1C level of 11.8. The Hemoglobin A1C blood test is the gold standard for determining if a patient's diabetes is under control. National guidelines are to get these levels down to < 7.0 to prove good control and avoid serious, expensive complications. After 90 days, the patient's Hemoglobin A1C dropped from 11.8 to 6.2 and with the addition of two oral diabetes medications, along with a more plant-based diet and an increase in daily exercise, she lost 24 pounds.

Given the flexibility of the Doctor On Demand platform to expand and track patient care, her treating physician also referred her to Doctor On Demand's Behavioral Health practice, as her PHQ-9 score indicated mild-to-moderate depression and she relayed feeling a lot of stress at work. The Doctor On Demand psychiatrist saw her over the course of several video visits, confirming the diagnosis of depression. He prescribed sertraline, an antidepressant medication for daily use, and her depression symptoms and PHQ-9 scores improved over the first month, and continued to do so thereafter.

The patient later said she had previously felt stressed mentally and financially in trying to go see doctors, and did not feel supported by local physicians. In contrast, she appreciated the convenience of seeing a Doctor On Demand physician, their commitment to listening well, and taking time with her. The support she felt as a result of her video visits was an important catalyst in her follow on treatment and success.



The Value of Virtual Primary Care

Through Doctor On Demand's Synapse offering, a first-to-market fully-integrated platform that allows health plans and employers nationwide to deliver primary care coverage virtually for the first time, examples like the one above can become increasingly commonplace. The company's experience with chronic disease management has demonstrated the ability to impact future clinical outcomes through reduction of Hemoglobin A1C in patients with diabetes, and lowering of LDL plus Total Cholesterol. Not only does this impact patient health, quality of life and patient satisfaction, it demonstrates that chronic disease management is possible — with vast benefits available to a wider and deeper patient population than ever before — through a national virtual medical practice that delivers stronger, better, and enduring doctor-patient relationships.