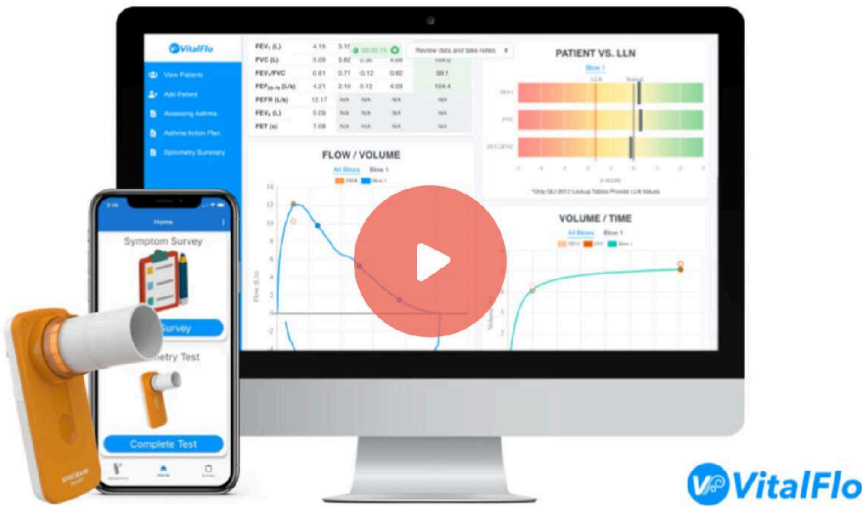


# VitalFlo helps doctors measure, monitor, and predict their patients' lung health



LEAD INVESTOR



**Matt Duke**

We invested in VitalFlo because of their ambitious mission to transform lung health. VitalFlo will enable people to take control of their lung health and prevent dangerous health situations. The Founders are strong with domain expertise and previous operating experience. The traction of the company is strong and they are positioned well for high growth. Our team believes this could take off as they close more partnerships with clinics, insurers, and hospital systems.

**Invested \$2,500 this round**

[vitalflohealth.com](http://vitalflohealth.com) Portland Oregon

Technology B2B Healthcare Venture Backed Science & R&D

## Highlights

- 1 Change asthma and COPD treatment to proactive, preventative care
- 2 2.7X subscription growth quarter-over-quarter
- 3 Launched with 90-hospital Health System group in May 2022
- 4 Raised \$2M+ in Seed funding in 2021 from 3 VCs and several Angels
- 5 Notable venture investors include Techstars, Geekdom Fund and Elevate Capital
- 6 Won \$1.2M+ in research grant funding from National Science Foundation (NSF) and others
- 7 20K+ spirometry tests performed on platform - more than 2X growth year-to-date!

## Our Team



**Luke Marshall** Founder & CEO

Raised over \$2M in investment and over \$1.2M in grant funding for VitalFlo from Techstars, Geekdom Fund, The National Science Foundation and others. PhD, University of Texas at Austin.



**Andy Taylor** Co-founder & COO

Founded the Medical Innovators Collaborative (MEDIC), an incubator for medical device startups and development. Built enterprise partnerships with United Therapeutics, Becton Dickinson and others. Biomedical Engineering, NCSU.



**Carl Mottram** Clinical Advisory Board Member

Wrote the definitive textbook on Pulmonary Function Testing. Professor of Medicine Emeritus at Mayo Clinic. Sits on several spirometry standards boards including the Clinical and Laboratory Standards Institute, and the National Board for Respiratory Care.



**Dr. Wes Sublett** Clinical Advisory Board Member

Senior Partner and Medical Director of Clinical Research of the largest private equity-backed Allergy & Asthma clinical group in the country. Forty under 40 Louisville Business First.

## VitalFlo helps doctors measure, monitor, and predict their patients' lung health

What if you had to go to the cardiologist to get your blood pressure taken?

That would be absurd. Of course you should be able to get your blood pressure tested with your primary care doctor, and by yourself at home!

So why are we making the 40 million Americans with asthma and COPD go to the pulmonologist to test how their lungs are doing? It's insane.

And it is part of why only 50% of people with COPD have *ever* had a pulmonary function test. (Can you imagine if only half of people with cardiovascular disease had ever had a blood pressure test?)

We founded VitalFlo to unlock pulmonary function testing, also called spirometry, for patient and their primary care doctors.



## We're backed by the best

To help us on this mission, we've been backed by some of the best investors in the

To help us on this mission, we've been backed by great VC investors like Techstars, Geekdom Fund and Elevate Capital.

We've also won support from the National Science Foundation.

Now, we're opening up the opportunity for the whole world.

Why is now the right time to invest? Because we're already working with some of the best customers in the world, and we're growing. Fast.

Our Spirometry Platform is trusted by the world's best, and we are growing fast



## A massive problem, that VitalFlo can solve

There are three major reasons that treating patients Chronic Respiratory Diseases like asthma and COPD has become such a big problem:

1. **Reactive Care is Expensive.** The US alone spends \$100 Billion per year on asthma and COPD care. *And \$29 Billion of that is on ER visits and hospitalizations!* Reacting to symptoms instead of proactive testing and treatment is responsible.
2. **Respiratory Care is Hard.** Most of this testing is done by specialists like Pulmonologists. That is because Pulmonary Function Testing (aka spirometry) has traditionally been a difficult test to do well. As a result, 40% of cases are underdiagnosed. And fully 50% of COPD patients have never had a pulmonary function test! How can we help patients before they end up in the hospital, if we don't know how they're doing?
3. **Trends are Making it Worse.** Unfortunately, a respiratory pandemic has made chronic respiratory disease an even bigger problem. COVID has impacted everyone, and especially the ~23 million who have long-haul COVID symptoms. And with other trends like climate change causing more pollen and allergy symptoms as well, this problem is becoming increasingly urgent.

Chronic Respiratory Care is an expensive, inefficient, and growing problem



REACTIVE CARE IS EXPENSIVE



RESPIRATORY CARE IS HARD



TRENDS MAKING IT WORSE

3.2M  
ER VISITS

>40%  
UNDERDIAGNOSED

23M  
LONG-HAUL COVID

\$29B  
ER & HOSPITAL

50%  
NEVER TESTED

+200%  
MORE ALLERGIES



Sources: see list below.

One of the biggest challenges is a lack of access to testing.

That's because the testing is typically stuck in the Pulmonary Lab.

And in the wake of COVID, Pulmonary Labs all across the country are backlogged by 4-6 months.



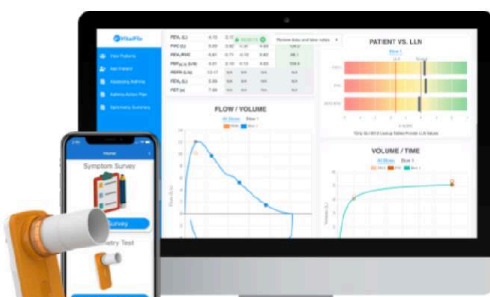
## The solution is to make spirometry available to your regular doctor

We've designed our software and data tools to make spirometry remarkably easy to do, all while maintaining the highest quality readings.

By pairing with 3rd-party hardware devices, we have focused on making super simple, easy-to-use mobile and web apps.

*Our products help Primary Care Doctors & Health Systems quickly and easily evaluate the respiratory health of their patients – both in the clinic and at home*

### VitalFlo unlocks Spirometry for Primary Care Providers & their Patients



One hybrid platform:  
**in-clinic & at-home**

**Powerful:** web-app portal with clinical decision support

**Flexible:** mobile-first app with integrated 3<sup>rd</sup>-party devices

**Easy-to-use:** intuitive UI for patients and generalists



We make it *Faster and Easier* to do *More* Spirometry Testing

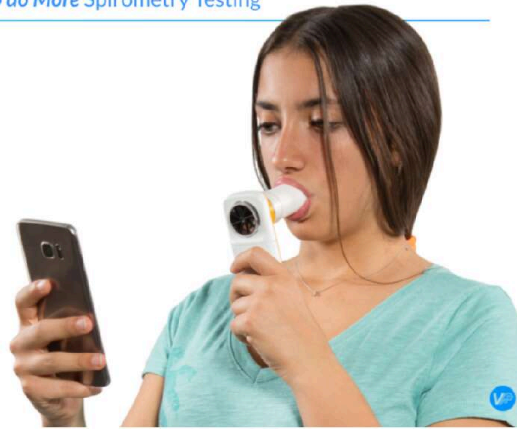
To unlock spirometry:  
**Make it Fast & Easy**

**Real-Time Coaching** with automated feedback

**Calibration-Free** 3<sup>rd</sup>-party devices are always ready

**Saves Clinical Resources** like staff time and exam rooms

**Turn-Key Home Monitoring** with VitalFlo Virtual Care (launching soon)



## We're built for Primary Care, so we're ready for everyone

We're built for primary care providers (non-specialists), which makes us a fantastic tool for many different clinical settings.

We have sequentially launched into three markets over the last few years: Researchers, Independent Primary Care providers, and now: Health Systems.

Sequenced launches into three markets: Research, Primary Care & Health Systems

 RESEARCHERS	 INDEPENDENT PRIMARY CARE	 HEALTH SYSTEMS
		
 		
	 	
	 	



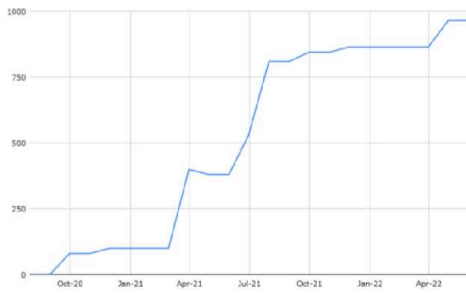
Academic Clinical Researchers were great early-adopters.

We helped elite research groups like UNC School of Medicine, the CDC, and UT Austin Dell Medical school to shift their studies from in-person to remote following COVID.

VitalFlo also helped groups like Stanford University's Sean N. Parker Center for Allergy & Asthma Research and Duke University design never-before done fully-remote, fully decentralized research studies.

Rapid adoption by Academic Clinical Researchers was driven by COVID

Contracted Patient Population: Research Studies

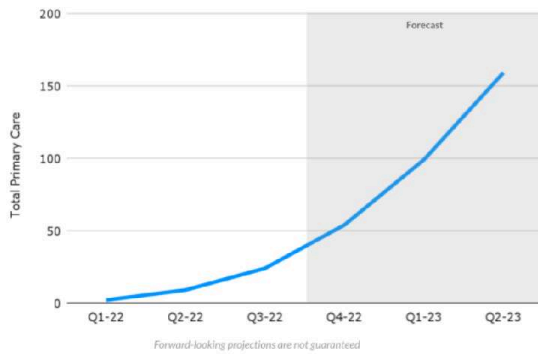


### Independent Primary Care launched earlier in 2022

There has been a great need for spirometry testing that we are helping to fill for primary care practices across the country.

Since launching our products to this segments earlier this year, we've been growing fast, and we're continuing that growth through the end of the year and into 2023.

### Since clinical launch, rapid and growing sales velocity with Independent Primary Care



Quarterly Growth  
**2.7X**  
Subscriptions

Primary Care Practices  
**50+**  
Proj. EOY-2022



### Health Systems are backlogged by all of the pulmonary function testing they need to do

With 4-6 month waits to get the testing they need done, Health System accounts need help getting more throughput.

We launched our first Health System earlier this year. Sovah Health has seen a great ROI by working with us: paying back the system cost in the first 6 weeks of use through insurance billing.

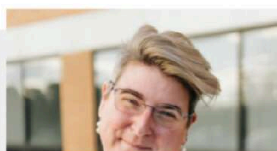
This is a massive market with large account sizes: the system we launched with is a 2-hospital system that was recently acquired by a 90-hospital group, which we will be working to expand into through the rest of the year and 2023.

### Health Systems need VitalFlo to help them with their 4-6 month Spirometry Backlog



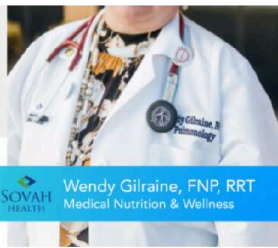
I love VitalFlo. I absolutely love it.

Within six weeks, just in billing, we were able to make back what we paid out



able to make back what we paid out.

We're using it really frequently. So I'm very happy with all that.



## A business model that works

As a software and data platform, we have both a SaaS and transactions-based revenue streams.

**Subscriptions:** We charge annual, auto-renewing subscriptions on a per-device basis. We are competitively priced, and by scaling with the number of devices deployed instead the number of patients or providers, our structure works great for both small and large practices.

**Disposables:** When the devices are used in the clinic, there are mouthpieces that must be replaced after each test. So in addition to the annual subscriptions, we are also driving revenue by increasing testing volume.

**Aligned Incentives:** Our customers are paid by insurance for each test they do, which makes the system pay for itself quite quickly. One of our health system customers has reported a 6-week payback period and success on 100% of the insurance claims they have made so far.

### How it works: VitalFlo unlocks quick and easy Spirometry for Health Providers



## Our next service: Virtual Care

In addition to in-clinic services, VitalFlo is about to launch its home-based program. For this offering we will be subcontracting virtual service providers to help oversee the patients while they are at home.

Our first customer will be a 120-provider Allergy & Asthma group based in the Midwest.

This product has been highly requested from our customers. It requires one device subscription per patient, and will dramatically expand the SaaS income associate with our accounts.

Next: we are Expanding Account Values with “Turn-Key” Virtual Care

VITAL FLO LAUNCHING FULLY-STAFFED REMOTE RESPIRATORY MONITORING

- **Highly Requested:** Health Systems are asking us for this
- **High Customer ROI:** with existing insurance reimbursement codes
- **High Need:** they do not have the staff to run program themselves



VIRTUAL CARE WILL BE A REVENUE DRIVER  
**3-5X**  
INCREASE IN ARPA

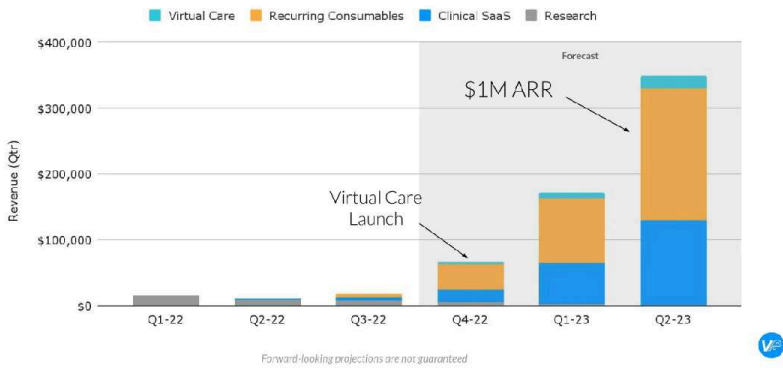


## The result: continued, rapid growth

We are in our growth inflection, and it’s an exciting time to invest in continued sales and marketing efforts.

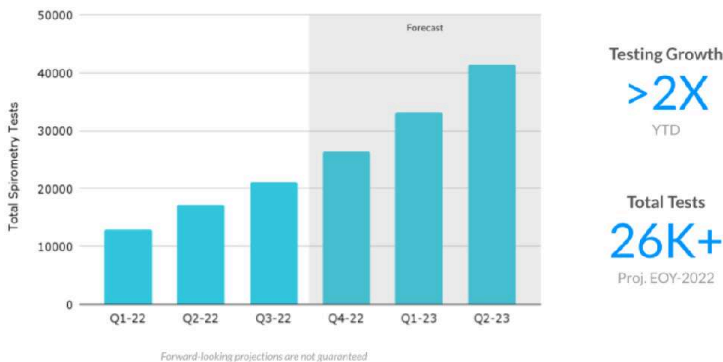
With a product that is ready to scale, and new services launching, we are primed to dramatically expand our revenue over the next several quarters.

After a recent clinical market launch, we are primed for accelerating growth



In fact, year-to-date we have already more than doubled the number of spirometry tests performed on the platform:

Adoption has been rapid, and spirometry testing through the platform is growing fast





# Join VitalFlo on our growth journey

We have an award-winning team that has successfully growth the company to this point, brought on over \$2M in Venture Capital backing, as well as over \$1.2M in grant support from federal institutions like the National Science Foundation.

Our award-winning team is bringing Predictive Respiratory Medicine to Primary Care

Our clinical advisors include:

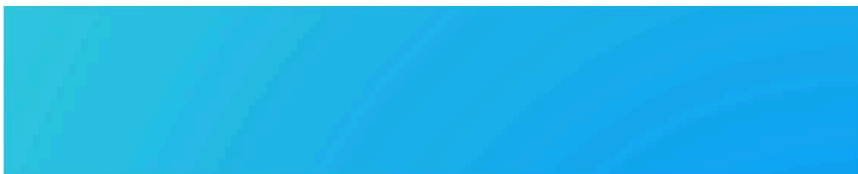
- **Carl Mottram** - professor-emeritus of Mayo - Clinic School of Medicine and author of the definitive text book on Pulmonary Function Testing
- **Dr. Wes Sublett** - Sr. Partner and Medical Director of Clinical Research of one of the largest PE-backed Allergy & Asthma clinical groups in the US
- **Dr. Todd Rowland** - Medical Informatics Fellow of Harvard/MIT, and Chairperson of the Telehealth Innovation Group of the American Academy of Physical Medicine & Rehabilitation

We believe we are primed for growth and invite you to join us on our journey!

VitalFlo is in its growth inflection - it's time to scale up



- We're changing Asthma and COPD treatment to proactive, preventative care
- Expanding within 90-hospital Health System group
- Previously raised \$2M+ in Seed funding
- Won \$1.2M+ in research grants from National Science Foundation (NSF) and others
- 20K+ spirometry tests performed on platform - more than 2X growth year-to-date!



*Statistic sources:*

- ER Visits, Hospitalizations & Hospital Readmissions: *CDC, JACI, CDC, Pharmacy Times, CDC, CDC, NIH*
- Under-diagnosis: *AAFP* and *ERS*
- Under-testing: *CMAJ*
- Long-haul COVID: *UC Davis*
- Pollen Increases: *Nature*