RESEARCH AMERICA
DISCOVERY. INNOVATION. HEALTH.

If you think research is expensive, try disease.

INVESTMENT IN RESEARCH SAVES LIVES AND MONEY

COPD

A debilitating and potentially deadly disease that afflicts millions of Americans, Chronic Obstructive Pulmonary Disease (COPD) encompasses several different lung conditions including emphysema and chronic bronchitis that cause chronic coughing, breathlessness, wheezing, and chest tightness. Research has revealed that COPD most often develops due to long-term exposure to toxins that irritate the lungs. Smoking has been found to be the leading cause of COPD, but other risk factors exist such as genetic predisposition and breathing in air pollutants. While currently available treatments can help alleviate symptoms, there is, as of yet, no cure for COPD.[1,2]

TODAY

16 million
Americans have been diagnosed with COPD, and millions more may be unknowingly living with the disease.[1]

As many as **one-fourth** of people who live with COPD have **never smoked**.[1]

While the number of men dying from COPD is decreasing,[3] female deaths from COPD **increased 4-fold** in the U.S. over the past three decades.[4]

COST

$3,210:
Annual medical treatment costs of COPD per adult patient in the U.S.[5]

$49 billion:
Predicted 2020 national medical costs attributable to COPD.[5]

Research Delivers Solutions

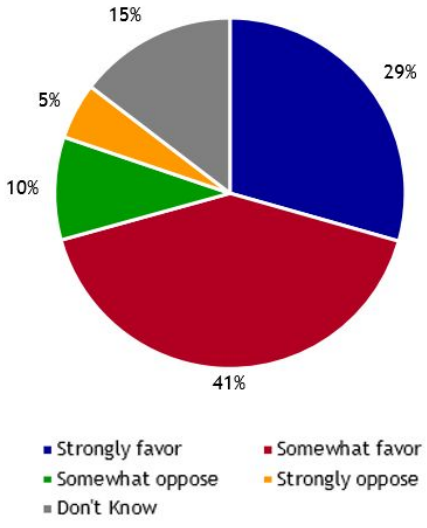
The **COPDGene study** is a long term, observational study examining over 10,000 people around the U.S. to better understand COPD and the people it affects. Since 2009, it has yielded numerous discoveries such as insights into the influence of factors like age, race, and sex on COPD as well as the overlaps between COPD, asthma, and other several other diseases. Another important focus of this study has been the genetic causes of COPD; in fact, researchers have found numerous parts of the genome that may play roles in COPD risk.[6]

Pulmonary rehabilitation that includes education and exercise can help improve lung function, ultimately enhancing COPD patients' quality of life.[7] Thanks to multiple clinical studies which demonstrated the significant benefits of such programs, pulmonary rehabilitation is now included as part of the recommended standard care for COPD patients.[8,9]

Respiratory infections caused by viruses like influenza can lead to a severe worsening of COPD symptoms and even death. Getting a yearly **flu vaccine** has been found to be valuable in protecting COPD patients, with one study finding flu shots **reduce mortality** in COPD patients by roughly 40% during the influenza season.[10]

Research is shining a light on the most effective strategies to help COPD patients who smoke to quit. A 2016 analysis of 16 different studies showed that utilizing **cessation counseling** in combination with **drug therapies** (such as nicotine replacement therapy, varenicline, or bupropion) successfully increased long-term quit rates in COPD patients.[8,11]

Do you favor or oppose doubling federal spending on medical research over the next five years?



Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2019

COPD

Then. Now. Imagine.

THEN

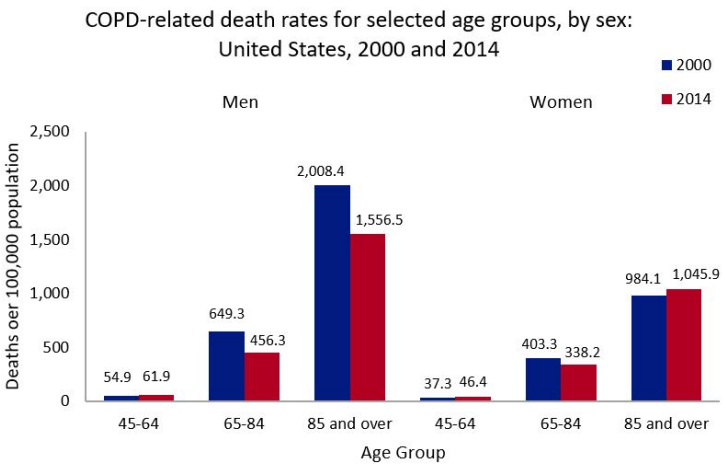
In the 1960's, treatments for COPD were limited and ineffective.[12,13] Patients were told not to exercise, as it was believed exercise could be harmful.[13]

NOW

There are more treatment options available for COPD patients than ever before. Better understanding of the disease has allowed COPD management to shift from a "one-size-fits-all" approach to one that is tailored to the individual patient.[14] Additionally, there are now worldwide consensus recommendations for COPD prevention and management through the Global Initiative for Chronic Obstructive Lung Disease (GOLD).[8]

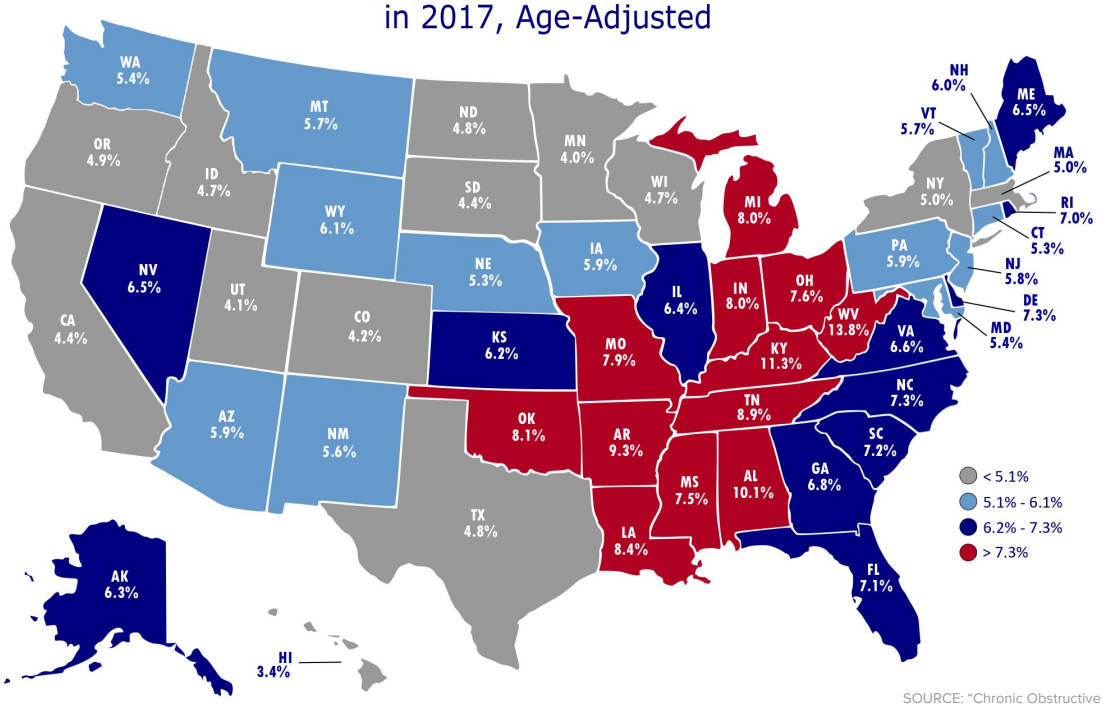
IMAGINE

A world without COPD.



All statistically significant increases/decreases in COPD-related death rates between 2000 and 2014. Figure adapted from: Figure 2. "COPD-related Mortality by Sex and Race Among Adults Aged 25 and Over: United States, 2000–2014." CDC NCHS Data Brief No. 256, September 2016.

Percentage of American Adults with COPD in 2017, Age-Adjusted



SOURCE: "Chronic Obstructive Pulmonary Disease and Smoking Status - United States, 2017." MMWR. 2019;68(24);533–538.

1. "COPD." NIH. n.d.
2. "COPD." CDC. 2018.
3. " Chronic obstructive pulmonary disease (COPD)." WomensHealth.gov. 2019.
4. "Taking her breath away: the rise of COPD in women." American Lung Association. 2017.
5. Ford et al. "Total and state-specific medical and absenteeism costs of COPD among adults aged ≥ 18 years in the United States for 2010 and projections through 2020." Chest. 2015;147(1):31-45.
6. Maselli et al. "Clinical epidemiology of COPD: Insights From 10 Years of the COPDGene Study." Chest. 2019;156(2):228-238.
7. "The basics of pulmonary rehabilitation." American Lung Association. n.d.
8. "Global strategy for the diagnosis, management, and prevention of Chronic Obstructive Pulmonary Disease (2020 report)." Global Initiative for Chronic Obstructive Lung Disease. 2019.
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11. Stead & Lancaster. "Combined pharmacotherapy and behavioural interventions for smoking cessation." Cochrane Database Syst Rev. 2012;(10):CD008286.
12. Fishman. "One hundred years of chronic obstructive pulmonary disease." Am J Respir Crit Care Med. 2005;171(9):941-8.
13. Petty. "The history of COPD." Int J Chron Obstruct Pulmon Dis. 2006;1(1):3-14.
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R!A12.19