

“The Parkinson’s Plan” with Dr. Ray Dorsey

Oakland, CA
Thursday, January 29, 2026



PD Active
By and for people with Parkinson's disease

Our Mission

The Parkinson’s Foundation makes life better for people with Parkinson’s disease by investing in **better care, education and advocacy**, and advancing **research**.



Learn More to Live Better

- Access digital books, guides, webinars, fact sheets, videos, podcasts and more at [Parkinson.org/Library](https://www.parkinson.org/Library)
- Order free printed books at [Parkinson.org/Store](https://www.parkinson.org/Store)
- Contact our Helpline at **1-800-4PD-INFO**, email us at Helpline@Parkinson.org or visit our website [Parkinson.org](https://www.parkinson.org)



Take Action!

Sign up for the *Parkinson's Foundation Action Network* to get the latest news

Learn more about policy issues

Advocate for change



<https://www.parkinson.org/how-to-help/policy-advocacy-priorities>

Today's Event

- Please silence your phones.
- The restrooms are near the entrance of the building.
- This event will be **recorded**. A YouTube link will be sent by email within a few weeks of the event.
- Slide decks, resource information, and resources will be sent in the same **follow-up email**.
- We will begin with an introduction from **Jana Reed, MD**.
- Followed by a presentation with **Ray Dorsey, MD**, co-author of *The Parkinson's Plan*.
- We'll have the chance to ask Dr. Reed and Dr. Dorsey your questions. Please write them on an index card and submit for the moderated **Q&A**.



PD ▶ Active

By and for people with Parkinson's disease

Who We Are

- ▶ A local, community-based nonprofit organization
- ▶ By and for people with Parkinson's disease
- ▶ Funded completely by our members
- ▶ Rooted in lived experience, inclusion and support

Our Mission

- ▶ To help people with Parkinson's stay active, informed and connected



What We Do

- ▶ **Movement:** Classes focused on strength, balance, and mobility
- ▶ **Community:** Support Groups as welcoming spaces for people with Parkinson's, care partners and family members
- ▶ **Education:** Speaker Forums, Round Tables and practical information for living well with PD





Movement

Classes

- ▶ Dance for PD (3!)
- ▶ PD Fit Club
- ▶ Tai Chi for PD
- ▶ Voice
- ▶ Yoga for PD (3!)
- ▶ RS Boxing
- ▶ Zumba for PD

Activities

- ▶ Pickle ball
- ▶ Ping pong
- ▶ Hikes
- ▶ Game Night



Community

Support Groups

- ▶ Women with PD
- ▶ DBS (Deep Brain Stimulation)
- ▶ African Americans Living with PD
- ▶ Grupo de Conexión
- ▶ Mild/Recently Diagnosed Care Partners
- ▶ Moderate Care Partners
- ▶ Adult Children of People with PD

Social Outings

- ▶ Happy Shaky Hour
- ▶ Picnics
- ▶ Walks



Education

Speaker Forums, Topics (23)

- ▶ Cell Therapies for PD
- ▶ PD & the Environment
- ▶ Personalized PD Care
- ▶ Gene Therapies for PD
- ▶ Effects of PD on Motor & Cognitive Function

Round Table Discussions (20)

- ▶ Keeping Fit & Engaged
- ▶ Building your PD Care Team
- ▶ Women & PD

Information Fairs

- ▶ Trade show for PDA instructors & partners

Stay Connected



- ▶ **Website:** pdactive.org

(Class and support group schedules, events and programs)

- ▶ **Email:** info@pdactive.org

- ▶ **Phone:** (510) 479-6119

(Questions, support or help getting started)

Jana Reed, MD

“ Our troops and their families deserve protection from TCE and other chemicals that increase the risk of cancer and Parkinson’s disease.

Jana Reed, Veteran USAF Flight Surgeon
Parkinson’s diagnosis age 48



The Parkinson’s Plan

1/29/2026

atria Center for the
Brain & Environment

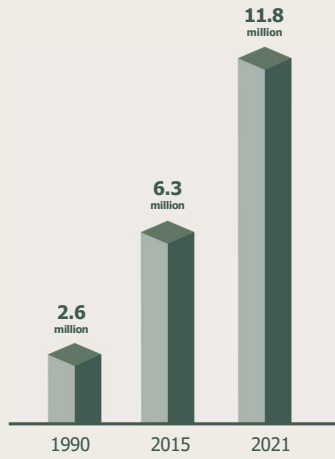
Parkinson’s
Foundation

PD Active

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<https://www.parkinsons.org>



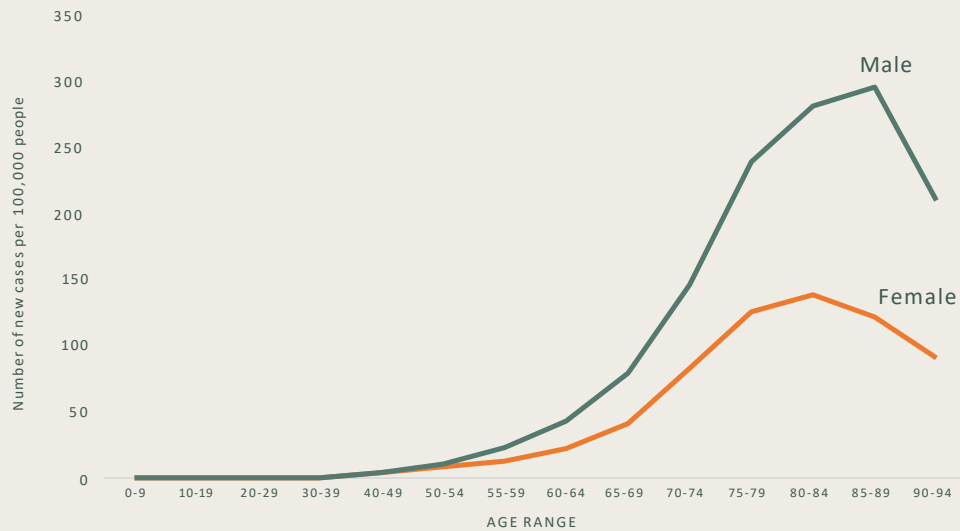
The rise of Parkinson's disease calls for a PLAN



P Prevent
L Learn
A Amplify
N Navigate

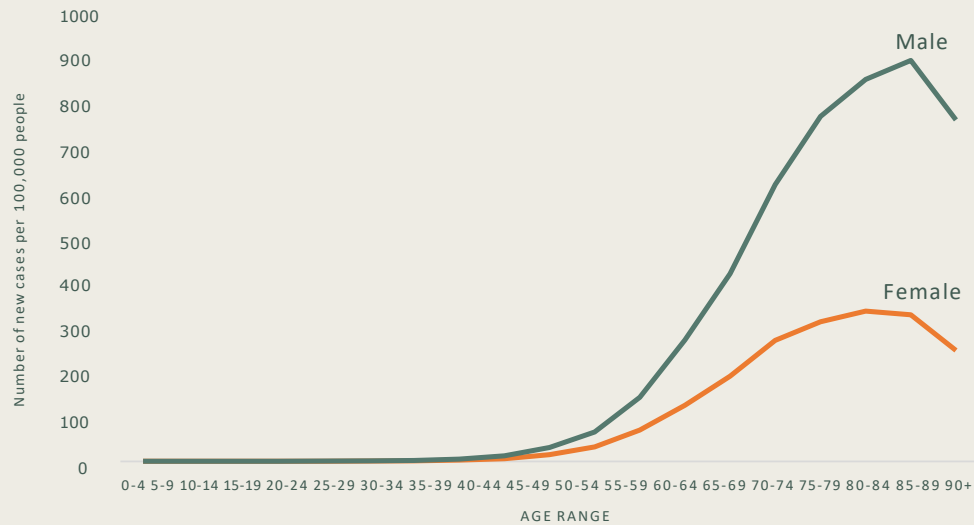


Longevity gives the symptoms of PD time to appear





...which is almost identical to lung cancer

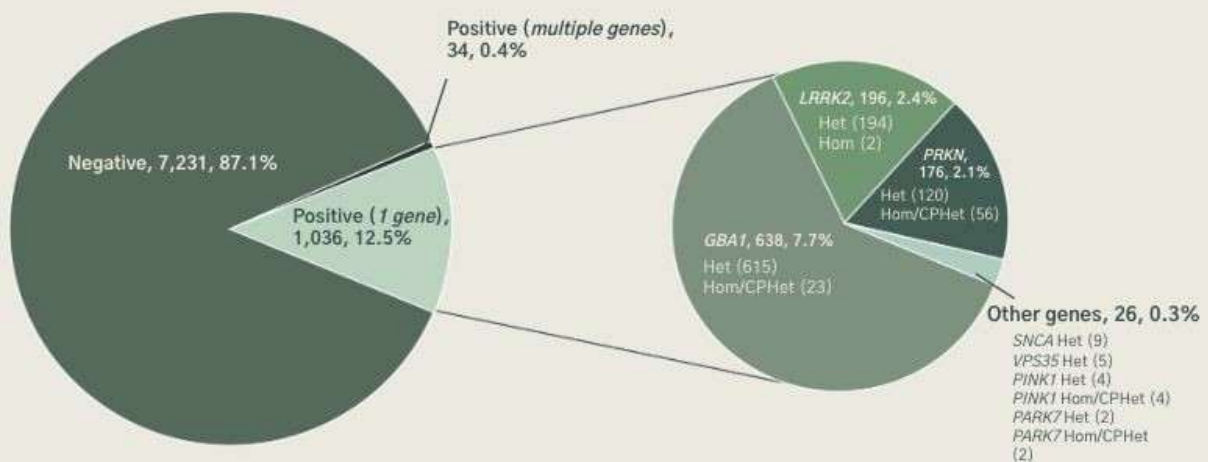


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Source: <https://pubmed.ncbi.nlm.nih.gov/38217619/>



The genetic contributions to Parkinson's are small in North America ...



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Three environmental toxicants may be fueling its rise

Certain pesticides



- Paraquat is associated with **150% increased risk** of PD and **its use has doubled** recently
- Prenatal chlorpyrifos exposure is associated with **reduced IQ, brain abnormalities and childhood tremors**

Trichloroethylene (TCE) and perchlorethylene (PCE)



- TCE is associated with **500% increased risk** of PD
- PCE is still widely used in drycleaning

Air pollution



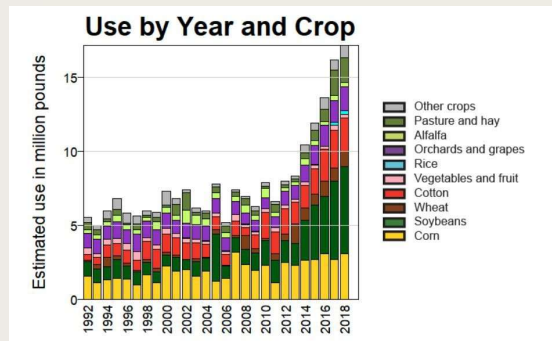
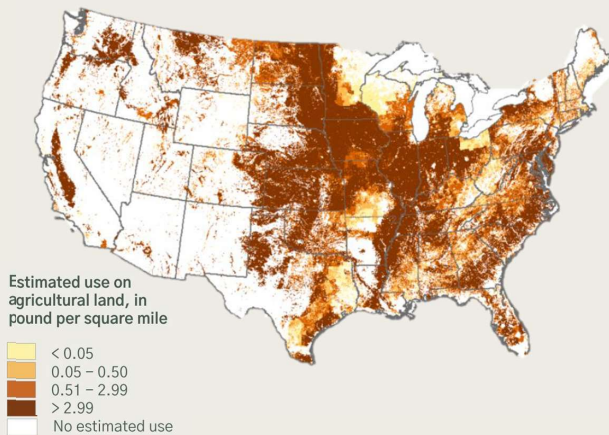
- **Sixth leading preventable cause** of death
- **40% breathe in unhealthy air** in the U.S.

Sources: Environ Health Perspect 2011;119:866-72; U.S. Geological Survey available at: https://water.usgs.gov/nawqa/prsp/usage/maps/show_map.php?year=2018&map=PARAQUAT&hilo=H; Our World in Data available at: <https://ourworldindata.org/pesticides>; Ann Neurol 2012;71:776-84; J of PD 2023;13:203-18; Environ Research 2018;156:348-62; Our World in Data available at: <https://ourworldindata.org/outdoor-air-pollution#outdoor-air-pollution-is-one-of-the-leading-risk-factors-for-premature-death>; American Lung Association available at: <https://www.lung.org/research/sota/key-findings>



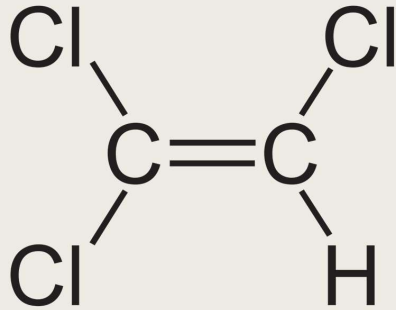
Paraquat is still sprayed across the United States

Estimated use of paraquat on U.S. agricultural land, 2018





Trichloroethylene may be another cause of Parkinson's



Trichloroethylene (TCE)

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Image source: <https://en.wikipedia.org/wiki/Trichloroethylene>



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TCE was and is ubiquitous

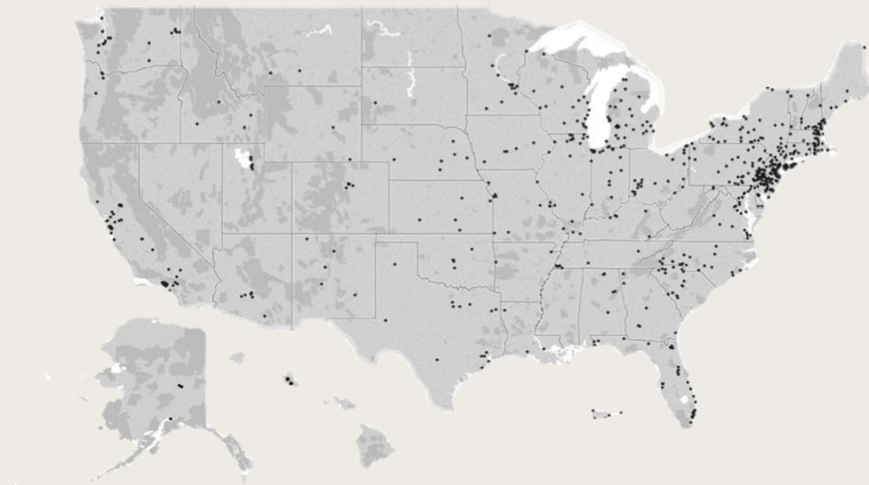
Occupations with possible TCE exposure	Commercial and consumer uses	Industry uses
1. Aircraft/jet engine mechanics	1. Adhesives	1. Automotive care
2. Automobile workers	2. Aerosol cleaning products	2. Dry cleaning
3. Computer specialists	3. Carpet cleaners	3. Degreasing
4. Dry cleaners	4. Cleaning wipes	4. Furniture care
5. Electronic manufacturers	5. Degreasers	5. Manufacturing
6. Embalmers	6. Decaffeinated coffee	○ Computer and electronics
7. Metal treatment workers	7. Film cleaners	○ Dyes
8. Oil processors	8. Glue	○ Fat and oil extracts
9. Painters	9. Gun cleaner	○ Jewelry
10. Printers	10. Inks	○ Machinery
11. Refrigerant manufacturers	11. Lubricants	○ Paint and coating
12. Sewage workers	12. Paint and paint removers	○ Paper
13. Shoe makers	13. Pepper spray	○ Perfume
14. Taxidermists	14. Pesticides	○ Plastics
15. Textile and fabric cleaners	15. Refrigerant	○ Refrigerants
16. Water treatment workers	16. Stain removers	○ Soap
17. Weapons specialists	17. Typewriter correction fluid	
18. Varnish workers	18. Wood finishes	

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Source: JPD 2023;12:203-18. doi: 10.3233/JPD-225047

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Sites contaminated with TCE are found across the US



Map of federal Superfund sites contaminated with TCE in the US, 2018

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Source: Superfund: National Priorities List, US Environmental Protection Agency <https://www.epa.gov/superfund/superfund-national-priorities-list-np> and The Parkinson's Plan and <https://map22.epa.gov/cmc/superfund?zoom¶ms=0800585815>

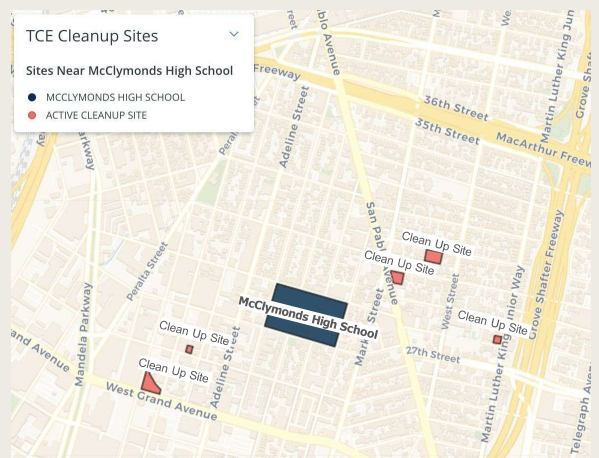
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...and in unsuspecting communities

TCE contamination near McClymonds High School in West Oakland, California

- **1990's:** West Oakland contains many metal-plating, dry-cleaning and industrial facilities that use trichloroethylene (TCE)
- **2017:** A 17 year old McClymonds student dies of leukemia
- **2018:** A 19 year old McClymonds graduate, dies of osteosarcoma
- **2019:** A fuel tank on McClymonds campus is removed revealing TCE contamination
- **February 2020:** 5 active cleanup sites warranting a state response were discovered within 2,000 feet of McClymonds High School
 - All sites list TCE as a contaminant of concern
 - All sites have been in active cleanup for years
 - TCE was discovered in the groundwater and soil vapor beneath the school raising concerns about evaporated TCE impacting its indoor air quality
- **March 2020:** school is shut down for testing (pandemic prevents reopening until 2021)
 - TCE was not found in the indoor air of the school
- **Today:** TCE remains in the groundwater and soil beneath the school. It's unclear how contamination impacted students prior to this discovery



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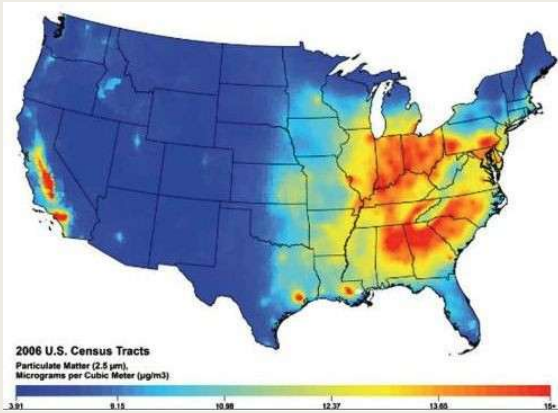
<https://www.nbcbayarea.com/investigations/contaminated-groundwater-shuts-down-mcclymonds-high-in-oakland/2237816/> <https://www.ktvu.com/news/community-mourns-loss-of-oakland-football-player-who-died-of-cancer-at-age-19>
<https://www.ktvu.com/news/inspirational-oakland-teen-who-battled-to-get-his-h-s-degree-loses-life-to-cancer> <https://oehha.ca.gov/calenviroscreen/indicator/cleanup-sites>

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As an individual's exposure to PM 2.5 increases so does their risk of developing Parkinson's

Particulate matter 2.5 exposure map, 2006



Parkinson's incidence map, 2012



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Sources: [https://www.thelancet.com/journals/langph/article/PIIS2542-5196\(20\)30227-9/fulltext](https://www.thelancet.com/journals/langph/article/PIIS2542-5196(20)30227-9/fulltext)
https://www.ncbi.nlm.nih.gov/core/hw/2.0/html/tilesshop_pmc/tilesshop_pmc_inline.html?title=Click%20on%20image%20to%20zoom&p=PMC3&id=11091623_jpd-14-jpd230357-g002.jpg

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We must first **prevent** the preventable



The Parkinson's Prevention Pyramid

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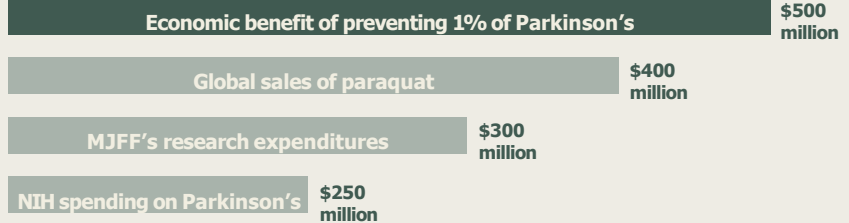
Source: The Parkinson's Plan

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We need to **learn** more about the causes of Parkinson's

Only 2 cents of every research dollar goes to prevention



We must **amplify** the voices of those affected



ACT UP members at the 1989 New York City Pride March



Candy Lightner, founder of Mothers Against Drunk Drivers (MADD), speaks at a press conference



...And navigate the frontiers of new treatments

10+ Years

Long-term

- Regenerating circuits
- Rethinking gene editing
- Restarting combination therapies
- Raising nanomedicine
- Reinvesting and reinvigorating the next generation

6-10 Years

Mid-term

- Reaching for new drugs
- Repositioning diets and the microbiome
- Rejuvenating stem cells
- Reconsidering vaccines and immune therapies

0-5 Years

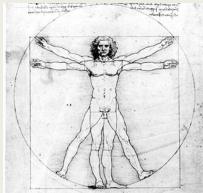
Near-term

- Recognizing Parkinson's fingerprints
- Reorganizing AI
- Realizing genes can drive drugs and therapies
- Repurposing old drugs
- Reorganizing electrical and pump therapies



Center for the Brain & Environment

To identify and eliminate the environmental causes of brain diseases



Measuring chemicals in our bodies

- Blood
- Hair
- Urine
- Fat



Measuring chemicals in our environment

- Food
- Water
- Air
- Soil
- Dust



Suspected cluster of PD in NY

Mapping clusters of brain disorders

- Autism
- Brain Cancer
- ALS
- Parkinson's disease
- Alzheimer's
- Dementia with Lewy bodies



Take Action Now

On an individual level:

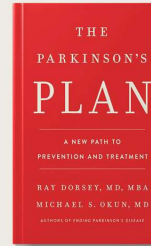
- Join PD Avengers at www.pdavengers.com
- Sign up for the Center for the Brain & Environment Research Registry
- Tell a friend.. or ten!

In your community:

- Advocate for pesticide-free golf courses and schools

At the national level:

- Contact the EPA Administrator, Lee Zeldin, at zeldin.lee@epa.gov and ask him to ban paraquat and chlorpyrifos



THINK GLOBAL. ACT LOCAL.



GLOBAL ALLIANCE TO END PARKINSON'S DISEASE

To learn more, visit pdplan.org/takeaction or contact us at info@pdplan.org

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Your advocacy is starting to make change

US EPA will reassess safety of herbicide paraquat, says its chief

By Reuters

January 9, 2026 5:49 PM EST · Updated January 9, 2026



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Source: <https://www.reuters.com/world/us-epa-will-reassess-safety-herbicide-paraquat-says-its-chief-2026-01-09/>

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Panel Discussion and Q&A



Moderated by
Monique Buffler, PD Active



Ray Dorsey, MD
Atria Health



Jana Reed, MD

Thank you!

Please remember to **complete the survey** found at your seat.

Your input helps us plan the next program!

