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## World Trade Center Health Program

### Research Activity Update Meeting of the WTC Health Program Scientific/Technical Advisory Committee (STAC) September 2021

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## Presentation Outline

- First Decade of WTC Health Program Research
- Research Initiatives:
  - Publications/Science Blogs
  - RAND Assessment of Translational Research
  - Youth Research Cohort Feasibility
  - Research Solicitations



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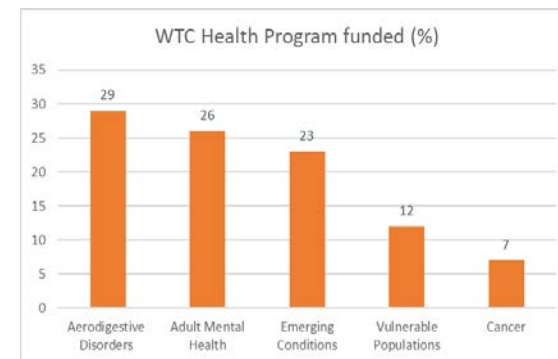
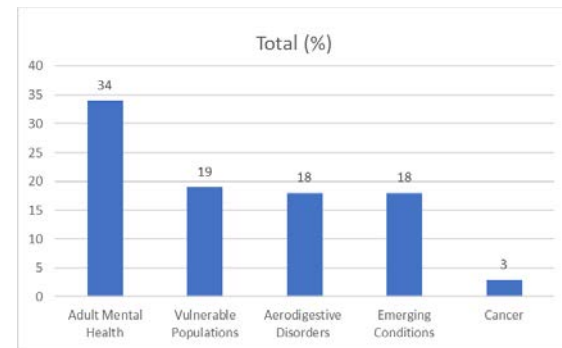
## **WTC Health Program First Decade of Research**

Trends, Vulnerable Populations, and Future Directions

## WTC Research Literature Review

- Publication dates: 2001 – June 30, 2020
- 944 eligible publications
  - 291 (31%) funded by the WTC Health Program
- Total Literature
  - WTC Responders
  - WTC Survivors and WTC Health Registry community members
  - Several on both populations
- WTC Health Program-funded publications
  - 78% examined responders
- Main areas examined: health burden and etiology
  - Other areas: exposure or intervention characterization

## Distribution of WTC Publications



## Research Trends and Findings

- Aerodigestive disorders are largest research category (56%)
  - higher prevalence among responders than in the general population
  - highest in those with greatest exposure
- Persistent increased risk of PTSD among the affected population
- Evidence of modestly increased cancer risk for all cancers combined, thyroid cancer, and prostate cancer; with intermittent indications of other excess cancers.\*

\*bladder, malignant melanoma, multiple myeloma, leukemia, and non-Hodgkin 's lymphoma

## Research Trends: Potentially Vulnerable Populations

- Research is needed to better identify at-risk populations, characterize burden, assess health equity, and inform care.
- Groups of interest include minorities, pregnant women, women of reproductive age, the elderly, and persons exposed as minors.

## Research Trends: New Conditions

- As members age, WTC-related surveillance and research activities may uncover new health conditions.
- Topics of current interest include autoimmune diseases, cardiovascular disease, and issues associated with cognitive impairment.

## Research Trends: Future Directions

- Identify effective approaches to improve the healthcare and wellbeing of at-risk populations.
- Identify knowledge gaps, especially in areas of causal determinates, disease progression, and emerging health conditions.
- Identify prevention and mitigation strategies intended to reduce adverse health effects in populations affected by future disasters.





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## WTC Health Program 2021 Publications and Science Blogs

## Publications

- World Trade Center Health Program—United States, 2012–2020. *MMWR* (2021) <http://dx.doi.org/10.15585/mmwr.ss7004a1>.
- The World Trade Center Health Program: twenty years of health effects research. *Am J Ind Med* (2021) <https://doi.org/10.1002/ajim.23273>.
- The World Trade Center Health Program: petitions for adding qualifying health conditions. *Am J Ind Med* (2021) <https://doi.org/10.1002/ajim.23267>.
- A workshop on cognitive aging and impairment in the 9/11-exposed population. *Int J Environ Res Public Health*; 18(2):681(2021). <https://doi.org/10.3390/ijerph18020681>.

## Science Blogs

World Trade Center Health Program: First Decade of Research  
Blog Posted on June 21, 2021

<https://blogs.cdc.gov/niosh-science-blog/2021/06/21/wtchp/>

A Workshop on Cognitive Aging and Impairment in the 9/11-Exposed  
Population

Blog Posted on August 26, 2021

<https://blogs.cdc.gov/niosh-science-blog/2021/08/26/mci/>



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## Translational Impacts of WTC Health Program Research

## Overview/Summary

- The WTC Health Program is funding a four-year study of the translational\* impact of WTC-related research.
- Identifies progress and opportunities for setting future research goals.
- Final report due for release by early 2022.
- RAND publication describing the translation framework.  
(2021) *Int J Environ Res Public Health* doi:  
[10.3390/ijerph18052659](https://doi.org/10.3390/ijerph18052659)

\*Translational research: the process of turning scientific observations into interventions that improve and enhance the health and well-being of individuals and populations



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## WTC Youth Research Cohort

Department of Education Feasibility Study  
and Next Steps

# Department of Education Feasibility Study

## Study Population

- Stratified random sample of 1,002 Students:
  - 501 exposed and 501 unexposed students with similar sociodemographic characteristics

## “Exposed zone”

- Lower Manhattan and western Brooklyn within ~1.5 miles of the WTC site

## “Non-exposed zone”

- $\geq 6$  miles from the WTC site

## Student Tracing and Location

- Batch tracing followed by two rounds of intensive tracing
- Each round of tracing was followed by mailing of informational brochures

## Findings

- Data sufficient for tracing and updating.
- Recruitment potential low.
  - 5.2% exposed; 1.4% unexposed.
- Did not yield a representative sample.
  - Response differed by gender, and race/ethnicity.
- Estimated tracing & contacting yield from complete DOE sample (~150,000).
  - ~4,600 potential participants at a cost of \$46M.

## Next Steps

- Contract solicitation to evaluate issues causing low recruitment and problematic sample distribution.
- Posting of a “Survivor” research solicitation.
- Initiate a Scoping Review\* of WTC youth research.

\*Scoping Review: A preliminary assessment of potential size and scope of available research literature.





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## Research Solicitations

2021 Award Summary, 2022 Survivor Initiative, and Future Directions

## 2021 Research Grants (U-01)

- 12/25 (48%) applications funded
- Score range 16 – 36
- \$6.4 M total FY 2021 cost
- 2 -5 years performance range
- Primary outcome: Emerging Conditions (e.g., cognitive aging, vascular dysfunction, liver steatosis, sleep apnea)

## 2021 Developmental Grants (R-21)

- 6/16 (38%) applications funded  
–4/5 (80%) funded by NIA\*
- Score range 25 – 48
- \$1.5 M total FY 2021 cost
- 2-year performance period
- Primary Outcomes: Cancer, Respiratory, Mental Health

\*National Institute on Aging (NIA)

## 2022 Research Solicitation Initiative

### Survivor (only) Research Cooperative Agreement (U-01) Solicitation Announcement

- Mid-July – Mid-August 2021: Federal Register Notice—Stakeholder Input
- Late August 2021: Solicitation Published
- December 7, 2021: Receipt Date for Project Proposals
- Late Spring 2022: Scientific Review
- July-August 2022: Project awards issued by the CDC Office of Grant Services

## Research Solicitations—Future Directions

- Explore inclusion of Early Career Grant Solicitations
  - Career Development Awards (K series)
  - Research Training and Fellowships (T & F series)
- Develop a solicitation targeting life-style intervention research
- Continue development of collaborative solicitations with the National Institutes of Health (NIH)



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## **WTC Health Program Resource Documents**

# WTC Health Program Resource Documents

- Program Laws: <https://www.cdc.gov/wtc/laws.html>
  - James Zadroga 9/11 Health and Compensation Act of 2010
  - James Zadroga 9/11 Health and Compensation Reauthorization Act of 2015
- WTC Health Program
  - Eligible Groups: <https://www.cdc.gov/wtc/eligiblegroups.html>
  - List of WTC-Related Health Conditions:  
<https://www.cdc.gov/wtc/conditions.html>
  - Program Statistics: <https://www.cdc.gov/wtc/ataglance.html>
  - Research Gateway: <https://wwwn.cdc.gov/researchgateway>

# WTC Health Program Resource Documents

- WTC Research
  - Publications and Compendium  
<https://wwwn.cdc.gov/ResearchGateway/Publications/Compendium2021>
  - Funding Announcements
    - Cooperative Research Agreements Related to the World Trade Center Health Program (U01)  
<https://grants.nih.gov/grants/guide/pa-files/PAR-20-280.html>
    - World Trade Center Health Research related to WTC Survivors (U01)  
<https://grants.nih.gov/grants/guide/rfa-files/RFA-OH-22-004.html>
- WTC Health Registry  
<http://www1.nyc.gov/site/911health/index.page>

## STAC SFTP Site Reference Documents

- 2021 WTC Health Program Funded Research Projects
- 2021 Children's Research Bibliography
- Final Report – WTC Youth Cohort Feasibility Study
- Summary of WTC Research Funding – WTC Steering Committee Briefing Document
- WTC Research Dashboard Descriptions
- Recent WTC Research Publications (December 2020 – September 2021)



# Questions