



**NYU**

SCHOOL OF GLOBAL  
PUBLIC HEALTH

# **New York City Transit Workers: An Essential Workforce**

**Multilevel Interventions to Reduce Risk of Adverse  
Impacts of Covid-19 and other Bioevents**

**National Academies  
Indoor Air Management of Airborne Pathogens:  
Public Transportation  
Virtual Forum**

**Robyn Gershon, MHS, DrPH**

# Research Team

- Alexis Merdjanoff, PhD
- Jonathan Rosen, MS CIH
- Gabriella Metzler, PhD
- David Vlahov, RN, PhD
- Rachael Piltch-Loeb, MSPH, PhD
  
- Graduate Students
  - Daliya Ali, DrPH Candidate
  - Michael Cziner, PhD Candidate
  - Owen Slyman, MPH Candidate

# NYC Transit

---

## Facts

Metropolitan Transportation Authority (**MTA**) is the largest public transportation network in North America

- The largest transit workforce in the country -- 40K Employees.
- \$18.5 billion operating budget.
- In 2019, average weekday subway ridership was 7.7 million.
- 2.2 million people per day ride the buses.
- Nearly 6K buses and roughly 7K subway cars.

# NYC Transit Workers & COVID-19

---

- In March 2020, NYC transit workers (MTA) were thrust into the role of frontline workers- they provided a “pandemic lifeline” to NYC

## **In the first wave (Mar 15 - June 30)**

[From **March 22 - June 13<sup>th</sup>** NYC was in “pause” .... lock-down]

- **March 6, 2020** MTA memo *forbidding facemasks*
- In the first wave- the workforce—experienced **high** rates of infection (15%), quarantine or home isolation (>10k), high rates of hospitalizations, and a high number of fatalities (125), which was the most of any agency in NYC
- MTA workers **also mourned the loss** of family members, friends, and co-workers

# The initial Response.....

- **By March 20<sup>th</sup>, face masks were allowed**
- **Aerosol transmission was not initially recognized**
  - **CDC on May 7, 2021**
  - **WHO on Dec 23, 2021**

# NYC Transit: Early Interventions

- **April 17, 2020** mandatory **face mask use** required by workers and riders

*Transit worker harassment, verbal abuse, and physical assault*

- **May, 2020** nighttime cleaning of subways and buses and use of UVC light for sterilization

# TWU Local 100 Covid-19 Pilot Study:

NYU School of Global Public Health partnered with leaders from the Transport Workers Union (TWU) Local 100 to conduct a **pilot study** of TWU members in **August 2020**. We collected survey data from **645 members**, which closely matched the demographics of TWU members.



# Pilot Study Results (N=645) Aug, 2020

---

- 80% were male
- 70% were racial or ethnic minorities Mean age was 51 years old
- 45% were in public facing positions with 30% of these in the bus division
- By Aug, 2020, nearly 40% had been under quarantine
- 39% had at least one chronic condition



# Key Findings: Covid-19 and Mental Health

---

- A large proportion of workers (24%) reported a history of Covid-19 infection.
- High levels of fear and concern were reported among TWU members:
  - 90% were afraid of getting infected at work
  - Lack of **Any PPE** was associated with increased fear
  - Nearly three-quarters (72%) were fearful of long-term health impacts of Covid-19
  - 71% were fearful for the personal safety (security) at work
  - 69% were concerned about being infected in the community
  - 91% knew someone infected, 76% knew someone who had died of Covid-19. Yet.....Originally Only 30% intended to be vaccinated
- A large majority (over 80%) reported Mental Health problems (e.g., felt nervous, anxious or on edge, had trouble sleeping or eating problems) because of the pandemic
- The most serious source of MH problems reported; “*fear for safety at work*”

# Early Interventions for Transit Workers

---

- Several **workplace interventions** were rolled out
  - MTA opened an **on-site vaccination** hub with the goal of vaccinating 1,000 workers per week
  - MTA also provided four hours in **bonus wages** for workers who get vaccinated (two hours for each dose they receive)
  - Worker's not vaccinated must be tested weekly- **vaccine is not mandatory** due to crew shortages
  - Symptom monitoring at work, including workers being sent home because they have symptoms or were possibly exposed at work
  - Increase in **availability of personal protective equipment**, Plexiglas shields in buses, safety supplies, and implementation of new sanitation protocols
- NYC launched **community interventions** massive testing, tracing and vaccination programs
- About **70-80% of MTA workers have been vaccinated** thus far

# Recognition of Loss and Bereavement

TWU, Local 100 mourned the loss of family members, friends, and co-workers





### Maintenance Of Way

Emily Borshchak - SW  
 Thomas Chu - LW  
 John Diaz - SW  
 William Day - SW  
 Scott Egan - SW  
 Andrew Gorman - SW  
 Ronald Hill - SW  
 Harvey Knight - CSEM  
 Patricia Lippman - SW

Walter Madala - SW  
 Janet Mautner - SW  
 Andrew Morris - SW  
 Robert Sapiro - SW  
 Robert Sapiro - SW  
 Victor Wang - SW  
 Anthony Szwed - SW  
 Boris Zayatsky - SW  
 William Lind - SW

### Manhattan & Bronx Surface Transit Operating Authority

David Cusack - SW  
 Edith Salata - SW  
 Dennis Pagan - SW  
 Raymond Pagan - SW  
 Gary Lee - SW  
 Lynn McKinley - SW  
 Ana Mass - SW

Walter Schreiner - SW  
 Brian Scott - SW  
 Philip Williams - SW  
 Kenneth Smith - SW  
 Louis Jaffery - SW  
 Ramon Gomez - SW

### Car Equipment

Frank Gertman - SW  
 Leo Quilley - SW  
 Glenn Kende - SW  
 Mark - SW

Shelly Zivich - SW  
 Edith - SW  
 Patrick Pagan - SW  
 Thomas DeLo - SW

The war against COVID-19 could not have been fought without the valiant transit workers on the front lines. We will never forget our fallen union brethren and sisters. May they rest in peace.



### Stations

Delva Gilbert - SW  
 Tai-Jen Fang - SW  
 Anthony Ferraro - SW  
 Ronald Sapiro - SW  
 Russell Johnson - SW  
 Derrell Lott - SW  
 Theodoros Mihalas - SW  
 Andrea Mouton - SW  
 Frank Moore - SW  
 Emanuel Pagan - SW  
 Raymond Pagan - SW  
 Christopher Pagan - SW

Gregory Pagan - SW  
 Raymond Pagan - SW  
 Joseph Pagan - SW  
 Daniel Pagan - SW  
 Robert Pagan - SW

### Rapid Transit Operations

Gary Chern - SW  
 Philip Davis - SW  
 Stanley Fang - SW  
 Phyllis Sussman - SW  
 Nicole Lippman - SW  
 Frank Lee - SW  
 Sylvia Kessler - SW  
 Eric Pagan - SW  
 David Gabel - SW

Allyson King - SW  
 Peter Pagan - SW  
 Phyllis Pagan - SW  
 Steve Pagan - SW  
 Ben Schaffer - SW  
 Gary Szwed - SW  
 Michael Thompson - SW  
 Adam Kagan - SW  
 David Williams - SW  
 David Moore - SW

### MTA Bus/School Bus/Private Operations

Robert Gorman - SW  
 Robert Taylor - SW  
 John Jackson - SW  
 Robert Taylor - SW  
 Robert Taylor - SW  
 Alexander Young - SW

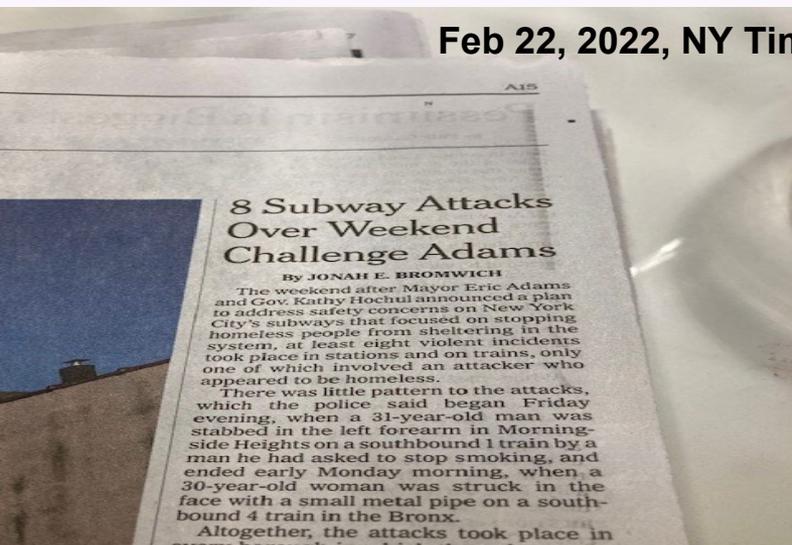
Alexander Figueroa - SW  
 Phyllis Pagan - SW  
 David Pagan - SW  
 Paul Davis - SW  
 George Marshall - SW  
 Michael Chambers - SW

### TA Surface

Walter Chumley - SW  
 Joseph Fischer - SW  
 Emanuel Hernandez - SW  
 Christopher Powell - SW  
 Emanuel Jacob - SW  
 Robert Pagan - SW

Emilio Serrano - SW  
 Robert Miller - SW  
 Lawrence Pagan - SW  
 John Pagan - SW  
 Cesar Torres - SW  
 Maria Pagan - SW

The TWC Local 100 Business Association proudly honors the members who have served our city and transit with their dedication. We thank you for your service and professionalism.



# Current Challenges

## Rider Safety

Jan 15, 2022

### Woman Dies After Being Pushed Onto Subway Tracks in Times Square

The police said Michelle Go, 40, of Manhattan, was shoved in front of an R train as it approached a 42nd Street platform in Manhattan on Saturday morning. NY Times



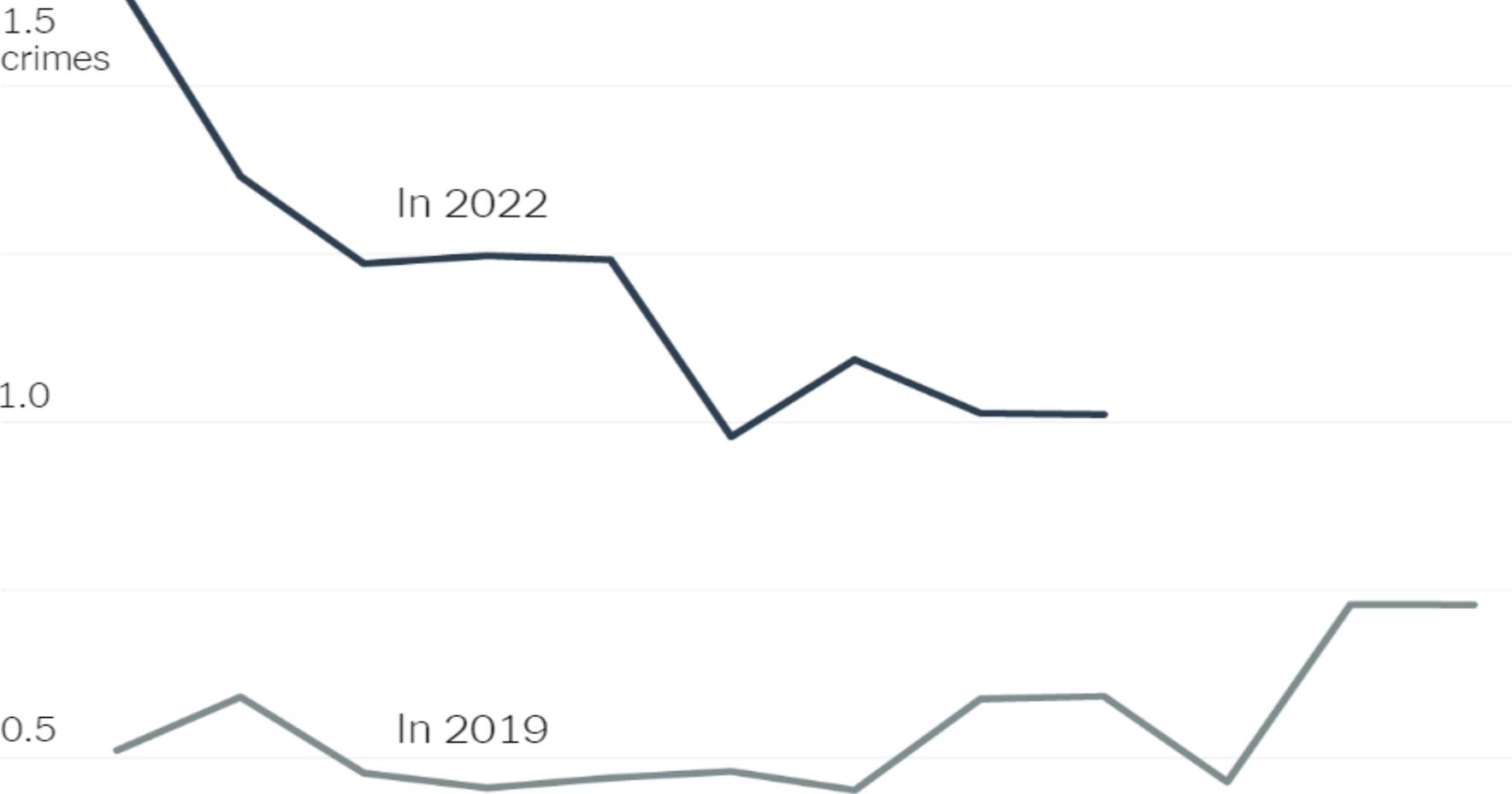
23 People injured April 15, 2022 Subway Shooting

Retirements, transfer to other NYC agencies, exit from workforce



# NYC Mass Transit Violent Crimes 1.2/1M rides

**Violent crimes per million subway rides**



# Study Overview

---

- NIH recently funded our 5-year, 5-phase study, in partnership with the **Transport Workers Union (TWU)**, Local 100. This study is **designed** to:
  - (1) Evaluate **multi-level interventions** (to-date) on worker health and well being (Implementation of the Pandemic Plan of 2012).
  - (2) Develop and implement interventions to **reduce risk and enhance worker resilience** using participatory action research and community-engaged framework.
  - (3) Disseminate findings to provide input into **policy** changes and inform operations to **protect** these and **other non-healthcare essential workers** during other pandemic events.

# Potential Strategies for Improvement

---

- **Improved coordination and support with federal, state, and city health authorities**
- **Create a joint labor and management Emergency Management Committee**
- **Implementation of Hierarchy of Controls in the Workplace**
- **Improvement of pandemic preparedness plans**
- **Policies that ensure rapid scale-up necessary testing, contact tracing, vaccination of workers**
- **Establish policies and programs that support the mental health and wellbeing of transit workers during and in the aftermath of disasters**
- **Improve communication and training to heighten worker awareness of how to protect themselves during infectious disease outbreaks**
- **Provide reasonable job accommodations for those workers who are increased risk for infection**
- **Implement safeguards to address increased violence towards transit workers**
- **Standard cleaning and sanitation protocols for both normal operations and during bioevents**

# Opportunities for Future Action

---

## **Providing Equal Protection for non-traditional frontline workers**

- Many of these workers are employed in public facing jobs (transit, food chain, retail pharmacy, etc.)
- Many are members of racial/ethnic minority groups
- Despite serving indispensable role during the pandemic, many continue to earn low wages and receive limited benefits and substandard access to care
- Stark example of **occupational health disparities** because they did not have the same level of preparedness and worksite controls provided to other frontline workers

# Thank you



**Robyn Gershon MHS, DrPH**  
**Clinical Professor, Dept of Epidemiology**  
**Co-Director, GPH Disaster Certificate Program**

Funding provided by NIH: R01NR020174

*“NYC Transit Workers and COVID-19: Impact of Multilevel Interventions “*