

# MICHAEL ROYCE TAN, BSN, RN, MPH

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## CLINICAL SKILLS

Care coordination, Clinical assessment, Discharge planning, Patient advocacy, health education, Multidisciplinary collaboration, Risk identification, Early intervention planning, Care transition, Resource navigation

## TECHNICAL SKILLS

### Programming Languages:

R (intermediate), SAS (intermediate), Python (basic)

### Statistical Methods:

Descriptive statistics, Regression analysis (linear, logistic), Frequency distributions, Hypothesis testing

### Data Visualization & Mapping:

ggplot2, Base R, SAS, ArcGIS (basic), ExcelDraw

### Healthcare Systems:

Epic, Allscripts, Clinical Trial Data Management

### Knowledge & Workflow Tools:

Markdown, LaTeX (basic), Github, Excel (basic), Notion, Obsidian, Trello (basic), Git (basic)

## EDUCATION

### Master of Public Health (MPH) Population & Health Science

University of Michigan  
Ann Arbor, MI 2025

Focus: Applied Epidemiology,  
Health Policy, Biostatistics

### Bachelor of Science in Nursing (BSN)

University of Central Florida  
Orlando, FL

## PROFESSIONAL SUMMARY

BSN-RN meets MPH — a progressive journey from direct patient care to population health, now cultivating knowledge in biostatistics and health data science. Bringing unique perspective that bridges clinical insights and public health with emerging analytical skills in R, SAS, and Python. Where others see numbers, I see patients; where many see problems, I see patterns; where institutions seek efficiency, I engineer empathy. Seeking collaborative opportunities where this vision can flourish, where better data leads to better decisions and ultimately, better health outcomes.

## RESEARCH & DATA ANALYSIS PROJECTS

### Longitudinal Age Distribution Analysis—California Teachers Study, City of Hope (2025) Report: [tmroyce.com/pub](https://tmroyce.com/pub)

- Applied SAS to analyze 20+ years of data (2000-2022) from the California Teachers Study cohort (~130,000 participants)
- Implemented reproducible statistical methods to compare teacher longevity with general population benchmarks
- Performed demographic trend analysis revealing potential increased life expectancy among study cohort
- Produced comprehensive statistical report with 5+ data visualizations illustrating age distribution changes over time
- Collaborated with senior researchers to refine methodological approach and interpretation of findings

### Implementation Science Project—Henry Ford Health System AI Preoperative Care Companion (2025) Report: [tmroyce.com/pub](https://tmroyce.com/pub)

- Developed implementation strategy for AI companion supporting knee replacement surgery patients
- Applied Consolidated Framework for Implementation Research (CFIR) to identify system barriers and facilitators
- Designed evaluation metrics across implementation, service delivery, and patient-centered outcomes using Proctor's model.
- Developed implementation proposal utilizing Expert Recommendations for Implementing Change (ERIC) evidence-based strategies

### GIS-Based Oral Health Disparities Dashboard—Alaska Department of Health (2024) Report: [tmroyce.com/pub](https://tmroyce.com/pub)

- Built interactive ArcGIS dashboard integrating 4+ public health datasets that mapped fluoridation status, provider availability, and access barriers across Alaska
- Conducted spatial analysis correlating geographic and demographic factors with healthcare access, providing critical insights on oral health disparities
- Developed visualization tools that streamlined stakeholder access to regional information while refining data cleaning and integration skills across diverse datasets

## SPECIALIZED TRAINING

### Data Science Professional

Harvard University, 2023

### Statistical Analysis with R for Public Health

Imperial College London, 2024

## LICENSES

- Registered Nurse, BSN  
Nurse Licensure Compact
- Advanced Cardiac Life Support,  
American Heart Association
- Basic Life Support,  
American Heart Association

## ASSOCIATIONS

- One Health Student  
Consortium
- Public Health Action  
Support Team
- Students Engaged  
in Global Health
- Student Emerging Leaders  
in Public Health
- American Nurses Association
- American Public Health  
Association

## CLINICAL EXPERIENCE

### Registered Nurse Orlando Health (2012 – 2019)

#### RN–Cardiac Stress Lab (2017 – 2019)

- Coordinated care for 15-20 high-risk cardiac patients daily, including discharge planning and follow-up appointment scheduling
- Identified patients at risk for complications through ECG rhythm interpretation and vital sign monitoring
- Assisted cardiologists with nuclear, exercise, and pharmacological (dobutamine) stress tests
- Collaborated with multidisciplinary teams to develop comprehensive care plans based on patient outcome and safety
- Educated patients and families on post-procedure care, medication management, and warning signs requiring medical attention

#### RN–Cardiac Evaluation (2013 – 2017)

- Developed and implemented discharge plans for cardiac patients, reducing readmission rates through effective coordination with outpatient providers
- Facilitated care transitions between emergency, inpatient, and outpatient settings
- Managed complex cases requiring coordination with multiple specialists, procedures, and community resources
- Performed comprehensive cardiac assessments, cardiac monitoring protocols, and identifying critical patterns

#### RN–Neuroscience (2012 – 2013)

- Conducted thorough neurological assessments for stroke and TBI patients
- Participated in multidisciplinary rounds to coordinate comprehensive care plans addressing medical, functional, and psychosocial needs
- Documented detailed care coordination activities while partnering with social workers to address barriers to care, ensuring continuity across transitions and facilitating safe discharge planning

## SPECIALIZED PROFESSIONAL EXPERIENCE

### Student Coordinator, University of Michigan (2024 – Present)

- Optimize LMS course sites (Canvas) for 200+ users, improving navigation and information architecture
- Apply data-driven approaches to course redesign, tracking engagement metrics to enhance user experience
- Collaborate with faculty to implement evidence-based instructional design principles

### Clinical Device Training & Operations Specialist

#### Inovio Pharmaceuticals (2021 – 2022)

- Analyzed device performance data across 5+ clinical trial sites to identify operational improvements
- Developed training materials that improved clinician comprehension
- Ensured accurate data capture in Electronic Data Capture (EDC) systems for DNA medicine clinical trials
- Collaborated with cross-functional teams to standardize operating procedures based on performance analytics