Curriculum Vitae

Han-Yi Chiu

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SUMMARY

✧ Registered Nurse (RN) with clinical nursing training, hospital management experience in workforce assessment and allocation, EMT and disaster response experience, military medical practice, and expertise in healthcare system resilience and workforce evaluation.
✧ RAND assistant policy researcher and PhD candidate with 10+ years of experience in nursing workforce, SNF/post-acute care/continuity care, hospital management, healthcare economics, and payment reform research.
✧ Experience working with CMS Medicare claims, California SNF staffing audits, PBJ staffing data, physician fee scheduling, and OPPS payment policy analyses focused on workforce shortages and reimbursement reform.
✧ Skilled in Stata and SAS for large-scale Medicare, and facility-level and individual-level analyses of healthcare quality, staffing performance, reimbursement systems, and policy impacts.
✧ Experienced in mixed-methods and stakeholder-engaged research, including healthcare quality metric development, policy simulations, and patient/provider surveys and interviews.

EDUCATION

September 2023 – Expected 2028
Ph.D. Candidate, Policy Analysis
RAND School of Public Policy

- RAND Scholarship and Taiwan Governmental Sponsorship
- Selected coursework: Health Economics, Empirical Public Finance, Applied Statistics, Robust Decision Making, Complex Systems Modeling, Qualitative Methods, and Policy Research Practicum.

January 2016
Master of Science, Health Policy and Management (HPM)
National Taiwan University (NTU), Public Health School, Taiwan

- Master thesis: "The Effect of Continuity of Post-Discharge Care on Heart Failure Outcomes and Expenses" (Advisor: Dr. Yu-Chi Tung)
- Selected coursework: Principles in Health Policy, Healthcare Financial Management, Applied Multivariate Quantitative Methods, Structural Equation Modeling, and Statistical Analysis for Repeated Measurement
- Valedictorian; GPA: 3.93/4.3

June 2013
Bachelor of Science, Nursing
National Yang-Ming University (NYMU), Department of Nursing, Taiwan

- 1,034 clinical practice hours (adult, emergency, pediatric, maternal-newborn, psychiatric mental health, community health, oncology and palliative care)
- Valedictorian; Excellent Nursing Practice; GPA: 3.94/4.0

June 2006
Bachelor of Science, Biomedical Science and Environmental Biology
Kaohsiung Medical University, Department of Biomedical Science and Environmental Biology, Taiwan

PUBLICATIONS

Cohen, Catherine C.; **Han-Yi Chiu**; Ashley Chastain; Uduwanage Gayani E. Perera; Suning Zhao; Patricia W. Stone and Andrew W. Dick. 2026. "Staffing Audit Outcomes among California Skilled Nursing Facilities, Prior to and after COVID-19-Related Staffing Waivers." *Journal of the American Medical Directors Association*. (Accepted for publication)

Liu, Jodi; **Han-Yi Chiu** and Lane Burgette. "Impact of Extending the Outpatient Prospective Payment System Cap in the Physician Fee Schedule." RAND Corporation. (Forthcoming)

Abir, Mahshid; Megan Andrew; Kelly Klima; Lisa A. Payne; Nahom M. Beyene and **Han-Yi Chiu**. 2025. "Needed: Blueprint for a U.S. health system overhaul" *RAND Research & Commentary*, October 22.

Chiu, Han-Yi; Chun-Kai Hwang; Shey-Ying Chen; Fuh-Yuan Shih; Hsieh-Cheng Han; Chwan-Chuen King; John Reuben Gilbert; Cheng-Chung Fang and Yen-Jen Oyang. 2022. "Machine learning for emerging infectious disease field responses." *Scientific Reports* 12(1): 1–13.

Weng, Ting-Chia; **Han-Yi Chiu**; Shey-Ying Chen; Fuh-Yuan Shih; Chwan-Chuen King and Cheng-Chung Fang. 2019. "National retrospective cohort study to identify age-specific fatality risks of comorbidities among hospitalized patients with influenza-like illness in Taiwan" *BMJ Open* 9(6).

Chiu, Han-Yi; Shou-Hsia Cheng and Yu-Chi Tung. 2016. "Associations of continuity and level with outcomes and expenses of post-discharge care for patients with heart failure." *Taiwan Journal of Public Health* 35(1): 66–79. https://doi.org/10.6288/TJPH201635104065

WORKING PAPERS

Chiu, Han-Yi. "Organizational Transformability in Nursing Workforce Resilience." Independent study working paper, RAND School of Public Policy, RAND Corporation. Advisor: Jeanne Ringel.

- Created the Transformability Index (TI) and Relative Resilience Loss Ratio (RRLR) to quantify changes in staffing resilience, recovery efficiency, and organizational learning across sequential shocks.

PRESENTATIONS

Chiu, Han-Yi; Catherine Cohen and Andrew Dick. 2025. "Exploring the Relationships of Facility Characteristics and COVID-19 with Staffing Levels in California Skilled Nursing Facilities." Poster presented at the 2025 AcademyHealth Annual Research Meeting, Minneapolis, MN. (Abstract #72465 accepted).

Cohen, Catherine; **Han-Yi Chiu** and Andrew Dick. 2025. "Racial and Ethnic Disparities in Staffing Audit Outcomes Among California Skilled Nursing Facilities, Prior to and After COVID-19-related Staffing Waivers." Poster presented at the 2025 AcademyHealth Annual Research Meeting, Minneapolis, MN. (Abstract #71299 accepted).

Chiu, Han-Yi. 2024. "Evaluating Hospital-Based ER Triage Systems in Mass Casualty Events in Taiwan." Poster presented at Spotlight on Applied Research (SOAR), RAND School of Public Policy, RAND Corporation, Santa Monica, CA.

Chiu, Han-Yi. 2016. "Establishing an Information System for Better Diabetes Health Monitoring in Outer Islands of the Marshall Islands." Invited presentation at the 20th Pacific Basin Medical Association Summit, Majuro, Republic of the Marshall Islands, October 4.

Chiu, Han-Yi. 2016. "Establishing a Radio-Based Archipelago Syndromic Surveillance System (RASSS) in the Marshall Islands During the 2016 Influenza Epidemic." Invited presentation at the MISMS Influenza Workshop, National Institutes of Health, Bethesda, MD, November 8.

RESEARCH EXPERIENCE

September 2023−present

Assistant Policy Researcher

Affiliation: RAND Corporation

PI: Andrew Dick, Ph.D., Catherine Cohen, Ph.D., RN; Jodi Liu, Ph.D., Lane Burgette, Ph.D.; Robert Lempert, Ph.D.

- **Assessed Nursing Home Workforce and Regulatory Policy:**
  Applied multivariable regression models and difference-in-differences analyses to evaluate the impacts of COVID-19 and staffing waiver policies. Findings showed California SNF staffing audit failure rates increased from 7% in FY2019 to 55% in FY2021, and facilities denied patient need waivers had 49.5% higher odds of audit failure (aOR=1.495, 95% CI: 1.212–1.844).
- **Simulated Payment Reform Scenarios:**
  Analyzed Medicare claims and reimbursement data using Stata to simulate the extension of OPPS caps under the Physician Fee Schedule, estimating that expanding site-neutral payment policies to all technical-component services could reduce non-facility physician payments by approximately $97 million annually while improving payment equity and reimbursement alignment across care settings.
- **Modeled Wildfire Recovery Financial Planning:**
  Developed financial and policy models to evaluate Disaster Recovery District (DRD) and Climate Resilience District (CRD) feasibility for post-wildfire recovery, integrating comparative analyses of disaster financing systems, FEMA and local resilience plans, and cost-effectiveness assessments of mitigation investments to inform long-term recovery and resilience strategies.

August 2016 − 2023

Health Data Analyst

Affiliation: Emergency Department, National Taiwan University Hospital, Taiwan

PI: Fuh-Yuan Shih, M.D., Ph.D., and Cheng-Chung Fang, M.D.

- Analyzed 83,227 hospitalized influenza-like illness cases from Taiwan's National Health Insurance Research Database using SAS and GEE models adjusted for hospital clustering, identifying cancer (aOR=3.02−3.49), cerebrovascular disease (aOR=1.24), and heart disease (aOR=1.19) as major predictors of ILI-related fatality.
- Conducted SAS- and SPSS-based time-series analyses using Taiwan EOC mass casualty incident data to evaluate associations between road-traffic incidents, injury scale, healthcare resource utilization, and traffic regulation amendments in Taiwan under a National Science Council-funded project (No. 108-2625-M-002-018).
- Prepared research manuscripts, analytical reports, conference presentations, and award-winning academic posters in health policy and emergency care research.
- Published findings in BMJ Open and Scientific Reports.

June 2017 − June 2018

Health Data Analyst

Affiliation: Emergency Department and Nursing Research Office, National Yang-Ming University Hospital, Taiwan.

PI: Cheng-Ru Wang, R.N., M.S.

- Evaluated the performance of an innovative hospital early intervention system (Rapid Response System, RRS) for deteriorating patients using retrospective medical record analyses and SPSS-based statistical modeling.
- Compared RRS interventions with the traditional emergency response protocol "6969 action", finding reductions in ICU transfer rates (51.9% to 48.3%) and ICU mortality (67.5% to 27.3%).

September 2013 − January 2016

Research Assistant

Affiliation: Health Services Management and Outcomes Research Laboratory, Institute of Health Policy and Management, National Taiwan University, Taiwan

PI: Yu-Chi Tung, Ph.D.

- Evaluated healthcare outcomes and expenditures among heart failure patients using Taiwan's Longitudinal Health Insurance Database (LHID) under a Ministry of Science and Technology–funded project (MOST102-2628-H-002-007-MY2).
- Applied SAS-based GEE and clustered survival models to compare long-term mortality, readmission, and healthcare expenditures across different hospital levels of physician continuity and post-discharge care settings.
- Conducted data extraction, cleaning, and quality assurance; contributed to manuscript preparation, conference presentations, and an award-winning poster presentation, with findings published in the Taiwan Journal of Public Health as first author.

July 2003 − August 2004

Research Intern

Affiliation: Immune Biology Laboratory, Graduate Institute of Medicine, Kaohsiung Medical University, Taiwan

PI: Tian-Lu Cheng, Ph.D., and Chiu-Min Cheng, Ph.D.

- Supported translational cancer research on engineered bacteria as a dual-function platform for tumor therapy and real-time imaging.
- Conducted genetic engineering of E. coli using polymerase-based plasmid construction techniques to insert bioluminescent reporter genes for in-vivo experimentation.
- Participated in tumor-targeting animal experiments involving transformed bacterial injection into nude mice with tumor xenografts.

HOSPITAL MANAGEMENT EXPERIENCE

August 2019 − September 2020

Strategic Planner

Affiliation: Department of Planning and Management, MacKay Memorial Hospital, Taiwan

Supervisor: Chang-Yi Lin, M.D., and Chao-Hung Chen, M.D., Ph.D.

- Led annual budgeting of US $3,000,000, workforce planning, and operational strategy for the thoracic medicine and surgery department, including manpower assessments for nurses, physician assistants, COPD case managers, and respiratory therapists.
- Applied cost-effectiveness analyses to optimize workforce allocation, increasing departmental revenue by 5% while improving care quality and operational efficiency.
- Developed hospital management and care coordination IT systems, including a COPD case management program and a tuberculosis reporting and tracking system linking the hospital with Taiwan CDC.
- Coordinated long-term hospital development initiatives, including regional medical alliance agreements and mutual support planning for mass casualty incident response.

CLINICAL EXPERIENCE

May 2016- May 2017

Public Health Nurse

Affiliation: Outer Islands Health Care System (OIHCS) Office, Ministry of Health, Republic of the Marshall Islands

Supervisor: Arata Nathan, M.X.D., R.N. | Collaborator: Seyoum Teshome, D.B.A.

- Created standard operating procedures (SOPs) for infectious disease reporting and public health nurse performance auditing, increasing reporting rates from 62% to 93% and achieving 90%

reporting accuracy within six months, contributing to the prevention of a large-scale influenza-like illness outbreak in 2016.
- Established an innovative radio-based archipelago syndromic surveillance system (RASSS) to strengthen infectious disease monitoring and diabetes case management across 49 outer island health centers.
- Conducted real-time epidemiological and spatial-temporal analyses of infectious disease outbreaks, identifying inter-island shipping routes rather than flights as the major transmission pathway for influenza-like illness.
- Collaborated with the Ministry of Health of the Republic of the Marshall Islands and Taiwan ICDF under a government-funded public health innovation initiative (MOH-IRB No. 20160902A).

July 2006-August 2007 **Military Medical Officer & Team Leader of Emergency Rescue and Evacuation Operations**
Affiliation: Taiwan Army
- Led 5 high-risk emergency rescue and medical evacuation missions involving traumatic brain injury cases, achieving zero fatalities and no progression to brain death.
- Supported Marine Corps combat exercises and medical readiness operations, including emergency response planning for 81-mm mortar training and high-acuity field triage.
- Managed military pharmacy supply, medical equipment logistics, reimbursement documentation, and operational resource coordination in field responses.
- Conducted EMT and combat casualty care training to strengthen soldiers' emergency rescue, trauma response, and battlefield evacuation capabilities.

February 2013 – April 2013 **Nursing Intern**
Affiliation: Oncology Ward and Nursing Research Office, National Yang-Ming University Hospital, Taiwan
Supervisor: Yi-Chiu Ou, R.N., M.S.
- Assisted in oncology nursing for 10 inpatients, including chemotherapy procedures, physical assessments, symptom monitoring, and patient safety management for cancer patients.
- Provided patient and family education on cancer treatment, hospice care, palliative care, and end-of-life decision-making.
- Conducted patient and family interviews on terminal care experiences and treatment preferences among pancreatic and colorectal cancer patients, supporting qualitative research and transcript-based data analysis.

AWARDS & HONORS

Academic Awards

February 2024 **Poster Award-First Prize**, Spotlight on Applied Research (SOAR) Conference 2024, RAND School of Public Policy, Santa Monica
- Poster Title: "Evaluating Hospital-Based ER Triage System in Mass Casualty Events in Taiwan"

October 2020 **Annual Excellence Poster Award**, Taiwan Public Health Association (TPHA) Annual Conference 2020, Taipei, Taiwan
- Poster Title: "Evaluate the association of case number, incident number, and scale affected by road-traffic mass casualty incidents in Taiwan with traffic regulations amendments- using time series analysis method"

September 2017 **Carlo Urbani Award**, Taiwan Carlo Urbani Association
- Reward to a Taiwanese dedicated to improving the public health system in developing countries. (An honorary award in memory of Dr. Carlo Urbani, who sacrificed himself in the fight against 2003 SARS)

October 2015 **Annual Best Graduate Student Paper Award**, TPHA Annual Conference 2015, Taipei, Taiwan
- Thesis Title: "Associations of Continuity and Level with Outcomes and Expenses of Post-Discharge Care for Patients with Heart Failure"

December 2014 **Internship Project Poster Award**, Institute of HPM, NTU, Taiwan
- Poster Title: "Assess the Inclination and Motivating Factors of Attending the Pilot Program of Post-Acute Care (PAC) for Stroke Patients at NTU Hospital"

2010-2013 **4 Academic Excellence Awards for Nursing Student**, NYMU, Taiwan (4 times in 4 years)

Clinical Awards

2012-2013 **Annual Excellence Nursing Student Award, Taipei Veterans General Hospital (TVGH), Taiwan**
Awarded as one of four nursing students among 1000 students in TVGH internship program for the excellent nursing skill performance and remarkable contributions of patient care. (2 times in 2 years)

LICENSES

Clinical and Health
- Registered Nurse, Taiwan. (No. 260496)
- Health Data Analyst, Republic of Marshall Islands (RMI-V-CH305090262)
- Certified EMT and medical rescue instructor in the Taiwan Army.

SKILLS

Leadership	Project Management, Monitoring and Evaluation, and Quality Control and Assurance
Quantitative Analysis	Advanced Statistical Method: Generalized Estimating Equations (GEE) model and Clustered Effect Adjustment, Regression Diagnosis and Predictor Selection Algorithm, Time Series Analysis, Survival Analysis and Proportional Hazard Model, and Incremental Cost Estimation of the Comorbidities
Qualitative	Survey, Interview, and Focus Group
Software	Statistical: SAS, Stata, SPSS, R, Python, Dedoose
Languages	English (fluent), Mandarin (native), Hakka (native), Taiwanese (fluent)

One-Page Statement of Interest

Persistent nursing workforce shortages have increasingly strained healthcare systems worldwide, notably long-term care systems facing rapid population aging.[1] During infectious disease outbreaks, surges in patient demand can quickly overwhelm healthcare capacity. My prior research in Taiwan found that influenza-diagnosed inpatients with heart disease, stroke, diabetes, and metastatic cancer faced substantially higher mortality risks.[2] Because these chronic conditions are highly prevalent among nursing home residents, workforce disruptions during public health emergencies may have particularly severe consequences for older adults. These observations motivated my interest in studying how healthcare labor markets, workforce policies, and organizational adaptation affect the resilience of long-term care systems.

During the COVID-19 pandemic, many countries experienced unprecedented mortality associated with healthcare system strain, workforce shortages, and disruptions to care delivery.[3, 4] Nurses were often required to identify potentially infected residents without adequate laboratory testing or personal protective equipment, increasing their risk of infection and mandatory quarantine.[5, 6] Nursing homes, which frequently operate under lower Medicaid reimbursement rates and higher infection risks than hospitals, have long faced challenges in recruiting and retaining nursing staff.[7]

Since 2023, I have been sponsored by Taiwan to pursue doctoral studies in policy analysis at the RAND School of Public Policy while contributing to RAND health policy research projects. My recent work evaluates California's nursing staffing audit and waiver policies in skilled nursing facilities (SNFs),[8] the first U.S. state to implement minimum nurse staffing standards alongside a formal staffing audit system. Through this work, I recognized a research gap regarding the combined effects of staffing audit and waiver policies, CMS payment reform in October 2019[9] and the onset of COVID-19 pandemic in March 2020 on long-term nursing workforce stability. While these events substantially reshaped the long-term care sector, limited research has examined how SNFs adapted to these sequential disruptions through organizational resilience and transformability. To address this gap, I seek advanced training in integrating empirical health economics and causal inference methods to better evaluate the effects of payment and workforce policies. My goal is to develop rigorous evidence and innovative measurement tools to assess workforce resilience, recruitment strategies, and the impacts of payment policies, helping long-term care organizations and policymakers respond more effectively to evolving healthcare labor markets and emerging public health challenges.

In addition, I found that facilities serving higher proportions of Asian residents demonstrated lower odds of staffing audit failure, contrary to my initial expectations for minorities. This observation raises questions about whether workforce resilience is associated with organizational characteristics, community demographics, or stronger participation of foreign-born healthcare workers. Given the growing reliance of long-term care providers on immigrant healthcare workers, I am particularly interested in examining how immigration policies and foreign nurse recruitment influence organizational workforce stability and transformative capacity.

The NBER Mentoring Program aligns closely with my research agenda because of NBER affiliates' strong research on healthcare labor markets, demographic change, and immigrant healthcare workers. Recent NBER-affiliated researchers have examined the rapid growth of healthcare employment and the role of immigration in sustaining the long-term care workforce and improving elder outcomes. I hope to engage with scholars such as David Grabowski and Brian McGarry,[10, 11] whose work on immigration, nursing home staffing, and long-term care policy would provide valuable guidance for strengthening causal identification and developing policy-relevant indicators related to workforce regulation, immigration policy, and foreign nurse recruitment.

Ultimately, I hope to generate evidence that helps policymakers and healthcare organizations design resilient long-term care systems capable of maintaining workforce stability and high-quality care amid demographic aging, public health emergencies, and evolving labor market conditions. Participation in the NBER Mentoring Program would provide invaluable guidance and scholarly connections to advance this research agenda.

Reference:

1. Gottlieb JD, Mahoney N, Rinz K, et al. The rise of healthcare jobs. National Bureau of Economic Research. Available at: https://www.nber.org/papers/w33583.
2. Chiu H-Y, Hwang C-K, Chen S-Y, et al. Machine learning for emerging infectious disease field responses. Scientific Reports 2022;12(1):328.
3. Bhaumik D, Rahman M, Gadbois EA, et al. Staffing Conditions In US Nursing Homes Before, During, And After The COVID-19 Pandemic: Article examines nursing home staffing post COVID-19 pandemic. Health Affairs 2026;45(2):193–199.
4. Joshi S. Staffing Shortages, Staffing Hours, and Resident Deaths in US Nursing Homes During the COVID-19 Pandemic. J Am Med Dir Assoc 2023;24(8):1114–1119.
5. Xu H, Intrator O, Bowblis JR. Shortages of staff in nursing homes during the COVID-19 pandemic: what are the driving factors? Journal of the American Medical Directors Association 2020;21(10):1371–1377.
6. McGarry BE, Grabowski DC, Barnett ML. Severe staffing and personal protective equipment shortages faced by nursing homes during the COVID-19 pandemic: study examines staffing and personal protective equipment shortages faced by nursing homes during the COVID-19 pandemic. Health affairs 2020;39(10):1812–1821.
7. Gandhi A, Yu H, Grabowski DC. High nursing staff turnover in nursing homes offers important quality information: study examines high turnover of nursing staff at US nursing homes. Health Affairs 2021;40(3):384–391.
8. Cohen CC, Chiu H-Y, Chastain A, et al. Staffing Audit Outcomes among California Skilled Nursing Facilities, Prior to and after COVID-19-Related Staffing Waivers. Journal of the American Medical Directors Association 2026. (Accepted for publication)
9. Shapley Jr R, Weech-Maldonado R, Davlyatov G, et al. The effects of the Patient Driven Payment Model (PDPM) and COVID-19 on nursing and therapy staffing levels among skilled nursing facilities. Journal of Hospital Management and Health Policy 2025;9.
10. Grabowski DC, Gruber J, McGarry BE. Immigration, the long-term care workforce, and elder outcomes in the U.S. National Bureau of Economic Research. Available at: https://www.nber.org/papers/w30960.
11. Grabowski DC, Gruber J, McGarry BE. Is immigration good for health? The effect of immigration on older adult mortality in the United States. National Bureau of Economic Research. Available at: https://www.nber.org/papers/w34791.