

COVID-19 Infection Prevention and Control Guideline Comparison between the U.S. and Taiwan

Jason Wong, PharmD, BCPS, BCGP

Ya-Wei Chung, PharmD Candidate

Yu-Hsin Liang, PharmD Candidate

College of Pharmacy, Western University of Health Sciences, Pomona, CA

Introduction

- The COVID-19 outbreak has increased healthcare facilities' workload because of increased hospitalized patients.
- As of October 13th, 2020
 - 178,268 out of 1,401,082 (12.7%) healthcare professional (HCP) reported positive for COVID-19 in the United States.
 - Taiwan was thought to be one of the COVID-19 disastrous areas, but COVID-19 infected only 0.001% of HCP.
- There is a 12,700 times difference in infection rates of HCP between Taiwan and the U.S..
- Differences in recommendations among countries due to differing licensure, cultural perception of risk, and opinions among experts can have an impact on infectious control.

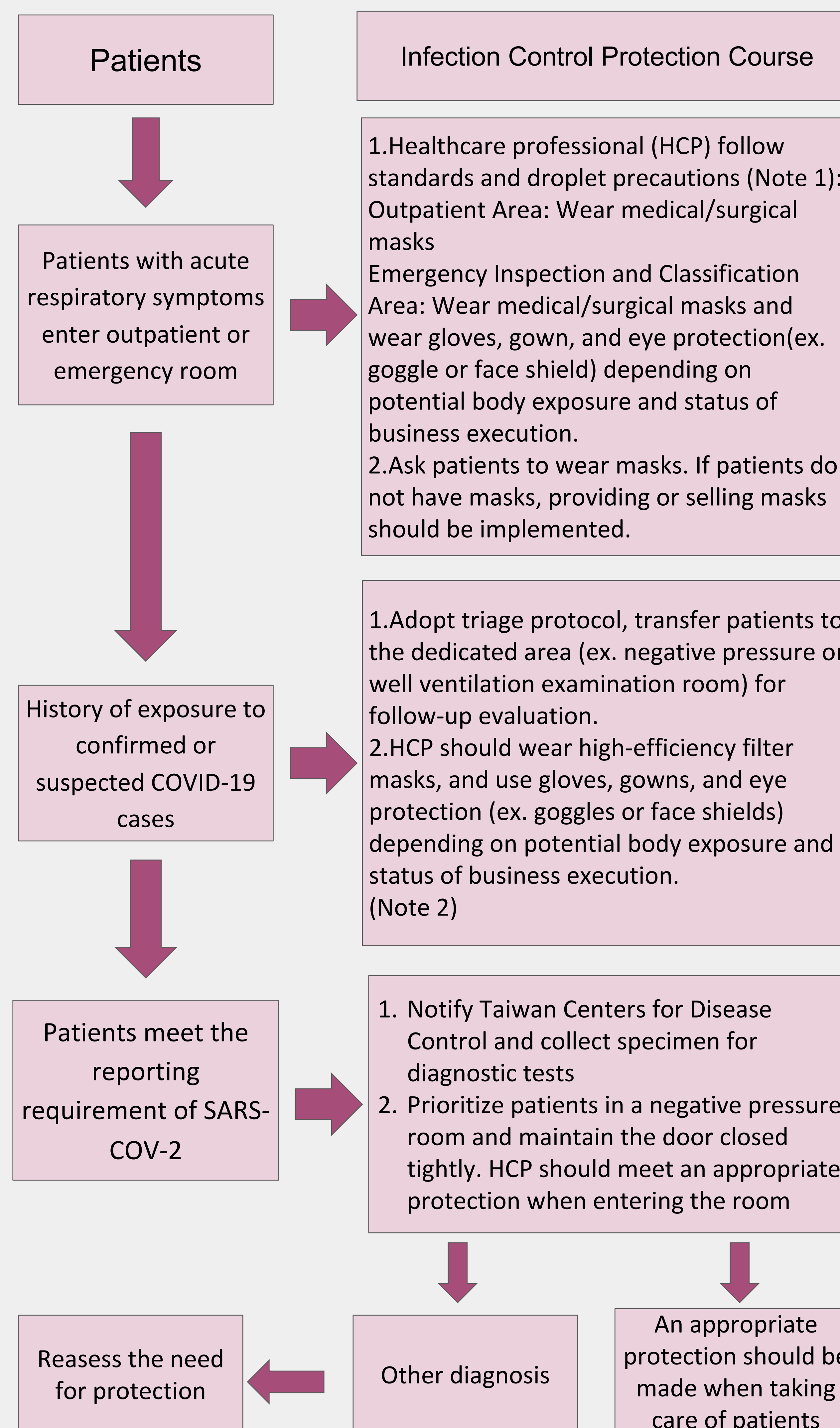
Study Objective

To compare Taiwan and the U.S. IPC guidelines for HCP during the COVID-19 pandemic and analyze the differences among these guidelines's recommendations. Understanding these differences can help improve the current IPC guideline in the U.S..

Methodology

- IPC guidelines were acquired from Taiwan and the U.S. Centers for Disease Control (CDC) websites on July 13th, 2020, and last accessed on October 12th, 2020.
- Minor differences were identified as similarities in content but there were differences in expression.
- Major differences were identified as a significant variation in content or when recommendations were documented in one guideline but not another.

Taiwan's Patient Management Flowchart



Note 1: Outpatient and emergency HCP should wear medical/surgical masks when consulting patients with acute respiratory symptoms, and ask the patients to wear masks; if the patient has symptoms and has relevant exposure history, the patient should be transferred to isolated area for follow-up assessments and the collection of the specimen. Relevant HCP should wear high-efficiency filter masks, and use gloves, gowns and eye protection equipment (ex. goggles or face shields) depending on potential body exposure and status of business execution.
 Note 2: If HCP diagnose patients that meet the relevant reporting requirements, please report to the CDC's "Infectious Disease Case Reporting System".
 Note 3: Isolation precautions: including hand hygiene, wearing gowns, wearing gloves, eye protection equipment, medical/surgical masks or high-efficiency filter masks (inclusive or higher than N95 or EU FFP2 level). Patients are treated according to the physician's clinical decisions, and if necessary, the commander of the infectious disease prevention and treatment team will be encounter.

Results/Discussion

- After comparing Taiwan and the U.S. IPC guidelines during the COVID-19 pandemic, major and minor differences were found in several areas.
- The minor differences included patient screening and triaging before entering, environmental cleaning, appropriate personal protective equipment (PPE), and hand hygiene practice.
- Three significant differences were found and included the following: **AIIRs, corpse disposal** and utilization of flowchart for patient management

IPC Guideline	US	Taiwan
Similar Recommendations	Patient screening and triaging at entrance, environmental cleaning, appropriate PPE, hand hygiene	
Airborne Infection Isolation Rooms (AIIRs)	Only reserved for patients undergoing aerosol-generating procedures	All hospitalized COVID-19 patients
Corpse Disposal	Not mentioned	Double-bagging of corpses and wiping corpse bags with diluted bleach
Patient Management Flowchart	No precise flowchart specific for HCP	Detailed and clear flowcharts are incorporated

Table 1: Comparison of Infection Prevention and Control Guidelines between the U.S. and Taiwan.

Conclusion

- Acquiring ideas from countries that perform well in infection control and incorporating them into current IPC guidelines may help decrease HCP infection risk in the U.S..
- Among the three differences mentioned in the analysis, two recommendations can be implemented in the U.S. IPC guideline.
 - Incorporating the corpse disposal
 - Patient management flowchart
- Due to many COVID-19 cases in the U.S., preparing sufficient AIIRs for all COVID-19 patients can be challenging.