NORTHWEST UNIVERSITY

Kirkland, Washington

Hygiene Values and Practices in Cambodian Hospitals: An Ethnographic Case Study

An undergraduate thesis submitted in partial satisfaction of the requirements

for completing the Northwest University Honors Program

by

Sarah A. Garat

Northwest University – Buntain College of Nursing

Ashley Ott MSN-PHN RN, Thesis Advisor

Dr. William Thompson, Honors Program Director

May 2023

Acknowledgements

I am deeply grateful for the support and love of my family throughout my academic and international endeavors. I would not have been able to accomplish this thesis or be the woman I am today without them. To my friends who patiently listened to my ramblings about Cambodian health care and encouraged me to persevere through the lengthy grind of research, I am so thankful for you and your help preserving my sanity.

I am also indebted to so many Northwest University faculty, particularly those part of the Honors Program and Buntain College of Nursing, who have invested in my education and faith. Thank you to the donors who funded the Presidential Scholarship that enabled me to come to Northwest and pursue the calling God placed on my life.

Lastly, my research would not have been possible without the contribution and friendship of the Cambodian informants included in this thesis. Thank you for welcoming me, teaching me, and allowing me to share in your life. I pray the insight you shared with me and the findings of this study will lead to meaningful change for the glory of God and the flourishing of Cambodia.

Contents

Hygiene Values and Practices in Cambodian Hospitals: An Ethnographic Case Study

Introduction

The values and practices of health care professionals (HCPs) and institutions are products of the nation and culture they operate within. Resource availability, national history, population needs, and local preferences inform how hospitals provide services, how clinicians are trained to practice medicine, and how patients perceive the quality of their treatment. Despite the establishment of best practice guidelines by international health agencies, health care systems in developing nations continue to be characterized by substandard clinical operations, specifically poor hygiene practices. While some have generated research aimed at understanding and addressing this issue, largely missing from this discussion is an exploration of the reality that hospital hygiene, along with all health care practices, occurs within social relations influenced by medical norms and social-cultural perceptions (Hancart-Petitet et al., 2011, p. 1). Before practical recommendations can be developed for improving clinical hygiene practices in these settings, a thorough evaluation of a nation's history, health care infrastructure, education system, and cultural understanding of hygiene must be undertaken. Through the exploration of this topic, HCPs will be better equipped to understand the foundation of current local practices and propose sustainable interventions that fortify the weak areas of individual systems. Current evidence about clinical hygiene in Cambodia suggests a great need for this approach to health care development. The purpose of this ethnographic case study was to develop a culturally congruent understanding of hygiene values and practices in Cambodian hospitals based on field observations and the perspectives of Khmer medical personnel and community members.

Literature Review

Current literature on hygiene in Cambodian hospitals is sparse. Therefore, the research collected for the development of this thesis primarily covers Cambodian ethnohistory, social structure phenomena, and current issues resulting from substandard clinical practices. These three categories of literature provide essential context to Cambodia's health care system and reveal why a study of current Khmer hygiene values and practices is a critical component of improving Cambodian medical services.

Cambodian Ethnohistory

The systemic impact of the Khmer Rouge regime in the late 1970s on health care infrastructure, education, and national development cannot be understated. Led by Cambodian dictator Pol Pot, a radicalized Communist party known as the Khmer Rouge took control of the nation from 1975 to 1979 and carried out a destruction of the country's institutions and intelligentsia (Clarke et al., 2016, p. 2). The regime targeted and exterminated anyone of the educated or professional classes, including doctors, nurses, pharmacists, and Ministry of Health (MoH) officials (Gryseels et al., 2019, p. 461; Ozawa & Walker, 2011, p. i21). The nations only medical school was closed, nursing and pharmacy training ceased, and no educators of any discipline remained in Cambodia after the genocide (Pearson et al., 2018, p. 2; Khan et al., 2020, p. 3). Inadequately trained individuals were appointed as 'doctors' during this time to care for the remaining population which resulted in detrimental health outcomes and the ongoing practice of many unqualified providers (Gryseels et al., 2019, p. 464). This intellectual cleansing left the nation with an estimate of only 20 to 45 Western-medicine-trained physicians at the end of 1979, one of the lowest physician-to-patient ratios in the world (Khan et al., 2020, p. 3; Pearson et al., 2018, p. 2; Suy et al., 2017, p. 24; Khim et al., 2020, p. 2). When the Khmer Rouge regime was

overthrown, approximately one quarter of the population had been executed and only 2.7% of the surviving population was over the age of 65 (Ozano et al., 2018, p. 2; Legido-Quigley et al., 2018, p. 200). Cambodia was faced with rebuilding its entire infrastructure with extremely limited resources, policy direction, and experienced personnel (Khim et al., 2020, p. 2). The health care system that was established continues to be fraught with operational deficits including underfunding, short-staffing, and under-regulation of professional practice.

Health Care Operational Deficits

The basic emergency health care infrastructure established post-Khmer Rouge has generally been unable to operate in line with international guidelines for the provision of services, drug regulation, and clinical training (Gryseels et al., 2019, p. 461; Marady & Huaifu, 2017, p. 375). Underfunding is a primary contributing factor to this as only about 6% of Cambodia's gross domestic product (GDP) is invested in health care annually (Khan et al., 2020, p. 3). The financial burden for supporting health services largely falls on Khmer patients who supply 60% of the nation's total health expenditures out-of-pocket (Pearson et al., 2018, p. 2; Phal, 2020, p. 5; Suy et al., 2017, pp. 26, 30). This has resulted in chronic shortages of essential supplies in clinical settings and below living wages for lower cadre personnel (Hancart-Petitet et al., 2011, p. 3; Gryseels et al., 2019, pp. 461-462). Insufficient wages have been correlated with demotivation of Khmer health care staff and higher rates of dual employment to supplement income (Ozano, 2017, p. 4; Annear et al., 2015, p. 93). Understaffing of facility maintenance personnel is of particular concern for the focus of this case study as these individuals have an essential role in maintaining hospital hygiene. Within the MoH Workforce Projection Plan for 2012-2020, there were only eighty-two public health facility maintenance staff in 2012 when the total need was projected to be 352 (Suy et al., 2017, p. 25). Not only does the Cambodian health

system struggle with recruitment of clinical staff, but also with the regulation of its existing HCP workforce. An assessment conducted by Clarke et al. (2016) of Cambodia's methods for regulating its health professions revealed a significant gap in the nation's ability to assure the safety and quality of current practices and the proper licensure of HCPs (pp. 3, 7). In 2017, only 68% of practicing nurses were registered with the Cambodian Council of Nurses (CCN), the primary national board for ensuring nurses are properly licensed (Fujita et al., 2019, p. 6). In addition, unlicensed practitioners originating from the Khmer Rouge period run an estimated 13,000 village drug outlets where Khmer go to receive 'diagnoses' and purchase antibiotics over-the-counter that should only be available with a prescription (Om et al., 2017, pp. 3, 6; Khan et al., 2020, p. 5; Hancart-Petitet et al., 2011, p. 2). While Cambodia's turbulent history set an unstable foundation for professional medical practice in the 21st century, these issues are perpetuated by deficits in education and mentorship for Khmer HCPs.

Education and Mentorship Deficits

Studies focused on the training and professionalism of Cambodian HCPs have identified several gaps in tertiary education including poor technical training, outdated and incomplete curriculum, and insufficient mentorship. Despite their vital responsibility for cleaning, disinfection, and waste management, one hospital survey found that most of the cleaning staff had not received adequate training on these tasks and the importance of clinical hygiene (Hancart-Petitet et al., 2011, p. 4). In addition, gaps in the knowledge and competence of higher-level HCPs have been correlated with questionable examination procedures and the lack of regulation over teaching standards, methods, and content (Khan et al., 2020, p. 2). The curricula used for professional education in many Asian nations has been criticized for not being updated enough to keep pace with modern technology, societal demands, and health system challenges

(Khan et al., 2020, pp. 3, 7). Adequate teaching of hygiene principles—including microbiology/antimicrobial resistance (AMR), appropriate antibiotic use, infection control, and vaccinations—appears to be a critical shortcoming of medical education in Cambodia according to current research (Khan et al., 2020, p. 5; Om et al., 2017, p. 4). The Khmer Rouge execution of the professional class is largely responsible for this as there are very few degreed, experienced medical leaders to prepare and lead the current and upcoming generations of health care workers (Lasater et al., 2012, p. 63; Fujita et al., 2019, p. 9). Supportive supervision and mentorship have been identified as essential components to promoting adherence to best practice, people-centered health care, and quality improvement efforts (Ozano, 2017, pp. 18, 180). However, Khmer informants have reported a lack of good leaders and identified cultural values that pose challenges to effective mentorship, including the tendency of senior managers to withhold knowledge because it would diminish their authority (Parry et al., 2020, p. 9; Ozano, 2017, p. 182). Considering social-cultural norms like this provides further insight into the development of Khmer hygiene values and practices.

Khmer Medical Norms and Social-Cultural Perceptions of Hygiene

Cambodian perceptions of hygiene, prioritization of health care components (e.g., affordability, quality, services, etc.), and social hierarchy all uniquely influence how patients and providers participate in the health system. Only one research article was located that described hygiene from the Khmer perspective. Hancart-Petitet et al. (2011) observed that many patients and caregivers associated hygiene with the notion of being clean and nice, meeting aesthetic rather than aseptic or sterile standards (p. 3). Hygiene in the clinical setting was evaluated by Khmer informants according to environmental appearances including the amount of light and the absence of spider webs (Hancart-Petitet et al., 2011, p. 3). Updated research is needed following

the 2020 COVID-19 pandemic to determine if the Cambodian perspective of hygiene has changed and if the perceived hygiene quality of health facilities impacts where Khmer go for care. Previous studies have found that the prevailing view of quality care among the Khmer is related more to wait times, perceived costs, and effectiveness of prescribed medicine than a hospital's level of hygiene (Marady & Huaifu, 2017, p. 375; Ozawa & Walker, 2011, p. i27; Om et al., 2017, p. 4). Trust is another important cultural value that influences where Khmer go to receive care and what they perceive to be the best clinical practices. It has been well established that Cambodian patients primarily base their health care decisions on their level of trust in a provider, but this trust is often misplaced in non-medical-sector practitioners or traditional healers who are more convenient, familiar, and accessible (Gryseels et al., 2019, pp. 467, 469; Ozano et al., 2018, p. 7; Ozawa & Walker, 2011, pp. i20-21, i23; Phal, 2020, p. 18; Om et al., 2017, p. 3; Parry et al., 2020, p. 2). Khmer also place more trust in certain treatments, including antibiotics and intravenous (IV) therapies, because many believe them to be more effective. Due to widespread misunderstanding about the indications for antibiotic use, Cambodian patients are known for determined antibiotic-seeking behaviors enabled both by the practice of untrained community suppliers and trained clinicians who are afraid of being perceived as a low-grade doctor if they do not prescribe antibiotics (Khan et al., 2020, p. 6; Om et al., 2017, p. 6). Similarly, there is a local perception that IV injections are far more effective than pills for curing almost all illnesses (Ozawa & Walker, 2011, p. i25). This high regard for IV therapies influences who Khmer choose for care (e.g., those who provide more IV medications) and contributes to Cambodia having one of the highest therapeutic injection rates worldwide (0.8-5.9 per person per year) (Ozawa & Walker, 2011, p. i25; Kanagasabai et al., 2020, p. 3). While it is probable there are Khmer HCPs who recognize the increased risk of AMR and bloodstream infections (BSI)

associated with the overuse of this treatment modality, these individuals likely struggle to voice their concerns within this strict hierarchical context. Hospital organization is based on authoritarian and patron-client principles that strongly discourage subordinates from speaking up about substandard practices or taking initiative as agents of change without a superior's approval (Hancart-Petitet et al., 2011, pp. 4-5; Khan et al., 2020, p. 2; Ozano et al., 2018, p. 3; Parry et al., 2020, pp. 2, 7; Ozano, 2017, pp. 7, 27-28). As a result, projects aimed at improving hospital practices using participatory strategies have been largely unsuccessful and problems within the system are allowed to continue (Parry et al., 2020, p. 7; Ozano, 2017, p. 7). Surveying Cambodia's ethnohistory and social structure phenomena—including the national health care system, deficits in education and mentorship, and Khmer social-cultural values—provides the necessary background to understand the various factors contributing to current issues in Cambodian clinical practices.

Substandard Clinical Operations

Substandard health care operations, particularly surrounding hygiene, have developed in Cambodian hospitals as a result of necessary accommodation to regional educational, economic, and social constraints. Khmer medical professionals who did receive education according to international guidelines, which are primarily established by the global North, find themselves attempting to adhere to this idealistic standard within a starkly different culture and hospital system (Gryseels et al., 2019, pp. 464, 469). Their practice is therefore adapted to the realities of their workplace, which often involves compromising or disregarding hygiene protocols due to equipment shortages, patient to staff ratios, and facility constraints (Hancart-Petitet et al., 2011, p. 5). Chronic supply deficits have contributed to ongoing parsimonious practices including the dilution of cleaning products, use of expired materials, and reuse of single-use materials

(Hancart-Petitet et al., 2011, p. 3). According to data collected from Kanagasabai et al.'s (2020) evaluation of injection safety practices among HCPs in Cambodia, 61.7% recapped their needle after use, 24.8% did not clean the injection site, 21.8% did not have a sharps container within arm's reach to immediately dispose of used needles, 19.4% did not perform initial hand hygiene, and 6% did not use a sterile needle or syringe (p. 6). In addition, only 50 to 70% of the medical professionals observed were compliant with hand hygiene recommendations (Kanagasabai et al., 2020, p. 8). Clinical hygiene is further burdened by the low perception and social capital of hygiene tasks. This means these protocols are often seen as needless by medical staff and delegated to subordinate cleaners who lack the thorough, ongoing training to properly complete them (Hancart-Petitet et al., 2011, pp. 3, 5-6). These are critical gaps in health care quality and safety that increase the risk of needle-stick injuries and the transmission of BBPs.

Increased Transmission of Blood-Borne Pathogens (BBPs)

Health care associated bloodstream infections (HA-BSIs) resulting from poor hygiene are a major clinical problem in Cambodia. BBP transmission—mainly human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV)—and HA-BSIs cost the world US$535 million each year with most of this medical expenditure arising from low-resource settings (Kanagasabai et al., 2020, p. 2). Ninety percent of the world's annual BBP infection cases caused by occupational exposure occur in developing nations like Cambodia where the HA-BSI rates are twice as high (Hancart-Petitet et al., 2011, p. 1; Kanagasabai et al., 2020, p. 2; Center for Disease Control & Infection Control African Network, 2019, p. 5). Among Khmer children attending public hospitals for treatment, it has been estimated that 12.7% will develop one or more HA-BSIs and 19% will die as a result (Stoesser et al., 2013, pp. e273-e275). These HA-BSIs are primarily a result of the high frequency of therapeutic injections among

Cambodians, unsafe injection practices, poor environmental sanitation, and providing care with contaminated hands or gloves (Hancart-Petitet et al., 2011, p. 1; Kanagasabai et al., 2020, p. 2; Center for Disease Control & Infection Control African Network, 2019, pp. 5-6). Many Cambodians are aware of this serious BSI risk and attempt to minimize it by relying heavily on antibiotics. This has, however, created another equally dangerous problem.

Increased Misuse of Antibiotics

AMR is a significant consequence of unregulated, inappropriate, and endemic misuse of antibiotics. Being that infectious diseases cause 58.6% of deaths for the global poor, avoiding infection is a major concern for impoverished Khmer who rely on their health for employment (Om et al., 2017, p. 2). Misconceptions regarding the indications for antibiotic treatment have led many to erroneously purchase antibiotics for diarrhea, the common cold, or vaginal deliveries (Khan et al., 2020, p. 5). This antibiotic-seeking behavior pressures qualified providers to prescribe antibiotics for 60 to 100% of their patients and encourages unqualified drug outlets to flood communities with counterfeit antibiotics (Om et al., 2017, pp. 2, 6-7). Insufficient hygiene in health facilities and homes has also been identified by Khmer informants as a factor driving HCPs to overuse antibiotics (Khan et al., 2020, p. 5). Multidrug-resistant organisms develop quickly under these conditions, so it is not surprising that one study found 90% of HA-BSI cultures to be third-generation cephalosporin resistant and 42.9% to be methicillin-resistant (Stoesser et al., 2013, p. e274). Such prevalent resistance to these common, second-line antibiotics makes it increasingly difficult to treat BSIs in this low-resource context. Wealthier Khmer patients aware of these issues have begun seeking medical care in neighboring countries as overall satisfaction with the public health system declines.

Decreased Client Satisfaction

The Cambodian MoH has recognized the need to improve the care provided at public facilities before utilization of and satisfaction with these services increases and Khmer choose to remain in the country for care (Legido-Quigley et al., 2018, p. 211). The number of Cambodian medical 'tourists' to Vietnam increased 20% during the first half of 2015 and in 2016 over 1.4 million Khmer traveled outside of Cambodia for health care (Marady & Huaifu, 2017, pp. 374-375). This prevalent health tourism among Khmer has been attributed to dissatisfaction with several areas of the Cambodian hospital system, including high transportation costs, medication shortages, long wait times, inattentiveness of staff, unclean facilities, and poor communication of diagnoses and illness prevention (Phal, 2020, p. 4; Annear et al., 2015, pp. 142, 147; Peou & Jean-Pierre, 2012, p. 8). While mistrust in public health facilities and providers was mentioned as another major barrier in several articles (Gryseels et al., 2019, p. 463; Marady & Huaifu, 2017, p. 374; Phal, 2020, p. 4), one study claimed that Khmer trust in these areas was remarkably high (Ozawa & Walker, 2011, p. i23). More investigation is needed to determine the current level of trust in and satisfaction with public HCPs among Khmer patients, especially following the COVID-19 pandemic. A national survey of satisfaction with public health services further revealed the need to improve facility cleanliness to reduce the fear of infection among patients. Although national hospitals received an overall satisfaction index score of 85 out of 100 in 2012, low ratings were given to toilet and room cleanliness with 10% of those surveyed reporting an overall dissatisfaction with facilities (Peou & Jean-Pierre, 2012, p. 36). Khmer patients, though, have expressed resistance to sharing their hygiene concerns with hospital staff because they fear the scolding they might receive as a result of 'disrespecting' the patron-client relationship (Hancart-Petitet et al., 2011, p. 5). The complex nature of client dissatisfaction with public health

care makes it difficult to identify a single area to target for improvement. Substandard hygiene practices, however, is the common denominator among the major problems of Cambodian health care. Developing this area has the potential to enhance clinical operations, decrease the transmission of BBPs, reduce antibiotic misuse, and improve client satisfaction and utilization of services.

Domain of Inquiry and Purpose

The domain of inquiry was the hygiene values and practices of the Khmer in Cambodian clinical settings. The purpose was to explore the ways Khmer define, prioritize, and maintain hospital hygiene to better understand the origins of current clinical operations and outcomes. This ethnographic case study utilized field observations and informant perspectives to establish themes of Cambodian clinical hygiene so that future culturally congruent quality improvement projects might be developed.

Conceptual Framework

The theory of Culture Care Diversity and Universality—also referred to as the Culture Care theory (CCT) (Leininger, 2002)—provided the general set of assumptions used for this study. CCT was developed by nursing theorist Madeleine Leininger to strengthen transcultural nursing research by establishing a naturalistic, people-centered approach to discovering, documenting, and explaining the interrelationship of care and culture phenomena (Leininger, 2002, p. 190; Leininger & McFarland, 2006, pp. 4, 16, 45). Leininger recognized that an individual's health care values, beliefs, and practices of a culture are shaped by and embedded in their cultural worldview, social structure factors, language, ethnohistory, and environment (Leininger & McFarland, 2006, pp. 18-19). The theory proposes that universalities and diversities in care meanings and expressions exist among all cultures, but these can only be

discovered from members within the culture (McFarland & Wehbe-Alamah, 2019, p. 544). The goal of CCT is to facilitate the collection of culturally-based care knowledge through direct field experience so transcultural nursing projects can meaningfully improve health care outcomes and nurses are better equipped to make informed care decisions with culturally diverse clients (Leininger, 2002, p. 189; Leininger & McFarland, 2006, pp. 16, 332; McFarland & Wehbe-Alamah, 2019, p. 550). The unique emphasis of this theory on understanding a culture's care values and practices before proposing development strategies fundamentally influenced the intent and purpose of this study.

Methods

Research Questions

The following research subtopics and questions shaped the development of the conversational guides used to explore the domain of inquiry with informants:

1. *Defining Hygiene* - How do the Khmer define 'hygiene,' particularly in the hospital setting?
2. *Hygiene Values* - To what degree do the Khmer value hygiene in the hospital and what aspects are most important?
3. *Hygiene Practices* - What practices or environmental characteristics do the Khmer associate with maintaining hospital hygiene, what problems do they identify, and what solutions do they propose?
4. *Cultural Influences and Barriers* - What social structure phenomena, environmental factors, and cultural lifeways influence hospital hygiene and present barriers to quality improvement in Cambodian hospitals?

Research Design

The Ethnonursing Research Method provided the methodology utilized to obtain insight into the hygiene values and practices of the Khmer in the clinical setting. To accomplish the objectives of CCT, Leininger developed a qualitative research technique known as the Ethnonursing Research Method that focuses on living alongside and learning about nursing care phenomena through the lives and experiences of local informants (Leininger & McFarland, 2006, pp. 21, 48). This method requires the nurse researcher to enter a largely unknown cultural context for a period of time to move alongside the people in their lifeways, observe their patterns of knowing and expressing ideas of care, and engage in open discussions with informants (Leininger & McFarland, 2006, pp. 21, 48, 54). For this study, the researcher lived in Phnom Penh, the capital city of Cambodia, from June 24th, 2022 to July 24th, 2022 and interned as a nursing student for an approximate total of 83 hours at a major public hospital. During this time, the researcher stayed with a Khmer host family and established relationships with Khmer both in and outside of the hospital. Based on the criteria of the Ethnonursing Research Method, detailed and credible data was gathered through direct observation in the clinical setting, verbal and typed statements from informants, photos, and participation in health care practices (Leininger & McFarland, 2006, pp. 21, 23).

Furthermore, this technique offered guides, referred to as enablers, which directed the researcher's integration into Cambodian culture and facilitated the collection of data in natural ways. The Observation-Participation Enabler emphasizes a period of focused observation within the informants' natural living and working environments prior to gathering statements or participating in activities (Leininger & McFarland, 2006, p. 26). This enabler necessitates that the nurse researcher sets aside their own preferences and practices to learn from and operate in

the ways of the informants who are the experts of their culture. Such an approach builds the rapport and trust required for the collection of data that authentically represents the values and lifeways of a cultural group. Approximately two-thirds of the researcher's internship was spent observing clinical activities and shadowing staff while the other third involved direct patient care and casual discussions with informants using conversational guides.

Informants

The perspectives of both key and general Khmer informants were sought out for this study. Key informants, as defined by Leininger & McFarland (2006), were those most knowledgeable about the culture and interested in the domain of inquiry (p. 28). These included physicians, nurses, and medical and nursing students who were directly and frequently involved in hospital hygiene practices. General informants were those who had only a broad knowledge of the domain of interest, but who still had relevant reflections and insight to offer about the research topic (Leininger & McFarland, 2006, p. 28). These were community members who had at some time received care in a Cambodian hospital but were not currently hospitalized or working in health care.

A total of 14 Khmer were included in this case study, including five medical students, one nursing student, one doctor, two nurses, and five community members. Informants ranged in age from 20 to 37. Half were female while the other half were male. Six conversations—including one conversation with two informants present—were audio recorded with verbal consent and seven informants submitted electronic responses to the questions within the conversation guides. English was spoken with all informants, but individuals would occasionally verbally process their response in Khmer before speaking in English for the researcher. Six informants submitted their electronic responses in English while one informant submitted in

Khmer. A professional Khmer interpreter was accessed through an online translation service to accurately convert this document into English for analysis.

Setting

Observation of clinical hygiene practices occurred while interning at a major public hospital in Phnom Penh. The hospital consisted of two connected buildings, one that was built over 60 years ago and another that was completed at the beginning of 2022. The older building treated patients of lower socioeconomic status while the newer building treated those who could afford updated medical facilities and services. Equal internship hours were spent on the general internal medicine units of both buildings. Informal discussions with informants occurred in a variety of naturalistic settings including hospital communal areas, local restaurants, and private offices.

Research Personnel

The author was the principal investigator of this ethnographic case study. Prior to entering the field, the researcher obtained a minor in Intercultural Studies and completed one year of a baccalaureate nursing program as well as six months of a nurse technician role at a major public hospital in Seattle, Washington. The researcher received preparation in undergraduate research as part of the Northwest University Honors Program and was advised by Buntain College of Nursing faculty member, Ashley Ott, MSN-PHN, RN. The nursing student internship in Phnom Penh was acquired through a social enterprise that coordinates volunteer opportunities abroad.

Data Collection

Entry to the Field

Connection with informants was made through associates in Washington that had contacts in Phnom Penh, the host volunteer organization, and the student nurse internship. Relationships were established in and outside of the clinical setting over the initial two-week observational period. This approach provided for diversity of Khmer informants and the development of strong, trusting relationships prior to any discussion of the domain of inquiry.

Conversations with Informants

Conversations occurred while in-country between July 19th, 2022 and July 21st, 2022 and electronic responses were submitted via email between August 18th, 2022 and September 28th, 2022. Five conversations were arranged ahead of time, and one occurred spontaneously during an internship shift. Prior to obtaining verbal consent to record the conversation for the purpose of later transcription, a verbal explanation of the case study and statement of confidentiality was provided to informants. A conversation guide, tailored to either medical professionals or community members, was used to stimulate discussion about hygiene perceptions, values, and practices in Cambodian hospitals. The length of conversations with informants ranged from 26 minutes to 1 hour and 11 minutes. For those informants with whom it was not possible to have in-person conversations, an electronic version of the conversation guide was emailed to them with an explanation of the case study and a statement of confidentiality.

Record Keeping

Audio of in-person conversations were recorded on the researcher's personal phone and labeled with the date, conversation number, and informant title (e.g., nurse, doctor, community member, or student). Recordings were later moved to a secure Cloud-based notetaking and task

management application and then transcribed by the researcher. A running list was kept of the conversation number, informant title, date, and description including the length and location. Simple notes were taken during the conversations to remember key phrases and ideas. All electronic responses were expunged of any identifying information and stored on the same Cloud-based application. A field journal was kept throughout the internship documenting hygiene practices, general clinical observations, and the researcher's reflections. Photos were also taken to capture hygiene modalities and the environment within the hospital.

Data Analysis

Data was analyzed according to Leininger's Four Phase Data Analysis Enabler for ethnonursing research (Leininger & McFarland, 2006, p. 62). This enabler separates the process of data analysis into four distinct phases starting with the collection of raw data and moving to the identification of recurrent components, analysis of patterns, and confirmation of major themes. Following the first phase of data collection, the researcher developed a coding system for informant statements to maintain confidentiality, studied the raw data to identify recurring themes, and filed informant statements into data categories under each of the four research subtopics. Data was then further separated into recurrent patterns and the author's field observations and reflections were included under corresponding subtopics. Data saturation was confirmed when further coding of data was not possible. Finally, the major themes within each subtopic were abstracted and cultural considerations and recommendations for future hygiene quality improvement efforts were developed.

TABLE 1. FOUR PHASES OF ETHNONURSING DATA ANALYSIS

Phase One Collecting, describing, and documenting raw data.	• Spent one month immersed in Khmer culture and 83 hours interning in a Cambodian public hospital. • Gathered data through direct observation in the clinical setting, verbal and typed statements from informants, photos, and participation in health care practices. • Transcribed audio recordings and collected electronic responses.
Phase Two Identifying, categorizing, and coding descriptors and recurrent components.	• Created a coding system for informant statements. • Studied raw data to identify similar terms and themes. • Filed informant statements into data categories under each of the four research question topics.
Phase Three Analyzing patterns and context to determine data saturation.	• Further separated statements within data categories into recurrent patterns. • Included field observations and reflections with corresponding data patterns. • Confirmed data saturation.
Phase Four Abstracting and confirming major themes, research findings, and recommendations.	• Abstracted and confirmed the major themes within each data category related to Cambodian hospital hygiene. • Developed considerations and recommendations for future hygiene quality improvement efforts.

Findings

Defining Hygiene

Hygiene was defined as external cleanliness that promotes internal wellbeing. Khmer informants described hygiene not only as practices and environmental conditions, but also in terms of physical and psychological health. The former was consistently identified as the primary influence of the latter, particularly in the hospital setting. One community member said that when the "hospital [is] really clean, I think maybe [patients] will recover a little better as well. It's really kind of mental as well. It's not just only what we can see on the outside." A clear correlation emerged between the quality of external hygiene and the quality of "hygiene in the patient mind," both of which ultimately determined how well a patient would recover.

External hygiene from this perspective involved the elimination of infectious agents from both the environment and one's person to "maintain health and prevent any disease." Sanitation of patient care areas was explained as the cleaning and destruction of bacteria to reduce the "risk

of infection and disease, including nosocomial infection." Mentioned more than this, though, was the role of personal hygiene in protecting oneself and others from illness. Informants recognized cleanliness of the body as the primary means of remaining "free from sickness" and preventing "the spread of bacteria [or] virus from me to the patient." A particular emphasis was placed on how the quality of a hospital's hygiene impacts a patient's recovery. One intensive care unit (ICU) nurse explained:

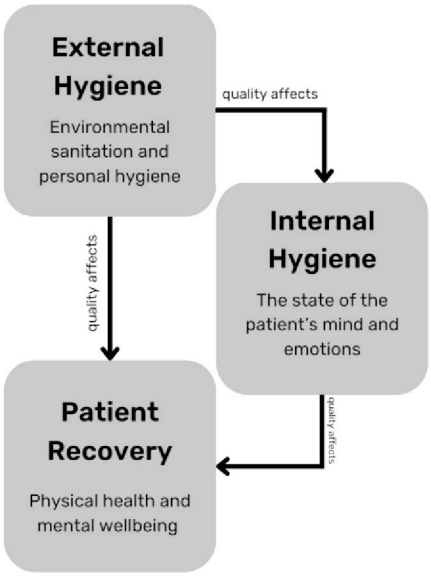
> If your hands and your body [do] not [have good] hygiene, if you [do] not clean correctly, we can add more disease to the patient and the patient can become worse … If we have [good] cleaning or [the] hygiene is good, the patient can get better soon from the disease.

This external component of hygiene contributes to patient recovery not only by decreasing infection transmission, but also by promoting mental wellbeing.

Internal hygiene from the Khmer perspective is contingent on environmental appearances and interactions with staff. The concept of internal hygiene includes the state of the patient's mind and emotions. "If their mind [is] not clear, they [will] worry a lot [and] then they cannot recover from the illness," concluded one medical student. Specific external aspects of hygiene (discussed in detail later) were associated with "good and safe" feelings and "making the hospital look more comfortable." When considering factors influencing patient recovery, the quality of an individual's internal hygiene was weighted as important as drug therapy by several Khmer informants: "When you [are] sick, you have to take medicines. But when the environment around you [is] good, [sometimes] you don't need medicine, but you already get better, and you feel good from your inside." In short, Khmer believe that a hygienic space promotes a clear mind which promotes a healthy body. Additionally, Khmer HCPs and patrons alike connected the quality of interpersonal communication to hospital cleanliness. One community member who has taken interns to many Cambodian hospitals remarked that when they "first come inside [a] hospital, we get a feeling if it's a clean hospital … Sometimes it's not just about cleaning, but it's

about you talking to the people and they're friendly." Therapeutic communication (or lack thereof) from hospital staff to patients had considerable influence on Khmer internal hygiene quality which then formed their perception of overall hospital hygiene. These layered internal-external dimensions of the Khmer perspective inform how hygiene is valued and expressed in Cambodian hospitals.

DIAGRAM 1. DEFINING HYGIENE



Hygiene Values

Shared Overall Value. Among all Khmer informants, hygiene was highly valued for its positive psychological, preventive, and curative effects. Affirmative statements like "very important," "huge impact on health," and "the first step of care" were used to describe hygiene in the hospital. The response of one medical student succinctly outlined the main reasons for this high appraisal: "Hospital hygiene is really important because good hygiene is a motivating factor for patients to recover faster; [it] help[s] patients trust in doctors [which] leads to good mental health; [and it] reduce[s] nosocomial disease and motility rate." Providers and patrons alike explained how hygiene quality affects their level of confidence and comfort within the hospital.

For patients, good hygiene fosters "trust in doctors [which] leads to good mental health." For staff, good hygiene creates a "good feeling to work" and helps the "staff work confidently."

Hygiene was further valued for its ability to protect health and prevent unnecessary costs. Informants generally described hygiene as a protective practice for collective health rather than just for personal health, as conveyed by one Khmer medical student: "Maintaining hygiene in hospitals is absolutely vitally important in ensuring no infections or other patient-by-patient infections or from patient to visitors." Another medical student identified how this preventative action of hygiene produces financial benefits: "Action now will prevent problems later. Investing in infection prevention throughout the hospital environment will prevent additional expenses related to healthcare-associated infections in the future." This was a unique observation not made by any other informant.

The final reason Khmer highly valued hygiene was for its curative effects. Hygiene was associated with improving recovery rates and the efficacy of treatments and was even described as "help to treat sickness" in and of itself. Khmer medical students consistently discussed how "good hygiene is a motivating factor for patients to recover faster" and how "it can make the patient get better or get worse." One even mentioned that "medicine cannot work well in the contaminated place." Despite hygiene being unanimously described as highly beneficial, it was prioritized differently depending on the individual's role as either a provider or consumer of health care.

Differentiated Specific Value. Hygiene was more valuable to a Khmer HCPs experience of working in a hospital than it was to a Khmer patient's health care decision-making. HCP informants agreed that the quality of hygiene in the hospital strongly influenced the way they practiced. "Yes, it affects me," answered a Khmer ICU nurse. "If the quality of hygiene is high,

it's good. [The] affect [on] you depends on the quality too. If the staff or the workers or patient … have a good quality of hygiene, the hospital will [be] better." One internal medicine doctor mentioned, "I always say it is very difficult for physicians in Cambodia [because of poor hygiene]." Not only was quality of hygiene correlated with quality of practice, but it was also closely linked to job satisfaction. One medical student intern captured this point, stating that:

> It surely affects my work because when this hospital has low hygiene, sometimes my emotion, my feeling is bad to come to [the] hospital because, you know, the low hygiene makes it difficult for me to work here ... When there is good hygiene, the patient feels better and they will recover soon and I also love this place. I come a lot, I come here frequently and feel good to work.

While hygiene was depicted to have significant influence on the work experience of Khmer HCPs, other factors took precedence for Khmer community members in their selection of medical care.

When choosing where to receive care, aspects like the quality of the prescribed medications or treatments, the reputation of the hospital or doctor, and especially the cost of care were more important to Khmer community members than a hospital's perceived level of hygiene. During a joint conversation with two domestic partners, it was emphasized that Khmer clients will wait for longer periods of time and accept a lower quality of service if they believe the drugs they will be prescribed are the best. Clinics in Phnom Penh are known among and selected by Khmer for the perceived efficacy of their medication and the trustworthiness of the doctors. One nurse described how she noticed in her hospital that "the patient does not focus on hygiene … They focus on another treatment like medicine, fluid, or anything related. So, hygiene, they don't think that is important." To substantiate this from the client perspective, one domestic partner explained that his significant other "does not really care about hygiene. It's [more] important about other factors, like a good doctor [and a] good review that the doctor [is] giving [the] right medicine. She means that hygiene is something [that] comes up but [is] not the

most important." However, even more crucial to health care decision-making than treatment or provider preference is cost. It was mentioned several times that Khmer would generally prefer to receive care at private hospitals that are known for better hygiene and service, but "for Cambodia, we [are] poor, so they [Khmer] give priority to the cost … Money is important. They have to go to the [public] hospital … even [though] the service [is] not good." When Khmer are given the opportunity to consider hospital hygiene, there are three practices informants identified that have the most value to them.

Most Valuable Practices. Handwashing, environmental sanitation, and staff cleanliness were the highest valued hospital hygiene practices. "Clean yourself [and] clean the building," one medical student said simply. "This is [an] important thing." To a majority of the informants, hand hygiene was "the most important in [the] hospital" to "reduce the transmission of germs." Another medical student explained that "hand cleanliness is the most important role because everything you touch will be effect to you and your patients." One community member expressed that her prioritization of handwashing originated from past observations of poor practices in the hospital: "Most patients won't clean their hand before eating or touch something. Even after use bathroom they forget to clean their hand so it can have virus on their hand so they need to be clean." Keeping one's hands clean is the foundation of good hygiene from the perspective of Khmer informants. Ranked almost as valuable was the cleanliness of the hospital environment, including the bathrooms, surfaces, patient rooms, and equipment. Several informants mentioned that bathroom hygiene was a main point of concern because "it's a point of contact for everyone. We can get a disease from there." In addition, Khmer valued environmental sanitation to keep surfaces "visibly clean and free from potentially harmful infectious material" and ensure rooms are "clean and comfortable for patients." Cleanliness of

equipment was also included "because it can reduce the infection rate and help the patients to recover faster." Finally, the cleanliness of staff was among the most valuable aspects of hospital hygiene. While specifics were sparse regarding what staff cleanliness meant, the informants who noted this identified clean clothes or uniforms as something they looked for "to make sure that [the staff] is not spreading disease to others." More specifics regarding hygiene practices were identified during discussions about the current state of hygiene in Cambodian hospitals.

Hygiene Practices

Hospital Hygiene in Practice. Current hospital hygiene practices reported by informants included personal cleanliness, environment and material sanitation, proper waste management, and certain sensory stimuli. Personal cleanliness, mainly expected of the medical staff, was described as keeping "orderly" and making sure "they're clean or sterile before touching or injecting the patient." Specific practices noted included hand washing, donning gloves, covering coughs, and masking. Informants explained that their expectations of personal cleanliness are met when "physician[s] have to wear a mask," HCPs "keep hand[s] clean before and after practicing with the patient," and the "doctor uses gloves in every checking to make sure they not affect by sickness." In the clinical setting, the researcher observed general compliance with these practices, noting consistent masking indoors by all HCPs, donning of gloves by most staff prior to patient care, and the frequent use of sanitizer, alcohol spray, or soap and water after doffing gloves.

Frequent cleaning of the environment and aseptic technique were the second most mentioned hygiene practices by informants. "Cleaning or maintaining hygiene in a patient's room is to be done regularly to ensure prosperity and hygiene for patients who have come to receive hospital treatment services," expressed one medical student. It was not only the practice

of environmental sanitation that informants associated with hygiene, but also the frequency with which it was done. Terms like "many times a day," "regular," and "routine" were used to express the expectations Khmer had for hospital cleaning practices. The use of "clean material" and aseptic practice by HCPs during patient care was also an expected component of hospital hygiene. Asepsis from this perspective involved "sterilization" of patient equipment (e.g., "Med equipment must be sterile before inject to the patient") and maintaining cleanliness during treatment (e.g., "We need to keep sterile patients who have peripheral venous catheters, intramuscular injection, urinary authorization, and the environment surrounding them"). While used in Western practice to describe different states of cleanliness, the terms 'clean' and 'sterile' were used interchangeably by Khmer informants when discussing hygiene. Practices observed by the researcher that followed aseptic technique included cleaning of patient IV ports with an alcohol-soaked cotton ball prior to medication administration and the donning of sterile gloves for urinary catheterization.

Another frequently specified practice was the proper separation and disposal of hospital trash. Several HCP informants described this as the categorization of waste by kind, either simple/regular or biological/infectious, and the safe storage of sharps (e.g., needles, lancets, syringes, and ampoules). Color-coded receptacles were mentioned as a means of guiding the proper separation of trash: "Very high contagious [waste] we need to put in the red or the yellow [receptacle] and the normal trash we need to put it in the blue [receptacle]." This is done, as emphasized by one nurse, to "prevent nosocomial infection." The researcher noticed these specially colored waste disposal bags or boxes on various hospital units and observed that sharps were always disposed of separately from regular waste.

Lastly, there were several sensory stimuli like smell, light, space, air, and reception that informants associated with hygiene. One community member commented:

> I have been to different hospitals, and I can say the hospital that really looks clean and feels good, [there are] many factors combined together [to make it that way]. I mean, like the building, if they have open space [and] not so many people, we can get a feeling like it's also clean. [When you can] get fresh air, good air in and more open space then [you] feel more hygienic … If we meet a good reception that can welcome you, you also get a feeling like it's [a good place].

Interestingly, most of these stimuli have more to do with the construction of the hospital than the practice of the HCPs. The researcher themself noticed a distinct change in the 'feel' of hygiene when practicing in the newly constructed building—fitted with better ventilation, more windows, and larger patient rooms—versus in the side built in the 1950s. While hospital construction is outside the control of HCPs, the quality of their hygiene practices and communication remarkably impacts a Khmer patient's sensory experience of hygiene. The majority of complaints from informants about the current state of hygiene in Cambodian hospitals related to sensory irritants resulting from various substandard practices.

Priority Problems. Priority problems with hospital hygiene included sensory irritants, insufficient environmental sanitation, poor personal cleanliness, and substandard practice of hospital cleaners. Unpleasant sensory stimuli—such as bad smells, excessive noise, derogatory provider-patient interactions, and crowded spaces—were widely identified by informants as the most problematic aspect of Cambodian hospital hygiene. One community member captured the general feeling of frustration among Khmer with this notorious shortcoming of public hospitals:

> It was my thought to go to [the] hospital to get better from my sickness or my illness. But going to [the] hospital everywhere has a smell and the toilet and the waiting area and the room for [the] patient is not really comfortable and it [does] not make the sick people feel better … It's a small and tight space with the bad smell and I really don't like that.

For those patients who have traveled to neighboring nations like Thailand or Vietnam to receive care, the hygiene deficit in Cambodian hospitals is even more obvious. An ICU nurse stated that

these patients "always complain, 'Oh, the hospital is not clean, very bad smell, [lots of] noises, and [we] don't have the separate room.'" Poor patient-provider interactions driven by hierarchical cultural values also contribute to "a lot of complaints about the service in the public hospital." Underlying many of these sensory issues is insufficient or improper environmental sanitation practices.

Despite environmental cleaning and aseptic technique being one of the top hospital hygiene practices described by informants, many significant shortcomings were noticed in this area. Several informants remarked that public hospitals struggled with "keeping everything clean," especially patient rooms and bathrooms. The researcher observed that hospital bathroom floors were generally dirty, slippery, or muddy and there were large plastic tubs of standing water for collective bathing. Flies, bugs, and feral cats could be frequently found in patients' rooms and occasional human waste was noted on the floors. HCPs were discouraged from sitting down on or touching objects in patient rooms because of "poor hygiene." The sanitization of beds and rooms was not seen by the researcher following the discharge of one patient and the admission of another. Furthermore, isolation precautions for patients with contagious contact, droplet, or airborne infections were extremely poor and protective isolation for the immunocompromised was nonexistent on the internship units. Equipment for measuring daily vital signs was not cleaned between patient use and the shared trays used to carry supplies into patient rooms were infrequently cleaned with alcohol-soaked cotton balls. Although emphasis was placed by informants on the proper separation and disposal of waste, practices observed in the clinical setting did not meet the standards detailed by informants. Sharps were disposed of in large plastic water bottles or milk jugs, which were often filled to the brim, and it was unclear how these were eventually disposed of. The pervasive malodorous smell commonly associated

with public hospitals resulted from piles of waste waiting for disposal in the hallways of patient care areas.

The personal hygiene practices of HCPs in the clinical setting were also questionable to informants and permeated with issues. "Everybody knows about hygiene," one ICU nurse asserted, "But [it is] difficult to know [if] they do good hygiene or not. If we say hygiene to another person, they know. But, if they do [it] correctly, we don't know." Time and material constraints were noted as the primary factors contributing to poor hygiene among HCPs. "There are a lot of patients, but the staff [are] only two or three, so they have no time to hygiene correctly. Just quick … Keep the same glove too," mentioned another nurse. The researcher experienced that it was common practice to reuse the same pair of gloves (even if visibly soiled) when caring for multiple patients due to supply deficits. One would simply spray sanitizing alcohol on the gloves to 'clean' them before the next patient. In addition, the donning of gloves was often dependent on staff preference, even when performing procedures that exposed them to bodily fluids (e.g., initiating IV catheters). Hand hygiene routines of HCPs also presented concerns. On one occasion, the researcher witnessed staff pet feral cats on the unit before providing patient care without sanitizing hands in between. The one or two hand washing stations for the entire unit had only a bar or cup of soap and a small communal towel (cleaned at unknown intervals) or no materials to dry hands with. Furthermore, the general practice of wearing street clothes to work and re-wearing the same clinical coat for several days compromised the quality of personal hygiene in the clinical setting.

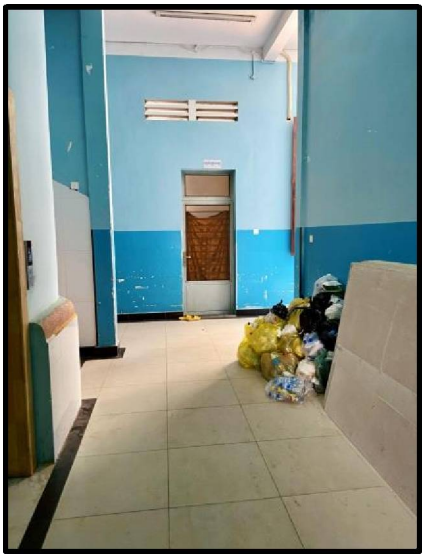
Finally, substandard practices of hospital cleaners were mentioned by informants as a contributing factor to poor sensory experiences of and frustration with current hospital hygiene. Issues expressed included the cleaners being too loud or disruptive while working, not taking

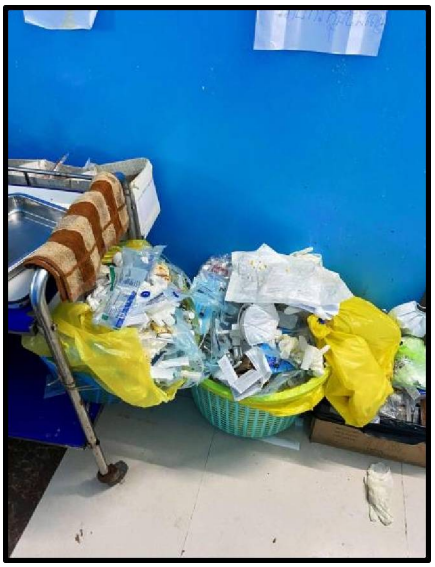
trash off the unit often enough, and not being held accountable to the standard or frequency necessary for proper environmental sanitation. One medical student explained how the current lack of administrative direction for cleaners has been negatively reflected in their practice:

> We have many cleaners here and some cleaners are trying hard to work, so they clean many times a day. But, when they time out, another cleaner [comes and] sometimes they are lazy, so they don't want to clean as many times. They clean only two times a day or three times a day. So, all of this, it is [up to] the cleaner because we don't have people to control them, to make sure that they clean many times … The nurse administrator controls only the nurses and the doctors, but I don't know who controls the cleaners … [Hospital administration] is not clear about it. So, it [environmental sanitation] is up to the cleaners [judgment].

Since, at the hospital of internship, there was no formal leadership identified to direct or correct the cleaners, HCPs described stepping in themselves as supervisors and even acting as mediators in conflicts between cleaners and caregivers. The current constraints on clinical hygiene pose both systemic and individual challenges to quality improvement in Cambodian hospitals. To address these, the Khmer informants offered numerous solutions aimed at three key issues of hospital hygiene.

Feral cats in patient care areas.





Piles of medical waste waiting for disposal in patient care areas.

Medication administration station and plastic water bottles for sharps disposal.

A hospital cleaner at work.

IV initiation by a medical student.

Proposed Solutions. Proposed solutions to address hospital hygiene issues were improving hygiene education, increasing the supply and availability of materials, and updating waste management practices. Increasing awareness of the importance of hospital hygiene among staff, patients, and caregivers was by far the most discussed solution. To address knowledge deficits among HCPs, one internal medicine doctor proposed local hospitals "should [provide more] education of the doctors, of the nurse staff, of the cleaner staff [about] the benefits of good hygiene and disadvantages of bad hygiene, like infection and sepsis and nosocomial infections." Along with these refresher and continuing education courses, both a nurse and medical student suggested "putting the steps of hygiene everywhere" in the hospital so HCPs would be constantly reminded to practice hygiene. To improve the practice of hospital cleaners, one medical student recommended holding "a meeting for all the cleaners [to] tell them how many times they need [to] clean and also teach them the technique that is comfortable to the patient." Since the extent of required and provided training for this role is largely unknown, such meetings would allow for the provision of necessary knowledge assessments and targeted training for hospital cleaners.

Additionally, increasing hygiene education among hospital patrons was mentioned as a priority by several informants because "some patients from rural areas lack awareness of hygiene" and "do not have enough knowledge about how important hygiene is." One medical student emphasized the importance of pursuing this hospital-wide hygiene education approach especially in public hospitals:

> Their [hospital administration, staff, and clients] sensitization would be vital for improving the cleanliness of the health facilities. The fact that the facility is meant 'for the people' must be appreciated by and supported 'by the people.' Patients and other visitors visiting health facilities can contribute [to this] by following hospital norms.

Similar to increasing awareness was the suggestion from Khmer informants to increase the availability of hygiene supplies in hospitals so HCPs can adhere to the expected standards.

Since a lack of material was identified as a primary contributing factor to substandard hygiene, many informants advocated for allocating more funding to public hospitals to improve supply availability. HCPs generally expressed awareness of the purpose and importance of single-use materials in the hospital, but the competing need to both ration sparse supplies and maintain some level of hygiene has forced conformity to substandard practice. Increasing the presence of hygiene resources like hand sanitizer throughout the hospital was another proposal aimed at encouraging staff and clients alike to more frequently engage in hygienic practices. One nurse remarked that when something like sanitizing alcohol "[is] available in all rooms, all spaces, for all patients, we will see and use hygiene." Along with securing enough hygiene resources to strategically dispense and effectively use was a desire among Khmer informants for more effective disposal of medical waste.

Being that the pervasive sensory irritants often associated with public hospitals were frequently attributed to poor waste management, the third most common suggestion for improving hospital hygiene focused on correcting these practices. Informants stressed that

hospitals ought to "take out the trash frequently," "follow waste disposal techniques," and "keeping trash separately." Improvement in this area was discussed in connection with improving the knowledge and training of hospital staff regarding hygiene. Other solutions proposed included expanding staffing to enable HCPs to follow the standards of hygienic practice, enhancing the therapeutic communication skills of HCPs to improve the mental hygiene of patients, and raising the salary of hospital cleaners to increase motivation for and quality of work. While there is significant merit to each of these quality improvement proposals, the barriers presented by the cultural beliefs, operational constraints, and common lifeways of the context in which they would be implemented must be taken into consideration.

Cultural Influences and Barriers

Responsibility and Social Hierarchy. Hygiene was generally described as a collective responsibility, but the hierarchical power structure of relationships in Khmer culture discouraged individuals from voicing concerns and owning change. When asked who they believed to be responsible for hygiene in the hospital, almost every informant identified it as a collective duty. Statements included, "All the people in the hospital should join together;" "Hygiene in the hospital is the responsibility of all;" and "We must be to keep hygiene together." Community members and HCPs alike asserted that "hygiene is a common issue, it is not [an] individual problem" and that "everyone needs to have responsibility so it can help to prevent in the every case in hospital." When evaluating why some departments have better hygiene than others, one doctor concluded this occurs because "the doctor, nurse staff, and cleaner are working together, teamwork." Despite this consensus about the collective responsibility of hygiene, a strong social hierarchy based on age and professional status exists in Khmer culture that hinders collaborative identification of problems and the pursuit of change.

The hierarchical social organization underlying interactions within the hospital makes it difficult and even dangerous for subordinates to report issues about hygiene to superiors. One internal medicine doctor was particularly hesitant to comment on specific hygiene problems he had witnessed out of fear of termination if his hospital's administration found out. The informant perceived hospital leadership and the MoH as generally unwelcoming of suggestions for improvement and punitive of those who speak up. Community members expressed a similar fear of mentioning hygiene concerns to public hospital staff who have a reputation of being rude to inquisitive clients. "If you complain about something or anything, the doctor [has] power to be [in] control [and] to be telling," explained one community member. "We are much smaller than [the] doctor; we cannot say anything." "Some staff will say back to us 'I am a doctor I know better than you do,'" reported another informant. "They blame us so sometimes I [am] scared to tell them." This pervasive patient-provider gap was confirmed by numerous informants, including one community member with experiences in numerous hospitals across the nation:

> In Cambodia, when you are asking [questions] to the doctor or to the nurse, you always get the words not good come back … We're also afraid to ask. When you ask, they will say, 'I'm a doctor. You just do what I tell you' or they ask you, 'Are you a doctor?' So, there's a lot of complaints with this.

A key component of Khmer hierarchy is the belief that higher education or older age places individuals above the perceived criticism that comes with others asking questions of them or pointing out mistakes. This translates to difficulty approaching the subject of substandard practice with older hospital cleaners who believe they have this right. One medical student described his observation of this in the clinical setting:

> When you [try to talk to them about this] and they are older than [you] and you tell them, "Oh, miss or madam, please clean it for me five times or six times or seven times a day," they will [be] upset or they will [be] angry to you like, "Oh, I am older than you. Why [do] you come to tell me like this?"

While Khmer generally identified hygiene as a collective responsibility, informant experiences of the existing social hierarchy within hospitals presents a barrier to identification of problems and collective quality improvement efforts.

Operational and External Constraints. Operational deficits and external constraints adversely affecting hospital hygiene included poor salaries, insufficient staffing, a limited supply of materials, and issues with national health care financing. Several informants noted a correlation between inadequate compensation for hospital cleaners and a decrease in motivation for and quality of work. One medical student suggested that the perceived "laziness" of cleaners is exacerbated by their need to work multiple jobs to make ends meet. Evidence of this was provided by another informant when he compared the quality of hygiene achieved by well-paid cleaners in private hospitals to that of poorly paid cleaners in public hospitals: "When you go to the private hospitals … [these are] the best hospital with the best hygiene because of higher salaries for the cleaners." Understaffing was another significant operational constraint associated with suboptimal HCP hygiene practices. One nurse commented that "when [there are a lot of] patients and they have no time, we cannot feel good [about] hygiene … The staff is not enough for the patient … so they have no time to hygiene correctly." The experience provided by another nurse confirmed how difficult it is for HCPs to provide best practice, hygienic care to every client when being regularly assigned six to ten patients per shift. "I don't know how to correctly do [it] all sometimes," he stated. "We still have mistakes because [there are] a lot of patients." Staff hygiene practices are further dependent on supply availability (or lack thereof). When asked what she learned in school regarding changing gloves between patients, one nurse answered that although she was taught to "use the one glove for the one patient … in this practice here, sometime no. It's busy and [there is] not enough supply to do like they tell me.

What they tell me [in school] is not like practice." Underlying each of these core operational constraints is the systemic issue of faulty health care financing in Cambodia.

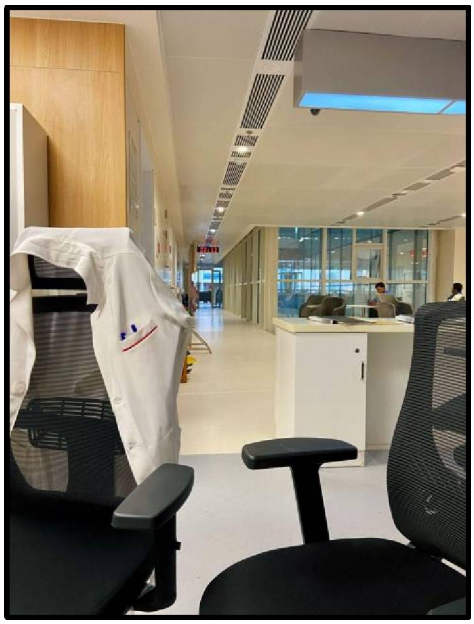
Within the Cambodian health care system, social stratification based on ability to pay for care within the Khmer population significantly dictates local hospitals operations. When seeking medical care, Khmer are divided into two categories, those who have the ability to pay and those who do not, which dramatically affects the quality of the facility they will receive treatment at. The hospital where the researcher interned provided an ideal microcosm of this larger system as the hospital itself was separated into a new building for 'rich' patients and an old building for 'poor' patients. According to staff, "patients who have enough ability to pay for illness" are treated in the updated, hygienic portion of the hospital while those who get support from the government are treated in old building where "because the hospitalization bed fee is low, hygiene is not there." The reality is that 'you get what you pay for' when it comes to care and hygiene in public hospitals like this one. Systemic issues arise when those who can afford better care choose private hospitals over public ones, funneling health expenditure into already better funded organizations and away from underfunded hospitals that are patronized by clients who cannot pay. Public hospitals, therefore, chronically struggle to obtain and maintain the funding necessary to raise wages to acceptable levels, hire enough staff, and purchase enough medical supplies. One ICU nurse expressed his experience of and frustration with this funding disparity among local hospitals:

> But if we compare it [public hospitals] to the [private hospitals in Phnom Penh], they can do everything. If you talk to the patients, it is the rich people [who go there], so they can buy everything. But [at] my hospital, sometimes the people there get the poor card, so everything is free. Sometimes my hospital maybe [gets a] donation from Australia. So, when they give, we can use [the money to purchase needed supplies]. But after [the] donation is gone, every department in my hospital [has] limited money to buy [supplies]. We cannot buy [what we need]. We need to think [about] what is the kind of material that [is] very important. But if we talk to the [private hospitals in Phnom Penh], they [are] not

> thinking [about rationing money for supplies]. If you need [something], you can buy [it] and then you [can] charge the patient [to cover the cost].

Ultimately, the quality of hospital hygiene experienced by Khmer patients is determined by their socioeconomic status and the pursuit of better hygiene within hospitals is determined by the socioeconomic status of their patient population.

Old building for poorer patients.



New building for wealthier patients.

Impact of Certain Lifeways. Hygienic practices and lifeways within the hospital appeared to have improved following the COVID-19 pandemic but continued to have shortcomings contributing to both substandard hygiene and the widespread belief in self-prescription. A subpoint of this ethnographic case study was to gain insight into the impact of COVID-19 on Cambodian hospital hygiene. While not much was offered by informants on this topic, one medical student shared how his involvement with hygiene practices changed during the height of the pandemic:

> Because of COVID, [the cleaners] were afraid of the hospital. The cleaner used to come to the hospital in [teams of] three or four, but when the COVID came, only one and some days no [cleaners came]. They were afraid they could [contract] COVID from the hospital. This is the reason they did not come. If you tried to call them, "Please come,

> please come," [they would say] "No, I don't want to go." Sometimes the medical staff needed to clean the hospital by themself. Like for example, I experienced this myself.

COVID-19 appeared to bring increased awareness among the Khmer to the presence of communicable diseases and the role of hygiene in staying healthy. One community member noted that following the pandemic, hospitals have "more good hygiene. They put hand wash at the public place so that patients can clean their hands often." Although the general understanding and embrace of hospital hygiene has improved, there remain beliefs in the community and care practices in the hospital that contribute to ongoing substandard clinical hygiene and misuse of antibiotics.

The common lifeways of the Khmer in the hospital are often contradictory to hygiene best practice and reinforce harmful medication behaviors. The researcher observed that patient care areas were treated more like homes rather than hospital rooms. Patients and caregivers generally wore shoes when outside their hospital room, but rarely while inside. Shoe racks were available outside rooms and mats to wipe feet (which were cleaned at unknown intervals) were placed either outside or just inside the doors. Being that family members are the primary caretakers and the hospital provides few supplies, several individuals would live at the hospital with the client and bring personal items to care for them (e.g., blankets, pillows, cooking supplies, and toiletries). These practices, while often necessary and congruent with cultural beliefs, increased the likelihood of additional pathogens being introduced to the hospital environment and the development of nosocomial infections among patients and caregivers. In an apparent attempt to minimize this risk, the researcher noted it was hospital policy for all patients, regardless of their diagnosis, to receive prophylactic IV antibiotic therapy upon admission, with ceftriaxone being the antimicrobial of choice. While this medication was chiefly administered by medical staff, almost every other medication was paid for, picked up, and administered by

caregivers often without proper teaching from HCPs on the medication's indication and action. If unrestricted administration of antibiotics and client-driven medication pathways exist in other hospitals in Cambodia, it is probable these have been strong contributing factors to the widespread misunderstanding and misuse of medications among the Khmer. One community member provided a description of the common Cambodian mindset regarding medications that has likely been influenced by these hospital practices:

> In Cambodia, there is a joke. When your children sick, when you are sick, you come to meet a doctor in the Russian Market. Actually, you are the doctor. They are the nurse. They will ask you, "What medicine do you want?" You tell them what you want … A lot of people don't ask [the pharmacist what kind of medicine they should buy]. They just say, "I want to get this medicine." That's why I see a lot of people selling [medicine in the] markets. So many pharmacies [exist here] because [Khmer] don't need to consult because we are doctor. We just tell them what we want. I found this is really different as well from Vietnam. In Vietnam, I've never seen like what I've seen in Cambodia, and I think it's really a problem … Maybe [Khmer] don't give importance much to the doctor because they can just do it themselves. And if they have any experience sick like that before, they are going to tell others, "You are sick like this, you can take this medicine." So, they are doctors for each other. It's everywhere in Cambodia.

While intimate caregiver involvement and the self-prescriber mindset are fundamental aspects of Cambodian health care, problems with hygiene and medication misuse have developed due to the unhygienic lifeways allowed to continue in the hospital and the lack of education provided by HCPs leading to harmful medication behaviors. These current hospital lifeways and beliefs regarding self-prescription present barriers to future quality improvement efforts because of their deeply ingrained and culturally acceptable nature.

ICU at a public hospital in Phnom Penh.

Family member assisting with IV initiation.

TABLE 2. MAJOR RESEARCH FINDINGS

Subtopics	Themes	Informant Quotes
Research Question 1 - Defining Hygiene	Hygiene is external (environment and personal) cleanliness that promotes internal (psychological and physical) wellbeing.	"Hygiene for me is, we have two points: Your hygiene outside and also hygiene [within] the patient." "When I heard the word hygiene I considered keeping clean to maintain health and prevent any disease." "When the patient gets good service and has hygiene from the provider, they can recover step by step faster, more than [just] treatment by medicine."
Research Question 2 - Hygiene Values	Hygiene was highly valued for its positive psychological, preventive, and curative effects.	"Hospital hygiene is really important because good hygiene is a motivating factor for patients to recover faster; [it] help[s] patients trust in doctors [which] leads to good mental health; [and it] reduce[s] nosocomial disease and motility rate."
	Hygiene was more valuable to a Khmer HCPs experience of working in a hospital than it was to a Khmer patient's health care decision-making.	"...the level of hygiene really affects the medical staff work." "It's [more] important about other factors ... She means that hygiene is something [that] comes up but [is] not the most important."
	Handwashing, environmental sanitation, and staff cleanliness were the highest valued hospital hygiene practices.	"Clean yourself [and] clean the building ... This is [an] important thing."
Research Question 3 - Hygiene Practices	Current hospital hygiene practices reported by informants included personal cleanliness, environment and material sanitation, proper waste management, and certain sensory stimuli.	"Here [in the new building], you see no trash, right? And also, the smell here is good and the light is enough. The cleaning too; it's clean here."
	Priority problems with hospital hygiene included sensory irritants, insufficient environmental sanitation, poor personal cleanliness, and substandard practice of hospital cleaners.	"It was my thought to go to [the] hospital to get better from my sickness or my illness. But going to [the] hospital everywhere has a smell and the toilet and the waiting area and the room for [the] patient is not really comfortable and it [does] not make the sick people feel better."
	Proposed solutions to address hospital hygiene issues were improving hygiene education, increasing the supply and availability of materials, and updating waste management practices.	"Their [hospital administration, staff, and clients] sensitization would be vital for improving the cleanliness of the health facilities. The fact that the facility is meant 'for the people' must be appreciated by and supported 'by the people.'"
Research Question 4 - Cultural Influences & Barriers	Hygiene was generally described as a collective responsibility, but the hierarchical power structure of relationships in Khmer culture discouraged individuals from voicing concerns and owning change.	"Hygiene in the hospital is the responsibility of all." "If you complain about something or anything, the doctor [has] power to be [in] control [and] to be telling. We are much smaller than [the] doctor; we cannot say anything."
	Operational deficits and external constraints adversely affecting hospital hygiene included poor salaries, insufficient staffing, a limited supply of materials, and issues with national health care financing.	"Our country is development country so the hygiene is not standard yet, due to lack of equipment, economic and education."
	Hygienic practices and lifeways within the hospital appeared to have improved following the COVID-19 pandemic, but continued to have shortcomings contributing to both substandard hygiene and the widespread belief in self-prescription.	"So many pharmacies [exist here] because [Khmer] don't need to consult because we are doctor. We just tell them what we want ... Maybe [Khmer] don't give importance much to the doctor because they can just do it themselves."

Discussion

Sustainable and culturally relevant recommendations for quality improvement cannot be developed based on anything other than the perspective and experience of those within that context. When investigating a topic as broad as hospital hygiene in Cambodia, it is imperative to begin with seeking understanding of how the Khmer define and value hygiene in the clinical setting. Identifying these enables one to discern the rationale behind current practices and tailor improvement recommendations to meet relevant gaps. The insights shared by Khmer informants and the field observations of the researcher reveal that while there is a general understanding and value of hygiene in Cambodian hospitals, the application of such knowledge largely fails to meet expressed and established standards. This gap between stated knowledge of hygiene and witnessed practice has resulted from a variety of constraints on the system, community, and individual levels. Ultimately, systemic change involving both Cambodian health care financing and the Khmer perception of voicing concerns about substandard practice is necessary for fundamental improvement of hospital hygiene. However, there are several realistic and attainable interventions that could be pursued to begin the process of developing hygiene in public hospitals.

Based on Khmer informant suggestions and the researcher's observations, establishing hygiene policies and education initiatives as well as expanding the presence of hygiene materials throughout the hospital are the primary means of hygiene quality improvement in Cambodian public hospitals. To guide both the practice of HCPs and the lifeways of patrons, hospital administration and nurse leaders ought to collaboratively develop hospital hygiene norms addressing topics like maximum room occupancies, waste disposal, facility expectations, effective supply use, cleaning protocols, and antibiotic administration. Clearly delineating

regulations for areas like these where there are currently only loose expectations at best is a crucial step in establishing a shared understanding of and commitment to the pursuit of better hygiene. Promoting the distribution of these policies throughout the hospital would then begin the process of improving hygiene awareness. Posters with visual aids outlining the hospital's norms, the benefits of good hygiene, and how to perform proper hand hygiene could be created to display around the facility. Meetings should then be arranged for the retraining and refreshing of all hospital staff on these hygiene practices and policies. These would be ideal times for performing knowledge and readiness assessments to determine specific gaps in staff understanding and identify what might pose barriers to improvement. Based on the findings of this case study, it is recommended to develop training tailored to improving the cleaning routines of hospital cleaners and enhancing the therapeutic communication of HCPs. Since the Khmer understanding of hygiene involves external and internal components, creating training focused on refining both aspects of practice is imperative for holistic hygiene improvement. Finally, expanding the availability of hygiene materials (e.g., gloves, hand sanitizer, disposable paper towels, sanitizing wipes) throughout the hospital would promote increased utilization. While this is limited due to public hospital underfunding and chronic supply shortages, even a more strategic distribution of a hospital's limited materials in high-traffic or frequently shared spaces (e.g., bathrooms) would encourage more staff and patients to partake in hygiene.

Limitations of the Study

Being that the nurse researcher is the primary instrument in ethnonursing research, it would have been ideal that the author was fluent in the first language of the informants, but this was not possible. English, therefore, was used during conversations, so it is understood that informants might not have been able to fully express their thoughts and some meaning was likely

lost through the process of translation and understanding. Furthermore, the sample size, total conversation time, and observational period for this ethnographic case study fell short of the requirements for a true small-scale ethnonursing study (Leininger & McFarland, 2006, pp. 29, 74-75). The parameters and time constraint of the internship also limited the researcher to observing the hygiene practices of only two units in one public hospital in Phnom Penh. The researcher was unable to spend time in multiple other clinical settings to confirm or contest the observations made during the internship. Finally, having only one investigator for this case study made it difficult to arrange and conduct discussions while simultaneously interning in and adjusting to a different culture. The author dealt with a variety of illnesses during the trip, including COVID-19, which cut back on time spent in the clinical setting and the number of in-person conversations. For this reason, electronic discussion questions were sent to half of the informants after leaving Cambodia. While in-person discussions were certainly preferred because of the interactivity and depth they provide, the researcher decided it was imperative to gather as much information as possible from the informants who had expressed a willingness to contribute. Being that most informants chose to electronically respond in English, it is understood that meaning was likely lost here as well when informants translated their statements into their second language.

Further Research

Several avenues for further research exist based on the findings of this study. When informants discussed hygiene, the terms 'clean' and 'sterile' were often used interchangeably. While this very well could have been related to the informant's answering questions in their second language, the consistent use of these two different English words for the same concept raises questions about how asepsis and sterility are taught and understood in the Khmer

language. The findings of such a study could be influential in understanding the spread of BBPs and HA-BSIs in Cambodia. Furthermore, it would also be imperative to include the perspective of hospital cleaners in the discussion of Cambodian hospital hygiene considering their integral role. Interviews with cleaners at both public and private hospitals would provide insight into the training these individuals receive, their level of knowledge about hygiene, and the barriers they identify to achieving quality hygiene. The more data that exists providing insight into the Khmer perspective of Cambodian hospital hygiene, the more effective and sustainable quality improvement strategies will be.

Conclusion

The intent of this ethnographic case study was to establish an understanding of hygiene from the Khmer perspective that future quality improvement projects in Cambodian hospitals may be built upon. Current literature and the findings of this study substantiate that substandard clinical hygiene practices in Cambodia have developed as a result of accommodation to regional educational, economic, and social constraints. Developing this area has significant potential to enhance clinical operations, decrease the transmission of BBPs, reduce antibiotic misuse, and improve client satisfaction and utilization of services. Such change necessitates buy-in to quality improvement projects from Khmer HCPs, hospital administrations, and community members, which is why research seeking to understand the issue from their perspective is essential. There is an undeniable relationship between culture and health care development. One must intentionally seek knowledge of the former to enact the latter sensitively and sustainably. In the pursuit of holistic flourishing with people of developing nations, we must never fail to appreciate the strengths of each culture, recognize the flaws in our own, and work together to create change.

References

Annear, P. L., Grundy, J., Ir, P., Jacobs, B., Men, C., Nachtnebel, M., Oum, S., Robins, A., & Ros, C. E. (2015, July 17). *The kingdom of Cambodia health system review* (2nd ed., Vol. 5) [Online]. Asia Pacific Observatory on Public Health Systems and Policies. https://apo.who.int/publications/i/item/9789290616917

Center for Disease Control & Infection Control African Network. (2019). *Best practices for environmental cleaning in healthcare facilities in resource-limited settings* (2nd ed.). Division of Healthcare Quality Promotion in the National Center for Emerging and Zoonotic Infectious Diseases. https://www.cdc.gov/hai/prevent/resource-limited/index.html

Clarke, D., Duke, J., Wuliji, T., Smith, A., Phuong, K., & San, U. (2016, March 10). Strengthening health professions regulation in Cambodia: A rapid assessment. *Human Resources for Health*, *14*(1). https://doi.org/10.1186/s12960-016-0104-0

Fujita, N., Matsuoka, S., Koto-Shimada, K., Ikarashi, M., Hazarika, I., & Zwi, A. B. (2019, July 3). Regulation of nursing professionals in Cambodia and Vietnam: A review of the evolution and key influences. *Human Resources for Health*, *17*(1). https://doi.org/10.1186/s12960-019-0388-y

Gryseels, C., Kuijpers, L. M. F., Jacobs, J., & Peeters Grietens, K. (2019, June 4). When 'substandard' is the standard, who decides what is appropriate? Exploring healthcare provision in Cambodia. *Critical Public Health*, *29*(4), 460–472. https://doi.org/10.1080/09581596.2019.1591614

Hancart-Petitet, P., Dumas, C., Faurand-Tournaire, A-L., Desclaux, A., & Vong, S. (2011, February 7). Social and cultural dimensions of hygiene in Cambodian health care

facilities. *BMC Public Health, 11*, Article 83. https://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-11-83

Kanagasabai, U., Singh, A., Shiraishi, R. W., Ly, V., Hy, C., Sanith, S., Srun, S., Sansam, S., SopHeap, S. T., Liu, Y., Jones, G., Ijeoma, U. C., Bock, N., Benech, I., Selenic, D., Drammah, B., Gadde, R., & Mili, F. D. (2020, October 30). Improving injection safety practices of Cambodian healthcare workers through training. *PLOS ONE*, *15*(10), e0241176. https://doi.org/10.1371/journal.pone.0241176

Khan, M. S., Bory, S., Rego, S., Suy, S., Durrance-Bagale, A., Sultana, Z., Chhorn, S., Phou, S., Prien, C., Heng, S., Hanefeld, J., Hasan, R., & Saphonn, V. (2020, February 11). Is enhancing the professionalism of healthcare providers critical to tackling antimicrobial resistance in low- and middle-income countries? *Human Resources for Health*, *18*(1). https://doi.org/10.1186/s12960-020-0452-7

Khim, K., Goldman, L. N., Shaw, K., Markuns, J. F., & Saphonn, V. (2020, March 12). Assessment of dual practice among physicians in Cambodia. *Human Resources for Health*, *18*(1). https://doi.org/10.1186/s12960-020-0461-6

Lasater, K., Upvall, M., Nielsen, A., Prak, M., & Ptachcinski, R. (2012). Global partnerships for professional development: A Cambodian exemplar. *Journal of Professional Nursing*, *28*(1), 62–68. https://doi.org/10.1016/j.profnurs.2011.10.002

Legido-Quigley, H., Asgari-Jirhandeh, N., Asia-Pacific Observatory on Health Systems and Policies, & World Health Organization. Regional Office for South-East Asia. (2018). *Resilient and People-centred Health Systems: Progress, Challenges and Future Directions in Asia, 3*(1). World Health Organization. Regional Office for South-East Asia.

Leininger, M. (2002). Culture care theory: A major contribution to advance transcultural nursing knowledge and practices. *Journal of Transcultural Nursing*, *13*(3), 189–192. https://doi.org/10.1177/10459602013003005

Leininger, M. M., & McFarland, M. R. (2006). *Culture care diversity and universality: A worldwide nursing theory* (2nd ed.). Jones and Bartlett Publishers.

Marady, H., & Huaifu, X. (2017, November 6). Why people prefer seeking care from one country to other countries: A case study from Cambodia. *MedCrave Online Journal of Public Health*, *6*(4), 373–376. https://doi.org/10.15406/mojph.2017.06.00178

McFarland, M. R., & Wehbe-Alamah, H. B. (2019). Leininger's theory of culture care diversity and universality: An overview with a historical retrospective and a view toward the future. *Journal of Transcultural Nursing*, *30*(6), 540–557. https://doi.org/10.1177/1043659619867134

Om, C., Daily, F., Vlieghe, E., McLaughlin, J. C., & McLaws, M. (2017, March 24). Pervasive antibiotic misuse in the Cambodian community: Antibiotic-seeking behaviour with unrestricted access. *Antimicrobial Resistance & Infection Control*, *6*, Article 30. https://doi.org/10.1186/s13756-017-0187-y

Ozano, K., Simkhada, P., Thann, K., & Khatri, R. (2018, January 6). Improving local health through community health workers in Cambodia: challenges and solutions. *Human Resources for Health*, *16*(1). https://doi.org/10.1186/s12960-017-0262-8

Ozano, K. (2017). *Mind the gap! An investigation into the optimisation of public health skills, knowledge and practices of health workers in Cambodia* (Order No. 10755511). Available from ProQuest Dissertations & Theses Global: Health & Medicine.

(1985562918). https://www.proquest.com/dissertations-theses/mind-gap-investigation-into-optimisation-public/docview/1985562918/se-2

Ozawa, S., & Walker, D. G. (2011, July 1). Comparison of trust in public vs private health care providers in rural Cambodia. *Health Policy and Planning*, *26*(Suppl. 1), i20–i29. https://doi.org/10.1093/heapol/czr045

Parry, S. J., Ean, N., Sinclair, S. P., & Wilkinson, E. (2020, July 29). Development of mental healthcare in Cambodia: Barriers and opportunities. *International Journal of Mental Health Systems*, *14*, Article 53. https://doi.org/10.1186/s13033-020-00385-4

Pearson, H., Fleming, T., Chhoun, P., Tuot, S., Brody, C., & Yi, S. (2018, April 2). Prevalence of and factors associated with utilization of herbal medicines among outpatients in primary health centers in Cambodia. *BMC Complementary and Alternative Medicine*, *18*(1). https://doi.org/10.1186/s12906-018-2181-1

Peou, E., & Jean-Pierre, D. (2012, August 17). *National client satisfaction survey: Healthcare services at public health facilities in Cambodia*. Market Strategy & Development (MSD). https://niph.org.kh/niph/uploads/library/pdf/RP019_National_Client_Satisfaction2012.pdf

Phal, M. (2020). Contextualizing the health-seeking behaviors of Cambodian families living in poverty (Order No. 27830947). Available from ProQuest Dissertations & Theses Global: Social Sciences. (2412860708). https://www.proquest.com/dissertations-theses/contextualizing-health-seeking-behaviors/docview/2412860708/se-2

Stoesser, N., Moore, C. E., Pocock, J. M., An, K. P., Emary, K., Carter, M., Sona, S., Poda, S., Day, N., Kumar, V., & Parry, C. M. (2013, July). Pediatric bloodstream infections in

Cambodia, 2007 to 2011. *Pediatric Infectious Disease Journal*, *32*(7), e272–e276. https://doi.org/10.1097/inf.0b013e31828ba7c6

Suy, R., Yen, Y., Chatterjee, R., Chhay, L., & Mian, M. M. (2017). Cambodian healthcare policy: Challenge and development. *International Journal of Humanities & Applied Social Sciences, 2*(2), 23-32. https://nbn-resolving.org/urn:nbn:de:0168-ssoar-50690-0

Appendix A

Conversation Guide for Doctors & Nurses

Opening Questions

- Can I have your permission to record this conversation? / Is it okay for me to record our conversation?
    - This will help me listen to this conversation again later if I need to when I am writing my university paper.
- Please tell me the title of your job, where you received your education, and how many months or years you have worked at this hospital.

Core Questions

1. What do you think when you hear the word 'hygiene'?
    a. How do you define 'hygiene'?
    b. What does 'hygiene' mean to you?
2. Tell me about what you learned during your medical education about hygiene/sanitation.
    a. Tell me about what was taught about hygiene/sanitation during your medical education.
3. What does good/quality hygiene/cleanliness/sanitation in a hospital look like to you?
4. Which part of the hospital do you believe has the best hygiene/cleanliness/sanitation? Please explain why.
    a. What does your hospital do well with hygiene/sanitation?
    b. What hygiene/sanitation practices does your hospital excel at?
5. What does bad/poor hygiene/cleanliness/sanitation in a hospital look like to you?
6. Which part of the hospital do you believe needs improved hygiene/cleanliness/sanitation? Please explain why.
    a. How can your hospital improve its hygiene/sanitation practices?
7. Can you identify problems or barriers that would make it difficult to improve hygiene/sanitation practices in your hospital?
8. In your opinion, how important is hospital hygiene/cleanliness/sanitation? Please explain why.
9. Tell me about the hygiene/sanitation practices or routines you often see during your work.
    a. Tell me about the rules for hygiene/cleanliness/sanitation in your hospital.
    b. What activities have you seen in hospitals that promote hygiene/cleanliness?
10. What hygiene/sanitation practices do you believe are most important in the hospital and why?
11. Who do you believe is responsible for the hygiene/cleanliness/sanitation in the hospital? Please explain why.
    a. Is it the responsibility of all hospital staff or specific staff to maintain the hygiene/cleanliness/sanitation in the hospital? Please explain why.
12. Tell me about the cleaners/sanitation workers who work in this hospital.
    a. What are they responsible for?
    b. Do you have a close working relationship with them?
13. Does the quality of hygiene/cleanliness/sanitation in your hospital affect the way you work? If so, how?
    a. Does the cleanliness/sanitation of the area you treat patients affect the way you work?
    b. If hospital hygiene/cleanliness/sanitation does not affect your practice, what other factors change or restrict your patient care?
14. Have you ever had a patient tell you about their hygiene/cleanliness/sanitation concerns in a hospital? If so, please tell me about that experience.

Closing Question

Is there anything you would like to share or that you find important that I did not ask you about?

Appendix B

Conversation Guide for Community Members

Opening Questions

- Can I have your permission to record this conversation? / Is it okay for me to record our conversation?
    - This is so I can listen to this conversation again later if I need to when I am writing my university paper.
- Please tell me what you do for work and how long you have lived in Cambodia.
- Have you visited a hospital in Phnom Penh for care within the last three years?

Core Questions

1. What do you think when you hear the word 'hygiene'?
    a. How do you define 'hygiene'?
    b. What does 'hygiene' mean to you?
2. What does good/quality hygiene/cleanliness/sanitation in a hospital look like to you?
    a. Which part of the hospital usually has the best hygiene/cleanliness/sanitation? Please explain why.
3. What does bad/poor hygiene/cleanliness/sanitation in a hospital look like to you?
    a. Which part of the hospital usually needs better hygiene/cleanliness/sanitation? Please explain why.
4. To what extent does the quality of hospital hygiene/cleanliness/sanitation affect whether you go for treatment there? Is quality hygiene/sanitation/cleanliness something you consider when seeking care? Please explain why or why not.
5. To what extent does the quality of hospital hygiene/cleanliness/sanitation affect your satisfaction with your care?
6. Tell me about any hygiene/sanitation practices you have seen in the hospital.
    a. What activities have you seen in hospitals that promote hygiene/cleanliness?
7. What hygiene/sanitation practices do you believe are most important in the hospital and why?
8. Who do you believe is responsible for the hygiene/cleanliness/sanitation in the hospital? Please explain why.
    a. Is it the responsibility of all hospital staff or specific staff to maintain the hygiene/cleanliness/sanitation in the hospital? Please explain why.
9. When you have been treated at a hospital in Cambodia, have you ever seen any hygiene/sanitation practices that you considered substandard or concerning to you?
    a. *If so:* Please tell me what you saw.
        - Did you feel comfortable telling the hospital staff about your concerns? Please explain why or why not.
        - If you did not feel comfortable, what needed to be different to make you feel comfortable telling the medical staff your concern?
    b. *If not:* If you were hospitalized and saw hygiene/sanitation practices that concerned you, would you feel comfortable telling the hospital staff about your concern? Please explain why or why not.
        - If you would not feel comfortable, what needs to be different to make you feel comfortable telling the medical staff your concern?

Closing Question

Is there anything you would like to share or that you find important that I did not ask you about?

Appendix C

Cambodian Hospital Hygiene Thesis Concept Map