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Increasing cultural awareness in emergency departments with simulation scenarios created through a survey

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Abstract

Introduction: There are various difficulties in treating foreign patients; however, the existing educational programs are still insufficient for addressing this issue. The purpose of this study is to investigate what difficulties are encountered in the treatment of foreigners in emergency departments, and to create scenarios for simulation-based education using real-life cases.

Methods: A cross-sectional anonymous survey to 457 emergency departments was conducted in 2018. Additionally, we conducted a survey of 46 foreign residents who had visited hospitals for treatment in Japan. The data was analysed quantitatively, and the narrative responses were thematically analysed.

Results: Of the 141 hospitals that responded (response rate: 30.9%), 136 (96.5%) answered that they had treated foreign patients. There were 51 and 66 cases with cultural and linguistic difficulties, respectively. In the qualitative analysis, different ideas/beliefs towards treatments or examinations (51.0%) and communication with non-English speaking patients (65.2%) were most common categories in the cases with cultural and linguistic difficulties, respectively. The survey of 46 foreign residents on the surprising aspects of Japanese healthcare showed, 14% mentioned difference in treatment plans between own country and Japan, 12% each mentioned a lack of explanation by medical staff, and a lack of privacy in the examination room. Based on the survey results, we created 2 scenarios of simulation.

Conclusions: Scenarios of simulation-based education using real-life cases may be effective materials for cultivating cultural awareness of medical staff.

Keywords: *Cultural Awareness, Cultural Humility, Emergency Department, Foreign Patients, Simulation-based Education*

Practice Highlights

- This study shows the current status of foreign patient care in emergency departments in Japan.
- We identified difficult cases of foreign patients with linguistic and cultural differences.
- We conducted a survey of foreign residents who had visited the hospital for treatment in Japan.
- We developed scenarios of simulation-based education using real-life cases.
- The scenarios include teaching points based on the survey results of the foreign residents.

I. INTRODUCTION

According to the Japan Tourism Agency (JTA), the number of foreign visitors to Japan was increasing every year in the midst of the recent rapid globalisation (Japan Tourism Agency, 2021). Although it is currently on the decline due to COVID-19 infection, a survey of foreign visitors to Japan conducted by the JTA in 2018 revealed that 5% of 3,000 visitors had suffered injuries or illnesses while visiting Japan (Japan Tourism Agency, 2019). When visiting a medical institution in an unfamiliar country, patients have anxiety due to language and cultural differences. Various measures are being taken around the world to prevent patients with different

cultural backgrounds from being disadvantaged in medical care (NHS England, 2016; Office of Disease Prevention and Health Promotion, 2021), such as training medical staff to recognise factors impeding cultural awareness (Hobgood et al., 2006).

Due to its nature, prompt treatment is required in emergency departments (EDs). Previous reports showed that among 97 EDs in Japan, 84 had some difficulties in treating foreign patients (Kubo et al., 2014), and medical staff faced complex cultural and social problems with foreign patients (Osegawa et al., 2002). According to the reports of Japanese government, health care institutions in Japan organise English conversation training or lectures on cultural differences by foreign lecturers for medical staff to improve treatment of foreign patients (Japan Ministry of Economy, Trade and Industry, 2019; Japan Ministry of Health, Labour and Welfare, 2021). However, a training for cultivating cultural awareness among medical staff who take care of foreign patients is still insufficient (Osegawa et al., 2002; Serizawa, 2007).

Simulation-based education (SBE) is a practical learning method which enables mastery learning (Kelly et al., 2018; Motola et al., 2013), and in Japan, English-speaking simulated patients are increasingly introduced in medical education (Ashida & Otaki, 2022). Simulated patients enhance reflective learning which improves cultural awareness of learners (Leake et al., 2010; Paroz et al., 2016). However, according to a survey of emergency training programs, less than 10% of the programs used SBE as a training method for cultivating cultural awareness (Mechanic et al., 2017).

The purposes of this study were to investigate what difficulties are encountered in the treatment of foreigners in EDs, and to create scenarios of SBE using real-life cases.

II. METHODS

In January 2018, we sent a questionnaire to 457 EDs of residency training hospitals in the top 10 prefectures with the highest number of foreign visitors, Hokkaido, Chiba, Tokyo, Kanagawa, Shizuoka, Aichi, Kyoto, Osaka, Fukuoka, and Okinawa (Japan Tourism Agency, 2016), by postal mail. In an anonymous survey, we asked about the hospital readiness for treating foreign patients and about difficult cases of foreign patients with linguistic or cultural differences in medical care (Appendix 1). The questions about readiness on treating foreign patients were analysed by simple percentages, and descriptive statistics were used for the questions about number of patients visiting ED per day. The narrative responses were collated and thematic analysis was performed. First, two authors created codes, generated several categories based on the codes, and sorted each case into categories independently as an investigator triangulation. Following that, we merged categories that were similar and revised categories that were different in interpretation through discussion. We repeated the member checking until we built our consensus, and the final categorisation was confirmed by all authors. The number of cases in each category was also calculated.

As a sub study, we also conducted a survey of 46 foreigners who were residing in Japan and had visited the hospital for treatment in Japan (hereafter foreign residents) to find patients' perspectives on medical care in Japan (Appendix 2). The questionnaire was initially sent to those who were recruited by the authors via email using Google form from January to May in 2018, and data were collected by snowball sampling. The data were analysed by simple percentages, and for narrative responses, we created codes and sorted the responses into categories. The number of responses in each category was also calculated. Both questionnaires stated that the participants' responses would be considered as their consent to the study, and the answers would be used anonymously for educational research.

Following the survey analysis, we selected cases suitable for scenario creation from an educational perspective with focus on the following points: 1) cases which were noted by multiple facilities, 2) difficulties that can be demonstrated by simulated patients; and 3) cases which had teaching points for multiple professions. The scenarios were composed following the Scenario Folder Sections by Seropian (2003) and included case description, manual for simulated patients, and teaching guide for the instructors. The scenarios were reviewed by an experienced medical English communication teacher from a linguistic and cultural standpoint, and by 2 experienced emergency medicine physicians from a medical standpoint. All 3 experts co-reviewed the final scenarios.

III. RESULTS

A. Survey of the EDs

1) Characteristics of the responding EDs: We received responses to the questionnaire from 141 EDs (response rate: 30.9%). Of these, 136 (96.5%) answered that they had accepted foreign patients, 116 (82.3%) had English-speaking staff, and 76 (53.9%) used translation tools or manuals. On the other hand, only 13 (9.2%) answered that they had a full-time English interpreter, and 27 (19.1%) had a website in English. The median number of overall outpatients visiting the ED per day was 30 (1–135), and the median number of foreign patients visiting the ED per day was 0.5 (0–8.3) (Table 1). As for

translation method, a variety of methods were used. Of the 76 EDs, 36 (47.4%) answered that they used translation applications on tablet/PC or smartphone (Appendix 3).

Total responded hospitals	**141**		
Readiness on treating foreign patients	n	(%)	
Have accepted foreign patients	136	(96.5	)
Have an English-speaking staff	116	(82.3	)
Use translation tools or manuals	76	(53.9	)
Have English medical history forms	52	(36.9	)
Have English medical certificates	50	(35.5	)
Have English signs for patients	46	(32.6	)
Have English medical explanation / consent forms	27	(19.1	)
Have a hospital website in English	27	(19.1	)
Have a full-time English interpreter	13	(9.2	)
No. of patients visiting emergency department per day	median	(range)	
Total	30	(1-135	)
Foreign patients	0.5	(0-8.3	)

Table 1. Characteristics of the responding hospitals.

2) Cases with cultural / linguistic difficulties: Cultural difficulties were encountered in 51 cases, and linguistic difficulties were encountered in 66 cases. In the thematic analysis, the cultural difficulties were classified into 4 categories: different ideas/beliefs towards treatments or examinations, medical fees, patients' lifestyle, and others. The linguistic difficulties were classified into 4 categories: communication with non-English-speaking patients, communication with English-speaking patients, communication with interpreters or using translation tools, and others. Different ideas/beliefs towards treatments or examinations (51.0%), and communication with non-English-speaking patients (65.2%) were the most common, respectively. Case examples in each category and how the hospital handled to the cases are shown in Table 2.

Cases with cultural difficulties (51 cases)			
	Categories	n (%)	Examples and ways they were handled
1	Different ideas/beliefs towards treatments or examinations	26 (51.0)	The patient's husband requested that only female medical staff be allowed to examine the patient. -Initially, the doctor in charge was a male, but he was switched to a female doctor.
2	Medical fees	10 (19.6)	The patient's credit card was over its limit and he/she could not pay for the hospitalisation. -They asked the embassy of his/her country to handle the international money transfer.
3	Patients' lifestyle	7 (13.7)	The patient complained about the predominantly rice-based diet during his/her hospitalisation. -They changed his/her diet to the bread-based one during the hospitalisation.
4	Others	8 (15.7)	The patient had a low threshold for pain and was very assertive about the pain -They confirmed that the complaint was due to pain and prescribed adequate painkillers.

Cases with linguistic difficulties (66 cases)			
	Categories	n (%)	Examples and ways they were handled
1	Communication with non-English-speaking patients	43 (65.2)	The medical staff could not communicate with the patient in either English or Japanese. -They used a translation tool to communicate.
2	Communication with English-speaking patients	10 (15.2)	The medical staff could understand ordinary conversation, but it was difficult for them to explain medical terms in English. -The English-speaking staff helped them.
3	Communication with interpreters or translation tools	9 (13.6)	The patient brought in an interpreter, but it was unclear if the interpreter was able to understand the details. -They asked an interpreter to support.
4	Others	4 (6.1)	The patient asked to provide a medical certificate in his/her native language. -They could not provide a medical certificate in the patient's native language, so we provided one in English.

Table 2. Categories of cultural and linguistic difficulties, their examples and ways handled

B. A Survey of the Foreign Residents

As regards the questionnaire sent to the foreign residents, we received 46 responses. Of those, 11 (23.9%) had lived in Japan for more than 30 years. In the multiple-answer questions regarding the reasons for visiting the hospital, 11 (8.2%) answered acute illness treated in the ED (The demographic data of foreigners responded to the survey is shown in Appendix 4). In terms of interpretation in the hospital, 10 (21.7%) answered that they have had some means of interpretation. For the question "What aspects of your medical care in Japan were most surprising or different from those in your country?", of a total of 50 responses with multiple answers, 7 (14%) answered "difference in treatment plans between own country and Japan " while 6 respondents (12%) each answered "a lack of explanation by medical staff" and "a lack of privacy in the examination room" (Table 3).

	Questions about the medical care/staff	Answer	No. (%) in total respondents
Q1	Did you have any means of interpretation in the hospital?	Yes	10 (21.7)
		No	36 (78.3)
Q2	Could you tell the doctor/nurse about your concerns in history taking?	Yes	27 (58.7)
		Somewhat	18 (39.1)
		No	1 (2.2)
Q3	Did you feel the doctor/nurse really cared for your ideas and culture during the history taking?	Yes	23 (50.0)
		Somewhat	17 (37.0)
		No	6 (13.0)
Q4	Did you feel that you were sincerely cared for during the physical exam?	Yes	29 (63.0)
		Somewhat	16 (34.8)
		No	1 (2.2)
Q5	Could you tell the doctor/nurse about your true concerns about treatment?	Yes	29 (63.0)

		Somewhat	12 (26.1)
		No	5 (10.9)
Q6	Did the doctor/nurse explain the diagnosis and treatment plan clearly?	Yes	29 (63.0)
		Somewhat	12 (26.1)
		No	5 (10.9)
Q7	Were you satisfied with the medical care you received?	Yes	32 (69.6)
		Somewhat	12 (26.1)
		No	2 (4.3)
	Questions about surprising points		
Q8	What aspects of your medical care in Japan was most surprising or different from your country?	Top 3 Answers	No. (%)
		Different treatment plan	7 (14.0)
		Lack of explanation by medical staffs	6 (12.0)
		No privacy in the examination room	6 (12.0)

Table 3. Result of the survey of foreign residents

C. Scenario Development

Based on the survey results, we decided the main topic of the scenarios based on the contents overlapped in multiple cases. “Gender restriction of doctors who treated patients” and “communication difficulty in languages other than Japanese or English” were the most frequent topics in cultural and linguistic difficulties respectively. Following the selection of topics, we synthesised the similar responses to create a scenario that could occur in any size of ED setting. We developed the settings including patient age, sex, language, and backgrounds, regarding that the patient characteristics can be demonstrated by simulated patients. As a result, we developed two scenarios: a scenario of abdominal pain in a Muslim female patient and a scenario of forearm fracture in a Chinese male patient (Appendices 5 and 6). In the abdominal pain scenario, no female doctor was available, and a learner, a male doctor, had to examine and treat a simulated patient who refused to be seen by a male doctor. In the forearm fracture scenario, no interpreter was available, and a learner had to communicate with a simulated patient who spoke Chinese only. The learning objective for the learners was to communicate appropriately with patients with different cultural and linguistic backgrounds. Based on the results of the survey for foreign residents, we indicated the importance of listening to the patient's concerns carefully as a teaching point. Also, we reflected the survey results of how each hospital handled the cases on the information for instructors and teaching points.

IV. DISCUSSION

At the time of writing this paper, 96.5% of the EDs had accepted foreign patients; and 82.3% had English-speaking staff. However, only 32.6% of the EDs had multilingual signs for patients, which is listed as actions to be taken in the manual for treating foreign patients (Japan Ministry of Health, Labour and Welfare, 2021).

In the present study, most of the EDs used translation tools when treating foreign patients. Various types of translation methods were found to be used in the EDs, the use of which is consistent with the manual for treating foreign patients (Japan Ministry of Health, Labour and Welfare, 2021). However, we found that the EDs still encountered a significant number of cases with linguistic difficulties. This suggests that even though the EDs own the translation tools, medical staff are not able to utilise them in communicating with foreign patients. According to our survey result, it was revealed that more than half of the cases with linguistic difficulties were of non-English speaking patients. To overcome the linguistic difficulties, medical staff need to be capable of using them enough to communicate with patients of various native languages. In addition to the use of translation tools, multilingual medical explanation/consent forms or signs in hospitals may be effectively used in the aim of communication with foreign patients.

Regarding culturally difficult cases, our survey showed the various issues caused by differences of religious background, lifestyles, and ideas and beliefs on treatment and testing between medical staff and patients. This result is consistent with the reports which elaborated difficulties in treating foreign patients in Japan (Tatsumi et al., 2016). Our study showed that different ideas/beliefs towards treatments or examinations was most common theme in the cases with cultural difficulties in EDs. Knowing beliefs of other culture is one of individual's capabilities to manage effectively in

culturally diverse settings (Ang et al., 2007), and a report on psychiatric hospitals showed that medical staff adapted to hospitalised foreign patients' culture and religion as they built the relationships with the patients over a long period of time (Kobayashi et al., 2014). Whereas, it is difficult to build relationships with foreign patients in the acute ED setting. Thus, we realised that practical training of communication with foreign patients provide knowledge about their cultures and religions in limited time and is critically important for medical staff in EDs.

SBE is an effective educational format which makes learners' unconscious incompetence to conscious incompetence (Morell et al., 2002), in other words, medical staff may be able to recognise their unconscious biases towards foreign patients by participating in SBE. As consistent with the previous survey by the MHLW (2021), the culturally difficult cases included complicated issues that require the cooperation of administrative staff and full-time English interpreters in the hospital. In the present study, we created the two scenarios targeting medical staff as learners based on the real-life cases with the many responses in the survey. However, we need to create more varieties of scenarios that can involve other professions than health care professionals. Furthermore, the acquisition and retention of learners' skills in a single training session of SBE is limited (Legoux et al., 2021). SBE aimed at cultivating cultural awareness cannot be completed in a single session but in continuous sessions with multiple scenarios.

The results of our survey of foreign residents showed that they had been surprised at the differences in treatment plans between their country and Japan, a lack of explanation by medical staff, and a lack of privacy in the examination room. We found that it is important to investigate the opinions of those who receive medical care in a country different from their home because their perspectives allow us to recognise the things taken for granted among medical staff. Medical staff's unconscious biases about patients of different cultural backgrounds or national origins influence their decision-making (Tervalon & Murray-Garcia, 1998), and implicit bias can contribute to miscommunication (Bartlett et al., 2019). Therefore, listening to the concerns of foreign patients is important in order to avoid providing treatment based solely on medical staff's biases. Furthermore, in creating scenarios, referring to the survey results of multiple stakeholders made the contents more multi-dimensional and relevant. This study was conducted in the contexts of EDs in Japan, however, scenarios created with perspectives of both medical staff and patients who have various cultural backgrounds may effectively address to the real-life problems triggered by unconscious biases, even in other contexts.

In Emergency situations, we often focus on the patients' cultural backgrounds, national origins, languages, and religious background in order to provide effective treatments. However, recognising our own bias is not achieved by only focusing on the patients' culture. Self-reflection is necessary to recognise one's own cultural biases. The process of self-reflection of our own culture is important for cultivating cultural awareness. Furthermore, the importance of cultural humility - discovering one's own values toward other cultures through continuous self-reflection and becoming aware of one's own relationship to the world - has been recently noted in medical education (Chang et al., 2012). As a further research, the development of scenarios that include the study guide which ensure the learners' self-reflection is required for SBE in emergency settings.

There are several limitations in this study. The response rate of a survey for EDs was 30.9%, which is unable to deny sampling bias. We conducted a survey for EDs with a focus on English, however, it is necessary to conduct surveys on languages other than English. In addition, the survey was only for the EDs of training hospitals in the top 10 prefectures with the most foreign tourists. We may consider expanding the number of hospitals to collect more information about difficulties they encounter in treating foreign patients. For the sub study, the snowball sampling had a methodological limitation in calculating total number the survey sent. As a further research, impacts of SBE using these scenarios on the treatment of foreign patients is less clear. To assess whether foreign patients' satisfaction of medical care will change, and whether unconscious bias towards foreign patients among medical staff will decrease by conducting these scenarios are necessary.

V. CONCLUSION

In the current study, we were able to clarify linguistic and cultural difficulties in treating foreign patients in the EDs. We developed the scenarios for SBE using the real-life difficult cases of foreign patients with linguistic or cultural differences in medical care in Japan. The simulation training using these scenarios may be useful for promoting cultural awareness of medical staff in EDs. In future, more varieties of scenarios of SBE need to be created and shared in order to treat foreign patients safely and adequately.

Notes on Contributors

SO contributed to the design of the study and conducted data collection and analysis. RA devised the project, the

main conceptual ideas, and conducted data collection and analysis. ST contributed to the design of the study and the interpretation of the data.

Ethical Approval

This study was approved by the Institutional Review Board of The Jikei University School of Medicine Japan (Approval No. 28-211(8454), 28-276(8519)). An informed consent was obtained from all the participants responded to the survey.

Data Availability

The data that support the findings of this study are not openly available due to privacy.

The materials are available from the corresponding author on reasonable request.

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Declaration of Interest

The authors report no conflicts of interest. The authors alone are responsible for the content of the article.

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Appendix 1. A Questionnaire survey for emergency departments

1. The questionnaire will be collected by postal mail. Returning the questionnaire constitutes your consent to participate in the research.
2. Please return the questionnaire in the enclosed envelope by Wednesday, January 31, 2018.
3. It will take about 10 minutes to complete the form.
4. The results of the research will be used for publication in academic conferences and papers, and for the creation of multicultural scenarios to be used in practical training using foreign Simulated Patients. Hospital names will be anonymized.
5. You will be asked to fill out the questionnaire by checking the appropriate boxes or filling out the form.

Q1. Hospital Location

Please check the appropriate prefecture.

□Hokkaido □Chiba □Tokyo □Kanagawa □Shizuoka

□Aichi □Kyoto □Osaka □Fukuoka □Okinawa

Q2. Emergency room patient information

1) Number of emergency outpatients per day (including all ambulances and walk-ins) Average ( )

2) Number of foreign patients per day in the emergency room (including all ambulances and walk-ins)

Average ( )

Q3. Please tell us what you are doing to accept foreign patients.

1) Hospital website in English □Yes □No

2) Hospital signs in English □Yes □No

3) Documents in English

3a) Medical history form or preliminary examination form □Yes □No

3b) Letter of explanation or consent regarding medical condition or procedure/surgery □Yes □No

3c) Medical certificate with diagnosis and other information □Yes □No

4) English-speaking staff □Yes → Go to 4a □No → Go to 5

4a) Please tell us the job title of the person (e.g. doctor) ( )

5) Full-time English interpreter □Yes □No

6) Use of translation/interpretation tools □Yes →Go to 6a □No →Go to Q4

6a) Please tell us the specific name of the tool ( )

Q4. Have you ever accepted foreign patients in the emergency room?

□Yes → Go to Q5 □No → Go to Q6

Q5. For those who answered “Yes”

1) What are some of the problems you have encountered due to cultural differences (e.g., differences in religion, lifestyles, or attitudes toward medical treatment)?

How did you deal with them? Please tell us in as much detail as possible.

Cultural background (Nationality, religion, etc.)	Age of patients	Problems	How did the facility respond?
Example: Muslim	50s	The patient insisted on day surgery because she had to pray five times daily and was worried about her life in the hospital.	We've set up a room where she can pray.

2) What are some of the problems you have encountered due to language differences?

How did you deal with them? Please tell us in as much detail as possible.

Linguistic background (Nationality, language, etc.)	Age of patients	Problems	How did the facility respond?
Example: Latino American (can communicate in English somehow)	70s	The patient was delighted when the health care provider said "positive" when referring to the patient's test results. “Positive" generally had the meaning of good.	I quickly rephrased it with another word, "You have-" and explained.

Q6. For those who answered “No”

What factors do you think are necessary for foreign patients to feel at ease when visiting a hospital?

Please answer in terms of facilities, systems, staff, care, etc.

Thank you for your cooperation.

There is a possibility that we may ask for further details on some of the responses. If you are still willing to respond to such questions, please provide the contact information of the respondent below.

Name of Hospital:

Respondent name:

E-mail address:

Appendix 2. Foreign Patient in Japan Survey

Thank you for your kind cooperation. The purpose of this survey is to improve healthcare for foreign patients in Japan by analyzing the results.

By completing this questionnaire, you are consenting to have your answers used anonymously for educational research. This forum has been set so that your email account will not be collected.

It will take about 10 minutes to do the survey. Please forward the survey link to any other foreigners who have received healthcare in Japan.

Thank you very much for your kind cooperation.

Q1. What is your gender? □Male □Female

Q2. What is your nationality? ( )

Q3. What is your native language? ( )

Q4. What is your age?

□Under 20 □20 – 29 □30 – 39 □40 – 49 □50 – 59 □60 – 69 □70 – 79 □Over 80

Q5. How many years have you lived in Japan? ( )

Q6. For what conditions have you received medical care?

□Acute illness treated in the ER □Pregnancy and childbirth □Colds, minor illnesses □Management of chronic illness (e.g. diabetes, hypertension) □Surgery □Other

Q7. Did you have an interpreter in the hospital? □Yes --> Go to 8a □No --> Go to 9

Q8a. If "Yes", who was it?

□A professional interpreter □Family member □Others □Used the tablet interpreter

Q8b. If answered "family member" or "others" in Question 8a, please specify who it was.

( )

Q9. Please give your reason(s) for your answer to question 7.

□My doctor speaks English. □I prefer communicating directly with my doctor even if the doctor is not fluent in English. □I speak enough Japanese. □I want my privacy. □It takes too long. □Other

Q10. Please tick the appropriate box (History Taking)

(1) I could tell the doctor/nurse about my concerns.

□Yes □Somewhat □No

(2) I was treated with respect.

□Yes □Somewhat □No

(3) I felt the doctor/nurse really cared for my own ideas and culture.

□Yes □Somewhat □No

Q11. If you have rated “Somewhat” or “No” above, what were the reasons?

( )

Q12. Please tick the appropriate box (Physical Examination)

(1) I felt I was sincerely cared for during the exam.

□Yes □Somewhat □No

Q13. If you have rated “Somewhat” or “No” above, what were the reasons?

( )

Q14. Please tick the appropriate box (Explaining Diagnosis and Treatment)

(1) The doctor/nurse was good at explaining the diagnosis and treatment plan.

□Yes □Somewhat □No

(2) I could tell the doctor/nurse about my true concerns about treatment.

□Yes □Somewhat □No

(3) I am satisfied with the medical care I received.

□Yes □Somewhat □No

Q15. If you have rated “Somewhat” or “No” above, what were the reasons?

( )

Q16. What part of your medical care in Japan has been most surprising or different from your country?

( )

Q17. Can you describe a good healthcare experience you had in Japan?

( )

Q18. Is there anything you would like to see changed about medical care in Japan?

( )

Thank you very much for your cooperation.

Appendix 3. Type of translation methods used in the Emergency Departments

	Type of translation methods	No. (%)
I	Translation applications on tablet / PC or smartphone	36 (47.4)
II	Remote interpretation by telephone or videophone	14 (18.4)
III	Bilingual table or guidebook	11 (14.5)
IV	II + Interpreter dispatch service	7 (9.2)
V	I + II + Interpreter dispatch service	4 (5.3)
VI	Interpreter dispatch service only	2 (2.6)
VII	Not known	2 (2.6)

Appendix 4. Characteristics of foreigners responded to the survey

Characteristics of responders		No (% of 46)
Gender		
	Male	14 (30.4)
	Female	32 (69.6)
Age		
	20-29	9 (19.6)
	30-39	9 (19.6)
	40-49	9 (19.6)
	50-59	8 (17.4)
	60-69	8 (17.4)
	70-79	3 (6.5)
Nationality		
	North America	16 (34.8)
	Asia	10 (21.7)
	Europe	10 (21.7)
	Latin America and the Caribbean	5 (10.9)
	Oceania	4 (8.7)
	Africa	0 (0.0)
	Middle East	0 (0.0)
	N/A	1 (2.2)
Length of residence in Japan		
	Less than 10 years	19 (41.3)
	10-20 years	6 (13.0)
	20-30 years	10 (21.7)
	More than 30 years	11 (23.9)
Native language*		No. (% of 47)
	English	30 (63.8)
	Chinese	5 (10.6)
	Spanish	5 (10.6)
	Indonesian	2 (4.3)
	Greek	1 (2.1)
	German	1 (2.1)
	Korean	1 (2.1)
	Russian	1 (2.1)
	Tagalog	1 (2.1)
Reason for visiting the hospital *		No. (% of 134)
	Colds	37 (27.6)
	Minor illnesses	37 (27.6)
	Pregnancy and childbirth	15 (11.2)
	Acute illness treated in the ED	11 (8.2)
	Management of chronic illness	8 (6.0)
	Surgery	7 (5.2)
	Other	19 (14.2)
	*= Multiple choices/answers allowed	

Appendix 5. Scenario 1: Abdominal pain in a Muslim woman

- Summary

Amal Sharma, a Muslim, has come to Tokyo from Dubai for sightseeing with her husband and two-year-old daughter. While visiting the Tokyo Tower, she suddenly became aware of a strong pain in her lower abdomen. It was difficult to walk, so she took a cab to the hospital.

- Objectives

(1) To be able to take a medical history of abdominal pain in English

(2) To be able to respond appropriately to the patient's complaints regarding medical examination and treatment

- Embedded participants/Props

1 resident, 1 nurse

3 chairs, 1 desk (if possible, an examination table)

- Paperwork and supporting documentation

Scenario Details:

Setting: Emergency room

Patient: Amal Sharma, a 24-year-old woman

Complaint: Lower abdominal pain

History: She arrived at Haneda airport two days ago and spent yesterday sightseeing in Asakusa, but nothing unusual happened. This morning, she woke up, had breakfast at the hotel, took a cab to Tokyo Tower and while she was looking at the view from the top, she suddenly became aware of a heavy pain in her lower abdomen. The pain echoed when she walked, so she bent down and held it for a while, but the pain became stronger and stronger, and worsened to about 7 on a scale of 10. The pain was localized in the lower abdomen, and there was no radiated pain. She felt a little queasy, but did not throw up. No diarrhea. No fever.

Medical history: None; delivered daughter spontaneously in her own country two years ago; no history of surgery.

Allergies: Peanuts

Menstruation: Last menstruation, according to her, was 4 weeks ago. Bleeding was less than usual. Her menstrual period was normal and there was no irregular bleeding. She is not sure if she is pregnant.

Social history: In Dubai, she is a housewife. No alcohol or tobacco use.

Religion: Islam. Avoids showing skin to men other than her husband if possible.

Interpretation Model: She has strong abdominal pain, which she has never experienced before, and is worried about what is happening. She would like to be examined by a female doctor, and if possible, her husband should be present. She wants to have the pain relieved and return home to Dubai as soon as possible. She would like to return to her home country for any invasive treatment, including surgery, if possible.

- Context

<u>For learners;</u>

You are in the emergency room and Miss. Amal Sharma is a 24-year-old woman. She has come to the hospital complaining of lower abdominal pain. Please take her medical history and explain the tests she needs. She speaks only English, not Japanese.

<u>For simulated patients;</u>

If the doctor is a man, please answer "I would prefer to be examined by a female physician if possible" when you are asked to be examined.

If you are told that “a female nurse will be present when a male doctor interviews and examines you”, refuse with a look of disgust.

If the doctor is a woman, ask her if there is a man in the room if she starts physical examination on you. If you are going to expose your skin for an examination, ask if you can have all the procedures done by female staff.

After repeating the above for a while, please say, "Okay, I understand. Please let me consult with my husband. Then I will decide”.

If you are told that you should take a urine pregnancy test, please ask why. If you are told that it is because you may be pregnant, reply, "I don't want to take a urine test because that cannot be possible”.

If you are repeatedly persuaded, reluctantly agree to the urine test.

If you are told that surgery may be necessary in some cases, insist that you want to have the treatment in your home country (Dubai), not in Japan.

If you are repeatedly persuaded, please say, "Please let me discuss this with my husband”.

- Knowledge and teaching information

For instructor

(Please answer verbally if the learner ask you about the patient’s conditions)

Blood pressure 100/60mmHg, heart rate 100/min, temperature 37.5 degrees, respiratory rate 24/min, SpO2 100% in room air.

Abdomen: Tenderness in the midline of the lower abdomen, no rebound tenderness, normal peristalsis, no apparent elevation.

No abnormalities in other physical examination findings.

Cultural competency is the acquisition of knowledge, skills, and attitudes that lead to a better understanding of patients with different backgrounds and beliefs, such as foreigners.

This is a communication learning scenario based on a medical interview with a female patient with a Muslim religious background.

The learning objectives of this scenario are as follows

(1) To be able to take a medical history of abdominal pain in English

(2) To be able to respond appropriately to the patient's complaints regarding medical examination and treatment.

Medically speaking, lower abdominal pain in a woman of childbearing age can be diagnosed as gynecological disorders such as ectopic pregnancy, ovarian stem torsion, ovarian hemorrhage, ruptured ovarian tumor, and digestive/renal system disorders such as acute appendicitis, pyelonephritis, ureteral stones, enteritis, ileus, diverticulitis, and cystitis. However, in this case, please focus on the aspect of communicating with patients with different cultural backgrounds. Please be aware of these points in your teaching.

- Teaching points (Please use this as a checklist.)

Is the learner able to listen to the patient's situation and background?

If the patient's request is not common in the learner's institution → Based on the idea of cultural awareness, first understand why the patient is making such a request. (In this case, it is for religious reasons, but even among Muslims, there are variations in how they feel about having a female doctor examine them.)

Is the learner carefully listening?

Even in stressful discussions such as the one above, it is necessary to listen to and understand the patient's words with consideration.

Is the learner able to suggest appropriate alternatives to the patient as a medical professional?

After understanding and respecting the patient's situation, look for a compromise that is both medically and socially acceptable. (In this scenario, if there is a female doctor, it may be possible to ask if she can examine, but what if there is no female doctor.)

Appendix 6. Scenario 2: Traffic Trauma in Asian man

- Summary

Lin Yushan, a tourist from China, has been in Japan for a week. While riding his rented bicycle, he collided with a passenger car coming out from the left at an intersection. His bicycle fell to the right and he fell on his right hand. After that, his right wrist started to hurt and swell, so he walked to the hospital with a friend.

- Objectives

(1) To be able to take a detailed medical history of the symptoms of the right wrist

(2) To be able to give an appropriate explanation about the treatment using the interpretation tools available at the facility

- Embedded participants/Props

1 resident, 1 nurse

3 chairs, 1 desk (if possible, an examination table)

1 pair of bandages, 1 triangular bandage, and 1 used bed sheet, if available

- Paperwork and supporting documentation

Scenario Details:

Setting: Emergency room

Patient: Lin Yushan, a 35-year-old man.

Complaint: Right wrist pain

History: He stayed in Japan for a week. Today, while riding a rental bicycle, he collided with a passenger car coming out from the left at an intersection. The bicycle fell to the right and he fell on his right hand. After the collision, his right wrist started to hurt and swell, so he came to the hospital on foot with a friend.

Medical history: None

Allergies: None

No medication

Social history: He smokes 10 cigarettes/day, occasional drinking

Religion: Buddhism

Language: Chinese only. His friend can speak a little English

Interpretation Model: He is a traveler and has insurance. He is planning to return to his home country tomorrow. He is anxious about receiving treatment in a foreign country.

The right hand joint pain was due to a distal end radius fracture. There was also a dislocation. He wants to be seen by an orthopedic surgeon in his country as soon as possible. His friend, who speaks only a little English, was not able to translate for him when it came to medical matters.

- Context

For learners:

You are in the emergency room and Mr. Lin Yushan is a 35-year-old male. He has come to the hospital complaining of right wrist pain. Please take his medical history and explain the treatment he needs. He speaks only Chinese, not Japanese.

For simulated patients:

Please dress as if your right arm is bent and your right wrist is patronizingly supported by your left hand.

When the doctor asks, "How did you put your hand on the ground?" please say "I don't speak English", and the doctor asks in Chinese, please say "I touched my hand with my palm to the ground (you can add gesture).

When you are asked to move the fingers of your right hand, move them slowly. You can move them but moving them too much will induce pain in your right wrist.

Since your right wrist is broken, your right forearm (between wrist and elbow) is also somewhat sore. However, it is not intense pain like the wrist.

If you are told to have an X-ray examination, please follow the instructions.

After the X-ray, if you are told that you have a dislocation and should be treated with painkiller injections, please ask for an explanation of the medical terms "dislocation" and "painkiller injections".

When you think you understand the explanation, please emphasize, "I have to go back to China tomorrow."

Also please ask "What am I supposed to do after I go back to China tomorrow? Can I go to anywhere? Will I be able to take a bath? " etc. You may follow the instructor's instructions on how long to continue these questions.

- Knowledge and teaching information

For Instructor

(Please answer verbally if the learner asks you about the patient's conditions)

Blood pressure 130/80mmHg, heart rate 90/min, temperature 36.8 degrees, respiratory rate 20/min, SpO2 100% in room air.

Right wrist swollen, unable to move wrist joint due to the pain. There is no pain in the elbow or shoulder, and fingertip sensation is maintained. The fingertips can be moved slightly. No wounds or swelling in other parts of the body.

Cultural competency is the acquisition of knowledge, skills, and attitudes that lead to a better understanding of patients with different backgrounds and beliefs, such as foreigners.

This is a communication learning scenario based on a medical interview and treatment explanation for a Chinese male patient.

The learning objectives of this scenario are as follows

(1) To be able to take a detailed history of the symptoms of the right wrist.

(2) To be able to give an appropriate explanation about the treatment using the interpretation tools available at the facility.

Some medical facilities may not have orthopedic surgeons, and there may be cases where a splint is used instead of a cast. The most important thing in this scenario, however, is whether the learner can explain medical details such as "fracture", "repair," and "dislocation" in simple terms to a patient who only speaks Chinese, using appropriate interpretation resources, and whether the learner can explain the future treatment and precautions to the patient. Please be aware of these points in your teaching.

- Teaching points (Please use this as a checklist)

Is the learner able to get detailed information about the patient's symptoms by any means possible?

When a foreign patient comes to the hospital who does not speak English nor Japanese, how does the learner ask the detailed information? Does the learner know any methods?

Is the learner carefully listening?

Even in stressful discussions such as the one above, it is necessary to listen to and understand the patient's words with consideration.

Is the learner able to select and use appropriate interpretation tools for patients who are linguistically difficult to communicate with?

If the learner uses the interpreting resources, please see if she/he can communicate with the patient. It is good idea to ask the simulated patient if he can understand.