

# COMPARATIVE STUDY OF ETHICAL PROBLEMS ON NATIONAL BOARD EXAMS IN JAPAN FOR HEALTHCARE PROFESSIONS – SPECIFIC EXAMPLES OF PHYSICIANS, PHARMACISTS, AND SPEECH THERAPISTS

Santaro Kobayashi<sup>1</sup>, Ken Kato<sup>2</sup>, Nakako Fujiwara<sup>3</sup>, Makoto Miyaji<sup>4</sup>,  
Hirishi Amano<sup>2</sup>, Mitio Naito<sup>5</sup>, Kimiko Katuyama<sup>6</sup>, Kazunobu Yamauchi<sup>7</sup>

<sup>1</sup> Aichi Shukutoku University, Nagakute, Aichi, Japan

<sup>2</sup> Aichi Medical Association Research Institute, Aichi-ken, Japan

<sup>3</sup> Aichi Prefectural University, Nagakute, Aichi, Japan

<sup>4</sup> Nagoya City University, Mizuho-ku, Nagoya City, Japan

<sup>5</sup> Fujita Health University, Toyoake, Aichi, Japan

<sup>6</sup> Yokohama City University, Kanazawa-ku, Yokohama, Japan

<sup>7</sup> Toin Hospital, Ano, Toin-Cho, Inabe-Gun, Mie, Japan

Correspondence to: Santaro Kobayashi (santa@asu.aasa.ac.jp)

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## ABSTRACT

**Background:** In medical practice, a team approach becomes more important, so a shared awareness of the ethical viewpoint is demanded.

**Aims & Objective:** The present study was conducted to clarify problem points in the evaluation of ethical awareness of medical specialists via the national exams.

**Material and Methods:** This study focused on national board exams for physicians, pharmacists, and speech therapists (STs), specifically targeting the problems posed to exam takers by the 2007 national exams in Japan. Seven researchers first extracted from the exams what were referred to as “ethical problems,” and then they categorized these problems by forms and contents.

**Results:** The percentages of ethical problems were 5.8% for the physicians’ exam, 3.8% for the pharmacists’ exam, and 1.0% for the STs’ exam. The results showed that the exams for physicians, compared to other specialists, contained a greater number of ethical problems and the proportion of ethical problems is also relatively large for the physicians’ exam. Moreover, in terms of taxonomy, problems posed to physicians not only elicited acquired knowledge but also required the exam taker to make decisions about specific cases. These ethical problems vary in forms and contents among the three exams.

**Conclusion:** The results suggest that standardized criteria are necessary for national exams to raise a shared awareness of the ethical viewpoint among medical specialists.

**KEY-WORDS:** Ethical Problems; National Board Exams; Taxonomy Of Educational Objectives; Team Approach

## Introduction

In healthcare practice in Japan, a team approach becomes more important, as is the case in other countries. Historically, the primary relationship in medical practice has consisted of a two-way relationship between physician and patient, but this has now evolved into a situation where the patient forms relationships with many different healthcare professions. However, so called a team approach among these healthcare professions does not work adequately. One of the reasons for this is that the roles of other professions are hard to be clearly defined.<sup>[1-4]</sup> For example, the

following stipulations with regard to physicians: “The practice of medicine shall consist of ... fulfilling various duties to ensure that the nation’s people lead healthy lives, such as contributing to the improvement and promotion of public health through medical care and guidance on the maintenance of health” (Medical Practitioners Law, Articles 1 & 17). With respect to pharmacists, the following legal provisions are made: “[the pharmacist] shall dispense drugs ... fulfilling various duties to ensure that the nation’s people lead healthy lives, such as contributing to the improvement and promotion of public health by filling prescriptions, supplying pharmaceuticals,

and performing other work related to pharmaceutical sanitation” (Pharmacists Law, Articles 1 & 17). The case could be made that the stipulations contained in the laws are not clear enough to enable the healthcare professions fulfilling different functions in everyday healthcare settings to understand each other well. Nor does the law have the capacity to accommodate the changes that are now taking place in healthcare. For these reasons, it has been pointed out that all a team approach among different professions in the healthcare world are in a troubled state.<sup>[4]</sup>

Obviously, the sharing of information is important to alliances in clinical settings. In this way, a foundation for sharing centered on the patients is established. Only once this occurs does it then become possible to elucidate the roles that each profession is called upon to take in medicine; i.e., the professional abilities. Moreover, a shared awareness of the ethical viewpoint is demanded. The reason for this is that the various professions in medicine have certain autonomy, and although engaged in a network of alliance, must in some situations make ethical decisions independently.

Ethical issues call upon persons working in each type of healthcare profession to respond to ethical dilemmas that occur in medical care settings and involve patients and their families. Siegler posited the goal for medical ethics “to improve the quality of patient care by identifying, analyzing and attempting to resolve the ethical problems that arise the practice of clinical medicine.”<sup>[5]</sup> It clarifies that the ability to handle problems from an ethical standpoint is as essential requirement -- not only for physicians, but for all persons in healthcare professions that deal with patients. In other words, each profession will need a degree of autonomy, together with the sense of ethics demanded by its particular circumstances.

At present in Japan, the ethical viewpoints of aspirants to healthcare professions is assessed by means of the Object Structured Clinical Examination as part of pre-graduation education and through the national board exams in the form of paper tests. In particular, the national board exams are important in that they confer the right to execute the functions that go with a healthcare

profession. Nevertheless, when we ask ourselves whether these exams for healthcare professions can evaluate a common ethical viewpoint among professions, the answer is that the situation remains unclear. There have been scarcely any reports on studies of the national board exams in terms of ethics by the taxonomy of educational objectives and contents in individual professions. Accordingly, the present study was conducted to clarify problems in the evaluation of ethical viewpoints of healthcare professions using national board exams.

## Materials and Methods

### Participants

Among the healthcare professions existing in Japan, this study focused on national board exams for physicians, pharmacists, and speech therapists (STs), specifically targeting the problems posed to exam takers by the 2007 national board exams (400 problems for physicians, 240 problems for pharmacists, and 200 problems for STs).<sup>[6-8]</sup>

In this study, we narrowed the objects of analysis down to the 3 professions of physician, pharmacist, and ST. Physicians are generally the ones in medical care settings who take the initiative when it comes to making decisions about medical treatment. In many cases, physicians are called upon to make complex ethical decisions.

The pharmacist today is being called upon to play an expanded role in the present Japanese medical system. As of 2006, the pharmacists’ period of undergraduate education was lengthened from 4 years to 6 years. This was done in order to provide education for pharmacists that focused on clinical practice, and the extension of their educational program signified the necessity of a longer period of learning so that they might be better equipped to deal aptly with the difficult problems that they will encounter in clinical care situations.<sup>[9]</sup> In view of the fact that potential incidents involving pharmaceuticals are second to potential incidents occurring during the treatment<sup>[10]</sup>, it is important that pharmacists bring an ethical perspective to bear upon their contacts with patients.

The profession of ST is also important from the standpoint of recovering speech functions, and

with the aging of the population, the need of patients for the services of the ST is growing. In fiscal year 2006, the number of patients with hearing or speech impediments came to approximately 340,000. Among these patients, those suffering from disequilibrium increased from 7,000 in 2001 to 25,000 in 2006, while those suffering from speech/language function or mastication disorders increased from 34,000 to 42,000.<sup>[11]</sup> ST in Japan is the only healthcare profession performing ingestion and swallowing training specified in law. The law mentions that ST is "the profession responsible for swallowing training, adjusting an artificial cochlea, and others defined by regulations from Ministry of Health, Labour, and Welfare on the basis of directions of a doctor or dentist as assistance of medical treatments," (Speech-Language Hearing Therapists Act, Article 42) and "cooperation with a doctor, dentist, and other healthcare professions is required for proper medical treatments" (Article 43) such as VF, direct training, a mouth care, and lung physical therapy. In fact, ST is the only healthcare profession to be explicitly stated in law that performing ingestion and swallowing training is their duty.

In light of these conditions, it was appropriate to select the professions of physician, pharmacist, and ST as representative for elucidating problems in the evaluation of ethical viewpoints via national board exams for healthcare professions

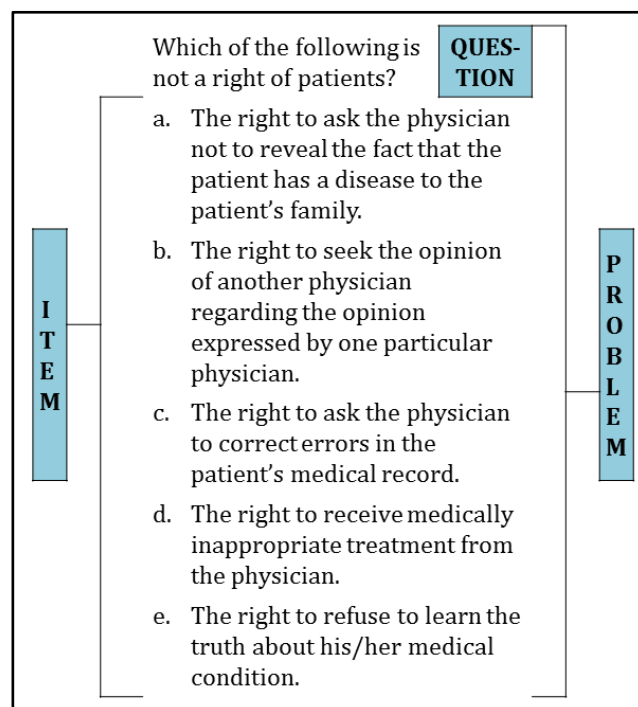
### Analyses

Problems from national board exams for physicians, pharmacists, and STs in 2007 were included for this particular study. In order to compare ethical problems among these national board exams, frequency, form, and content of an ethical problem were examined.

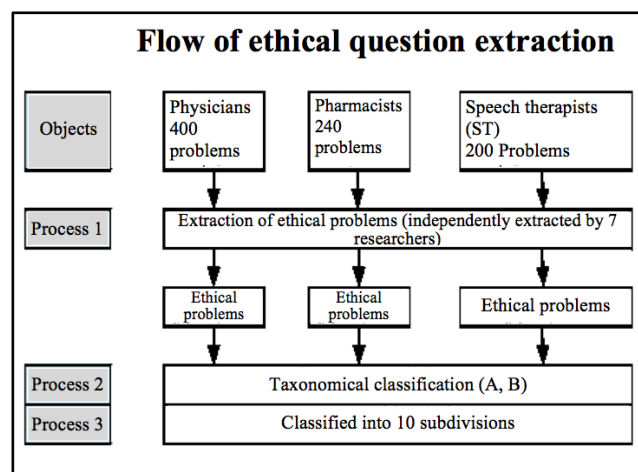
### Frequency

First, the problems presented in these national board exams were divided into 3 parts: the problem statement (the "question"), the multiple-choice possible answers (the "items"), and the problem as a whole, encompassing both the question and the items (the "problem") (Figure 1). Then, seven independent researchers first extracted from the exams what were referred to

as "ethical problems," meaning any exam problems having multiple-choice possible answers that embodied an ethical viewpoint. Then, ethical problems were identified by four or more researchers in agreement (Figure 2), and the number of these ethical problems was counted.



**Figure-1: Example of Problem with Example** (The whole is referred as a 'Problem'; the text of the query as the 'question' and the possible answers as 'items'). [From Physicians' National Examination Problem Collection, 2007, 101c-5]



**Figure-2: Research Methods**

### Form

On the basis of the taxonomy of educational objectives<sup>[12]</sup>, the form of the question was categorized as either A or B. Category A questions probed recall and knowledge retention, and Category B questions involved judgment on the part of the exam taker. Seven independent

researchers examined type of the taxonomy independently. In case that four or more researchers reached in agreement, these numbers of questions were calculated in each type and the proportion of total problems on each national board exam that fell into each category were also calculated (Figure 2).

## Content

In order to examine type of content, multiple-choice possible answers (the items) in ethical problems extracted previously were categorized by seven researchers using 10 areas derived from Jonsen et al.'s four topics<sup>[13]</sup> with subdivisions for (1) medical indications, (2) patient preferences, (3) QOL, and (4) contextual features, and Fujiwara et al.'s categories<sup>[14]</sup>, consisting of (5) obeying the law, (6) obligation to explain, (7) attitude when dealing with patients, and (8) obligation to caution patients, (9) knowledge and (10) other (Figure 2). The type of content was classified into what four or more researchers agreed on.

## Results

The percentages of problems appearing on each national board exam that were identified as ethical problems by 4 or more researchers in agreement came to 5.8% for the physicians' exam (23/400 problems), 3.8% for the pharmacists' exam (9/240 problems), and 1.0% for the STs' exam (2/200 problems). Among these, the breakdown of problem content agreed upon by the number of researchers is shown in Table 1. The results showed that the exams for physicians, compared to other professions, contained a greater number of ethical problems and the proportion of ethical problems is also relatively large for the physicians' exam. Moreover, in terms of taxonomy, these problems belonged to one of 2 categories: either Category A problems, which emphasis on recalling knowledge, or Category B problems, which emphasis on judgment. As a result, the ethical problems answered by physicians were found to break down into 10 Category A problems and 13 Category B problems, while those answered by pharmacists broke down into 9 Category A problems and 0 Category B problems, and those answered by STs consisted of 2 Category A problems & 0 Category B problems.

**Table-1: Breakdown of Problems on which 4 or More Researchers were in Agreement, by Number of Researchers**

Specialist	Number of Researchers			
	4	5	6	7
Physician	5 problems	6 problems	7 problems	5 problems
Pharmacist	3 problems	4 problems	1 problems	1 problems
Speech Therapist	2 problems	no	no	no

**Table-2: Content of Items as Categorized according to 10 Subdivisions**

Categories	Physicians (n = 30)	Pharmacists (n=12)	STs (n=1)
Medical Indications	3.3%		100.0%
Patient Preferences	36.7%	8.3%	
QOL			
Contextual Features			
Obeying the law	26.7%	50.0%	
Obligation to exam	3.3%	33.3%	
Attitude when dealing with patients	30.0%		
Obligation to caution patients			
Knowledge		8.3%	
Other			

Problems posed to physicians not only elicited acquired knowledge but also required the exam taker to make decisions about specific cases. However, problems posed to pharmacists and STs only tested them on their knowledge. By profession, the percentage of exam problems identified by 4 or more researchers as having possible answers (items) with content embodying an ethical viewpoint came to 26.1% for physicians (30/115 items), 29.3% for pharmacists (12/41 items), and 10.0% for STs (1/10 items). For physicians, the breakdown of ethical content into the 10 subdivisions established above came to 3.3% related to (1) medical indications, 36.7% related to (2) patient preferences, 26.7% related to (5) obeying the law, 3.3% related to (6) obligation to explain, and 30.0% related to (7) attitude when dealing with patients. For pharmacists, the corresponding distribution was 8.3% related to (2) patient preferences, 50.0% related to (5) obeying the law, 33.3% related to (6) obligation to explain, and 8.3% related to (9) knowledge. For STs, a full 100.0% of the questions pertained to (1) medical indications. Here we see that the problems were slanted toward (5) obeying the law and (6) obligation to explain, in the case of pharmacists, while the sole focus of problems for STs was (1) medical indications (Table 2).

## Discussion

### Criteria for Problem Preparation

On the basis of the results of this research, the number of ethical problems posed on the physicians' exam was in line with the criteria for questions to appear on the national board exam. When it comes to pharmacists and STs, however, the criteria for problem preparation do include criteria for questioning ethical judgments, but the number of problems posed is disproportionately small, and it is difficult to say that the necessary ethical viewpoints are comprehensively covered by the national board exam. From the standpoint of considering team-approached medical care, it seems obvious that the shared criteria common to all three of these national board exams need to be interjected into the criteria for questions to the greatest degree possible. In other words, there should be a crucial need for a better balance among the types of problems appearing on exams, so that all national medical exams share a common axis when it comes to ethical problem criteria, in a way that transcends specific professions. Recently, Minister of Health, Labour and Welfare and Ministry of Education, Culture, Sports, Science and Technology are studying core curriculums for each healthcare profession. However, this study requires a cross-cutting standpoint.

### Forms of Problems

In terms of the forms (taxonomy) of the questions, there is already a good balance among the problems posed to physicians, but the problems for pharmacists and STs are skewed toward probing acquired knowledge. For ethical judgment in clinical settings, it is important to learn abilities one can interpret the situation and apply ethical principles to it using case scenarios. However, when introducing problems that involve case scenarios, there is not that much meaning in posing problems where the exam taker need only apply ethical principles to answer the problem. Rather, it will be an important and challenging task to enhance the quality of the case examples given, because there is a risk that examples on paper will depart too greatly from the realities of clinical medicine.<sup>[15]</sup> Since potential incidents

involving pharmaceuticals are second to potential incidents occurring during the treatment, there is a need to make decisions about ethical elements in problems that take the form of case examples. Some are of the view that the introduction of OSCE has already provided for the development of student ability to assume ethical viewpoints, rendering the testing of that capacity on national board exams no longer necessary. Nevertheless, Singer et al. have pointed out the weaknesses of that assessment, including the evaluation of the OSCE itself.<sup>[16]</sup> Accordingly, the national board exams should still be used to assess whether that ability really has been cultivated in the graduating student.

Ethical issues call upon persons working in each type of medical specialist to respond to ethical dilemmas that occur in medical care settings and involve patients and their families. Siegler posited the goal for medical ethics "to improve the quality of patient care by identifying, analysing and attempting to resolve the ethical problems that arise the practice of clinical medicine."<sup>[17]</sup> It clarifies that the ability to handle problems from an ethical standpoint is as essential requirement – not only for physicians, but for all persons in medical specialists that deal with patients. In other words, each specialist will need a degree of autonomy, together with the sense of ethics demanded by its particular circumstances. In terms of the specifics of the national exams, which evaluate the educational attainments of pre-graduates in each field, this will translate into a need for standardized criteria to determine the numbers of ethical problems posed and the content of those problems. In terms of taxonomy, it will also mean increasing the number of case example-type problems and giving recognition to the autonomy of each particular specialist. Such changes would make it possible for persons in each medical specialist to cope with situations where they need to make ethical decisions in the context of an alliance among medical care workers, and it would contribute to the provision of a higher quality of medical care.

### Limitations

We evaluated ethics on national board exams among three professions, exams for other

healthcare professions such as nurse need to be analyzed in the future study. Furthermore, ethical problems were categorized into 10, but these categorization should be reconsidered for further studies.

## Conclusion

Today, when the significance of team medical care is increasing, the frequency with which ethics-related problems appear in the national board exams and the specific content of those problems should be adjusted to introduce common elements shared by all such professions. In future research, we would like to investigate the situation for healthcare professions that were not taken up in the present study.

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