

# Attitude of physiotherapists vis-à-vis nurses concerning information exchange

Ogiwara Shimpachiro Tsukada Nozomi\*

## ABSTRACT

**OBJECTIVE :** To determine attitudes of physiotherapists towards information exchange (IE) with the nurses. **DESIGN :** Cross-sectional mail survey. **SETTING :** Ishikawa Prefecture, Japan. **PARTICIPANTS :** 283 practising physiotherapists. **METHODOLOGY :** The first 3 Likert-type statements were concerned with the importance of IE with nurses, reflecting "the degree of perception towards IE with nurses", whereas the second 3 statements reflected "physiotherapists' willingness for IE with them," and "the degree of physiotherapists' understanding of nursing tasks." **MAIN RESULTS :** The final sample consisted of 200 respondents (70.7%). The degree of perception towards IE was not affected by gender and number of years of professional training. Neither was it affected by the number of years of professional experience, which seemed to be dependent largely on individual differences. Both physiotherapists and nurses cited client's "activities of daily living and/or mobility" as the most important factor for their IE. The main problems of IE quoted by physiotherapists were "lack of time," and "inadequate means of intercommunication." **CONCLUSION :** IE could be greatly enhanced between nurses and physiotherapists through education. The importance of IE between healthcare professionals is becoming of greater significance since extended care units specifically designed for clients in the subacute stage of their physical condition were implemented nationwide in April 2000. Given the importance of communication amongst healthcare professionals, future research and educational efforts related to evidence-based protocols for IE will be beneficial.

## KEY WORDS

Information exchange, Attitude, Physiotherapists, Nurses.

### Introduction

Smooth exchange of information and collaboration with other healthcare professionals is essential for the effective practice of physiotherapy<sup>1)</sup>. However, discussions on this matter have been few and far between, particularly concerning a common method of approach of how this should be undertaken. Amongst healthcare professionals nurses spend longer periods of contact with a larger number and variety of clients. They are likely to have much needed information that is of great value to other disciplines and, therefore, can be a valuable information provider. Consequently, from

the healthcare professionals' point of view, close liaison with the nurses is an important contributing factor to a fully effective healthcare team<sup>2)</sup>.

Provision of a physiotherapy service with a high quality of care, which meets the needs of each client, is mandatory and requires close collaboration with other disciplines. In the present study the perception of physiotherapists in regard to information exchange (IE) between physiotherapists and nurses is explored. The purpose of this study was two-fold : 1) to recognize how physiotherapists exchange information with nurses, and 2) to analyze the background and reasons

Department of Physical Therapy, School of Health Sciences, Faculty of Medicine, Kanazawa University

\* Department of Medical Rehabilitation Services, Kanazawa Nishi Hospital

for the findings. The information obtained from this study would provide a state of awareness that would be conducive to professional practice of physiotherapy as well as improving teamwork for the benefit of the clients.

## Methodology

### *Instrumentation*

A questionnaire, devised by the authors, was implemented in this study and consisted of Parts A, B and C. Part A of the questionnaire consisted of a Likert-type attitude scale to measure the degree of physiotherapists' perception (DP) on how information is exchanged between them and nurses. The statements in the questionnaire consisted of six items, which were used as dependent variables in this study.

The manifest contents of the six statements were as follows. Item 1 was concerned with the multidisciplinary aspect of physiotherapy practice. Item 2 reflected the degree to which IE with nurses influenced the outcome of physiotherapy treatment. The nature of interpersonal relations amongst healthcare professionals — conflicting or benign — was implied in Items 3 and 5. Also the extent to which interpersonal relations were influenced by appropriate IE was tapped in Item 3. Finally, Items 4 and 6 represented the aspect of a positive IE.

Part B of the questionnaire dealt with specific aspects of physiotherapists' IE with nurses in their routine daily practice.

Part C of the questionnaire included background information about respondents' gender, years of professional experience, workplace setting and the length in years of professional training.

### *Scoring*

Five responses were provided for each of the statements, and the items were scored in such a way that a score of +2 indicated the highest DP concerning IE with nurses and that of -2 indicated the lowest DP. There was a neutral or zero point provided on the scale. The lowest possible score attainable was -12 and the highest +12. A constant of +12 was added to eliminate negative values. Thus, the final score ranged from 0 to 24. However, all but one respondent indicated positive scores, so that we excluded this odd one from the analyses, and, consequently, a 0-12

scale was adopted instead of a 0-24 scale.

### *Participants and procedures*

Two hundred and eighty-three physiotherapists practicing in Ishikawa Prefecture were selected as a sample of convenience. Because of the relatively small number of physiotherapists comprising the total membership in the prefecture, almost all of the members were selected. The physiotherapists who were excluded from this study were those either involved in teaching and research or were non-practising at the time of the survey.

Therapists in the University of Kanazawa Hospital Departments of Physical and Occupational Therapy critically examined the original version of the questionnaire for its wording and phrasing. Surveys were mailed to the individual respondents with a letter of explanation concerning the purpose of the study, together with a stamped addressed return envelope. The questionnaires were anonymous but contained a code, which would enable mailed reminders to be posted, if necessary. This was, nonetheless, not required. This survey was conducted during November 2001.

The rate of return was 71.4 per cent, from which 2 incomplete questionnaires were excluded from analysis. Thus, the final sample consisted of 200 respondents (70.7%).

### *Statistics*

The total DP scores were interpreted as respondents' DP of IE with nurses, and, accordingly, the mean and standard deviation for the dependent variables were calculated. We determined that there was no difference in variation in the scores obtained for both the men and women respondents, which was confirmed by the *F*-test. We then calculated the mean DP scores of these two groups according to the respondents' gender using a non-paired samples *t*-test for independent groups.

We calculated a coefficient of correlation in order to determine the strength of a linear relationship between the DP scores and years of professional experience. A 95 per cent confidence interval for the dependent variables was also calculated.

The mean DP scores obtained from the respondents who had completed a 3-year academic programme and those who had completed a 4-year academic programme were compared using a non-paired

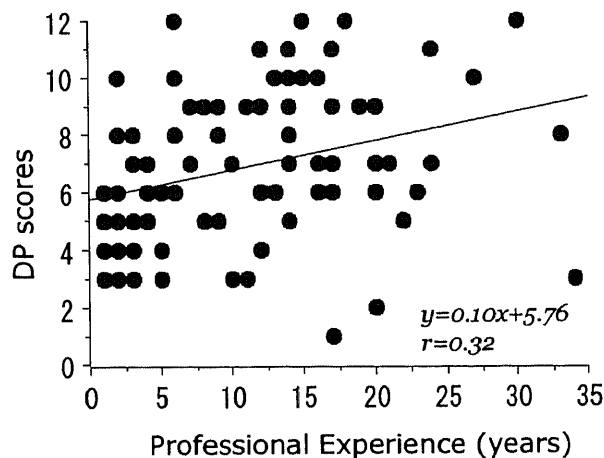


Fig. 1. Relationship between degree of perception for the need of information exchange and respondents' professional experience

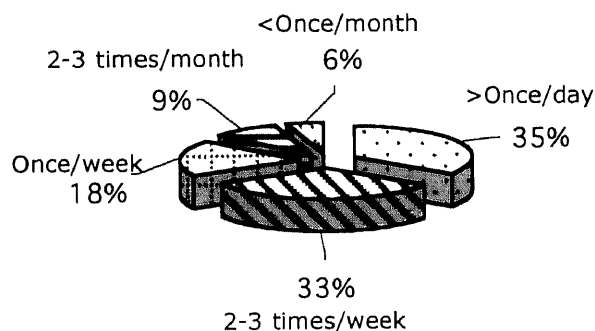


Fig. 2. Frequency of information exchange between physiotherapists and nurses

samples *t*-test for independent groups. Probability values of  $<.05$  were considered statistically significant in a two-sided test, and computer softwares *Microsoft Excel 2001* and *StatView 5* were used for the data analysis.

## Results

### Description of the respondents

The number of women slightly exceeded the men respondents (108 vs. 93). The mean number of years of professional experience was 9.4 years with a standard deviation of 7.4, ranging from 1 to 34. One hundred and forty-eight (74.0%) of the respondents had undergone a 3-year academic programme, 49 (24.5 %) a 4-year academic programme, and 3 (1.5 %) had qualified under the grandfather clause. The overwhelming majority (176) of the respondents held positions in medical facilities, 18 in social welfare

institutions, and 6 in various other health-related employments.

### Degree of perception concerning information exchange with nurses

The mean (SD) DP score for all of the dependent variables was 6.90 (2.51). In a comparison of the dependent variables between genders the men ( $n=91$ ) scored 6.90 (2.67) and the women ( $n=109$ ) 6.89 (2.37), which yielded no statistical significance.

As for the relationship between DP and the length of professional experience, the correlation coefficient for all of the respondents was 0.23 ( $y=0.08x+6.16$ ). The men's correlation coefficient was 0.32, showing a very weak relationship between DP and the length of professional experience (Fig. 1), and the women's was 0.14 ( $y=0.55x+6.46$ ), which showed hardly any relationship.

The mean (SD) DP score of the respondents with

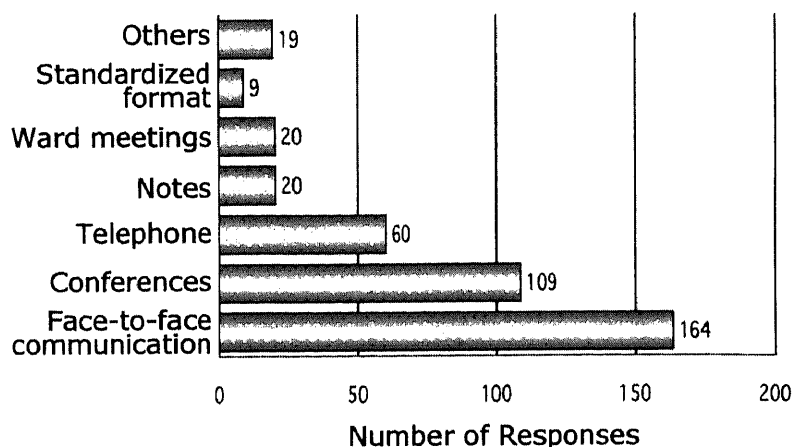


Fig. 3. Methods of information exchange between physiotherapists and nurses

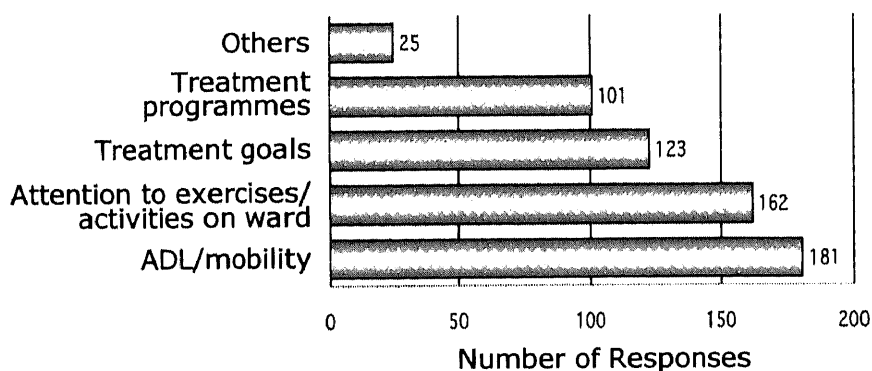


Fig. 4. Contents of information exchanged by physiotherapists to nurses (ADL : activities of daily living)

a 3-year professional training was 7.16 (2.46), while those with a 4-year professional training scored 6.10 (2.46), which was statistically significant ( $p < .05$ ). (The three respondents who qualified under the grandfather clause were excluded from this calculation).

#### *Actual information exchange between physiotherapists and nurses*

Approximately one third of the respondents exchanged information with nurses more than once a day, and another one third 2 to 3 times a week (Fig. 2).

The respondents were asked to cite up to two items for their method of IE. *Face-to-face communication* was cited most, followed by *conferences* and *telephone* (Fig. 3). There were 19 various responses for other methods utilized, two of which were in the form of *reports* with 7 responses and *accompanying ward rounds* with 3 responses.

The respondents were asked to cite up to three

items for the contents of information that were conveyed from the physiotherapists to nurses. *Activities of daily living and/or mobility* was cited most, followed by *attention to exercises and/or activities on the ward* and *treatment goals* (Fig. 4). Other responses included *exercises practised independently on the ward*, *treatment techniques* and *instruction by the physiotherapist utilizing his/her knowledge and technique*.

A maximum of three items were permitted for the response concerning contents of information conveyed from the nurses to physiotherapists. *Activities of daily living and/or mobility on the ward* was cited most, followed by *clients' general condition* and *complaints from the client and family of the physiotherapist* (Fig. 5).

A maximum of three items were permitted for the response concerning reasons for problems of IE encountered with nurses. *Lack of time* was cited most,

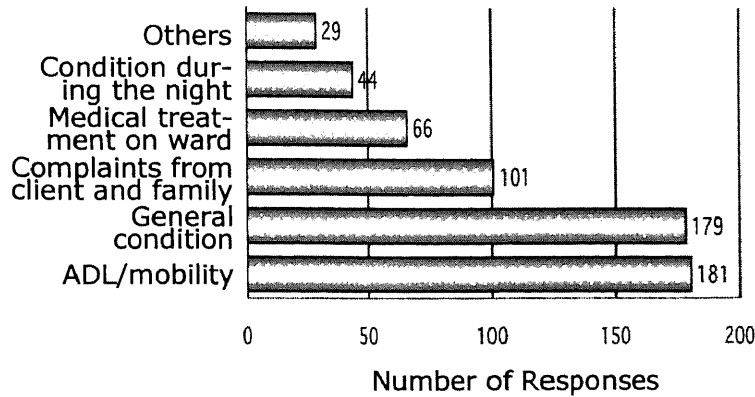


Fig. 5. Contents of information exchanged by nurses to physiotherapists (ADL : activities of daily living)

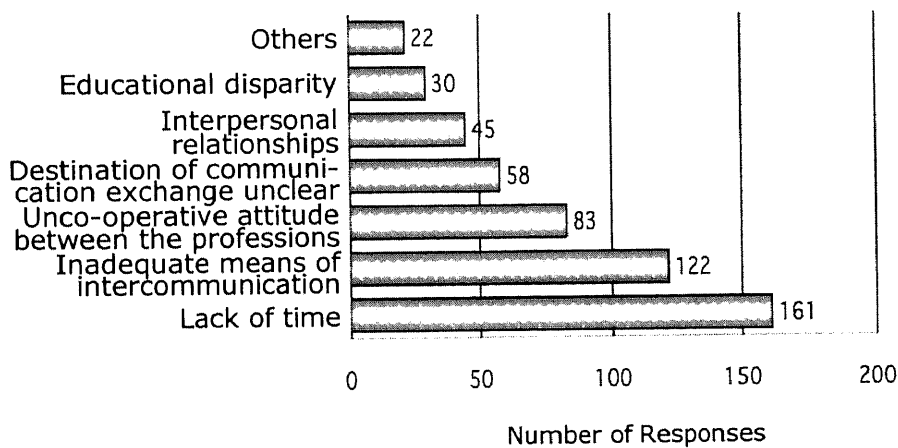


Fig. 6. Reasons for problems of information exchange with nurses

followed by *inadequate means of intercommunication* and *unco-operative attitudes between the professions*. There were a total of 22 responses with the majority of physiotherapists favouring *destination of communication exchange unclear* (Fig. 6).

### Discussion

In general, the score showing the therapists' regard for the importance of information exchange with nurses was high, showing their willingness for IE with nurses and understanding of nursing tasks. However, the variance obtained from the individual DP scores was large, reflecting individual variations concerning the above two factors.

Lack of any statistical difference between men and women respondents in DP suggests that gender is not a factor, influencing the attitude towards IE.

As for the relationship between DP and the length

of respondents' professional experience, the attitude towards IE with nurses became of more importance as the respondents gained clinical experience. This suggests that the more inexperienced the physiotherapists are, the more their time is spent on treatment methods and techniques, and, as a result, IE tends to be put behind the scenes. This tendency in the early stage of their career to ignore the need of IE was more pronounced in the men than in the women respondents.

A comparison of the DP scores between the respondents who had completed a 3-year academic programme and those of a 4-year academic programme demonstrated a higher DP in the former. The history of a 4-year academic programme for the education of physiotherapists in Japan goes back only about 10 years, and, consequently, the length of professional experience of those respondents who had

undergone a 4-year academic programme was less than 4 years. Furthermore, the number of those who had completed a 4-year academic programme was approximately one third of all the respondents. Therefore, the higher DP obtained by the respondents with a 3-year academic programme may have been influenced by professional experience rather than by the length of professional training. The implication of this fact, as a measure of DP, signifies that the length of professional training may be of doubtful validity.

A *Rehabilitation Nursing* course is mandatory in approximately two-thirds of schools of nursing in Japan<sup>3)</sup>. On the contrary, no course concerning nursing is offered on the curriculum for the education of physiotherapists since the mandatory rules and regulations for the curriculum were set by the Ministry of Health, Labour and Welfare in 1966. Several courses on the physiotherapy curriculum at the University of Kanazawa concerning nursing are only compulsory for transfer students where one (TN) of the authors studied. One course entitled *Professional Ethics and Administration in Physiotherapy* is offered as an elective course in which students are exposed to the notion of a multidisciplinary team approach. However, only 12 out of 30 government-run schools of physiotherapy with a diploma programme offer this course<sup>4)</sup>. Regardless of no set course in their curriculum related to nursing being offered, there is a great deal of opportunity to acquire knowledge and collaboration with nurses through classroom instruction and clinical placement. In fact, most of this information is generally learned through clinical practice and observation following qualification.

As for the frequency of IE in day-to-day physiotherapy practice, the response of *more than once a day* and *2 to 3 times a week* accounted for approximately 70 per cent of IE. However, there were responses of *2 to 3 times a month* and *less than once a month*. This latter fact indicates that these responses may have been made by the physiotherapists who work in a geriatric treatment setting and/or extended care facilities where clients' and/or residents' recovery and progress is relatively slow. In other words, the respondents may have had less need for frequent IE compared to in an acute treatment setting.

The results of this investigation have shown that

the respondents cite *face-to-face communication* with nurses as being the most important method of IE. This is in agreement with the findings demonstrated by Katada and his associates, which states that, apart from means of intercommunication, it is important to scrupulously exchange information about each client on a day-to-day practice, which becomes the foundation of collaboration<sup>2)</sup>. *Conferences* were cited as next in importance as a specific method of IE, which enable professionals to recognise each other's professional knowledge for the clients' progress and welfare.

The common denominator found as a result of physiotherapists' and nurses' IE was the improvement in the clients' activities of daily living<sup>5)</sup>. The results of our investigation agree with this notion. The second largest denominator of IE were *attention to exercise on the ward* cited by the physiotherapists and *general condition* cited by nurses. These facts suggest that both professions show concern for the welfare of the clients based on their condition.

The majority of the respondents felt that there were problems of IE with the nurses, with specific responses being *insufficient time for IE* and *inadequate means of intercommunication*. The interpretation of this finding may be that there is an inadequate established working system amongst physiotherapists and nurses. In recent years common communication systems have been introduced using, for example, an electronic chart system<sup>6)</sup> and clinical pathways that allows IE and sharing of information more easily accessible amongst healthcare professionals<sup>7)</sup>. In fact, in this study the minority of the respondents specified this as their method of IE as *utilization of identical charts used on the ward* and also the *electronic chart*. It is expected that computerization of record keeping will become routine in healthcare institutions, with IE becoming more efficient. However, building such a system requires money and time. Therefore, at the present time, creation of opportunities of IE with nurses should be explored by participating in daily meetings on the ward and/or utilizing liaison charts, thereby alleviating some of the present-day problems of IE.

In order to promote collaboration amongst healthcare professionals it is important for them to respect each other's work<sup>2, 8)</sup>. In this study a large

number of physiotherapists considered *lack of understanding between professionals* as one of the problems of IE. This finding implies that the degree of understanding of each other's tasks can vary individually. For effective teamwork, IE is an important priority followed by a division of roles that fluctuate as the patient's rehabilitation programme progresses, which requires both a close liaison and a common understanding amongst healthcare professionals<sup>9)</sup>. Each healthcare professional should realise the importance of the aforementioned fact, as well as an understanding of each other's tasks, which should be included in undergraduate and post-registration education or on-the-job training. However, team approach cannot be established in a day because it is influenced by complex factors such as the historical background of the development in each healthcare profession, differences in academic programmes, various systems in hospitals and institutions and complex human relationships in the workplace.

In April 2000 the terms and conditions of *extended care units* (ECU) specifically designed for clients in the subacute stage of their physical condition were defined by the Ministry of Health, Labour and Welfare<sup>10)</sup>. These ECU's have become established nationwide and are expected to increase in number<sup>11)</sup>. Each ECU must have a minimum of two full-time physiotherapists who work exclusively on these units. The physiotherapists' job description entails active participation in case conferences including ward meetings, planning and submission of the client's comprehensive rehabilitation programme, and utilization of a liaison chart. In this way emphasis is placed on the team approach in comparison with the traditional method of physiotherapy treatment. In-patient physiotherapy practice will encompass more every-day life situations of clients instead of working in an isolated environment of a physiotherapy treatment room. Given the importance of communication amongst healthcare professionals, future research and educational efforts related to evidence-based protocols for IE will be worthwhile.

### Conclusion

The willingness of the physiotherapists' to have IE with nurses and their degree of understanding of nursing tasks were apparent. It was found that gender

does not influence the attitude towards IE. As physiotherapists gain clinical experience, DP towards IE becomes more pronounced. Face-to-face communication was found to be the most important method of IE with nurses. Physiotherapists will be further expected to contribute to IE with other healthcare professionals, since the implementation of the extended care units were instituted nationwide in April 2000.

### Acknowledgements

*The authors appreciated the participation in this study of the members of the Ishikawa Physical Therapy Association.*

### References

- 1) Uyeda, S. Ohkawa, Y. : Teamwork as collaboration : from the work division in borderline areas to collaboration in overlapping areas. *Japa. J. Occup. Ther.*, 27 : 240-6, 1993 (in Japanese).
- 2) Katada, K. Ohoka, H. : Cooperation of physiotherapists and nurses for the management of clients in the chronic stage of their physical condition. *J. Phys. Ther.*, 14 : 286-92, 1997 (in Japanese).
- 3) Sekiya, N., Miyashita, S., Asada, H. : Physical therapists and education of related professions : the role of physical therapists in the education of the nurse. *Japa. J. Phys. Ther.*, 26 : 156-61, 1992 (in Japanese).
- 4) Kurokawa, Y. : Education of Physiotherapists. In : Nara, I. (ed.) *Introduction to Physical Therapy*, 3rd ed., pp 229-77, 1993 (in Japanese).
- 5) Morimoto, S. : Nursing practice in physical therapy. *J. Phys. Ther.*, 14 : 268-72, 1997 (in Japanese).
- 6) Watanabe, K. : Implementation of a clinical support system in Kameda General Hospital. *J. Phys. Ther.*, 18 : 291-300 (in Japanese).
- 7) Kawashima, H. Kawanami, Y., Yonehara, T., et al. : Physical therapy record as a communication tool in team approach. *J. Phys. Ther.*, 19 : 1098-103 (in Japanese).
- 8) Yanagihashi, R. : Physical therapy in nursing. *J. Phys. Ther.*, 14 : 274-7, 1997 (in Japanese).
- 9) Sunahara, N. : Exchanging views among the profession and teamwork in rehabilitation hospital. *Japa. J. Occup. Ther.*, 27 : 251-3, 1993 (in Japanese).
- 10) Saito, I. : Extended care of patients in subacute stage. *Rihabiriteshon no Hiroba* 34 : 10-5, 2002 (in Japanese).
- 11) Ishikawa, M. : Establishment and implementation of extended care units in hospitals. *Japa. J. Phys. Ther.*, 35 : 161-6, 2001 (in Japanese).
- 12) Okano, F. Hara, M. : Role of physiotherapists in extended care units : reflection and future tasks. *Japa. J. Phys. Ther.*, 35 : 179-82, 2001 (in Japanese).

## 理学療法士の看護師との連携における情報交換 —質問紙による意識・実態調査—

荻原新八郎, 塚田 望み

### 要 旨

本研究の目的は、看護師との情報交換に対する理学療法士の認識を把握することにより、治療の質とチームワークの向上に役立てることである。石川県の理学療法士283名を対象とし、郵送調査法を用いた。調査票は、看護師との情報交換に対する理学療法士の関心や積極性の程度を表す6項目の主張から成った。回答手段には Likert 型尺度を用いた。また看護師との情報交換に関する具体的な情報も得た。回収率は70.7%であり、認識度の平均得点は6.90であった。情報交換に対する認識度は性別や経験年数ではなく、個人差によることが示唆された。実際の情報交換では、日常生活行為に関することが最も重視されていた。理学療法業務において、「情報交換の十分な時間がない」、「情報交換のためのシステムが無い」という問題点が挙げられた。連絡用紙を用いた情報交換や、朝の申し込みに参加するなど、理学療法士は可能なことから情報交換の機会を日常の業務に取り入れるべきであろう。