

# Humanoid Diagram for Holistic Care

Over 10-years' Experience in the  
Use of Humanoid Diagrams by  
Tzu Chi Nursing

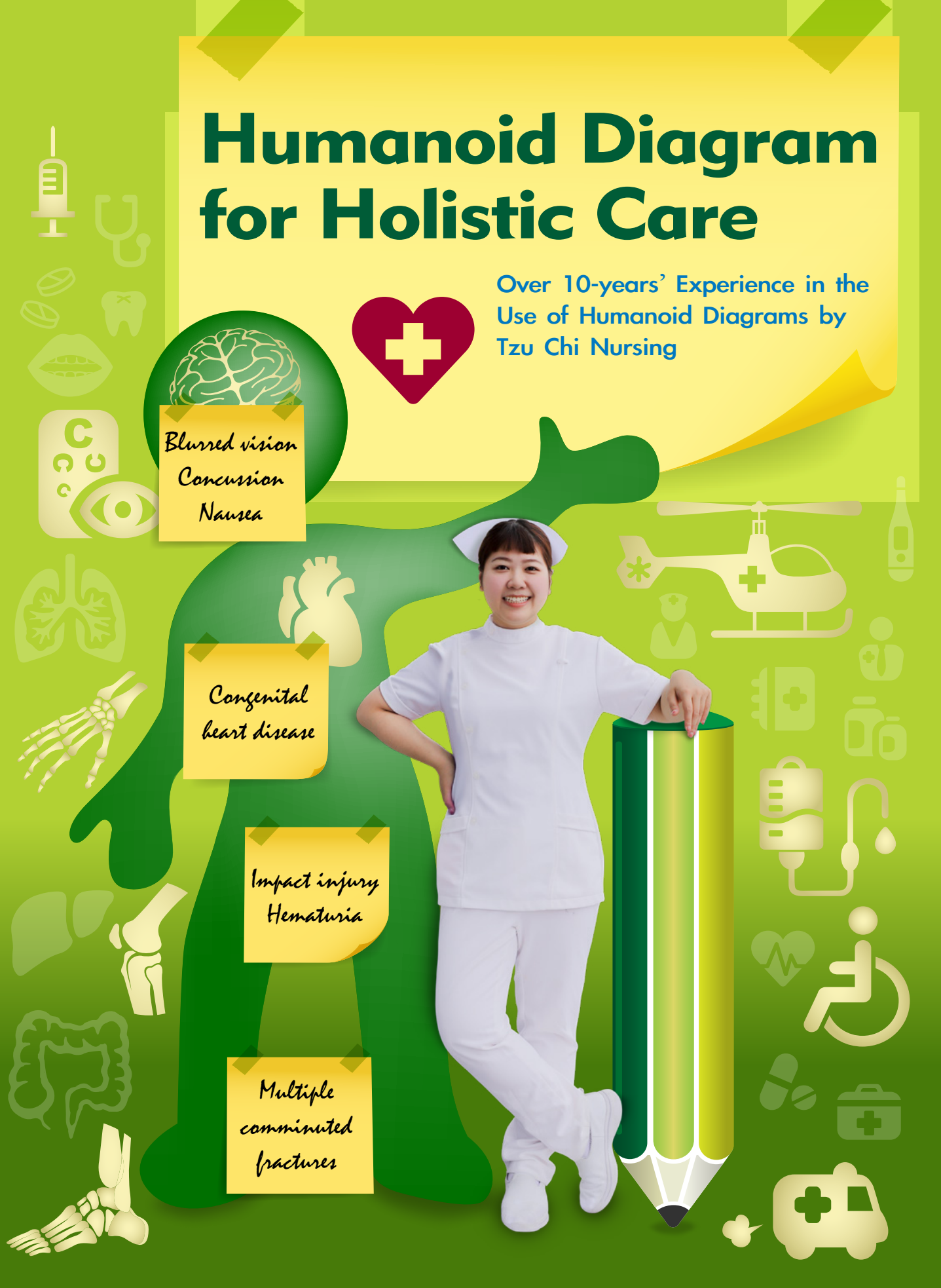


*Blurred vision  
Concussion  
Nausea*

*Congenital  
heart disease*

*Impact injury  
Hematuria*

*Multiple  
comminuted  
fractures*



Many years ago, while I was watching a series of text-heavy slides projected by a RN during delivery of a routine case report, my attention was drawn to the personal information of a 20-year-old patient, who was homebound due to a serious disease and only weighed 21 kg at a weight of 170 cm... I couldn't help wondering how a patient as skinny as that managed his life. However, after reporting the vital signs, the RN determined that the patient had health issues associated with nutrition falling short of physiological needs. She failed to mention mental or mobility issues. This experience made me ponder how we can assist RNs in gaining a better understanding of the patients in their care.

Patient-centered care is the ultimate objective of every hospital and one of the key indicators of teaching hospital accreditations. This clearly shows that the priority of hospital care has shifted from diseases to the patient. We must observe the patient in his/her entirety, his/her lifestyle and living environment, and the main caregiver. The Nursing Department of Hualien Tzu Chi Hospital has invited nursing professors from America, Japan, and Taiwan to serve as visiting professors and lecturers for five consecutive years starting in 2006. Guidance items include ethics, clinical reasoning, and nursing theory. The goal is to impart the concept of a holistic view of the patient to all nursing staff members of the hospital.

### **Review of the Validity of Humanoid Diagrams after Ten-Year Use**

In 2012, we initiated development of the case report for the first stage of the humanoid diagram project which aims to change the habit of our staff members to create text-only presentations and encourage them to attempt visualization through drawings. Since standardized poster templates were not available back then, we asked every staff member to draw the patient in their care on a blank piece of poster paper. Everyone focused on the aesthetic quality of their drawings and neglected the key point, namely that patient in their care is a human being. In 2013, we therefore designed a template of a human silhouette on blank poster paper as a pattern for their creative efforts to depict the patient in their care. We encouraged our staff members to use these templates in a flexible manner. Over the past ten years, more than 1,000 "humanoid diagrams" have been created and the project has been extended to numerous hospitals and schools/colleges.

Now that the humanoid diagram has been in use for over 10 years, we wish to gain a better understanding of the experiences of Tzu Chi Medical mission nursing staff members with the diagram through this questionnaire survey.



### **80% of the 75% who have heard of human diagram education have participated**

1,126 respondents filled out the questionnaire. 76% (n=856) of this sample knows that the nursing department is promoting humanoid diagram-based case reporting and education. 24.0% are not aware of this. 44.3% of the former group have learned this technique in school/college. In other words, over 40% have been exposed to the humanoid diagram during their academic studies, which in turn indicates that image-based teaching approaches are highly accepted among students and faculty members.

Only 17.5% (n=150) of the respondents who know about the humanoid diagram have not participated in humanoid diagram education or case reporting. 38.8%, 19.3%, 18.6%, and 5.8% have taken part in case reporting 1-3 times, over 10 times, 4-6 times, and 7-9 times, respectively. Humanoid diagram-based case reporting education at Hualien Tzu Chi Hospital is usually scheduled after 1:30pm. Nursing supervisors and head nurses invite personnel in other occupational categories, RNs on duty, interns, and instructors to participate in discussions. Consequently, RNs who are on a fixed night shift schedule have relatively few opportunities to attend such education.

33.8% of the respondents have never utilized humanoid diagram reporting. As for the 70% who have experience using humanoid diagrams for their reports, 22.1%, 18.6%, 11.0%, and 14.6% have used such diagrams once, twice, three times, and

### **Basic Statistics**

Gender	Number of People	%
Female	1,043	92.6
Male	83	7.4
Total	1,126	100.0
Years worked in the hospital	Number of People	%
under 1	165	14.6
1.1~2	84	7.5
2.1~3	108	9.6
3.1~5	124	11.0
above 5	645	57.3
Total	1,126	100.0

Age	Number of People	%
under 20	14	1.2
21~25	235	20.9
26~30	259	23.0
31~35	155	13.8
36~40	132	11.7
above 40	331	29.4
Total	1,126	100.0
Department	Number of People	%
Internal Medicine	202	17.9
Surgery	153	13.6
Pediatrics	41	3.6
Obstetrics & Gynecology	40	3.6
Intensive Care & ER	189	16.8
Functional Unit	19	1.7
Kidney Dialysis	51	4.5
Operating Room	92	8.2
Outpatient Clinic	191	17.0
Palliative Care	30	2.7
Administration	25	2.2
Psychiatry	40	3.5
Others	53	4.7
Total	1,126	100.0
Job Title	Number of People	%
Registered nurse	849	75.4
Deputy head nurse	45	4.0
Head nurse	59	5.2
Supervisor and above	21	1.9
Case manager / functional unit	56	5.0
Nurse Practitioner / senior RN	96	8.5
Total	1,126	100.0



four times, respectively. In the initial stage of humanoid diagram promotion, there were no clearly defined regulations governing reporting. Every unit would deliver a report every 1-2 months. The presenter was designated by the head nurse. With a view to encouraging a rising number of staff members to participate in this project, it was allowed to use humanoid diagram-based reporting for the reporting of case analysis results. In addition, the acquisition of humanoid diagram reporting certificates could serve as supporting information for promotion to N2 nurse (case analyst).

### **High Familiarity with Medical history and Nursing Processes - Self-Reflection and Patient's Perspective are Difficult to Implement**

Humanoid diagram contents include basic patient information, patient's perspective (FIFE), past and current medical history, nursing process, and self-reflection. How familiar are nurses with all these contents?

The survey results reveal that nurses are most familiar with the past and current medical history (20.5% and 76.4% of respondents state that they are "very familiar" and "familiar", respectively). 18.2% and 17.3% of the respondents claim to be very familiar with nursing processes and basic information, respectively. Only 14.5% and 11.1% are "very familiar" with self-reflection and patient's perspective (FIFE), respectively. As for the next question on the survey ("What items of the humanoid diagram do you find most difficult to implement?"), self-reflection and patient's perspective (FIFE) top the list with 32.4% and 43.1%, respectively.

### **Self-reflection Requires Guidance and Accumulation of Analytic and Inductive Skills**

The self-reflection item in humanoid diagram reports aims to encourage nursing personnel to examine and evaluate their own care practices by relying on acquired professional information and patient information and thereby develop new thinking and behavioral models. I still have a fresh memory of a report about a cancer patient delivered by a RN in the surgical ward. After a smooth reporting of the whole caregiving process, the RN shed tears when describing the self-reflection dimension since she had been unable to control the patient's pain. Although the RN tried her best to convince the physician to adjust the patient's medication, the physician had different considerations and was not willing to add painkillers. The RN therefore blamed herself for not alleviating the patient's pain. During the feedback session after the report, the RN's co-workers and supervisor offered suggestions regarding the nurse's self-reflection. When similar issues are encountered in the future, they can be raised for discussion in the context of

a team meeting to give the RN a clear understanding of the doctor's perspective. The decision not to adjust the medication was based on concerns about the impact of drug side-effects on post-surgery recovery. It was therefore also recommended to discuss the question of how to achieve a balance between pain and recovery with the patient.

Self-reflection resembles a mirror that allows RNs to revisit care situations, gradually clarify their own thoughts, and discover new views through guided questioning by meeting participants. This process is conducive to the formation of value judgments by nurses. It also enhances their professional competence in an imperceptible manner.

Some RNs mention during self-reflection that they show special concern for patients whose age and status are similar to theirs. This also makes them cherish their own good fortune. Self-reflection is an opportunity for nurses to contemplate the patient and engage in introspection.

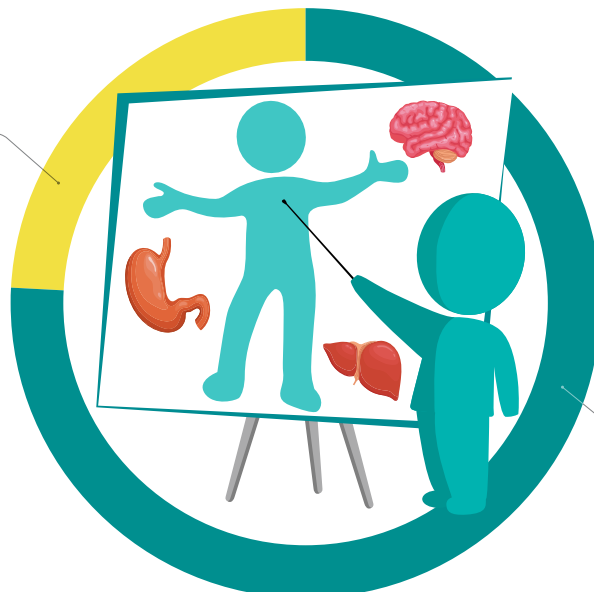
It is therefore evident that self-reflection requires guidance. However, clinical instructors and presenters don't have much time to meticulously analyze issues and their root causes due to their hectic schedules despite the fact that the self-

Q1

**Are you aware that the Nursing Department is promoting case reports and teaching using human figure diagrams? ( N = 1,126, single choice )**

24.0%

No



76.0%

Yes ( 856 )



reflection record form contains writing tips and instructions. The nurses therefore employ an intuitive writing style to describe the patient care process in a factual and straightforward manner without accumulating analytical and inductive skills.

### **Understanding of the Patient's Perspective (FIFE) as a Key Prerequisite for the Adoption of the Most Appropriate Measures**

Another major challenge is the patient's perspective (FIFE), which aims to gain a deeper understanding of the patient's personal illness experiences instead of disease-centered experiences through a human-oriented communication model. The FIFE approach encompasses the feelings (F), ideas (I), functions (F), and expectations (E) regarding the illness. This dimension is deemed most challenging by the nurses, but it also represents the best opportunity for learning since it enables them to obtain valuable information pertaining to patient care through communication and dialog.

For instance, patients must endure side effects or limited mobility caused by medical treatment, which can trigger the thought of giving up therapy. However, the

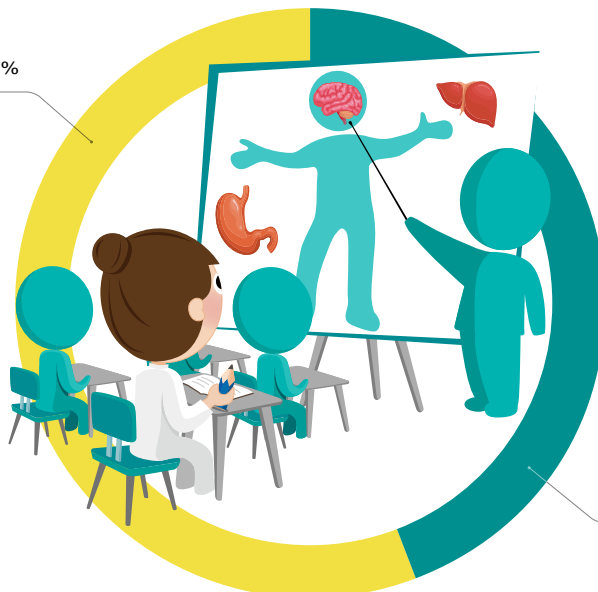
Q2

**Have you received training on the use of human figure diagrams during your education?**

(N = 856, select one)

55.7%

No



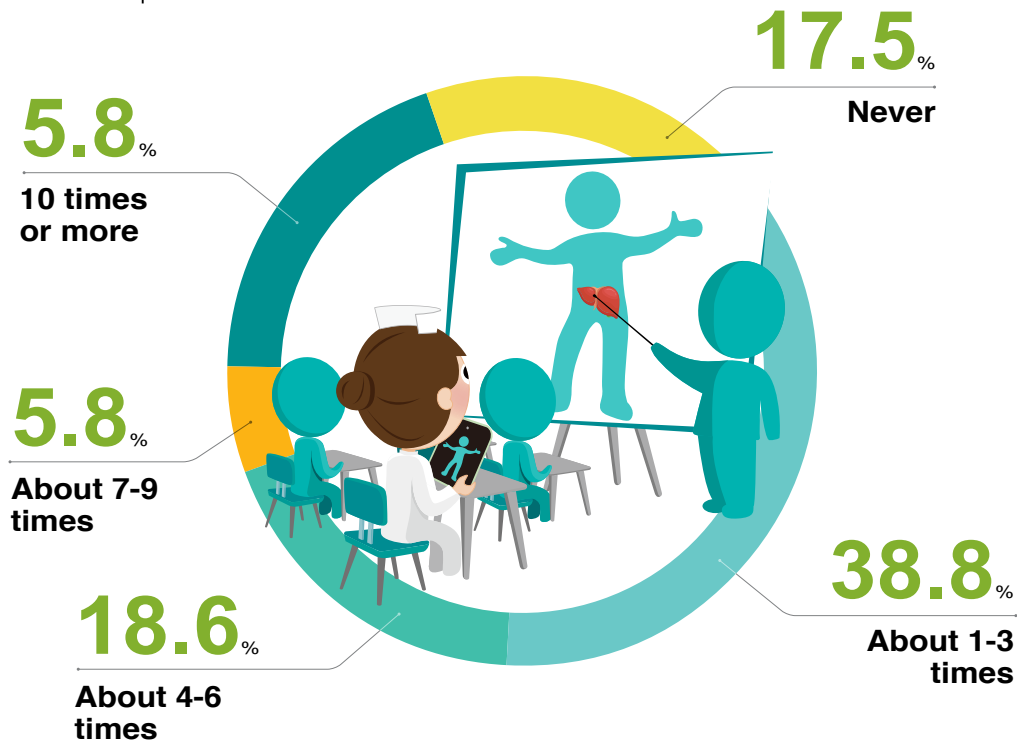
44.3%

Yes

# Q3

## Have you attended case reports using human figure diagrams presented by other colleagues?

( N = 856, single choice )



patient still hopes to return back home or to their careers. RNs can rely on FIFE-based interview data to encourage patients to participate in medical treatment plans and thereby realize their expectations.

We once had a patient (a young mother), who was diagnosed with NPC (Nasopharyngeal Carcinoma ) one month after giving birth and had to be hospitalized for radiotherapy. She had to separate from her baby and since she was worried that her husband would abandon her due to her changed appearance after therapy, she planned to terminate treatment. Subsequently, the RN explained to her that accepting therapy was the only way for her to realize her expectations, namely to return home and reunite with her baby. In addition, daily video calls with her family, which gave her a chance to have some facetime with her husband and baby, gave her more courage to continue treatment. Another patient was ordered to stay in bed after neck surgery to prevent wound bleeding. These movement restrictions really upset him. The RN told him that these restrictions were only temporary and urged him to be patient: “We can



provide you with your favorite comic books to ease your boredom.” These examples help illustrate the results of FIFE interviews to the RNs. This in turn enables them to propose appropriate nursing measures and achieve optimal therapy results for their patients.

### **Logical Thinking and Identification of Key Points Must be Deliberately Trained in Daily Practices**

Patient perspective and self-reflection both require organization, analysis, and generalization, which in turn enables RNs to provide patients with the best nursing guidance. However, nursing personnel tend to perceive this as a daunting challenge.

I recommend that the Departments of Nursing or Medical Education offer more logical thinking or communication courses to hone the ability of nurses in this particular area. Narrative nursing, for example, gives nurses an opportunity to share their care experiences and engage in joint learning.

It is quite startling that 20.1% of respondents state that it's quite difficult to achieve the goals of the nursing process, which is a core skillset that all RNs start to learn in school/college. Patient care is provided on a daily basis through the nursing process. The main reason why RNs find this process so challenging may be related to the fact that recording now requires the use of a software package with all selections made by themselves. These packages reflect patient health issues and adequate measures in an intuitive manner. The organization and generalization of such contents require logical thinking and judgments, which is perceived as challenging. Prior to the completion of the humanoid diagram, the RNs are asked to list a topic at the top of the case report. During the training of reorganization and generalization abilities of RNs, the key points of the humanoid diagram-based case reports are identified.

### **Humanoid Diagrams Have Multiple Benefits Allowing a Grasp of Patient Conditions at a Glance**

What are the benefits of humanoid diagram-based case reports?

The highest ranked item is “overall assessment”, which was selected by 65.4% of respondents, followed by “grasp of patient conditions at a glance” (60.9%). These two items also represent the initial purpose of humanoid diagram education.

Education generally relies on PowerPoint PPT or PDF presentations. The main advantage of projecting slide after slide is that it allows presenters to emphasize a key point on each slide. However, after around 20 slides, the audience can't recall the contents of the slides displayed at the beginning. On top of that, it is not easy for the

# Q4

## Have you attended case reports using human figure diagrams presented by other colleagues?

( N = 856, single choice )



audience to grasp the correlation between overall patient assessments, symptoms, and nursing procedures when they are discussed together. Finally, PPT or PDF files are usually not utilized for follow-up learning after completion of the presentation. At Hualien Tzu Chi Hospital, we therefore utilize images displayed like wall calendars, which gives non-participants a chance to engage in learning. This method also allows ongoing addition of key points and new information. Newly hired RNs can refer to these images to gain a better understanding of how the unit provides care for frequent diseases and symptoms.

### Channel for Joint Discussions Involving All Occupational Categories and Familiarization with Other Points of View

36.9% of respondents believe that humanoid diagrams are conducive to cross-team interactions. During humanoid diagram-based reports, clinical instructors usually invite representatives of other job categories who have experience caring for patients such as dietitians, occupational therapists, physical therapists, psychologists, respiratory therapists, and pharmacists to participate in the discussions. During these



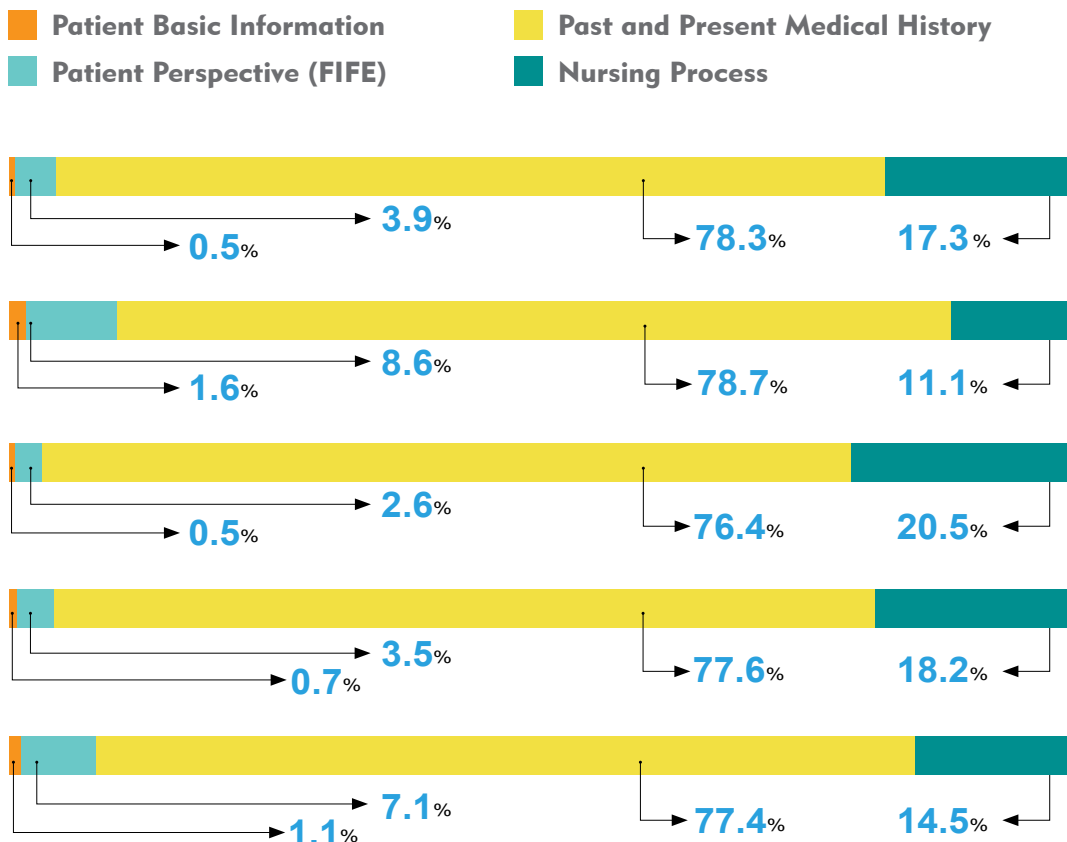
discussions, representatives of each job category share care priorities, which facilitates mutual learning. In one of such discussion sessions, a nutritionist who had already prepared a diet plan for a certain patient learned that this patient resided in a rather remote area where certain ingredients were hard to obtain, which made it necessary to adjust the plan.

30.7% of respondents are of the opinion that humanoid diagrams are conducive to familiarization with the points of view of others. Despite the fact that duty handover records exist for all three RN shifts, it is impossible to create detailed records without omissions during care processes. Humanoid diagrams facilitate making up of deficiencies. Even nursing student observations can be important. During the delivery of

Q5

### What do I consider to be the benefits of human figure diagram case reports?

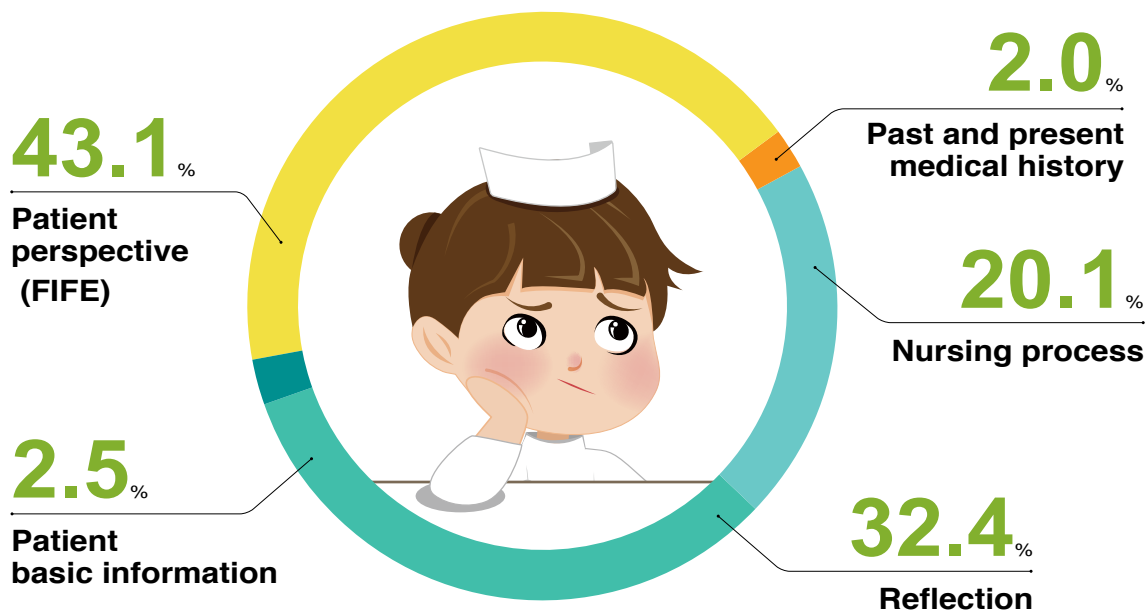
( N = 856, multiple choices allowed )



# Q6

**What do I consider to be the drawbacks of human figure diagram case reports?**

( N = 856, multiple choices allowed )



a report on a congestive heart failure patient who was on a low-sodium diet, a nursing student discovered that the patient couldn't eat his meals without pickled cucumber, which reminded the RNs to adjust the sodium content of his diet. Since participation in humanoid diagram-based case reporting is an advanced scoring item, some RNs participate in case reporting of other wards, which creates opportunities for cross-departmental learning. For instance, traditional Chinese medicine nurses can propose nursing strategies in their field for reference by other medical departments when attending presentations in other units. Finally, the humanoid diagrams of certain units are the result of cross-unit collaboration and sharing of experiences, which not only fosters co-worker cohesion but also ensures rapid completion of diagrams.

## **Time is Always Short - Detection of Clues through Observation of Patient Characteristics**

Despite all the benefits mentioned above, it cannot be denied that there are also shortcomings. 53.6% of respondents state that time-consuming organization of data is the biggest drawback.



Q7

**What is my level of understanding of each component in humanoid figure diagrams?**

( N = 567, single choice )

Can provide comprehensive assessment **65.4%**



No need to look at presentation notes **30.7%**



No need to re-enter data **9.7%**



Time-saving **8.6%**



Patient's condition is clearly visible **12.7%**



Interesting **16.5%**



Can learn from others' perspectives **16.9%**



Can serve as a checklist **21.1%**



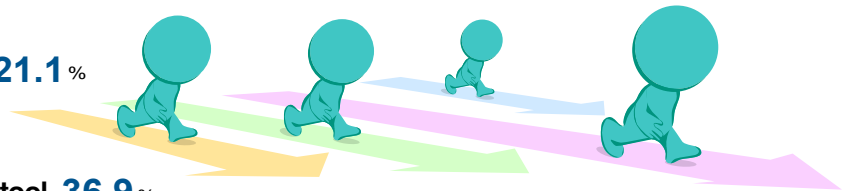
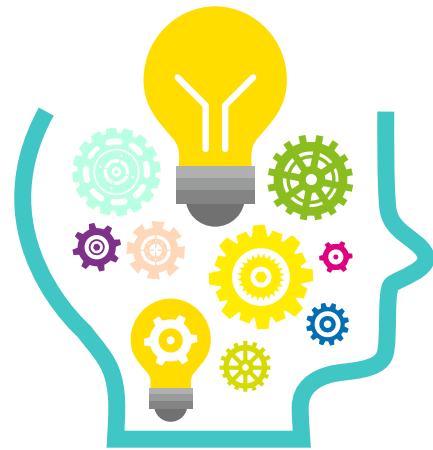
Acts as a communication tool **36.9%**



Promotes interdisciplinary team interaction **60.9%**



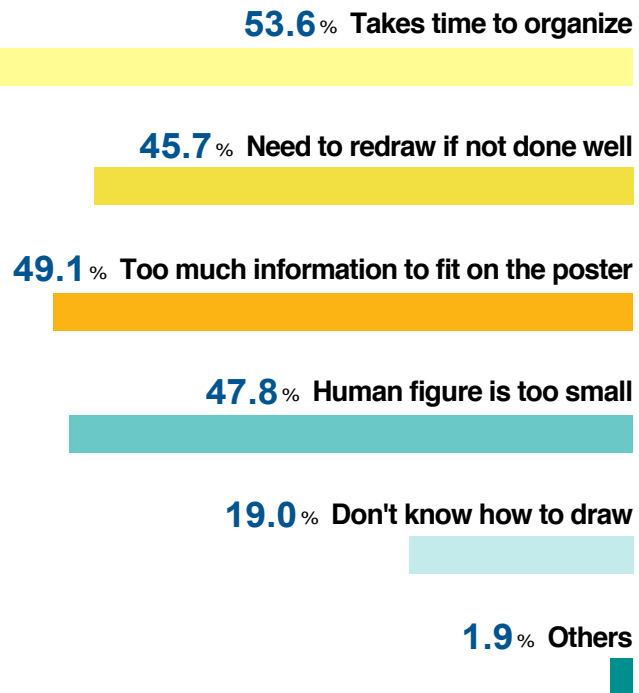
Others **0.9%**



# Q8

**Among the basic components of human figure diagrams, which item do I find most difficult to complete?**

( N = 856, single choice )



However, it should also be pointed out that all case reports require time-consuming organization of data irrespective of whether humanoid diagrams are used or not. It can therefore be surmised that the aforementioned self-reflection, FIFE, and drawings pose a significant challenge for the nurses. 49.1% of respondents point out that there is too much information and not enough space on the posters, 47.8% feel that their lack of drawing skills is a major obstacle, and 45.7% state that they feel forced to redo their drawings. This clearly shows that the lack confidence in their drawing skills coupled with the RNs' commitment to creating the most visually appealing presentation possible results in a very time-consuming drawing process.

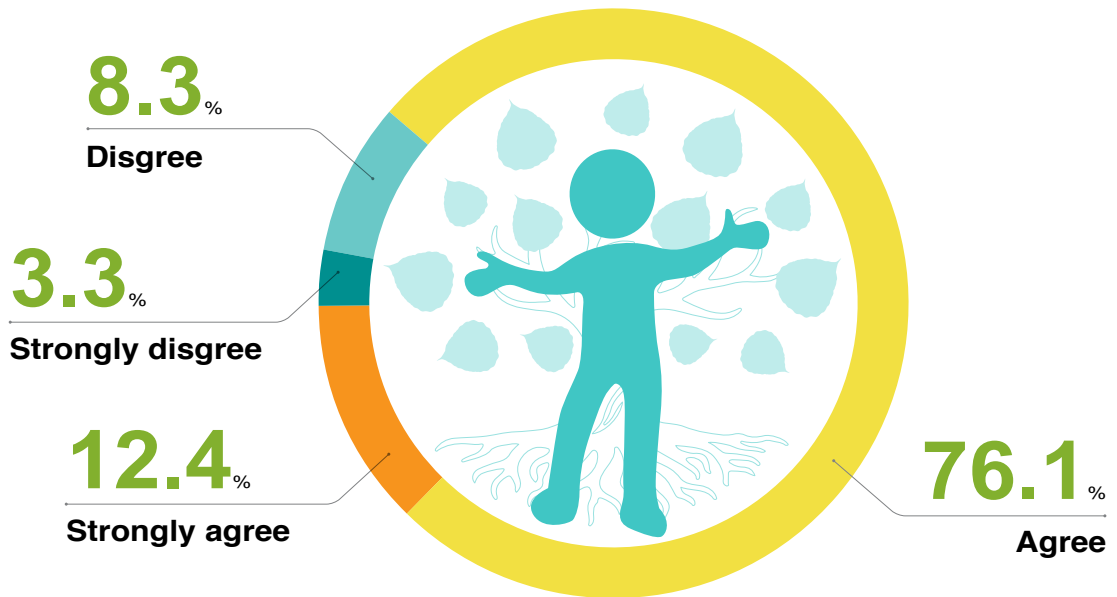
The initial decision to depict the patient appearance in graphic form was motivated by the perceived need to redirect the attention of nurses toward unique characteristics of patients as clues for care processes. A RN once portrayed a patient wearing a scarf. She was not aware of the significance of this scarf for the patient but couldn't help noticing that the patient donned a differently colored scarf each day. After gaining a



Q9

**I believe human figure diagram teaching helps in learning holistic care?**

( N = 856, single choice )



deeper understanding, she realized that the patient was a photographer who placed strong emphasis on his appearance. The reason why the patient was not willing to leave the hospital was that his urinary catheter had not been removed yet, which hurt his pride. After the nursing staff understood this, they hid the catheter in an aesthetically pleasing cloth bag and thereby successfully convinced the patient to return home.

These tiny clues serve as key references for adopted nursing measures. RNs also graphically depict the living environments of their patients. For instance, a RN drew a farm field on the humanoid diagram poster of a patient suffering from diabetic foot complicated by cellulitis who was engaged in agriculture. The goal was to remind the patient to pay special attention to foot protection when working in paddy fields after his discharge from the hospital. In addition, images also portray the nursing procedures. For instance, one image showed a patient with a fractured right arm using a four-legged walker which can be determined to be an inappropriate nursing measure since it requires sufficient strength in both arms.

## **Acknowledgment of the Benefits of Humanoid Diagrams for Holistic Care - How Do You Address Your Patient?**

Is humanoid diagram-based instruction conducive to holistic care training? 12.4% of respondents strongly agree and 76.1% agree that it is very beneficial. Only 11.6% disagree. Holistic care encompasses physiological, psychological, social, and spiritual care dimensions. It is indeed difficult to present all these dimensions on a small 90 x 60 cm poster, but if they are presented this way, it is much easier for viewers to grasp the mutual correlations. Physical symptoms can affect the mental state of the patient. For instance, nausea and vomiting in cancer patients caused by chemotherapy can result in fear of the next therapy session, while relatives who have succumbed to cancer may affect the patient's decision to accept treatment. Important persons in the lives of these patients or major events in their growth process have an impact on patient care. Holistic education is therefore the ultimate goal of medical education and hospital education. Another priority of the humanoid diagram-based education is the nurse-patient relationship. We therefore place special emphasis on how RNs address the patients under their care. This is the first step of building a trust relationship between patients and RNs.

For the last item on the questionnaire, we adopted an open-ended question format. We asked them to offer suggestions for humanoid diagrams. In the ten-year period since the launch of the humanoid diagrams, we have earned a lot of praise for our efforts, but a large number of RNs have also expressed their dissatisfaction with certain aspects. We have received the following complaints: humanoid diagrams increase our workload, we feel forced to deliver these reports, or we are reduced to drawing contest or arts and crafts course participants. These suggestions represent obstacles that must be overcome by nursing department supervisors through cautious and prudent use of humanoid diagram strategies. Nurses who have a positive view of humanoid diagrams hope for more related course offerings and promotion of such courses starting in school/college.

Humanoid diagrams are only one approach in the field of holistic care education. The author recommends the incorporation of more approaches and utilization of multidimensional teaching modes to give clinical RNs a better understanding of human-oriented care models. The ultimate goal is to enhance the quality of medical care and enable nursing personnel to gain work values and a sense of achievement in the care process.