

# **Nursing and Patient attitudes towards Trainee Interns prescribing Over -The- Counter medications.**

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## **Abstract**

**AIM:** To determine the attitudes of patients and nursing staff towards the prescription of “Over the Counter” (OTC) medicines by Trainee Interns (TIs) in a hospital inpatient setting.

**METHOD:** 10 minute structured interviews were conducted with 40 nurses and 40 inpatients from Dunedin Public Hospital. An information sheet was provided for both nurses and patients prior to interview.

**RESULTS:** The majority of the nurses and patients are supportive of TIs prescribing OTC medication whether or not the prescription is checked by a qualified doctor. The majority of nurses and patients are also supportive of TIs prescribing any medication as long as their work is double checked by a qualified doctor. The most common reasons for supporting are: TIs have already passed exams and therefore should know enough pharmacology to prescribe; any person could buy over-the-counter medications in the community without a prescription, a TI should know more than the average person of the community; and time efficiency for nurses and House Surgeons. However, if the TIs were to prescribe, the majority of both nurses and patients believe they should take full legal responsibility for their actions.

**CONCLUSION:** There are many advantages to Trainee Interns being able to prescribe. It would provide them with a more gradual transition into the workforce, and at present, they have the support of both the nurses and patients to prescribe over-the-counter medications in the hospital setting.

## **Introduction**

Trainee Interns (TIs) are medical students in their last year of training. They are in transition between a student and a qualified doctor. Their role is very similar to that of the House Surgeon. They are expected to be involved in everything from the admission, examination, and treatment to rehabilitation of the patients in their care. They are expected to look after at least a third of the patients on the ward they are assigned to, and on occasion, they may even assume the duties of an absent House Surgeon.<sup>1</sup> However, at present, they cannot prescribe any medication. If TIs were able to prescribe, it would be beneficial not only to their own learning but it would also shorten the time between a nurse having to locate a busy house officer, and administering the medication to the patients. This would be particularly helpful in the instances of pain relief, requiring a drug such as paracetamol. Recently, suggestions have been made that nurses should have the right to prescribe OTC medication. This may be a potential barrier to TIs prescribing in future. In the US, advanced practice psychiatric nurses (APRNs) can prescribe, and has shown to be just as good as psychiatrists.<sup>5</sup> Another potential barrier to TIs prescribing includes a lack of confidence in their ability by nursing staff and patients. Hence the aim of this investigation is to determine the attitudes held by patients and nurses towards TIs prescribing medication in the hospital setting.

## **Methods**

40 Nurses and 40 patients were selected from the wards of Dunedin Public Hospital. The nurses were selected by the Charge Nurse on duty, including both senior and junior

nurses. They were selected on their availability and willingness to participate in the study. This may contribute to selection bias, as those willing to participate may have a specific view. The number selected from each ward depended on how many nurses were assigned to the ward and proportion of senior to junior staff present.

Patients were selected on each ward by the nurses on duty based on their wellbeing – coherent and physically well enough to be interviewed. Patients in the ICU, Psychiatry Ward, Dementia Care of the Elderly Wards and Paediatrics were not included in the study.

An information sheet (Appendix 1) describing the aim of the project and explanations of terminology used were given to participants to read before written, informed consent was obtained from each participant. Short 10 minute structured interviews (appendix 2) were carried out by one single interviewer over a two week period.

The key question asked is whether or not the nurse or patient thinks a TI should be able to prescribe OTC, or any medication or treatment, with or without a qualified doctor double checking their work, and the reason for their answer. Other data collected include their demographic data, number of times they have been an inpatient, severity of condition at admission – as determined by the patient's house officer, and the level of satisfaction of the care they have received. Nurses are asked about their nursing status, (senior or junior), how long they have worked as a nurse and how long they have worked on that particular ward.

The interviews were digitally tape-recorded. A list of themes and number of occurrence were identified and recorded by the author. The qualitative data was quantified by the counting number of times a certain theme came up. This was done by the author and a neutral third person. The quantitative and qualitative data were then combined for analysis and comparison using Microsoft Excel, with the appropriate t-test for the groups compared, setting the statistical significance at 95%.

### **Results:**

For over-the-counter medicines, a significant majority of patients and nurses are supportive of TIs prescribing in the ward setting, irrespective of whether or not they are double checked by a qualified doctor. Eighty five percent of nurses and 82.5% of patients approve of TIs prescribing if double checked by a qualified doctor, compared to 72.5% of Nurses and 72.5% of patients without double checking. There is no statistical difference between with or without double checking in neither the nurses group nor the patient group, (p-value nurses= 0.25 > 0.05; p-value patients=0.19 > 0.05), (fig 1 and 2).

Fig 1:

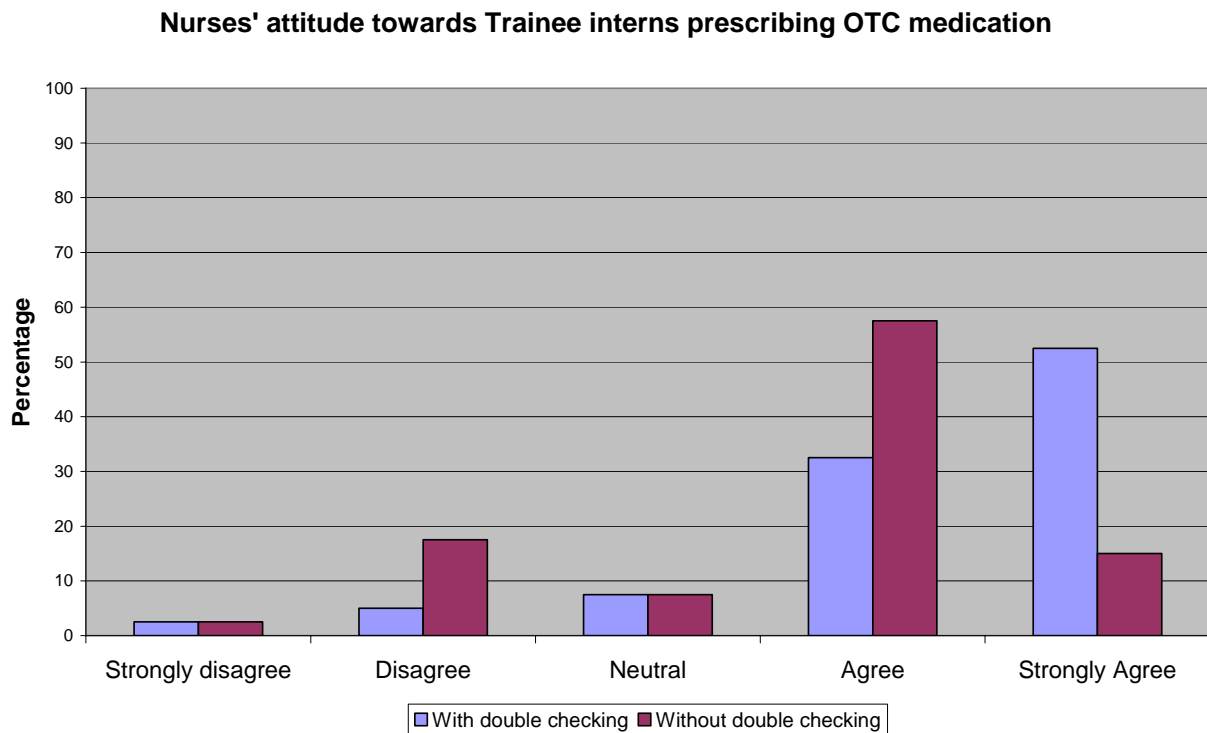
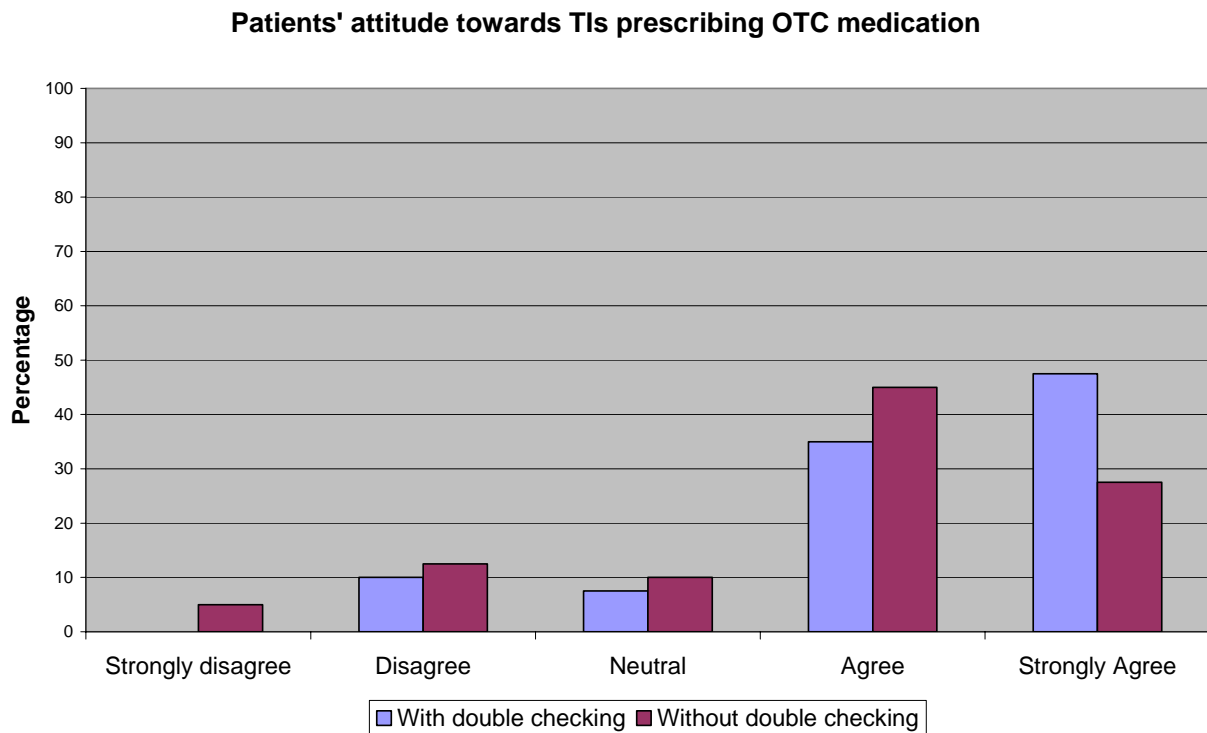


Fig 2:



For TIs being able to prescribe all medication i.e. not limited to OTC medications, 85% of nurses and 87.5% of patients are supportive as long as the prescription was double checked by a qualified doctor. These numbers are very similar to that of prescribing OTC medication with a qualified doctor double checking. However, only 15% of nurses and 40% of patients are supportive of TIs prescribing all medications independently,

without a qualified doctor double checking. The difference is statistically significant at 95% confidence interval (p-value for comparing nurses =  $0.021 < 0.05$ ; patients =  $0.027 < 0.05$ ), (fig 3 and 4). The nurses' and patients' opinions concur in all categories.

Fig 3:

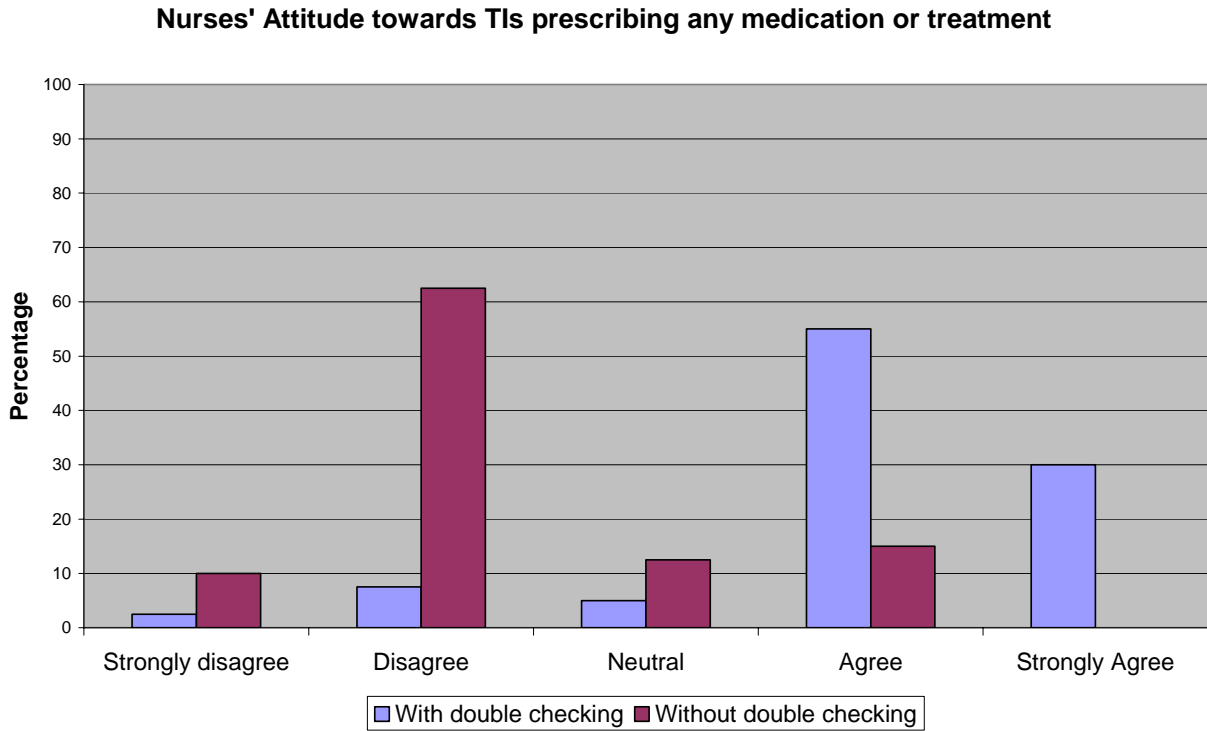


Fig 4:

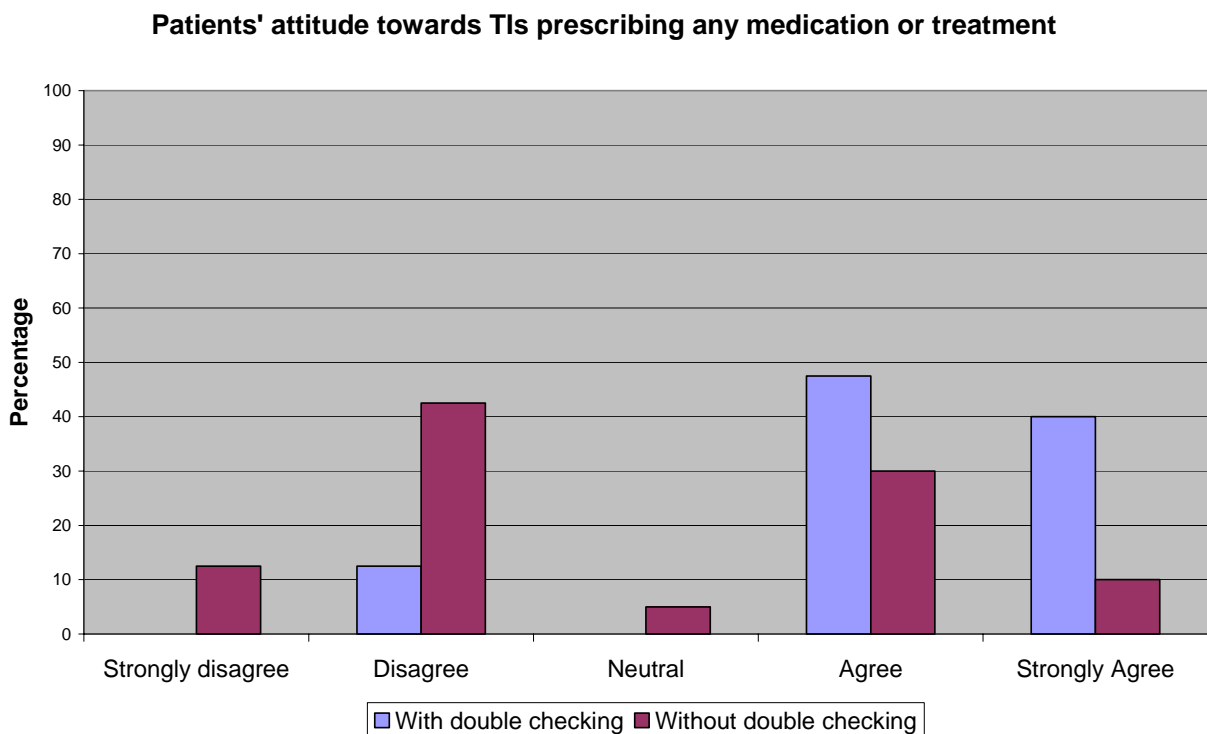


Table 1 indicates the varying themes that emerged from the interviews and the number of times each was raised.

Table 1:

Reason	Number of Nurses	Number of Patients
<b>Knowledge:</b>		
Enough Knowledge/ passed exams	14	19
Know Patient History well enough	2	0
Not enough knowledge of Drug interactions	8	0
In one year you can learn a lot	1	2
<b>Safety:</b>		
Depends on level of complication of condition	0	5
Unsafe for patient	2	2
Unsafe for TIs without double checking	6	1
Too much responsibility for TI	6	0
Don't Know Patient History well enough	2	0
<b>Experience:</b>		
Learning opportunity for TI	7	7
Lack of experience	7	3
Patient's negative Past Experience of prescribed medication	1	0
<b>Cultural/ community:</b>		
Anyone can buy OTC	14	7
Going to prescribe soon anyway – within a year will become a house surgeon.	2	2
Cultural/If rules changed, views will change too	1	1
Simply not qualified (matter of trust)	1	5
<b>Time factor:</b>		
Time efficiency/HS too busy	8	1
<b>Others:</b>		
Should be based on the individual TI	5	1
Don't really care/don't know	0	2

There are several reasons in support of TIs prescribing medication that emerged from this study. These include: TIs should have enough knowledge about medicines to pass their final exams the year before; TIs are going to prescribe soon anyway as a house surgeon and it is good practice and learning opportunity before they have to prescribe independently. A study conducted by Al Khaja et al<sup>4</sup> has shown by incorporating a prescribing programme into clinical, problem based teaching, a student's ability to prescribe appropriate drugs, dosage form, and direction for use were significantly improved over 2 years. Many that were interviewed had expressed one way or another: "You've got to learn somehow, better now than later."

Currently, anyone can buy OTC medicines without a prescription in the community, and as an inpatient, all medication must be prescribed. Quote from a patient interviewed: "If I can go out there and buy them for myself, shouldn't a sixth year medical student be more qualified to give them to me than me theoretically prescribing myself?" If the TI could prescribe, it would improve the time efficiency for nurses to get their patients'

medication administered, as well as take some workload off the busy house surgeon, and some believe if the rules changed, the public's view will too.

For those against TIs prescribing in the hospital setting, the most common themes from the nursing group are: the lack of knowledge about drug interactions, lack of experience, unsafe for the TI to work independently and too much responsibility. A nurse interviewed had a negative experience as a patient with a first year house surgeon that took her off a certain medication without first consulting her senior colleagues. The medication was prescribed to treat a condition other than its mainstream purpose, and the incident had caused the individual much anxiety. "If qualified doctors could screw up like that, how am I to trust trainees?" From the patient group: matter of trust, because TIs are not qualified; depends on the level of complication of condition, and lack of experience. The theme of lack of experience and lack of trust emerged from both groups.

Others believe it should be based on the individual. One nurse commented: "There shouldn't be a blanket rule for everyone." Another nurse stated: "It also depends on the individual TIs confidence level."

97.5% and 82.5% of nurses and patients respectively believe if TIs were to prescribe in future, they should have the legal responsibility that goes with prescribing, at the same level as the House Surgeon, (Fig 5). Currently House Surgeons are under the "National credentialing framework for senior medical officers."<sup>3</sup> The Otago District Health Board is ultimately responsible for the quality of care the patients of Dunedin Hospital receive. However, the individual has the professional responsibility to their team and other health professionals to do their best in the given circumstance.

Fig 5:

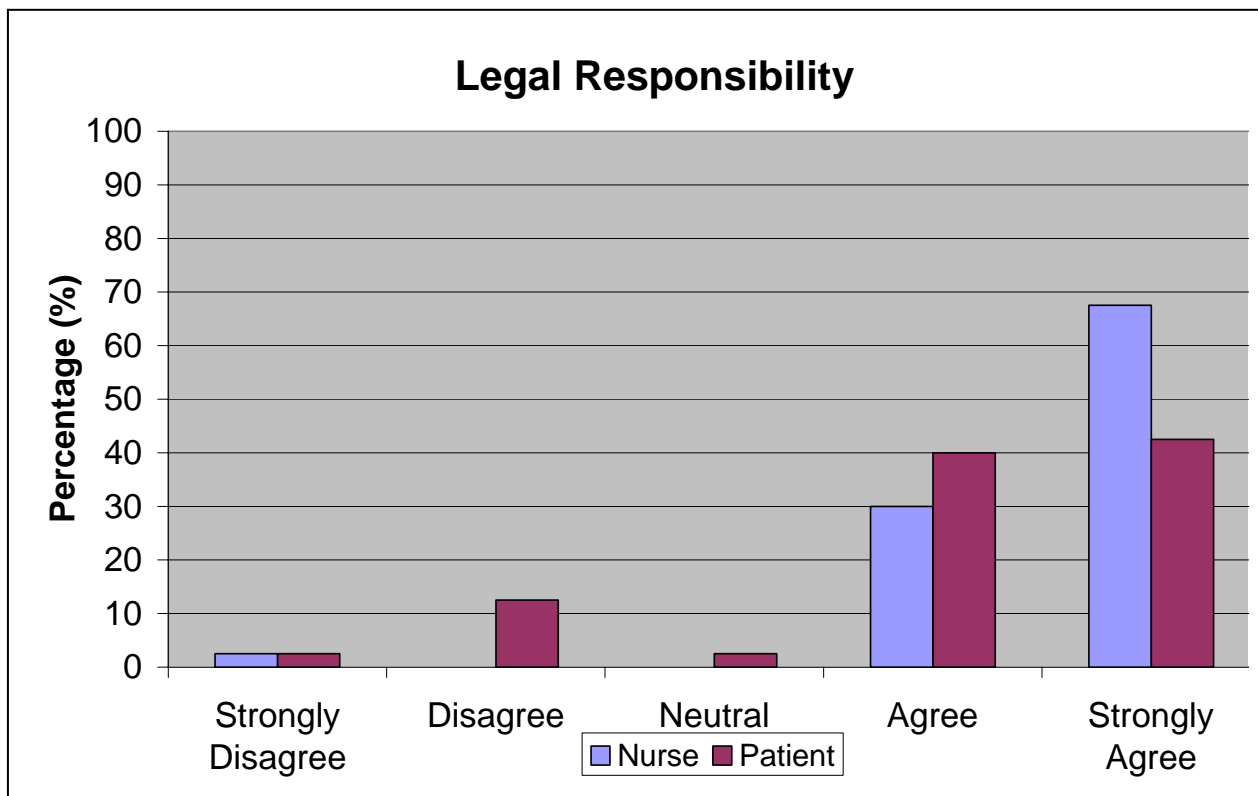


Table 2: Demographic data

	<b>Nurses</b>	<b>Patients</b>
<b>Gender</b>	39 Females, 1 Male	19 Females, 21 Males
<b>Age</b>	18-29yr: 10 30-39yr: 7 40-49yr: 11 50-59yr: 11 60- yr: 1 Median: 40-49yr	18-29yr: 1 30-39yr: 7 40-49yr: 6 50-59yr: 4 60- yr: 22 Median: 60+ yr
<b>No. Times as inpatient</b>	<b>0:</b> 4 <b>1:</b> 9 <b>2:</b> 8 <b>3:</b> 7 <b>4:</b> 3 <b>&gt;5:</b> 9 Median: 2	<b>1:</b> 2 <b>2:</b> 6 <b>3:</b> 10 <b>4:</b> 6 <b>&gt;5:</b> 16 Median: 4
<b>Overall Experience of hospital stay</b>		
<i>Very unsatisfied:</i>	0	0
<i>Unsatisfied:</i>	2	0
<i>Neutral:</i>	8	1
<i>Satisfied:</i>	17	14
<i>Very Satisfied:</i>	9	25
Median:	Satisfied	Very Satisfied

The gender ratio of male to female patients is fairly equal compared to the nursing staff where the vast majority is female. On average, the nursing group is younger than the patients by 10-20 years. The nursing group has also less experience as an inpatient compared to the patient group. The median number of times a nurse is hospitalised in their lifetime is twice. However the median number of times hospitalised if you are a patient is four. Both groups were satisfied with their hospital stay experiences.

Looking at the correlation between the number of times hospitalised in lifetime and the attitudes held towards TIs prescribing medication in the hospital setting, there seems to be no significant difference whether the nurse or patient has been hospitalised numerous times or none at all. The attitudes held towards TIs prescribing medication in the inpatient setting are still the same, and coincides with that of the general trend stated above for the nursing and patient groups respectively.

Table 3: Patient Information

<b>Severity of Condition – at admission</b>	
<i>Critical</i>	10
<i>Severe</i>	14
<i>Mild</i>	12
<i>Pregnant</i>	4

The severity of condition at admission does not affect the attitude held by the patient towards TIs prescribing medication in the hospital. Regardless of the patient being critically ill or only have a mild condition, they are comfortable for TIs to prescribe any medication as long as they are double checked by a qualified doctor, and are comfortable with TIs prescribing OTC without their work being double checked.

Table 4: Nurse Information

<b>Nurse Grade</b>	
Senior	27
Junior	13
<b>How long been Nurse</b>	
<1yr	6
1-5yr	8
6-15yr	7
16- 30yr	10
>30yr	9
Median:	6-15yr
<b>How long have been on Current Ward</b>	
<1yr	16
1-5yr	14
6-15yr	7
16-30yr	2
>30yr	1
Median:	1-5yr

There are a larger proportion of senior nurses to junior nurses working in Dunedin Public Hospital. According to data collected, it is approximately 2:1. The median years of nursing experience of nursing staff in Dunedin Public Hospital is 6-15 years.

When comparing the senior nursing staff to the junior nursing staff, there was no statistically significant difference (at 95% confidence), in their attitudes towards TIs prescribing OTC or any medication, with or without their work being double checked by a qualified doctor.

Table 5: Data of Senior and Junior Nurses' attitudes towards TIs prescribing

<b>OTC With Double Checking</b>			<b>OTC Without Double Checking</b>		
	Senior Nurses	Junior Nurses		Senior Nurses	Junior Nurses
Strongly disagree	1	0	Strongly disagree	0	1
Disagree	1	1	Disagree	6	1
Neutral	2	1	Neutral	2	1
Agree	7	6	Agree	16	7
Strongly Agree	16	5	Strongly Agree	3	3
<b>All Meds With Double Checking</b>			<b>All Meds Without Double Checking</b>		
	Senior Nurses	Junior Nurses		Senior Nurses	Junior Nurses
Strongly disagree	1	0	Strongly disagree	3	1
Disagree	2	1	Disagree	17	8
Neutral	2	0	Neutral	4	1
Agree	15	7	Agree	3	3
Strongly Agree	7	5	Strongly Agree	0	0

**Discussion:**

Patients and nurses have very similar views on TI prescribing in the ward setting. This is an encouraging discovery to know that despite different needs, both health professionals and patients concur in their views on this topic. Both groups support TIs prescribing OTC medications, regardless of whether or not they are double checked by a qualified doctor. The most common reasons for supporting this are: TIs have already passed their final exams and hence should know enough about OTC medications to prescribe them. TIs know more than the average person in the community and if OTC medications can be obtained without a prescription outside the hospital setting, why should a final year trainee doctor not prescribe it. These two themes emerged often in interviews with both the nursing group and the patient group.

Another common theme, especially for the nurses, is the time factor. House surgeons are often very busy on the ward and hard to locate. If TIs were able to prescribe, it would shorten the time to treatment. This is especially beneficial if the medication required is for pain relief.

Dunedin Public Hospital is a teaching hospital. Both nurses and patients mentioned learning to prescribe as an important part of the training. The common attitude held by those interviewed is that the TI has got to learn somehow, and through practice is the best way. However, some nurses believe it should be based on the individual, and that no blanket rule should be applied.

Lack of experience and lack of trust is the main reasons against TI prescribing, however those that argued against it stated that TI will be prescribing independently soon as a house surgeon anyway. TIs being involved and responsible for at least one third of the patients on the wards mean they should know their patient's history well enough to prescribe safely.

Currently, TIs are not permitted to prescribe. Some of those interviewed believe that if the rules were to change, the public views on the subject would alter also. One patient stated: "It is a matter of getting used to the idea." This patient was an elderly gentleman who had many encounters with the health system in his lifetime. For those who have never been in hospital and had very little to do with the health system, a TI prescribing for them may not be such a big deal, especially when it involves OTC that they have had before.

Other themes that influenced views that were identified include: In a year you can learn a lot, negative past experiences. Negative past experiences with the hospital and medical staff may cause the person to be more cautious and prefer a more senior staff member to take care of them.

**Conclusion:**

Trainee Interns at Dunedin Public Hospital have the support of both nurses and patients to prescribe OTC medication in the ward setting either independently or with supervision. Nurses and patients also support the prescription of all medications by Trainee Interns as long as they are double checked by a qualified doctor.

The limitation on this study is that the findings only apply to Dunedin Public Hospital. It may be quite different elsewhere in the country where the hospital is not a teaching hospital, and the patient population is not accustomed to TIs being part of the medical team. Further studies on non-teaching hospitals are required before an absolute conclusion can be made.

## References:

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## Appendix 1

### Over the Counter prescribing study

#### Information for Patient

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you of any kind and we thank you for considering our request.

#### What is the Aim of the Project?

To determine the attitudes of patients and nursing staff towards the prescription of OTC medicines by Trainee Interns in a hospital inpatient setting.

#### What will I be asked to do?

You will be asked to be interviewed by a 5<sup>th</sup> year medical student, Tina, asking your opinions on the prescribing of **Over the Counter medications (OTC)** by **Trainee Interns (TI)**. Over the Counter medications (OTC) medication is the kind of medication you can buy without a prescription from your local pharmacy. Examples include Paracetamol (Panadol), Nurofen, antihistamines, and antacids. Trainee Interns (TI) are medical students in their final year of training to become a doctor. Medical students go through six years of training where the final exams are sat at the end of the fifth year. Trainee interns, or sixth years, are responsible for patients on the ward including admission, maintaining the medical records and under supervision of the registrar, initiating investigations and treatments. However, at present they do not have the legal right to prescribe medications). The interview should take approximately **10 minutes**.

#### Can I Change my mind and Withdraw from the Project?

You may withdraw from participation in the project at any time and without any disadvantage to yourself of any kind.

#### What Data or Information will be Collected and What Use will be Made of it?

You will not be identified personally. The results of the project may be published and will be available in the library but every attempt will be made to preserve your anonymity.

You are most welcome to request a copy of the results of the project should you wish.

The data collected will be securely stored in such a way that only those mentioned above will be able to gain access to it. At the end of the project any personal information will be destroyed immediately except that, as required by the University of Otago research policy, any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed.

#### What if you have any Questions?

If you have any questions about our project, either now or in the future, please feel free to contact either:-

Tina Liu  
027 696 2358  
[liuch733@student.otago.ac.nz](mailto:liuch733@student.otago.ac.nz)

Dr. Belinda Green  
027 498 4537  
[Belinda.green@stonebow.otago.ac.nz](mailto:Belinda.green@stonebow.otago.ac.nz)

## Appendix 2 Structured Interview - Patient

Date \_\_\_\_\_

Ward \_\_\_\_\_

Severity of Condition:                      *Critical*                      *Severe*                      *Mild*

Gender      a. Male  
                 b. Female

My name is Tina, I am a 5<sup>th</sup> year Medical student completing a project for the New Zealand Medical Council. We are interested in looking at the attitudes towards Trainee Interns (TI) prescribing over the counter medications in the ward setting. All information collected in this study will be treated confidentially. Feel free to change any answers as we go along.

1. Could you tell me what age group you fall within? The ranges are:

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
18-29	30-39	40-49	50-59	60-

2. Could you tell me the number of times you have been an **inpatient** in your lifetime

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5≤</b>
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3. What has your overall experience of hospital stays been like

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Do you know what a **Trainee Intern (TI)** is? (If not – explain use your **information sheet**)

4. Do you think **Trainee interns** should be able to **prescribe**:
- a. **Any** Medication or treatment *without* a qualified Doctor double checking

**1**                      **2**                      **3**                      **4**                      **5**  
Strongly Disagree    Disagree            Neutral              Agree              Strongly Agree

- b. **Any** Medication or treatment *with* a qualified Doctor double checking

**1**                      **2**                      **3**                      **4**                      **5**  
Strongly Disagree    Disagree            Neutral              Agree              Strongly Agree

5. Do you think **Trainee Interns** should be able to **prescribe**:

- a. **OTC** Medication *without* a qualified doctor double checking

**1**                      **2**                      **3**                      **4**                      **5**  
Strongly Disagree    Disagree            Neutral              Agree              Strongly Agree

- b. **OTC** Medication *with* a qualified Doctor double checking

**1**                      **2**                      **3**                      **4**                      **5**  
Strongly Disagree    Disagree            Neutral              Agree              Strongly Agree

**Could you explain your views expressed above.**

8. If **Trainee interns** were to prescribe, they should have **legal responsibilities** (explain)

**1**                      **2**                      **3**                      **4**                      **5**  
Strongly Disagree    Disagree            Neutral              Agree              Strongly Agree

## Structured Interview - Nurse

Date \_\_\_\_\_

Ward \_\_\_\_\_

Gender a. Male

b. Female

My name is Tina, I am a 5<sup>th</sup> year Medical student completing a project for the New Zealand Medical Council. We are interested in looking at the attitudes towards Trainee Interns (TI) prescribing over the counter medications in the ward setting. All information collected in this study will be treated confidentially. Feel free to change any answers as we go along.

1. Can I just check your grade?

**1**                      **2**  
Junior Nurse          Senior Nurse

2. .Could you tell me what age group you fall within. The ranges are:

**1**              **2**              **3**              **4**              **5**  
18-29          30-39          40-49          50-59          60 -

3. Could you tell me how long you have been:

1. A nurse

**1**              **2**              **3**              **4**              **5**  
<1yr          1-5yr          6-15yr          16-30          30 -

2. Current ward

**1**              **2**              **3**              **4**              **5**  
<1yr          1-5yr          6-15yr          16-30          30 -

4. Although you work here could you tell me the number of times you have been an **inpatient** in your lifetime

**0**              **1**              **2**              **3**              **4**              **5≤**

5. What has you overall experience of hospital stays been like

**1**              **2**              **3**              **4**              **5**  
Very unsatisfied      Unsatisfied      Neutral      Satisfied      Very satisfied

Do you know what a **Trainee Intern (TI)** is? (If not – explain use your **information sheet**)

6. Do you think **Trainee Interns** should be able to **prescribe**:

a. **Any** Medication or treatment *without* a qualified Doctor double checking

**1**                      **2**                      **3**                      **4**                      **5**  
Strongly Disagree    Disagree            Neutral              Agree                Strongly Agree

b. **Any** Medication or treatment *with* a qualified Doctor double checking

**1**                      **2**                      **3**                      **4**                      **5**  
Strongly Disagree    Disagree            Neutral              Agree                Strongly Agree

7. Do you think **Trainee Interns** should be able to **prescribe**:

a. **OTC** Medication *without* a qualified doctor double checking

**1**                      **2**                      **3**                      **4**                      **5**  
Strongly Disagree    Disagree            Neutral              Agree                Strongly Agree

b. **OTC** Medication *with* a qualified Doctor double checking

**1**                      **2**                      **3**                      **4**                      **5**  
Strongly Disagree    Disagree            Neutral              Agree                Strongly Agree

**Could you explain your views expressed above.**

8. If **Trainee interns** were to prescribe, they should have **legal responsibilities** (explain)

**1**                      **2**                      **3**                      **4**                      **5**  
Strongly Disagree    Disagree            Neutral              Agree                Strongly Agree