

# 2024 Pharmacy Education Symposium



ORAL PAPER SESSION 3: Simulation to enhance  
pharmacy education

Chair: Louise Lord



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PHARMACY AND  
PHARMACEUTICAL  
SCIENCES

# 2024 Pharmacy Education Symposium

Evaluation of a Novel Approach to  
Experiential Learning within a Pharmacy  
School Operated Patient Care Clinic

Prof Derek Jorgenson



UNIVERSITY OF SASKATCHEWAN

College of Pharmacy  
and Nutrition

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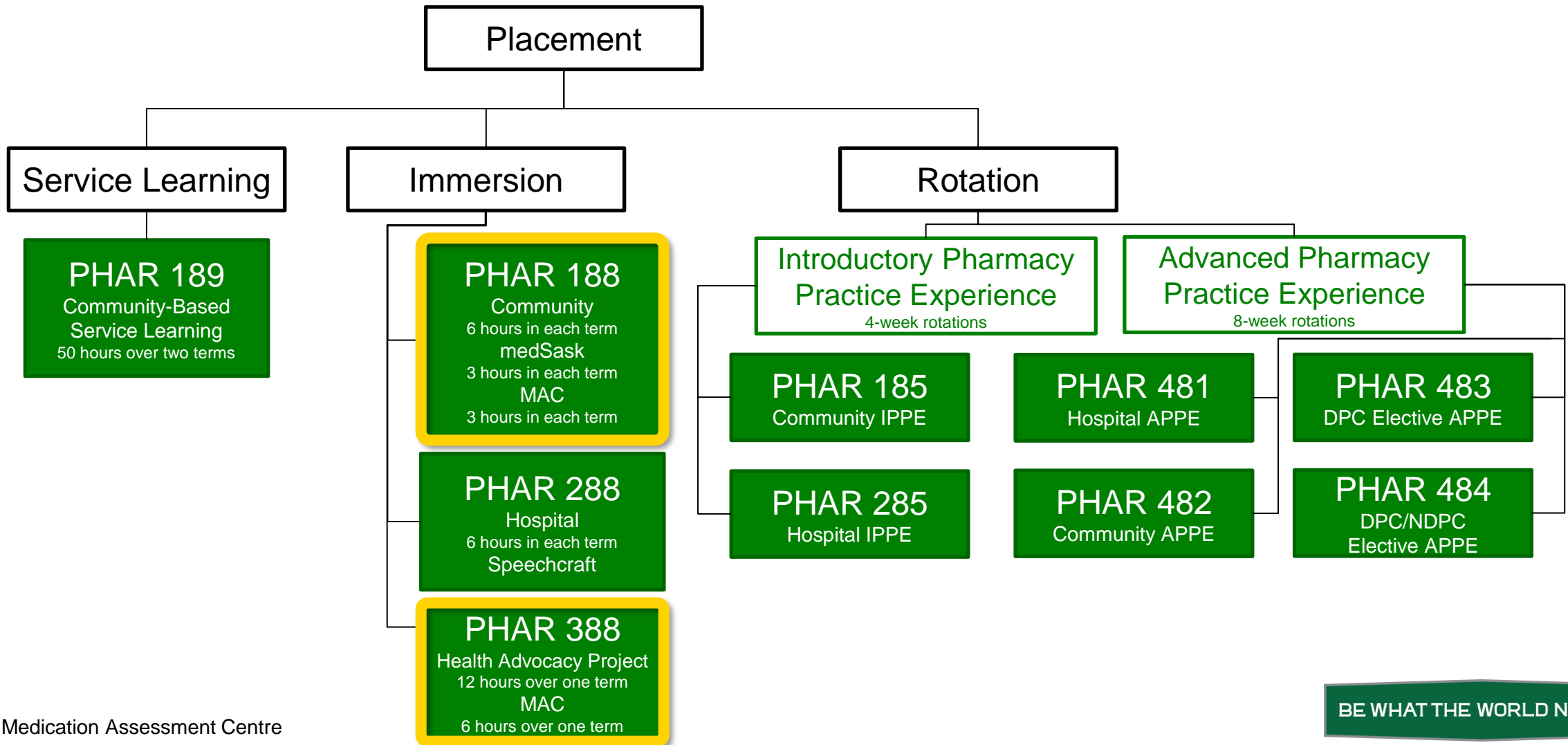
# Evaluation of a Novel Approach to Experiential Learning within a Pharmacy School Operated in a Patient Care Clinic

**Derek Jorgenson, BSP, PharmD, Taylor Raiche, BSP, Kirsten Bazylak, BSP**  
College of Pharmacy and Nutrition  
University of Saskatchewan

**PES 2024**

BE WHAT THE WORLD NEEDS

# PharmD Experiential Learning Overview





Medication  
Assessments



Insomnia  
Treatment  
(CBT-i)



Interdisciplinary  
Chronic Pain  
Management

# PHAR 188 (Year 1)

Group Size: 4-6

	Learning Objectives	Activities
1	<p><b>Observe a pharmacist</b> exhibiting <b>professional behavior</b></p> <p><b>Reflect and recognize how personal attributes</b> may support or be a barrier in their ability to provide patient care</p>	<ul style="list-style-type: none"><li>• Observe the live patient encounter (30-60 min)</li><li>• Discuss the encounter with peers and preceptor</li><li>• Submit a written reflection of approximately 150 - 250 words (assessed by preceptor)</li></ul>
2	<p><b>Observe a patient interview</b> of a new patient's initial appointment</p> <p><b>Complete a partial care plan</b> with an emphasis on goals of therapy and monitoring parameters</p>	<ul style="list-style-type: none"><li>• Watch a recorded video of an initial appointment with a new patient (45 min)</li><li>• Share reflections from the observed patient interview with peers and preceptor</li><li>• Discuss completed care plan components with peers and preceptor (assessed by preceptor)</li></ul>

# PHAR 388 (Year 3)

Group Size: 3-4

	Learning Objectives	Activities
1	<b>Demonstrate a comprehensive patient interview</b>  <b>Formulate and deliver formative feedback to a peer</b>	<ul style="list-style-type: none"><li>• Two students conduct a comprehensive patient interview of a new patient with a partner (60 min)*</li><li>• Two students observe peers' interview, formulate, and deliver formative feedback*</li><li>• All students receive feedback from preceptor</li><li>• Discuss the encounter and case with peers and preceptor</li></ul>
2		* The assigned pairs from Immersion 1 swap roles

# MAC/UCPC Staff Roles

## Admin staff:

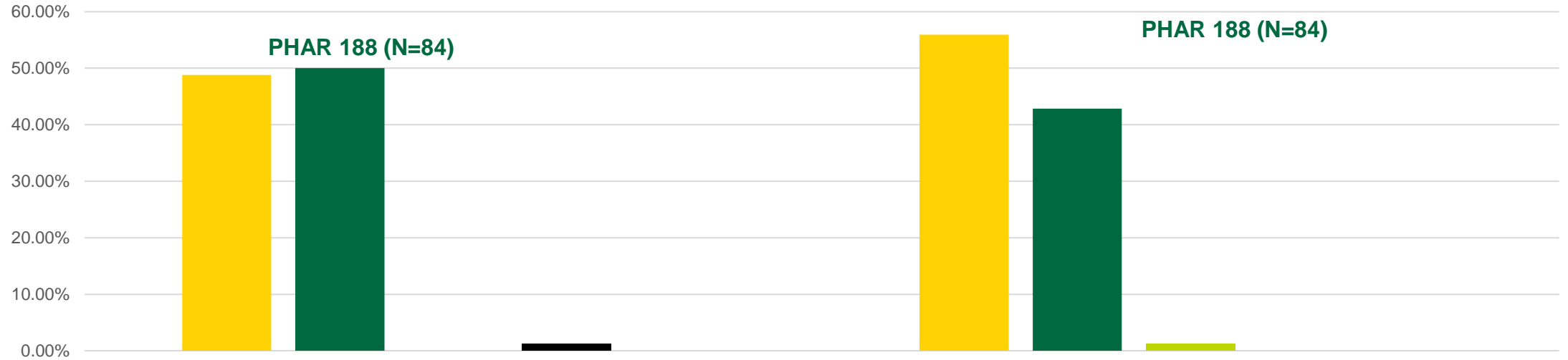
- blocked off pharmacist schedules for immersion “appointments”
- determined appropriateness of referrals for immersions
- obtained initial consent from patients
- emailed students zoom link
- coordinated patients’ virtual care link and pre-appointment info

## Pharmacist preceptors:

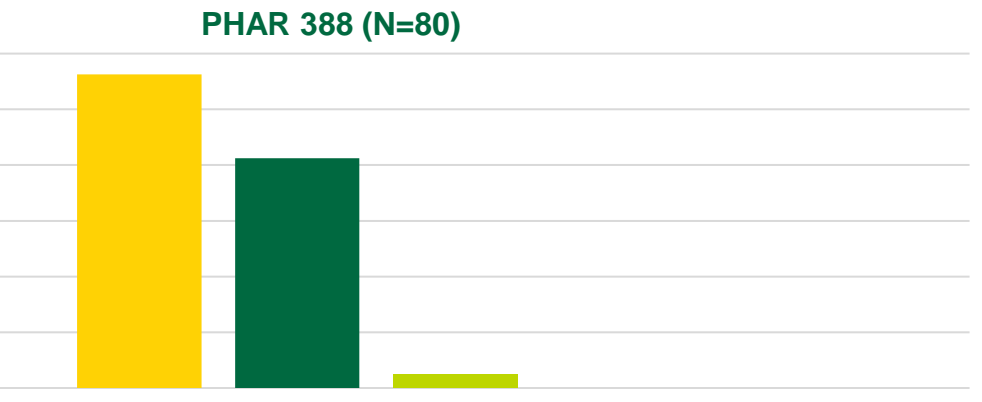
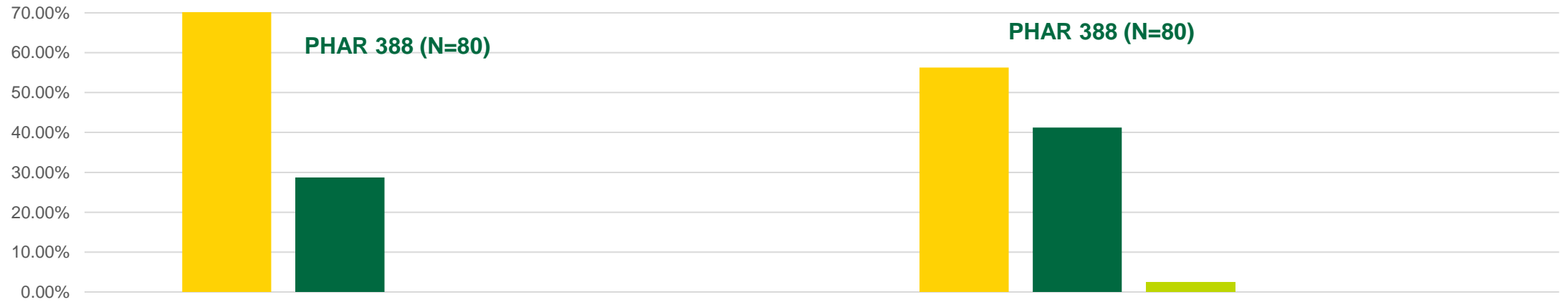
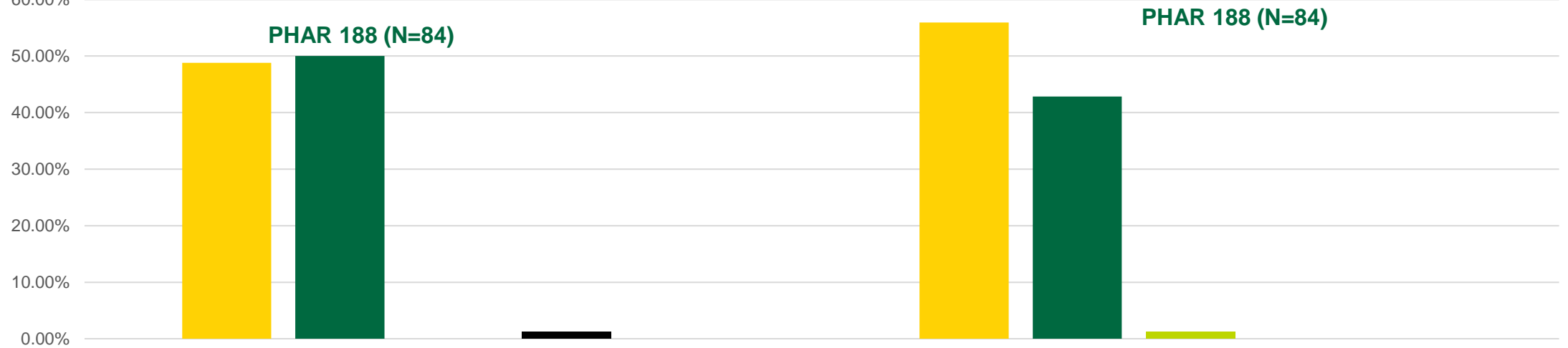
- previewed referrals at least one week before immersion
- led or supervised all immersions in full
- provided verbal formative feedback
- submitted evaluation to EL Office in CORE
- followed up with patients

# Evaluation

**I was able to connect academic course work with MAC immersions**



**Activities enabled me to achieve care provider competencies**

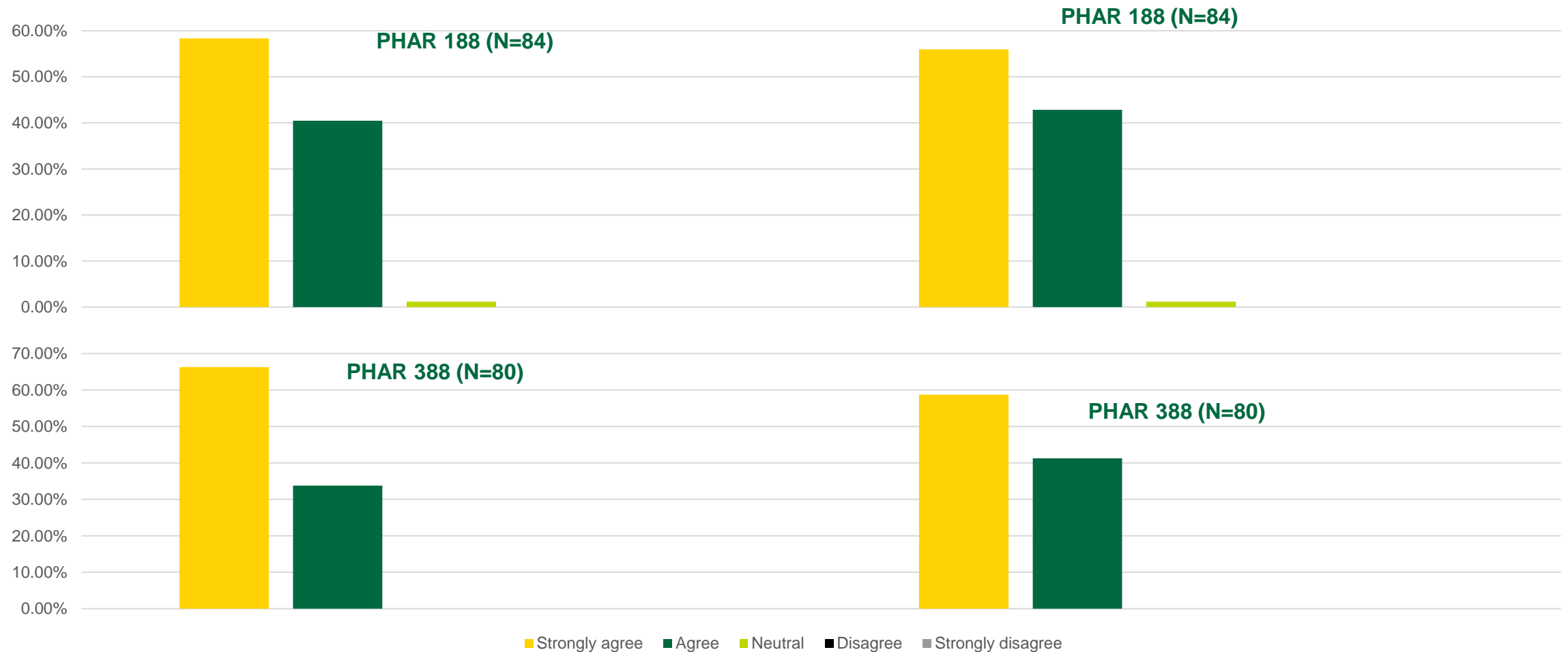


■ Strongly agree   
 ■ Agree   
 ■ Neutral   
 ■ Disagree   
 ■ Strongly disagree

# Evaluation

## MAC preceptors provided thoughtful and actionable feedback

## MAC preceptors provided adequate instruction and supervision



# Authenticity of Practice Experiences

*“I thought they were **extremely relevant to real world situations and scenarios**...Being able to witness a pharmacist...gave my group a great look at the change we can do in our communities and for our future patients.”*

*“The MAC immersions allowed us to do a comprehensive patient interview with an actual patient. **There are differences between natural and simulated patients**, and I have found that simulated patients don't reflect patients in practice. Having an opportunity to work and navigate a real-life scenario is beneficial to our learning.”*

*“I also liked how we didn't know the cases before hand and had real-life experience since it was a **real patient with real concerns**. This allowed us to **think tactfully on the spot** and rely on the lecture content we knew and our knowledge of pharmacy school we have gained till now.”*

# Culture of Teaching and Learning

*"I found the learning environment **safe and supportive through the preceptors, other students, and patients**. I found them all to be very helpful and understanding, as well as constructive in their feedback to help me learn."*

*"Learning with others was helpful as well, because **their questions were often my own questions**. And at times they asked things I wouldn't have thought to. This helped me build rapport with my pharmacy colleagues."*

*"I thought the preceptors I had **knew exactly what level we were at as 3rd years**, but also helped us challenge ourselves with conditions we maybe hadn't seen IRL before. That being said, they also supported us in our learning and informed us that they were there to fall back on if we needed it, but that we were all very qualified and ready to handle what was coming our way!"*

*"I think that a strength of this experience was that **we were immersed in an unfamiliar therapeutic situation, and forced to be confident in what we know while understanding when to say we don't have the answer.**"*

# Exposure to Virtual Care

*“This experience was definitely challenging because we were unable to see the patient's face and unable to utilize our non-verbal cues as the interview occurred over the phone, but it was **such a good learning experience being able to navigate a different realm and using different techniques** to conduct an over-the-phone interview.”*

*“It can be difficult when the patient has difficulty getting on zoom, but **this reflects real world practice in the sense that it can be unpredictable.** A phone interview was good experience that resulted from such unpredictability.”*

*“MAC was a **good opportunity to practice professional conduct over Zoom,** whether it be having an appropriate background or dressing appropriately, there were many opportunities to be professional.”*

*“I felt that the MAC immersions provided me an opportunity to see how pharmacists can provide valuable health-related care needs **whether in person or over an online meeting.** This showed me the importance of being a care provider and ways that I will be able to overcome barriers to provide the best care for my patients that I can.”*

# Conclusions

Intermittent, 3-hour EL placements (i.e., immersions) facilitated virtually at the MAC are appreciated by students as learning experiences that are:

- **authentic and relevant**
- **safe and supportive**
- **unique (with respect to virtual care)**

The immersion structure allows more students to participate in EL at the MAC vs. the traditional 8-week APPE structure

- Tiered (near peer) learning opportunities exist

# Acknowledgements

- MAC/UCPC Pharmacist Preceptors
- MAC/UCPC Administrative Staff
- MAC/UCPC Patients
- USask PharmD EL Team

# Contact

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- (306) 966-2009

# 2024 Pharmacy Education Symposium

Using MyDispense to simulate the Electronic Medical Record (EMR) inpatient medication order verification process

A/Prof Steven Walker

# Using MyDispense to simulate the Electronic Medical Record (EMR) inpatient medication order verification process

**Steven Walker**, BPharm(Hons), MClinPharm

**Dr Daniel Malone**, PhD; **Dr Yassmin Samak**, PhD

**Keith Sewell**, BSc, MSc; **Keenan Beaumont**, BIT



[Steven.walker@monash.edu](mailto:Steven.walker@monash.edu)



[@stwalker88](https://twitter.com/stwalker88)

# Background – Inpatient Order Verification

Process of reviewing medication orders for a patient admitted to hospital to verify that the order is acceptable (often for the purpose of supply).

The screenshot displays a hospital medication administration record (MAR) interface. The interface is divided into several sections:

- Left Sidebar (Menu):** Contains navigation options such as Pat Info - Change Encntr, Perioperative Doc, Anesthesia Summary, Results Review, Orders - Charges, I-View, Documentation - Pow..., Clinical Notes, Clinician Summary View, Form Browser, **MAR** (highlighted), MAR Summary, Allergies + Add, Medication List RX Wr... + Add, Task List, Problems and Diagnoses, Histories, Immunization Schedule, Overview, Appointments, Accommodation History, Lab List, Nursing Chart Summary, Advanced Growth Chart, Patient Summaries, CCU Summary, Directives, Infection Prevention, and CMS Infusion Billing (highlighted with box A).
- Top Bar:** Shows the patient's name (MAR) and system status (Full screen, Print, 3 minutes ago).
- Time View:** A dropdown menu on the left of the grid showing options: Scheduled, Unscheduled, **PRN** (highlighted with box B), Continuous Infusions, Future, Discontinued Scheduled, Discontinued Unscheduled, Discontinued PRN, and Discontinued Continuous Infus.
- Medications List:** A list of medications with their respective administration times. A red box labeled 'C' highlights a medication order for sodium chloride 0.9% (sodium ch... 10 ml, INJ, FLUSH, BID&and20, Start: 26-Apr-2016 08:00:00 MST, 2-10 ml for flush) on 09-May-2016 at 09:19 MST.
- Grid:** A grid showing medication administration times from 09-May-2016 09:19 MST to 10-May-2016 03:46 MST. The grid is mostly empty, with some entries for other medications like bacitracin topical ointment, cefepime, sodium chloride 0.9%, chlorhexidine topical (chlorhexidi... 15 ml, LIQ, SWISH&SPT, TID, Start: 30-Apr-2016 01:48:00 MST), pantoprazole, petrolatum topical (Vaseline), and vancomycin.

# Inpatient Order Verification

**Romanoff, Natasha**

MRN: 8475963    Age: 35 Years (03/07/1983)    Sex: Female    Location: C Ward 41 / - 02  
FIN: 9787727    Race:    Admitted: 05/12/2018 09:00 AEDT    Physician:  
Rx Clinical Note:    Pregnant: Unknown

Acute Profile    Ambulatory Profile    Results    Interventions

Drug:

Add

Action	Status	Order Sentence	Start
	Active	amoxicillin 1,000 mg/ 2 cap(s) Capsule Oral THREE times a day	14/12/2018 20:00 AEDT
	Active	fluticasone 50 microg-salmeterol 25 microg 2 puff(s) Inhaler Inhalation ...	14/12/2018 20:00 AEDT
	Active	oxycodone 5 mg/ 1 tab(s) Tablet Oral 4 hourly PRN severe pain	14/12/2018 16:41 AEDT
	Active	paracetamol 1,330 mg/ 2 tab(s) Tablet, Modified Release Oral THREE t...	14/12/2018 20:00 AEDT
	Active	perindopril 5 mg/ 1 tab(s) Tablet Oral daily	15/12/2018 08:00 AEDT
	Discontinued	sodium chloride 0.9% 1,000 mL Solution, Injectable IV Continuous Infus...	14/12/2018 16:41 AEDT

Submit    Cancel    Apply

# Inpatient Verification

The screenshot shows a software interface for medication management. A dropdown menu is open over a table of medications. The 'Verify' option is highlighted with a red box. The table contains the following data:

Status	Medication	Start Date/Time
Active	perindopril 5 mg/ 1 tab(s) Tablet Oral daily	15/12/2018 08:00 AEDT
Discontinued	sodium chloride 0.9% 1,000 mL Solution, Injectable IV Continuous Infus...	14/12/2018 16:41 AEDT

Buttons at the bottom of the interface include 'Submit', 'Cancel', and 'Apply'. A status bar at the bottom right shows 'Active', 'Order Profile as of: 14:30', 'PHARMACIST2', 'P0611', and '14:37'.

Pharmacy Supply

Imprest Selection

# Order Verification Simulation Literature

Contents lists available at [ScienceDirect](#)



**Currents in Pharmacy Teaching and Learning**

journal homepage: [www.sciencedirect.com/journal/currents-in-pharmacy-teaching-and-learning](http://www.sciencedirect.com/journal/currents-in-pharmacy-teaching-and-learning)



Experiences in Teaching and Learning

**Impact of an inpatient order verification simulation on student perceived preparedness and confidence**



Celeste VanAtta<sup>\*</sup>, Suzanne Surowiec

1

*American Journal of Pharmaceutical Education* 2020; 84 (8) Article 7534.

**BRIEF**

**Using Electronic Health Record Technology to Teach Inpatient Medication Order Verification to Pharmacy Students**

Amy L. Ives, PharmD, Shannon R. Tucker, MS, James A. Trovato, PharmD, MBA

2

*American Journal of Pharmaceutical Education* 2015; 79 (7) Article 96.

**TEACHERS' TOPIC**

**Simulated Order Verification and Medication Reconciliation during an Introductory Pharmacy Practice Experience**

Nicole L. Metzger, PharmD, Melissa M. Chesson, PharmD, Kathryn M. Momary, PharmD

3

1. VanAtta C, Surowiec S. 2022
2. Ives AL, Tucker SR, Trovato JA. 2020
3. Metzger NL, Chesson MM, Momary KM. 2015

- Free
- Pharmacy online simulation software
- Traditionally used for community pharmacy tasks

## MyDispense wins Australian Financial Review Award



<https://info.mydispense.monash.edu/>

# Aim

To evaluate a MyDispense simulation activity used to teach pharmacy students how to verify inpatient medication orders.

# Method


**Setting:** Formative 60-minute workshop exercise (Friday 13<sup>th</sup> October 2023)

**Workshop scenario:** Verify inpatient medication orders for patient on a busy palliative care ward

- Instructional video provided prior to workshop
- 8 inpatient orders
- Students permitted to discuss case in teams
- Facilitated by practising pharmacists

# Inpatient Verification

**EHR** ▾ **Dashboard** **Queue** **Hillary Baker** ✕

 **Hillary Baker**  
Female, 01/06/1943, 80,  
General Floor

Weight: 80kg  
Height: 173cm  
Admission date: 11/10/2023  
09:00

Insurance:  
Allergies: [NSAIDs - specify](#)  
MRN: 8967889080

**Professional Communication**

**Verify**

**Notes**

**Medications**

**Allergies**

**Vitals**

**Results**

**Orders**

**Immunizations**

**Notes**

**Hospital Admission** 11/10/2023 09:00

**Author** Mr Donald Cardy  
**Profession** Gerentologist  
**Location** General Floor

**Date:** 11th October  
**Time:** 0800  
**Name:** Dr Cardy  
**Team:** Pall Care  
**Contact:** 2323  
**HOPC:** Hillary is a 80 year old female with metastatic breast cancer referred by palliative care nurses for symptom management on ward.  
Hillary had progressive worsening of pain in the last week, unresponsive to regular opioid regimen. She has also experienced significant nausea and vomiting prompting referral by palliative care nurses for management. Hillary has mild abdo distension from constipation (BNO for 3 days).  
**PMHX:**  
1. Metastatic breast cancer  
2. Hypercholesterolaemia  
3. Chronic pain  
- Bony lesions responding well to bisphosphonate therapy

**Medication orders**

V	Order	Freq
!	Enoxaparin 20mg/0.2mL Inj	Daily
!	Morphine Sulphate 15mg, MR Tab	2 times daily (0900 & 1700)
!	Fentanyl 12mcg/hr Patch	Every 72 hours
!	Ondansetron 4mg Tab	2 times daily
!	Macrogol 13.125G Pwd	2 times daily
!	Paracetamol 240mg/5mL, 200mL Elix	4 times daily
!	Diclofenac Sodium 50mg, EC Tab	Every 8 hours PRN
!	Zometa 800mcg/ml Inj	Every 28 days

x0 x0

# Method

**Participants:** 301 third year pharmacy students

- 12- week acute care unit of study
- Familiarity with MyDispense and EMR simulation
- 2-weeks post experiential hospital placement

**Design:**

- Anonymous, online survey
- Four x 5-Point Likert Scale Responses
- Open-ended text feedback
- Monash University Human Research Ethics Committee (MUHREC) approved 40482

# Survey Responses (48% response 144/301)

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I enjoyed this activity	1% (1/144)	1% (1/144)	6% (8/144)	44% (63/144)	49% (71/144)
The activity improved my understanding of the order verification process	1% (1/144)	0% (0/144)	3% (4/144)	38% (55/144)	58% (84/144)
MyDispense is a useful tool to practice the inpatient medication order verification process	1% (1/144)	1% (1/144)	3% (5/144)	31% (45/144)	64% (92/144)
Following this activity, I feel better prepared to verify medication orders	1% (1/144)	0% (0/144)	6% (8/144)	43% (62/144)	51% (73/144)

# Open-text responses

What were the most useful aspects of this activity?

“similar to hospital lay out”

“Realistic view of EMR pages, also very **easy to navigate**”

“It **looks like the hospital EMR** so it really helps us to learn how to learn how to use in advance”

“**Simulates work within a hospital** and it’s EMR procedure along with the verification processes involved i.e., looking at medication charted, looking at patient charts, looking at doctor’s notes, etc.”

# Open-text responses

**What recommendation/s do you have to improve this activity?**

**“Not sure which medications would be on **imprest** or in **pharmacy**”**

**“want to be able to see **patients results** while writing reason for “not verify””**

**“Maybe have an **expand all** and **collapse all** button for the notes. If there’s no available information for one of the lab results maybe show it as greyed out or N/A, so I don’t have to click and open them to check them individually”**

# Discussion

- **Overall positive impact** on perceived **readiness to perform task** and **usefulness of MyDispense**
- **Similar** perceived positive impacts to **existing literature**<sup>1,2,3</sup>
- **First time MyDispense** used to **simulate inpatient order verification**
- Positive feedback focused on **similarity to practice**
- **Improvements related to user experience** (incl. practical access to data)
- **Unknown impacts of previous experience** with inpatient verification process
- Future projects
  - **Translation to performance** in the workplace
  - **Training of pharmacy technicians?**

1. VanAtta C, Surowiec S. 2022

2. Ives AL, Tucker SR, Trovato JA. 2020

3. Metzger NL, Chesson MM, Momary KM. 2015

# Conclusion

**MyDispense** was well received as a tool to **help simulate the inpatient order verification process** and prepare pharmacy students to perform this task

# References

Duncan BJ, Kaufman DR, Zheng L, et al. A micro-analytic approach to understanding electronic health record navigation paths. *Journal of biomedical informatics*. 2020;110:103566-103566. doi:10.1016/j.jbi.2020.103566

Ives AL, Tucker SR, Trovato JA. Using Electronic Health Record Technology to Teach Inpatient Medication Order Verification to Pharmacy Students. *American journal of pharmaceutical education*. 2020;84(8):1071-1076. doi:10.5688/ajpe7534

Metzger NL, Chesson MM, Momary KM. Simulated Order Verification and Medication Reconciliation during an Introductory Pharmacy Practice Experience. *American journal of pharmaceutical education*. 2015;79(7):96-96. doi:10.5688/ajpe79796

VanAtta C, Surowiec S. Impact of an inpatient order verification simulation on student perceived preparedness and confidence. *Curr Pharm Teach Learn*. 2022 Dec;14(12):1543-1548. doi: 10.1016/j.cptl.2022.10.012. Epub 2022 Nov 16. PMID: 36400708.

# 2024 Pharmacy Education Symposium

Impact of an Ambulatory Care Certificate  
Program on the Professional Development of  
Student Pharmacists

Dr Mollie Scott



**UNC**

**ESHELMAN SCHOOL  
OF PHARMACY**

# **Impact of an Ambulatory Care Certificate Program on Student Pharmacists' Professional Development**

Mollie Ashe Scott, Pharm.D., BCACP, CPP, FASHP, FNCAP  
Regional Associate Dean and Clinical Professor

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# Ambulatory Care Pharmacy Practice

- Provision of integrated, accessible healthcare services
- Practice occurs in the outpatient setting
- Pharmacists are accountable for:
  - Addressing medication needs
  - Developing sustained partnership with patients
  - Practicing in the context of family and community

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# Ambulatory Care Certificate Program



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## Study Purpose

- Analyze students' self-assessment of their professional identity
  - Evaluate students' perceived preparedness to provide specific ambulatory care services during experiential education
  - Identify the impact of the Ambulatory Certificate Program on students' professional development
-

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# Study Methods

- A 17-item survey including Likert scale and open-ended questions was created in Qualtrics® and distributed to all enrolled Ambulatory Care Certificate Program students (n=18)
  - Students selected one or more options that described their professional identity from a pre-defined list adapted from the literature
  - Students rated preparedness to provide ambulatory care services during experiential education using a 4-point Likert scale
  - Analyses included descriptive statistics for quantitative data and inductive coding to identify themes within qualitative data
-

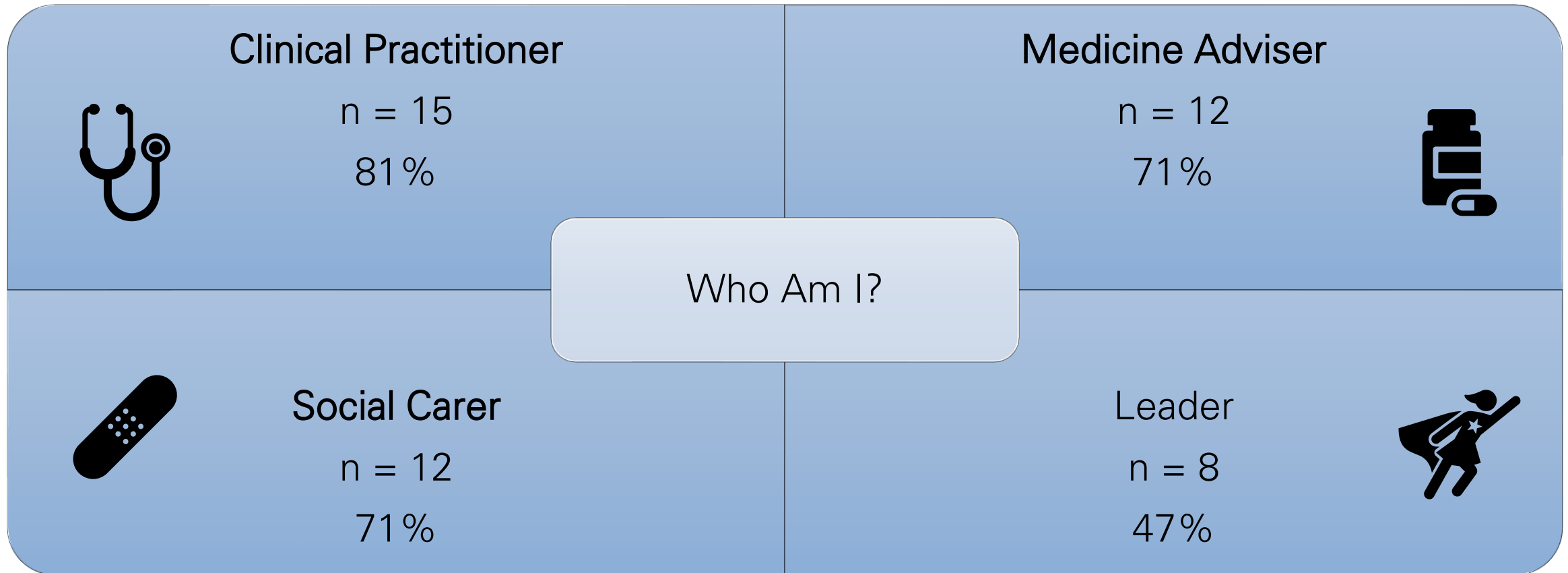
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## Ambulatory Care Scholar Demographics (n = 17)

Characteristic	n (%)
Year of Study	
PY2 student	6 (35%)
PY3 student	5 (29%)
PY4 student	6 (35%)
Gender	
Female	15 (18%)
Male	2 (12%)
Non-binary	0 (0%)
Prefer not to say	0 (0%)
Undergraduate degree	
Yes	13 (76%)
No	4 (24%)
North Carolina resident	
Yes	14 (82%)
No	3 (18%)

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# Professional Identities



# Preparedness to Provide Ambulatory Care Services

Patient Visit Type Certificate Program Teaching Activity	Extremely or Very Prepared Number, %	Somewhat Prepared Number, %	Unprepared Number, %
Annual Wellness Visit Laboratory Session n = 10	9 (90%)	1 (10%)	0 (0%)
Transitions of Care Laboratory Session n = 11	11 (100%)	0 (0%)	0 (0%)
Anticoagulation Laboratory Session n = 15	14 (93%)	1 (7%)	0 (0%)
Contraception Statewide Training Program n = 11	10 (91%)	0 (0%)	1 (9%)
Gender-Affirming Care Lecture n = 9	4 (24%)	3 (18%)	2 (12%)
Naloxone Administration Simulation Center n = 15	14 (93%)	1 (7%)	0 (0%)
Long-Acting Injections Statewide Training Program n = 10	7 (70%)	2 (20%)	1 (10%)
Continuous Glucose Monitoring Laboratory Session n = 14	11 (79%)	3 (21%)	0 (0%)

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# Qualitative Themes



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# Conclusions

- The most common professional identities of Ambulatory Care Scholars were clinical practitioner, medicine advisor, and social carer
  - Students felt extremely or very prepared to provide the majority of common visit types
  - The certificate program fostered practice readiness, relationship building, interprofessional education, hands-on learning, patient-centered care, and post-graduate planning
-

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# Acknowledgements

- Faculty: Stephanie Kiser, Macary Marciniak, Mary McClurg, Amanda Savage, Christy Sherrill
  - Staff: Karen Hughes
  - Class of 2024 Scholars: Jade Carpenter, Madison Carter, Lauren Fasth, McKenna Knock, Julia Mesawich, Cassie Twisdale
  - Class of 2025 Scholars: Cassidy Cox, Ingrid Findlay, Jess Hudak, Meg Parmalee, Erin Valek
  - Class of 2026 Scholars: Aislyn Coyne, Addy Eddings, Fiona Gable, Leeann Musick, John Nyznyk, Michael Ramon, Cassandra Redente
-

# 2024 Pharmacy Education Symposium

Student views on a Medicines Information department simulation for final year MPharm undergraduates

Dr Jeremy Sokhi

**STUDENT VIEWS ON A MEDICINES  
INFORMATION DEPARTMENT SIMULATION  
FOR FINAL YEAR MPHARM  
UNDERGRADUATES**

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# OVERVIEW

## Medicine Information (MI) Simulation

Design and delivery

## Evaluation

Method and findings

## Evolution

Where we are now

## Questions

And answers



# MEDICINES INFORMATION

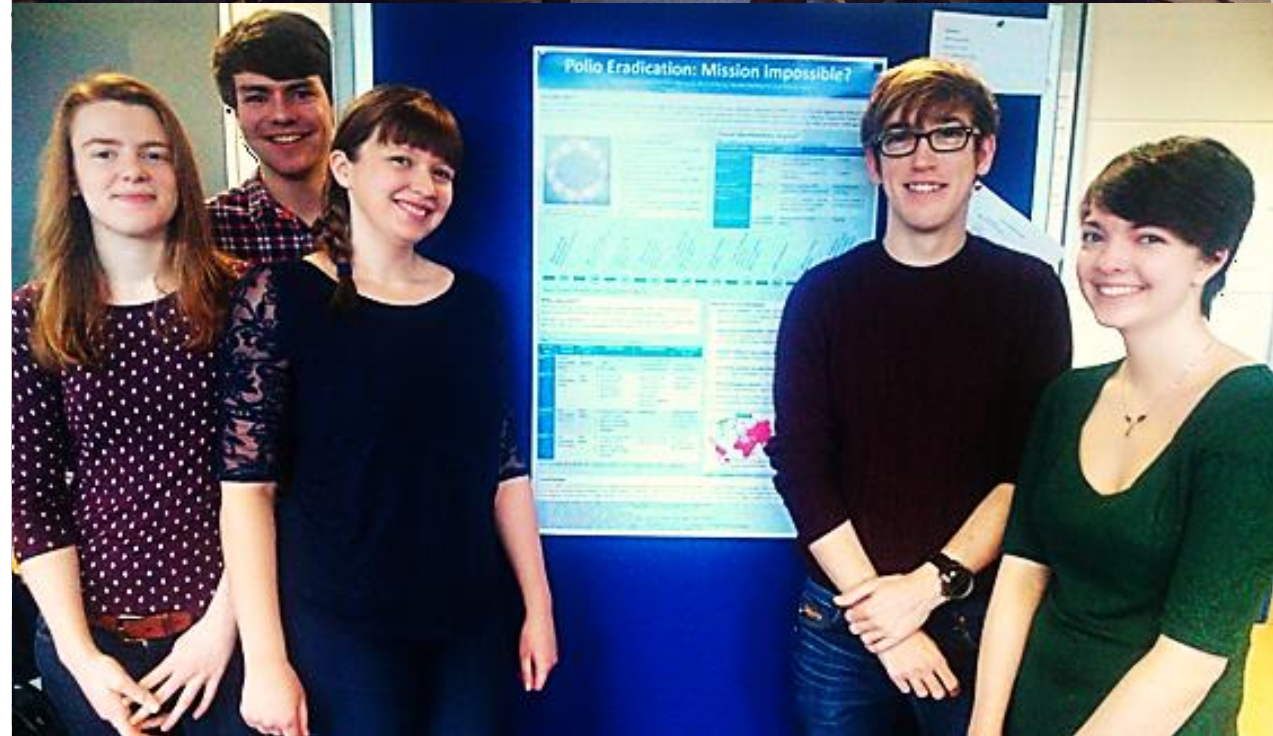
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- MI departments respond to queries from healthcare professionals and the general public
- Requires effective **clinical, communication, teamworking, leadership and management skills**
- 2017: simulation developed as an opportunity for final year students to practise these skills



# SIMULATION SET-UP

- **AIM:** To mimic a pressurised working environment
- Two MI departments
  - 2 x 5 students (regular groups)
- Advised in advance to consider organisation of team and individual roles
- 3-hour session + debrief
- 12 enquiries
- Satisfaction survey



# EXAMPLE ENQUIRIES

**ENQUIRER:**

**ENQUIRY:**

**COMMUNICATION METHOD:**

**URGENCY:**

# EXAMPLE ENQUIRIES

ENQUIRER:

NURSE

ENQUIRY:

RECONSTITUTION OF  
CEFUROXIME INJECTION

COMMUNICATION METHOD:

IN-PERSON

URGENCY:

WILL WAIT

# EXAMPLE ENQUIRIES

ENQUIRER:

NURSE

PATIENT

ENQUIRY:

RECONSTITUTION OF  
CEFUROXIME INJECTION

COMPLAINT: HAS BEEN  
GIVEN ANTIBIOTIC THAT  
THEY ARE ALLERGIC TO

COMMUNICATION METHOD:

IN-PERSON

TELEPHONE

URGENCY:

WILL WAIT

WANTS AN ANSWER  
IMMEDIATELY

# EXAMPLE ENQUIRIES

ENQUIRER:

NURSE

PATIENT

GP

ENQUIRY:

RECONSTITUTION OF  
CEFUROXIME INJECTION

COMPLAINT: HAS BEEN  
GIVEN ANTIBIOTIC THAT  
THEY ARE ALLERGIC TO

CONVERT ORAL MORPHINE  
TO A PATCH

COMMUNICATION METHOD:

IN-PERSON

TELEPHONE

TELEPHONE

URGENCY:

WILL WAIT

WANTS AN ANSWER  
IMMEDIATELY

WITHIN 30 MINUTES SO  
CAN GET SCRIPT TO  
PHARMACY BEFORE  
CLOSING TIME

# ORGANISATION

Scenario	Staff Member
Scenario 1	Pregnancy
Scenario 2	Patient ADRs – angry patient
Scenario 3	Paediatrics
Scenario 4	Interactions
Scenario 5	Interpretation of levels
Scenario 6	Interactions
Scenario 7	Renal dose modification
Scenario 8	Administration advice
Scenario 9	Opioid dose conversion
Scenario 10	Enteral tube administration
Scenario 11	Hepatic impairment
Scenario 12	Administration error

		10:10	10:15	10:20	10:25
Staff 1 (or 1 (2.5 hrs)	MI dept 1	MI dept 2			
6 (1 hr)					
11 (1.5hr)				MI dept	
14 (end of					
15 (end of					
Staff 2					MI dept
2 (immedi					
10 (2 hrs)					
12 (30m)					
5 (45m)					
3 (5m)					
Staff 3			MI dept 1		
7 (2.5h)					
9 (30m)					
8 (15m)					
4 (1.5h)	MI dept 2				
13 (1 hr)					

**Scenario 2** Time enquiry given: Time answer received:

**Enquirers Full Name:** Suzanne/Stuart Two

**Job Title:** Patient

**Department:** N/A  
If asked for address: 26 Elderflower Court, Flatplace

**Tel no.** via collaborate

**Email:** [S.two@googlemail.co.uk](mailto:S.two@googlemail.co.uk) **Bleep no.**

**Contact for reply (who and how):** Yourself via collaborate

**Reply required by (date and time):** I want to speak to someone right now who can help

I am suffering an allergic reaction to antibiotics I was given when I went home from hospital.

- **Come across and angry and distressed** – station is about consultation skills in dealing with an angry and upset patient
- Discharged yesterday from the surgical admissions unit which I attended for treatment to a dog bite on my hand.
- Given a course of antibiotics - took the first one last night and now I have a rash all over body
- Had this before when took flucloxacillin and amoxicillin – it's on records as allergic to penicillin. Given co-amoxiclav 625mg TDS for 7 days for bite.
- Told several members of staff about allergy
- Very upset and concerned about the rash – NO symptoms of anaphylaxis or swelling of the mouth/tongue
- Want advice on what to do and would like to know how to lodge a complaint

**Patient Name:** As above

**Gender:** Female/Male **Age or DOB:** 49 years (08.08.1974/75) **NHS / Hospital no.** Don't have a hospital number I have my NHS number 9466 3445 3456

**Weight:** 80kg **Blood tests:** You haven't got any blood test results

**Height:** 171cm

**Enquirer name**

**Summary of enquiry**

**Your enquiry**

I was able to contact the medicines information department easily

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
-------------------	----------	---------	-------	----------------

The staff were professional

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
-------------------	----------	---------	-------	----------------

The staff appropriately interpreted my needs

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
-------------------	----------	---------	-------	----------------

An appropriate deadline was agreed for a reply?

Yes	No
-----	----

**Our response**

I received the answer by the agreed time?

Yes	No
-----	----

Did our response answer your question?

Yes	No
-----	----

Were you offered practical advice where appropriate?

Yes	No	N/A
-----	----	-----

Did we give you enough detail in the answer?

Yes	Not enough	Too much
-----	------------	----------

Were you confident in the answer given?

Yes	No
-----	----

**Overall**

Would you use the service again?

Yes	No
-----	----

Overall what is your opinion of the Medicines Information Service?

Poor	Average	Good	Very Good	Excellent
------	---------	------	-----------	-----------

What could we do to improve the Medicines Information service? Please give any comments below

# STUDENT GUIDANCE

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- Simulation overview
  - LOs, general nature of tasks
- Pre-work - consider organisation:
  - Group leader
  - Breaks
  - Distribution and prioritisation of work
  - Familiarisation with resources



# EVALUATION – FOCUS GROUP THEMES

REALISM	MANAGEMENT & TEAMWORK	PREPARATION FOR PRACTICE

All 10 students participated

# EVALUATION – FOCUS GROUP THEMES

REALISM	MANAGEMENT & TEAMWORK	PREPARATION FOR PRACTICE
<ul style="list-style-type: none"><li>• Variety of problems</li><li>• Randomness of timing</li><li>• Realistic, challenging</li></ul>		
<p>“We can have like two or three calls, and then we have nothing and then suddenly at the last minute somebody can still call us and we still need to answer the query.”</p>		
<p><i>Would like more enquiries</i></p>		

# EVALUATION – FOCUS GROUP THEMES

REALISM	MANAGEMENT & TEAMWORK	PREPARATION FOR PRACTICE
<ul style="list-style-type: none"> <li>• Variety of problems</li> <li>• Randomness of timing</li> <li>• Realistic, challenging</li> </ul>	<ul style="list-style-type: none"> <li>• Not seen as integral to the task at the outset</li> <li>• Reluctance to take on lead role</li> </ul>	
<p>“We can have like two or three calls, and then we have nothing and then suddenly at the last minute somebody can still call us and we still need to answer the query.”</p>	<p>“Our aim is to complete the task, it’s not about the management, how we do it; it’s to answer the question. We don’t think taking a break is necessary for us.”</p>	
<p><i>Would like more enquiries</i></p>	<p><i>Staff observed a change in approach as the simulation progressed in one group</i></p>	

# EVALUATION – FOCUS GROUP THEMES

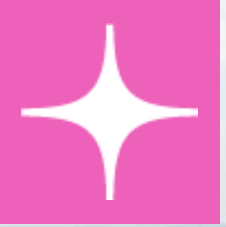
REALISM	MANAGEMENT & TEAMWORK	PREPARATION FOR PRACTICE
<ul style="list-style-type: none"> <li>• Variety of problems</li> <li>• Randomness of timing</li> <li>• Realistic, challenging</li> </ul>	<ul style="list-style-type: none"> <li>• Not seen as integral to the task at the outset</li> <li>• Reluctance to take on lead role</li> </ul>	<ul style="list-style-type: none"> <li>• Supported development of research and communication skills</li> <li>• Application of clinical knowledge</li> </ul>
<p>“We can have like two or three calls, and then we have nothing and then suddenly at the last minute somebody can still call us and we still need to answer the query.”</p>	<p>“Our aim is to complete the task, it’s not about the management, how we do it; it’s to answer the question. We don’t think taking a break is necessary for us.”</p>	<p>“You get a range of queries as well, some more difficult, and also just knowing we can lean on someone.”</p>
<p><i>Would like more enquiries</i></p>	<p><i>Staff observed a change in approach as the simulation progressed in one group</i></p>	

# EVOLUTION

---

- More enquiries added (15)
- Videocall and email enquiries added
- Enquiries support preparation for assessment (constructive alignment)
- Pre-work:
  - More directive in terms of organisation and management
  - Development of a “standard operating procedure”
- Staff directed to test poor organisation





**THANK YOU!**

**ANY QUESTIONS?**





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# 2024 Pharmacy Education Symposium

Exploring the use of intensifiers and hedges in  
Objective Structured Clinical Examinations  
(OSCEs) and its impact on marking

Dr Angelina Lim

# Exploring the use of intensifiers and hedges in Objective Structured Clinical Examinations (OSCEs) and its impact on marking



**Natalie Cheung, Averil Grieve, Tim Tran, Kyle Wilby and Angelina Lim**

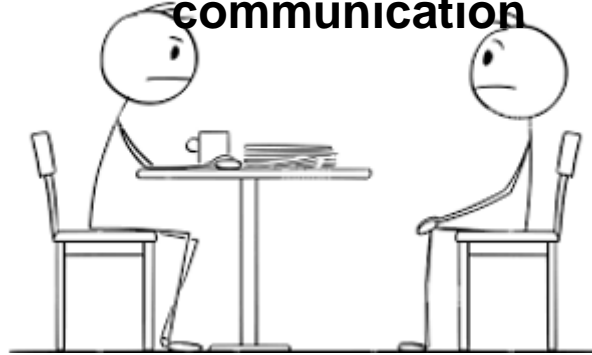
# Marking Communication Rubrics in OSCEs.....

Are there internal biases that get in the way???

**Speaks just like me...Excellent communicator**



**Didn't love the flow...Poor communication**



**Doing so well for just a student! Excellent communication**



# Politeness Theory (*Brown and Levinson, 1987*)

Politeness = showing awareness of and consideration for another person's face  
(=someone's public self-image)

## Face Threatening Acts (FTAs)

To engage in this acts, linguistic strategies e.g. hedges/intensifiers may be used to get the message across

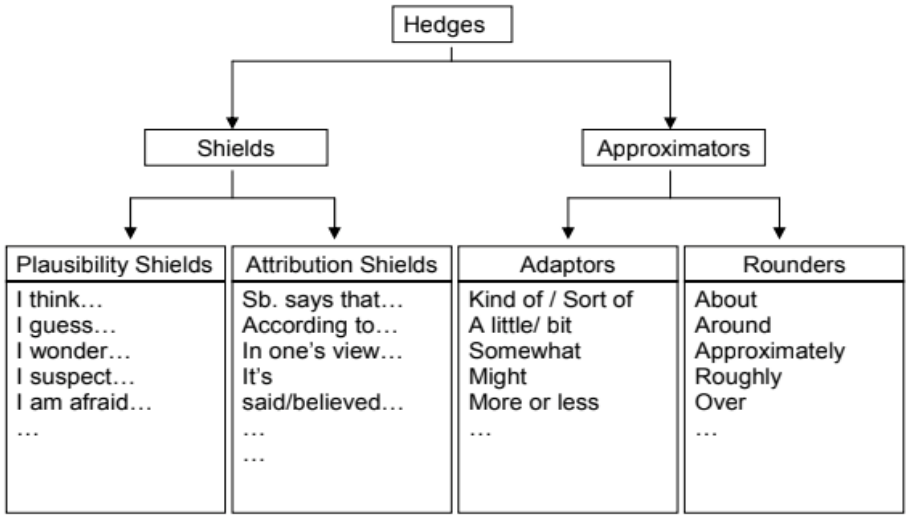
Use of these linguistic strategies is said to be dependent on social distance, relative power, absolute ranking of the imposition

**Aim:** To investigate the relationship between intensifiers and hedges used across OSCE communication grades using politeness theory

# Hedges and Intensifiers

**Hedging** is a word/phrase that help softening the communication and make a statement less assertive to avoid disagreement

**Intensifier** helps strengthen the meaning of other expressions and to show emphasis



List of all intensifier cues

-ass	absolutely	altogether	amazingly	astoundingly
awfully	badly	decidedly	bitterly	bloody
colossally	completely	damn	deeply	drastically
dreadfully	entirely	enormously	especially	exceptionally
excessively	extraordinarily	extremely	fantastically	freaking
frightfully	██████████	fully	greatly	hella
highly	incredibly	insanely	intensely	immensely
largely	literally	lot	lots	massive
mightily	more	outrageously	particularly	perfectly
phenomenally	pretty	radically	real	really
remarkably	purely	so	soo	sooo
super	supremely	surpassingly	strikingly	strongly
terribly	terrifically	totally	thoroughly	truly
unusually	utterly	very	wicked	

# Spotlighting on our teamwork OSCE station

Simulated doctor AND simulated carer in the room

Set in a hospital setting at the patient's bedside

There's a medication related problem

Student has to work with the doctor AND carer in the room to come up with an optimal solution considering both their preferences



# Communication Rubric

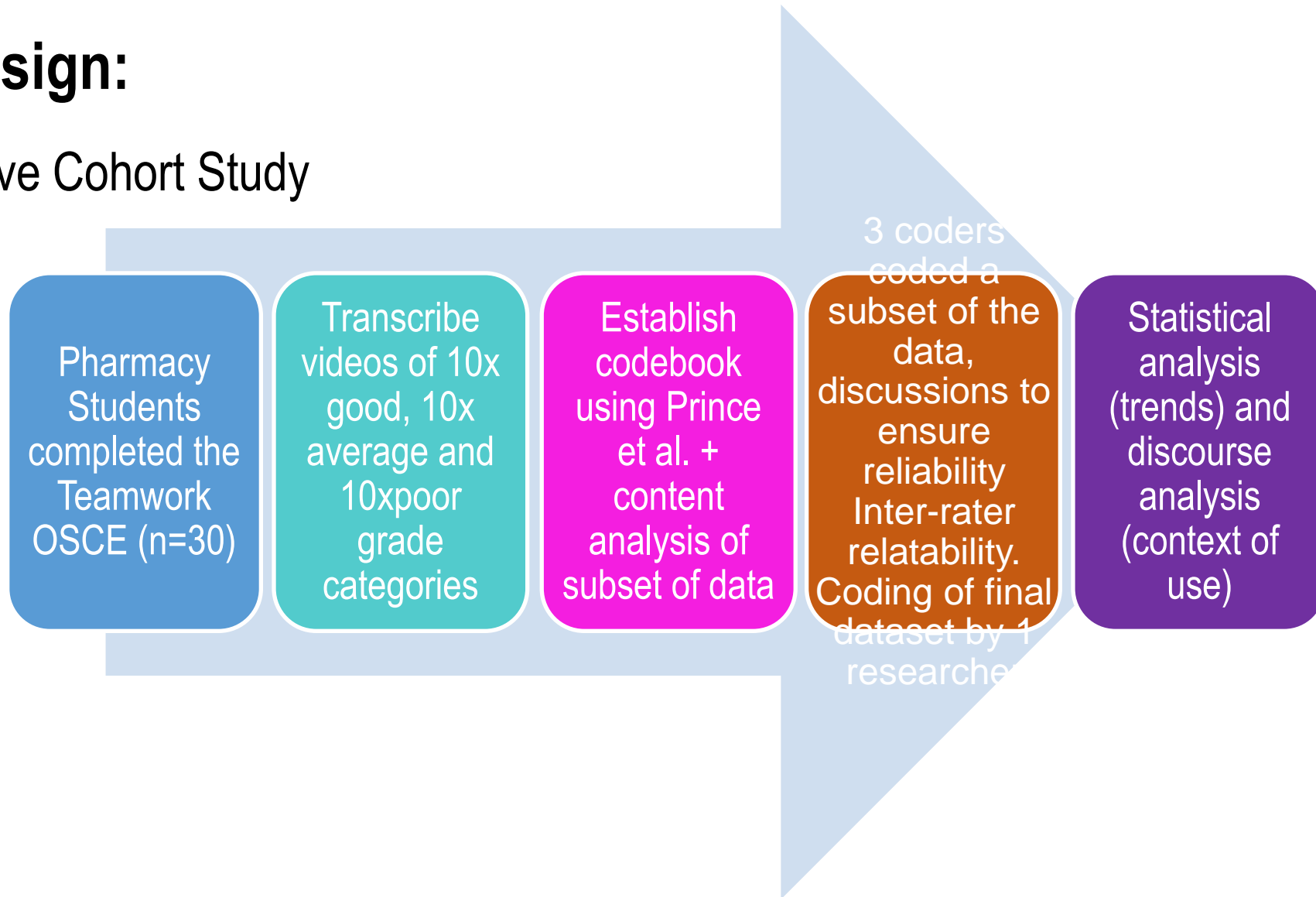
Students are marked on a clinical checklist as well as a communication checklist (mapped from CCC2019 and ICAR2013)

Criteria	Poor	Adequate	Good
Performance indicators			
1. Communicate with others (ie health professionals & patient/family) in a respectful, responsive and responsible manner			
2. Listen actively and encourage the ideas and opinions of others (i.e., health professionals & person/family)			
3. Articulate information in a logical and structured manner			
4. Shares evidence-based information/ options with other healthcare providers that is useful for the delivery of patient care			
5. Integrates the input of other professions and the patient/family to reach a shared vision of care plans			
6. Participates in the interprofessional debate			

# Methods:

## Study design:

Retrospective Cohort Study



## Codebook

Code	Type	Subtype (grammatical category)	Examples
MAV	Hedging	Modal auxiliary verbs	may (not), might (not), can (not), could (not), would (not), should (not), ought (not), seem to be
MAB	Hedging	Modal adverbs	maybe, generally, perhaps, probably, possibly, likely, potentially, kind of, sort of, relatively, necessarily,
MAT	Hedging	Modal adjectives	certain, definite, clear, possible, probable, typical
MES	Hedging	Mental Performative Shields	I think, I mean, I know, I don't think, I feel, I assume, I hope that, I was wondering if, personally, hopefully
HQA	Hedging	Quantity Approximators	Most, many, about, just, some, a lot of, few, most of, one of, a little bit
HDA	Hedging	Degree Approximators	somehow, about, almost, approximately, pretty much
HFA	Hedging	Frequency Approximators	usually, just, sometimes, regular, current
SRA	Hedging	Restrictive adverbs	just, only, quite, basically, simply, currently, at the moment/ at this stage/ for now
HQS	Hedging	A softening question	if you don't mind, would you like, do you agree? what do you think? Is that okay? Does it sound okay to you?
HQT	Hedging	Question tags	isn't it? aren't they? right?
PMH	Hedging	Evidential stance markers	According to..., based on..., Therapeutic guidelines said..., based on your clinical notes/ your drug chart, apparently
IAJ	Intensifiers	Exaggerate with strong adjectives	outstanding, excellent, awful, terrible, disgusting
IAB	Intensifiers	High strength adverbs	absolutely, completely, extremely, highly, totally, actually, really, very, simply, as well, definitely, obviously, especially, in particular
IQH	Intensifiers	A hardening question	Don't you agree?
IQA	Intensifiers	Quantity Approximators	a lot of, many
IDA	Intensifiers	Degree Approximators	more
IFA	Intensifiers	Frequency Approximators	more, always
IAV	Intensifiers	Modal auxiliary verbs	You have to choose between A and B...
EDD	Intensifiers	Emphatic Do/Does/Did	Do, Does, Did
UMJ	Intensifiers	Use of medical Jargon	upper gastrointestinal bleeding, exacerbation, heart failure, acute kidney injury

# Sample of coding

## Sample for doctor/student interaction

**Student 1 (Poor)** 00:34

Yeah. So just to confirm the information is MRN is 366158624. And he's living in our 8 Pinewood Drive Tonne Site. And he's, yeah.

**Doctor** 00:46

That's correct.

**hedges**

**intensifiers**

**Student 1 (Poor)** 00:46

Yep. Okay, yeah. So doctor, so I have a review of what the patient is taking. And then yeah, I have **some** concerns with current medications. So yeah. Okay, so first of all, like he's taking Perindopril and spironolactone together. However, like, **according to** MIMs, I have checked the interaction, and then those two are having some interaction. Yeah. And then also spironolactone is **related his** current headache. So yeah, and then because, um, yeah, let me just check. Yeah, **according to** MIMs, **and this** is **life threatening** and can, **you know**, can give a **permanent damage**. So I don't recommend taking perindopril and spironolactone together. So I **would like to** cease spironolactone.

**Doctor** 01:44

Okay.

**Student 1 (Poor)** 01:44

**is it okay?**

**Doctor** 01:45

That's okay.

**Student 1 (Poor)** 01:46

**is it good with you?**

**Doctor** 01:47

Yup.

## Sample for carer/student interaction

**Student 1 (Poor)** 03:11

Oh, yeah. I'm the pharmacist on duty today. I just want to tell you there are some medication changes and your concerns. So currently, you're taking a perindopril and spironolactone together. However, this can cause, **you know**, bad effects. If it is like, ... going together. So yes, cease spironolactone. Then, yeah.

**Carer** 03:35

Okay. Well, we've actually got his Webster packs packed for the next two weeks with his current medication. So, um... can't we just keep it like it is until he sees his GP at the end of two weeks when those packs will be used up? **And change it then?**

**Student 1 (Poor)** 03:53

Well, **I understand** your concern. But yeah, but we need to cease spironolactone right now because you're **having headache** right now. Right?

**Carer** 04:01

Yes.

**Student 1 (Poor)** 04:01

Yeah. **So side** effect of spironolactone is headache and then by removing spironolactone. You're... Yeah, your headache will be **likely to reduce**. Yup.

**Carer** 04:12

Okay.

**Student 1 (Poor)** 04:12

Okay. And then we'll... Yeah... arrange um... another new webster pack as soon as possible. Yeah. And then yeah, for the second one, because you're taking furosemide and dapagliflozin together, however, like those acts as increasing your urine output, so yeah, we just want to change dapagliflozin to Metformin. Yeah, metformin, 1g a day. And Metformin is like **the best medication** for diabetes. Yeah.

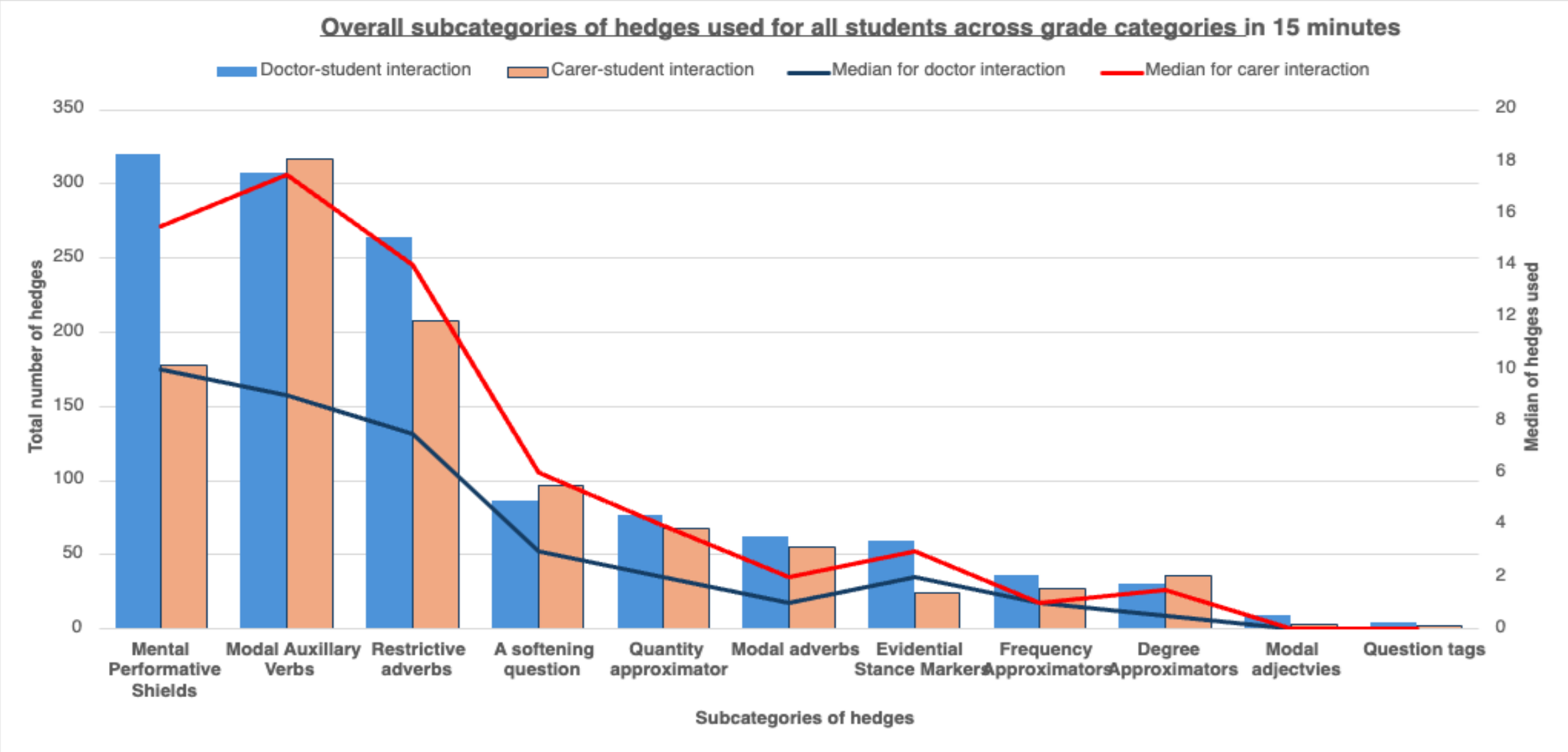
**Carer** 04:44

Okay. No problem.

# Results

		<b>Good Median (IQR) N = 10</b>	<b>Adequate Median (IQR) N = 10</b>	<b>Poor Median (IQR) N = 10</b>	<b>P-value</b>
<b>Doctor-student interaction</b>	<b>Intensifiers</b>	16.5 (9.5-24)	19.5 (13-26.75)	17 (14.25-22.5)	0.875
	<b>Hedges</b>	42 (29.75-48)	43 (27-62.5)	42 (29-47.75)	1.000
<b>Carer-student interaction</b>	<b>Intensifiers</b>	12.5 (10-18.75)	9 (7-13.25)	10.5 (6-21)	0.387
	<b>Hedges</b>	29 (22.75-48.25)	34 (28.25-37.5)	38 (24.5-45.25)	0.670

# Results - Hedges



# Context of Hedges used

The most common hedges used were....

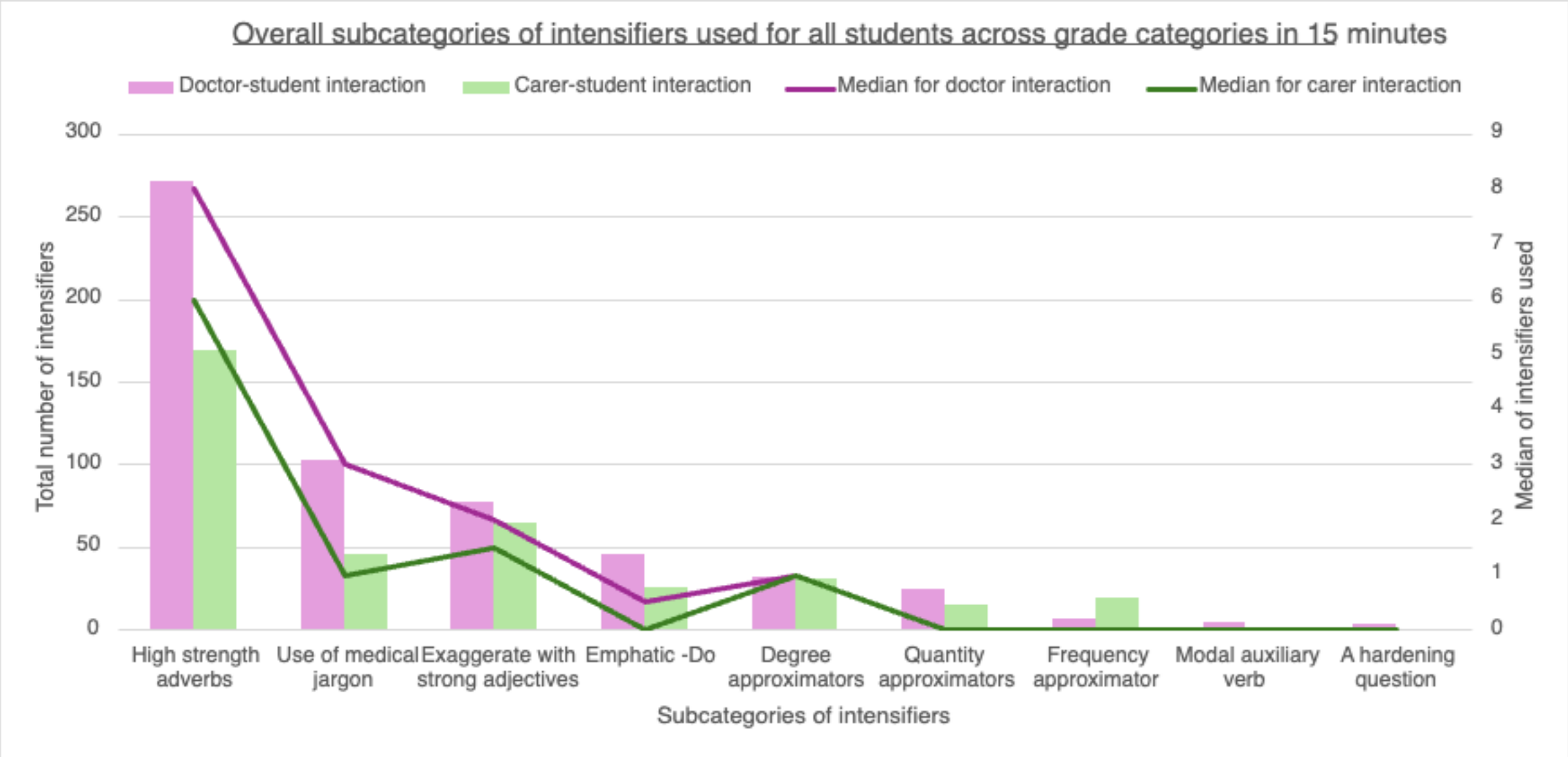
Dr interaction - I recommend (19.4% - Mental Performative Shields)

- To provide recommendations and avoid imposing on others
- ★ I **recommend** going with clindamycin, which is known to be safe in patients who have anaphylaxis to penicillins
- ★ I **recommend** her to start on lifestyle modifications first to see if this can control her cholesterol levels

Carer interaction - Can (40.3% - Modal auxiliary verbs)

- To express possibility by softening the verb behind
- ★ Because it **can** affect the baby's development
- ★ He's not experiencing any gastrointestinal bleeding currently, which **can** occur if we did continue him on the ibuprofen

# Results - Intensifiers



# Context of Intensifiers used

The most common intensifiers used were High strength adverbs

i.e. also (22.5%), as well (15.5%) and actually (15.2%)

- To strengthen/intensify the statement to show emphasis

Doctor interaction

- ★ I've noticed that his pain scores are **actually** being well controlled
- ★ So I'm concerned about bradycardia. And he's sort of dizziness or faintness **as well**.

Carer interaction

- ★ **Also**, consuming foods that are high in saturated fats and trans fats can cause an increase in cholesterol **as well**
- ★ This antibiotic is quite safe for your wife, and it's safe for the baby **as well**

# Relationship between graduates / undergraduate status

	Good	Adequate	Poor
Graduate	5	2	2
Undergraduate	5	8	8

	Dr (Hedges)	Carer (Hedges)	Dr (Intensifiers)	Carer (Intensifiers)
Graduate	31	31	15	12
Undergraduate	44	36	17	10



# Relationship between domestic/ international status

	Good	Adequate	Poor
Domestic	8	4	2
International	2	6	8



	Dr (Hedges)	Carer (Hedges)	Dr (Intensifiers)	Carer (Intensifiers)
Domestic	42	36	17.5	12
International	43	31.5	17	10

## Thoughts for educators

- More hedges > intensifiers used in total
- Consistent no. of hedges in Doctor interaction across communication grades
- Less hedges use in good communicator grades in carer interaction
- No trends for intensifier used in either conversation
- Good communicators were able to adjust their use of hedges better than poor communicators

# Thoughts for educators

- Purposive teaching of politeness theory strategies (esp intensifiers and hedges)?
- Incorporating politeness theory in communication rubrics or training to ensure more consistency
- Obtain a perspective of politeness theory strategies in other situations e.g. work based placements
- Obtain reasons/perceptions of use regarding the hedging/intensifiers that may have practice implications
- Supporting CALD students



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# 2024 Pharmacy Education Symposium

Escaping the Mundane - The Use of  
Gamification Simulation Learning in the  
Classroom

Kylie Mueller



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A stylized map of Australia is shown in a darker blue silhouette against a background of lighter blue wavy lines. A white location pin is placed on the eastern coast of Australia. The word 'LUNCH' is written in white, bold, uppercase letters across the center of the map.

**LUNCH**